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ANNUAL REPORT

OF THE

MEDICAL OFFICER

TO

The County Council

OF

NOTTINGHAMSHIRE,

FOR THE YEAR 1908,

BY

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Nottingham:

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THE SHIRE HALL,

NOTTINGHAM,

June 15th, 1909.

MY LORDS AND GENTLEMEN,

I have the honour to present my thirteenth Annual Report, which deals with the year 1908. It consists, as in former years, of an analysis of the Annual Reports of the Medical Officers of Health of the 26 Districts into which the Administrative County is divided for sanitary purposes, together with Tables of Vital Statistics derived from those Reports, and based upon the Forms of the Local Government Board. No new forms have been issued this year.

Although the statistics are confined to the year 1908, other matters relating to Public Health have been brought as far as possible up to the date of publication.

The estimated population for the middle of the year 1908 was **334,939**, shewing an increase of 7,599 on the population of 1907, an increase at the rate of **2·32** per cent., compared with 2·41 last year.

The birth-rate was 29·3, an increase of 2 per 1000 over last year; and, indeed, the first material increase since the year 1901. At the same time the infantile death rate, or the deaths of infants under one year of age per 1000 births, was smaller than ever before, having fallen to 119 from 127 in the previous year.

The gross general death-rate was also, with the exception of the year 1906, the lowest hitherto recorded, namely, 13·0 per 1000. When corrected for the deaths in Public Institutions it is increased to 13·3; but when further corrected for "age and sex distribution" as explained upon page 14 it falls to 12·4.

When taken in groups of years, the progressive diminution of the death-rate is most striking.

*Average death-rate	for the	10	years 1861-70 = 21·7	per 1000
,,	,,	10	,, 1871-80 = 21·4	,,
,,	,,	10	,, 1881-90 = 19·6	,,
,,	,,	10	,, 1891-1900 = 16·4	,,
,,	,,	year	1908 = 13·0	,,

If the death-rate prevailing in the ten years 1861-70 had continued during the year 1908 there would have been 2913 **additional deaths** in 1908 of persons now living!

*For further details see pages 13–16.

These lives may truly be said to have been saved in one year by Sanitation and Preventive Medicine.

The prevalence of Infectious Disease in the County again shewed a considerable diminution.

Three Local Inquiries were held by the Local Government Board in connection with sewerage and sewage disposal, and were attended by the County Medical Officer.

The administration of the Midwives Act has occupied an unusual amount of attention and is fully described upon pages 25-31.

The vital statistics of the County are dealt with on pages 6-25, and in Tables I to XII. at the end of this Report.

An account of the rainfall for 1908 in eleven districts is given in Table XIII.

A very short abstract of the work done by the Medical Officers of Health for the various Districts in the County under the Factory and Workshops Act, is given upon pages 73-75, and the adjoining Tables.

I have the honour to remain,

Your obedient servant,

HENRY HANDFORD.

ANNUAL REPORT.

The Annual Report of the County Medical Officer is the *only* record of the health of the whole Administrative County over which the County Council exercise jurisdiction.

Administrative *versus* Registration County.

It is still necessary to point out that the Report of the Registrar-General deals with the *Registration County*, which differs very essentially from the Administrative County both in area and population, including, as it still does, nearly 100,000 persons residing in Derbyshire, Leicestershire, Lincolnshire, and the West Riding of Yorkshire, in addition to the majority of the population of the Administrative County, and the whole of the population of the City of Nottingham, and the Borough of Ilkeston ; thus making a total of considerably more than half-a-million persons.

It is greatly to be regretted that public funds are still employed in publishing statistics concerning life, death, and disease for areas based upon Poor Law Unions, and for Counties which have no other existence—statistics of which the representative administrative bodies, charged with the duty of looking after the Public Health, such as the Councils of Counties, County Boroughs, Urban and Rural Districts, can make little or no use on account of the great difference between Registration areas and Sanitary areas ; and with which the Poor Law Guardians—the only public bodies who can make use of the statistics, because the areas coincide—are not concerned.

The methods by which these valuable statistics should be made available for the use of the administrative authorities most nearly concerned, is a matter for the consideration of the Registrar-General ; but the existing anomaly is sufficiently serious to need the attention of Parliament.

Annual Reports.—The Reports were received on the following dates :—

Jan.	19th	Misterton.	
Feb.	12th	Newark Rural.	
"	15th	Eastwood.	
"	19th	Carlton.	
"	22nd	Kirkby-in-Ashfield.	
"	24th	West Bridgford.	
"	24th	Mansfield Woodhouse.	
"	26th	Hucknall Torkard.	
"	27th	Warsop.	
"	27th	Stapleford.	
Mar.	4th	Mansfield.	
"	8th	Arnold.	
"	10th	Leake.	
Mar.	13th	Newark Borough.	
"	13th	East Retford Rural.	
"	15th	Worksop.	
"	15th	Huthwaite.	
"	17th	Sutton-in-Ashfield.	
"	19th	Beeston.	
"	19th	Basford.	
"	20th	Blyth and Cuckney.	
"	24th	Southwell.	
"	26th	East Retford Borough.	
April	14th	Skegby.	
"	14th	Bingham.	
"	19th	Kingston and Ratcliffe	

It will be noticed that the last Report was received nearly six weeks earlier than last year, and consequently this Report will be ready for the July meeting of the County Council. The compilation of this Report has been greatly facilitated by the kindness of Medical Officers of Health in sending *advance copies of their statistics* when there was a probability of the printed Report being late.

Printing Annual Reports.—All the District Councils now print the Annual Reports of their Medical Officers of Health, except Leake. The latter Report was type-written.

It is greatly to be desired that Leake may soon come into line with other districts, and print the Annual Report of its Medical Officer.

Medical Officers of Health.—It is satisfactory to be able to report that no change has taken place in the *personnel* of the Medical Officers during 1908.

Area.—The area of the Administrative County amounts to 521,440 acres or 814¾ square miles, exclusive of water.

Population.—The *natural* increase of population for the year 1908, by excess of births over deaths was 5,451 or 1·66 per cent. upon the population of 1907, compared with 1·40, 1·59, 1·46, 1·69, 1·72, and 1·74 in the six preceding years.

The *estimated* population of the County at the middle of the year 1908, was 334,939, shewing an increase of 7,599, or 2·32 per cent, upon the population of 1907, compared with 7,728 and 2·41 per cent., 9,527 and 3·07 per cent., and 6,802 and 2·24 per cent. in the three preceding years. Although the rate of increase is very slightly smaller than last year, it remains much in excess of the *natural* increase, and indicates a very considerable amount of immigration, chiefly into the coal mining parts of the Urban Districts.

The estimated increase in the Urban Districts was 5,989 or 2·95 per cent., and in the Rural, 1,610, or 1·29 per cent. The *estimated* population of the County has been arrived at by adding together the populations of the 26 districts, which have been calculated by each Medical Officer of Health for his own district from local knowledge. The calculation is made by a consideration of the number of houses on the rate-book, the number of new houses, and of empty houses, and by taking the number of persons per house found to prevail in the district at the date of the last Census. This is the nearest approximation that is available. But this calculation, even when carefully made, is liable to fallacy, as the number of lodgers taken in,

and consequently the number of persons per house, is apt to vary considerably in times of good trade and bad trade, and in inverse ratio to the rate of building.

Calculated according to the rate of increase shewn between the Census of 1891 and the Census of 1901, the population at the middle of the year 1908 should have been 310,728. This is probably too small ; and on the other hand the local estimates are probably somewhat too high.

The birth-rates and death-rates have been calculated upon the *estimated* population. But now that we are eight years from the last Census, the uncertainty as to the true population of the rapidly-growing Urban Districts somewhat impairs the value of important statistics, and renders a quinquennial Census a matter greatly to be desired.

The Registrar-General writes :—" It cannot be too strongly " urged that a more frequent Census enumeration is the true " remedy for this state of things."

Births.—During the year, 9,818 live births were registered; corresponding to a rate of 29·3 per 1000 of the population, and shewing the remarkable increase of 2 per 1000, compared with 1907. This is the first year since 1901 (with one trifling exception) that the birth-rate has ceased to decline. It is still low when comparison is made with other countries, as shewn in the following table taken from the 70th Annual Report of the Registrar-General.

TABLE OF BIRTH-RATES IN OTHER COUNTRIES.

Country.	Births to 1000 living. Avge. Annual rate in 5 years. 1901-1905.	Country.	Births to 1000 living. Avge. Annual rate in 5 years. 1901-1905.
Russia (European)	49·3*	Denmark	29·0
Bulgaria	41·0	Tasmania	29·0
Roumania	39·4	Scotland	28·9
Jamaica	39·0	Norway	28·6
Ceylon	38·8	ENGLAND & WALES	28·1
Servia	38·7	Switzerland	28·1
Hungary	37·2	Belgium	27·7
Chili	36·1	New South Wales	26·7
Austria	35·6	Queensland	26·7
Spain	35·0	New Zealand	26·6
Prussia	34·8	Sweden	26·1
German Empire	34·2	Victoria	25·0
Italy	32·6	South Australia	24·5
Japan	31·7	Ireland	23·2
The Netherlands	31·5	Ontario, Province of	21·8
Finland	31·3	France	21·2
Western Australia	30·3		

* Average for 5 years, 1896 to 1900.

*Measuring the Birth-rate.—"The crude birth-rate, "*i.e.*, the proportion of registered births to the total population "at all ages, is sufficient for comparing the birth-rate in a "population from year to year; while in conjunction with the "death-rate it affords a ready means for gauging the natural "rate of increase in a population; but the crude birth-rate is "not adapted for comparisons extending over a long series of "years, because it takes no account of the effect of the changing "constitution of a population in regard to sex, age, and con- "dition as to marriage; nor is it well adapted for comparing "the rates in two or more communities, because of the "differences in the sex and age constitution of the respective "populations."

"It is desirable, therefore, to make a comparison of birth- "rates, based not only on the total population, but also on the "number of possible mothers."

"The birth-rate in England and Wales attained the "highest point on record in the year 1876; and for the purpose "of measuring the decrease that has since occurred, the mean "annual rate in the quinquennial period, 1876-80, has been "taken as a standard. Calculated on the total population, the "fall in the birth-rate in the period under review amounted to "over 25 per cent. Based on the proportion of births to the "number of possible mothers, *i.e.*, the total number of women "living at child-bearing ages, the fall in the rate amounted to "over 31 per cent. in the same period; while the fertility of "married women, based on the ratio of legitimate births to "wives of conceptive ages, showed a decrease amounting to "over 27 per cent. Put in another way, if the fertility of "married women in proportion to their numbers had been "identical in 1876-80 and in 1907, then the legitimate births "would have numbered over 1,212,000 in 1907, instead of the "881,853 actually recorded."

"While it is recognised that the results of calculating the "birth-rate in proportion to total population are of considerable "value, it is at the same time very desirable to ascertain the "reasons for such wide discrepancies among the crude birth- "rates in the different countries. These discrepancies are to "some extent due to variations in the civil condition and in the "sex and age constitution of the several populations; for "example, the birth-rate of Ireland, based on the proportion "of births to the total population, appears among the lowest in "the list of countries given on page 58; whereas if the rate is "based on the proportion of legitimate births to the married "women, aged 15-45 years, it is found that in the period 1900-2,

*Registrar-General's 70th Annual Report, p xxiv., *et seq.*

"*the fertility of Irish wives is only exceeded in three European* "*countries*—the Netherlands, Norway, and Prussia."

"The countries possessing the requisite data were therefore "asked to furnish returns of the numbers of married women, "aged 15-45 years, in their populations, and of the numbers of "legitimate births at the three past census periods; from these "data the following Table has been constructed."

LEGITIMATE BIRTH-RATES.

COUNTRIES. (Arranged in order of Rates in 1900–02.)	Proportion of Legitimate Births per 1,000 wives aged 1 -45 years. Approximate periods. 1880–82.	1890–92.	1900–02.	Increase (+) or Decrease (-) per cent. in Fertility during 20 years.
EUROPEAN COUNTRIES.				
The Netherlands	347·5	338·8	315 3	– 9·3
Norway..	314 5	306·8	302·8	– 3 7
Prussia	312·6	307·6	290·4	– 7·1
Ireland	282·9	287·6	289·4	+ 2·3
German Empire	310·2	300·9	284·2	– 8·4
Austria	281·4	292·4	283·7	+ 0·8
Scotland	311·5	296·4	271·8	– 12 7
Italy	276·2	?	269·4	– 2·5
Sweden	293·0	280·0	269·0	– 8 2
Switzerland	284·1	274·0	265·9	– 6·4
Denmark	287·1	278·1	259·1	– 9·8
Spain	257·7	263·9	258 7	+ 0 4
Belgium	312·7	285·1	250·7	- 19·8
England and Wales ..	**286·0**	**263·8**	**235·5**	**– 17·7**
France	196·2	173·5	157·5	- 19 7
AUSTRALIAN COMMONWEALTH.				
Tasmania	?	311·0	256·4	?
Queensland	329·0	320·6	252·8	– 23·2
*Western Australia	323·9	338·8	246·4	– 23·9
South Australia	326·5	307·5	235·0	– 28·0
New South Wales	337·8	298·5	234·3	– 30·6
Victoria	299·2	297 8	226·8	– 24·2
New Zealand	322·1	277·5	243·2	- 24·5

* The legitimate births in Western Australia are not precisely known, but are estimated to be 95 per cent. of the total births.

"In reviewing these important figures it appears that "among the European countries from which it has been "possible to obtain returns, there were only two—Austria and "Spain—in which the fertility of wives during the 20 years "(1881-1901) showed a tendency to increase, and this also "applies to Ireland. In all of the remaining countries a "decrease in fertility took place in the period under review,

"ranging from 2·5 to as much as 19·8 per cent. There were "two countries, Italy and Norway, in which the fall was only "2·5 and 3·7 per cent. respectively; in five others, Switzerland, "Sweden, the German Empire, the Netherlands, and Denmark, "the decrease ranged from 6·4 to 9·8 per cent., in Scotland the "decrease was 12·7 per cent., in England and Wales 17·7 "per cent., in France 19·7 per cent., and in Belgium 19·8 per "cent."

"In New Zealand and in the States of the Australian "Commonwealth, the decrease in legitimate natality in the "period 1881-1901, ranged from 23·2 to 30·6 per cent."

"It is probable that there is a common cause operating "throughout these countries to account for the phenomenon of "a general decline in human fertility, and apart from any "decrease due to changes in the age constitution of the married "women of conceptive ages, there is strong ground for the "assumption, that in varying degree, that cause is the deliberate "restriction of child-bearing on the part of the people them-"selves."

Whether this is an unmixed evil in the presence of the increasing severity of the struggle for existence is a question upon which much may be said. Parents with large families, especially among the poorer wage earners, find great difficulty in obtaining houses with sufficient rooms to afford decent accommodation at a rent within their means. Not unfrequently suitable accommodation cannot be obtained at any price, and overcrowding is the result. In how many instances, too, do employers refuse to employ men with large families?

The responsibility for the falling birth-rate must be spread over all classes of the community, and the decline is likely to continue until there is a change in public opinion.

Whether sufficient care is taken of the children that are born will be discussed under the heading of Infantile Mortality and the Notification of Births Act.

Very scanty information can be given as to the number of still-births occurring in the County each year. At present, still-births are not registered, and the information under the Midwives Act is all that is obtainable.

In accordance with the Rules of the Central Midwives Board under the Midwives Act, notices of 101 still-births were sent to the County Council by certified Midwives during the year 1908. These must be a very small portion of the whole number of still-births occurring in the County during the year. And yet in many instances the distinction between live-birth and still-birth is so fine as to leave the door open to serious dangers. One of the advantages of adopting the Notification

of Births Act would be that under it, notice is required to be given of all still-births after the 28th week of pregnancy, from which date a viable child may be born.

Illegitimate Births.—Table V. of the Forms issued by the Local Government Board now requires the legitimate and the illegitimate births to be entered separately; and this has now been done for all the districts.

In the whole County there were 390 illegitimate births, or a proportion of 39 per 1,000 registered births, compared with 41·8 last year. In the Urban districts there were 40·8 per 1,000 births, and in the Rural districts 37. The infantile mortality among the illegitimate children was 248 per 1,000 births compared with 114 for the legitimate!

THE NUMBER OF LEGITIMATE AND ILLEGITIMATE BIRTHS, AND OF MALE AND FEMALE BIRTHS FOR EACH DISTRICT, IN THE YEAR 1908.

URBAN DISTRICTS.	Births.	Legitimate.	Illegitimate.	Males.	Females.
Mansfield	1087	1054	33	552	535
Newark	477	444	33	245	232
East Retford	331	304	27	177	154
Arnold	332	316	16	180	152
Beeston	317	312	5	152	165
Carlton	451	428	23	242	209
Eastwood	137	134	3	65	72
Hucknall Torkard	569	553	16	298	271
Huthwaite	176	171	5	88	88
Kirkby-in-Ashfield	543	526	17	270	273
Mansfield Woodhouse	401	395	6	213	188
Sutton-in-Ashfield	702	657	45	364	338
Warsop	157	152	5	69	88
West Bridgford	188	187	1	80	108
Worksop	639	606	31	309	328
TOTAL	6505	6239	266	3304	3201
RURAL DISTRICTS.					
Basford	1205	1174	31	586	619
Bingham	285	266	19	148	137
Blyth and Cuckney	114	114	..	49	65
East Retford	339	315	24	169	170
Leake	92	92	..	50	42
Misterton	114	109	5	57	57
Newark	203	191	12	110	93
Skegby	224	216	8	104	120
Southwell	428	415	13	233	195
Stapleford	301	289	12	162	139
Kingston and Ratcliffe	8	8	..	4	4
TOTAL	3313	3189	124	1672	1641

Birth-Rate for 1908, per 1,000 of the Population.

Urban Districts.	Rate.
Mansfield Woodhouse	40·0
Warsop	36·9
Huthwaite	35·6
Sutton-in-Ashfield	35·2
Hucknall Torkard	33·4
Mansfield	33·4
Worksop	33·3
Kirkby-in-Ashfield	33·0
Arnold	31·2
Carlton	29·4
Newark	28·7
Beeston	26·7
Eastwood	26·3
East Retford	24·5
West Bridgford	16·5
Total Urban Districts	31·1

Rural Districts.	Rate.
Skegby	33·6
Stapleford	30·5
Basford	29·1
Misterton	26·9
Newark	25·2
Leake	24·8
Blyth and Cuckney	24·1
East Retford	23·8
Southwell	22·5
Bingham	20·1
Kingston and Ratcliffe	19·2
Total Rural Districts	26·2

Average Birth-Rate for the Ten Years, 1898–1907, per 1,000 of the Population.

Urban Districts.	Rate.
Mansfield Woodhouse	42·0
Huthwaite	41·4
Warsop	40·8
Sutton-in-Ashfield	37·8
Kirkby-in-Ashfield	37·7
Hucknall Torkard	34·3
Worksop	32·9
Mansfield	32·6
Eastwood	31·5
Arnold	30·7
Carlton	30·6
Newark	28·4
Beeston	28·0
East Retford	26·5
West Bridgford	17·8
Total Urban Districts	32·2

Rural Districts.	Rate.
Skegby	34·3
Basford	30·7
Stapleford	30·5
Misterton	27·9
Newark	25·5
Blyth and Cuckney	24·9
Leake	24·2
Southwell	23·8
East Retford	23·3
Bingham	22·1
Kingston and Ratcliffe	19·4
Total Rural Districts	27·0

In the foregoing tables the birth-rates of the different districts in the County are given for the year 1908, and also for the past 10 years. From these it will be clear that the distinction into Urban and Rural Districts does not separate the high birth-rates from the low; but that the high birth-rates prevail in the coal mining and manufacturing portions of the County, whether they are denominated Urban or Rural, and the low birth-rates in the agricultural and residential portions.

It might be inferred from these tables that the fertility of married women is greater in Urban than in Rural areas. The researches of the Registrar-General show that the fertility of women living in the country districts is from 5 to 8 per cent. greater than that of women residing in towns.

It must, however, be observed that the continuous migration of young persons from the country has considerably reduced the normal proportion of the younger married women and, therefore, has reduced the average birth-rate in Rural Districts.

It might be hastily assumed that the high birth-rates prevailing in the mining districts and in certain Urban areas are more effective in the maintenance of population than the moderate birth-rates recorded in Rural and other districts; but such is not always the case. In a previous Report the subject was fully discussed, and a series of Tables was published showing the effect of child mortality on the numbers of the population. From those Tables it was deduced *that moderate birth-rates associated with low mortality among the children are more effective in the up-keep of population than are high birth-rates associated with excessive child mortality.*

Deaths.—The number of deaths registered in the County in 1908 was 4,367, compared with 4,550 in the previous year. *Of these, 1,176, or more than one-quarter, occurred in infants under one year of age.*

The *gross* death-rate per 1,000 of the population of the County for 1908 was **13·0**, which, with the exception of 1906, is the lowest rate during the past 17 years.

When the necessary adjustment has been made for deaths in Public Institutions, as explained on page 15, the *nett* number of deaths belonging to the County becomes 4,460, and the *nett* death-rate 13·3.

It has not been possible to obtain the death-rate for the Administrative County before the year 1891. For comparison of the death-rates in earlier years, it is necessary, therefore, to have recourse to the Registration County, the composition of which is described upon page 5. These rates, including as they do the City of Nottingham, are no doubt slightly higher than those for the County alone, if we could obtain them, but they are the only means of comparison available.

Registration County.		Administrative County.	
10 year Periods	Death Rate (at all ages and from all causes)	5 year Periods.	Death Rate (at all ages and from all causes)
1861–1870	21·7	1891–1895	16·6
1871–1880	21·4	1896–1900	16·2
1881–1890	19·6	1901–1905	14·2
1891–1900	17·7	**1906–8 .. ..**	**13·2**

If the death-rate prevailing in the ten years 1861–1870 had continued during the year 1908, *there would have been 2,913 additional deaths, for that year alone, of persons now living.*

The Urban death-rate was **12·8** and the Rural **13·4**. Thus for the sixth year in succession the "uncorrected" Rural death-rates have exceeded the Urban. A reference to Table XII. will show that this phenomenon is not confined to Nottinghamshire. The death-rate of the 142 "*Smaller Towns*" in England and Wales, as published by the Registrar-General, is lower by 0·7 per 1,000 than the death-rate of "England and Wales less the 218 towns," that is approximately, *Rural England.*

The higher death-rate of the Rural Districts is mainly owing, as stated in previous Reports, to the difference in age and sex constitution between the populations of the Urban and of the Rural districts. The Rural districts contain a larger proportion of males and of old persons, amongst whom the death-rates are higher.

By making the appropriate *corrections for the age and sex constitution* of the Urban and Rural districts, assuming that the proportions of each sex remain the same as at the Census of 1901 (and there is no information since that date,) the gross rates are altered as follows:—

	Uncorrected.			Corrected for Age and Sex.		
	Whole County.	Urban.	Rural.	Whole County	Urban.	Rural.
1901	14·9	15·4	14·3	14·3	15·5	12·8
1902	14·4	14·8	13·8	13·8	14·9	12·4
1903	14·0	13·8	14·3	13·4	13·9	12·8
1904	14·4	14·2	14·6	13·8	14·3	13·1
1905	14·3	13·9	14·9	13·7	14·0	13·4
1906	12·9	12·9	13·0	12·3	13·0	11·7
1907	13·6	13·3	14·2	13·06	13·4	12·8
1908	13·0	12·8	13·4	12·49	12·9	12·08

It is then seen that the Rural death-rate with the necessary corrections is always lower than the Urban; and it will also be noticed that during the last eight years there has been a smaller variation in the Rural death-rate than in the Urban.

In 1908 the corrected rates are remarkably uniform for the Urban and Rural districts. When further corrected for deaths in Institutions, the *nett* death-rate corrected for age and sex becomes:—Whole County, 12·78; Urban, 13·23; Rural, 12·26.

The need for a correction of this kind to compensate for the different proportion of young and old persons, and of males and females in town and country, before any deductions of real value can be drawn from the rates of mortality is urged more and more strongly year by year by the Registrar-General, so much does the rate of mortality vary in the two sexes and at different age periods. The exodus of the young and vigorous,

and especially of females from the Rural districts into the Urban is proceeding at an ever increasing rate; and it is probable that the Census of 1911 will show that the factors for correction for Age and Sex Distribution now being used are too low, and that we are already making too small an allowance for the change that is taking place.

It is further necessary to make additional corrections by the exclusion of the deaths of non-residents registered in the various districts, and the inclusion of the deaths of residents who have died in Asylums, Workhouses, and Hospitals outside the districts. The result is the *nett* death-rate in contradistinction to the *gross* death-rate.

The necessity of making these troublesome corrections is well illustrated in such a case as that of Bingham, in which district the County Asylum is situated. Of the 238 deaths registered in the Bingham Rural district, 73 took place in the Asylum and Workhouse, and of these only eight belonged to the Bingham Rural district. Consequently 65 deaths were deducted, thus reducing the Bingham death-rate from 16·83 to 12·73 per 1000.

In order to facilitate these somewhat troublesome corrections, the County Medical Officer has again, through the kindness of the Officers concerned, obtained the lists of deaths of residents in the County from the County Asylum, the Nottingham General Hospital, and the Basford Workhouse, and distributed them to the Medical Officers of Health of the various Sanitary districts. In addition, the deaths in the Mansfield Hospitals and Workhouse, the Newark Hospital and Workhouse, the Retford Hospitals and Workhouse, the Sheffield General Hospital, and other Institutions, have been distributed by the Medical Officers concerned. The result is that the statistics are more accurate than in previous years, and the nett deaths are now 93 more than the total deaths registered in the County.

For many years the deaths of persons belonging to a District which took place in Institutions, such as Workhouses, Hospitals, and Asylums, outside a District were excluded from the death-rate of that District, and also from the death-rate of the District in which the Institution was situated. Consequently, the death-rates generally were *below* the actual truth. In the face of this fact the great fall in the death-rate during the last few years is of even more significance. I am glad to say that source of error has now been eliminated.

There must always remain a few deaths, especially among the better classes, which take place at the Sea-side, at Health Resorts, or in London, and which are not referred to their proper Districts; but they are too few to seriously affect the statistics.

The following table gives the death-rates of the different Districts corrected, as just mentioned, for the deaths in Public Institutions :—

NETT DEATH-RATE CORRECTED FOR DEATHS IN PUBLIC INSTITUTIONS FOR 1908, PER 1,000 OF THE POPULATION.

URBAN DISTRICTS.	RATE
Arnold	16·2
Mansfield Woodhouse	15·6
Sutton-in-Ashfield	14·7
Worksop	14·4
Huthwaite	14·1
Mansfield	13·8
Hucknall Torkard	13·5
East Retford	12 8
Newark	12·8
Eastwood	12·4
Kirkby-in-Ashfield	12·1
Carlton	12·0
Warsop	12·0
Beeston	10·9
West Bridgford	6·2
Total Urban Districts	13·1

RURAL DISTRICTS.	RATE
Misterton	15·1
Blyth and Cuckney	15·0
Southwell	14·7
Newark	13·7
Skegby	13·6
Basford	13·5
East Retford	13·3
Leake	12·9
Bingham	12·7
Stapleford	12·6
Kingston and Ratcliffe	7·2
Total Rural Districts	13·6

In order to eliminate as far as possible temporary and accidental variations it is always useful to estimate the death rate for a period of years; and it is usual to take 10 year periods, where possible. Much valuable information is thus gained. For this purpose it is necessary to employ the gross or crude death-rates, because in the earlier portion of the past 10 years the corrections just described for deaths in Public Institutions, and for age and sex distribution were not made.

AVERAGE GROSS DEATH-RATE FOR THE TEN YEARS, 1898-1907 PER 1,000 OF THE POPULATION.

URBAN DISTRICTS.	RATE
Huthwaite	17·2
Worksop	17·0
Newark	16·8
Mansfield	16·5
Sutton-in-Ashfield	16·0
Mansfield Woodhouse	15·9
Hucknall Torkard	15·4
Warsop	15·0
East Retford	14·5
Eastwood	14·5
Arnold	13·9
Kirkby-in-Ashfield	13·5
Beeston	12·1
Carlton	11·6
West Bridgford	8·14
Total Urban Districts	14·8

RURAL DISTRICTS.	RATE
Bingham	16·8
Southwell	15·9
Misterton	14·9
East Retford	14·2
Blyth and Cuckney	14·1
Basford	13·9
Leake	13·9
Skegby	13·7
Stapleford	13·6
Newark	13·5
Kingston and Ratcliffe	10·6
Total Rural Districts	14·6

Zymotic or Epidemic Death-Rate.—The death-rate from the principal Epidemic diseases, namely, Small-Pox, Scarlet Fever, Whooping Cough, Fever (comprising Typhus, Typhoid, and Continued), Diarrhœa or Epidemic Enteritis, Diphtheria, and Measles, was 1·01 per 1,000 for the whole County. The Urban rate was 1·12, and the Rural 0·83. This is the usual classification.

The deaths from Diarrhœa, and Epidemic Enteritis form a very large proportion of the Zymotic deaths; and, consequently, the Zymotic death-rate is mainly influenced by them. But, unfortunately, the deaths from disorders of the intestine, of which Diarrhœa is the chief symptom, are arbitrarily divided into classes, some of which, such as Epidemic or Zymotic Enteritis are included among the Zymotic deaths, and others such as Enteritis, Muco-Enteritis, and Gastro-Enteritis are excluded.

This arbitrary and uncertain method of classification makes the Zymotic death-rate of very little value as an index of the prevalence of epidemic diseases.

Infantile Death-Rate.—The rate for the whole County in 1908 was 119 per 1,000 births, being the lowest rate hitherto recorded for this County. For the Urban Districts the rate was 128, and for the Rural 102. The weather, which so largely influences the number of deaths from Infantile Diarrhœa, was favourable to a low mortality. The only hot weather occurred in the last fortnight of July, the first few days of August, and the last few days of September. The first fortnight of July was "very unsettled," with "more or less rain nearly every day." The mean temperature of August was one degree below the average, both days and nights being equally cold. After the 19th unsettled weather set in, and lasted for the rest of the month." "September was a dull and showery month." The weather, although a contributing cause, cannot be considered the sole reason for the infantile mortality rate of 1908 being the lowest known in this County. There has been a gradual and continuous drop for many years, but a sudden drop since the year 1905, when the public conscience first became aroused by an acute and serious agitation, as shewn by the Infantile Mortality Conferences of 1906 and 1908.

In order to trace back the rate of Infantile Mortality for a long period of years, it is necessary to have recourse to the Registration County, since the statistics of the Administrative County do not extend beyond the year 1891. The Registration County, as explained upon p. 5, includes the City of Nottingham, the Borough of Ilkeston, and other portions of Derbyshire, and the Infantile Mortality rate is, therefore, higher than the rate for Nottinghamshire alone.

Infantile Mortality.

Registration County. Years.	Deaths under One Year per 1,000 Births.
1861—1870	170
1871—1880	164
1881—1890	154
Administrative County. Years.	
1891—1900	146
1901—1907	133
1908	119

But great and satisfactory as the drop in the Infantile Mortality rate has been, it still remains much higher than it need be, and higher than the rate for "England and Wales less the 218 Towns." This portion of the kingdom, which corresponds with the Administrative County more closely than any other for which the Registrar-General publishes statistics, had an Infantile Mortality rate of only 110 in 1908, or 9 per thousand less than this County.

On the other hand, the Registration County of Notts. in 1907 had the highest Infantile Mortality rate of any County in England. The Registrar-General's observations * are worth notice, and are given below.

"Among Counties with populations of more than 100,000 "persons, the highest and lowest proportions in the year 1907 "of deaths of children under one year to 1,000 births were as follows :—

Registration Counties with Highest Rates of Infantile Mortality.	Deaths of Children under 1 year per 1,000 Births.	Registration Counties with Lowest Rates of Infantile Mortality.	Deaths of Children under 1 year per 1,000 Births.
Nottinghamshire ..	146	Sussex	89
Lancashire	138	Surrey	88
Glamorganshire ..	136	Cambridgeshire ..	88
Durham	135	Herefordshire	87
Staffordshire	133	Buckinghamshire ..	84
West Riding of Yorkshire	131	Berkshire	83
North Riding „ „	127	Hertfordshire	80
Warwickshire	126	Wiltshire	77
Monmouthshire ..	126	Dorsetshire	77

"It has been frequently pointed out that those divisions "of the country that comprise the districts of the mining, "textile, and pottery industries show very badly in the Tables

* 70th Report, p. xliii.

"of Infantile Mortality; not only are the rates excessive in "many of the large boroughs of these districts, but they are "equally so in the majority of the smaller towns."

"The climatic conditions in the Summer of 1907 were "exceptionally favourable to infantile life."

The Infantile Mortality rate for the Administrative County for 1907 was 127.

The causes of the diminution which has already taken place are not far to seek, and may be found in the increased public interest, in the increased number of District Nurses, and in the co-operation of many of the Midwives in distributing to young mothers the leaflet on infant feeding, drawn up by the County Medical Officer.

But there is urgent need for much more to be done. The chief need is the appointment of several lady Health Visitors; and the next is the adoption of the Notification of Births Act. But the latter will not be sanctioned until provision is made for following up the notifications by the work of Health Visitors.

A high rate of Infantile Mortality is not an inevitable accompaniment of modern civilization, of poverty, or of density of population. This is conclusively shewn by the figures for the year 1906, contained in the 42nd Annual Report of the Governors of the Peabody Donation Fund, relating to the health condition of the **19,737 residents** of the buildings owned by the Trust.

"It is pointed out in the report that the birth-rate among the residents was equal to 30·5 per 1000, exceeding the general London rate by 3·8; that the death-rate did not exceed 12·5 per 1000, and was 3·2 below the mean rate in London; and that *the rate of infant mortality was only 84·9 per 1000 births, against 133·0 in the whole of London.* It appears that the buildings occupy nearly 33 acres in various parts of the metropolis, and that the mean density of population on this area is equal to 603 persons per acre, or nearly ten times the mean density throughout London."

The Infantile Mortality Rate of these Peabody Buildings in London was lower than the rate for any Urban District in this County for the same year, or for 1908, except West Bridgford; and lower than any Rural District in 1906, except Southwell, Leake and Kingston. In 1908 there are 6 Rural Districts with lower rates than the one for the Peabody Buildings in 1906.

The remarkable inequalities of the Infantile Mortality Rate in Urban Districts of about the same population, suggest that

there are local conditions which are removable. Thus Mansfield with a population of 32,500 has an Infantile Mortality Rate of 137, whereas the adjoining town of Sutton-in-Ashfield with a population of 19,929 has a rate of 166! Arnold with a population of 10,624 has an Infantile Mortality Rate of 171, whereas Beeston with a population of 11,844 has a rate of only 100. Similarly in the Rural Districts—Skegby and Basford have rates of 169 and 130 respectively, whereas Blyth and Cuckney and Newark Rural have rates of 70 and 64 respectively. Indeed, Skegby *Rural* District has a higher Infantile Mortality Rate than any *Urban* District, except Arnold.

It would appear from the following Tables that in this County, the mining and manufacturing districts, whether called Urban or Rural, have high infantile death-rates and the purely agricultural districts have low rates.

RATE OF INFANTILE MORTALITY FOR 1908, PER 1000 BIRTHS.

URBAN DISTRICTS.	RATE.
Arnold	171
Sutton-in-Ashfield	166
Huthwaite	159
Kirkby-in-Ashfield	139
Hucknall Torkard	137
Mansfield	137
Mansfield Woodhouse	137
Carlton	115
Warsop	114
Worksop	113
Eastwood	102
Beeston	100
East Retford	93
Newark	88
West Bridgford	58
Total of Urban Districts	128

RURAL DISTRICTS.	RATE.
Skegby	169
Basford	130
Southwell	98
Misterton	96
Stapleford	89
Bingham	84
East Retford	79
Leake	76
Blyth and Cuckney	70
Newark	64
Kingston and Ratcliffe	0
Total of Rural Districts	102

AVERAGE RATE OF INFANTILE MORTALITY FOR THE TEN YEARS, 1898–1907, PER 1000 BIRTHS.

URBAN DISTRICTS.	RATE.
Huthwaite	196
Worksop	170
Eastwood	167
Mansfield Woodhouse	166
Sutton-in-Ashfield	166
Hucknall Torkard	159
Arnold	156
Mansfield	150
Kirkby-in-Ashfield	147
Warsop	144
East Retford	132
Carlton	131
Newark	130
Beeston	120
West Bridgford	75
Total of Urban Districts	150

RURAL DISTRICTS.	RATE.
Skegby	154
Stapleford	142
Basford	137
Misterton	133
Blyth and Cuckney	115
Newark	111
Southwell	106
East Retford	105
Bingham	96
Leake	67
Kingston and Ratcliffe	50
Total of Rural Districts	122

The next Tables, giving the deaths of legitimate and of illegitimate children, shew that the lesser degree of care bestowed upon illegitimate children results in their dying at the rate of 248 per thousand, compared with 114 per thousand for legitimate children!

The experience that the mortality of illegitimate children is *approximately double* that of legitimate children is general throughout England and is one of the many evil results of illegitimacy and its antecedent immorality.

THE NUMBER OF DEATHS OF LEGITIMATE AND ILLEGITIMATE CHILDREN under one year of age, together with the number Certified and Uncertified, for each District in the year 1908.

URBAN DISTRICTS.	Deaths under 1.	Legitimate.	Illegitimate.	Certified.	Uncertified.
Mansfield	143	130	13	136	7
Newark	42	32	10	42	..
East Retford	31	25	6	30	1
Arnold	57	47	10	57	..
Beeston	33	33	..	33	..
Carlton	52	47	5	49	3
Eastwood	14	14	..	14	..
Hucknall Torkard ..	78	73	5	70	8
Huthwaite	28	27	1	28	..
Kirkby-in-Ashfield ..	76	69	7	76	..
Mansfield Woodhouse ..	57	54	3	57	..
Sutton-in-Ashfield ..	120	107	13	119	1
Warsop	18	18	..	18	..
West Bridgford	11	11	..	11	..
Worksop	72	70	2	72	..
TOTAL	832	757	75	812	20
RURAL DISTRICTS.					
Basford	144	134	10	141	3
Bingham	24	22	2	24	..
Blyth and Cuckney ..	9	9	..	7	2
East Retford	29	28	1	29	..
Leake	7	7	..	7	..
Misterton	11	10	1	10	1
Newark	13	13	..	13	..
Skegby	38	35	3	38	..
Southwell	42	41	1	41	1
Stapleford	27	23	4	26	1
Kingston and Ratcliffe ..	..	..	..	..	..
TOTAL	344	322	22	336	8

The small number of uncertified deaths, namely 28, among the 1176 deaths of infants under the age of one year, shews that inability to secure the services of a fully qualified medical practitioner during some part of the child's fatal illness has very little to do with the number of infantile deaths. Whether the doctor is called in soon enough and whether the advice of unqualified persons is followed until too late, the available statistics do not reveal.

A large, though varying, proportion of the infants' deaths is constantly attributed to prematurity and to debility from birth. To remedy these conditions, care and attention are required by the mother *during pregnancy*; the chief among these being *rest from factory work after the fifth month of pregnancy, suitable and abundant diet*—but not overfeeding—and *abstinence from alcohol.*

Another considerable proportion of infants' deaths may be attributed primarily to the want of **breast feeding.**

When recourse is had, of necessity, to artificial feeding, the first thing to recognise is that *the proper methods are not revealed to the poor mother by instinct, but require to be taught and to be learned.*

Several thousand leaflets on Infant Feeding have been distributed gratuitously, chiefly through the instrumentality of the certified midwives, who have attended about half the births in the County; but the limits of the utility of leaflets are soon reached. There can be little question that the most efficient remedy is the employment of Health Visitors, which will be necessary wherever the Notification of Births Act is adopted.

The adoption of the Notification of Births Act in East Retford and in Mansfield appears to have worked smoothly, and to be reducing the infantile mortality as well as benefiting the mothers.

It would be very much in the public interest, and tend greatly to reduce the existing useless loss of life, if the Notification of Births Act were adopted, with the necessary employment of Health Visitors, *in all districts having a higher Infantile Mortality rate than that shewn by the Registrar-General to exist in "England and Wales, less the 218 towns," which in the year 1908 was 110.*

The following extracts from the Annual Reports of the Medical Officers of Health of the different Districts shew what is already being done, and also in what directions they consider improvement necessary:—

Dr. Irvine (Huthwaite) writes :—"I consider the best "means of reducing the high death-rate in young children "would be the employment of a Health Visitor, or a Nurse, "who could act in a similar way." . . . "Perhaps a time "will come when there will be simple, thorough, and common-"sense teaching in the laws of health and infant care implanted "in early life and made the chief object of every girl's education. "In order to live healthy lives, advantage must be taken of the "public elementary schools as a necessary medium for the "education of the public."

Dr. Mackenzie (Kirkby-in-Ashfield) writes :—"There were "543 births in the district; of these 526 were legitimates, 69 "of them died, giving a death-rate of 131·1 per 1,000; 17 were "illegitimates, of which 7 died, giving the very high death-rate "of 411·7 per 1,000; had the same mortality existed amongst "the legitimates, nearly half the children born in the district "would have perished."

"Of the 15 infants dying of Diarrhœa, no less than 13 "were hand-fed, making a percentage of 86·6."

"The appointment of a hospital-trained nurse is urged, "whose duty would consist of visiting and superintending the "rearing of infants. It is explained that such a nurse would "give her whole time exclusively to improving the home life "of young infants, feeding and clothing, and above all, education "in the duties of motherhood of the scores of women here; "mothers of healthy and lusty born children, of whom, alas! "one can predict with every assurance that by the end of the "year not a few will have succumbed to improper feeding and "exposure. The children's nurse should be in constant touch "with the less robust, and with babies of careless mothers "from their birth."

"Although a gratifying reduction has taken place since "1900, when the infantile mortality stood at 204·4 per 1,000 "births, there is still much room for improvement. We should "never rest content until the death-rate falls considerably below "100 in this district, For this very laudable object no better "means could be adopted than the appointment of a well-trained "Health Visitor."

"Tbe East Ward, with its high average birth-rate, shows "by far the lowest infantile death-rate."

"The inhabitants of the East Ward are exactly the same "as the West and South Wards, but sanitary improvements "are much more advanced in the East Ward. Scavenging was "first done here by the Council, more pails and privy closets "have been converted into water closets, all the private streets

"have been completed in this Ward and taken over by the "Sanitary Authority. So also are public sewers and surface "water drainage much better than is the case in the other "Wards. In the matter of house accommodation there are "fewer houses in the East Ward than in the West and South "Wards with low rents and only two or three rooms, where "the out-of-work and casual labourer live."

Dr. Nesbitt (Sutton-in-Ashfield) writes:—"One hundred "and seventeen deaths were registered in the district under "one year of age, equivalent to an annual mortality of 166 per "1,000 births—the highest rate recorded with one exception "since 1903." . . . "A Medical writer says: 'The main "'fact of Infantile Mortality is this—not that children die "'because the race is degenerating, not that they die because "'their parents cannot afford the small quantity of food they "'require, but because they are improperly fed.'"

Dr. Garrett (Worksop) writes:—"Until recently no special "effort has been made in the district to deal with the question "of Infantile Mortality. This year the Worksop Ladies' Health "Association was formed, under the presidency of Her Grace "the Duchess of Portland, and a committee of ladies, of which "Mrs. E. Latchmore, M.D., is the Secretary, and Mrs. Daffen "Treasurer. A successful meeting was held in December, at "which the Duchess presided, when it was decided to begin "work at once."

"The work of the Association is done by two qualified "nurses, and consists in visiting the houses where there are "infants and where it is thought their help will be desirable, "to give advice and assistance to mothers as to the best "methods of feeding and clothing their infants, pointing out "the advantages of fresh air and cleanliness, and all other "details relative to the hygiene of the home."

"The Association is maintained by voluntary contributions "and as yet the work is carried on under a temporary arrange-"ment, but it is hoped that funds will be forthcoming to enable "the committee to carry on the work permanently."

Dr. Manners-Smith (East Retford Borough), writes:—"This Act (Notification of Births Act, 1907), having been "adopted by the Local Authority in May, 1908, it became part "of my duty as Medical Officer of Health, to make the necessary "registrations, and supply the Health Visitor with all necessary "information. This enables her to get in touch at once with "cases which require her services, and I am convinced that "much good has already emanated from the adoption of the "Act, and as time goes on, the good effects will be increasingly "demonstrated."

Dr. Knight (Carlton), writes:—"The Notification of "Births Act will probably be in force before long, and it will "be interesting to watch its effects. It is doubtful whether "mothers, in many instances, are prepared for the responsi- "bilities connected with child rearing; and, to such, helpful "advice should be of the greatest use. Above all things, it is "essential that the food on which the life of the little ones "depends should be of a suitable character. In manufacturing "districts where females are largely employed in factories, etc., "children do not get the maternal care which is their due, and "the mothers themselves often suffer in health, and bring "forth weakly babies."

Dr. Jones (Hucknall Torkard), writes:—"I quite agree "with the opinions expressed by other Medical Officers, as to "the great benefit that might reasonably be expected from the "appointment of a Lady Health Visitor, whose duties would "be to visit the mothers, more especially those of the poorer "classes, in their homes, to advise and instruct as to the "general management and feeding of young children."

"I have no doubt whatever that the general adoption of "the Notification of Births Act, will have very beneficial "effects on the infantile mortality of the future."

Midwives Act, 1902.

This Act, "to secure the better training of Midwives and to regulate their practice," came into operation, except as otherwise provided, on April 1st, 1903. *The final portion will come into operation on April 1st, 1910.*

It will be easily understood that an Act of this kind was required, when it is stated that in 1908 forty-three per cent. of all the births in this county were attended by certified Midwives without a doctor. In addition, there are a large number of births, of which there is no record, attended by uncertified Midwives; and a very large number attended by certified Midwives under the direction of a doctor, when the cases are not entered in the Midwives' registers. It is probably, therefore, not far from the truth that women accustomed to act as Midwives, have been in some way associated with 60 or 70 per cent. of all births in this county, or even more. In the last Report of the Registrar-General, for the year 1907, it is shewn that 3,510 women died from causes associated with pregnancy or child-bearing; and of these, 1,455 deaths were due to "Puerperal Fever" in one or other of its forms, and were, therefore, preventable. It cannot be doubted, too, that many of the other deaths might have been prevented by greater skill and care.

In this county, eleven deaths were certified as due to some form of Puerperal Fever (but there is reason to think that number does not include all the cases), and, in addition, thirteen deaths were certified as due to other diseases and accidents of parturition.

The operation of Section 2 of the Midwives Act, which made provision for existing Midwives being placed on the Roll, expired on March 31st, 1905.

The first complete Roll was published by the Central Midwives Board in July, 1905, and contained 22,308 names. The fifth Roll was published at the end of June, 1909, and contains 27,234 names, an increase of 4926.

In the year, "since the publication of the 1908 Roll, "1901 names have been added to the Roll, but these represent "only about 1100 *practising* Midwives. The names of 60 "women have been removed on their own application, while "58 have been removed under the penal powers of the Board."

In this county nine charges of negligence and misconduct have been investigated by the Local Supervising Authority, during the years 1906-8 inclusive, under the powers conferred upon them by Section 8 (2) of the Midwives Act; and in eight instances a *primâ facie* case has been found, and the Midwives have been reported to the Central Midwives Board. The names of seven of these women have been removed from the Midwives Roll by the Central Midwives Board, and the eighth was "severely censured." The latter Midwife was suspended from practice in 1908, and a fresh charge of negligence was contemplated; but she surrendered her certificate on the ground of "ill-health," and her name was removed from the Roll, thus obviating any further proceedings.

Another Midwife in 1908 surrendered her certificate on the grounds of ill-health and was taken off the Roll, thus rendered any further action unnecessary.

In the course of the year 1908, under the powers conferred upon the Local Supervising Authority by Section 8 (3) of the Midwives Act, five Midwives were suspended from practice, for periods varying from a few days to a month, because they had contravened the Rules laid down by the Central Midwives Board, for the purpose of preventing the spread of infection.

Thirty-one other Midwives ceased practice for two or three days for the purpose of carrying out disinfection under the supervision of the Inspector of Midwives, after being in attendance upon cases of Puerperal Fever, or other cases of a

septic nature capable of spreading infection. In no instance, so far as is known, has a Midwife carried infection to another patient after she has thoroughly disinfected herself, clothing, and appliances to the satisfaction of the Local Supervising Authority; though in several instances the infection had already been spread to two or three patients when first notified to the Local Supervising Authority.

The number of Midwives who, in compliance with section 10 of the Midwives Act, have notified to the Local Supervision Authority (viz., the Health Committee of the County Council) their intention to practise in this County each year is shown in the following table :—

Year.	Number of Midwives.
1903	40
1904	93
1905	184
1906	181
1907	183
1908	177

The printed list for 1908, giving the full names and addresses of the 177 Midwives who notified their intention to practise was distributed as early as possible this year to all Midwives, Doctors, Medical Officers of Health, and District Councils in the County, in order that it might be known as widely as possible what women were authorized to practise as Midwives.

There were in the County in 1908, according to the Roll for 1909, 217 persons who possess the Certificate of the Central Midwives' Board, and are on the Midwives' Roll. Of these, 63 did not notify. There were 11 resident in Workhouses, and therefore exempt from the supervision of the Local Authority. Fifteen have ceased to practise, 28 are not practising *as Midwives*, 3 have left the County, and 8 are at present unaccounted for.

In addition to the Certified Midwives, there are in this County a considerable number—probably 100, or more—Midwives who possess no certificate. These women cannot be prevented from practising UNTIL APRIL 1ST, 1910, provided they do not call themselves Midwives, or profess to be specially qualified.

They still have, therefore, eight months in which they can continue to practise without any restriction; but *after that date active steps will be required to prevent any uncertified*

woman practising except as a Monthly Nurse under the immediate supervision and direction of a doctor. It is much to be hoped that in carrying out this work the Local Supervising Authority will receive the active sympathy and support of public opinion; for, hitherto, *the want of an enlightened and educated public opinion* has been a serious source of weakness in the administration of what must prove in the end to be a most beneficent Act.

In the year 1908, about 4,290 confinements out of 9,818 were attended by certified Midwives on their own responsibility, without a doctor. That is 43 per cent. This number does not include the confinements attended by uncertified Midwives on their own account; or the cases attended by certified Midwives "under the direction of a doctor." These latter amount to a very large number. It is clear, therefore, that Midwives in some capacity are associated with a very large majority of the births; and, consequently, their cleanliness, general skill, and conduct, cannot be a matter of indifference.

The whole of the 177 Midwives who notified their intention to practise in this County in 1908 have been visited by the Inspector of Midwives, who has inspected their registers, bags of appliances, &c., and investigated their mode of practice, as required by the Rules of the Central Midwives Board. The majority have been inspected once a quarter, and a few, who require special attention, at more frequent intervals. Most of the trained Midwives working under Committees are only inspected every six months.

A leaflet on Infant Feeding is supplied gratuitously to Midwives, for use in their practice.

A large number of the Midwives inspected carry out the Rules to the best of their ability, and show a very distinct improvement in their mode of practice and in general cleanliness. A considerable minority give a very great amount of trouble by evading the Rules, by want of cleanliness, and general unsatisfactory conduct. The most serious failing of the untrained Midwives is intemperance. It is seldom cured; and at the same time it is very difficult to obtain sufficient evidence to ensure the removal of their names from the Roll. The practice, still sadly too common, of giving spirits to Midwives during their attendance at a confinement is most pernicious.

During the year 1908, thirty-six cases of Puerperal Fever of varying degrees of severity occurring in the practice of certified Midwives came to the notice of the Local Supervising

Authority, and further details are given on pages 41-44. Each case was investigated by the Inspector of Midwives and the County Medical Officer, and arrangements made for efficient disinfection. It is most satisfactory to be able to state that the disinfection proved to be efficient, and that in no case has a Midwife, after disinfection to the satisfaction of the Local Supervising Authority, carried infection to a second case.

The following table shows the number of notices, &c., received from the Midwives, in accordance with the Rules of the Central Midwives Board. Sixty-six notices (compared with 56 last year) were not sent at the proper time, but were brought away by Miss Lessey as a result of her visits of inspection.

Year	1904	1905	1906	1907	1908
Records of sending for Medical help...	44	177	282	282	340
Notices of still-birth	3	68	123	100	101
Notices of death of child before arrival of doctor	0	12	19	15	21
Notices of death of mother before arrival of doctor ...	0	0	0	0	1
Changes of address notified to the Central Midwives Board	0	51	35	45	55
Changes of name notified to the Central Midwives Board ...	0	0	0	5	4
Deaths of Midwives notified to the Central Midwives Board	...	...	...	...	3
	47	308	459	447	525

The duty of inspecting Midwives is essentially a woman's work, and has been most conscientiously and thoroughly performed by Miss Lessey. By many of the more satisfactory Midwives she is looked upon as a friend and adviser, and in all respects her influence has been beneficial. Unfortunately, during the slippery weather at the end of December, Miss Lessey slipped off the curb-stone and sustained a fracture of the thigh, which has incapacited her for several months. On February, 6th, 1909, Miss Simmons was appointed Deputy Inspector, and it is hoped that before long Miss Lessey will be able to resume work.

In view of Section 1, Sub-section (2) of the Midwives Act, coming into operation on April 1st, next year, and making it illegal for an uncertified woman "habitually and for gain to attend women in child-birth, otherwise than under the direction of a qualified medical practitioner," and of the consequent

possibility of a serious dearth of Midwives, the Privy Council appointed a Departmental Committee to consider the whole question and take evidence.

On March 24th, the County Medical Officer, by the direction of the Health Committee, gave evidence before that Committee at considerable length. No doubt, the evidence taken by the Committee will eventually be published, and their Report will be awaited with much interest.

A simple illustration will show how inadequate is the ordinary law as commonly administered, to protect women during child-birth, from the fatal results of unskilled or careless treatment.

On one day, two inquests were held upon women who had died during child-birth, and who had been attended by two women who had each been taken off the Midwives Roll, by the Central Midwives Board on account of misconduct! In neither case was a doctor engaged. In one, death took place before the arrival of a hastily summoned doctor; in the other, the doctor found the woman dying and beyond hope of recovery. In neither case was the ex-Midwife in any way censured. Such instances render it very difficult for the Local Supervising Authority to convince women that it is worth while to be certified, or to carry out the Rules of the Central Midwives Board.

A considerable number of the certified Midwives who have had no sort of training, and to whom the Central Midwives Board were compelled by the Midwives Act to grant certificates, on the ground that these women had been in *bonâ fide* practice for at least a year before the Act was passed, are quite incompetent, drunken, dirty, and untrustworthy. But it has been worse than useless to take steps to have them taken off the Midwives Roll, so long as they could continue to practice, as they would then not be subject to any control whatever. After 1910, the position will be somewhat different; but if many incompetent and unsatisfactory Midwives are taken off the Roll, it will become necessary to see that properly trained and certified women are available to take their places. For that reason, the following appeal has been issued.

TRAINING OF MIDWIVES: AN URGENT NEED.

We venture to appeal to you on behalf of the women of the poorer villages and districts of our County under circumstances which we are sure will have your sympathy.

In less than twelve months, by the operation of the Midwives Act, a large number of uncertified women at present acting as Midwives will not be allowed to continue to practise; these women chiefly attend the very

poor, who cannot afford a Doctor, and who will be left without anyone to help them in the hour of their direst need, unless the number of properly trained and certified Midwives can be rapidly increased. We are informed that there are only 56 such trained Midwives now practising in the County, and that this number is increasing but *very* slowly, whilst the population is growing quickly. In addition to these properly qualified Midwives, there are 120 quite untrained women who were granted certificates because they were in *bonâ fide* practice before the Act came into operation ; this number not only can never increase, but is rapidly diminishing by death, by resignation, and by removal from the Roll on account of misconduct, gross incompetence, or drunkenness. And yet, we learn, that out of a total of 9,818 births in the County in 1908, as many as 4,290 were attended by Midwives on their own responsibility, not counting those where a Doctor was engaged, or those attended by uncertified Midwives. Of this large total, only slightly over 300 were attended by District Nurses.

There is, therefore, urgent need of a special effort to see that the untrained women, who are dying off and being removed for dangerous incompetence, shall be replaced by trained and properly qualified Midwives. The cost of training a woman in Midwifery alone is £25 to £30; such a Midwife would not be a District Nurse, as she would have to work in places which are too poor to maintain a District Nurse, or where none is available. She would, therefore, in no way compete with the admirable work done by the District Nurses under the various local Associations. Suitable women are now offering themselves for training, but have not sufficient means to pay the cost.

It is found that 30 or more lives of mothers are lost in this County alone every year from the want of properly trained cleanly women to attend them in their confinements ; and at the very least three times that number, who escape death, suffer from permanent ill-health from the same cause. So too, a *large* number of infants die during birth, or shortly after, whose lives would be saved by a little more skill and knowledge, and a far larger number are afflicted in various ways, owing to want of proper attention at the same time.

These facts will give some idea of the vital importance to the community of the prompt provision of such properly qualified help for our poorer neighbours—it is literally a matter of life and death. We ask you to join us in raising a special fund for this purpose. The need for training will be most urgent during the next two years, in consequence of the change in practice to be made by the Midwives Act in 1910, and it is estimated that £200 a year for that period will meet the most serious requirements. The administration of the fund will be entrusted to a Committee to be appointed by the subscribers.

Contributions may be sent at once to E. W. Enfield, Esq., c/o Lloyds Bank, Nottingham (who has consented to act as Treasurer) or to any of the undersigned.

This appeal was signed by the Duchess of Portland, the Lady Belper, the Lady Elinor Denison, Mrs. Hoskyns, and Miss Seely.

ISOLATION HOSPITALS.

There is very little fresh to record for 1908, the chief point being the renewed agreement between the Basford Rural District Council and several of the surrounding Urban Districts which ought to result in their mutual advantage.

In the matter of the provision of Isolation Hospitals, this County for a long time past has been mainly "marking time." It is to be hoped a rude awakening may not come!

The Hospitals already provided have been doing good work during the year. It is, indeed, difficult for those who are familiar with the work that is being done to appreciate the position of those who claim that Isolation Hospitals are of no value in diminishing the amount of infectious disease. It is true there is much difference of opinion in the case of Scarlet Fever, but the more experienced opinion is in favour of the utility of properly equipped and properly managed hospitals.

That well managed Isolation Hospitals are a very great *convenience*, the frequent demand for them on the part of the community is sufficient evidence. But the cost must always be considerable, especially in the absence of *combination to form large areas*. And the dislike to combination is at present insuperable. Yet it is common knowledge that in all departments of manufacture and commerce, combination is the key to success, both as regards efficiency and economy of production. Within strictly defined limits it is equally true of Hospitals.

The following extracts from the Annual Reports for the different districts are chiefly an expression of the needs experienced:—

Dr. Wills (Newark Borough) writes:—"The new Hospital "which was built in 1907 has been of great service in the "management of cases of Diphtheria."

"It possesses three wards, one with a capacity of 8,000 "cubic feet, and two having each a capacity of 4,000 cubic "feet."

"It has a bedroom for two nurses, a bedroom for the care-"taker, and a kitchen, and we have had in use as often as the "temperature allowed it, a good tent, which has been a "serviceable convalescent ward, and a useful provision for a "recreation room for children in warm weather."

"We used it, by the aid of a paraffin stove, until late in "the Autumn. Wind storms rather damaged it, and repairs "had to be made with new walls and roof."

"I think no part of your Hospital is more useful, and I "believe it can be used reasonably for 4 or 5 patients, according "to age."

"The laying on of the town water, the building of an "additional bedroom, the provision of a steam disinfector, made "by Manlove & Alliott, with laundry and mortuary in the same "block, constitutes a great advance."

"On the same site, but at a safe distance, are the huts "you have used in former outbreaks of small-pox. They are "ordered to be ready in case of emergency."

"Beyond this, there is accommodation for poor Consump- "tives at the Union Workhouse."

"The accommodation for Scarlet Fever is in two cottages, "one for the caretaker, and another containing four bedrooms, "a kitchen and scullery, which is used for four patients."

"The site is in the Southwell Rural District on the "Muskham Main Road, near the Trent, and about a mile and "a half from the Market Place."

"It is desirable to complete the Barnby Road Hospital as "soon as possible, by the erection of a caretaker's house, "because at present the accommodation for the staff is very "limited and inconvenient, there being no place for the meals "of Nurses. The plan for the house has been considered, but "the work has been delayed by other important matters, such "as the steam disinfector and laundry."

Dr. Forbes (Eastwood) writes :—"Eastwood, in common "with other towns, suffers from a lack of sanatoria for dealing "with Consumption. It is extremely difficult to get a patient "without means into a Sanatorium, and I think the time has "arrived when this should be made a national question, and "adequate arrangements be made for dealing with the disease "in every district."

Dr. Broadbent (Newark Rural) writes :—"The negotiations "between Newark and our Rural District have fallen through, "and I am afraid, for the present, there is no chance of an area "round Newark being made for an Isolation Hospital. In my "opinion, this is much to be regretted."

Dr. Littlewood (Skegby) writes :—"Although the need of "an Isolation Hospital in this district has not up to now been "over-pressing, still the cases of Scarlet Fever which have "occurred in the parish of Skegby might have been considerably "less had one been provided. The prospective growth of "Blidworth, however, due to the opening of collieries in the "immediate neighbourhood, renders it desirable that an "Isolation Hospital be erected without undue delay."

NOTIFICATION OF INFECTIOUS DISEASES AND REMOVAL TO HOSPITAL.

During the year 1908, the number of cases of Infectious Disease notified was 1,736, *which is fewer than for any year since 1902*, when the population was smaller by 49,266. At the same time the proportion removed to Hospitals for isolation and treatment is much higher than ever before, namely 19·7 per cent. compared with 15·1 per cent. last year. This is

highly satisfactory as shewing both the care of the Medical Officers of Health, the diminishing opposition of the family doctor, and the growing appreciation of the value of Isolation Hospitals in the eyes of the people.

The incidence of Infectious Diseases was very slightly greater in proportion to population in the Urban Districts than in the Rural in the ratio of 5·55 to 4·57 per 1,000.

Year.	Number of notified Cases.	Number removed to Hospital.	Per centage of Removals.
1895	1355	11	0·8
1896	1808	76	4·2
1897	1409	93	6·2
1898	1624	121	7·4
1899	2430	148	6·0
1900	2292	180	7·8
1901	1780	159	8·9
1902	1443	110	7·6
1903	1744	286	16·3
1904	2022	259	12·7
1905	2673	380	14·2
1906	2607	347	13·3
1907	1844	280	15·1
1908	1736	343	19·7

NOTIFIABLE INFECTIOUS DISEASES.

SMALL POX.

During the year 1907 no case of Small Pox was notfied in the County.

The following Table gives the number of cases which have been notified each year since 1895, and the number of deaths.

	SMALL POX.		
	Cases.	Deaths.	Case Fatality per cent.
1895	4	..	..
1896	1	..	..
1897	..	..	..
1898	..	..	..
1899	..	..	..
1900	..	..	..
1901	6	1	16·6
1902	2	0	..
1903	183	8	4·37
1904	101	3	2·97
1905	92	3	3·25
1906	2	..	0·00
1907	..	..	0·00
1908	..	..	0·00

CHICKEN POX.

Chicken Pox is not usually a notifiable disease, and is seldom dangerous to life; but it may give rise to great trouble on account of its close resemblance, in some cases, to modified Small Pox, with which it is not unfrequently confused.

SCARLET FEVER.

	SCARLET FEVER.			Attack Rate or Cases per 1000 of the Population.
	Cases.	Deaths.	Case Fatality per cent.	
1895	540	26	4·8	2·17
1896	833	30	3·6	3·30
1897	824	29	3·5	3·21
1898	732	24	3·2	2·80
1899	1693	44	2·6	6·36
1900	1485	45	3·0	5·48
1901	1080	21	1·9	3·91
1902	829	13	1·5	2·90
1903	870	15	1·7	2·95
1904	984	20	2·03	3·24
1905	1559	33	2·1	5·01
1906	1468	28	1·9	4·59
1907	937	23	2·4	2·87
1908	793	23	2·9	2·36

Both the number of cases and the deaths for 1908 were small. The **fatality** per 100 cases in the Urban Districts was 1·89, and in the Rural 4·4.

The incidence of the disease per 1000 of the population or the "*Attack Rate*" was 2·7 per 1000 in the Urban Districts and 2·5 in the Rural.

The following extracts from the Reports of Dr. Garrett and Dr. Wills call attention to some of the difficulties which beset the Medical Officer of Health in his endeavours to prevent the spread of Scarlet Fever.

The "mild cases which escape detection," or the "missed cases" as they are often technically termed, will probably continue to prove troublesome for many years, as a remedy is not easily discovered. They are responsible for much of the continued prevalence of Scarlet Fever. The majority of them

are not seen by any doctor, and are only discovered accidentally in the peeling stage when much mischief has already been done. Some, in all probability, are never discovered at all. Something might be done by a more vigorous enforcement of the existing law; but a complete remedy is yet to seek and must be looked for in improved education and greater regard for the general welfare.

In regard to the too early return to school of known cases, much trouble has been taken to prevent this in the future and the result will be awaited with interest.

The need of an "Observation Ward" in connection with all Isolation Hospitals, mentioned by Dr. Wills, *is a very real one*; but it is very seldom provided in this County, and the best use has to be made of the imperfect isolation available.

Dr. Garrett (Worksop) writes:—"From the continued "prevalence of Scarlet Fever in the town it is evident that a "considerable number of mild cases escape detection altogether, "and that some of these children return to school in an in- "fectious condition. The only means of preventing this seems "to be to prolong the period of exclusion from school, more "particularly for the contacts. In future, after a case is "notified, it is proposed to exclude every other child in the "house from school for at least 8 weeks."

Dr. Wills (Blyth and Cuckney) writes:—"In two instances "Scarlet Fever appeared to be intermixed with Diphtheria, so "that the disease notified as Scarlet Fever was treated as "Diphtheria. Such cases show the need for an Observation "Ward, such as is attached to most Hospitals, so that if two "infectious diseases occur in one person at the same time they "might be treated in a special ward by themselves. Those "who have had experience of infectious disease, point out the "necessity of small wards for isolating such cases and for "isolating those of a doubtful nature."

Dr. Wills (Southwell) writes:—"Many of the cases of "Scarlet Fever were removed to the Isolation Hospital at "Southwell, which proved of great service in preventing the "spread of the disease in several large families."

DIPHTHERIA AND MEMBRANOUS CROUP.

These diseases, though for a long time past called by different names, are caused by the same organisms, and are now classified together under the head of Diphtheria. It should be understood that Membranous Croup is almost invariably Diphtheria affecting the larynx or wind pipe.

It will be noticed, from the accompanying table, that a sudden increase in the cases of Diphtheria occurred in 1904, the numbers nearly doubling in one year. From 1904 to 1907 there was very little variation. In 1908 there has been another increase of more than a quarter in the number of cases; or more exactly, 27·6 per cent. In the year 1895 there was one case of Diphtheria in every 2,857 of the population of the County; last year, one case in every 637 was notified!

In 1895 there were 26 deaths from Scarlet Fever, and 35 from Diphtheria; in 1908 there were 22 deaths from Scarlet Fever, and 60 from Diphtheria! And yet only 10 districts have made any arrangement for the hospital isolation and treatment of Diphtheria, and that frequently not adequate.

So, too, there are still districts which do not provide for the free use of Antitoxin in necessitous cases, although the great value of the remedy, which unfortunately is expensive, has long been placed beyond the possibility of dispute, and innumerable lives are saved by its early use.

	DIPHTHERIA & MEMBRANOUS CROUP.			Attack Rate, or Cases per 1000 of the Population.
	Cases.	Deaths.	Case Fatality per cent.	
1895	88	35	39·7	0·35
1896	142	38	26·7	0·56
1897	137	35	25·5	0·53
1898	119	26	21·8	0·45
1899	157	27	17·2	0·59
1900	182	32	17·5	0·67
1901	186	41	22·0	0·67
1902	209	29	13·4	0·73
1903	272	35	12·8	0·92
1904	447	63	14·1	1·47
1905	442	54	12·2	1·42
1906	447	53	11.8	1·39
1907	412	44	10·6	1·25
1908	526	60	11 4	1·57

There is, probably, no infectious disease for which properly arranged hospital isolation is more valuable. It is highly infectious, and cannot safely be treated in the same wards as, or even in close proximity to, Scarlet Fever. The affection of the throat in Scarlet Fever renders the patients very remarkably susceptible to the growth of the Diphtheria bacillus; and post-scarlatinal-diphtheria is only of too common occurrence.

It needs to be clearly understood that Diphtheria spreads by personal infection from one case to another, and that the influence of "drains" is secondary, though not unimportant.

There are a great many instances on record where outbreaks of Diphtheria have been traced to infected milk; but "*there is no evidence of the dissemination of Diphtheria by the water supply.*"

The spread of Diphtheria is clearly favoured by the aggregation of young children in the elementary schools; bad ventilation, close personal contact of the children, the sucking of sweets and pencils, and the use of slates affording every facility for the propagation of the disease, through the instrumentality of undetected or convalescent cases.

It is also needful for Sanitary Authorities to remember that convalescents, although no longer themselves ill, may remain a source of infection for weeks or months by carrying the living, virulent bacilli in their throats. Such cases, therefore, should not mingle with the uninfected until repeated examination of "swabs" from the throat has shewn that Diphtheria bacilli can no longer be found. The necessary expenditure is not large, and is money very well spent.

It is also needful to remember that persons in close association with the sick, may become carriers of infective bacilli in their throats and air passages, without at any time suffering from the disease themselves.

Dr. Wills (Mansfield), writes:—"At Mansfield, 94 of the "total 139 cases occurred in children of school age, viz.: "between five and fifteen years, and besides this, twelve "occurred among children under five years of age attending "school, so that 106 of the total 139 cases occurred among "children of school age."

"Antitoxin has been supplied for those cases in which the "father has not been able to pay for it, and also for use at the "Isolation Hospitals."

Dr. Wills (Newark Borough), writes:—"In all, 87 cases of "Diphtheria were notified, but only one was fatal. Sixty-nine "were removed to the new Hospital on the Barnby Road, "which was of great service in preventing the spread of "Diphtheria." . . . . "Sixty-four per cent of the cases "occurred among children of school age, between five and "fifteen years."

Dr. Knight (Carlton), writes:—"The increased use of "Antitoxin is, in my opinion, the chief factor in reducing the "fatality."

"There is now every facility afforded for the very poorest "sufferer to be promptly treated with Antitoxin Serum, owing "to the action of the Council in resolving to supply it free "where needed."

Dr. Houfton (Mansfield Woodhouse), writes:—"Your "Council supply Diphtheria Antitoxin gratis for prophylactic "purposes, and I regard this as one of the greatest safeguards."

Dr. Wray (Basford), writes:—"There has been a continued "increase in the prevalence of Diphtheria in the District, as "well as in the Country at large, during the past year. This, "I attribute to the existence of mild and unrecognised cases "attending school, and not so much to the insanitary "conditions of home surroundings, though no doubt the latter "favour the development of the disease. Considerable "advantage has been taken of the free supply of Antitoxin by "the medical men practising in the District, with apparently "beneficial results."

Dr. Broadbent (Newark Rural), writes:—"I must again "remark that the free distribution of Antitoxin to poor people "has been a great help in dealing with this dangerous disease."

Enteric Fever.—The cool wet summer of 1908 was unfavourable to the spread of Enteric Fever both by diminishing dust and by lessening the number of flies; and consequently the total number of cases notified was the smallest during the last 14 years, although during that time the population has increased by 86,879. This says much for the detailed sanitary progress of the County. Although Enteric Fever can still be spread by polluted water or milk (and there has been no change of opinion upon that point) these sources of infection are so well known and have attracted so much attention, that large outbreaks from these sources have been avoided in this County for many years, and small ones are soon discovered and checked. But there are other sources of infection that have not been known so long, and with the importance of which the public mind is not yet sufficiently imbued. These are pollution of the ground and spread by infectious dust; and, far more important, the spread of infection by flies from specific excreta in privies and pails to milk and food. This is an almost universally prevailing influence wherever the dry method of removal of excreta is in vogue; and it explains the continued spread of many epidemics which previously puzzled all investigators.

Within the last very few years another unsuspected source of the origin of epidemics of Enteric Fever has been proved, beyond doubt, in the discovery of what are called Typhoid Carriers. Some persons—how many we do not yet know—having

once suffered from the disease, continue to excrete living and virulent Typhoid bacilli for months or years. Such persons are specially dangerous when they are engaged in kitchens or dairies in the preparation of food. Several outbreaks of Enteric Fever in large Public Institutions have recently been traced to infection from Typhoid Carriers engaged in the kitchen.

Much attention is also being directed by the Army Medical Department to the existence of Typhoid Carriers in barracks, in the case of soldiers returning from India after Enteric Fever.

If attention is again directed to the table, it will be seen that while the "Case fatality" remains practically unaltered, during the past 14 years, shewing that Enteric Fever is as serious and as fatal a disease as it was 14 years ago, the prevalence of the disease is very much less. Preventive Medicine has been more successful than Clinical Medicine; and the labours of the Sanitary Authorities have resulted in reducing the proportion of cases to population to less than one-third of the proportion existing in 1896! That is something worth accomplishing.

The Disease continues to be more prevalent in the Urban Districts, in which the attack rate is ·55 per 1000 compared with ·29 in the Rural Districts.

The following table gives the number of cases since 1895.

	ENTERIC FEVER, including "Continued."			Attack Rate or Cases per 1000 of the Population.
	Cases.	Deaths.	Case Fatality per cent.	
1895	300	44	14·6	1·21
1896	395	58	14·9	1·56
1897	277	41	14·8	1·07
1898	431	63	14·6	1·65
1899	343	46	13·4	1·29
1900	388	51	13·1	1·43
1901	257	34	13·2	0·93
1902	160	22	13·7	0·56
1903	187	31	16·5	0·63
1904	187	31	16·5	0·61
1905	206	36	17·4	0·66
1906	334	36	10·7	1·04
1907	215	29	13·4	0·65
1908	152	22	14·4	0·45

Dr. Wills (Mansfield), writes:—"The outbreak in September, October and November appeared to originate in the "eating of uncooked oysters, on a visit to the seaside 14 days "previously."

"The case commenced in September, and two cases "followed in the same house during October and November. "Bad privies were in use at the house, and the disease spread "to houses in the same locality, where a group of bad privies "existed, and most of the cases occurred in the same locality— "Westfield Lane. The privies were ordered to be abolished "and replaced by water closets."

Dr. Knight (Carlton), writes:—"As a result of investi-"gations, I am inclined to think that at least ten of the "Carlton cases were directly or indirectly traceable to a "colliery. It is known that sanitary observances are not "strictly adhered to in collieries, defecation and urination "taking place indiscriminately in the most convenient but not "most suitable places, and such a condition is undoubtedly "productive at times of contagion. It is not difficult to "conceive that particles of fœcal matter mixed with coal dust "may very easily come in contact with food and be ingested "by employees."

"Eight of the persons suffering from this complaint were "removed to the Nottingham General Hospital for treatment."

Dr. Garrett (Worksop) writes:—"The other four cases "originated from the same source. A child became ill soon "after returning from a visit. The nature of the illness was "not suspected, and it was only recognised when medical advice "was sought on account of the mother and another child. A "friend who helped to nurse the children also contracted the "disease."

Dr. Broadbent (Newark Rural) writes:—"A patient I "believe contracted the disease from drinking Trent water at "Farndon, where he worked. He died in Newark Hospital."

Puerperal Fever.—This term is retained because it is still used in the tables issued by the Local Government Board and it is, also, the term employed in the Infectious Disease (Notification) Acts and cannot be altered without an amending Act. The Local Government Board have directed that for the purposes of classification in the tables issued by them the term Puerperal Fever shall be held to include:—

"Pyæmia, Septicæmia, Sapræmia, Pelvic Peritonitis, Peri- and Endo-Metritis, occurring in the Puerperium." This is fair and reasonable and should also be the interpretation put upon the term in carrying out the Infectious Disease (Notification) Acts.

For the purpose of Death Certification the Registrar-General has issued his own directions, and the Nomenclature of Diseases, fourth edition, drawn up by the Royal College of Physicians, and printed for His Majesty's Stationery Office, is to be followed.

In the "Nomenclature" it is advised that the term Puerperal Fever should be abandoned, because it is too wide in its significance and is wanting in scientific precision; and that one of the more exact terms quoted above should be used instead, according to the occasion. As already mentioned, for the purposes of the Infectious Disease (Notification) Acts, the term Puerperal Fever cannot be abandoned, and others substituted, without fresh legislation. The only reasonable course for the present is to look upon Puerperal Fever as a comprehensive, generic term, and accept the definition adopted by the Local Government Board.

The following table gives the number of *notified* cases and deaths during the past thirteen years. It will be noticed that the fatality varies so enormously as to be explicable only by very incomplete notification.

Indeed, as many as 47 cases, of which 13 were fatal, came to the knowledge of the Health Committee. Only 29 were notified as "Puerperal Fever"; but all of them were cases of well marked Fever, occurring during the Puerperium, and accompanied by definite septic conditions, which might readily convey disease to another patient, and which required disinfection on the part of the attendant. Seven occurred in the practice of doctors when no midwife was in attendance. Thirty-six occurred in patients where a certified Midwife was in attendance; and three where an uncertified Midwife was in attendance.

The unwillingness of many members of the Medical Profession to notify cases of Puerperal Fever constitutes one of the greatest hindrances which the Local Supervising Authorities have to overcome in carrying out the Midwives Act, in supervising the practice of Midwives, and in endeavouring to diminish the wholly unnecessary and avoidable mortality from Puerperal Fever.

To attain the maximum of efficiency, the Local Supervising Authority should know of every Puerperal case where a certified Midwife is employed, and where a rise of temperature associated with septic conditions occurs, such as, without disinfection, can prove the source of infection of another case.

	PUERPERAL FEVER.		
	Cases.	Deaths.	Case Fatality per cent.
1895	24	11	45·8
1896	18	2	11·1
1897	21	9	42·8
1898	12	5	41·6
1899	28	14	50·0
1900	21	18	85·7
1901	23	18	78·2
1902	20	9	45·0
1903	16	9	56·2
1904	17	14	82·3
1905	20	6	30·0
1906	12	7	58·3
1907	21	8	38·0
1908	29	11	37·9

These do not include the deaths from "diseases and accidents of parturition," which in 1908 numbered 13.

Thirty of the 47 cases occurred during the first four months of the year. The cause of this outburst could not be traced. It was spread all over the County, and in only one instance did more than one case occur in the practice of the same Midwife. It has not been very uncommon in the past for one Midwife to carry infection to two or three, or even more, patients. But this seldom happens without neglect of important and definite rules. In every case of Puerperal Fever, as interpreted by the Local Government Board, which has come to the knowledge of the Local Supervising Authority, and where a certified Midwife has been in attendance, the Inspector of Midwives has visited the Midwife and superintended the necessary disinfection. Although in many cases the want of a steam disinfecting stove for clothing and bedding has been felt, nevertheless, the disinfection, as carried out, has proved to be efficient, since no second case has arisen in the practice of a Midwife shortly after disinfection.

Finally, the system of Reports upon cases of Puerperal Fever by the Medical Officers of Health to the County Medical Officer has worked extremely well, and is an essential part of the administration of the Midwives Act.

NON-NOTIFIABLE INFECTIOUS DISEASES.

Measles.—In the absence of notification, little is known as to the number of *cases* of Measles, or indeed of any of the other non-notifiable Infectious Diseases, but the number of *deaths* directly due to Measles for each of the last 14 years is shown in the following table.

Year.	Deaths from Measles.	Year.	Deaths from Measles.
1895	35	1902	77
1896	230	1903	42
1897	47	1904	50
1898	62	1905	177
1899	142	1906	7
1900	67	1907	147
1901	105	1908	31

This by no means represents the whole of the evil wrought by Measles, or even the whole of the mortality, as many deaths are assigned to the lung diseases which complicate Measles so frequently as to be in reality a part of the disease.

Twenty-six schools were closed on account of Measles in 1908 which, the table shews, was not an epidemic year. The bearing of Measles upon school life has been recently dealt with in the Report to the Education Committee, and it is only necessary to say further that since that Report was written, it has been ascertained that the Board of Education will allow an Infants' *Division* of a mixed school to be closed on account of infectious disease, on the same conditions as to grant as in the case of an Infants' *Department*. This concession should diminish the number of closures of the whole school, although it does not by any means remove all the difficulties.

Whooping Cough.—The following table shews the number of deaths from Whooping Cough. Twenty schools were closed for Whooping Cough. Most of what has already been written about Measles applies equally to Whooping Cough.

Year.	Deaths from Whooping Cough.	Year.	Deaths from Whooping Cough.
1895	61	1902	71
1896	51	1903	88
1897	129	1904	107
1898	40	1905	86
1899	37	1906	61
1900	109	1907	86
1901	71	1908	76

Influenza.—During 1908 the number of deaths from this insidious and mysterious disease continued large and shews little abatement, as will be seen in the accompanying table.

Although the prevalence of Influenza is favoured by cold and damp, and especially by rapid changes of temperature, it remains essentially an infectious disease; but the knowledge of its infectious properties is very slightly acted upon in practice, and hardly any precautions are taken to prevent its spread.

The constantly increasing amount of travelling by railway and tramway, and the consequent overcrowding of carriages, together with the deficient ventilation of offices and public buildings warmed by hot water or steam pipes, without open fireplaces and their valuable ventilating powers, must be held in large measure responsible for the continued prevalence of this plague.

Year.	Fatal Cases of Influenza.
1900	152
1901	23
1902	47
1903	45
1904	44
1905	47
1906	31
1907	84
1908	69

Diarrhœa—This disease is mainly of importance in connection with infant life, and in hot, dry seasons assumes the characteristics of a specific epidemic disease. The statis-

tical uncertainties consequent upon a want of uniformity in nomenclature have been already mentioned under the heading of Zymotic death-rate. In 1908 there were 128 deaths certified from Diarrhœa, and 78 from Enteritis. Of this total of 206 deaths, 167 occurred in infants under one year of age, 21 in children between one and five, and only 18 in persons over five years of age.

Year.	Deaths from Diarrhœa.	Year.	Deaths from Diarrhœa.
1895	201	1902	85
1896	88	1903	123
1897	166	1904	242
1898	240	1905	116
1899	233	1906	223
1900	158	1907	119
1901	205	1908	128

Tuberculosis.—The following table shews the number of *deaths* from Phthisis or Consumption (that is, tuberculosis of the lungs), and also from "Other Tuberculous Diseases," that is, tuberculosis of any other organ except the lungs. We have no complete record of the *cases*, as tuberculosis is not yet compulsarily notifiable.** It is frequently estimated that for each death there are six other cases of Pulmonary Consumption which have not yet terminated. That method of calculation would give 1,452 persons suffering from Consumption in the County, besides those suffering from "other tuberculous diseases."

By a more recent calculation made by Dr. Philip ‡ there are from 10 to 20 other cases of Pulmonary Consumption for each death. On that basis there would be from 2,420 to 4,840 cases of Consumption in this County, apart from those suffering from "Other Tuberculous Diseases."

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‡ "The Public Aspects of the Prevention of Consumption," by R. W. Philip, M.D., F.R.C.P.E., 1908.

** From January 1st, 1909, all cases of Pulmonary Phthisis occurring in Workhouses, and all pauper cases attended outside by Poor Law Medical Officers must be notified to the Medical Officer of Health. This is a useful beginning; and before long it is hoped all cases of Phthisis will be compulsorily notifiable.

Year	Deaths from Phthisis.	Deaths from other Tuberculous Diseases.
1895	287	..
1896	233	..
1897	308	..
1898	303	..
1899	266	..
1900	256	184
1901	238	153
1902	229	173
1903	262	150
1904	256	167
1905	281	140
1906	267	160
1907	281	143
1908	242	140

The proportion of deaths from Pulmonary Phthisis, or Consumption of the Lungs, per 1,000 of the population, is given in the following table for the last six years; and also the deaths from "*Other* Tuberculous Diseases," and from "*All* Tuberculous Diseases":—

Deaths from Phthisis per 1,000 of the Population.

	Whole County.	Urban Districts.	Rural Districts.
1903	·88	·80	1·01
1904	·84	·79	·92
1905	·90	·93	·86
1906	·83	·84	·82
1907	·85	·88	·81
1908	·72	·72	·71

Deaths from OTHER Tuberculous Diseases per 1,000 of the Population.

	Whole County.	Urban Districts.	Rural Districts.
1903	·50	·53	·46
1904	·55	·59	·48
1905	·45	·48	·40
1906	·50	·51	·48
1907	·43	·46	·39
1908	·41	·47	·32

Deaths from ALL Tuberculous Diseases per 1,000 of the Population.

	Whole County.	Urban Districts.	Rural Districts.
1903	1·39	1·34	1·48
1904	1·39	1·38	1·40
1905	1·35	1·41	1·27
1906	1·33	1·35	1·30
1907	1·29	1·35	1·20
1908	1·14	1·20	1·03

The next two tables give the average death-rates of the different districts from Phthisis (Tuberculosis of the lungs), for the ten years 1898—1907 and from "other Tuberculous Diseases," for the eight years 1900—1907.

It would be more simple to give the deaths from all tuberculous diseases for the past ten years in one table; but, unfortunately, the statistics in the possession of the County Council relating to tuberculosis affecting other organs than the lungs, do not go further back than the year 1900.

AVERAGE DEATH-RATE FROM PULMONARY PHTHISIS FOR THE TEN YEARS, 1898–1907.

URBAN DISTRICTS.	Per 1000
Newark	1·28
Sutton-in-Ashfield	1·16
Beeston	1·09
Mansfield	1·03
Arnold	0·99
Worksop	0·89
Hucknall Torkard	0·86
East Retford	0·85
Carlton	0·72
Kirkby-in-Ashfield	0·71
Huthwaite	0·70
Eastwood	0·68
Mansfield Woodhouse	0·65
West Bridgford	0·63
Warsop	0·49
Total Urban Districts	0·92

RURAL DISTRICTS.	Per 1000
Bingham	1·10
Southwell	0·95
Newark	0·94
Stapleford	0·92
Misterton	0·85
Basford	0·84
Leake	0·83
Blyth and Cuckney	0·77
Skegby	0·72
Kingston and Ratcliffe	0·72
East Retford	0·71
Total Rural Districts	0·87

AVERAGE DEATH-RATE FROM OTHER TUBERCULOUS DISEASES, FOR THE EIGHT YEARS, 1900—1907.

URBAN DISTRICTS.	Per 1000
Sutton-in-Ashfield	1·21
Warsop	0·95
Eastwood	0·71
Newark	0 63
Hucknall Torkard	0·63
Kirkby-in-Ashfield	0·61
Mansfield Woodhouse ..	0·60
Worksop	0·50
Carlton	0·48
East Retford	0·44
Huthwaite	0·42
Mansfield	0·41
Beeston	0·41
Arnold	0·39
West Bridgford	0·26
Total Urban Districts ..	0 57

RURAL DISTRICTS.	Per 1000
Skegby	0·86
Stapleford	0·85
Blyth and Cuckney ..	0·61
Basford	0·50
East Retford	0·42
Southwell	0·34
Newark .. — ..	0 38
Bingham	0·28
Leake	0·23
Misterton	0·24
Kingston and Ratcliffe ..	0·00
Total Rural Districts ..	0·46

A careful perusal of the above series of Tables together with the figures for 1908, given in Table I. at the end, will clearly show that a slow and gradual but definite improvement is taking place. The great variations in different districts deserve local attention, especially as the rates in the ten year averages indicate persistent causes independent of accidental yearly fluctuations. Much can be done to diminish tuberculosis by local effort, in the way of better housing, better ventilation, sanatorium treatment of selected cases, and a careful guarding of the milk supply.

The most important and noteworthy advance in the Administrative Measures to prevent Tuberculosis during 1908, was the issue, by the Local Government Board in December, following the International Congress on Tuberculosis at Washington in the early Autumn, of "Regulations as to Tuberculosis," under Section 130 of the Public Health Act, 1875, and under the Public Health Act, 1896; which Regulations came into operation on January 1st, 1909. The most important provisions relate to the notification of Consumption. By Article iv. (1). "The Medical Officer of a Poor Law "Institution within the period of 48 hours after his first "recognition of the symptoms of Pulmonary Tuberculosis in "the case of a poor person who is an inmate of the Poor Law "Institution" must notify the case to the Medical Officer of "Health.

And by Article v. "A District Medical Officer within the "period of 48 hours after his first recognition of the symptoms "of Pulmonary Tuberculosis in the case of a poor person upon "whom he is in Medical attendance must notify the case to the "Medical Officer of Health."

Suitable fees are payable in each case.

Article ix. (2) details the powers of District Councils for the purpose of preventing the spread of infection from Pulmonary Tuberculosis. And these powers are further explained in the Circular letter issued by the Local Government Board, in December, 1908, and still more carefully and precisely in the Memorandum by the Medical Officer to the Local Government Board, issued in February, 1909, price twopence.

A number of poor law cases are now being notified and the statistical details will appear in next year's Report.

Following the Tuberculosis Regulations came the **Third Interim Report** of the **Royal Commission** on **Tuberculosis (Human and Bovine),** published in January, 1909. It establishes, beyond doubt, the serious danger of the spread of Tuberculosis by Cows' Milk, and thus confirms the opinion repeatedly expressed by the County Medical Officer for many years past.

The following passages are sufficiently important to be quoted *in extenso* :—

"In our Second Interim Report we expressed the opinion, "as a result of our investigations, that a very considerable "amount of disease and loss of life, especially among infants "and children, must be attributed to the consumption of cows' "milk containing tubercle bacilli."

"Tuberculosis involving the udder is **comparatively "common** in cows, and *in such cases their milk always "contains tubercle bacilli*, and is, therefore, *dangerous* for "human beings consuming it. It was, however, undecided "what is the danger, if any, attaching to the milk of tuber- "culous cows in which the udder presents no evidence of "disease. We therefore took the opportunity of making a "number of observations and experiments bearing on this "point. The experiments were made with the milk of cows "which had contracted the disease in the natural way."

"In natural tuberculosis in the cow, cases which show "such obvious symptoms of the disease as emaciation and "cough, should be considered separately from the cases in "which there are no such signs, and in which the disease is to "be recognised during life, only by means of the injection "of tuberculin."

"None of the cows investigated showed any sign of "disease of the udder during life, and in all, after slaughtering, "the udder was carefully examined for tuberculous lesions and

"tubercle bacilli. No tuberculosis was found except in one "case (Cow F.), in which one quarter of the udder showed "four small nodules. These could not possibly have been "detected during life."

"We found that *the milk of the cows obviously sufferin* "*from tuberculosis* (see Appendix, Cows B., C. and F.), "**contained tubercle bacilli,** whether the milk was obtained "in the ordinary way or was withdrawn from the teat by "means of a sterilized catheter. *The presence of tubercle* "*bacilli in the milk of cows clinically recognisable as tuberculous,* "*confirms the opinion we expressed in our Second Interim* "*Report, that the milk of such cows must be considered* "*dangerous for human beings.*"

"The experiments which we have carried out with regard "to the infectivity of the fœces of tuberculous cows were "dictated by knowledge of the fact that dirt of various kinds "from cows and the cowshed, is almost constantly present in "milk as it reaches the consumer. Cows suffering from "extensive tuberculosis of the lungs must discharge consider- "able numbers of bacilli from the air passages in the act of "coughing, and some of the bacilli thus expelled may find their "way into the milk. But our experiments indicate that the "excrement of cows obviously suffering from tuberculosis of "the lungs or alimentary canal, must be regarded as much "more dangerous than the matter discharged from the mouth "or nostrils. We have found that even in the case of cows "with slight tuberculous lesions, tubercle bacilli in small "numbers are discharged in the fæces, while as regards cows "clinically tuberculous, our experiments show that the fæces "contain large numbers of living and virulent tubercle bacilli."

"The presence of tuberculous cows such as B., C. and F., "in company with healthy cows in the cowshed, is, therefore, "distinctly dangerous, *as some of the tubercle bacilli which* "*escape from their bodies in the excrement, are almost certain* "*to find their way into the milk.*"

Following again upon the third interim Report of the Royal Commission, and immediately following the introduction of the Milk and Dairies Bill into the House of Commons, came the "Tuberculosis Order of 1909," issued by the Board of Agriculture and Fisheries, on May 27th, 1909, under the Diseases of Animals Acts, 1894 to 1903, and which Order will come into operation on the 1st January, 1910. The Order deals especially with Tuberculosis of the Udder, and with any "bovine animal which is emaciated from Tuberculosis." It makes provision, under certain circumstances, for slaughter and compensation, and for "precautions to be adopted with respect to milk, etc."

It would appear, therefore, that if the new measures above referred to are fairly and wisely administered there is a good prospect of the gradual diminution of the "great white plague" with all its attendant misery and suffering.

The Tuberculosis Exhibition, promoted by the National Association for the Prevention of Consumption and other forms of Tuberculosis," which was opened on June 2nd in Whitechapel by the President of the Local Government Board, should do much to spread widely the knowledge of the best methods of prevention, and of the right way of living.

Dr. Wills (Mansfield) writes :—"The death-rate from "Pulmonary Consumption was ·65 per 1,000 in 1908, and it is "lower than the average rate of the previous ten years by ·37."

"This may be attributable in part to the isolation of cases "in the Hospitals of the district, both at the Notts. Sanatorium "and at the Victoria Hospital in Stockwell Gate, attached to "the Workhouse, for it is reasonable to expect that the "comfortable isolation of a consumptive person, with good food "and attention, from a family of a poor person where there is "no room for comfortable isolation, cleanliness, and feeding, "will not only promote the happiness and welfare of the "individual and give him hope of recovering his health, but it "will provide for the safety of his family from infection."

"These Sanatoria appear to be popular with those who "use them, and to be doing excellent work."

"The contrast between the ten years before Sanatorium "treatment began and the ten years since it has been used, "appears decidedly favourable to the treatment, and the com-"parison of the last five years with the previous five is more "favourable still."

1897—Death-rate from Phthisis	..	·7 per 1,000
1898— ,, ,,	..	1·4 ,,
1899— ,, ,,	..	1·0 ,,
1900— ,, ,,	..	1·1 ,,
1901— ,, ,,	..	1·3 ,,
Average for the 5 years	..	1·1 ,,
1902—Death-rate from Phthisis	..	·9 per 1,000
1903— ,, ,,	..	·9 ,,
1904— ,, ,,	..	·8 ,,
1905— ,, ,,	..	1·2 ,,
1906— ,, ,,	..	·7 ,,
Average for the 5 years	..	·9

Dr. Wills (Newark) writes :—"Although you have adopted "the Voluntary Notification of Phthisis, only eight cases were "notified in 1907, and only one case during 1908; this last "was a discharged soldier."

MILK SUPPLY.

It is fitting that the subject of the milk supply should be considered immediately after that of Tuberculosis, as they are closely connected. The Royal Commission in their Second Report, which appeared in the Spring of 1907, gave the fullest details of the investigations which, they consider, have proved the identity of the Tubercle Bacillus in human beings and in cows, and the inter-communicability of tuberculous disease by means of milk.

In their Third Report the Royal Commission have carried the matter a stage further, as already described on page . The findings and conclusions of the Royal Commission have been confirmed and supported in the fullest manner at the International Congresses, both at Paris in 1905 and at Washington in 1908. And now, at last, the Board of Agriculture in their circular letter to Local Authorities accompanying their Tuberculosis Order of 1908 state :—

"As your Local Authority are doubtless aware, the subject of "Tuberculosis in man and in animals, and the relations between the "disease in human beings and in animals, has been under careful "investigation during recent years, both in this country and abroad, and "various phases of the question have been inquired into by successive "Royal Commissions. So far as regards the possibility of the transmission "of the disease from affected bovine animals to man, the Board are satisfied "**it must now be accepted as a fact that Tuberculosis is "transmissible by the agency of milk used for human con-"sumption.**" . . . "In considering the question in relation to "animals, the fact that the disease is communicable to man by milk has "a material bearing on the measures to be adopted. Any action which "results in the reduction in the number of tuberculous bovine animals in "the country must reduce the risk of the spread of Tuberculosis amongst "the community."

It is thus abundantly clear that cow's milk, as at present produced and distributed, is apt at times to prove a most dangerous article of food, though one upon which a very large number of that portion of the population least able to protect itself is dependent for its very existence. The Milk and Dairies Bill, so long announced by the President of the Local Government Board, and so long awaited with anxiety, is at last before Parliament.

It is premature to attempt to forecast what will be the eventual outcome of the Bill. Although a very great advance

upon previous milk legislation, it does not concede everything which County Councils desire. The objects of the Bill are set out in the Memorandum which is reproduced below, and which gives very useful information, whatever may be the fate of the present Bill.

THE MAIN OBJECTS OF THIS BILL ARE TO PROVIDE FOR—

(1) The more effective registration of dairies and dairymen ;

(2) The inspection of dairies and the examination of cows therein ;

(3) The prohibition of the supply of milk from a dairy where such a supply has caused or would be likely to cause infectious diseases, including tuberculosis ;

(4) The prevention of the sale of tuberculous milk ;

(5) The regulation of the importation of milk so as to prevent danger to public health arising therefrom ;

(6) The issue of regulations for securing the supply of pure and wholesome milk ;

(7) The establishment by Local Authorities in populous places of milk depôts for the sale of milk specially prepared for infants.

The provisions as to registration supersede the provisions as to the registration of dairies contained in the Contagious Diseases (Animals) Acts and the Orders made thereunder.

The provisions as to the inspection of dairies, and the prohibition of the supply of milk, reproduce, with amendment, section 4 of the Infectious Diseases Prevention Act, 1890, section 71 of the Public Health (London) Act, 1891, and *the model milk clauses incorporated in many local Acts.*

The clause as to the prevention of the sale of tuberculous milk is also taken from *the model milk clauses*, but the scope of the enactment is somewhat extended.

The Board of Agriculture and Fisheries will in connexion with this Bill issue an Order under the Diseases of Animals Act, 1894, dealing with the *notification of Tuberculosis in cattle*, and the *inspection, examination, detention, isolation, and slaughter of tuberculous cattle, and the giving of compensation in appropriate cases.*

On account of the importance of the subject, and the need of creating a healthy, well-informed and educated public opinion upon the milk question, more than usually abundant extracts have been made from the Reports of the Medical Officers of Health of the various districts. They show clearly how much is being done in some parts of the County without serious friction and without disturbance of trade, while little or nothing is being accomplished in adjacent and similar districts. Attention is particularly directed to the valuable conclusions, quoted by Dr. Wills, from the most important Report of Investigations as to the Contamination of Milk, carried out on behalf of the Councils of the County Boroughs of Bradford, Hull, Leeds, Rotherham, and Sheffield, and the Administrative Counties of the East and West Ridings of Yorkshire.

"The conclusions of the Report are abbreviated as "follows :—

"(a) Of the total organisms in the milk used by the "consumer, the greatest number are contributed by the farmer. "During railway transit, at the retailer's premises, and in the "consumer's house, smaller amounts are added ; the amount in "each instance being apparently the same."

"(b) Of the intestinal organisms and the streptococci by "far the greater number are added at the farm."

"(c) The sediment or dirt gains entrance to the milk "chiefly at the cowshed. In 86·8 per cent. of the samples "examined, there was no increase in the sediment when sold "by the retailer, but a decrease in 68·8 per cent."

"(d) The farmer was responsible for the presence of "certain organisms, suggested by Dr. Klein as the cause of "diarrhœa, in 66·6 per cent. of the samples. In 11·1 per cent. "of the samples these bacilli were added by the retailer or "the consumer, while in the 22·2 the source was doubtful."

"Chief Sources of contamination.—

"(a) At the Cowshed—

"Improperly cleaned milk vessels and the dirty udders of "the cows are the source of by far the greatest amount of "contamination by organisms, and especially intestinal "organisms, and Streptococci. The dirty milk vessels con- "tribute much more than the dirty udders in summer, but in "the winter the opposite is the case. Milkers with dirty hands "and dirty clothes, and especially wet milkers contribute their "share of pollution."

"The air and dust in the cowshed add to the contamination, "and the coolers, as often used, contribute a certain amount."

"(b) At the Railway Station—

"Contamination, while the cans are in the hands of the "Railway Authorities, occurs mainly as a result of placing them "in dusty vans, storing them in improper or dusty parts of the "Station, and of improper and rough handling, causing the "milk to splash over the lids."

"The Railway Porters and others who sit upon the churns "are responsible for a certain amount of contamination also."

"The risk is increased in all cases when the cans are "provided with lids which are badly fitted, or of faulty con- "struction."

"(c) On the retailer's premises or street—

"Badly cleaned cans are a source of contamination here "also, although not so great as at the cowshed, owing to the "retailer paying greater attention to the cleaning process."

"Pollution will take place in retailer's premises owing to "the milk receptacle being uncovered, especially where the "keeping place is dusty, or the clothes of the retailer dirty. "Organisms may be added by carelessness in handling, *i.e.*, "by the use of a dipper which has been kept on a dusty "counter."

"(d) At the consumer's house—

"Pollution takes place here as a result of keeping the milk "in a dusty place, and leaving it uncovered. Only a small "amount of contamination occurs from the receptacles of the "consumer."

"Flies are a source of contamination at all stages of transit, "but especially at the consumer's house, where they are usually "more abundant."

Dr. Wills (Mansfield) writes:—"The cowhouses and milk-"sellers' places have been more closely inspected during the "past year, and *a Veterinary Inspector has been employed to go "round to inspect the cows. Four cows have been destroyed for "Tuberculosis during the year.*"

"Improvements have been made on the premises of four "milksellers by improving the drainage, building sheds for "milk and milk vessels, and abating nuisances which were "dangerous."

"The water supply of several cowsheds, which was faulty, "was ordered to be improved by laying on Town water."

"The cowhouses and dairies have been renovated at the "Intake Farm, Bull Farm, and Mile Hill Farm, and Big Barn "Lane. Great improvements have been made which will be "very beneficial to the occupiers and the public."

"In most of these cases new buildings have been erected, "new yards and drainage made, and the sanitary conditions of "the premises, in every way, improved."

Dr. Wills (Newark Borough) writes:—"*The cows in the "sheds within the Borough have been examined by the Veterinary "Inspector three times during the year.*"

"*Five were found suffering from disease, and one of them "was slaughtered; one died, and three of them were sent out of "the Borough.*"

"A Committee of the Council inspected the cowsheds in "the Borough, and three were considered unfit for the purpose "of keeping cows supplying milk; two of these have since been "closed, and the third, I am told, has not been used."

"Improvements in several have been made in accordance "with the requirements of the Committee, and the Inspector "of dairies and cowsheds."

"A great deal more improvement is required in and around "several of the cowsheds, and with respect to ventilation, "drainage, and manure receptacles, several cowkeepers were "required to comply with your regulations."

Dr. Harvey Francis (Arnold) writes:—"The Sanitary "Inspector and myself have examined the cowsheds during the "year; they were in much the same condition as in previous "years."

"The Regulations with respect to Dairies, Cowsheds and "Milkshops came into force on January 1st, 1909, and I hope "to be able to give a more satisfactory account of them in my "next report."

"I do not think anything has been done in this matter as "yet, but all persons concerned should have due notice and a "copy of the regulations."

Dr. Rothera (Beeston) writes:—"Since your Council "adopted the 'Dairies, Cowsheds, and Milkshops Orders,' we "have inspected all the cowsheds, dairies, and milkshops twice "yearly, and I regret to say that very few of the first-named "come up to the standard laid down as desirable in my report "of 1906. To say that the cowsheds and their surroundings "are quite satisfactory would be an exaggeration. Heaps of "manure are usually in too close proximity to the byres, and "these with pools of liquid manure are not only unsightly, but "are apt to contaminate the clothes of the milkers, the flanks "of the animals themselves, and the utensils for the reception "of the milk."

Dr. Knight (Carlton) writes:—"The cowsheds and dairies "have, as usual, been inspected by the Inspector of Nuisances "and myself. Comparatively speaking, I think the cowsheds "are kept in about as good order as they are elsewhere—a "rather primitive state of things, perhaps—and, to my mind, a "general improvement might certainly be accomplished by a "stricter adherence to hygienic principles."

Dr. Irvine (Huthwaite) writes:—"The dairies, cowsheds, "and milkshops have been inspected by the Sanitary Inspector

"and myself. There are very few which are up to the 'Regu-
"lations made by the District Council.' With some the
"sanitary construction could not be found fault with, and we
"advise more attention to limewashing and general cleanliness.
"With others, and these are in the majority, the drainage is
"bad and the light and ventilation deficient. I consider *many*
"*of the cowsheds could be easily remedied at a slight cost*, but
"there are some which, in order to be up to the 'Regulations,'
"require to be re-built, and this has in a few instances been
"decided on."

Dr. Mackenzie (Kirkby-in-Ashfield) writes:—"*In quite
'two-thirds of the sheds, light, ventilation, and drainage are
"deficient.*"

"There is also an *almost entire absence of care in sterilizing
"the hands of the milker and the udders of the cows.*"

"As the result of the visits, two cowsheds have been
"enlarged, and greatly improved as to space, light, ventilation
"and drainage; in both cases, farm-yards have been drained
"into newly-constructed, covered and ventilated cesspools."

Dr. Nesbitt (Sutton-in-Ashfield) writes:—"Considerable
"progress has been made during the year in the sanitary
"conditions of the dairies and cowsheds of the district. Three
"of the most insanitary cowsheds have been re-built, and
"improvements have been made in the light and ventilation of
"other eight; also new drainage provided to one milk house."

Dr. Hunter (West Bridgford) writes:—"A considerable
"improvement in the condition of the dairies and cowsheds is
"noticeable since my last Report. Still, a good deal remains
"to be done, especially in the way of drainage."

Dr. Garrett (Worksop) writes:—"In several sheds
"desirable improvements have been made."

"*All the animals in the sheds have been inspected four
"times in the year by the Veterinary Inspector*, who reports
"that the general condition of the animals is good, and that
"*fewer suspects came under his notice than in the previous year.
"In these cases his advice is readily taken, and the animals are
"excluded from the milk supply.*"

Dr. Beale (East Retford Rural) writes:—"I am glad to be
"able to say, too, that on the whole there is a tendency towards
"greater cleanliness in the cow-sheds, and better drainage, but
"there is still room for improvement."

"I visited one farm on account of a case of Diphtheria "which was notified me, and found that the occupier was a "milkseller, but was not on the register. He at once became "registered, on my representation to him that he should do so. "I told him also that he must cease from selling milk whilst "there was Diphtheria in his house. On inspecting the general "sanitary condition of the premises, I found that they were in "a bad condition, both as to cleanliness and structural arrange-"ments. This matter was reported at the time, and notices "were served to put the premises into good condition. After "some correspondence, the work is being proceeded with, "under the supervision of the Surveyor."

"In another farm I found that it was the custom to keep "cows and milk them in a shed in which there were also pigs "and poultry, and in which refuse from the house was often "put. I made representations as to this, and was told that it "would not be continued."

Dr. Broadbent (Newark Rural) writes :—"Your Inspector "and myself have inspected all the registered milk sellers in "the district. One cowshed has been condemned, and another "built in its place. In thirteen others, improvements in "drainage, lighting, ventilation, &c., have been carried out."

Dr. Wills (Southwell) writes :—"*Two of the milk sellers "inform me that they have had their cows tested for Tuberculosis, "and those which reacted removed from the sheds. Two other "dairymen in the district have had their cows tested, so that the "dairymen of your district are taking a lead in this important "matter.*"

WATER SUPPLY.

This subject was treated so fully last year in a special Report that it is only necessary to allude to circumstances which have taken place since that date. As already reported to the Council, the following Bills have been before Parliament this year, namely, the Derwent Valley Water Board Bill, 1909, and the Worksop Water Bill, 1909. The County Council have succeeded in getting protecting clauses inserted in them.

In the Derwent Valley Water Board Bill the Board are seeking an extension of time for the construction of the Derwent Reservoir Works, and the County Council are asking that there should be a corresponding extension of time for the supply of water to Notts. Local Authorities, and a clause will be inserted providing that instead of the latest date for the supply of such water being the year 1930 (as in the former Act) such date shall be the expiration of 20 years from the date when the water is first available for the supply of the County.

In the Worksop Water Bill, 1909, Clause 11 states :— "Notwithstanding anything contained in this Act, or in any "other Act or Order of the Company, or in any Act or Acts "incorporated therewith, the Company shall not, without the "consent of the County Council of the Administrative County "of Nottingham under their Common Seal, supply water in "bulk or otherwise for any purpose *beyond the boundaries of "the said County.*"

There is also an obligation by Clause 12, to supply the Blyth and Cuckney Rural District Council with water, under certain conditions.

It is further arranged that any additional supply of water required shall be obtained from the water which has so long been pumped to waste at the Manton Colliery. There is a prospect, therefore, of this water being eventually utilised for drinking purposes.

On March 31, 1909, an Inquiry was held by an Inspector of the Local Government Board to consider the application of the Basford Rural District Council for sanction to borrow £4,000 for works of water supply for the Parish of Ruddington. The loan was granted, and works will shortly be commenced. The water will be supplied in bulk from the mains and reservoirs belonging to the City of Nottingham, at the price of one shilling per thousand gallons.

Dr. Farrar, in his Report to the Local Government Board dated Oct. 14, 1908, gives as his first recommendation—"That "the Southwell Rural District Council should endeavour to "obtain pure water supplies for certain parts of their district, "which, as set forth in detail in the body of this Report, are "inadequately provided in this respect."

The villages particularly mentioned as most needing a public water supply are Lowdham, Gunthorpe, Caythorpe, Bulcote, Oxton, North Muskham, Sutton-on-Trent, Epperstone, Thurgarton, Gonalston, South Muskham, Cromwell, Carlton-on-Trent, Weston, Elston, Syerston, Stoke, Thorpe Batley, Norwell, Caunton and Holme. It is further pointed out that all these villages could be supplied without difficulty by the existing undertakings of the Newark Corporation or the Nottingham Corporation. The Clauses in the Newark Water Acts and the Nottingham Water Acts bearing on this matter, and the agreement of 1898, between the Nottingham Corporation and the Rural District Council of Southwell, are given below.

SECTIONS OF ACTS OF PARLIAMENT BEARING UPON THE SUPPLY OF WATER TO THE SOUTHWELL RURAL DISTRICT.

NEWARK CORPORATION ACT, 1891.

54 & 55 Vict. Ch. cxxii.

Section 5.—The limits of this Act shall be the parishes townships extra parochial and other places of Newark-upon-Trent those parts of the parishes of Averham and Kelham included between the River Trent and the Newark Navigation and known as "the Island" and the parishes of Farndon Hawton Balderton Coddington and Winthorpe all in the county of Nottingham.

Section 57.—The Corporation may from time to time enter into and carry into effect agreements with any sanitary authority company corporation public body officers or persons for the supply by the Corporation to any such sanitary authority company corporation public body officers or persons respectively of water beyond the limits of this Act provided that such supply of water do not at any time interfere with the supply of water for domestic purposes within the limits of this Act and provided further that the powers of this section shall not be exercised within the limits of supply of any company authority or body authorised by Act of Parliament or Provisional Order confirmed by Act of Parliament to supply water without the consent in writing of such company authority or body but the consent of the Southwell Union Rural Sanitary Authority shall not be required in respect of any supply of water to Lewis Randle Starkey of Norwood Park his heirs or assigns or his or their tenants so long as that rural sanitary authority is unable to afford such supply from their own works.

LOCAL GOVERNMENT BOARD'S PROVISIONAL ORDERS CONFIRMATION (No. 4) ACT, 1893. 56 & 57 Vict. Ch. cxv.

Extends the limits of supply of the Newark Corporation to —

Farnsfield Edingley Halam Southwell and Upton. Provided if at the end of 5 years the Corporation shall not have made provision for an adequate supply the restriction imposed by Section 52 of the Public Health Act 1875 shall cease to apply.

NOTTINGHAM CORPORATION WATER ACT, 1897.

60 and 61 Vict. (Ch. cc.)

Section 23.—(1) After the Corporation have completed the Boughton Pumping Station or have so far completed the same as to be in a position to supply water therefrom they shall within three months after receiving a request in writing from the Southwell Rural District Council at any time supply the said Council with such quantity or quantities of water in bulk as they shall require for the use of any contributory place or part of any contributory place within the district of the said council not being within the limits of water supply of the Corporation of Newark at a price not exceeding sixpence per one thousand gallons (exclusive of meter rent) and such water shall be delivered into a suitable tank or reservoir to be provided by the said council near to any of the main pipes of the Corporation within the said district and within the limits within which the Corporation are by this Act authorised to supply water in bulk and the suitability and situation of the tank or reservoir shall in case of disagreement be determined

by a referee to be nominated by the Local Government Board provided that the cost of making the necessary connexions with such main pipes for the purpose of such supply shall be paid by the council.

EXTRACT FROM AN AGREEMENT DATED 27TH MAY, 1898, MADE BETWEEN THE CORPORATION OF NOTTINGHAM AND THE RURAL DISTRICT COUNCIL OF SOUTHWELL.

13. THAT the Corporation if so requested by the District Council will supply them with water for the Parishes of Bulcote and Gunthorpe at the Boundary of the Corporation Water District at the rate of sixpence per one thousand gallons and will be at the expense of laying pipes for such water supply by the nearest route to the boundaries of the said Parishes of Bulcote and Gunthorpe respectively if the Chairman for the time being of the Health Committee of the Nottinghamshire County Council should so require.

14. THAT the Corporation will supply water in bulk to the said District Council for the Parish of Lowdham at the rate of sixpence per one thousand gallons if so required by the District Council at the Boundary of the Corporation Water District but in such case all expenses of pipes to convey the supply of water to Lowdham shall be paid by the District Council.

From the above it is abundantly evident that ample powers exist to supply most, if not all, of the villages mentioned with the necessary water, and it is the will only which is wanting.

The following extracts from the Annual Reports of the Medical Officers of Health give a fair representation of the needs of some districts, and of the progress made in others. It is too late in the day to doubt the benefits to health which follow the provision of a permanent and abundant supply of pure water. Unfortunately, the necessary expenditure of money is usually large, and presses severely upon the small rural districts where the want of water is often greatest. But the provision of a proper supply of pure water is a permanent improvement, which increases the value of property, as well as benefiting health. The only way in which many of the villages can obtain a permanent supply is by *combination*, and for some of them the matter is already urgent.

Dr. Wills (Mansfield) writes:—"During June the new "Waterworks at Clipstone were opened, an abundant supply of "water having been proved. This was a most important step, "seeing that the population to be supplied was increasing so "rapidly, and the Rainworth well, although designed for a "population of 30,000 (and it had not been more than 13 years "in use), was being heavily drawn upon to supply a considerably "larger population than was anticipated, besides which Col- "lieries were being established in the neighbourhood which "might somewhat affect the supply from one well."

"Dr. Beale (East Retford Rural) writes:—"In some parts "water from the Chesterfield Canal is used."

"Dr. Wills (Southwell) writes:—"Dr. Farrar points out, "in the very able Report he has made upon your District, how "readily part of your District could be supplied from the "Nottingham main, running from Boughton to Nottingham, in "the case especially of Walesby and Oxton, and from the "Nottingham supply near Bulcote to Lowdham, Gunthorpe, "Epperstone, Thurgarton and Hoveringham, and other villages "in that locality; and from the Newark supply it would be "easy to supply other villages in the Trent Valley, such as "Muskham, Cromwell, Carlton, Sutton, Rolleston, Stoke, "Elston, etc."

"It is the more necessary that the Trent side villages "should possess a supply of good water, because they are "unable to obtain a satisfactory supply locally, since the water, "even if it were safe from pollution by drainage, is too hard "naturally for drinking and cleaning purposes, and it is rare to "find a well properly made so as to be safe from pollution by "drainage."

"The most noteworthy improvements of the year have "been that water has been laid on throughout Clipstone, "Ollerton and Kirton."

RIVER POLLUTION.

Progress is being made in diminishing the pollution of the rivers, streams, and canals in the County with sewage matter, but it is very slow and unequal. Indeed, the inequality of treatment is one of the chief grievances. When a local authority have spent a large sum of money in purifying the sewage effluent discharged into a stream, and have attained a high standard of efficiency, it is apt to appear to the man of business to be a waste of money if the adjoining, and possibly much larger, local authority higher up the stream continues to pour untreated or imperfectly treated sewage into the same stream. This is very largely the case as regards the river Erewash, and causes intense dissatisfaction

A serious complaint was made to the Local Government Board on this matter, but no satisfaction was obtained. The County Council continue to act in full accord with the Derbyshire County Council; but until the very gross pollution of the Erewash from Ilkeston and from Long Eaton is abated, the bitter and well-grounded complaints, to which we are accustomeded, must continue.

There is now little pollution of the Erewash from the Nottinghamshire side, except from Newthorpe; and there new works are in progress, though they have advanced too slowly. The Order of the County Court expires January 25th, 1910, on the same date as the Derbyshire Order against Ilkeston, and then the whole question must be reconsidered.

The County Court Order against the Southwell Rural District Council expires April 29th, 1910; and as the pollution of the river Greet and its tributaries has not yet been completely abated, that also will require reconsideration.

Dr. Farrar, in his Report, dated October 14th, 1908, to the Local Government Board, complains of the pollution of the Trent and various of its tributaries, by the sewage from various villages in the Southwell Rural District. The Health Committee of the County Council have the matter, at present, under their consideration.

As a consequence of Dr. Farrar's Report, arose the question of the pollution of the river Trent by the sewage of Newark; and the County Council directed the County Medical Officer to make a comprehensive report, which will take a considerable time to complete, as the whole of the County, except a few hundred acres, drains directly or indirectly into the river Trent, not to speak of the City of Nottingham and other large centres of population in adjoining Counties.

Three Local Inquiries were held by Inspectors of the Local Government Board in connection with sewage disposal, and were attended by the County Medical Officer.

At Sutton Bonington on January 30th, 1908, for sanction to borrow £3,900 for purposes of sewerage and sewage disposal for the parish of Sutton Bonington. The loan was granted and the works are well on their way towards completion. A further Inquiry was held on February 10th, 1909, for sanction to borrow a further £500 for an extension of the sewerage to a wider area.

On May 5th, 1908, a local Inquiry was held by an Inspector of the Local Government Board to enable them to determine whether they shall issue an Order requiring the Basford Rural District Council to undertake or contract for the removal of house refuse from premises, and the cleansing of earth closets, privies, ashpits, and cesspools in the Parish of Ruddington. The Inquiry was attended by the County Medical Officer, and was adjourned *sine die* upon an undertaking being given that a new Sewer would shortly be made to connect with the existing Pumping Station.

On October 20th, a local Inquiry was held at Mansfield by an Inspector of the Local Government Board for sanction to borrow £36,718 for works of sewage disposal. The Inquiry was attended by the County Medical Officer, and it is understood the loan was granted, but the works have not yet been commenced.

Special Reports have been presented to the Health Committee in connection with each of these Inquiries.

DRAINAGE, SANITARY WORK AND SCAVENGING.

It is still necessary to commence this subject by quoting the words spoken by the late Sir Richard Thorne Thorne, when Chief Medical Officer to the Local Government Board.

"The fact that with our presert knowledge, such a structure as the common midden-privy should not only exist in our midst, but be clung to with a perverted tenacity, is, in my opinion, the greatest blot which attaches to English sanitary administration at the close of the nineteenth century. Apart from its sanitary aspect, it is a system as degrading and ignoble as it is foul; and I trust the day is not far distant when we shall look back to it as a barbarism of the past."

Improvements are gradually taking place, mainly as the result of the persevering recommendations of the Medical Officers of Health of the various districts. The substitution of pail-closets for privy middens is not a completely satisfactory change, unless accompanied by *an efficient system of Public Scavenging.*

From the Reports, it is abundantly evident that Public Scavenging is required in **villages** as well as in Urban Districts. Indeed the Reports show that Public Scavenging is in operation in some villages, greatly to the benefit of the health of the community.

Another recommendation which is annually made in this Report consists in *the paving of yards and spaces around houses.*

The following extracts from the Annual Reports of the Medical Officers of Health for the various districts shew what is being done, and what most needs to be undertaken. The frequent repetition of the same complaint affords some indication of the difficulties in the way of progress.

Dr. Wills (Newark Borough) writes :—"The system "generally in use in Newark for closets is the tub system, and "the tub system is used also for ash refuse, the latter tubs "being kept under sheds in most cases adjoining the tub "closets."

"*The reason that the tub closet system has been adopted so "widely is that the Corporation has been anxious to avoid, as "far as possible, the further pollution of the canalised stream "which passes by the north side of the town.*" . . .

"I am informed that there are 1586 tub closets in Newark."

"*In most new buildings the water closet is introduced, and "I consider it is the most healthy and cleanly closet. All "improving towns I know are adopting it, and providing a "sewage system suitable for dealing with it.*"

"When the problem is courageously approached and the "ablest advice obtained from an engineering and financial "point of view, it is possible that the dread of incurring expense "out of proportion to the resources of the town may disappear."

Dr. Harvey Francis (Arnold) writes :—"The sanitary tins "are emptied once a week with tolerable regularity, but they "are not found sufficiently large for some households."

Dr. Rothera (Beeston) writes :—"*For the last 4 years no "plans of new houses with tub closet accommodation have been "passed where a public sewer exists*, and in consequence the "number of tubs that have to be taken down to the farm "remains about stationary ; 2,200 of these are removed weekly "to the farm by your Sanitary Staff between the hours of 10 "p.m. and 7 a.m., where they are emptied, cleansed, disinfected, "and then returned. This material soon loses any manurial "value it may have, and we have an increasing difficulty in "disposing of it gratis to the neighbouring farmers. In con- "sequence of this, 1,500 loads have had to be buried on the "farm during this winter. This may serve as a temporary "expedient, but it cannot go on indefinitely. I still maintain "that the removal of so much filth by fire is the only rational "and sanitary method of dealing with it."

The Surveyor (Carlton) writes :—"*I am pleased to say that "the Council's action in requiring all new houses to be provided "with water closets has not resulted, as predicted by some, in "the wholesale blocking up of drains. There have been a con- "siderable number fixed in connection with cottage houses, and "I have not heard of a single complaint of stoppage or being any "trouble.*"

Dr. Forbes (Eastwood) writes :—"We shall not be in a "condition to cope quickly and successfully with fevers until "water closets and dustbins are the rule, and open closets and "ashpits the exception."

Dr. Jones (Hucknall Torkard) writes :—"I am glad also "to report that *water closets have been adopted in most of the "new property erected during the year*, and that the foul privy "ashpits are still being attacked, and converted into pail and "water closets."

Dr. Irvine (Huthwaite) writes :—"The greater number of "the houses are supplied with pail closets. Privy middens are "becoming fewer each year."

Dr. Houfton (Mansfield Woodhouse) writes :—"The sewer- "age and sewage disposal at Forest Town has occupied your "attention during the past year. A scheme formulated by your "Surveyor, Mr. F. P. Cook, has been adopted, has received "the sanction of the Local Government Board, and the tender "for carrying out the work has been let, and it is hoped will "be completed within six months."

"The scheme is as follows :—The population at Forest "Town is estimated at 2,160, there being 360 inhabited houses, "and the dry weather flow of sewage is estimated at 25,000 "gallons per diem, but provision is made for dealing with a "much larger quantity than this."

"The sewers and the effluent pipes will be of the best "stoneware pipes, jointed in approved Portland Cement and "sand ; 9-inch sewers will be laid along Clipstone Road, and "thence along Forest Town new street to the junction of the "12-inch sewer running along Newlands Road to the pumping "tanks."

"Half-an-acre of land on the Newlands Road has been "purchased for the Pumping Station, and there the following "works will be laid down :—

"The sewage will enter upon the pumping site through a "screening chamber to the storage tanks in duplicate of 25,000 "gallons capacity, from whence it will be pumped by town "gas engines and plunger pumps through a 6-inch cast-iron "main to the outfall works."

"The pumps are capable of delivering 5,000 gallons of "sewage per hour against a head of 100 feet. Upon delivery "at the outfall works the pumping main discharges into an

"overflow chamber, and thence to detritus tanks, having pro-
"vision for drawing off sludge deposited at the bottom by
"stoneware pipes to a lagoon or open pit which will be cleaned
"as occasion requires."

"Provision is made fn case of an excess of sewage being
"pumped for dealing with the same upon a storm bed, 30 feet
"by 60 feet and 4 feet deep, formed of hard clinker, and having
"distributing half-round stoneware 6-inch pipes on the surface.
"The area of the storm bed is 200 square yards, and at the rate
"of 500 gallons per yard, is capable of dealing with 100,000
"gallons of sewage, if required. The sewage passes from the
"detritus tanks into large open septic tanks, each holding
"25,000 gallons, and arranged if required for alternate use."

"From the septic tanks the sewage passes through a
"collecting tank, thence to the dosing chamber, having a
"special arrangement for delivering the sewage on to the
"percolating beds. The collecting tank has a capacity of 350
"gallons, which will be delivered to the percolating beds by
"Adams' patent dosing syphons as required, the beds being
"arranged to act together or independently."

"The percolating beds (two in number) will be formed of
"varying thicknesses in layers, 3-in., 2-in., and 1-in. of cold-
"blast specially selected furnace slag, the diameter of the
"beds at the surface is 32 feet, the depth 5 feet, and at the
"rate of 56 gallons per foot, each bed can deal with 25,000
"gallons of sewage."

"In addition to treating the sewage upon the percolating
"beds, it will, after leaving, be conveyed by 9-inch stoneware
"pipes and carriers to the surface of the land adjoining, and
"by means of open carriers or grips formed by hand or plough,
"distributed over the whole of the available sand land, having
"an area of over four acres."

"The land is extremely light and sandy, and forms a most
"excellent filtering medium."

"The land will be under-drained at 6-inch depth, and the
"effluent (if any) will run into a 9-inch stoneware pipe to the
"outfall in the river Maun."

"Most of the houses are provided with pails and ashbins,
"but some, especially the older houses, have middens, whilst
"a still fewer number are provided with water closets."

Dr. Mackenzie (Kirkby-in-Ashfield) writes:—"The
"scavenging is done by the Council's own men and horses.
"The refuse destructor mentioned in the last year's Report has
"not yet been provided."

Dr. Garrett (Worksop) writes :—" Up to September, 1908, " the scavenging of the district was done by a contractor, but " owing to the unsatisfactory way in which the work was done " for some time, the Council then decided to take over the " work. A capable foreman was appointed, who has full charge " of the staff of men and horses necessary to carry cut the " work."

" This year the Council renewed their lease of the Sewage " Farm for another 25 years."

Dr. Littlewood (Skegby) writes :—" The accumulation of " decomposing vegetable and organic matter in and about a " dwelling-house is undoubtedly a source of danger to the " inmates. These accumulations afford a favourite breeding " ground for insect life, particularly flies, which hatch out in " the warmer months of the year in very great numbers, " carrying with them on their bodies particles of the substance " in which they have bred. Generally speaking, the first thing " on which they alight is an article of food, which they thus " contaminate with germs of a dangerous character. The " obvious remedy for this state of things is to put in force a " regular system of scavenging. In the district which we are " now considering, a great deal of this work has to be done by " private enterprise, but the great difficulty which at present " confronts us, is to provide suitable localities for the deposit of " the material collected." . . .

" The day is not far distant when all Sanitary Authorities " who are not able to make these provisions, will be called upon " to erect Refuse Destructors."

Dr. Wills (Southwell) writes :—" Dr. Farrar, in his Report, " has drawn special attention to the drainage of certain places, " and the attention of the County Authorities has been directed " to those cases, particularly were complaints have been made " of the pollution of streams. These are Hoveringham, " Kelham and Farnsfield. Hoveringham and Kelham have " been complained of locally." . . .

" Schemes for the improvement of the drainage of Hover- " ingham and Kelham have been presented to you." . . .

" The drainage of Farnsfield and Edwinstowe could be " dealt with without serious difficulty, for two reasons : one, " because you have the great auxiliary of water supply ; two, " because the fall of the land lends itself to dealing with the " outfall by deposition and filtration readily, without the " expense of pumping."

"In another matter Southwell is to be congratulated on "the number of owners who have complied with your "Inspector's request to replace the privy midden and pan "closet by the water closet."

"The Sewage Farm has been improved by the Surveyor "running the sewage over a much larger area, and sowing part "with Italian rye grass."

"In addition to this, the Consulting Engineer of the "Council has been called in to advise upon what is necessary "for improving the sewage effluent before it discharges into "the stream adjoining the farm, which has been complained "of very much."

PAVING OF YARDS.

Dr. Knight (Carlton) writes:—"It would be well if back- "yards of all houses were properly paved or asphalted where "necessary, as the soil is, in many instances, allowed to become "sodden and unwholesome, and not rendered porous by "cultivation."

Dr. Irvine (Huthwaite) writes:—"I again desire to draw "the Council's attention to the sanitation of the back-yards. I "consider that there is an improvement in them in many places, "and that their covering with an impervious material is to be "encouraged as much as possible. It is a common custom for "slops and organic refuse to be thrown broadcast anywhere "over the yard, when part of it practically becomes a yard "covering. In hot weather the effluvia arising may or may "not be offensive, but all the same there is a lurking danger in "it to the public health. The bearing of these spaces on the "infantile death-rate need not be repeated."

Dr. Mackenzie (Kirkby-in-Ashfield) writes:—"In many "places in the district there are blocks of houses, ranging from "three to eight, with the curtilage or yard premises uncultivated. This space is often used by children for play, but the "objectionable aspect of the question is that domestic animals, "such as fowls, pigeons, rabbits, etc., also have their abode "here; not unfrequently every form of decaying rubbish, "animal or vegetable, is thrown out here. It is impossible to "sweep or flush these places properly, so in dry weather they "are covered with dry dust, and in wet weather saturated with "mud and kitchen slops. The remedy is to have them "asphalted."

Dr. Houfton (Mansfield Woodhouse) writes:—"I should "suggest that you insist upon the paving of back-yards in the "new houses which are to be erected."

Dr. Littlewood (Skegby) writes:—"It is obvious that the "cleanly condition of a house depends very largely upon the "completeness with which the back-yard is kept clear from "mud and dust. There are a number of houses at Stanton "Hill and Meden Bank and other parts of the district where "the back-yards are insufficiently asphalted or paved."

SMOKE PREVENTION.

The prevention of the pollution of the air by smoke is one of the duties imposed upon Sanitary Authorities, by Sections 91 (sub-sections 7 and 8), 92 and 102, of the Public Health Act, 1875.

Rural District Councils have the same powers and the same duties as Urban Councils as regards Smoke prevention.

Many collieries and some factories are situated in Rural Districts, and there is no valid reason *even of an economic kind* to excuse the present pollution of the air by black smoke. The economy consists in smoke prevention by more careful stoking and more complete combustion of the fuel. Smoke is waste as well as a nuisance.

Mechanical science, in its application to proper combustion of fuel, whether the fuel be coal or the gas obtained from it, is now quite capable of relieving us from this nuisance. Further, *this much-needed relief may be obtained in a manner quite consistent with economy*, so far as steam production is concerned.

The value of pure air is gradually being more and more appreciated, now that the difficulty of obtaining it is daily increasing. The question of "aerial sewage," as it has been termed, is attracting much attention. The importance of the evil has been recognised by the Physical Deterioration Committee, in Clause 7 of their recommendations. In the coal mining parts of the country, smoke pollution concerns the Rural Districts, as well as the Urban. Smoke prevention is already successfully accomplished in some cases, and there is no sufficient reason why smoke-consuming furnaces and careful stoking should not be required in all.

Sir William Ramsay, F.R.S., in his address in 1896, referred to some points in connection with smoke production, which cannot be known too widely. He said, "Smoke con- "denses atmospheric vapour, causing fog and rain, *renders our* "*climate colder*, and makes our lives more or less unhappy and

"uncomfortable. It *shuts out sunlight*, and thus increases the "growth, and tends towards the multiplication of bacteria, "many of which are of a dangerous character."

In the vegetable world, there can be no doubt that smoke injures trees and damages crops both directly and through the diminution of sunshine induced.

From considerations of Public Health it is greatly to be desired that it should be the rule rather than the exception to leave rubbish below ground, as the smoke and injurious fumes from burning "spoil" banks in connection with collieries are an even greater nuisance than the black smoke from colliery chimneys. And both are unnecessary.

Dr. Rothera (Beeston) writes:—"Fewer complaints have "been made with respect to pollution of the air by smoke from "factory chimneys during the past year. Probably this is due "to the fact that more frequent warnings have been given to "those responsible for the management of the furnaces. In "these days of mechanical science it is quite consistent to so "perfectly consume the fuel that a minium of smoke results, "and this without any loss of economy. In fact, in the great "majority of instances, smoking chimneys are the result of "improper stoking, and are wasteful of energy."

HOUSE ACCOMMODATION.

Dr. Wills (Southwell) writes:—"The house accommodation "in country districts, I think, should be better than it is; and "in your district a great improvement would be effected by "providing cottages with three bedrooms. A damp course and "good spouting are necessary for a healthy house." . . .

"I regret that in many villages, cottages are falling to "decay for the need of attention, and I see very few good "cottages being built. In Norwell, six cottages have been "closed as unfit for habitation. In Kersal and Eakring two "are required to be closed. In Farnsfield three have been "closed. Cottages at Ompton have also been closed recently. "I do not often see cottages being built in a good position for "health." . . .

"More important than all is the need for controlling the "locality in which houses are built, so that provision for good "drainage should be possible. In all districts it appears desir- "able that the building of houses in such a position that they "cannot be well drained should be stopped, for it is frequently "practised and causes serious difficulty throughout both Rural "and Urban Districts."

OVERCROWDING.

Dr. Irvine (Huthwaite) writes:—"Three cases of over-"crowding were reported and remedied, the people concerned "having removed to larger houses at the request of the "Sanitary Inspector."

Dr. Knight (Carlton) writes:—"There were two cases of "overcrowding, which were remedied without proceedings "being taken beyond formal notice."

Dr. Houfton (Mansfield Woodhouse) writes:—"There "have been a number of cases of overcrowding, which I am "pleased to state have been remedied without having to take "police-court proceedings."

HOUSES UNFIT FOR HABITATION.

Dr. Knight (Carlton) writes:—"Four houses were con-"demned after inspection by the Surveyor, Inspector of "Nuisances, and myself. These houses were situated between "Main Street in front and Church Street behind. They were "quite unfit for habitation, and consisted of very old property, "and, I should say, beyond repair."

SLAUGHTER-HOUSES.

Dr. Irvine (Huthwaite) writes:—"I have made periodical "inspection of the slaughter-houses. The floors are well paved, "and means of drainage provided. The general construction "is in most cases satisfactory. Cleanliness is what some of "them are most lacking in. I have drawn the attention of the "owners to the fact that lime-washing should be done more "regularly, that refuse material should be removed sooner, and "that the premises should be well flushed after slaughtering. "In order to facilitate cleansing purposes, I have again "suggested that the walls be covered for a few feet from the "floor with gas tar. This has been done in the majority of "the houses."

"No diseased meat was detected during the year."

FACTORIES, WORKSHOPS, AND BAKEHOUSES

The amount and kind of work that is being done by the Health Authorities under the recent Act is shown on the accompanying Tables; and also by the following extracts from the Annual Reports of the Medical Officers of Health.

A large addition has been made to the regular work of the District Medical Officers of Health, without, as a rule, any additional remuneration.

Dr. Howard Francis (Arnold) writes :—"The bakehouses, "on the whole, are in a satisfactory condition, though five "required limewashing, but were otherwise in quite a clean "state."

"Sixteen addresses of outworkers living in the district "were received from other Councils."

"In two instances work was prohibited on account of "infectious disease in the house."

Dr. Rothera (Beeston) writes :—"Our chief concern with "regard to these is to see that no work is done in a house "where any infectious disease is known to exist. In con- "sequence of the falling off of lists from local employers, a "circular has been sent to each one reminding them of the "requirements of the Factory and Workshops Act. As will be "seen from the table, only four lists, containing in all twelve "names, have been received during the year from Beeston "manufacturers. During the same period thirty addresses "have been received from Nottingham and other districts."

Dr. Knight (Carlton) writes :—"There are 6 factories and "57 workshops registered, and these have been inspected. One "outer door of a factory was found to open inwards ; this was "immediately rectified by the manager on his attention being "called to it. Some of the workshops were not quite as clean "as desirable, and limewashing was carried out where requested. "The bakehouses, with a few exceptions, were satisfactory, "fresh limewashing in some instances being required ; this the "owners undertook to effect when requested. Outworkers "were debarred in 2 cases from doing home-work in infected "houses.

Dr. Irvine (Huthwaite) writes :—"The factories and work- "shops are in a fairly satisfactory condition. Instructions were "given to attend more frequently to limewashing and to "ventilation, which was defective, not from want of air space "or overcrowding, but the neglect of the use of the means "provided for ventilation. The sanitary conveniences are "sufficient, and provided for both sexes when necessary."

"No particular fault could be found with the outworkers' "premises. The usual care was taken to prevent home-work "being taken to infected premises. To the best of my know- "ledge, no case of infectious disease occurred at any of the "outworkers' premises."

"Lists of the outworkers have been sent in by the employers "or their managers, and a record of the addresses of outworkers "received from other Councils, and forwarded to other Councils."

Dr. Nesbitt (Sutton-in-Ashfield) writes :—"The bakehouses "are well lighted and ventilated, and are satisfactory as regards "cleanliness. There are now no underground bakehouses in "the district."

Dr. Mackenzie (Kirkby-in-Ashfield) writes :—"In con- "nection with homeworkers, 76 visits of inspection were made. "In five houses work was stopped and goods fumigated and "disinfected. Three of these were due to the presence of "Whooping Cough, and two to Scarlatina."

Dr. Garrett (Worksop) writes :—"Lists were received "from all employers employing outworkers, and these premises "were inspected. No cases of infectious disease occurred in "any of these houses during the year."

"There are 15 bakehouses in occupation. In several "instances the walls and floors required cleaning. At the "bakehouse where I reported last year that the yard required "paving, the improvement has been carried out."

Dr. Wray (Basford) writes :—"As a rule the workshops "and workplaces are clean and possess sufficient means of "ventilation, but in winter-time there is great difficulty in "getting workpeople to make use of them. Two complaints "of want of cleanliness in workshops were received from H.M. "Inspector, and were promptly attended to."

"As far as I know, there is no underground bakehouse in "the district. In six of the bakehouses I visited I found it "necessary to order limewashing, and this was done."

"The work put out is chiefly lace mending and hosiery "seaming. The outworkers, as a rule, are thrifty, and their "homes clean, but the very fact of their taking in home-work "in many cases points to large families; still in no case "coming under my notice have I come across a case of "preventible overcrowding, and no case of notifiable infectious "disease has occurred in an outworker's home."

"The employers now send a complete list of outworkers, "and where names occur not in your district, I send them on "to the Council of the district in which they work."

Dr. Wills (Southwell) writes :—"The bakehouses of "Southwell have much improved in recent years, but I "requested that accumulations of manure and midden pits "should be removed from the proximity of two of them, and "the occupiers agreed to have this done."

FACTORIES, WORKSHOPS, WORKPLACES, AND HOMEWORK. Year 1908.

URBAN DISTRICTS.	Number of Workshops on the Register. (Including Bakehouses.)	Number of Workplaces on the Register. (Other than Outworkers' Premises.)	Number of **Inspections**, including Inspections made by Sanitary Inspectors.			DEFECTS FOUND.								Underground Bakehouses.		Outworkers.			Homework.		
						Nuisances under the Public Health Acts.				Offences under the Factory and Workshop Act.											
			Factories (including Factory Laundries).	Workshops (including Workshop Laundries).	Workplaces. (Other than Outworkers' Premises.)	Found.	Remedied.	Referred to H.M. Inspector.	Prosecutions.	Found.	Remedied.	Referred to H.M. Inspector.	Prosecutions.	Certificates granted.	In use at the end of 1908.	Number of Lists received.	Number of Outworkers.	Number of Inspections of Outworkers' Premises.	Notices prohibiting Outwork in Unwholesome Premises.	Orders prohibiting Outwork in Infected Premises.	Failure to affix Abstract of the Factory and Workshop Act.
MANSFIELD	92	..	2	95	..	26	14	..	..	..	..	..	..	..	1	4	38	37	4	..	4
NEWARK	116	..	..	116	..	37	34	..	..	3	3	..	..	..	3	7	126	126	1	..	5
EAST RETFORD	86	..	8	37	..	14	11	..	..	..	..	..	..	..	..	3	3	8	..	..	..
ARNOLD	83	..	35	120	..	4	4	..	..	..	..	..	..	..	1	5	169	60	..	2	..
BEESTON	41	..	24	41	21	10	10	..	..	..	..	..	..	..	..	6	12	60	..	..	1
CARLTON	57	..	6	57	..	3	3	..	..	..	..	..	..	..	..	3	..	3	..	4	5
EASTWOOD	17	..	9	68	..	4	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..
HUCKNALL TORKARD	63	..	25	139	21	15	15	..	..	..	..	..	..	..	1	34	402	..	..	..	..
HUTHWAITE	4	..	4	2	..	..	..	..	..	..	..	..	..	..	..	2	96	..	..	..	..
KIRKBY-IN-ASHFIELD	7	7	8	14	14	1	..	..	..	..	..	..	..	..	..	..	38	76	..	5	..
MANSFIELD WOODHOUSE ..	6	..	8	12	..	..	..	..	..	..	..	..	..	..	..	2	15	15	..	..	..
SUTTON-IN-ASHFIELD	44	3	46	129	19	7	7	..	..	..	..	..	..	..	..	52	405	350	7	12	3
WARSOP	..	..	..	..	9	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
WEST BRIDGFORD	..	..	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
WORKSOP	60	..	84	246	12	4	4	..	..	..	..	..	..	..	..	10	12	25	..	..	3

FACTORIES, WORKSHOPS, WORKPLACES, AND HOMEWORK. Year 1908.

RURAL DISTRICTS.	Number of Workshops on the Register. (Including Bakehouses.)	Number of Workplaces on the Register. (Other than Outworkers' Premises.)	Number of **Inspections**, including Inspections made by Sanitary Inspectors.			DEFECTS FOUND.								Underground Bakehouses.		Outworkers.			Homework.		
						Nuisances under the Public Health Acts.				Offences under the Factory and Workshop Act.											
			Factories (including Factory Laundries).	Workshops (including Workshop Laundries).	Workplaces. (Other than Outworkers' Premises.)	Found.	Remedied.	Referred to H.M. Inspector.	Prosecutions.	Found.	Remedied.	Referred to H.M. Inspector.	Prosecutions.	Certificates granted.	In use at the end of 1908.	Number of Lists received.	Number of Outworkers.	Number of Inspections of Outworkers' Premises.	Notices prohibiting Outwork in Unwholesome Premises.	Orders prohibiting Outwork in Infected Premises.	Failure to affix Abstract of the Factory and Workshop Act.
BASFORD	40	..	13	40	17	8	8	..	..	..	..	..	..	..	..	8	108	63	..	..	..
BINGHAM	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
BLYTH AND CUCKNEY	25	..	..	..	50	10	10	..	..	..	..	..	..	..	..	..	..	..	..	..	..
EAST RETFORD	64	..	5	60	3	13	13	..	..	..	..	..	..	..	..	..	..	..	..	..	1
LEAKE	28	..	..	55	..	5	5	..	..	..	..	..	..	..	..	4	62	116	..	1	..
MISTERTON	47	..	6	20	106	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
NEWARK	17	..	1	19	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2
SKEGBY	25	..	..	77	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
SOUTHWELL	138	..	17	120	4	17	14	..	..	..	..	..	..	..	..	2	3	13	..	..	2
STAPLEFORD	15	..	33	12	3	1	1	..	..	..	..	..	..	..	..	6	23	23	..	..	..
NOTTS. PARISHES administered by SHARDLOW	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

Table I. NOTTINGHAMSHIRE. Vital Statistics for the Year 1908.

BOROUGHS AND URBAN DISTRICTS.

BOROUGHS AND URBAN DISTRICTS.	Area in Acres Exclusive of area covered by water.	Persons per Acre.	Inhabited Houses at Census, 1901.	Persons per House at Census, 1901.	Population, Census 1901.	Population, Estimated to the middle of 1908.	Births.		Deaths under 1 year of age.		Total Deaths Registered at all Ages.		Nett Deaths at all Ages belonging to the Districts.	** Nett Death Rate.	Average Death Rate of the ten years 1898–1907.	Death Rate from Tuberculous Diseases, 1908.	Death Rate from principal Zymotic Diseases, 1908.
							Number.	* Rate.	Number.	Rate per 1000 Births Registered.	Number.	* Rate.					
MANSFIELD (Borough)	7,208	4·5	4,369	4·94	21,445	32,500	1087	33·4	150	137	493	15·1	451	13·8	16·5	1·01	1·47
NEWARK (Borough)	1,899	8·7	3,416	4·3	14,992	16,600	477	28·7	42	88	223	13·4	213	12·8	16·8	·903	0·24
EAST RETFORD (Borough)	4,498	3·0	2,707	4·5	12,340	13,514	331	24·5	31	93	185	13·7	174	12·8	14·5	1·7	1·03
ARNOLD	4,612	2·3	1,799	4·8	8,757	10,624	332	31·2	57	171	163	15·3	173	16·2	13.9	2·07	2·26
BEESTON	1,586	7·4	1,978	4·5	8,960	11,844	317	26·7	32	100	111	9·3	130	10·9	12·1	1·35	1·09
CARLTON	1,400	10·9	2,159	4·6	10,041	15,303	451	29·4	52	115	167	10·9	185	12·0	11·6	1·30	0·78
EASTWOOD	940	5·5	948	5·0	4,815	5,200	137	26·3	14	102	61	11·7	65	12·4	14·5	1·34	0·38
HUCKNALL TORKARD ..	3,270	5·2	3,126	4·8	15,250	17,000	569	33·4	78	137	201	11·8	231	13·5	15·4	1·11	1·00
HUTHWAITE	1,199	4·1	789	5·0	4,076	4,940	176	35·6	28	159	68	13·7	70	14·1	17·2	1·01	1·61
KIRKBY-IN-ASHFIELD ..	5,814	2·8	2,055	5·0	10,318	16,442	543	33·0	76	139	194	11·8	199	12·1	13·5	·973	1·39
MANSFIELD WOODHOUSE	4,834	2·06	961	5·0	4,877	10,000	401	40·0	55	137	150	15·0	156	15·6	15·9	1·10	3·30
SUTTON-IN-ASHFIELD ..	4,786	4·1	2,993	4·9	14,862	19,929	702	35·2	117	166	270	13·5	294	14·7	16·0	·903	0·85
WARSOP	5,728	0·7	429	4·9	2,132	4,250	157	36·9	18	114	51	12·0	51	12·0	15 0	2·58	1·41
WEST BRIDGFORD	1,123	10·1	1,544	4·5	7,018	11,362	188	16·5	11	58	64	5·6	70	6·2	8·14	·705	0·08
WORKSOP	17,930	1·06	3,258	4·9	16,112	19,109	637	33·3	72	113	270	14·1	276	14·4	17·0	1·30	0 83
Totals for Urban Districts	66,827	3·1	32,531	4·7	155,995	208,617	6505	31·1	833	128	2671	12·8	2738	13·1	14·8	1·20	1·12

* Rates calculated per 1000 of the estimated population.

** The Nett Death Rate is arrived at by taking the whole of the Deaths registered during the year in the District, adding the Deaths of residents registered beyond the District, and subtracting the Deaths of non-residents registered within the District.

Table II. NOTTINGHAMSHIRE. Vital Statistics for the Year 1908.

RURAL DISTRICTS.

RURAL DISTRICTS.	Area in Acres, exclusive of area covered by water.	Persons per Acre.	Inhabited Houses at Census 1901.	Persons per House at Census 1901.	Population, Census 1901.	Population estimated to the middle of 1908.	Births.		Deaths under one year of age.		Total Deaths registered at all ages.		Nett Deaths at all ages belonging to the Districts.	Nett Death Rate. * *	Average Death Rate of the ten years 1898–1907.	Death Rate from Tuberculous Diseases, 1908.	Death Rate from principal Zymotic Diseases, 1908.
							Number.	Rate. *	Number.	Rate per 1000 Births registered.	Number.	Rate. *					
BASFORD	61,868	·66	8,115	4·7	38,365	41,336	1,205	29·1	144	130	525	12·7	559	13·5	13·9	0·92	0·89
BINGHAM	66,574	·21	3,250	4·1	13,612	14,132	285	20·1	24	84	238	16·8	180	12·73	16·8	0·63	0·28
BLYTH AND CUCKNEY	28,208	·16	1,005	4·5	4,562	4,730	114	24·1	8	70	67	14·1	71	15·0 *	14·1	1·26	0·63
EAST RETFORD	92,740	·15	3,321	4·6	14,239	14,236	339	23·8	27	79	174	12·2	190	13·3	14·2	1·12	0·49
LEAKE	17,073	·21	861	4·3	3,709	3,709	92	24·8	7	76	43	11·6	48	12·9	13·9	1·07	1·34
MISTERTON	14,268	·29	805	4·4	3,618	4,234	114	26·9	11	96	57	13·4	64	15·1	14·9	0·70	1·65
NEWARK	36,619	·21	1,795	4·3	7,738	8,049	203	25·2	13	64	109	13·4	111	13·7	13·5	1·36	0·49
SKEGBY	12,405	·53	1,071	5·1	5,478	6,661	224	33·6	38	169	87	13·0	91	13·6	13·7	1·50	2·10
SOUTHWELL	117,638	·16	4,573	4·1	19,114	18,970	428	22·5	42	98	273	14·3	280	14·7	15·9	0·84	0·84
STAPLEFORD	4,860	2·02	1,708	4·6	7,873	9,850	301	30·5	27	89	120	12·1	125	12·6	13·6	1·82	0·81
Notts. Parishes administered by SHARDLOW	2,360	·17	79	5·2	413	415	8	19·2	0	0	3	7·2	3	7·2	10·6	0·00	0·00
Totals for Rural Districts ..	454,613	·27	26,583	4·4	118,721	126,322	3,313	26·2	341	102	1,696	13·4	1,722	13·6	14·6	1·03	0·83

* Rates calculated per 1000 of the Estimated Population.

* * The Nett Death Rate is arrived at by taking the whole of the Deaths registered during the year within the District, adding the Deaths of residents registered beyond the District, and subtracting the Deaths of non-residents registered within the District.

Table III. NOTTINGHAMSHIRE. Cases of Infectious Disease notified during the Year 1908.

BOROUGHS AND URBAN DISTRICTS.

BOROUGHS AND URBAN DISTRICTS.	Small Pox.	Diphtheria (including Membranous Croup).	Erysipelas.	Scarlet Fever.	Enteric Fever.	Continued Fever.	Puerperal Fever.	Cerebro-Spinal Fever.	Chicken Pox.	Phthisis.	TOTAL.	Whether there is any Isolation Hospital for Infectious Diseases?	Total available Beds.	Number of Diseases that can be concurrently treated.	Total Cases removed to Isolation Hospital.	Name of the Medical Officer of Health.	Whether the Annual Report is printed?
MANSFIELD (Borough)	..	139	22	68	20	..	3	..	..	..	252	Yes	12 15	Small Pox. Scarlet Fever	41	Charles Wills, M.R.C.S.	Yes
NEWARK (Borough)	..	87	3	10	12	..	..	..	..	1	113	Yes	12 4 4	Diphtheria. Scarlet Fever Small Pox.	84	Charles Wills, M.R.C.S.	Yes
EAST RETFORD (Borough)	..	3	12	9	3	..	3	..	..	..	30	Yes	18 8	Scarlet Fever Small Pox.	9	A. E. Manners-Smith, M.R.C.S.	Yes
ARNOLD	..	12	1	7	3	..	2	..	..	..	25	* ‡	..	..	0	Harvey Francis, M.D.	Yes
BEESTON	..	19	7	5	1	..	1	..	..	..	33	*	..	..	0	Frank Rothera, M.D.	Yes
CARLTON	..	26	19	61	15	..	..	..	..	..	121	* ‡	..	..	14	J. T. Knight, M.R.C.S.	Yes
EASTWOOD	..	8	1	15	4	..	..	..	..	..	28	No	..	..	0	D. M. Forbes, F.R.C.S.	Yes
HUCKNALL TORKARD	..	6	12	23	5	..	1	..	..	..	47	Yes	30	Small Pox.	0	H. T. Jones, M.R.C.S.	Yes
HUTHWAITE	..	2	4	13	5	..	..	..	..	..	24	Yes	12	Small Pox.	0	Robert Irvine, L.R.C.P.	Yes
KIRKBY-IN-ASHFIELD	..	1	23	40	15	..	2	..	..	..	81	Yes	14	1	1	John Mackenzie, L.R.C.P.	Yes
MANSFIELD WOODHOUSE	..	35	9	22	5	..	3	..	..	..	74	†	..	..	0	Ernest H. Houfton, M.D.	Yes
SUTTON-IN-ASHFIELD	..	6	16	72	9	..	2	..	..	..	105	Yes	10	Small Pox.	0	R. Nesbitt, L.R.C.S.I.	Yes
WARSOP	..	14	13	6	5	..	..	..	..	..	38	No	..	..	0	H. W. Horan, M.B., B.S.	Yes
WEST BRIDGFORD	..	7	2	33	5	..	1	..	..	..	48	‡	..	..	1	Walter Hunter, M.D.	Yes
WORKSOP	..	22	15	91	8	..	3	..	..	..	139	*,* Yes	24	Small Pox.	74	T. C. Garrett, M.B.	Yes
TOTAL		387	159	475	115		21			1	1158				224		

† There is an rrangement with the Mansfield Corporation to admit cases of Small Pox and Scarlet Fever into their Isolation Hospitals.

* These districts contribute to the Joint Small Pox Hospital at Hucknall.

‡ These districts have an agreement with the Basford Rural District Council by which cases of Scarlet Fever and Diphtheria can be received into the Basford Sanatorium.

, Cases of Scarlet Fever, Diphtheria, and Enteric Fever are sent to the Joint Hospital situated in the Blyth and Cuckney District.

Table IV. NOTTINGHAMSHIRE. Cases of Infectious Disease notified during the Year 1908.

RURAL DISTRICTS.

RURAL DISTRICTS.	Small Pox.	Diphtheria (including Membranous Croup).	Erysipelas.	Scarlet Fever.	Enteric Fever.	Continued Fever.	Puerperal Fever.	Cerebro-Spinal Fever.	Chicken Pox.	Phthisis.	TOTAL.	Whether there is any Isolation Hospital for Infectious Diseases?	Total available Beds.	Number of Diseases that can be concurrently treated.	Total Cases removed to Isolation Hospital.	Name of the Medical Officer of Health.	Whether the Annual Report is printed?
BASFORD	..	66	29	130	15	..	1	..	..	..	241	Yes	28	Enteric Fever Scarlet Fever Diphtheria	96	G. B. Wray, M.R.C.S., D.P.H.	Yes
BINGHAM	..	5	2	21	3	..	..	..	..	..	31	No	..	..	0	J. W. Eaton M.R.C.S.	Yes
BLYTH AND CUCKNEY	..	3	..	11	4	..	1	..	..	..	19	Yes	16	Scarlet Fever and Diphtheria or Enteric	12	Charles Wills, M.R.C.S.	Yes
EAST RETFORD	..	8	5	58	2	..	1	..	..	..	74	No	..	..	0	Hanway R. Beale, M.D.	Yes
LEAKE	..	9	..	2	4	..	..	..	..	..	15	†	..	..	0	Thos. Corcoran, L.R.C.S.I.	Type-written
MISTERTON	..	14	12	19	3	..	..	..	..	..	48	Yes for Small-pox	3	Small Pox	0	W. W. Farrar, M.B.	Yes.
NEWARK	..	10	9	16	3	..	2	..	..	..	40	No	..	..	0	Frank Broadbent, M.R.C.S.	Yes
SKEGBY	..	5	4	35	..	..	..	..	..	..	44	No	..	..	0	J. O. Littlewood, M.R.C.S., D.P.H.	Yes
SOUTHWELL	..	18	4	23	2	..	3	..	..	..	50	Yes	9	Scarlet Fever Diphtheria or Small Pox	11	Charles Wills, M.R C.S.	Yes
STAPLEFORD	..	1	11	3	1	..	..	..	..	..	16	*	..	..	0	E. Kingsbury, M.D.	Yes
NOTTS. PARISHES administered by SHARDLOW	..	..	..	..	..	..	..	..	..	..	..	No	..	..	0	J. A. Hogg, M.R.C.S.	Yes
TOTALS	..	139	76	318	37	..	8	..	..	..	578				119		

† There is an arrangement with the Borough of Loughborough whereby cases of Enteric Fever and Diphtheria may be sent to the Loughborough Isolation Hospital.
* This district contributes to the joint Small Pox Hospital at Hucknall.

Table V. NOTTINGHAMSHIRE. Vital Statistics for the Year 1908.

WHOLE ADMINISTRATIVE COUNTY.

	Area in Acres.	Persons per Acre.	Inhabited Houses at Census, 1901.	Persons per House at Census, 1901.	Population, Census, 1901.	Population Estimated to the middle of 1908.	Births.		Deaths under 1 year.		Total Deaths registered at all Ages.		Nett Deaths belonging to the Districts.	Corrected Death Rate.	Average Death Rate for the ten years 1898–1907.	Death Rate from Tuberculous Diseases. 1908.	Death Rate from principal * Zymotic Diseases, 1908.
							Number.	Rate. *	Number.	Rate per 1,000 Births.	Number.	Rate. *					
URBAN DISTRICTS	66,827	3·1	32,531	4·7	155,995	208,617	6,505	31·1	833	128	2,671	12·8	2,738	13·1	14·8	1·20	1·12
RURAL DISTRICTS	454,613	·27	26,583	4·4	118,721	126,322	3,313	26·2	341	102	1,696	13·4	1,722	13·6	14·6	1·03	0 83
WHOLE ADMINISTRATIVE COUNTY.	521,440	·64	59,114	4·6	274,716	334,939	9,818	29·3	1,174	119	4,367	13·0	4,460	13·3	14·7	1·14	1·01

* Rate calculated per 1,000 of the estimated Population.

Table VI. Causes of Death during the Year 1908. URBAN DISTRICTS.

DISTRICTS.	Small Pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria (including Membranous Croup).	Croup.	Fever (Typhus, Enteric, and Continued).	Epidemic Influenza.	Diarrhœa.	Enteritis.	Puerperal Fever.	Erysipelas.	Phthisis.	Other Tuberculous Diseases.	Cancer, Malignant Disease.	Bronchitis.	Pneumonia.	Pleurisy.	Other Diseases of Respiratory Organs.	Alcoholism. Cirrhosis of Liver.	Venereal Diseases.	Premature Birth.	Diseases and Accidents of Parturition.	Heart Diseases.	Accidents.	Suicides.	Old Age.	Convulsions.	Apoplexy.	Debility from Birth.	All other Causes.	All Causes.
MANSFIELD	..	3	1	5	16	1	5	2	15	19	1	..	21	12	14	23	38	1	6	4	3	24	1	34	23	8	35	27	..	15	94	451
NEWARK	..	..	..	..	1	..	1	5	2	3	..	..	10	5	24	21	13	..	1	4	2	8	..	25	2	5	26	3	..	2	50	213
EAST RETFORD ..	..	..	..	6	1	..	1	..	6	2	..	..	14	9	11	6	7	..	1	1	1	6	..	8	7	1	..	3	..	1	82	174
ARNOLD	..	..	..	8	5	..	..	1	11	..	..	..	14	8	7	18	22	..	4	1	..	10	..	17	1	3	..	1	..	2	40	173
BEESTON	..	5	..	3	1	..	..	1	4	4	..	1	8	8	14	12	10	..	2	2	..	4	..	10	4	3	6	2	7	3	16	130
CARLTON	..	1	..	2	3	..	3	9	3	4	..	..	15	5	14	17	15	1	2	..	..	10	1	17	4	..	8	9	..	11	31	185
EASTWOOD	..	..	1	..	1	..	..	2	..	4	..	..	7	..	2	10	14	..	..	2	2	2	..	4	1	..	2	1	2	1	7	65
HUCKNALL TORKARD	..	..	..	4	..	..	1	..	12	2	..	..	6	13	14	22	13	..	1	3	..	13	..	19	6	..	..	9	..	15	78	231
HUTHWAITE ..	..	..	..	5	..	..	..	2	3	..	..	..	5	..	2	12	4	..	..	..	..	5	..	7	3	1	..	2	..	3	16	70
KIRKBY-IN-ASHFIELD ..	..	..	1	8	..	..	..	8	14	3	1	..	10	6	15	7	29	..	..	1	1	10	2	11	4	..	..	14	..	11	43	199
MANSFIELD WOODHOUSE ..	..	13	..	6	4	..	2	..	8	5	1	..	4	7	6	15	21	..	..	..	1	10	2	12	5	..	..	2	..	4	28	156
SUTTON-IN-ASHFIELD ..	..	..	3	8	..	..	1	..	5	11	1	..	13	5	16	21	31	..	3	..	..	17	..	17	8	1	..	13	..	43	77	294
WARSOP	..	..	..	..	1	..	..	..	5	1	..	..	5	6	1	..	6	..	..	1	..	1	..	5	..	1	..	4	..	4	10	51
WEST BRIDGFORD ..	..	..	..	1	..	..	2	..	..	1	..	4	4	12	3	3	..	..	1	..	6	..	14	1	..	..	1	..	..	17	70
WORKSOP	..	..	3	..	5	..	2	4	6	7	2	1	16	11	14	24	16	..	..	2	1	10	2	28	11	..	23	7	14	16	51	276
TOTAL	..	22	9	55	39	1	16	36	94	65	7	2	152	99	166	211	242	2	20	22	11	136	8	228	80	23	100	98	23	131	640	2738

Table VII. Causes of Death during the Year 1908. RURAL DISTRICTS.

DISTRICTS.	Small Pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria (including Membranous Croup).	Croup.	Fever (Typhus, Enteric, and Continued).	Epidemic Influenza.	Diarrhœa.	Enteritis.	Puerperal Fever.	Erysipelas.	Phthisis.	Other Tuberculous Diseases.	Cancer, Malignant Disease.	Bronchitis.	Pneumonia.	Pleurisy.	Other Diseases of Respiratory Organs.	Alcoholism. Cirrhosis of Liver.	Venereal Diseases.	Premature Birth.	Diseases and Accidents of Parturition.	Heart Diseases.	Accidents.	Suicides.	Old Age.	Convulsions.	Apoplexy.	Debility from Birth.	All other Causes.	All Causes.
BASFORD	..	2	3	9	8	1	1	9	14	3	1	1	22	16	22	78	37	1	1	6	2	29	1	78	18	4	..	17	..	8	167	559
BINGHAM	..	..	1	..	..	..	1	8	2	..	..	..	9	..	15	21	11	..	..	2	..	2	..	19	3	2	..	5	..	4	75	180
BLYTH AND CUCKNEY	..	..	1	..	1	..	..	1	1	2	1	..	6	..	3	3	4	..	2	..	..	1	..	5	4	..	13	..	..	..	23	71
EAST RETFORD ..	..	..	3	2	2	..	..	3	..	1	..	..	12	4	14	13	6	..	1	5	..	6	..	27	7	1	35	2	10	11	25	190
LEAKE	..	..	..	2	..	..	..	..	3	..	..	1	1	3	5	4	2	..	..	..	..	1	..	7	3	..	..	..	..	1	15	48
MISTERTON	..	..	1	..	3	..	2	..	1	..	..	..	1	2	4	5	1	1	1	1	..	..	..	5	2	1	15	1	6	4	7	64
NEWARK	..	..	1	..	2	1	1	..	..	2	1	..	9	2	11	4	5	..	..	..	..	4	..	17	5	..	..	2	..	3	41	111
SKEGBY	..	1	3	1	3	..	..	2	6	..	..	..	5	5	1	11	5	..	..	..	..	4	3	7	2	..	6	6	..	10	10	91
SOUTHWELL	..	6	1	7	1	..	..	8	1	4	1	3	13	3	16	13	15	..	1	3	..	9	..	33	5	5	54	3	..	6	69	280
STAPLEFORD	..	..	..	..	1	..	1	2	6	1	..	..	12	6	8	15	5	..	1	..	..	10	1	14	6	..	10	5	3	4	14	125
Notts. Parishes administered by SHARDLOW ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3
TOTAL	..	9	14	21	21	2	6	33	34	13	4	5	90	41	99	167	92	2	7	17	2	66	5	212	55	13	133	41	19	51	448	1722

Table VIII. NOTTINGHAMSHIRE. Causes of, and Ages at, Death during the Year 1908. URBAN DISTRICTS.

CAUSES OF DEATH.	All ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards
Measles	22	5	17	..	..	..	..
Scarlet Fever	9	..	4	5	..	..	..
Whooping-cough	55	29	24	2	..	..	..
Diphtheria (including Membranous Croup) ..	39	1	18	20	..	..	..
Croup..	1	..	1	..	..	..	..
Enteric Fever	16	..	1	1	4	9	1
Epidemic Influenza ..	36	3	3	1	3	12	14
Diarrhœa	94	85	7	..	..	1	1
Enteritis	65	51	9	3	..	1	1
Puerperal Fever	7	..	..	..	1	6	..
Erysipelas	2	..	..	1	..	1	..
Phthisis (Pulmonary Tuberculosis)	152	3	9	15	29	89	7
Other tuberculous diseases	99	35	26	23	6	8	1
Cancer, malignant disease	166	..	..	..	5	101	60
Bronchitis	211	59	21	..	..	29	102
Pneumonia	242	90	61	10	5	48	28
Pleurisy	2	..	1	..	..	..	1
Other diseases of respiratory organs	20	..	4	1	1	9	5
Alcoholism / Cirrhosis of Liver	22	..	..	..	..	19	3
Venereal diseases	11	9	1	..	..	..	1
Premature birth	136	136	..	..	..	..	..
Diseases and accidents of Parturition	8	..	..	..	2	6	..
Heart diseases	228	5	..	5	6	112	100
Accidents	80	9	13	18	7	25	8
Suicides	23	..	..	..	4	17	2
Old Age	100	..	..	..	..	..	100
Convulsions	98	95	2	1	..	..	..
Apoplexy	23	..	..	..	1	6	16
Debility from Birth ..	131	127	4	..	..	..	..
All other causes	640	90	62	20	21	196	251
All causes	2738	832	288	126	95	695	702

Table IX. NOTTINGHAMSHIRE. Causes of, and Ages at, Death during the Year 1908. RURAL DISTRICTS and WHOLE COUNTY.

CAUSES OF DEATH.	All ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards	Deaths in whole Administrative County at all Ages.
Measles	9	4	3	2	..	..	..	31
Scarlet Fever	14	..	7	6	1	..	..	23
Whooping-cough	21	13	8	..	..	..	..	76
Diphtheria (including Membranous Croup)	21	..	7	14	..	..	..	60
Croup	2	..	..	2	..	..	..	3
Enteric Fever	6	..	..	1	..	4	1	22
Epidemic influenza	33	..	1	..	3	7	22	69
Diarrhœa	34	24	3	..	1	3	3	128
Enteritis	13	7	2	..	..	..	4	78
Puerperal fever	4	..	..	..	1	3	..	11
Erysipelas	5	2	..	..	1	1	1	7
Phthisis (Pulmonary Tuberculosis)	90	..	2	4	19	63	2	242
Other tubercular diseases	41	12	12	6	3	6	2	140
Cancer, malignant disease	99	..	..	..	..	47	52	265
Bronchitis	167	44	12	1	..	22	88	378
Pneumonia	92	21	20	6	5	24	16	334
Pleurisy	2	..	..	..	..	2	..	4
Other diseases of respiratory organs	7	..	1	1	..	2	3	27
Alcoholism / Cirrhosis of Liver	17	..	..	..	..	10	7	39
Venereal diseases	2	2	..	..	..	..	..	13
Premature birth	66	66	..	..	..	..	..	202
Diseases and accidents of parturition	5	..	..	..	1	4	..	13
Heart diseases	212	4	..	2	6	86	114	440
Accidents	55	..	12	9	7	18	9	135
Suicides	13	..	..	..	3	7	3	36
Old Age	133	..	..	..	..	..	133	233
Convulsions	41	39	2	..	..	..	..	139
Apoplexy	19	..	1	..	..	9	9	42
Debility from Birth	51	50	1	..	..	..	..	182
All other causes	448	56	25	19	19	137	192	1088
All causes	1722	344	119	73	70	455	661	4460

Table X. NOTTINGHAMSHIRE. URBAN DISTRICTS.

Infantile Mortality during the Year 1908. Deaths from stated Causes in Weeks and Months under One Year of Age.

CAUSE OF DEATH.		Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months	2-3 Months	3-4 Months	4-5 Months	5-6 Months	6-7 Months	7-8 Months	8-9 Months	9-10 Months	10-11 Months	11-12 Months	Total Deaths under 1 Year.
Common Infectious Diseases	Small-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Chicken-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Measles	..	..	..	1	1	..	..	..	..	..	1	..	..	1	2	..	5
	Scarlet Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Diphtheria (including Membranous Croup)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
	Whooping Cough	..	..	..	..	..	4	1	5	3	5	1	1	4	2	1	2	29
Diarrhœal Diseases.	Diarrhœa, all forms	..	1	1	6	8	8	2	14	13	10	11	3	6	6	..	4	85
	Enteritis, Muco-enteritis, Gastro-enteritis	..	..	1	1	2	3	4	4	4	1	2	5	4	2	2	2	35
	Gastritis, Gastro-intestinal Catarrh	..	1	..	2	3	1	2	1	..	4	1	2	1	1	..	..	16
Wasting Diseases.	Premature Birth	95	15	14	4	128	6	..	1	..	..	..	..	1	..	..	..	136
	Congenital Defects	15	3	3	2	23	1	2	1	..	1	..	..	1	1	..	..	30
	Injury at Birth	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
	Want of Breast-milk, Starvation	..	..	..	..	..	3	1	1	..	..	..	..	..	..	..	..	5
	Atrophy, Debility, Marasmus	19	8	9	10	46	26	22	15	5	5	2	4	..	1	1	..	127
Tuberculous Diseases.	Tuberculous Meningitis	..	..	..	..	..	1	..	2	2	2	1	..	1	1	2	3	15
	Tuberculous Peritonitis: Tabes Mesenterica	..	..	1	..	1	..	6	3	1	..	1	..	1	..	1	2	16
	Other Tuberculous Diseases	..	..	..	..	..	1	..	3	..	..	1	..	1	..	1	..	7
Other Causes	Erysipelas	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Syphilis	1	1	..	1	3	1	4	2	..	..	..	..	..	..	..	..	10
	Rickets	..	..	..	..	..	..	..	1	..	..	1	..	..	1	2	..	5
	Meningitis *(not Tuberculous)*	..	1	..	..	1	1	..	..	1	1	3	3	..	1	..	..	11
	Convulsions	14	4	6	4	28	18	9	11	3	5	3	9	1	4	2	2	95
	Bronchitis	1	2	3	2	8	6	7	4	5	3	5	5	2	7	6	1	59
	Laryngitis	..	..	..	..	..	..	..	..	..	1	..	1	1	..	..	..	3
	Pneumonia	..	..	1	3	4	5	8	4	10	6	9	11	8	12	2	11	90
	Suffocation, overlying	..	..	1	..	1	2	2	1	..	1	..	..	..	..	..	..	7
	Other Causes	6	4	3	4	17	4	6	3	4	1	2	3	1	2	1	..	44
All Causes		152	40	43	40	275	91	76	76	51	46	44	47	33	42	23	28	832

Table XI. NOTTINGHAMSHIRE. RURAL DISTRICTS.

Infantile Mortality during the Year 1908. Deaths from stated Causes in Weeks and Months under One Year of Age.

CAUSE OF DEATH.		Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months	2-3 Months	3-4 Months	4-5 Months	5-6 Months	6-7 Months	7-8 Months	8-9 Months	9 10 Months	10-11 Months	11-12 Months	Total Deaths under 1 Year.
Common Infectious Diseases	Small-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Chicken-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Measles	1	..	..	..	1	1	..	..	..	..	..	..	..	1	1	..	4
	Scarlet Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Diphtheria (including Membranous Croup) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Whooping Cough	..	..	..	3	3	2	..	..	1	..	..	1	1	2	3	..	13
Diarrhœal Diseases.	Diarrhœa, all forms ..	..	..	..	2	2	2	3	6	..	3	2	..	1	3	..	2	24
	Enteritis, Muco-enteritis, Gastro-enteritis	..	..	2	..	2	..	1	1	2	..	..	..	..	..	..	..	6
	Gastritis, Gastro-intestinal Catarrh	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
Wasting Diseases.	Premature Birth	44	4	3	5	56	7	1	1	..	1	..	..	..	..	..	..	66
	Congenital Defects ..	11	3	..	1	15	4	1	..	..	..	..	..	..	..	..	1	21
	Injury at Birth	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
	Want of Breast-milk, Starvation	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	2
	Atrophy, Debility, Marasmus	17	1	7	3	28	6	2	4	3	1	..	1	1	2	1	1	50
Tuberculous Diseases.	Tuberculous Meningitis ..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	3
	Tuberculous Peritonitis: Tabes Mesenterica	..	..	..	..	..	..	..	..	1	2	1	..	1	..	..	..	5
	Other Tuberculous Diseases	..	..	..	..	..	1	..	..	..	..	..	..	2	..	1	..	4
Other Causes	Erysipelas	..	..	1	..	1	1	..	..	..	..	..	..	..	..	..	..	2
	Syphilis	..	1	..	..	1	1	1	..	..	..	..	..	..	..	..	..	3
	Rickets	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Meningitis *(not Tuberculous)*	..	..	..	..	..	..	..	1	..	..	2	..	..	..	..	..	3
	Convulsions	7	2	..	3	12	8	2	4	4	3	2	..	2	1	1	..	39
	Bronchitis	1	..	2	2	5	5	3	7	4	3	5	4	2	3	2	1	44
	Laryngitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Pneumonia	..	..	..	..	..	1	..	2	2	1	1	5	1	4	2	2	21
	Suffocation, overlying ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Other Causes	15	3	1	1	20	3	1	1	1	..	1	1	..	2	..	2	32
	All Causes	97	14	16	20	147	43	16	27	21	14	14	13	11	18	11	9	344

TABLE XII. NOTTINGHAMSHIRE. Abstract of Vital Statistics.

Year.	Estimated Population at the middle of the year.	Annual Increase of Population.	Rate of Increase per cent. on Population of preceding Year.	Persons per Acre.	Inhabited Houses at Census 1901.	Persons per House at Census 1901.	Registered Births.	Births per 1000 of the Population.	Deaths under 1 year per 1000 Births.	Registered Deaths.	Deaths per 1000 of the Population.	Death Rate corrected for deaths in Institutions.	Death Rate corrected for age and sex distribution.	Deaths from the Principal Zymotic Diseases per 1000 of the Population.
1881	205,328	..	..	·39	44,014	4·6	..	..	..	..	..	..	..	..
1891	232,776	..	..	·44	49,186	4·7	8202	35·2	138	4135	17·7	..	..	..
1892	236,770	3994	1·71	·46	..	..	8007	33·9	147	4051	16·7	..	..	..
1893	240,026	3256	1·37	·46	..	..	7949	33·1	..	4087	17 0	..	..	..
1894	243,965	3939	1·64	·47	..	..	7747	31·7	130	3585	14·7	..	..	..
1895	248,060	4095	1·67	·48	..	..	8066	32·5	154	4128	16·6	..	..	..
1896	252,282	4222	1·70	·49	..	..	8154	32·3	138	3987	15·8	..	..	..
1897	256,667	4385	1·73	·5	..	..	8186	31·8	152	4115	16·0	..	..	1·7
1898	261,224	4557	1·77	·505	..	..	8117	31·0	151	4187	16·0	..	..	1·74
1899	265,952	4728	1·80	·51	..	..	8266	31·0	161	4375	16·4	..	..	2·01
1900	270,862	4910	1·84	·52	..	..	8292	30·6	160	4617	17·0	..	..	1·75
1901	275,971	5109	1·88	·53	59,114	4·6	8636	31·3	145	4139	15·0	..	14 3	1·79
1902	285,673	9702	3·51	·54	..	..	8920	31·2	138	4116	14·4	14·4	13·8	1·29
1903	294,566	8893	3·11	·56	..	..	9072	30·7	134	4146	14·0	13·7	13·4	1·38
1904	303,283	8717	2·95	·58	..	..	9379	30·9	139	4375	14·4	14·1	13·8	1·70
1905	310,085	6802	2·24	.59	..	..	8880	28·6	126	4451	14·3	14·1	13·7	1·63
1906	319,612	9527	3·07	·61	..	..	9088	28·4	121	4148	12·9	13·2	12·3	1·28
1907	327,340	7728	2·41	·62	..	..	8962	27·3	127	4479	13·6	13·8	13·0	1·36
1908	**334,939**	**7599**	**2·32**	**·64**	..	..	**9818**	**29·3**	**119**	**4367**	**13·0**	**13·3**	**12·4**	**1·01**
For comparison—														
1908	England and Wales	..	..		..	..	..	26·5	121	..	14·7	..	14·7	1·29
	76 Great Towns ..	..	..		..	..	..	27 0	128	..	14·9	..	15·8	1·59
	142 Smaller Towns	..	..		..	..	..	26·0	124	..	14·0	..	14·7	1·26
	England and Wales less the 218 Towns ..	..	..		..	..	..	**26·2**	**110**	..	**14·7**	..	**13·8**	**0·99**

The Population for the years 1892—1901 inclusive, has been corrected according to the information derived from the censuses for 1891 and 1901. The Population for the years 1902—1907 is the total of the Populations of the 26 Districts as estimated by the Medical Officers of Health for each District.

The Statistics for England and Wales are those published in the Quarterly Return of the Registrar-General for January, 1909. They are subject to revision when the causes of death and other details shall have been finally classified for publication in the Registrar-General's 71st Annual Report. The alterations, however, are usually inappreciable.

Table XIII. NOTTINGHAMSHIRE. RAINFALL.

DISTRICT.	Total depth in inches, 1908.	No. of Rainy days, 1908.	Total depth in inches, 1907.	No. of Rainy days, 19[illegible]	Total depth in inches, 1906.	No. of Rainy days, 1906.	Total depth in inches, 1905.	No. of Rainy days, 1905.	Total depth in inches, 1904.	No. of Rainy days, 1904.	Total depth in inches, 1903.	No. of Rainy days, 1903.	Total depth in inches, 1902.	No. of Rainy days, 1902.	Height of gauge above ground.	Height above Sea level.	STATION AND OBSERVER.
EAST RETFORD .. .. (Urban)	21·26	183	24·68	191	20·44	168	17·35	158	19·86	166	29·51	187	19·69	169	..	..	J. D. KENNEDY, Esq., Market Square, Retford.
BEESTON	25·54	185	27·75	193	26·47	185	20·44	184	21·65	174	35·00	203	21·84	190	9 inches	206 ft.	G. FELLOWS, Esq., Beeston Fields, Nottingham.
EASTWOOD	26·14	194	30·15	193	28·87	182	21·72	162	21·19	157	34.40	186	24·84	178	1 ft.	245 ft.	BARBER, WALKER & Co., Eastwood, Nottingham.
BASFORD	22·45	159	24·70	169	24·55	168	20·57	161	20·57	141	34·32	173	23·43	175	1 ft.	475 ft.	Mr. G. I. FLETCHER, Selston Waterworks, near Annesley, Nottingham.
BASFORD	23·77	189	26·89	184	25·52	168	19·33	167	19·40	162	31·64	197	23·09	189	1 ft.	396 ft.	T. L. K. EDGE, Esq., Strelley, Nottingham.
BASFORD	20·555	161	23·973	171	22·471	162	18·378	118	19·439	155	28·57	180	19·68	161	1 ft.	65 ft.	Mr. A. A. AVIS, Corporation Farm, Stoke Bardolph, Nottingham.
BASFORD	21·690	186	25·390	194	24·030	178	19·510	168	21·11	174	..	..	..	..	9 inches	65 ft.	F. W. DAVIES, Esq., Burton Joyce Waterworks, Nottingham.
BLYTH & CUCKNEY ..	20·38	179	23·66	197	23·43	179	16·91	152	19·81	165	27·95	190	22·10	170	..	56 ft.	H. MELLISH, Esq., Hodsock Priory, Worksop.
NEWARK .. .. .. (Rural)	21·29	209	23·01	193	19·32	138	17·51	129	17·21	119	27·48	152	17·36	141	1 ft.	28 ft.	E. TURTON, Esq., North Collingham, Newark.
SOUTHWELL	21·10	198	..	..	..	..	..	..	..	..	..	..	..	..	1 ft.	131·27 ft.	H. HANDFORD, Esq., M.D., Southwell.
KINGSTON & RATCLIFFE	21·08	181	22·76	183	21·26	165	..	..	..	..	..	..	..	..	..	..	F. WAKERLEY, Esq., Midland Agricultural & Dairy College, Kingston, Derby.