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ANNUAL REPORT

OF THE

MEDICAL OFFICER

TO

The County Council

OF

NOTTINGHAMSHIRE,

FOR THE YEAR 1913,

BY

HENRY HANDFORD, M.D., Edin., D.P.H., Camb.

Fellow of the Royal College of Physicians of London,
and of the Royal Sanitary Institute.
Hon. Consulting Physician to the General Hospital, Nottingham,
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of Consumption.

Nottingham:

THOS. FORMAN AND SONS, SHERWOOD STREET.

1914.

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The Shire Hall,

Nottingham,

August, 1914.

My Lords and Gentlemen,

I have the honour to present my eighteenth Annual Report.

The Local Government Board in the County Medical Officers of Health (Duties) Order of 1910 have prescribed the subjects to be dealt with in this Report, which is for the information of the Board as well as of the County Council ; and consequently some matters which have already been discussed in detail by the Health Committee and are familiar to the County Council, are treated at greater length than might, without this explanation, appear necessary.

The statistics relate to the calendar year 1913.

The estimated population of the administrative County at the end of the second quarter of the year 1913 was **362,307**, an increase of 7,261 over the previous year. It is from this estimate that the vital statistics have been calculated.

This is a smaller increase than for the previous year. Nevertheless, since my first Annual Report the population of the County has increased by 110,025, from 252,282 to 362,307 ; and the rateable value by £462,575, from £1,407,918 in 1896 to £1,870,493 in the year 1913.

In a County where such rapid increase has taken place both in population and in wealth, the sanitary administration is much more difficult than where the population is stationary, and the occupation mainly agricultural.

During the year 1913 and the Spring of 1914 the sinking of shafts for four new large collieries was commenced at Rufford, Warsop, Harworth, and Farnsfield. At Rufford coal is already being raised. These four collieries alone will soon employ from 6,000 to 8,000 men and boys; and there will consequently be a new population dependent upon them of nearly 15,000 persons.

There is great probability that in the immediate future Public Health Administration in the Counties as well as in the Urban and Rural Districts will be brought into closer contact with the Local Government Board, and consequently this seems to be a suitable occasion for drawing attention to the progress that has been made, under the old system, as opportunity offers, without waiting for the completion of a second decennial period.

The following tables give in abstract the most important Vital Statistics for the year 1913, together with their comparison with 1912, and with the average for the ten years, 1903—1912. Further details are to be found in the tables in the Appendix and under the headings of the different diseases.

BIRTH-RATE AND NETT DEATH-RATE PER 1,000 POPULATION.

YEAR	1913.	1912.	Mean Rate for 10 years, 1903—1912.
Birth-rate	**25·8**	25·9	28·3
Nett Death-rate .. .. (Corrected for transferable deaths.)	**12·2**	11·8	13·2

INFANTILE MORTALITY RATE PER 1,000 BIRTHS.

YEAR	1913.	1912.	Mean for 10 years 1903—1912.
Rate	**101**	93	120

DEATH-RATES FROM THE FOLLOWING INFECTIOUS DISEASES PER *100,000 POPULATION.

YEAR	1913.	1912.	Mean for 10 years 1903—1912.
Scarlet Fever	**4·6**	3·3	5·9
Diphtheria	**14·6**	9·8	13·9
Enteric Fever	**3·0**	2·8	7·7
Pulmonary Tuberculosis	**65·4**	65·9	78·3
Other Forms of Tuberculosis	**30·4**	36·6	45·8

The above tables show that while the birth-rate remained practically stationary (having fallen only ·1 per 1,000), the death-rate increased by ·4 per 1,000. This is mainly accounted for by the increased infantile mortality, which rose from 93 to 101 per 1,000 births.

The infectious diseases, scarlet fever, diphtheria, and enteric fever, all showed a slightly increased mortality, while tuberculosis continues to show a steady decline.

In considering the health prospects of the County for the coming year credit must be given for the general improvement likely to result from the establishment of three or more Tuberculosis Dispensaries, and for the benefits likely to flow from "Medical Benefit" organised by the National Health Insurance Committee for the County.

But on the other hand it cannot be too seriously remembered that disease dogs the steps of war and continues after war has ceased. The diseases most to be feared are Enteric Fever, Dysentery, Diarrhoea, and Small Pox, together with an increase of the general diseases due to privation and anxiety. In the South African War in 1899-1902 there were 404,026 admissions into hospital for disease and injury, with 14,024 deaths, compared with 21,292 admissions for wounds and 6,965 deaths, including those killed in action. The chief provision, therefore, should be against *disease* and all the suffering it entails, for it is quite uncertain how far the higher civilization and modern sanitary progress of Western Europe will modify the experience of former wars.

* In order to avoid the use of small decimal fractions it is useful to adopt a rate for 100,000 population instead of 1,000.

It is much to be desired that the present enthusiasm for the establishment of temporary hospitals should result in the permanent provision of much more adequate and better equipped hospitals for the needs of the Urban and Rural Districts in dealing with infectious disease.

The adoption of the Notification of Births Act has been much discussed, and is still under consideration.

In regard to Tuberculosis the value of *Prevention* and the necessity of close co-operation with the Public Health Authorities, both County and District, are becoming each year more evident and have gained in importance rather than lost.

During the year I have received every assistance from the office staff, who have worked with zeal and energy.

Every year the work of the County Medical Officer of Health becomes more and more closely associated with that of the twenty-five Medical Officers of Health of the Urban and Rural Districts in the County. My relations with them have been most friendly and cordial, and I am glad to acknowledge the courtesy and assistance which I have received, and which I have endeavoured to reciprocate.

I have the honour to remain,

Your obedient servant,

HENRY HANDFORD.

ANNUAL REPORT.

The Administrative County of Notts. contains 265 Civil Parishes.

The area of the Administrative County amounts to 521,060 acres or 814$\frac{1}{6}$ square miles, *exclusive of water*.

In the year 1906 the staff of the County Medical Officer of Health, who had just been made a whole-time officer, consisted of an Inspector of Midwives and one clerk. There was no Medical Inspection of Elementary School Children, but the medical examination of Pupil Teachers and Intending Teachers was commenced.

In 1914 the rapid development of work had necessitated the following staff for County Health purposes together with School Medical Inspection and the treatment of Tuberculosis. The names and addresses of the Medical Officers of Health of the 15 Urban and 11 Rural Districts into which the Administrative County is divided are given on pages 8 and 9.

COUNTY MEDICAL STAFF.

County Medical Officer of Health and School Medical Officer—

HENRY HANDFORD, M.D. Edin., F.R.C.P. Lond., D.P.H. Camb.

Assistant County Medical Officer of Health and Senior Assistant School Medical Officer—

T. E. HOLMES, M.A., M.D. Cantab., D.P.H.

Assistant School Medical Officer—
ROSE HUDSON, M.B., Ch.B. Glas., D.P.H. Ed.

Assistant School Medical Officer—
A. C. TIBBITS, M.R.C.S., L.R.C.P.

School Dentist—
B. B. WESTLAKE, L.D.S., L.R.C.S., L.R.C.P.

Chief Tuberculosis Officer—
JOHN TEARE, M.D., D.P.H. Liverpool.

Assistant Tuberculosis Officer—
L. WHITTAKER SHARP, M.A., M.B., B.C. Cantab.

Tuberculosis Nurses—
MISS JESSIE SMITH, Superintendent Nurse.
MISS ADA BOYD.

School Nurses—

MISS B. WATKINS, Superintendent Nurse.	MISS SIMMONS, L.O.S.
MISS BARKER.	MISS HAYLOCK, C.M.B.
MISS COLLIER.	MISS VINT, C.M.B.

The latter three act also as Inspectors of Midwives.

Chief Clerk and Sanitary Inspector—
S. TEMPLE BROWN, Cert.R.S.I.

Clerks—MISS KNIGHT. MR. WOODCOCK.
MISS WHEAT. MISS THURMAN.

NAMES AND ADDRESSES OF THE MEDICAL OFFICERS OF HEALTH OF THE 26 DISTRICTS INTO WHICH THE COUNTY IS DIVIDED.

BOROUGHS AND URBAN DISTRICTS.

Districts.	Name of the Medical Officer of Health.	Address.
MANSFIELD (Borough).	John Lambie, M.D., D.P.H	Queen Street, Mansfield.
NEWARK (Borough).	Charles Wills, M.R.C.S.	Farnsfield, Southwell.
EAST RETFORD (Borough).	A. E. Manners-Smith, M.R.C.S.	Cannon Square, Retford.
ARNOLD	Harvey Francis, M.D.	Arnold, Nottingham.
BEESTON	Frank Rothera, M.D.	Old Manor House, Beeston.
CARLTON	J. T. Knight, M.R.C.S.	Ivy Lodge, Carlton.
EASTWOOD	F. Dixon, L.R.C.P.	Eastwood, Notts.

Hucknall Torkard	H. T. Jones, M.R.C.S.	Hucknall Torkard, Notts.
Huthwaite	Robert Irvine, L.R.C.P.	Huthwaite, Mansfield.
Kirkby-in-Ashfield.	H. S. Maxwell, L.R.C.P.	Quinton House, Kirkby-in-Ashfield.
Mansfield Woodhouse	Ernest H. Houfton, M.D.	Bath House, Mansfield.
Sutton-in-Ashfield.	R. Nesbitt, L.R.C.S.I.	Ashfield House, Sutton-in-Ashfield.
Warsop	H. W. Horan, M.B., B.S.	Warsop, Notts.
West Bridgford	Walter Hunter, M.D.	Bridgway House, Arkwright Street, Nottm.
Worksop	T. C. Garrett, M.B.	Newcastle Avenue, Worksop.

RURAL DISTRICTS.

Districts.	Name of the Medical Officer of Health.	Address.
Basford	G. B. Wray, M.R.C.S., D.P.H.	Burton Buildings, Parliament St., Nottingham.
Bingham	O. B. Eaton, D.P.H.	Long Acre, Bingham.
Blyth and Cuckney.	W. T. Wood, L.R.C.P.	The Laurels, Creswell, near Mansfield.
East Retford	Hanway R. Beale, M.D.	Bridgegate House, East Retford.
Leake	N. B. M. Blackham, L.R.C.P.	25, Victoria St., Loughboro'
Misterton	W. W. Farrar, M.B.	Misterton, Gainsborough.
Newark	Frank Broadbent, M.R.C.S.	The Old Hall, N. Collingham, Newark.
Skegby	J. O. Littlewood, M.R.C.S., D.P.H.	Highfield, Mansfield.
Southwell	Charles Wills, M.R.C.S.	Farnsfield, Southwell.
Stapleford	E. Knigsbury, M.D.	High Street, Stapleford.
Notts. Parishes administered by Shardlow	Vacant.	

CHANGES OF STAFF.

Since the changes noticed in my last Annual Report the County has lost the services of Dr. J. A. Hogg, of Shardlow, who had acted for many years as the efficient Medical Officer of Health for the Notts. Parishes of Kingston and Ratcliffe-on-Soar, which are administered by Shardlow. Dr. Hogg died quite suddenly from a shooting accident.

ANNUAL REPORTS.

The Medical Officer of Health of each Urban and Rural District is required to send a copy of his Annual Report to the County Council. It is from the Statistical Tables in these Reports, on forms supplied by the Local Government Board, that the Vital Statistics for the whole County are prepared.

The Reports for the year 1913 were received on the following dates :—

Feb.	7th	Misterton.
,,	27th	Mansfield Woodhouse
Mar.	9th	Newark Rural.
,,	9th	Carlton.
,,	21st	Newark Borough.
,,	28th	Stapleford Rural.
,,	30th	Sutton-in-Ashfield.
,,	31st	Huthwaite.
,,	31st	E. Retford Borough.
April	1st	Hucknall.
,,	2nd	Southwell.
,,	2nd	West Bridgford.
,,	3rd	Basford.
April	6th	Beeston.
,,	9th	Worksop.
,,	15th	E. Retford Rural
,,	18th	Leake Rural.
,,	20th	Arnold.
,,	20th	Kirkby-in-Ashfield.
,,	27th	Blyth and Cuckney
May	9th	Eastwood.
,,	25th	Skegby.
June	3rd	Mansfield Borough
,,	12th	Warsop.
July	1st	Bingham.
		Shardlow Rural.

In several instances advance copies of the Vital Statistics were very kindly sent to the County Medical Officer some weeks before the completed printed report was ready for circulation, and greatly facilitated the preparation of this Report.

In the first Annual Report prepared by the County Medical Officer only 14 of the District Councils printed the Annual Reports of their Medical Officers, while 12 reports were received in manuscript ; and for many years it was necessary to continue to urge the importance of having the reports printed. For the last two or three years all the reports have been printed as a matter of course. Only those who have watched the gradual improvement in the quality and accuracy of the Annual Reports, as well as the steady growth of the mass of valuable information they contain, can fully understand the remarkable transformation that has been accomplished in the last 18 years. There has been progress in many directions at varying rates, and due to numerous causes, but to the publicity and permanence given to the Annual Report of the Medical Officer of Health by printing, some considerable portion of the credit is due.

POPULATION.

The *natural* increase of population for the year 1913 by excess of births over deaths, was 4,934, or 1·38 per cent. upon the population of 1912, which is a slightly smaller rate of increase than in the previous year.

The *estimated* population of the County at the middle of the year 1913 (being the sum of the estimates for each of the Urban and Rural Districts) was 362,307, showing an increase of 7,261, or 2·04 per cent. upon the population of 1912. According to the rate of increase between the Census of 1901 and the Census of 1911, the population of the whole County at *Midsummer*, 1913, should have been 362,029. The sum of the local estimates exceeds this total by only 278, which is a remarkably close approximation. The local estimates are formed mainly from a calculation based upon the number of houses actually occupied, and affords a very valuable confirmation of the accuracy of the methods used for the whole County calculated from the increase between the last two Census returns. The increase is much in excess of the natural increase and there is no indication at present that the rate is likely to diminish. Hitherto, the estimates of future population made in the Health Department for purposes of water supply, etc., have always proved to be too small rather than too large, when it has been possible to verify them by succeeding census returns.

In the year 1896 the population of the Administrative County was only 252,282, and the present estimated population shows an increase of 110,025 in 17 years. The population of a large town or small county has been added to Nottinghamshire since a County Medical Officer was first appointed. Nottinghamshire is increasing in population more rapidly than the great majority of the counties of England. The increase has been mainly in the Urban Districts but also includes to a lesser degree the Rural Districts. The chief cause has been the development of coal mining along the Leen Valley, the Erewash Valley, and more recently in the North of the County in the direction of Yorkshire. This rapid development of population and of industry requires constant effort and strain on the part of those responsible for Sanitation and Health, in marked contrast to the conditions in agricultural districts with a stationary population.

BIRTHS.

The number of live births registered in the County during the year 1913, amounted to 9,369, corresponding to a rate of 25·8 per 1,000 of the population, compared with 25·9 in 1912. The Urban rate was 27·5, and the Rural 22·9.

In the following tables the birth-rates of the different districts in the County are given for the year 1913. The average birth-rate for the 10 years 1903—1912 is also given for comparison.

Birth-Rate for 1913, per 1,000 of the Population.

Urban Districts.	Rate.
Warsop	42·9
Huthwaite	35·7
Mansfield Woodhouse	34·1
Sutton-in-Ashfield	31·2
Kirkby-in-Ashfield	30·1
Mansfield	28·6
Hucknall Torkard	28·3
Eastwood	28·2
Worksop	27·8
Beeston	26·9
Carlton	25·4
Arnold	23·4
Newark	22·7
East Retford	21·7
West Bridgford	15·6
Mean of Urban Districts	27·5

Rural Districts.	Rate.
Skegby	30·8
Misterton	28·8
Basford	25·9
Stapleford	24·9
Kingston and Ratcliffe	22·9
Blyth and Cuckney	21·5
Newark	20·3
Leake	19·8
Bingham	18·9
Southwell	18·9
East Retford	18·7
Mean of Rural Districts	22·9

Average Birth-Rate for the Ten Years, 1903–1912, per 1,000 of the Population.

Urban Districts.	Rate.
Mansfield Woodhouse	40·1
Warsop	39·9
Huthwaite	36·1
Sutton-in-Ashfield	34·2
Kirkby-in-Ashfield	33·7
Mansfield	32·1
Worksop	31·5
Hucknall Torkard	30·7
Arnold	28·7
Carlton	27·6
Eastwood	27·3
Newark	27·0
Beeston	26·9
East Retford	25·1
West Bridgford	16·0
Mean of Urban Districts	30·1

Rural Districts.	Rate.
Skegby	32·3
Stapleford	29·5
Basford	28·8
Misterton	26·1
Newark	24·5
Blyth and Cuckney	23·1
East Retford	22·5
Leake	22·1
Southwell	21·9
Bingham	20·8
Kingston and Ratcliffe	17·8
Mean of Rural Districts	25·5

In the year 1896, with a population of 251,470 persons, there were 8,154 live births registered, giving a birth-rate of 32·4 per 1,000. In 1913 the population had increased to 362,307, but the births only increased by 1,215, and the rate per 1,000 had fallen to 25·8. This great fall in the birth-rate is only partially compensated by a lessening of the infantile mortality rate, which in 1896 was 138 per 1,000 births, and in 1913 had fallen to 101. That is to say, in 1896, of the 8,154 children born alive, only 7,025 were living at the end of the year; but in 1913, of 9,369 children born alive, 8,421 were still living at the end of the year. Thus an increase of 1,215 live births becomes an increase of 1,396 living children at the end of the year.

If the birth-rate of 1896 had continued into 1913 there would have been 11,738 children born alive instead of 9,369; and if the infantile mortality rate of 1896 had also persisted 10,119 children would have remained alive at the end of the year instead of 8,421. The County would have had 1,698 more living children under one year of age; and, consequently, the great fall of the birth-rate is only partially compensated by taking more care of the children that are born.

But if the new birth-rate had been accompanied by the old infantile mortality rate, the results would have been sad indeed, and only 8,077 living children under one year of age would have remained at the end of the year instead of 8,421.

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 received under the Midwives' Act is all that is obtainable.

In accordance with the rules of the Central Midwives Board, notices of 147 still-births were sent to the County Council by certified midwives during the year 1913, compared with 110 for the previous year. 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.

ILLEGITIMATE BIRTHS.

In the whole County there were 396 illegitimate births, or a proportion of 42·1 per 1,000 registered births, compared with 44·5 the previous year. In the Urban Districts there were 43·4 per 1,000 births, and in the Rural Districts 39·2. The infantile mortality among the illegitimate children was 189 per 1,000 births, compared with 97 for the legitimate!

The Number of Legitimate and Illegitimate Births for each District, in the Year 1913.

URBAN DISTRICTS.	Births.	Legitimate.	Illegitimate.
Mansfield	1,194	1,143	51
Newark	380	359	21
East Retford	294	276	18
Arnold	278	269	9
Beeston	324	309	15
Carlton	439	424	15
Eastwood	141	137	4
Hucknall Torkard	453	426	27
Huthwaite	194	186	8
Kirkby-in-Ashfield	506	487	19
Mansfield Woodhouse	399	399	..
Sutton-in-Ashfield	733	687	46
Warsop	202	198	4
West Bridgford	199	198	1
Worksop	599	560	39
TOTAL OF URBAN DISTRICTS	6,335	6,058	277
RURAL DISTRICTS.			
Basford	1,111	1,076	35
Bingham	280	270	10
Blyth and Cuckney	108	107	1
East Retford	296	272	24
Leake	74	71	3
Misterton	116	114	2
Newark	171	165	6
Skegby	237	229	8
Southwell	373	351	22
Stapleford	259	251	8
Kingston and Ratcliffe	9	9	..
TOTAL OF RURAL DISTRICTS	3,034	2,915	119

The terrible mortality, which always afflicts in varying degree illegitimate offspring, is one of the evils of illegitimacy. This great mortality cannot be considered an unimportant evil as it is associated with a proportionately increased amount of sickness and defective health amongst the survivors for which, usually, the State is required to pay.

DEATHS.

The number of deaths registered in the County in 1913 was 4,309, compared with 4,059 in the previous year. *Of these, 948 occurred in infants under one year of age.*

The *gross* death-rate per 1,000 of the population of the County for 1913 was **11·8,** which is the lowest rate with one exception during the past 23 years, and that exception was in 1912.

The Registrar-General sent to the County Medical Officer triplicate forms concerning each of 401 deaths which, for statistical purposes, need to be transferred from the place of registration to other districts. Each of these " transferable deaths " has to be allotted to the correct sanitary district in this or some other county, forwarded to the District Medical Officer of Health for verification, collected again, and finally returned to the Registrar-General. All this involves much time and correspondence, but immensely improves the accuracy of the Death Statistics.

A small number of births are also treated as transferable.

These transfers are necessary in order that the National Vital Statistics may be published by the Registrar-General for *Administrative* County areas, instead of only for Registration Counties and Unions.

When the necessary correction has been made for transferable deaths, the *nett* number of deaths belonging to the County becomes 4,435, and the *nett* death-rate **12·2**, which is also the lowest nett death-rate hitherto recorded for this County, with the exception of the year 1912.

The **Nett Death-rate** as ascertained in this way is the one upon which reliance should be placed both for statistical and for Public Health purposes.

There is, however, a further correction which is of interest and of value. It depends upon age and sex distribution, and has been used in these Reports for the past ten years. In the first instance the 'Factor' was worked out by the County Medical Officer from the Census returns of 1901. It has been explained at greater length in previous Reports

that the death-rate varies not only at different ages but in the two sexes ; and consequently it is of importance to know not only the proportion of males to females, but also the proportion of the population living at the different age periods. This was last ascertained at the Census of 1911. It varies considerably between the Urban and the Rural Districts ; and, further, the proportions for the County of Notts. vary somewhat from those obtaining for the whole of England. By the kindness of the Registrar-General, the Medical Superintendent of Statistics, Dr. Stevenson, has been permitted to supply the 'factors' necessary for the correction of the results of these variations. The corrected rates show the death-rates that would have occurred if the age and sex constitution of Notts. had been the same as for the whole of England.

The death-rate thus obtained is called the **Standard Death-rate,** and amounted in 1913 to **11·8** for this County.

'Factors' for each of the Urban and Rural Districts have also been supplied, through the County Medical Officer, to each of the Medical Officers of Health in the County.

The nett death-rate multiplied by the appropriate factor gives the Standard Death-rate.

Factors for correcting the general death-rate, based upon the populations enumerated in 1911, supplied by the kindness of the Registrar-General :—

Whole Administrative County	·9704
Aggregate of Urban Districts	1·0233
Aggregate of Rural Districts	·8931

Separate Urban Districts.

Arnold	1·0236
Beeston	1·0225
Carlton	1·0362
East Retford	0·9335
Eastwood	1·0182
Hucknall Torkard ..	1·0163
Huthwaite	1·0148
Kirkby-in-Ashfield ..	1·0447
Mansfield	1·0721
Mansfield Woodhouse ..	1·0922
Newark	0·9441
Sutton-in-Ashfield ..	1·0523
Warsop	0·9759
West Bridgford	1·1043
Worksop	1·0158

Separate Rural Districts.

Basford	·9611
Bingham	·8221
Blyth and Cuckney ..	·9070
East Retford	·8349
Leake	·8359
Misterton	·8763
Newark	·8642
Skegby	1·0249
Southwell	·8166
Stapleford	·9871
Notts. Parishes administered by Shardlow	·9161

Death-rates per 1,000 of the Population for the Whole County, and for the Aggregates of the Urban and the Rural Districts.

	Uncorrected, or Gross Death Rate.			Corrected for Age and Sex, and for Transferable Deaths, or Standard Death Rate.		
	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	13·9	14·6	12·8
1903	14·0	13·8	14·3	13·3	13·5	12·6
1904	14·4	14·2	14·6	13·9	14·0	12·9
1905	14·3	13·9	14·9	14·2	13·7	13·5
1906	12·9	12·9	13·0	13·1	13·2	11·9
1907	13·6	13·3	14·2	13·7	13·7	12·8
1908	13·0	12·8	13·4	13·1	13·2	12·2
1909	12·7	12·3	13·3	12·7	12·6	12·2
1910	12·5	12·7	12·2	12·2	13·0	11·2
1911	12·8	13·3	12·1	12·5	13·5	11·4
1912	11·4	11·4	11·3	11·4	12·0	10·5
1913	11·8	12·6	11·5	11·8	12·7	10·4

The following table gives the death-rates of the different districts corrected for transferable deaths.

Nett Death-rates per 1,000 of the Population for the Year 1913.

Urban Districts.	Rate	Rural Districts.	Rate
Warsop	16·3	Blyth and Cuckney	13·5
Huthwaite	14·6	Bingham	12·6
Hucknall Torkard	14·3	Southwell	12·6
Eastwood	13·6	Stapleford	12·5
Mansfield	13·6	Skegby	12·4
Arnold	13·0	Misterton	11·9
Mansfield Woodhouse	12·9	East Retford	11·4
Newark	12·7	Leake	11·2
East Retford	12·6	Basford	10·5
Carlton	12·1	Newark	10·2
Worksop	11·9	Notts. Parishes administered by Shardlow	10·2
Kirkby-in-Ashfield	11·7		
Sutton-in-Ashfield	11·5		
Beeston	10·2		
West Bridgford	8·6		
Mean of Urban Districts	12·5	**Mean of Rural Districts**	11·7

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.

AVERAGE NETT DEATH-RATE FOR THE TEN YEARS 1903–1912, PER 1,000 OF THE POPULATION.

URBAN DISTRICTS	RATE
Newark	15·0
Worksop	14·6
Warsop	14·3
Mansfield Woodhouse	14·2
Sutton-in-Ashfield	14·2
Hucknall Torkard	14·0
Huthwaite	13·7
Arnold	13·7
Mansfield	13·4
Eastwood	13·3
East Retford	13·3
Kirkby-in-Ashfield	11·8
Beeston	11·7
Carlton	10·7
West Bridgford	7·3
Mean of Urban Districts	13·1

RURAL DISTRICTS	RATE
Southwell	15·1
Misterton	14·4
East Retford	14·2
Leake	13·8
Blyth and Cuckney	13·6
Basford	13·2
Bingham	13·1
Stapleford	12·8
Newark	12·7
Skegby	12·5
Kingston and Ratcliffe	8·0
Mean of Rural Districts	13·5

ZYMOTIC OR EPIDEMIC DEATH-RATE.

The death-rate from the seven principal epidemic diseases, namely, Small Pox, Scarlet Fever, Whooping Cough, Enteric Fever, Diphtheria, Measles, and Diarrhoea was 0·94 per 1,000 for the whole County. The Urban rate was 1·14 and the Rural 0·59.

The method of calculating this rate is much improved from what it used to be, but it is still dominated by the diarrhoea mortality, practically the whole of which is now included in this rate instead of only a variable portion.

The diarrhoea mortality is nearly synonymous with the mortality from infantile diarrhoea, which is responsible for so large a portion of the infantile deaths. As will be seen in the next section infantile diarrhoea is very largely under the control of efficient sanitary measures.

INFANTILE DEATH-RATE.

The rate for the whole County in 1913 was 101 per 1,000 births. For the Urban districts the rate was 110, and for the Rural 82.

It will be noticed from the following table that the considerable increase in the infantile mortality rate for the whole County in the year 1913 was due to the increased

mortality in the Urban Districts, whereas the deaths in the Rural Districts were fewer than in 1912. The weather conditions in 1913 were unfavourable to infant life. On the eastern side of the County (Southwell) a long dry period commenced on May 13th, and for the following 100 days (14 weeks and 2 days) only 1·152 inches of rain were measured, spread over 23 days. This condition, when associated with the average summer temperature, promotes the spread of infection through dust and flies, especially under urban conditions.

RATE OF INFANTILE MORTALITY PER 1,000 BIRTHS.

	WHOLE COUNTY.	URBAN DISTRICTS.	RURAL DISTRICTS.
1895	154	180	128
1896	138	149	122
1897	152	169	128
1898	151	166	129
1899	161	178	135
1900	160	173	141
1901	145	154	132
1902	138	151	115
1903	134	141	122
1904	139	150	118
1905	126	133	114
1906	121	131	104
1907	127	134	113
1908	119	128	102
1909	106	112	93
1910	110	122	85
1911	125	137	115
1912	93	95	87
1913	101	110	82

The foregoing statistics make it clear that there has been a very great improvement in the course of the past 19 years, and especially during the last eight or nine years. The next two tables show that the improvement has been far from uniform in different parts of the County; and although in the aggregate the infantile mortality in the Rural Districts is much lower than in the Urban Districts, nevertheless, in 1913 there were three Rural Districts with an infantile mortality over 100 and five Urban Districts with an infantile mortality under 100. And, further, notwithstanding the general increased infantile mortality, which is in part attributable to unfavourable climatic conditions, there are many districts (five Urban and six Rural) which show a lower mortality in 1913 than in 1912, when the climatic conditions were much more favourable.

RATE OF INFANTILE MORTALITY FOR 1913, PER 1,000 BIRTHS.

URBAN DISTRICTS.	RATE.
Huthwaite	139
Warsop	138
Mansfield Woodhouse	132
Mansfield	127
Hucknall Torkard	121
Kirkby-in-Ashfield	120
Arnold	111
Eastwood	106
Worksop	105
Beeston	102
Sutton-in-Ashfield	98
Carlton	93
Newark	84
East Retford	78
West Bridgford	65
MEAN OF URBAN DISTRICTS	110

RURAL DISTRICTS.	RATE.
Stapleford	135
Skegby	105
Blyth and Cuckney	101
Basford	90
Newark	81
Bingham	71
Southwell	56
East Retford	50
Misterton	43
Leake	27
Kingston and Ratcliffe	—
MEAN OF RURAL DISTRICTS	82
Rate for the whole County	101

AVERAGE RATE OF INFANTILE MORTALITY FOR THE TEN YEARS, 1903–1912, PER 1,000 BIRTHS.

URBAN DISTRICTS.	RATE.
Mansfield Woodhouse	152
Sutton-in-Ashfield	151
Arnold	151
Huthwaite	146
Eastwood	138
Hucknall Torkard	137
Kirkby-in-Ashfield	137
Warsop	136
Worksop	128
Mansfield	124
Newark	114
East Retford	113
Carlton	108
Beeston	101
West Bridgford	62
MEAN OF URBAN DISTRICTS	128

RURAL DISTRICTS.	RATE.
Skegby	134
Stapleford	129
Misterton	126
Basford	111
Newark	106
East Retford	91
Southwell	88
Blyth and Cuckney	84
Bingham	79
Leake	73
Kingston and Ratcliffe	13
MEAN OF RURAL DISTRICTS	103
Rate for the whole County	120

It thus becomes evident, as has been stated in these Reports on many previous occasions, that it is quite possible to reduce the old rate of infantile mortality under all circumstances and to render a locality largely independent of climatic variations. This can be accomplished without any unreasonable expenditure, as can be learned from those districts where the change has already taken place. It is not sufficient to adopt the Notification of Births Act, as notification alone can do little good. The essential feature is the consequent appointment of a Health Visitor, with suitable qualifications and a suitable area of work, who should act as the adviser and instructor of the mothers, under proper medical control.

The following Report on the subject was prepared by the County Medical Officer :—

NOTTS. COUNTY COUNCIL.

PUBLIC HEALTH DEPARTMENT,
SHIRE HALL, NOTTINGHAM,
December 31st, 1913.

REPORT OF THE COUNTY MEDICAL OFFICER TO THE PUBLIC HEALTH COMMITTEE UPON THE ADOPTION OF THE NOTIFICATION OF BIRTHS ACT, 1907.

Gentlemen,

A circular letter, dated July 25th, 1913, was received from the Local Government Board requesting the County Council to consider the question of the adoption of the Notification of Births Act at an early date and to inform the Board of the result.

At the Meeting of the Committee on October 1st, 1913, the matter was referred to the County Medical Officer to report upon the probable expenditure that would be involved in the adoption of the Act for the whole County and to advise generally.

As stated in the circular of the Local Government Board, "The Notification of Births Act, 1907, is now in force in 390 districts, with a total population exceeding 20,000,000, or upwards of 56 per cent. of the population of England and Wales, and the reports of Medical Officers of Health who have had experience of the Act afford evidence that its operation and the domiciliary visits and other administrative action which it facilitates have led to a better knowledge and wider adoption of proper rules in regard to the prevention of infectious diseases of infancy."

It is also of great advantage in connection with the administration of the Midwives Act.

I have pointed out the value of the Act and advised its adoption for several years past in my Annual Reports, and cannot usefully say more on that head than has already been written by the Chief Medical Officer of the Local Government Board in his reports on Infant Mortality, the second of which was issued in July, 1913.

The office expenses connected with the adoption of the Act for the whole County, would probably not exceed £150 per annum, and would consist mainly of printing, postage, and half the time of one clerk. For those portions of the County that have not already adopted it the expense would probably not exceed £100.

The main item of expenditure is the provision of a sufficient staff of female Health Visitors, without whom the Local Government Board will not sanction the adoption of the Act. Seven Urban Districts, namely: Retford, Mansfield, Hucknall Torkard, Arnold, Kirkby-in-Ashfield, Worksop, and Mansfield Woodhouse, with an aggregate population of 130,682, have already adopted the Act and appointed Health Visitors. I should not advise any attempt to

bring them into a County Scheme unless at their own request. Some of the remaining Urban Districts and several of the Rural Districts have not a population large enough to provide sufficient work to employ the whole time of a woman Health Visitor. For such cases the Local Government Board say " the office may be joined with that of Assistant Inspector of Nuisances, Tuberculosis Visitor, or School Nurse." The School Nurses, except in the Boroughs, are entirely in the employment of the County Council, and the Tuberculosis Visitors will mainly be in the same employment ; it is not easy, therefore, for districts with a small population to secure part of the time of a Health Visitor except through the County Council. The population of those portions of the County that have not already adopted the Act amounts to about 225,000. The number of Health Visitors that would eventually be required for this population would be at least five, costing with travelling expenses about £750 per annum, but at first the number would probably be less.

By a judicious combination of the work of School Nurses, Tuberculosis Visitors and Health Visitors, much overlapping would be avoided, more efficient work would be done, and the amount of travelling considerably reduced.

In the early part of 1913 only five Counties, namely : Durham, Hertfordshire, Leicester, Warwick, and Worcester, with a large and well-organised staff of Health Visitors, had adopted the Act ; but since then I understand that some others are contemplating bringing it into operation.

I have the honour to remain,
Your obedient Servant,
HENRY HANDFORD,
COUNTY MEDICAL OFFICER.

Before taking any further steps towards the adoption of the Act for the County, it was decided to communicate with each of the Urban and Rural District Councils and ascertain how many proposed to adopt the Act for their own districts. The returns are not yet quite complete ; but up to the date of writing the following districts have adopted the Act, namely : Mansfield, Retford Boro', Arnold, Hucknall Torkard, Kirkby-in-Ashfield, Worksop, and Mansfield Woodhouse. In these the Act is already in operation, and their aggregate population amounts to 132,972.

Should Skegby and Basford, which have already passed resolutions to adopt the Act, succeed in bringing it into operation, 50,522 may be added to the above total.

In the following districts, with an aggregate population of 60,606, the matter is still under consideration, namely : the Urban Districts of Beeston, Huthwaite, and Sutton-in-Ashfield, and the Rural District of Southwell.

The following twelve districts have decided to take no action, namely : the Urban Districts of Newark Boro',

Carlton, Eastwood, West Bridgford, and Warsop ; and the Rural Districts of Bingham, Blyth and Cuckney, East Retford, Leake, Misterton, Newark, and Stapleford.

Their aggregate population amounts to 117,815. In the year 1913 Warsop had an infantile mortality rate of 138, Eastwood 106, Blyth and Cuckney 101, and Stapleford 135.

In addition to these measures, and arising out of them, " Schools for Mothers " and " Mothers and Babies Welcomes" have been organised for several years with very great success in many large towns and populous places, but not hitherto in this County. In some of the more populous portions of the County there is abundant scope for education of this kind. There are few directions in which a small expenditure may be confidently expected to give a greater return in the saving of infant life and in a general improvement in the health and vigour of the generation that is now growing up.

The recent communications from the Local Government Board and the Board of Education have very greatly facilitated the establishment of Mothers and Babies Welcomes in the County, and the War has rendered the matter one of considerable urgency.

The influence of local conditions, such as Housing, Scavenging, Paving of backyards, etc., upon infantile mortality is very great, and is dealt with under the appropriate headings.

It must not be expected that the measures that have just been advocated as the result of experience can rapidly, if at all, influence the very large number of infant deaths, shown in detail on Tables xi and xii, which are mainly due to *antenatal* Conditions. The most important of these are " Premature Birth " and " Atrophy, Debility and Marasmus." Together they account for 354 out of a total of 948 infant deaths, or more than one-third—more exactly 37·3 per cent. How far these deaths may be due to unavoidable conditions, how far to general unwise and irregular modes of life, and how far to the prevalence of Venereal Diseases it is very difficult to say. Probably some guidance may be expected from the Royal Commission upon Venereal Diseases, which is now sitting, and whose Interim Report has just been issued. Though difficult and complex the subject is of much importance to the health and well-being of the nation.

Dr. Rothera (*Beeston Urban*) *writes* :—" Sixteen out of " thirty-three of the infantile deaths were due to Premature " Birth and Debility from Birth, four of them being twin " births. This seems an excessive mortality, and must in " part be ascribed to the necessity of some of our married " women being obliged to go to work almost up to the time " of their confinement. I still think the adoption of the " Notification of Births Act, the appointment of a nurse to " supervise the rearing and proper feeding of these delicate " babies might save some lives, but we are hardly in the " position to incur any extra expense just now."

Dr. Dixon (*Eastwood Urban*) *writes* :—" The high mor- " tality can only be diminished by adopting the Notification " of Births Act and educating the mothers in the matter of " feeding, clothing, and general hygiene, and appointing an " inspector to visit and instruct the mothers in these " matters."

Dr. Irvine (*Huthwaite Urban*) *writes* :—" From observa- " tion it would appear that feeding bottles with long tubes are " being discarded to a great extent, but many mothers still " find them so convenient that they are loth to part with " them. Allied with the long tube bottle is the ' Comforter,' " another source of trouble. This introduces microbe infec- " tion into the mouth and stomach, because it is almost " necessarily dirty—at any rate from a medical point of view— " and the constant sucking causes an excessive flow of saliva " which interferes with digestion.

" The value of home visiting and giving instructions in " these cases cannot be over-rated, and until this is done, the " results as regards proper feeding will not show a great " improvement.

" I would again strongly recommend the Council to put " into force the Notification of Births Act and appoint a " Health Visitor. The conditions of modern times render the " rearing of infants increasingly difficult, and make it necessary " to educate mothers how to rear their offspring in the best " way possible."

Dr. Maxwell (*Kirkby-in-Ashfield Urban*) *writes* :—" The " 61 deaths of infants under one year gives an infantile " mortality for the past year of 120·7 per 1,000 births. This

" is an improvement on the previous year, which was 123 per " 1,000. In 1911 it was 132·8 per 1000. This, in fact, " is the lowest on record, with two exceptions—1903 and " 1907—since the inception of the Council in the year " 1896, when the mortality of infants was 186·9 per " 1,000, and the general death-rate 18·5 per 1,000. The " decrease during the last two years justifies amply the " action of the Council in engaging the services of a Health " Visitor, whose work in educating the parents in the proper " feeding, clothing, and necessity of fresh air for infants is " undoubtedly a great factor in averting the high " death-rate."

Dr. Houfton (*Mansfield Woodhouse*) *writes* :—" There " were 53 deaths of infants under one year of age as compared " with 47 in the previous year. A comparison with the " infantile death-rate for England and Wales shows that they " bear practically the same relation to each other as in the " previous year, when they were less owing to a wet summer, " and show that there are circumstances or conditions in your " district which cause the deaths of infants in larger propor- " tions than in most other parts of the country. So far as I " can determine these conditions seem to be :—

" (1) The number of houses still provided with dry privy " middens, many of which are too close to the house.

" (2) The number of houses crowded in too small a place " without gardens, and with common backyards and set " directly on to the streets.

" (3) The ignorance of many of the mothers.

" In regard to No. 3, the Notification of Births Act was " adopted by your Council on the 1st April, 1913, and a Lady " Health Visitor appointed, and commenced duties on " July 17th, 1913.

" Improvement is being brought about and I hope will " be accelerated, and it will be seen that though the infantile " death-rate is still too high, it is the second lowest recorded " in your district."

Dr. Nesbitt (*Sutton-in-Ashfield*) *writes* :—" As evidence " for the need of instruction in the treatment of infants, the " following report of an Inquest is taken from our local paper,

" the *Free Press*, of February 20th, 1914. The mother gave " the following evidence :—' The child was five weeks old and " ' was apparently all right up to Wednesday when she gave " ' it a spoonful of gin as it did not seem very well. She also " ' gave it a dose of cinder water which she had been told was " ' good for children. She had brought up the child on bread " ' and milk and biscuits and milk, which she thought was a " ' proper food for infants. The child died on Wednesday " ' afternoon.'

" For many years I have recommended the adoption of " the Notification of Births Act and the appointment of a " Health Visitor."

Dr. Horan (Warsop) writes:—" The cause of 10 of the " deaths was due to debility at birth and prematurity, and it " is in such cases as these that a Health Visitor can do a vast " amount of good, and I should suggest that the Council once " more consider the advisability of adopting the Notification " of Births Act and appointing such a Visitor."

ADMINISTRATION OF MIDWIVES' ACT, 1902.

This subject was dealt with very fully in the Report for 1911.

During 1912 little change in administration took place. In July 1913, the lady Inspector of Midwives obtained a better appointment in the South of England and the County Council decided not to fill the vacancy. Until the Midwives Act has been amended and the position of the Local Supervising Authority put upon a more satisfactory basis, the Health Committee do not feel that the Council are justified in incurring large expenditure in the administration of this Act. In the meantime the County Medical Officer has been instructed not to continue any arrangements for the routine inspection of the registers and bags of appliances, etc., of the Midwives ; but to employ those of the School Nurses who have Certificates from the Central Midwives' Board in investigating any cases of puerperal fever or septic infection where the continuance of the midwife in practice without warning and without disinfection might endanger life.

Some little useful work has been accomplished in this direction ; but the present position is in the highest degree unsatisfactory and needs serious protest.

The number of Midwives who, in compliance with Section 10 of the Midwives Act, have notified to the Local Supervising Authority 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
1909	195
1910	203
1911	217
1912	220
1913	202

Of the 202 Midwives who notified their intention to practise in 1913, 103 had been trained, and 99 received their certificates because they were in bonâ fide practice before July, 1901.

Maternity Cases attended by Certified Midwives without a Doctor.

Year.	Number of Cases.	Percentage of Total Births.
1907	4,150	46·3
1908	4,290	43·0
1909	4,166	42·0
1910	4,120	43·1
1911	4,339	45·9
1912	5,264	57·1
1913	6,339	67·6

Out of 6,339 maternity cases, medical help was advised in 416, or 6·5 per cent., compared with 10·1 per cent. in 1912.

From these figures it will be observed that coincident with the diminution and final cessation of the routine inspection of midwives by a trained and experienced inspector, the proportion of cases in which it has been thought advisable for the midwife to advise that medical help be sent for, has fallen considerably, although the midwives who have received any training at all still form only just over one-half of those who have notified their intention to practise, and who are entitled to conduct cases without a doctor.

Ophthalmia Neonatorum.—Only nine cases of this highly contagious disease were mentioned in the records of sending for medical help, compared with 21 in 1912. This is probably only a small proportion of the total cases. From April 1st, 1914, the Local Government Board has made Ophthalmia Neonatorum compulsorily notifiable by Medical Practitioners and by Midwives to the Medical Officer of Health of each district, and consequently the Local Supervising Authority will eventually know the total number of cases occurring in the County. The knowledge will be too late to be of use to the Local Supervising Authority, who also will not know which cases have been attended by midwives.

TABLE OF NOTICES, ETC., RECEIVED BY THE NOTTS. LOCAL SUPERVISING AUTHORITY.

Year	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Records of sending for Medical help..	44	177	282	282	340	321	365	466	534	416
Notices of still-birth	3	68	123	100	101	106	113	142	110	147
Notices of death of child before arrival of doctor ..	0	12	19	15	21	36	26	14	16	12
Notices of death of mother before arrival of doctor ..	0	0	0	0	1	0	0	2	1	0
Notices of laying out the dead	0	0	0	0	0	0	0	35	64	29
Changes of address notified to the Central Midwives Board	0	51	35	45	55	54	67	55	85	40
Changes of name notified to the Central Midwives Board	0	0	0	5	4	5	5	4	2	4
Deaths of Midwives notified to the Central Midwives Board	0	0	0	0	3	3	3	0	4	0
	47	308	459	447	525	525	579	718	816	648

The increase in the number of Still-births and the marked diminution in all the other notices following upon a practical cessation of inspection for only six months needs no comment for those who understand the subject.

Classification of the Causes for which Medical Help was sought during the year 1913.

Pregnancy—		
Abortion	16	
Deformed Pelvis	2	
Excessive Sickness	3	
	—	21
Labour—		
Malpresentation	34	
Where no presentation could be made out	2	
Excessive bleeding	19	
Placenta retained for more than two hours	31	
Ruptured perinæum	33	
Delay in labour	80	
Debility	5	
By patient's wish	4	
Placenta Prævia	16	
Fits	2	
Uterine Inertia	12	
Prolapse of the Uterus	1	
	—	239
Lying-In—		
Rise of temperature	15	
White leg	1	
Pain and swelling of breasts	4	
Sepsis	1	
	—	21
The Child—		
Convulsions	8	
Malformation	11	
Dangerous feebleness	54	
Inflammation of eyes	9	
Prematurity	20	
Still birth	6	
Jaundice	4	
Rash	—	
Not stated	23	
	—	135
		416

NOTIFICATION OF INFECTIOUS DISEASES AND REMOVAL TO HOSPITAL.

During the year 1913, the number of cases of Infectious Disease notified was 2,887.

The incidence of Infectious Disease was greater in proportion to population in the Urban Districts than in the Rural in the ratio of 9·22 to 5·77 per 1,000.

Year.	Number of notified Cases.	Attack Rate, or Cases per 1,000 of the Population.	Number removed to Hospital.	Percentage of Removals.
1895	1,355	5·45	11	0·8
1896	1,808	7·16	76	4·2
1897	1,409	5·48	93	6·2
1898	1,624	6·21	121	7·4
1899	2,430	9·14	148	6·0
1900	2,292	8·46	180	7·8
1901	1,780	6·45	159	8·9
1902	1,443	5·11	110	7·6
1903	1,744	6·03	286	16·3
1904	2,022	6·83	259	12·7
1905	2,673	8·83	380	14·2
1906	2,607	8·42	347	13·3
1907	1,844	5·83	280	15·1
1908	1,736	5·36	343	19·7
1909	1,635	4·94	325	19·8
1910	1,544	4·55	304	19·6
1911	2,198	6·36	437	19·8
1912	2,245	6·31	482	21·5
1913	2.887	7·96	583	20·1

It has been thought well to continue to include this table in the report although its comparative value is being rapidly altered by the addition from year to year of fresh diseases to the list of those which were formerly notifiable. Too much significance, therefore, should not be attributed to the increase in the notified cases or to the attack-rate. In the past year 646 cases of tuberculosis were notified, and are included in the table. Many of these were not notifiable in 1912 and previous years.

ISOLATION HOSPITALS.

The attention now being given to the Institutional treatment of Tuberculosis has tended at the same time to increase the interest in the isolation of other infectious diseases for which Isolation Hospitals have long been recommended. Although much less provision for such diseases as Small Pox, Scarlet Fever, Diphtheria, and Enteric Fever has been made than has been advised, nevertheless, the following quotation from the Report for the year 1896 will show that a very great advance has taken place during the past 18 years.

"Three Urban Districts and one Rural District have "provided Isolation Hospitals; and, in addition, two Urban

"Districts have made provision for Small Pox. . . . .
"Of the 1212 notified cases of infectious disease in the
"Urban Districts, only 71 were removed to hospital, and of
"the 596 cases in Rural Districts only five were removed."

In 1913 every Urban District and five of the Rural Districts have made some provision for Small Pox, though in many cases, inadequate provision; and all but four Urban and two Rural Districts have made some kind of provision for the isolation of other infectious diseases, although in many instances it is quite inadequate. Nevertheless, 583 cases received hospital isolation and treatment in 1913, compared with 76 in 1896. This is a long step in the right direction, though many more steps are needed.

During the same period a remarkable change has taken place in the opinion of that portion of the public most intimately concerned in Isolation Hospitals, namely the patients and the parents of the children who are sent. Formerly it was difficult to persuade parents to allow their children to be removed to an isolation hospital when suffering from an infectious disease. Now they recognise that removal to hospital is a boon to the patient as well as an advantage to the community and complain of the absence of sufficient facilities. This point is well illustrated by Dr. Francis on page 37.

It is necessary at this stage to utter a word of warning against the practice of overcrowding isolation hospitals, especially in times of emergency. It is also necessary to insist that however simple and inexpensive a hospital for infectious diseases may be—and the simpler and more inexpensive the better—it is essential that it should be as well ventilated, light, clean, well equipped for its purpose and *sanitarily perfect* as every other hospital. In this respect it is well to remember what Florence Nightingale wrote in 1863 after her unique experience of hospitals: "It may seem a "strange principle to enunciate as the very first requirement "in a Hospital that it should do the sick no harm. It is "quite necessary, nevertheless, to lay down such a principle, "because the actual mortality in hospitals, especially in those "of large crowded cities, is very much higher than any "calculation founded on the mortality of the same class of "diseases among patients treated out of hospitals would lead "us to expect."

The work of Miss Nightingale and many other hospital reformers has altered the state of things above described, but there appears at the present moment to be much risk of the former existence of such dangers being forgotten.

The following letter from the Local Government Board concerning the provision of an Isolation Hospital for Retford and the surrounding district, together with the Special Report of the County Medical Officer, explain themselves, and represent the position at the beginning of the present year, after many personal interviews. Since that date I am glad to learn that negotiations have been resumed and that there is a good prospect of a satisfactory agreement being reached.

(COPY.)

LOCAL GOVERNMENT BOARD,

WHITEHALL, S.W.,

25th September, 1913.

Sir,

I am directed by the Local Government Board to state for the information of the Nottinghamshire County Council that they have been in correspondence with the Town Council and Rural District Council of East Retford with reference to the joint provision by the two Councils of hospital accommodation for the isolation of cases of infectious disease occurring in their Districts.

The Town Council of East Retford have expressed their willingness to erect and equip an isolation hospital and to make additional accommodation beyond their own requirements to meet the requirements of the Rural District, but the two authorities have been unable to agree to terms, and the matter is therefore in abeyance.

In view of the fact that the Rural District Council have made no provision for the isolation of cases of infectious disease, and that the existing accommodation provided by the Town Council is unsatisfactory, the Board are of opinion that the case is a suitable one for the formation of a Hospital District, under the Isolation Hospital Acts, 1893-1901, consisting of the areas of the Borough and Rural District, and they would be glad if the County Council would take into consideration the question of the formation of a Hospital District as suggested. In this connection, it should be noted that, under Section 2 of the Act of 1893, it will be necessary to obtain the assent of the Town Council before the Borough can be included in a Hospital District formed under the Isolation Hospitals Acts.

The Board would be glad to be informed of the result of the County Council's consideration of the above suggestion.

I am, Sir,

Your obedient Servant,

(Signed) F. J. WILLIS,

Assistant Secretary.

The Clerk of the
Nottinghamshire County Council.

PUBLIC HEALTH DEPARTMENT,
SHIRE HALL, NOTTINGHAM,
January 1st, 1914.

SPECIAL REPORT OF THE COUNTY MEDICAL OFFICER UPON THE PROVISION OF AN ISOLATION HOSPITAL FOR RETFORD AND DISTRICT.

Gentlemen,

On September 26th, 1913, a letter was received from the Local Government Board, a copy of which is circulated with this Report. At the meeting of the Committee on October 1st, the County Medical Officer was instructed to inquire as to the necessity of an Isolation Hospital being established for the use of the inhabitants of the East Retford Rural District; and of the Borough of East Retford also, if their assent to a joint hospital could be obtained.

The second paragraph of the letter of the Local Government Board, I am informed, is not now correct, inasmuch as the Town Council of East Retford is not now willing to erect a new hospital. I have had the opportunity of seeing the plans which had been prepared for a joint hospital, and of examining the site, which is an excellent one, with gas and water available, and with ready access to the Retford drainage system. These are exceedingly valuable considerations, and it would be greatly to the advantage both of the Borough and the Rural District if the interrupted negotiations could be renewed and brought to a successful conclusion.

The existing Isolation Hospital accommodation provided by the Town Council is described by the Local Government Board as "unsatisfactory," and with that description I agree. But the County Council cannot include the Borough in any contemplated Hospital District without the previous assent of the Town Council; and, consequently, I need not pursue any further the subject of the existing provision made by the Borough.

The East Retford Rural District is one of several districts in the County that have made either no provision at all or no provision which can be considered in any way adequate; and, therefore, I have no alternative but to report that a hospital ought to be established.

Attention was first called to the lack of an Isolation Hospital for the East Retford Rural District by Dr. Housley in his Report for the year 1901; subsequently, the matter was alluded to periodically, but came up in a more urgent form in the early part of 1911 in consequence of an epidemic of Scarlet Fever. In December, 1911, negotiations were commenced with the Sanitary Committee of the Town Council upon the subject of an Isolation Hospital, and have been continued at intervals till June, 1913, when the Town Council, by a very small majority, rejected the proposal which had been agreed upon by the respective Committees of the District Council and of the Town Council.

In the meantime the District Council since 1911 had been endeavouring by advertisement, as well as by private enquiry, to obtain either premises, or a site, for two small Cottage Hospitals in different portions of the district, but without any success. It is now generally agreed that for a district such as East Retford, two small hospitals instead of one central hospital, would not be at all satisfactory.

Owing to the position of the Borough in the centre of the district and its accessibility by road and rail, it is evident that the Borough, or its immediate neighbourhood, affords the best site for an Isolation Hospital for the Rural District.

Apart from the very important considerations of a constant water supply, lighting and drainage, the administration expenses of a joint hospital are much less than for two separate hospitals with the same aggregate number of beds. And, further, no arrangements for the isolation of cases of infectious disease arising within the Borough of Retford can be effective in preventing fresh outbreaks of disease in the Borough so long as it remains the natural centre for the surrounding district for commercial and educational purposes, and the cases of infectious disease in those surrounding districts are not adequately isolated.

A joint Hospital would be in every way to the interest of both districts.

In September, 1913, an arrangement was made for the admission of cases of Scarlet Fever from the Rural District into Arlington House, which is being used as the Borough Infectious Diseases Hospital; but as this hospital is considered by the Local Government Board to be "unsatisfactory" for the Borough alone, the arrangement can only be looked upon as a temporary expedient to attempt to meet the existing emergency.

I have the honour to remain,

Your obedient Servant,

HENRY HANDFORD,

COUNTY MEDICAL OFFICER.

In June, 1914, a communication was received from the Local Government Board concerning the lack of Isolation Hospital accommodation in the Urban Districts of Sutton-in-Ashfield and Mansfield Woodhouse and in the adjoining Rural District of Skegby. This matter has been under consideration for many years, but no effective progress has been made, although the need for an efficient hospital becomes every year more urgent owing to the rapid growth of population. On March 27th, 1912, a Local Inquiry was held by R. A. Farrar, Esq., M.D., an Inspector of the Board, as to the advisability of the issue of a Provisional Order forming the Urban District of Mansfield Woodhouse and the Rural District of Skegby into a United District for the purpose of the provision, maintenance and management, for the use of the inhabitants of such United District, of Hospital accommodation for the reception of cases of infectious disease. The Inquiry was adjourned *sine die* on account of the withdrawal of Skegby, and no material advance has been made since that date.

NOTTS. COUNTY COUNCIL.

PUBLIC HEALTH DEPARTMENT,

SHIRE HALL,

NOTTINGHAM,

August 19th, 1914.

ISOLATION HOSPITALS AND THE WAR.

In view of the circular letter of the Local Government Board dated August 12th, and of the fact that all previous Wars on a large scale have been associated with and followed by an increased amount of Infectious Disease, especially Enteric Fever, Diarrhoea, Dysentry, and Small Pox, it would seem to be a suitable moment to seriously consider the efficiency of the Isolation Hospitals in the County. In the South African War in 1899—1902 there were 404,126 admissions to Hospitals for disease, and 14,024 deaths, compared with 21,292 admissions for wounds and 6,965 deaths, including those killed in action. The chief Small Pox outbreak in Nottinghamshire in recent years occurred in 1903, 1904, and 1905, when there were 376 cases.

The general improvement in the Sanitary Administration of this country may, or may not, prove to be sufficient to prevent the mass of disease which follows war: but as the Local Government Board have repeatedly complained that the Isolation Hospitals of Nottinghamshire in some districts fall short of the minimum requirements of ordinary times of peace it would seem wise to reconsider the position.

It may be necessary to find employment, and money spent in bringing the Isolation Hospitals of the County up to date would be usefully expended.

The County Council have recently had a communication from the Local Government Board as to the need of an Isolation Hospital for Sutton-in-Ashfield and Skegby. Kirkby-in-Ashfield and Huthwaite should be associated in any complete scheme for that area as their existing hospitals are quite unfit for serious or prolonged occupation.

The County Council and the Local Government Board have already been in communication with Retford and there would be much advantage if that scheme could be pushed on.

There are several other districts where either the increasing population or changing conditions render the present hospitals inadequate for any serious strain. They could readily be brought up to date within six months or a year.

In a notice issued by the War Office recently it is said :—

"There is no need to remind Officers of the Royal Army "Medical Corps of the disastrous effects of Typhoid in recent "campaigns. It can hardly be hoped that improved sanitary "precautions will succeed completely in safeguarding the force "from infection since it will certainly be exposed to three sources "of infection difficult or impossible to control, viz. :—

(a) Men in the incubative stage of Typhoid who have accompanied or joined the force.
(b) Unsuspected Typhoid carriers.
(c) Contact with the inhabitants of the Country in which Typhoid may be present.

"The preventive value of Antityphoid inoculation is now "universally recognised and is well known to all who have served "in India."

This is followed by instructions about inoculating the force as opportunity offers. Whether this may be practicable in the Army at the present moment I do not know. It is not practicable on a large scale in civil life, and could only be recommended for Nurses and Attendants in Enteric Fever Wards. The energies of Sanitary Authorities should be directed to making sure that at the very least the ordinary requirements in the way of hospital provision are adequately fulfilled.

There is no essential difference between hospitals used for one purpose and another, and so-called infectious hospitals should be available for any class of cases, infectious or not, for which they may be needed. The chief essentials are facilities for open air treatment and proper equipment.

The following letter to the "Times" from the Professor of Medicine at Birmingham University, a physician of very wide experience of hospitals and some experience of military requirements as Lieutenant-Colonel in the Territorial branch of the Royal Army Medical Corps, expresses the opinions of many other hospital physicians and surgeons. It shows that open air treatment is as valuable for surgical cases (including the sick and wounded in war) as for Medical. In the Nottingham General Hospital for many years past every opportunity for placing beds in the open air has been used, especially in surgical cases and in Tuberculosis. There is no reason why our Isolation Hospitals should not meet all these requirements, at small expense, to the benefit of all classes of cases treated in them. Even the Asylums now have verandahs on which beds can be placed for open air treatment, attached to some of their wards.

THE NEED FOR OPEN AIR HOSPITALS.

To the Editor of the "Times."

"Sir,

"I write in the hope that something may be done to arrest "the, in my opinion, mistaken policy of converting buildings not "designed for the accommodation of the sick into hospitals at "considerable expense, and, no doubt a minor consideration, "considerable damage to the buildings themselves, whereas we "have learnt, especially in connection with Sanatoria for Con-"sumption, but not alone in that disease, how much better more "or less open buildings with abundance of light and fresh air "are for the treatment of the sick and wounded.

"This is no new lesson, yet it is one that has been hard to "learn and seems not yet appreciated by our military authorities. "Even so long ago as the Civil War in America it was noticed "how much better the sick did in open tents than in the hospitals, "and in the late Life of Florence Nightingale there is an instructive "letter from the then Crown Princess of Prussia telling how certain "wounded men whose wounds had been doing badly in hospital "improved rapidly and recovered after removal to a shed in the "garden whose walls did not reach to the roof and on one side "was open. The success obtained in the large wards of the "Liverpool Country Hospital for Children, under the care of

"Mr. Robert Jones, sufficiently demonstrates the value of such "open air treatment for a class of cases that notoriously recover "slowly, if at all, in the ordinary hospitals. In Birmingham the "Queen's Hospital opened a roof ward some years ago, in which "medical cases have been treated summer and winter, and at the "General Hospital we have enlarged our balconies and have "treated as many medical and surgical patients there as we have "room for. It would not only be more efficient but cheaper to "put up suitable sheds in the parks and pleasure grounds surround- "ing the buildings it is proposed to appropriate, which latter may "well serve the useful purpose of administration blocks. The "patients could then be kept on one floor and more or less in the "open air, while it would not be difficult to arrange that in these "improvised buildings all the wards should be open to the south.

I am, Sir, Yours faithfully,

ROBERT SAUNDBY,

Consulting Physician to the General Hospital ;
Professor of Medicine, University of Birmingham ;
Lieutenant-Colonel R.A.M.C.T.

140, Great Charles Street,
Birmingham. August 13th."

Finally, may I say that any expenditure in bringing the Isolation Hospitals of the County up to date would not be thrown away, as the Hospitals, even though not specially used in connection with the present War, would be of permanent value to the County. They would be most useful for advanced cases of Tuberculosis.

H. HANDFORD,

COUNTY MEDICAL OFFICER OF HEALTH.

The following extracts show the position as regards Isolation Hospital accommodation in eleven of the districts.

Dr. Lambie (*Mansfield*) *writes* :—"The main features of "this scheme are the erection of three new ward blocks in "permanent materials, additions to the administration "block, and an unclimbable fence round the buildings. "Under this scheme provision is made for 32 patients."

Dr. Francis (*Arnold Urban*) *writes* :—"The isolation for "a long period in some of the houses has been a very difficult "matter and has entailed considerable inconvenience and "often expense, as sometimes it has been necessary for other "members of the family to board out on account of their "work. Public opinion has changed the last few years. "Formerly it was difficult to obtain the consent of a parent "to the removal of a child to an Isolation Hospital ; now, "however, it is the usual thing to be asked to send the child "away, and it is not always a pleasant task refusing, as it is "difficult to make some of the people understand the position "of affairs. They are ever ready to point out instances

"where other children have been sent, and to compare this "place with some other district where they formerly lived, "and in which all children could go to a hospital. In many "cases I fear that the refusal to send is put down to the "unkindness of the Medical Officer of Health."

Dr. Rothera (*Beeston Urban*) *writes* :—"We have no "Isolation Hospital except for Small-pox, which we share "with other Urban authorities; neither have we a disinfecting "chamber for the proper treatment of bedding and wearing "apparel. When we get our new Destructor to work, this "latter defect, I trust, may be remedied."

Dr. Houfton (*Mansfield Woodhouse*) *writes* :—"Arrange- "ments are made with the Mansfield Corporation to admit "cases of Small-pox into their hospital, two beds being "reserved. For other cases of infectious disease no isolation "hospital has up to the present been available. On "December 16th, 1911, an application was made to the Local "Government Board by your Council and by the Skegby "Rural District Council for the appointment of a Joint "Hospital Board, and the provision of an Isolation Hospital "for the use of the two districts. At the Inquiry which was "held the Skegby District Council asked for the Inquiry to "be adjourned until the neighbouring district of Sutton-in- "Ashfield either came into the scheme or provided isolation "for the cases in their district. The Inquiry was accordingly "adjourned and so far nothing further has been done."

Dr. Nesbitt (*Sutton-in-Ashfield*) *writes* :—"There can be "no two opinions that Hospital accommodation and skilled "nursing for cases of Enteric Fever is an urgent necessity for "this district. It is a pitiable sight to see several cases of "this disease being treated in one room of a small cottage."

Dr. Garrett (*Worksop*) *writes* :—"The hospital accommo- "dation was fully taxed since August ; and during the height "of the epidemic many cases had to be treated at home. In "order to obtain better isolation of cases treated at home, the "Council appointed a qualified Nurse early in the present "year to assist in the work of visiting cases and contacts."

Dr. Wray (*Basford Rural*) *writes* :—"In October the "Local Government Board wrote observing that the Hospital "was not large enough for the needs of the District, and "deprecating the admission of outside cases. I was instructed "to make a special report, which I did on November 26th, "1913. Copies were sent to each member of the Council, to

" the Local Government Board, and to the County Councils " of Notts. and Derby. In that report I advocated the " provision of a Discharging Block, but its consideration has " been deferred to a future meeting of the Committee."

Dr. Eaton (*Bingham*) *writes* :—" The Isolation Hospital " at Basford is situated too far from the District to be readily " available. Four cases were sent to it during the year. " Two cases of Enteric Fever were admitted to the Newark " Isolation Hospital."

Dr. Beale (*Retford Rural*) *writes* :—" The plan followed " when a case of infectious disease is notified is that I visit the " house personally if possible, make enquiries and give " instructions as to isolation and disinfection. Hanging- " cards of instructions and disinfectants are distributed gratis. " At the termination of the case, the house is disinfected by " the Sanitary Inspector and his staff. When a child is " infected, this usually means a visit to the school to enquire " for absentees and a visit to all suspicious cases which may " be absent. By so doing I am often able to find an unsus- " pected case.

" There is no Isolation Hospital in the District. During " the year I suggested that an arrangement might be made " with the Borough of East Retford to admit a limited " number of Scarlet Fever cases into their Hospital, where " the circumstances of the case seemed to make such a " procedure unusually desirable, and provided there was " sufficient room available in the hospital. The Borough " Council on being approached by the District Council " acquiesced in this, and power is now given me by the " District Council to make the necessary arrangements when " desirable. Advantage has not been taken of this at " present. One case was considered suitable, but owing to " the fact that no horse ambulance was available to bring the " child some six miles, the new arrangement was not carried " out. In consequence of this I was instructed to look for a " temporary vehicle which would do for the purpose until a " proper ambulance is purchased when the isolation hospital " is built.

" During the year negotiations have been in progress " between the District Council and the Borough Council for " the provision of a joint hospital, and many meetings were " held. The District Council agreed to all the conditions " suggested by the special Sub-committee which was appointed " to deal with this matter, but the resolution that the two

" districts should combine was defeated in the Borough " Council by one vote; consequently the scheme for a " satisfactory isolation hospital fell to the ground. A letter " was received in October from the County Council asking " what steps were being taken in the matter, and I had a long " interview with the County Medical Officer in November.

" Negotiations with the Borough Council of East Retford " are about to be re-opened, and a meeting of the Sub- " committees of the two Councils has been fixed. I trust " that before my next report is written this question will have " been settled satisfactorily."

Dr. Broadbent (Newark Rural) writes :—" There is no " provision for an isolation hospital in this district. I hear " that Claypole is approaching the Newark Urban Council to " see if they will board their cases. I hope thay may be more " successful than we have been, for I still continue to think " the only way to deal with the question is for Newark to " combine with us."

Dr. Kingsbury (Stapleford Rural) writes :—" Through the " arrangements by you with the Nottingham Corporation and " the Shardlow Joint Hospital Committee we have the power " to send cases when necessary to the Bagthorpe or Draycott " Isolation Hospitals."

DISINFECTION.

One of the most serious needs of the populous districts in the County is some provision for the disinfection by steam of bedding and clothing which cannot be washed without injury. This want is very much felt in attempting to disinfect bedding and clothing in cases of Tuberculosis and after Enteric Fever, Diphtheria and Scarlet Fever, in connection with Puerperal Fever and Midwives' work, and even more in connection with the crusade of the School Nurses against verminous conditions. It is little use providing clean underclothing for children suffering from body lice, when the bedding in the house cannot be disinfected. There are too many verminous homes for the burning of the bedding to be other than an expensive remedy. For the far commoner condition of verminous hair much the same is true.

In the public mind far too great confidence is placed in the use, and frequently the wasteful use, of chemical disinfectants, which from the conditions under which they are employed, must frequently be ineffective. On the other hand, there is too much neglect and want of appreciation of the more

modern method of disinfection by heat, which destroys the vitality of the animal or vegetable organisms, together with their eggs or spores, which cause, or at any rate, transmit disease. Neither is simple cleanliness, with free exposure to light and air, sufficiently valued. Whatever improvements may be made in methods of disinfection, simple cleanliness will always be necessary. This is such a truism that it may appear foolish to mention it, but experience shows only too painfully that it is needful to repeat it again and again.

Dr. Francis (*Arnold Urban*) *writes* :—" Fumigation is not " sufficient for bulky articles such as mattresses, and a steam " disinfector is badly wanted for those articles which cannot " be boiled."

Dr. Knight (*Carlton Urban*) *writes* :—" A steam disin- " fector is one of the needs of the district ; the subject has " been discussed but left in abeyance.

" The clothing and bedding of the Tuberculous patients " who have been removed to Hospital, or have died, can only " be effectually disinfected by means of a steam disinfector, " and in a populous district containing numerous cases, in " addition to other more or less present infectious diseases, " proper provision for thorough disinfection is very desirable."

Dr. Nesbitt (*Sutton-in-Ashfield*) *writes* :—" The question " of securing a steam disinfector has been a hardy annual for " years. Your Council has now given instructions to the " Surveyor to prepare plans with a view of providing one."

Dr. Wray (*Basford Rural*) *writes* :—" On receipt of a " notification I send a leaflet of ' Rules for the prevention of " ' the spread of Infectious Diseases ' and one of ' Rules for " ' the admission of patients into the Basford Sanatorium,' " together with an addressed post card to the occupier of the " house in which the disease has occurred. I also inform the " Inspector, and if it be one which it is desirable should be " isolated in Hospital, I visit it immediately myself with a " view to early removal. On the post card being returned, " signed by the Doctor in attendance, the house is visited and " disinfected by an Officer of the Council.

" During the past year 206 houses were disinfected, these " included the homes of patients removed to Hospital, also " the homes of Tuberculosis cases either after removal or " death."

Dr. Eaton (*Bingham Rural*) *writes* :—" A good steam " disinfector is needed for the disinfection of clothing and " bedding."

Dr. Hunter (*West Bridgford*) *writes* :—" All domestic " refuse and garbage is taken to the destructor and destroyed " by fire. There are no ' tips ' and no refuse goes out of the " district. The destructor is a two-cell one with boilers, " steam disinfector, etc. It has given complete satisfaction " since its erection. The clinkers obtained as the result of " the burning of the refuse are used chiefly for road-making."

THE NEED OF A BACTERIOLOGICAL LABORATORY.

This is a subject to which attention has been called on many previous occasions for several years. The need is now becoming so urgent that it will be difficult to postpone action of some kind much longer. Steps have already been taken to make provision on a very small scale at the Ransom Sanatorium for the examination for Tubercle Bacilli of specimens of sputum sent by practitioners in the County. But the accommodation is not at all adequate, and now that practice in all departments of medicine is being put upon a more scientific basis, the need of an arrangement by which a scientific diagnosis can be made has become acute. The diseases for which a bacteriological examination is desirable are all infectious or contagious ; and consequently an exact diagnosis at the earliest possible stage is in the best interests of the general community as well as of the individual patient.

Allusion has often been made to the spread of infectious disease by unrecognised cases. Many early or slight cases of Diphtheria, Enteric Fever, or Tuberculosis can alone be diagnosed by the aid of a bacteriological examination, such as must be conducted in a properly equipped laboratory. What are known as " carrier cases " of Diphtheria and of Enteric Fever can only be recognised in this way. They are not themselves ill, but yet they may be most potent causes of spreading the disease. Most of them have already suffered from the disease and have recovered weeks, months, or sometimes even years previously, but they still carry the infection. Some few have been exposed to the infection, but have not suffered from the disease, although they carry about the infection in their bodies.

A bacteriological examination is necessary for the diagnosis of the fortunately rare diseases, Cerebro-spinal Fever, Cholera, Plague, Glanders and Anthrax.

It is also a necessary part of any complete examination of milk or water. The provision of such a bacteriological examination—free of cost to the patient, inasmuch as the consequent advantage accrues to the general public rather than to the individual patient—is a necessary part of every fully equipped Public Health service. There would be much advantage in the establishment of such a laboratory as part of the Public Health Department of the County Council.

Dr. Lambie (Mansfield) writes of the small Mansfield laboratory :—"Full use was made of the bacteriological "laboratory for the diagnosis of cases of diphtheria by the "medical practitioners of the town, and by the Medical Officer "of Health."

NOTIFIABLE INFECTIOUS DISEASES.

SMALL POX.

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	..	..
1903	183	8	4·37
1904	101	3	2·97
1905	92	3	3·25
1906	2	..	..
1907	..	..	..
1908	..	..	..
1909	..	..	..
1910	4	1	25·00
1911	..	..	..
1912	1	..	..
1913	..	..	..

VACCINATION.

The most efficient means for the prevention of Small Pox are vaccination and re-vaccination.

The number of unvaccinated persons is increasing rapidly and there is much reason to fear they will prove a great danger should an outbreak of Small Pox get beyond the control of the small number of permanent Health Officers. Although this County has fortunately remained free from Small Pox for the past 18 months there have been numerous small outbreaks in other parts of England; but, hitherto, all of them have been checked at the commencement by the precautions taken on the spot.

The Small Pox Hospitals at present existing in the County are not calculated to deal with an epidemic such as occurred in 1903—1905, without the aid of vaccination. There is much ground, therefore, for anxiety on the part of the Public Health Authorities.

SCARLET FEVER.

	SCARLET FEVER.			
	Notified Cases.	Deaths.	Case Fatality per cent.	Attack Rate or Cases per 1,000 of the Population.
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	1,693	44	2·6	6·36
1900	1,485	45	3·0	5·48
1901	1,080	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	1,559	33	2·1	5·01
1906	1,468	28	1·9	4·59
1907	937	23	2·4	2·87
1908	793	23	2·9	2·36
1909	726	9	1·23	2·13
1910	815	13	1·59	2·40
1911	1221	18	1·47	3·53
1912	1000	12	1·2	2·81
1913	1,392	17	1·2	3·8

During the last three years there has been no sign of any diminution in the number of cases of Scarlet Fever, both the actual number of notified cases and the proportion of cases to the population were larger last year than in any year since 1906. The type of the disease remained mild on the whole, as shown by the very low case fatality. One of the most insuperable difficulties in preventing the continued spread of this disease consists in the mildness of the prevailing type, which leads to many cases passing through the whole course of the disease, not only without any medical treatment, but without any precautions against the spread of the disease to other persons. When not under medical care cases are very seldom notified, and the sanitary authorities have little opportunity of requiring disinfection or of preventing the exposure of the patient during the most infectious stages. Cases that are only discovered during the "peeling" stage have generally already spread the disease to one or more other persons. During 1913 ten schools were closed on account of the prevalence of Scarlet Fever and much interference with education resulted.

Until more is known of the *Materies Morbi*, of the reason of the seasonal prevalence of Scarlet Fever, and of its relation to milk and to diseases of some of the lower animals, there is little ground for expecting any great change. We are at present towards the top of the wave of prevalence, though near the bottom as regards severity.

Dr. Lambie (Mansfield) writes :—"The same methods for "the control of the disease were in use as in former years, but "the Health Committee recognising the difficulty of dealing "with the large number of cases at the end of the year, gave "sanction for the appointment of a temporary nurse to visit "the homes of the patients regularly, to give advice, and see "that isolation was properly carried out.

"The nurse who was appointed was fully trained in "general and fever work. She began her duties on the 13th "October, and carried them out with great zeal and ability. "She was still doing this work at the close of the year.

"Your Medical Officer ventures to highly commend this "method of dealing with scarlet fever epidemics in preference "to utilising a large amount of hospital accommodation to "the exclusion of other diseases, for the reason that scarlet "fever is the least amenable of the notifiable infectious "diseases to control by hospital isolation.

"The accommodation at the Forest Hospital was strained "to the utmost during the last quarter of the year.

"The number of cases which occurred in houses where "the accommodation was insufficient for proper isolation was "in excess of the hospital accommodation, but it is satis- "factory to be able to state that very few secondary infections "occurred in families after the primary cases came under the "control of the Health Department."

DIPHTHERIA AND MEMBRANOUS CROUP.

These diseases are caused by the same organism, 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.

	DIPHTHERIA & MEMBRANOUS CROUP.			
	Notified Cases.	Deaths.	Case Fatality per cent.	Attack Rate, or Cases per 1,000 of the Population.
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
1909	469	41	8·7	1·37
1910	358	31	8·6	1·05
1911	381	39	10·2	1·10
1912	373	35	9·3	1·05
1913	517	53	10·2	1·42

There was a considerable increase in the number of notified cases of Diphtheria in 1913, and also of the deaths, which amounted to 53. Diphtheria is so closely allied to Scarlet Fever in its incidence as well as in its character, and the two diseases are so frequently associated in the same

patient either at the same time or as a sequel one of the other, that it is not surprising that the increase in the number of cases of Scarlet Fever has been accompanied by a similar increase in the cases of Diphtheria. Here the similarity ceases. The *Materies Morbi* of Diphtheria has been known for several years, and the discovery has resulted in the further discovery of an antitoxin, the proper use of which very greatly reduces the fatality of the disease. The earlier a sufficient dose of antitoxin is given in cases with clinical signs of diphtheria, the more valuable the effect, and experience unfortunately shows that after the fourth day of the disease the use of antitoxin ceases to have much beneficial influence. It should be given in all cases with well marked clinical signs at the earliest opportunity, without waiting for a bacteriological diagnosis, which involves too much delay. The bacteriological examination should be made and is valuable for other purposes. The increasing use of antitoxin, which is supplied free of cost for suitable cases by most of the Urban and Rural District Councils, in accordance with the "Provision of Diphtheria Antitoxin" Order issued by the Local Government Board, on August 15th, 1910, has done much to diminish the number of deaths; but it cannot be relied upon to prevent the risk of infection. Antitoxin is not available for combatting the two chief sources of the spread of the disease, namely: unrecognised and undiagnosed mild cases, and "carrier" cases which have been already described. The treatment of the disease is now satisfactory owing chiefly to antitoxin. The prevention of the disease still leaves much to be desired.

Dr. Lambie (Mansfield) writes :—"One example may be "here given of the way in which an unrecognised case may "spread infection. A child was presented to the School "Medical Officer at the Public Health Office by the mother, "who asked for a certificate of exclusion from school on the "ground that the child had swollen glands, the result of a "'bad cold.' The intention of the mother was to send the "child away for a change of air. On examination it was "observed that there was some purulent discharge from the "nose with excoriation of the lip. A culture was made from "the nasal discharge and diphtheria bacilli were found. The "child was isolated in the care of a medical man, who notified "the case. A day or two later the Medical Officer of Health "received information that a child was ill in a house having "a yard in common with the house in which the first child "lived, the informant suspecting scarlet fever. No medical "man had been called in, and the Medical Officer of Health, "on visiting, found a typical case of faucial diphtheria of "fairly severe type."

ENTERIC FEVER.

The following table gives the number of cases since 1895.

	ENTERIC FEVER, including "Continued."			
	Notified Cases.	Deaths.	Case Fatality per cent.	Attack Rate or Cases per 1,000 of the Population.
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
1909	116	20	14·2	0·34
1910	83	15	18·0	0·24
1911	186	23	12·3	0·53
1912	119	10	8·4	0·33
1913	68	11	16·1	0·18

Notwithstanding the large increase of population the number of notified cases of Enteric Fever in 1913 was by far the smallest hitherto recorded. This is a most satisfactory experience, and speaks well for the gradual penetration of sanitary progress into all parts of the County. Not so many years ago the Registration County, which included the City of Nottingham and parts of Derbyshire, had a larger proportion of Enteric Fever than any other county except Durham.

The scientific study of Enteric Fever on a large scale, especially in Germany and in India, has resulted, among other things, in the differentiation of a less fatal variety—Paratyphoid. No cases of paratyphoid have been separately diagnosed hitherto in this County, and without a bacteriological laboratory, the distinction is very difficult if indeed it is possible. The serious danger of Enteric Fever to troops

in the field has led to an extended use of preventive inoculation in several countries, especially France and India, but the need for such measures in civil life has not been established except for those going to India or Africa, and for Nurses and Attendants in Enteric Fever Hospitals.

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 :—" Pyaemia, Septicaemia, Sapraemia, Pelvic Peritonitis, Peri-Metritis 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.

The following table gives the number of *notified* cases and deaths during the past nineteen years.

	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
1909	16	10	62·5
1910	12	7	58·3
1911	14	8	57·2
1912	21	8	38·1
1913	9	6	66·6

These do not include the deaths from " other diseases and accidents of pregnancy and parturition," which in 1913 numbered 28. If these deaths comprised all the harm resulting from careless and inefficient midwifery it would be sad enough ; but, as the late Sir William J. Sinclair, for many years one of the Medical Members of the Central Midwives Board, repeatedly pointed out, for every death there are at least five or six women who survive in a permanently injured condition after much suffering.

ACUTE POLIOMYELITIS AND CEREBRO-SPINAL FEVER.

These diseases, though distinct, are closely allied and are frequently confused. They have only recently been made notifiable. No case of Cerebro-Spinal Fever was notified in 1913, and only one case of Acute Poliomyelitis.

ANTHRAX.

This highly infectious disease chiefly affects the lower animals, especially cattle. It is thus dealt with by the police and the Diseases of Animals Committee. But Anthrax also affects man, in whom it is an exceedingly dangerous and fatal disease. It is most frequently met with in men who handle foreign wool and hides and is then known as wool-sorters' disease. It can also be caught directly from affected cattle or other animals, and the milk of affected cows is dangerous and must not be used.

Dr. Beale (Retford Rural) writes :—" One case of Anthrax " in a beast was found at Scrooby ; the carcase was destroyed. " This is the only case notified during the year."

GLANDERS AND FARCY.

This disease chiefly affects horses, but it readily spreads to human beings when brought into close contact with affected horses, and becomes a highly dangerous and fatal disease.

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 19 years is shown in the following table.

Year.	Deaths from Measles.	Year.	Deaths from Measles.
1895	35	1905	177
1896	230	1906	7
1897	47	1907	147
1898	62	1908	31
1899	142	1909	98
1900	67	1910	140
1901	105	1911	112
1902	77	1912	123
1903	42	1913	40
1904	50		

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.

Although the year 1913 showed by no means a large mortality when compared with previous years, nevertheless, 22 schools were closed on account of Measles in the Education County, excluding the schools in the Boroughs of Newark, Retford, and Mansfield. This represents an amount of interference with the progress of Education which is truly deplorable.

Whooping Cough.—The following table shows the number of deaths from Whooping Cough. Ten schools were closed for Whooping Cough in the Education County.

Year.	Deaths from Whooping Cough.	Year.	Deaths from Whooping Cough.
1895	61	1905	86
1896	51	1906	61
1897	129	1907	86
1898	40	1908	76
1899	37	1909	75
1900	109	1910	67
1901	71	1911	98
1902	71	1912	40
1903	88	1913	47
1904	107		

Influenza.—During 1913 the number of deaths from this insidious and mysterious disease continued large, 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. It is by no means unknown in the warmer seasons of the year.

Year.	Fatal Cases of Influenza.
1900	152
1901	23
1902	47
1903	45
1904	44
1905	47
1906	31
1907	84
1908	69
1909	47
1910	38
1911	38
1912	35
1913	42

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

Year.	Deaths from Diarrhœa.	Year.	Deaths from Diarrhœa.
1895	201	1905	116
1896	88	1906	223
1897	166	1907	119
1898	240	1908	128
1899	233	1909	76
1900	158	1910	98
1901	205	1911	396
1902	85	1912	75
1903	123	1913	73
1904	242		

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS 1912.

Summary of Notifications during the period from 1st February, 1913, to the end of the week ending on the 3rd January, 1914.

Age Periods.	Number of Notifications on Form A.													Number of Notifications on Form B.					Number of Notifications on Form C.	
	Primary Notifications.											Total.	Total Notifications (*i.e.*, including cases previously notified by other doctors.)	Primary Notifications.				Total Notifications (*i.e.*, including cases previously notified by other doctors).	Poor Law Institutions.	Sanatoria.
	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upw'ds			Under 5	5 to 10	10 to 15	Total.			
Pulmonary :																				
Males	..	5	6	7	15	29	40	27	13	12	3	157	157	..	1	2	3	3	22	19
Females ..	1	10	18	16	17	14	44	30	10	5	—	165	167	..	2	1	3	3	6	7
Non-Pulmonary :																				
Males	10	25	40	16	3	9	7	3	2	0	1	116	116	..	3	2	5	5	13	1
Females ..	4	22	20	11	9	7	6	3	..	..	..	82	82	..	..	..	..	..	3	..

H. HANDFORD,
MEDICAL OFFICER OF HEALTH.
10th February, 1914.

Since February 1st, 1913, all forms of Tuberculosis have been compulsorily notifiable, and detailed returns are sent to the County Medical Officer by the Medical Officer of Health of each Urban and Rural District. The results for the eleven months are shown in the accompanying table, which is drawn up in accordance with the requirements of the Local Government Board.

It will thus be seen that there were 322 primary notifications of Pulmonary Tuberculosis. If 44 cases notified in January be added, the total for 1913 reaches 366. The next table shows the number of deaths for 1913, amounting to 237, or 64·7 per cent. of the notified cases. This makes it clear that many of the *early* cases still escape notification.

The following table shows the number of *deaths* from Consumption (that is Pulmonary Tuberculosis), and also from "Other Tuberculous Diseases," that is, tuberculosis of any other organ except the lungs.

Year	Deaths from Pulmonary Tuberculosis.	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
1909	245	120
1910	261	166
1911	233	186
1912	234	130
1913	237	110

The proportion of deaths from Pulmonary Phthisis, or Consumption of the Lungs, per 1,000 of the population, is given

in the following tables for the last fourteen years; and also the deaths from "*Other* Tuberculous Diseases," and from "*All* Tuberculous Diseases":—

Deaths from Pulmonary Phthisis per 1,000 of the Population.

	Whole County.	Urban Districts.	Rural Districts.
1900	·93	·95	·90
1901	·86	·92	·77
1902	·80	·75	·86
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
1909	·71	·72	·70
1910	·77	·83	·66
1911	·67	·73	·58
1912	·65	·68	·62
1913	·65	·64	·67

Deaths from ALL OTHER Tuberculous Diseases (excluding Tuberculosis of the Lungs) per 1,000 of the Population.

	Whole County.	Urban Districts.	Rural Districts.
1900	·67	·76	·54
1901	·55	·64	·42
1902	·60	·65	·53
1903	·50	·53	·46
1904	·55	·59	·48
1905	·45	·48	·40
1906	·50	·51	·48
1907	·43	·46	·39
1908	·41	·47	·32
1909	·35	·36	·33
1910	·48	·59	·31
1911	·53	·61	·40
1912	·36	·40	·30
1913	·30	·39	·14

Deaths from ALL Tuberculous Diseases (including Tuberculosis of the Lungs) per 1,000 of the Population.

	Whole County.	Urban Districts.	Rural Districts.
1900	1·60	1·71	1·45
1901	1·41	1·57	1·20
1902	1·40	1·41	1·39
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
1909	1·07	1·09	1·04
1910	1·26	1·42	0·98
1911	1·21	1·34	0·98
1912	1·02	1·08	0·93
1913	0·95	1·03	0·82

From the above tables it becomes clear that the diminution in the mortality from *all* forms of Tuberculosis, which has been in progress for the last 60 years, but for which records only exist for the last 14 years in the Administrative County, was continued during 1913. The improvement as regards tuberculosis of the lungs was not marked last year, the diminished deaths being confined to all other forms of Tuberculosis. Although by the end of 1913 the work of carrying out Sanatorium Benefit under the National Health Insurance Act had progressed beyond the position in 1912, nevertheless the work had not developed sufficiently to have any considerable effect upon the mortality from Tuberculosis. No Dispensaries were provided during 1913, and it was not until January 1st, 1914, that the County Council undertook any responsibility for the Institutional treatment of Tuberculosis. The progress that has been made since that date will be the subject of next year's report. Suffice it to say that two whole-time Tuberculosis Officers (a chief and an assistant) have been appointed and are already at work. Also two Nurses as Tuberculosis Health Visitors; and authority has been obtained for the appointment of two more. They are on the staff of the County Medical Officer and under his administrative control.

The chief Tuberculosis Officer is the Consulting Officer to the Notts. Insurance Committee, and the County Medical Officer, since the beginning of January, 1914, is not present at the meetings of the Notts. Insurance Committee or of the Sanatorium Benefit Sub-Committee, and has no knowledge of

the developments of that side of the work. This in no long time will make future modifications of the Scheme increasingly difficult.

The adopted Scheme for Institutional Treatment is based upon the Scheme originally prepared by the County Medical Officer and subsequently much modified by the County Council and the Local Government Board. The details of it were given in last year's Report.

Two of the five Dispensaries are already opened and at work, namely, one at Church Street, Mansfield, and another at Goldsmith Street, Nottingham. A third, at Lombard Street, Newark, will be opened before this Report is in circulation.

Plans for the addition of 12 beds to the Ransom Sanatorium have been prepared and are awaiting the sanction of the Local Government Board. The beds can hardly be ready for occupation this year.

The following, which was the last report of the County Medical Officer as Consulting Officer to the Insurance Committee, gives a very short *resume* of the work up to the end of 1913 :—

NOTTS. COUNTY COUNCIL.

PUBLIC HEALTH DEPARTMENT,

SHIRE HALL, NOTTINGHAM,

December 31st, 1913.

REPORT OF THE CONSULTING OFFICER TO THE SANATORIUM BENEFIT SUB-COMMITTEE OF THE NOTTS. INSURANCE COMMITTEE.

Ladies and Gentlemen,

The number of applications for Sanatorium Benefit has now reached 151, of which only three have been received since the last meeting. I have seen and carefully examined all these except a very few, where, for varying reasons, an examination was not necessary or was not possible ; and am now able to hand over my work, free from arrears, to the Tuberculosis Officer, Dr. Teare, who will for the future be your Consulting Officer. It is only the fact that during December only three applications have been received, compared with 14 in November, that has made it possible for me to continue to accomplish this work *unassisted*.

I hope, in the near future, to prepare a more detailed report of the cases, and to point out from the experience of the past 13 months the chief administrative difficulties which have arisen, together with suggested remedies.

In the meantime I may say that of the 151 applicants, two were found to be not insured, and six have moved out of the area of the County. Of the remaining 143 it is known that 23 have already died, most of these being hopeless when first seen.

Sixty-two insured patients have been admitted into the Ransom Sanatorium in the ordinary course to the beds (16) reserved for the Insurance Committee, and 4 have obtained admission by means of "Recommendations" to the beds reserved for the Notts. Association. None of these have died in the Sanatorium, but 4 have died since their discharge and are included in the 23 previously mentioned.

Forty-seven patients have been discharged, in the following conditions :—

Not Tuberculous	1
Disease arrested	17
Much improved..	19
Improved	7
Worse	3

One patient has been treated in the Brompton Hospital for Consumption, London.

In addition 8 patients (6 male and 2 female) have been admitted to that portion of the Newark Isolation Hospital which is being used as a Sanatorium, and none have yet been discharged.

Further, 18 patients have been admitted into the special Ward (Castle Houses) of the Nottingham General Hospital. Eight of these were acute cases which, after improvement, were passed on to the Ransom Sanatorium. Two were severe cases which failed to improve in the Sanatorium, and were sent to the Hospital. Two were patients suffering from other diseases (Diabetes and Heart Disease) besides Tuberculosis, which rendered them more suitable for General Hospital treatment, and 6 were "hospital" cases unsuitable for a Sanatorium, and have been treated throughout by the Hospital.

By the aid of funds derived from private sources at least six patients on leaving the Sanatorium have been sent to the Scarborough Convalescent Home.

Four domiciliary cases have obtained admission to different Workhouse Infirmaries.

Four "shelters" have been supplied to patients who have been granted "Domiciliary Treatment," and are still in use, much to the benefit of the patients. Three other patients have been using shelters provided by friends.

At the present date 16 persons have been passed as suitable for treatment in a Sanatorium and are waiting for admission.

The five outstanding deductions that may be drawn from my one-and-a-half year's work are :—

(1) Without the extremely friendly co-operation of the medical staff and the authorities of the General Hospital many of the patients would have been in a very unfortunate condition, and my task would have been even more difficult than it has proved to be.

(2) There is no Institutional Treatment yet provided for the advanced cases ; although the advanced cases are more likely than any other to spread the disease in the home.

(3) Even 24 beds will not obviate the delay that necessarily occurs in the admission of suitable cases to the Sanatorium.

(4) The periodical visiting of ALL the tuberculous patients IN THEIR OWN HOMES by a Nurse Health Visitor has more than justified the small expense incurred, and is essential for obtaining the best results. All the cases have been visited by one or other of the two Nurses and the results reported to me each week. Many cases have been visited a dozen times or more. I have thus a record of the progress and result of every case.

(5) The provision of milk for some of the " domiciliary " cases has quite justified the expense incurred, and has helped a few of them to improve sufficiently to obtain admission to the Newark Sanatorium.

I cannot take leave of the Sanatorium Sub-Committee without expressing my grateful thanks for the kindness and consideration which they have always shown, and the confidence they have reposed in me when unexpected difficulties have arisen, as must often happen during the inauguration of an entirely new work.

HENRY HANDFORD, M.D.,

CONSULTING OFFICER.

In many respects the eighteen months which were spent in bringing into operation the exceedingly complex organisation required for Sanatorium Benefit represent a more difficult and more arduous period than any likely to recur. The work was new, the regulations were obscure and constantly being changed, and much hostility had to be faced. It was quite impossible for the County Medical Officer, without any assistance and in addition to his ordinary routine duties, to carry out to his own satisfaction work which two whole-time Tuberculosis Officers now find quite sufficiently arduous. Delay was inevitable and much clinical work was necessarily omitted. Little time could be given to searching for suitable buildings for dispensaries, especially as until the latter part of 1913 the County Council had not decided to undertake responsibility for Institutional Treatment—a responsibility which did not begin until January 1st, 1914.

The accidental circumstance that the County Medical Officer happened to be the Senior Honorary Consulting Physician to the Ransom Sanatorium, and the action of the Notts. Association for the Prevention of Consumption in providing two nurses trained in the work of Tuberculosis Health Visitors, enabled a large amount of practical remedial work to be carried through which otherwise would have been most difficult, even though the Insurance Committee provided the funds.

The County Medical Officer in his Report upon the Prevention and Treatment of Tuberculosis, dated June 7th, 1912, as well as on previous and subsequent occasions, has strongly advocated the employment of Women Health Visitors as one of the most efficient means of preventing disease, through their visits to the homes and the instruction of the mothers. Difficulties as to payment have hitherto stood in the way, but the memorandum issued by the Local Government Board on July 30th, 1914, seems likely to remove some of those difficulties, much to the advantage of the public health.

As an example of the work which can be done at extremely small cost for the *prevention* of Tuberculosis by means of instruction in healthy modes of living and suitable domestic management, it is right to mention the two Tours of the Tuberculosis Caravan, which was hired from the National Association for the Prevention of Consumption, of which His Majesty the King is Patron. The Association also provided an able lecturer, an Exhibition, and a man to take charge of the latter, at a cost of £6 16s. per week. An account of the first tour through the North and East of the County for five weeks, from April 12th to May 19th, 1913, was given in last year's Report.

After the unqualified success of the first tour it was considered advisable to organise a second tour through the Colliery districts. This lasted for six weeks, from October 20th to November 28th, 1913, during which time 26 places were visited and 61 lectures were given. The work done in the schools and the addresses given to children have already been described in this year's report to the Education Committee. The addresses to adults were given in the evening and were illustrated by lantern slides. The attendances were good and reached a total of 4,279. It was satisfactory to see that even at small meetings the audience was composed of working-men and women, who showed great interest.

The Tours were organised by the Hon. Mrs. Handford, who raised the necessary funds from the districts concerned, with the aid of a few generous donors and contributions of £15 10s. from the Notts. Association for the Prevention of Consumption, and £3 3s. from the Notts. Branch of the National Union of Women Workers. The total cost of the two tours lasting 11 weeks was just under £100. It was only possible to do so much at such small cost through the cordial help of the Notts. Education Committee and of many of the District Councils, and through the co-operation of a large number of voluntary helpers and friends who provided hospitality for the lecturer.

The following is a list of places visited with the numbers attending. The County Medical Officer attended some of the lectures, and without exception much valuable assistance and support were given by the Medical Officers of Health of each of the Districts visited.

THE DETAILS OF THE SECOND CARAVAN TOUR.

Date.	Place.	Building.	Time.	Audience.	Number present.
Oct. 20	Ruddington	Girls' School	3 p.m.	Children	200
,, 20	,,	Village Hall	8 p.m.	Adults (lantern)	257
,, 21	Bulwell	National Schools	3 p.m.	Children	400
,, 21	,,	,,	8 p.m.	Adults (lantern)	200
,, 22	Eastwood	Albert St. Schools	3 p.m.	Children	300
,, 22	,,	,, ,,	7.30 p.m.	Adults (lantern)	80
,, 23	Kimberley	Council Schools	2 p.m.	Children (Girls)	89
,, 23	,,	Church Schools	3 p.m.	Children (Boys)	160
,, 23	,,	School-room	7 p.m.	Adults (lantern)	182
,, 24	Greasley	Beauvale School	2 p.m.	Children	170
,, 24	,,	,,	7.30 p.m.	Adults (lantern)	30
,, 27	Brinsley	Moor School	3 p.m.	Children	108
,, 27	,,	,, ,,	7 p.m.	Adults (lantern)	142
,, 28	Underwood	Bagthorpe Inf. Sch.	2.45 p.m.	Children	207
,, 28	,,	,, ,,	7 p.m.	Adults (lantern)	150
,, 29	Jacksdale	Council Schools	2.45 p.m.	Children	160
,, 29	,,	,,	7 p.m.	Adults (lantern)	140
,, 30	Selston	School	2.30 p.m.	Children	208
,, 30	,,	,,	7 p.m.	Adults (lantern)	258
,, 31	Kirkby Woodhouse	School	3 p.m.	Children	62
,, 31	,, ,,	Church Hall	7 p.m.	Adults (lantern)	173
Nov. 3	Huthwaite	Free Library Hall	2.30 p.m.	Children	160
,, 3	,,	,, ,,	7 p.m.	Adults (lantern)	200
,, 4	Skegby	Church School	3 p.m.	Children	215
,, 4	,,	,,	7 p.m.	Adults (lantern)	110

Date.	Place.	Building.	Time.	Audience.	Number present.
Nov. 5	Sutton-in-Ashfield	Higher Stand. Sch.	2.30 p.m.	Children ..	350
,, 5	,, ,,	Bainbridge Hall ..	7.30 p.m.	Adults (lantern)	35
,, 6	,, ,,	Central Schools ..	2.30 p.m.	Children ..	165
,, 6	,, ,,	Bainbridge Hall ..	7.30 p.m.	Adults (lantern)	80
,, 7	,, ,,	Church School ..	2.30 p.m.	Children ..	260
,, 7	,, ,,	,, ,, ..	7.30 p.m.	Adults (lantern)	40
,, 10	Kirkby (West)	Chapel Street Council School	3 p.m.	Children ..	100
,, 10	,, ,, ..	Central Hall	7 p.m.	Adults (lantern)	350
,, 11	Kirkby (East)	Higher Stand. Sch.	3 p.m.	Children ..	220
,, 11	,, ,, ..	Church Hall	7 p.m.	Adults (lantern)	300
,, 12	Rainworth ..	Church Hall	7.30 p.m.	Adults (lantern)	45
,, 13	Blidworth ..	Wesleyan School ..	1.30 p.m.	Children ..	50
,, 13	,, ..	Church ,, ..	2.30 p.m.	Children ..	104
,, 13	,, ..	,, ,, ..	7.30 p.m.	Adults (lantern)	150
,, 14	Newstead ..	School	3 p.m.	Children ..	125
,, 14	,, ..	,, ...	7 p.m.	Adults (lantern)	100
,, 17	Annesley ..	,, ...	2.45 p.m.	Children ..	106
,, 17	,, ..	,, ...	7 p.m.	Adults (lantern)	110
,, 18	Hucknall Tork.	Co-operative Hall ..	3 p.m.	Children ..	350
,, 18	,, ,,	,, ,, ..	7 p.m.	Adults (lantern)	260
,, 18	,, ,,	Coffee Tavern ..	9 p.m.	Girls' Frd. Soc.	50
,, 19	,, ,,	Co-operative Hall ..	3 p.m.	Children ..	500
,, 19	,, ,,	,, ,, ..	7 p.m.	Adults (lantern)	150
,, 20	Linby	Church School ..	3 p.m.	Children ..	80
,, 20	,, ...	,, ,, ...	7 p.m.	Adults (lantern)	60
,, 21	Carlton-in-the-Willows	Picture Palace ..	2.30 p.m.	Children ..	500
,, 24	Bestwood ..	School	3.15 p.m.	Children ..	65
,, 24	,, ..	,, ...	8 p.m.	Adults (lantern)	101
,, 25	Arnold	Daybrook Church Institute ..	3 p.m.	Mother's Union	120
,, 25	,, ...	British Council Sch.	8 p.m.	Adults (lantern)	73
,, 26	,, ...	Empress Pict. Pal.	3 p.m.	Children (slides)	650
,, 26	,, ...	Council School ..	8 p.m.	Adults (lantern)	100
,, 27	Burton Joyce ..	Wesleyan Room ..	2.30 p.m.	Children ..	130
,, 27	,, ,, ..	,, ,, ..	8.15 p.m.	Adults (lantern)	153
,, 28	Carlton	Netherfield Pic. Pal.	2.30 p.m.	Children (slides)	500
,, 28	,, ...	Public Offices ..	8 p.m.	Adults (lantern)	80

ATTENDANCES.

School Children at Afternoon Lectures	6,694
Adults at Evening Lectures	4,279
Teachers and Visitors at Afternoon Lectures	150
TOTAL	11,123

Several complaints are constantly being made in connection with Sanatorium work and the treatment of Tuberculosis generally.

1. Cases are not sent to the doctors engaged in the treatment of Tuberculosis in Sanatoria and Dispensaries at a sufficiently early stage to yield the best results.

2. The influence of conditions in the home and in the work-place (factory, mine, work-shop, etc.) predominate in the production of tuberculosis.

3. The widespread ignorance of relative food values, and the consequent under-feeding or improper feeding prepares the ground for much ill-health and subsequent tuberculosis.

It is essentially the duty of the Public Health Service to endeavour to *prevent* disease, and it is probable that the systematic instruction of the rising generation in the schools would do much to induce the coming generation of adults to co-operate more intelligently with the Tuberculosis Officers in the prevention of Tuberculosis. The experiment already described has shown that such instruction is well received and is not costly. It might easily be made a permanent feature.

While the infectious nature of tuberculosis has been duly recognised and its notification enforced by the Local Government Board, and proper methods of disinfection advised, an exaggerated fear of infectivity is often entertained by the public. This has led to unnecessary disabilities being imposed upon sufferers from the disease and to opposition being raised in some places to the establishment of institutions for its detection and treatment.

It may be useful, therefore, that the following report of a Special Committee of the Royal College of Physicians upon the matter should be widely known.

ROYAL COLLEGE OF PHYSICIANS.

REPORT OF THE COMMITTEE UPON THE INFECTIVITY OF PULMONARY TUBERCULOSIS.

Dated February 12th, 1914.

1. Tuberculosis is an acquired disease, but certain constitutional types may be inherited which render the patient specially susceptible to infection and there is reason to think that such susceptibility is an inherited character.

2. The infective agent is the Tubercle Bacillus. This may be contained in the various discharges and excreta of the patient, and especially in the sputum of those suffering from Pulmonary Tuberculosis. No discharge is infective unless it contains the Tubercle Bacillus.

3. Cases of Tuberculosis of bones, glands, and internal organs from which there is no discharge or which do not furnish any excretion, and cases of arrested Pulmonary Tuberculosis, have never been proved to be infectious.

(By arrest is here meant that all the symptoms and physical signs of activity have disappeared, and the sputum has either ceased or no longer contains Tubercle Bacilli.)

4. The means by which Tubercle Bacilli may enter the body are :—

(*a*) *By inoculation* through a wound or abrasion of the skin. This has occasionally occurred to workers in laboratories, post-mortem attendants, and others dealing with tuberculous material, and is presumably the way in which Lupus is acquired.

(*b*) *By inhalation.* Susceptible animals are readily infected by the inhalation of air containing Tubercle Bacilli, whether in droplets or suspended as fine dust, but in the spread of the disease among human beings the latter appears to be the more important means of infection. The sputum or other discharges, whether on soiled handkerchiefs, linen, garments, or elsewhere, when dried, may become pulverised, and in this condition may be readily dispersed in the air of a room. That droplets of sputum are less important agents of infection is suggested by the fact that the incidence of consumption upon the staff, nurses, and others engaged in hospitals for the treatment of tuberculous disease, where all discharges are carefully disposed of, is not above the average in the general population.

(*c*) *By swallowing.* Dust infected by the Tubercle Bacillus may be conveyed to food and so enter the alimentary canal ; or infection may occur more directly in the act of kissing, or by consumptive and healthy persons using the same food utensils. As about 10 per cent. of the milk supplied to large cities contains Tubercle Bacilli derived from infected cows, this avenue of infection is particularly important in the case of children. The Bovine Tubercle Bacillus is more commonly responsible for Tuberculosis in young children than in adults, but the proportion of cases due to it varies very much in different localities.

(*d*) There is no evidence that Tuberculosis can be conveyed to others either by the breath alone, or by emanations from patients, or by their garments, unless soiled by dried sputum or discharges.

5. The spread of Tuberculosis is favoured by uncleanliness, overcrowding, and imperfect ventilation, and is hindered by the opposite conditions. Experience in hospitals and other institutions where the following precautionary measures have been thoroughly

carried out indicates that by such measures the risk of infection is reduced to a minimum, namely :

(*a*) The careful disposal and disinfection of the sputum and other discharges.

(*b*) The disinfection or destruction of soiled handkerchiefs, clothes and linen.

(*c*) The removal of dust by frequent moist cleansing of the floors, walls, etc. of the rooms.

(*d*) The supply of abundant air space, and free ventilation with fresh air.

No risk is incurred by living in the immediate neighbourhood of Institutions for the treatment of Tuberculosis which are properly conducted.

The following three extracts from the Annual Reports of the Medical Officers of Health for the Urban and Rural Districts are quite representative of local opinion and practice.

Dr. Kingsbury (*Stapleford Rural*) *writes* :—" In all cases " of Primary Notifications of Tuberculosis, visits have been " paid to the patient's house, and unrecognised cases of the " disease sought for. Subsequent visits have been paid in " every case. In all suitable cases the Tuberculosis Officer " of the County Council has given his services, and Sanatorium " Treatment has been given in several instances."

Dr. Eaton (*Bingham*) *writes* :—" The 19 cases of Pul- " monary Tuberculosis notified were scattered generally " throughout the district.

" As far as possible, without danger of giving offence, " these cases are visited at their houses and advised as to " disposal of sputum, ventilation and cleanliness.

" Every advantage is taken of the sanatorium accommo- " dation available, but the accommodation in this County is " very limited and more is needed. Premises occupied by " tuberculous patients are cleansed and disinfected by the " sanitary authority whenever possible."

Dr. Knight (*Carlton Urban*) *writes* :—" Advanced cases " in small homes appear to be the most difficult to deal with " as there is no Hospital for such, and they remain a menace " to those around. The natural affection of relatives, " inducing them to herd and partake of food with patients in " one room has to be gently dealt with ; interference in such " cases is likely to be resented if not tactfully attempted."

MILK SUPPLY.

The new legislation dealing with milk seems likely to be completed before this Report is in circulation. The need for it in the interests of health has long become urgent ; but until it is known what form the new Bill will eventually take after its passage through Parliament, it is not necessary to refer to it further.

It is more interesting at present to show what is being done by the Urban and Rural District Councils under their existing powers to render the milk supply cleaner, and to diminish the amount of tuberculous milk which is the cause of such a large proportion of tuberculosis in children especially when affecting their glands, bones, and joints.

The copious extracts which follow show that all the District Councils are doing something to carry out the powers they possess, and some of them a great deal. Eighteen years ago in only six of the districts was any mention made of inspection of Cowsheds, or regard for the purity of the milk supply. Very few districts had adopted regulations, and in only one was there any Veterinary Inspection of Milch Cows. Now every district except two or three have adopted regulations, and a considerable number have, in addition, made arrangements for the periodical inspection of the cows by a Veterinary Surgeon. The Public Health Committee of the County Council at present possess no powers.

Dr. Lambie (*Mansfield*) *writes :*—" There were 41 cow-
" sheds in use at the end of the year, a number having been
" discontinued in the course of the year. These were visited
" during the year, but not with the frequency which is
" desirable.

" There are approximately about 200 cows kept within
" the Borough for milking.

" The milch cows of the Borough are inspected regularly
" every three months by the Veterinary Inspector appointed
" for that purpose by the Council."

" The great bulk of the milk supply comes from farms
" within a radius of about 25 miles by train, or other transport
" vehicle.

" No milk samples were taken for analysis by the Local
" Authority, but a number were taken by the Inspectors of
" the County Council for analysis by the Public Analyst.

"During the year the activities of the Inspectors were confined, with regard to cream, to seeing that the notice required to be given of the amount of preservative contained was properly stated. No samples of cream were taken.

"Only two samples of milk were examined during the year for tubercle bacilli. The ordinary bacteriological examination such as can be carried out at the small Public Health Laboratory is not very reliable for proving the absence of the tubercle bacillus, but positive results when obtained are very valuable."

Dr. Wills (Newark Borough) writes :—"The Cowsheds, Dairies, and Milkshops in the Borough have been visited and inspected three times during the year. Five of the total eight sheds have been reported as requiring improvements in the matters of drainage, paving and ventilation of the sheds.

"A Veterinary Inspector is accustomed to go round and examine the cows for evidence of tuberculosis three times a year. This year a cow, very much affected with tuberculosis, was found, and slaughtered.

"During the Spring months of the year samples of milk were taken from the churns of the principal milk sellers bringing milk into Newark from the country round.

"These samples were forwarded for examination bacteriologically and by inoculation, to Professor Delépine, of Manchester University.

"It is satisfactory to mention that out of nine specimens of mixed milk only one was found to produce tuberculosis. You then authorised me to get an order to take a Veterinary Surgeon and find the cow producing the tuberculous milk in two herds of cows from which the milk sample was taken in the country.

"By examination of the cows of the two herds, the Veterinary Inspector found a nodule in the udder of one of the cows. The milk from this was stopped from supply and sent for examination. It was found to cause tuberculosis by inoculation and the affected cow was sent to the butcher.

"The following is the report of your Veterinary Surgeon : ' As requested I have the honour to report that I have made ' the third inspection of the cows in the cowsheds in the

" ' Borough of Newark, accompanied on some of my visits
" ' by the Medical Officer of Health and the Sanitary Inspector.

" ' Fifty-three cows were examined as to disease. With
" ' the exception of one cow, which has been standing next
" ' to the one that was destroyed, and should be tested with
" ' Tuberculin, I have found them healthy and in good
" ' condition.

" ' The cow mentioned in my last report has been dealt
" ' with under the Tuberculosis Order of 1913 and destroyed.
" ' I hear that she was suffering from generalised Tubercu-
" ' losis, but I had not the privilege of attending the post
" ' mortem.

" ' Ten cows in Kelham Parish, outside the Borough,
" ' have been examined and their milk tested. One cow was
" ' found to have an indurated udder and the milk to contain
" ' tubercle bacilli. The owner was notified, the milk stopped
" ' and the cow was sold to a butcher.

" ' The conditions of housing and the construction of sheds
" ' have improved slightly, but are still far from what is
" ' desirable.' "

Dr. Manners-Smith (*E. Retford Borough*) *writes* :—" The
" Dairies and Milk Shops are systematically inspected by
" myself and the Inspector of Nuisances.

" In two cases new drainage has been provided One
" cowshed has been thoroughly limewashed by the Council
" at the expense of the occupier."

Dr. Francis (*Arnold Urban*) *writes* :—" The Cowsheds
" have been inspected by the Sanitary Inspector and myself
" during the year. They are, generally speaking, in a fair
" condition, drainage, ventilation, light and sufficiency of air
" space all being attended to much more than in former years.

" To insist on certain requirements for the cowsheds is,
" in my opinion, not enough. We want, in addition, to be sure
" that the cattle are healthy as well, and I again ask you to
" consider the advisability of appointing a Veterinary Inspec-
" tor to examine all the cows periodically, say twice a year,
" for the detection of Tuberculosis."

Dr. Rothera (*Beeston Urban*) *writes* :—" During our
" inspection of the cowsheds, which takes place twice a year,
" we keep a sharp lookout for any signs of disease in the cows

" and carefully examine the udders and teats for any evidence " of tubercle, but in spite of this I cannot feel convinced that " no tuberculous milk finds its way to the consumer. All the " dairies and milkshops have also been visited twice during " the year with very little fault to be found."

Dr. Knight (*Carlton Urban*) *writes* :—" There were eight " cowsheds with 69 milch cows in the district, the former have " been visited at least twice in the year. Two of the cow- " sheds were unclean. There are 28 milk-sellers in the " district and six outside residents bring in milk. A strict " observance of the Dairies, Cowsheds and Milkshops Order " is imperatively necessary to ensure cleanliness and preven- " tion of transmissible disease ; and it is, I think, desirable " that veterinary inspection of milch cows should form part " of a legislative enactment."

Dr. Dixon (*Eastwood Urban*) *writes* :—" The cowsheds in " the district have been inspected and are found on the whole " clean and well kept, but this is not a dairy district and only " a few cows are kept."

Dr. Maxwell (*Kirkby-in-Ashfield Urban*) *writes* :—" The " desired improvement in the conditions under which milk " cows are kept is very slow. The farmers and cow-keepers " have grown so accustomed to their old and ancient methods, " that to effect alterations is a very difficult task. On the " whole there is an improvement in the general conditions, and " in the quality of beast kept for milking purposes.

" The systematic inspection of cows by a veterinary " surgeon has had the effect of bringing about this improve- " ment in the cattle. Cowsheds to the number of 50 have " been visited, and 281 cows examined during the year. " Thirteen of these were affected with Tuberculosis, and the " supply of milk from them for human consumption was " stopped."

Dr. Irvine (*Huthwaite Urban*) *writes* :—" A steady " improvement is taking place in the cowsheds. Most of " the floors are cemented and paved so as to render them " impervious to moisture, and fluids falling on the floors are " carried away by a suitable channel to a manure heap or to " an outside receptacle. In some instances these manure " heaps are situated too close to the sheds. More attention " is needed with regard to limewashing and litter is not used " as freely as desirable, probably owing to expense. The " cleanliness of the quarters and udders of the cows generally

" varies in proportion to the amount of litter used. The " sheds are well ventilated and there is sufficient cubic space " allowed for each animal.

" The Dairies and Milkshops are kept clean and are " otherwise satisfactory.

" It has now been amply proved that milk derived from " cows infected with tubercle is capable of causing consump- " tion and other tuberculous diseases in human beings and " especially children, and in order to prevent this I strongly " advise the Council to appoint a Veterinary Surgeon to make " periodical inspections of the cows for the presence of " Tuberculosis."

Dr. Houfton (Mansfield Woodhouse) writes :—" These " have been frequently inspected during the year, 62 visits " having been made. Four cowsheds were found dirty. On " being notified the cowkeepers cleansed and limewashed the " premises.

" A new cesspool and proper drainage has been provided " at one farm during the year. Some of the cowkeepers " keep the premises and cattle very clean, and others are very " careless and indifferent.

" The remarks made in previous reports as to the con- " dition of the yards, and storage of large heaps of manure " near to the sheds still apply. These conditions make it " difficult to keep the sheds and cattle clean and the average " cowkeeper makes no attempt to groom or clean the cattle.

" Your Committee decided that one of the premises used " for the storage of milk was unsuitable. The business was " discontinued on the premises.

" The following is the report of the Veterinary Surgeon " appointed by the Council :—' During the year 1913 I have " ' inspected the whole of the milk beasts in Mansfield Wood- " ' house four times I have not come across any cases of " ' tuberculosis during my inspections and have to report the " ' beasts healthy and all in a good state and condition, and " ' free from disease.' "

Dr. Nesbitt (Sutton-in-Ashfield) writes :—" The number " of cowsheds in present use is 38, compared with 37 last year. " In every case the cows are turned out daily, even in winter. " Six notices were served for removal of manure and want of " limewashing, which were complied with.

" There are 18 dairymen or purveyors of milk registered, " most of which are from adjoining districts. The cowsheds " and dairies in the district are frequently visited and on the " whole are fairly satisfactory. The following is the report " of the Veterinary Inspector :—' During the past twelve " ' months I have inspected all the milk beasts in your dis- " ' trict twice during that period, and have to report two cows " ' affected with tuberculosis of the lungs. The rest of the " ' beasts were healthy. The diseased cows were destroyed.' "

Dr. Hunter (*West Bridgford*) *writes* :—" There are now " only three farms in the parish with a stock of milch cows. " These are visited periodically by Mr. Pare and myself. " The cowsheds are still far from satisfactory as regards " cleanliness. Reform is required in three ways (1) greater " cleanliness of the cows ; (2) greater cleanliness of the " cowsheds ; (3) greater cleanliness on the part of the milker."

Dr. Garrett (*Worksop*) *writes* :—" The number of regis- " tered cowsheds is 18. These have been regularly inspected " and also the premises of 16 milk-sellers in the town. One " old shed which was unsuitable has been abolished. In " others the animals are housed in good buildings with " sufficient space and means of ventilation.

" All the cows are examined every three months by the " Veterinary Surgeon."

Dr. Wray (*Basford Rural*) *writes* :—" There are 470 cow- " keepers on the Register, 30 of which were registered during " the year, and 201 visits have been paid to the premises. " The Local Authority reported 15 cases under the Tubercu- " losis Order of 1913 ; of these, nine were Tuberculosis with " emaciation, two tuberculosis of the udder, and four were " found to be free from Tuberculosis. All the animals were " slaughtered.

" The following is the report of the Sanitary Inspectors : " ' *We would again call attention to the fact that the lack of* " ' *Regulations under the Dairies, Cowsheds and Milkshops* " ' *Order hamper our efforts to improve the conditions under* " ' *which milk is produced in the District, and where a man* " ' *endeavours by systematic cleansing and scrupulous care to* " ' *produce clean milk, he is faced with the competition of those* " ' *milk producers whose non-observance of the most elementary* " ' *rules of cleanliness and hygiene enable them to make a larger* " ' *profit at the expense of the consumer. Quite* 30 *per cent. of* " ' *the premises at present in use as cowsheds are only fit for*

" ' *demolition, and the remainder are through defective lighting,*
" ' *paving, ventilation, and drainage very unsatisfactory. The*
" ' *adoption and enforcing of Regulations is an urgent necessity*
" ' *for the control of the milk supply.*' "

Dr. Eaton (*Bingham*) *writes* :—" The diaries and cowsheds
" were inspected at intervals during the year. Considerable
" alterations and improvements were carried out in connection
" with many of them. In several, new concrete floors and
" channels were laid. New drains were constructed leading
" to cesspits situated at a distance from the sheds. New
" concrete causeways were laid outside and in many the
" lighting and ventilation were improved. Twelve milk-
" sellers were registered during the year."

Dr. Beale (*Retford Rural*) *writes* :—" I inspect the cow-
" sheds of the District and on the whole they are well kept and
" clean. One cowshed was found to be very dirty and was
" cleaned and limewashed within a week of my visit."

Dr. Blackham (*Leake Rural*) *writes* :—" All the Dairies,
" Cowsheds and Milkshops in the district are in good condition
" as regards cleanliness, ventilation, etc., at the end of the
" year. One new cowshed has been built and three repaired,
" and 35 cleansed and limewashed."

Dr. Farrar (*Misterton Rural*) *writes* :—" The cowsheds
" have been inspected at various times and found clean, with
" the exception of one at Saundby, and in this case steps are
" being taken by the owner to build new and properly con-
" structed sheds. All the sheds have a good supply of water.
" In June last I received information of Tuberculosis on a
" farm. Upon visiting the same I found that two infected
" heifers had been destroyed."

Dr. Broadbent (*Newark Rural*) *writes* :—" Your Inspector
" and I have visited all the registered cowsheds in the district.
" Two new sheds have been constructed and one old shed
" raised and considerably improved. I think it would be
" better if dates for white-washing were changed from May
" and September to April and October. It would be more
" convenient and the white-washing would be more likely to
" get done at the right time. I consider that we have gradu-
" ally improved our sheds all through the district, but a good
" deal more has to be done in dealing with the milk. The
" washing of the hands of the milkers, the supplying them with
" clean aprons, and the washing and cleansing of cow's udders,
" the regular grooming of the cows are more honoured in the
" breach than in the observance."

Dr. Wills (*Southwell Rural*) *writes* :—" No Regulations " have as yet been passed for the dairies and milkshops under " the Order of 1885.

" In three instances I obtained the order of a Justice to " examine the cows in three cowsheds where there was ground " for suspecting the presence of tuberculous cows. In one " herd a cow was found with a nodule on the udder. Her " milk was collected and sent to Professor Delépine, of Man- " chester University, for testing by inoculation. Tubercle " bacilli were found and the cow was sent to the butcher. " In a second case no Tubercle bacilli were found, but the cow " in the suspected herd was badly affected with Ringworm."

WATER SUPPLY.

It is remarkable that the provision of a constant supply of pure water should excite so little interest, especially in those areas where the existing supply is both scanty and liable to frequent pollution. Nottinghamshire possesses unrivalled supplies of pure and excellent water stored in the Bunter sandstone. They are not being fully used, they are liable to waste, and in the meantime, especially in the Sutton-in-Ash-field Urban and the Bingham and Southwell Rural Districts, there is a serious shortage of water to the detriment of health.

The following extracts from the Annual Reports of the Medical Officers of Health of the districts concerned demand serious consideration. The provision of abundant water and facilities for drainage should precede any Housing Schemes on an extensive scale.

Dr. Nesbitt (*Sutton-in-Ashfield*) *writes* :—" Your Council " is under agreement for a limited number of years to supply " several adjoining villages with water—Huthwaite, Skegby, " South Normanton, and Blackwell—in all a population of " about 46,000, half of which may be credited to your own " district. Until the agreement with these adjoining dis- " tricts is determined there is not a sufficient water supply " for the conversion of the present conservancy system of " excrement disposal to that of water carriage. There are at " present 996 houses with water closets, 3,706 with pail " closets, and about a dozen privy middens on the outskirts " of the Town."

Dr. Wray (*Basford Rural*) *writes* :—" The greater portion " of the population now have a wholesome supply of tap water " on the constant system. An extension of mains to the

" Parishes of Bunny and Bradmore has been carried out " during the year. A Local Government Board Inquiry has " been held in connection with the water supply of Cossall, " and an application by you for sanction to borrow money in " connection therewith has been granted."

Dr. Eaton (*Bingham*) *writes* :—" With the exception of " Radcliffe-on-Trent and a portion of Holme Pierrepont, " which obtain their water from Nottingham, the water supply " is derived from shallow surface wells yielding a water which " in most districts is very hard from an excess of carbonate of " lime, and in many instances, sulphates of lime and magnesia. " I have analysed waters having a hardness, mostly permanent, " of as much as 80 parts per 100,000.

" The wells are generally very roughly constructed, being " lined with uncemented bricks or stones, and totally destitute " of any sill or projection above the ground level. Con- " sequently the water is open to pollution from surface " washings from the ground surrounding them, which is often " fouled from the keeping of pigs and poultry. The wells are " also frequently placed in too close proximity to manure " yards, privy middens and cesspools.

" In some parts of the district the provision of a good " water supply owing to the geological formation is a very " difficult problem.

" The village of Orston, to which I have alluded in previous " reports, still remains without an adequate water supply.

" Many of the inhabitants of Kinoulton and Cropwell " Bishop obtain their water from the canal, which is much " polluted by sewage and by accumulations of Nottingham " night soil, which is deposited at various places on its banks."

Dr. Beale (*Retford Rural*) *writes* :—" The Lincoln City " Waterworks have been at work for some time, and the main " pipe line is tapped to supply the villages of Tuxford and " East Markham, for which a service reservoir has been built, " and the houses in these two villages now have a constant " supply of good water."

Dr. Wills (*Southwell Rural*) *writes* :—" At Burton Joyce, " on the boundary of Bulcote parish, a large part of the " Nottingham water supply is taken at a depth of about 250 " feet, the depth of the sandstone beds being stated as " 166 feet, and the thickness as 452 feet. Another chief " supply for Nottingham is taken from Boughton in your

"district. Thus it is evident that the Southwell Rural "District is situated on and near to the bunter sandstone, so "that the inhabitants have the great privilege of getting a "supply of the best water that can be obtained, from which "all the principal towns of Notts., Lincoln and several "Derbyshire towns and districts are deriving their water. "It is very curious that the whole of your district is not yet "supplied, but only about half.

"It is very pleasing to state that the villages supplied "with sandstone water in your district have been added to "by the supply of Kneesall and Laxton, which are furnished "with a remarkably soft water from a boring in the sandstone "between Eakring and Kneesall.

"No satisfactory progress has been made with the water "supply for Oxton, Epperstone, Lowdham, and Gunthorpe, "although there is a rapidly growing opinion among the "intelligent portion of the population that the interests of "these places require a supply of wholesome water very "badly. In my opinion it is necessary for the health and "interest of the villages of Oxton, Epperstone, Lowdham, "and Gunthorpe, that they should be supplied with good "water, and your consulting engineer, Mr. Sands, states that "the supply could be obtained from the sandstone at Grimes-"moor at a reasonable cost, and much more economically "than from Nottingham or Newark Corporations."

RIVER POLLUTION, SEWERAGE & SEWAGE DISPOSAL.

These three subjects are so closely connected that it is convenient to treat the whole of them in one section.

Works of sewerage, without corresponding and adequate works for sewage disposal, naturally tend to increase the pollution of streams and rivers, since the liquid sewage, which in unsewered villages soaks into the ground, is carried by the sewers to the nearest available water-course. Works of sewage disposal can be made so perfect that the effluent discharged from them ceases to be injurious to any stream, however small, except as a source of water supply for human consumption. Such a degree of perfection is seldom long maintained, and the imperfect purification of sewage at the disposal works is one of the chief sources of River Pollution.

Different standards for sewage effluents, varying according to the volume of the river into which the effluent is discharged, have been suggested in the eighth report of the Royal Com-

mission on Sewage Disposal, but they have not yet been generally adopted. The method of analysis recommended is troublesome and has given rise to much criticism on the part of chemists. It has been used for this County for the past two years as an addition to the older methods.

The list of samples of effluents that were analysed during 1913, together with the results, have already been printed, and were circulated to the County Council in January, 1914.

The following is a list of the Local Government Board Inquiries attended by the County Medical Officer, at which leave was sought to borrow money under the Public Health Act for purposes of street sewerage, or sewage disposal, or both.

LOCAL GOVERNMENT BOARD INQUIRIES.

DATE.	DISTRICT.	OBJECT.	AMOUNT BORROWED	RESULT
1913 Jan. 8	Mansfield	Sewerage	£650	Granted.
May 15	Mansfield	Sewerage and Sewage Disposal at Rainworth	£3,100	Granted and work completed
Sept. 24	Beeston	Sewerage and Sewage Disposal ..	£28,700	Granted.

As regards Rainworth, Dr. Lambie writes :—" The new " sewage works and main sewers at Rainworth have been " completed." At the Beeston Inquiry the report of the County Medical Officer of September, 1910, and subsequent reports on the same subject were amply confirmed. With a view of protecting the river in the future exception was taken to the unnecessary number of storm overflows, the inadequate provision for pumping, and other matters. The objections have been most fairly met. The following extract from the Annual Report of the Medical Officer of Health not only shows the completeness of the new scheme, but attention is also directed to the provision that is to be made for converting the objectionable and costly pail closets into water closets—a change which, from an economic point of view, if for no other reason, is most desirable.

Dr. Rothera (Beeston) writes :—" It is perhaps fitting that " as this is my 21st anniversary, so to speak, I should be in the " proud position of stating that our sewers and sewage " disposal works are to be entirely remodelled and a thoroughly

" up-to-date system of treating the sewage is to be installed " at the farm. It is within the cognizance of you all that an " action was brought against the Council by the owner of " some cottage property in Myrtle Grove and Humber Road " claiming an injunction to restrain us from allowing the " sewers draining this property to overflow. As the result of " a trial extending over three days before Mr. Justice Avory " and a special jury, this injunction was granted and a period " of six months allowed us in which to take the necessary " steps.

" Within a week of the injunction being made we con- " sulted Mr. W. H. Radford, the eminent sanitary and water " engineer of Nottingham, and after considering the matter " carefully he advised your Council to go in for a comprehen- " sive scheme, embracing the re-laying of the iron sewer down " Humber Road with a better fall, the provision of septic " tanks and percolating beds at the farm, a new pumping " station, and a destructor for burning up the solid refuse. " After much and careful consideration by your Council, this " scheme—large and expensive though it be—was adopted in " its entirety, and application was made to the Local Govern- " ment Board for their sanction to obtaining a loan of £28,770 " to meet the cost. After a public enquiry by Mr. Etherington " —one of the L.G.B. Inspectors—the scheme was accepted " by them with the proviso that within a reasonable time we " should convert our existing method of excrement disposal " by pails into the water carriage system. Owing to the " great disadvantages, sanitary and otherwise, of the pail " system, its great cost, annoyance and loss of sleep to " householders, and increasing difficulty of disposing of the " contents which remained in unsightly and malodorous heaps " at the farm, we had already been considering the desirability " of this conversion, and under the able generalship of Mr. " Bannister, the Council accepted the conversion scheme, and " it is to be incorporated in the whole plan at an additional " cost of £12,650 spread over a period of years."

Dr. Maxwell (Kirkby-in-Ashfield Urban) writes :—" The " new additional sewage scheme has been completed at a cost " of over £11,000. The sewer in a portion of Victoria Road " has been taken out and re-laid with 12 in. pipes, on an " improved gradient.

" An improvement has also been carried out in the sewers " in Prospect Street and Low Moor Road. A new line of " sewer has been laid from the Outfall Works in Park Lane " to the summit of Low Moor Road, a distance of over two " miles, in the course of which several connections have been

" made with the old sewer. These connections will relieve " the old sewer when its capacity is overtaxed, and the flooding " which occurred at various points in times of storm or " excessive flow should be obviated. The Outfall Works " have been re-modelled, a new screen and detritus tank have " been constructed."

The time allowed to the Borough of East Retford in the New Order made by the County Court on October 10th, 1911, for completing " a proper and efficient scheme of sewerage and sewage disposal for the purpose of preventing the pollution of the River Idle " expired on September 30th, 1913. The necessary works have not yet been quite completed, but the following facts will show that great progress has been made and the remaining work should not occupy a very long time. The number of houses connected with the sewers during the year 1913 amounted to 198, leaving only 185 still to be connected on December 31st, 1913.

The Great Central Railway Co. have constructed at their engine sheds an intercepting chamber for the purpose of preventing the discharge of oily substances from the sheds into the adjacent stream and so to the river, but the result is said not to have been entirely satisfactory.

The laying of a new sewer in Albert Road at the back of the brewery premises, to enable the brewery waste to be taken into the sewers, has not yet been carried out.

Negotiations have at last been completed with the Great Northern Railway Co. for the drainage of their station, and it is hoped that the re-construction may be undertaken very shortly.

There has been a great improvement in the condition of the river Erewash, of which complaint used constantly to be made, especially in its lower part as it passes through Stapleford. Dr. Kingsbury (Stapleford Rural) writes :— " The river Erewash no longer acts as an objectionable sewer " for Ilkeston—the effluents entering are now clear and " practically odourless."

The following report from Dr. Wills deserves attention, especially as regards Farnfield, where rapid colliery development has already commenced.

Dr. Wills (Southwell Rural) writes :—" I consider that " plans for the sewerage of Sutton and Farnsfield should " engage the attention of the Council, as advised by Dr. Farrar

"in his report of the District, published in the year 1908; "but it is desirable that a better supply of water should be "provided for Sutton in order that a sewage scheme should "be satisfactory by first providing water for flushing the "sewers; therefore a water supply should be also considered."

Dr. Eaton (Bingham) writes :—"The construction of the "new sewer and sewage disposal works at Normanton and "Keyworth has been delayed owing to difficulty in acquiring "the necessary land. However, a start is now about to be "made and it is hoped that the work will be completed "within the present year."

The following list of Sewage Disposal Works, the effluent from each of which necessarily discharges into one of the streams or rivers of the County, will show how much has been done since 1897 to prevent the pollution of rivers, and how enormously the need for inspection has increased.

SEWAGE DISPOSAL WORKS

WHICH ARE PERIODICALLY INSPECTED.

In 1897	The total number of works was	7
In 1910	,, ,, ,, ,, ,, ,, ...	36
In July, 1913	,, ,, ,, ,, ,, ,, ...	48

METHODS OF TREATMENT.

Urban Districts.

Mansfield,	
Borough	Settling tanks, percolating filters and subsequent irrigation.
Do. Pleasley Hill	Settling tanks and percolating filters.
Do. Rainworth	,, ,, ,, broad irrigation.
E. Retford	
Borough	Settling tanks and broad irrigation.
Arnold	See Nottingham Corporation Sewage Farm, Stoke Bardolph.
Beeston	Broad irrigation. New works under construction.
Carlton	See Nottingham Corporation Sewage Farm, Stoke Bardolph.
Eastwood	See Newthorpe.
Hucknall Torkard	Settling tanks, percolating filters.
Huthwaite, South	,, ,, ,, ,, and irrigation.
Huthwaite, E. ..	,, ,, ,, ,, ,, ,,

Kirkby-in-Ashfield	Settling tanks and percolating filters.
Do. Portland Row	.. ,, ,, ,, ,,
Mansfield	
Woodhouse	..Settling tanks and broad irrigation.
Do. Forest Town	.. ,, ,, percolating filters and irrigation
Sutton-in-Ashfield	Settling tanks, filters and irrigation. (New works contemplated.)
Warsop ..	..Settling tanks, percolating filters and irrigation.
West Bridgford	.. ,, ,, ,, ,, ,, ,,
Worksop ..	..Settling tanks and broad irrigation.

Rural Districts.

Basford—	
Ruddington	..Settling tanks and broad irrigation.
Newthorpe	.. ,, ,, ,, double set of percolating filters.
Kimberley	.. ,, ,, ,, percolating filters.
Greasley ..	..See Newthorpe.
Eastwood ..	..See Newthorpe.
Selston—	
Beaufit Lane	..Settling tank and percolating filters.
Bagthorpe	.. ,, ,,
Plain Spot	.. ,, ,,
Langton Hallam	,, ,,
Jacksdale ..	.. ,, ,,
Underwood	.. ,, ,,
Pye Hill	.. ,, ,,
Watnall ..	.. ,, ,,
Annesley ..	.. ,, ,,
Burton Joyce \ *Stoke* /	..Nottingham Corporation Sewage Farm, .. intermittent downward filtration and broad irrigation.
Awsworth ..	..Settling tank and broad irrigation.
Brinsley ..	.. ,, ,, percolating filters.
Colwick ..	..See Nottingham Corporation Sewage Farm.
Cossall ..	..Settling tank and percolating filters.
Gedling ..	..See Nottingham Corporation Sewage Farm.
Watnall ..	..Settling tank and percolating filters.
Bingham—	
Radcliffe-on-Trent	..Settling tank, contact beds and land irrigation.
Normanton	..Unfinished.
Keyworth ..	..Unfinished.
Leake—	
Sutton Bonington ..	..Settling tanks, percolating filters and land irrigation.

Newark—	
Balderton	Settling tanks, percolating filters and land irrigation.
Winthorpe	,, ,, and filter bed.
Skegby—	
Skegby Forest	Settling tanks, filters and land irrigation.
Meden Bank	,, ,, land irrigation.
Dawgates	,, ,, ,, ,,
Southwell	Settling tanks, percolating filters and irrigation.
Halam	,, ,, filtration.
Epperstone	,, ,, and filter beds.
Oxton	,, ,, ,, land irrigation.
Stapleford	Settling tanks, percolating filters and land irrigation.

SANITARY WORK AND SCAVENGING.

The great importance of an efficient system of Public Scavenging not only in the Urban Districts but also in the more populous parts of the Rural Districts is gradually gaining acceptance. Progress in this direction, elementary as the question is from a sanitary point of view, remains lamentably slow. The advantages of converting privies and pail closets to the water carriage system, not only from considerations of health and decency but also as regards economical administration, are becoming more evident year by year. The following extracts, however, illustrate some of the material difficulties which stand in the way, in addition to the inert public opinion which also needs to be converted.

Dr. Wills (*Newark Borough*) *writes* :—" Your Inspector " has occasionally called attention to the need for better " supervision of the scavenging in the Borough, and you will " find it necessary to do away with the accumulation of " refuse beyond the G.N. Station, where the ash refuse and " the contents of the tubs are chiefly deposited, and where " the accumulation has become large of late years."

Dr. Francis (*Arnold Urban*) *writes* :—" Up till 1910 I was " always able to report favourably on this important work ; " since then, however, the condition of things has changed, " and there have been increasing numbers of complaints as to " the irregularity of the contractor's work. It is somewhat " surprising as, with the gradual conversion of the midden " privy to the water closet which has been going on for the " last year or two, his duties must necessarily have been " lightened to a certain extent."

Dr. Knight (*Carlton Urban*) *writes* :—" There are 3,250 " pail-closets, 970 dust-bins, and 1,330 water closets in the " district.

" It would undoubtedly improve the properties and " increase their value if water closets were substituted for pail " closets.

" A scheme might be devised of carrying out such work " in sections, or owners willing to contribute a fair sum might " receive first attention, a few conversions might thus be " effected each half-year without incurring great expense "

Dr. Dixon (*Eastwood Urban*) *writes* :—" Now there is an " unlimited supply of water in the town I think the Council " could gradually do away with a large number of the privy " middens and enforce the conversion of many existing closets " into W.C.'s. It would make many more healthy surround- " ings and help to diminish much of the diarrhoea and enteritis " amongst children during the hot weather."

Dr. Irvine (*Huthwaite Urban*) *writes* :—" There is no " doubt but that this deposit of refuse on the streets is more " or less a nuisance, as dust, paper, and all kinds of rubbish " get blown about and the refuse material is often of a dan- " gerous character. An improvement on this would be the " conveyance of the refuse material in covered receptacles " and depositing it in covered carts. Movable iron dust-bins " offer many advantages over the fixed ashpits."

Dr. Maxwell (*Kirkby-in-Ashfield Urban*) *writes* :—" The " Local Government Board held an inquiry in December last, " into the Council's application to borrow £3,000 for the " purpose of erecting a Refuse Destructor on a site adjoining " the Gasworks.

" The Destructor proposed is a two-cell back-feed type, " and provision is made in the building for a further cell to be " installed when the necessity arises. The Council are now " waiting the Board's sanction, on receipt of which the work " should be commenced immediately, as the disposal of the " refuse at the present time has become a difficult question."

Dr. Nesbitt (*Sutton-in-Ashfield*) *writes* :—" The scaveng- " ing, which is done by contract, cost in 1913, £1,350. The " work has been done satisfactorily during the year. It is " a point worth considering whether it would not be more

"economical—as it would certainly be more sanitary—to "procure an additional water supply, and convert all pail "closets to water closets."

Dr. Garrett (*Worksop*) *writes* :—"Since 1909 the work has "been done by the Council. A foreman has charge of this "department and the work is now done regularly and with as "little nuisance as possible with the system. Householders "are required to send notice to the foreman when pits or "middens require emptying. This rule has little to recom- "mend it for the reason that notices are often neglected and "usually not sent till the pits are overflowing on to the yard. "Many of the old pits, too, are so large that to empty them "only when full means that they are emptied once in six "months, or even longer. The contents have to be wheeled "in barrows from the pit, through a passage, deposited in "the street, and filled into the carts. This necessitates the "soiling of the yard, passage and street, causing a nuisance "at the time of emptying."

Dr. Wray (*Basford Rural*) *writes* :—"The question of the "conversion of foul privy middens and tub closets to "water closets is one on which firm action will have to be "taken. In my opinion the existence of these foul abomina- "tions is the one great blot on the sanitary condition of the "district and a serious menace to its otherwise healthy "condition.

"The question of the scavenging of the Parish of Selston "is becoming an urgent one."

Dr. Eaton (*Bingham*) *writes* :—"At Bingham, house "refuse is collected and removed weekly with the contents of "the tubs from the closets by scavengers employed by the "Council. Throughout the rest of the district, refuse is "removed at irregular and often very long intervals by the "householders themselves, which means that accumulations "of decomposing refuse in the near vicinity of dwelling- "houses is far more common than it should be.

"Complaints still continue to be received respecting "deposits of Nottingham night soil at various places in the "neighbourhood.

"My attention has recently been drawn to such deposits "at the railway sidings at Aslockton and Elton, and several "cases of illness have been attributed to them."

Dr. Blackham (*Leake Rural*) *writes* :—" This is accom-
" plished in the old-fashioned manner by the common midden
" and privy arrangement and has answered fairly satisfactorily.
" The new scavenging arrangement at Sutton Bonington has
" been carried out in a satisfactory manner by the contractor."

Dr. Broadbent (*Newark Rural*) *writes* :—" The scavenging
" in New Balderton is being done better and more systemati-
" cally."

Dr. Littlewood (*Skegby Rural*) *writes* :—" I am of opinion
" that the time is now ripe for considering the advisability
" of dispensing with privy middens and pail closets, and
" enforcing the conversion of many existing closets into
" W.C.'s, as the district is well equipped with good sewers and
" an ample water supply."

Dr. Wills (*Southwell Rural*) *writes* :—" I regret to say
" that there is no extension of scavenging in your District
" beyond that for Southwell, Lowdham and Sutton, where it
" is much appreciated and has effected great improvement.

" Scavenging has had a most marked influence for good
" in those villages where it has been introduced, not only upon
" health but upon the cleanliness, decency and improvement
" of the homes, and though people may in a few cases live a
" long life in a dirty state I do not think it is desirable to live
" without cleanliness."

Dr. Kingsbury (*Stapleford Rural*) *writes* :—" The public
" scavenging at Stapleford and Bramcote is maintained at a
" high level of efficiency. I have not received one serious
" complaint during the year."

PAVING AROUND HOUSES.

The influence of the proper paving of the surfaces around houses upon the health of the inhabitants, and especially upon the infant mortality, can hardly be overestimated. Attention has been called to this subject in these reports for many years and much has been done, especially at Sutton-in-Ashfield. The following extracts show how much may be accomplished with a little trouble.

Dr. Nesbitt (*Sutton-in-Ashfield*) *writes* :—" The good work
" of asphalting yards which has been so marked a feature in
" our sanitary work for several years has been vigorously
" continued during 1913. For the last five years the number

" of yards asphalted or paved with blue bricks has been as " follows :—

1909	..	..	30 yards	
1910	..	..	57 ,,	
1911	..	..	90 ,,	200 houses
1912	..	..	32 ,,	109 ,,
1913	..	..	40 ,,	183 ,,

Dr. Littlewood (Skegby Rural) writes :—" The health of a " community depends largely on the condition in which the " backyards are kept. It is of the utmost importance that the " surface be kept watertight, as the leakage of slops and " polluted water into the subsoil soon gives rise to conditions " inimical to good health. The moment the foundations of " a dwelling become damp, the process of decomposition takes " place, resulting in the formation of poisonous gases which " rapidly find their way into the house and are consequently " inhaled by the inmates.

" During the year a considerable amount of attention " has been given to the matter, in urging owners of property " to make good the backyard surfaces, and also where the " paving was thought to be insufficient to order an increased " area."

HOUSING.

No communication was made to the County Council or to the County Medical Officer during the year 1913, under the Housing of the Working Classes Acts, 1890 to 1909, with the exception of copies of five " representations " concerning houses in the Leake Rural District, and five " Closing Orders " concerning houses in the same district, and one demolition order.

It will be seen from the accompanying table that 255 " Representations " and " Closing Orders " were made during the year 1913 in Rural Districts, but no copies were sent to the County Medical Officer of Health as required by Section 69 (1) of the Housing, Town Planning, etc., Act, 1909, except from the Leake Rural District as mentioned above. One Local Inquiry was held at Scarrington in the Bingham Rural District, on April 24th, 1914, at which leave was sought to borrow £1,006 for the purpose of a scheme under Part iii of the Housing of the Working Classes Act, 1890, for the erection of working-class dwellings in the Parish. The Inquiry was the first of the kind in this County. The County Medical Officer of Health attended the Inquiry and gave a general support to the scheme.

HOUSING AND TOWN PLANNING ACT, 1909.

TABLE SHOWING INSPECTIONS MADE AND WORK CARRIED OUT DURING THE YEAR 1913.

DISTRICT.	Number of Dwelling-houses inspected under and for the purposes of Section 17.	Number found to be unfit for human habitation.	Number of Representations made to Local Authorities with a view to making Closing Orders.	Number of Closing Orders made.	Number of Dwelling-houses the defects in which were remedied without making Closing Orders.	Number of Dwelling-houses which after the making of Closing Orders were made fit.	Number of Dwelling-houses closed.	Number of Dwelling-houses demolished voluntarily after Closing Order made.
URBAN.								
Mansfield	90	10	10	10	36	4	5	2
Newark	240	107	39	24	46	36	12	12
Retford	75	—	—	—	24	—	—	—
Arnold	133	19	19	13	79	8	—	—
Beeston	203	29	29	6	35	23	—	10
Carlton	200	6	6	6	194	3	—	—
Eastwood	180	12	2	2	10	—	—	3
Hucknall	597	74	57	22	41	—	—	9
Huthwaite ..	412	1	—	—	34	—	—	—
Kirkby-in-Ashfield.. ..	—	—	11	11	—	—	—	—
Mansfield Woodhouse ..	357	30	30	6	21	4	5	—
Sutton-in-Ashfield.. ..	195	39	21	21	18	6	7	—
Warsop	90	—	—	—	58	—	2	3
West Bridgford	—	—	—	—	—	—	—	—
Worksop	27	1	—	—	26	—	—	1
Total Urban Districts ..	2799	328	224	121	622	84	31	40
RURAL.								
Basford	155	80	63	39	47	—	—	10
Bingham	152	130	9	9	114	1	—	—
Blyth and Cuckney ..	—	—	—	—	—	—	—	—
E. Retford ..	286	4	4	—	105	—	—	4
Leake	113	5	5	5	91	3	2	—
Misterton	120	—	—	—	14	—	—	—
Newark	115	—	—	—	—	—	—	—
Skegby	152	32	32	32	136	6	32	—
Southwell	226	53	37	20	39	—	—	6
Stapleford.. ..	112	—	—	—	19	—	—	—
Shardlow	—	—	—	—	—	—	—	—
Total Rural Districts ..	1431	304	150	105	565	10	34	20
WHOLE COUNTY.. ..	4230	632	374	226	1187	94	65	60

The tabular statement of work under the Housing and Town Planning Act, which has been compiled from the Annual Reports of the Medical Officers of Health of the Urban and Rural Districts, supplemented by the results of individual enquiries, make it evident that a good deal of work is being done. The following extracts from the Reports further make it clear that many more houses would be closed were it not for the impossibility at the present moment of finding suitable houses for the people elsewhere.

Dr. Francis (*Arnold Urban*) *writes* :—" Most of the " houses inspected were defective in some particular or other, " but generally speaking they were in a better condition than " those inspected in previous years. This, of course, is " accounted for by the fact that we inspected the worst of the " property when the Act first came into force.

" The chief defects found were dampness, due either to " the want of a damp course or to a dilapidated roof or " spouting, windows not made to open, absence of sinks, " unpaved yards, and the presence of the midden privy. " With a few exceptions the repairs have been executed by " the landlord without a great deal of grumbling, though they " have taken a considerable time.

" The housing accommodation throughout the district " is sufficient and good as regards the recently-built houses."

Dr. Knight (*Carlton Urban*) *writes* :—" There are a large " number of old houses of a rather inferior character in " Carlton Ward, which are occupied by poor people, many of " whom receive parish pay and pensions. Too great and " rapid a disturbance of such has been, as far as possible, " avoided ; only the worst have been dealt with, but it is " hoped that under the Act the number will be gradually " diminished."

Dr. Dixon (*Eastwood Urban*) *writes* :—" The Housing " Conditions are on the whole satisfactory, and there is no " overcrowding. The property owners have carried out the " work required to put the houses in repair in most cases after " the first intimation."

Dr. Jones (*Hucknall Torkard Urban*) *writes* :—" The " housing accommodation of the district must be considered " ample, so much so that 365 are uninhabited at the present " time. This is owing, as I have previously pointed out, to " the bad state of the mining industry in the district."

Dr. Irvine (*Huthwaite Urban*) *writes* :—" Larger houses " are needed in the district for workers with large families. " This scarcity of ' larger house room ' creates a difficulty in " dealing with the matter of overcrowding, four instances of " which required attention. Not only is there this desire for " larger houses by people with large families, but there is a " desire for more houses by local workers who would reside in " the district if suitable accommodation were provided. The " owners have made various repairs to a number of old " cottages, now occupied, which are barely fit for human " habitation."

Dr. Houfton (*Mansfield Woodhouse*) *writes* :—" It will be " noticed that 30 representations were made to the Local " Authority with a view to the making of closing orders. " Of this number the defects in 21 houses were remedied by " the owners without the necessity of making closing orders. " Three houses were closed after the making of closing orders."

Dr. Nesbitt (*Sutton-in-Ashfield*) *writes* :—" In accordance " with Section 17, 195 houses were examined. Thirty-nine " were found to be unfit for occupation. Closing Orders were " served in 21 cases, 18 were put in a satisfactory state without " Closing Orders, six were put in a state fit for habitation " after making Closing Orders, five are now undergoing repair " or re-construction, seven remain closed, and in three houses " the work is arranged for but not yet actually begun."

Dr. Horan (*Warsop*) *writes* :—" A number of old proper- " ties have been improved by the provision of proper sanitary " accommodation and new drainage, three houses unfit for " habitation pulled down, and two closed with a view to " alteration and improvement.

" About 26 notices were given to property-owners having " reference to 58 defective dwellings, and in many instances " the improvements have been, and in several others, are " being, made.

" Several back-to-back houses are to be converted into " through houses, and in other cases the windows are being " enlarged and raised, defective roofs and rain-water gutters " renewed, and the condition of the property improved " generally."

Dr. Wray (*Basford Rural*) *writes* :—" Closing Orders were " recommended in 63 cases, 39 were made, and 24 postponed. " Of these, 23 houses were put in repair and one closed by the " owner. Closing Orders were determined in five cases.

" Demolition Orders were recommended in 29 cases, and of " these, seven were postponed ; in all seven the houses are " empty and the owners given time to demolish, as they are " not dangerous or a nuisance. Two houses were closed by " the owners without a Closing Order. Five houses were " closed and demolished after Closing Orders, but before " Demolition Orders and 13 houses were demolished after " Demolition Orders. Two visits of inspection by a Sub- " Committee were made, and the Orders relating to the proper- " ties postponed, pending the results of the action of the " owners, who undertook in each case to cure the dampness, " which was the chief cause of complaint."

Dr. Eaton (*Bingham Rural*) *writes* :—" Upon the subject " of housing I can only repeat the statement made in my " Annual Report last year. With few exceptions there is a " deficiency of good cottages suitable for a working-man and " his family, throughout the whole district.

" The population has remained stationary, many houses " have been demolished or have become unfit for habitation, " and few new ones have been built.

" Houses inhabited at the present time, which cannot by " any stretch of imagination be called sanitary, would not be " inhabited if other more sanitary dwellings were available. " However, a good start has been made to remedy this " unsatisfactory state of affairs by the preparation of plans " and specifications for the erection of six really good cottages " at Scarrington, at a cost of something like £1,000. The " plans have been prepared by the Sanitary Inspector, and " the cottages when built, will be models of their class.

" The Council are to be congratulated on being the first " authority in the County to initiate a scheme of cottage " building under the provisions of the Housing and Town " Planning Act. New cottages are required especially at " Barnstone and Cropwell Bishop, where there are cement and " lime works.

" Under the Housing (Inspection of District) Regula- " tions, 152 houses were inspected ; 130 of these were on " inspection considered to be in a state so dangerous or " injurious to health as to be unfit for human habitation."

Dr. Wood (*Blyth and Cuckney Rural*) *writes:* —" A " scarcity of houses exists in your district as in many others " in the country. Several of the houses which I have visited

" seem fairly satisfactory, but as no systematic house-to-house " inspection has been done, it is impossible to say much. " Now that the Council has decided to appoint a whole-time " Sanitary Surveyor and Inspector of Nuisances, a thorough " house-to-house inspection will be made during 1914."

Dr. Beale (*Retford Rural*) *writes* :—" The housing is just " sufficient for the needs of the district. In some parts " labourers have to walk some distance to their work."

Dr. Blackham (*Leake Rural*) *writes* :—" The general " character of defects found were dampness caused by defective " and leaky roofs, walls without damp-proof courses, insuffi- " cient light and ventilation, defective and dangerous floors " and ceilings."

Dr. Farrar (*Misterton Rural*) *writes* :—" The workmen's " houses in the district are of the cottage type, having low " living-rooms, three bedrooms, scullery, and the usual " out-offices. The closets are generally of the soak variety, " one for two cottages. They have ashpit combined, this " being covered in.

" The new cottages which were built two years ago were " supplied with pail closets, of which there are now a good " number. A few houses have water closets with cesspools.

" The district, owing to the larger number of cottages " built in 1912, has now become almost free from over- " crowding. I am glad to say before any house is built the " plans are submitted to your Council for approval and are " not passed until quite satisfactory in every way."

Dr. Broadbent (*Newark Rural*) *writes* :—" The housing " conditions throughout my district are on the whole satis- " factory."

Dr. Littlewood (*Skegby Rural*) *writes* :—" There is a great " scarcity of houses in the whole district, but particularly in " the Blidworth sub-district ; in the latter instance this " condition has been brought about through the sinking of " coal pits in the neighbourhood."

Dr. Kingsbury (*Stapleford Rural*) *writes* :—" Under the " Regulations of the Housing and Town Planning Act I " inspected 112 houses, none were in a state so dangerous or

" injurious to health as to be unfit for human habitation. " Notices were served and complied with in respect of 19 " houses, the chief defects being damp due to faulty or absent " roof spouting, insanitary yard paving, and defective closet " accommodation. I have had the advantage of the Sanitary " Inspector's advice in cases of more than usual difficulty.

" The working-class house accommodation in the district " is ample, in fact there has been considerable overbuilding " in the past. With few exceptions there is more than " sufficient air space around the houses. Overcrowding is " rare and when a case comes to our notice, is readily " stopped."

THE INSPECTION OF FOOD AND THE SALE OF FOOD AND DRUGS ACTS, 1875 TO 1907.

These matters, including the inspection of Slaughter-houses, are so closely allied that it is difficult to separate them. That the food consumed should be in a wholesome condition is of vital importance to the public health. Not only is it necessary that food should be wholesome when bought, but it is also necessary that suitable places for keeping food should be available in each cottage, so that food which was sound when bought, may not become dangerous to health before it is consumed. Many Medical Officers of Health call attention to this great need in so many houses which have no suitable provision for keeping food at all.

The inspection of food offered for sale is partly carried out under the Public Health Acts by the Medical Officers of Health and the Sanitary Inspectors, and partly under the Sale of Food and Drugs Acts.

The County Medical Officer has nothing to do with the administration of the Sale of Food and Drugs Acts in this County. The Acts are carried out by a separate Officer and Staff and a separate Committee.

The following extract shows that attention is being paid to the soundness of food in Mansfield.

Dr. Lambie (*Mansfield*) *writes* :—" Two prosecutions were " instituted in the course of the year in respect of unsound " food, but both cases were dismissed on payment of costs.

"Many and serious complaints were received during the "year, especially in the last quarter, with regard to the "quality of meat sold in the market.

"As events subsequent to the appointment of the "additional inspector have shown, these complaints were not "without foundation, but the inspection of the market is, at "the time of writing, perfectly efficient."

SMOKE PREVENTION.

There can be no question that the prevention of the pollution of the air by smoke has already become an important question for the Rural Districts as well as for the Urban Districts of the County. Nottinghamshire is rapidly becoming more and more an industrial and mining County. A very few years ago no steps were taken outside the City of Nottingham to deal with the smoke nuisance. Now the extracts given later on show that some interest is being taken. Much more is needed. The prevention of the smoke nuisance stands in a different category from most of the nuisances with which a Sanitary Authority is called upon to deal, inasmuch as the proper consumption of smoke results not only in greater amenities and better health for the public, but also in financial benefit to the manufacturer. It is true the gain may be small and beneath the notice of large undertakings; but it is not a loss.

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.

The following extracts show that interest in this matter is growing, although very slowly.

Dr. Lambie (*Mansfield*) *writes* :—" Except with regard to " two chimneys in the Borough no complaints have been " received of nuisances from this cause.

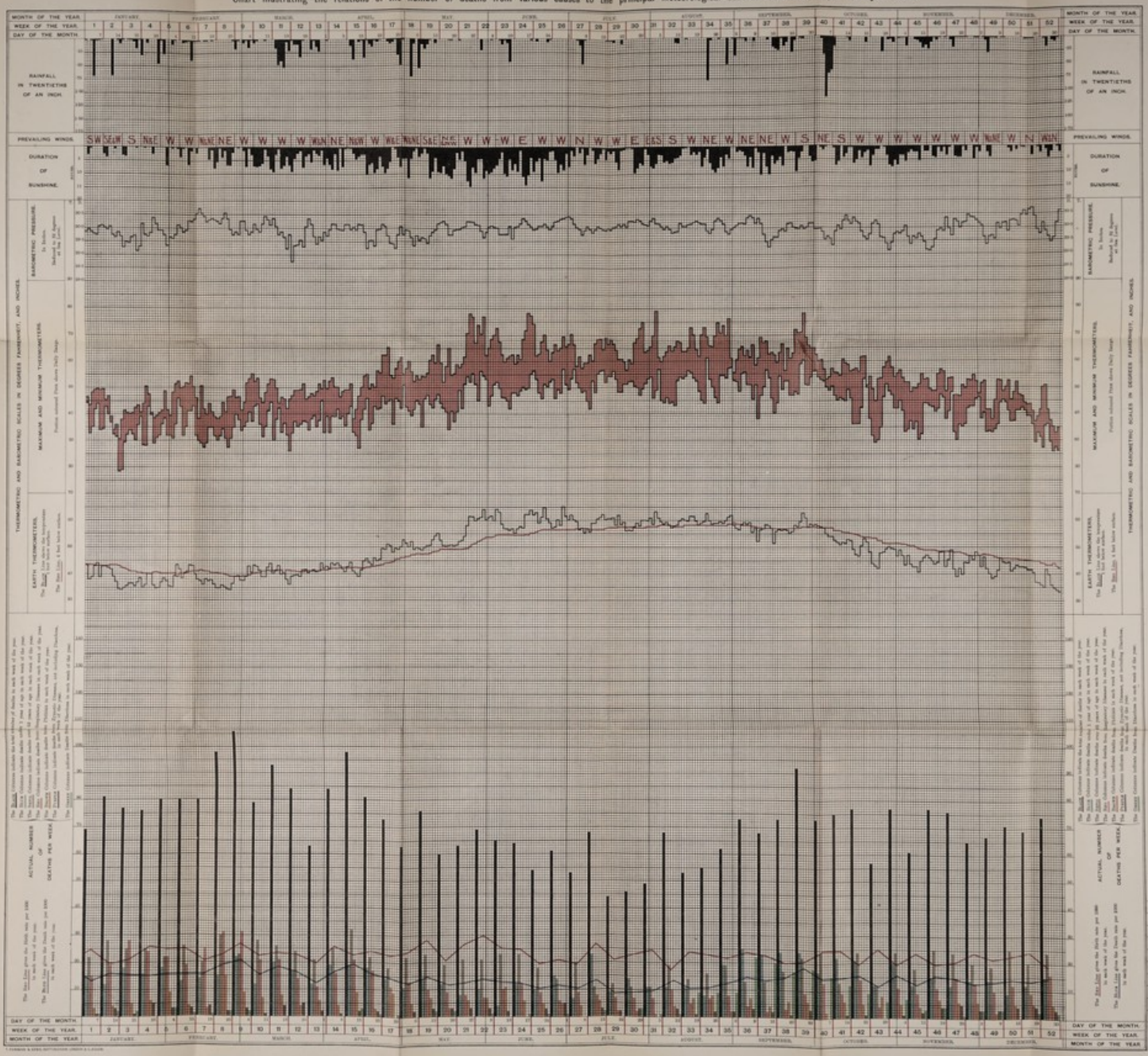
" Statutory notice was served in one case to abate the " nuisance."

Dr. Rothera (*Beeston Urban*) *writes* :—" More attention " has evidently been given to stoking factory boilers, as not " one complaint has been made during the year from that " source. I have always contended that dense volumes of " smoke indicated faulty stoking, and such seems to be the " case."

Dr. Knight (*Carlton Urban*) *writes* :—" Two complaints " respecting factory smoke have been satisfactorily dealt " with."

City of Nottingham.

Chart illustrating the relations of the number of deaths from various causes to the principal Meteorological conditions on each day of the year 1913.



Readings taken at 9 a.m.
Rainfall, Sunshine and Maximum Temperature are entered to previous day.

Estimated Population of the City, middle of 1913, 264,750.
" " " " 1914, 266,063.
Area of the City ... 10,595 acres.

Total Births during the year, 6210.
Birth Rate per 1000 of population per annum, 23·64.
Fifty-three weeks included in 1913 figures and rates accordingly.

Total Deaths during the year, 3,962.
Death Rate per 1000 of population per annum, 14·31.
N.B.—This Death Rate is made up at the close of the year to which it relates, and before the final correction of inward and outward transferable births and deaths for the full year can be made.

ARTHUR BROWN, M. Inst. C.E., F. R. Met. Soc., City Engineer.
PHILIP BOOBBYER, M.D., Medical Officer of Health.

DEATHS FROM CANCER

Year.	No. of Deaths
1904	212
1905	223
1906	233
1907	220
1908	254
1909	247
1910	250
1911	278
1912	271
1913	213

Table I. NOTTINGHAMSHIRE. Vital Statistics for the Year 1913.

BOROUGHS AND URBAN DISTRICTS.

BOROUGHS AND URBAN DISTRICTS.	Area in Acres Exclusive of area covered by water.	Persons per Acre.	Families or separate Occupiers at Census, 1911.	Persons per Family at Census, 1911.	Population, Census 1911.	Population, Estimated to the middle of 1913.	Births. Number.	Births. * Rate.	Deaths under 1 year of age. Number.	Deaths under 1 year of age. Rate per 1000 Births Registered.	Total Deaths Registered at all Ages. Number.	Total Deaths Registered at all Ages. * Death Rate.	** Nett Deaths at all Ages belonging to the Districts.	Nett Death Rate, i.e., Death Rate corrected for "Transferable" Deaths.	Average Nett Death Rate for the ten years 1903—1912.	Death Rate from all Tuberculous Diseases per 1000 of population.	Death Rate from seven principal Zymotic Diseases per 1000 of population.
MANSFIELD (Borough)	7,208	5·1	7,561	4·8	36,888	41,676	1,194	28·6	152	127	596	14·3	565	13·6	13·4	1·22	1·27
NEWARK (Borough)	1,899	8·6	3,866	4·2	16,408	16,740	380	22·7	32	84	218	13·0	213	12·7	15·0	1·31	0·95
EAST RETFORD (Borough)	4,498	2·9	3,076	4·3	13,385	13,521	294	21·7	23	78	176	13·0	171	12·6	13·3	0·66	0·51
ARNOLD	4,612	2·4	2,463	4·5	11,146	11,839	278	23·4	31	111	139	11·7	154	13·0	13·7	1·01	2·12
BEESTON	1,586	7·1	2,662	4·2	11,336	12,042	324	26·9	33	102	110	9·1	123	10·2	11·7	1·16	0·83
CARLTON	1,400	11·1	3,570	4·3	15,581	17,243	439	25·4	41	93	189	10·9	209	12·1	10·7	1·57	0·87
EASTWOOD	940	4·9	1,016	4·6	4,692	5,000	141	28·2	15	106	58	11·6	68	13·6	13·3	0·40	1·00
HUCKNALL TORKARD ..	3,270	4·8	3,485	4·5	15,870	16,000	453	28·3	55	121	206	12·8	229	14·3	14·0	0·93	1·06
HUTHWAITE	1,199	4·3	1,071	4·8	5,231	5,437	194	35·7	27	139	74	13·6	80	14·6	13·7	1·66	2·02
KIRKBY-IN-ASHFIELD ..	5,814	2·6	3,198	4·8	15,378	16,740	506	30·1	61	120	183	10·9	196	11·7	11·8	1·25	0·41
MANSFIELD WOODHOUSE	4,834	2·2	2,107	5·2	11,015	11,700	399	34·1	53	132	140	11·9	150	12·9	14·2	1·19	2·05
SUTTON-IN-ASHFIELD ..	4,855	4·4	4,437	4·8	21,708	23,452	733	31·2	72	98	241	10·2	271	11·5	14·2	0·68	1·23
WARSOP	5,728	0·7	861	4·9	4,221	4,700	202	42·9	28	138	70	14·8	77	16·3	14·3	0·63	3·82
WEST BRIDGFORD	1,123	10·3	2,827	4·1	11,632	12,756	199	15·6	13	65	102	7·9	110	8·6	7·3	0·55	0·23
WORKSOP	17,930	1·1	4,397	4·6	20,387	21,496	599	27·8	63	105	277	12·8	267	11·9	14·6	0·79	1·07
Totals for Urban Districts	66,896	3·2	46,597	4·6	214,878	230,342	6,335	27·5	699	110	2,779	12·0	2,883	12·5	13·1	1·03	1·14

* Rates calculated per 1,000 of the timated espopulation.

** The Nett Deaths are 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; the question of what constitutes "residence" is decided by the Registrar-General according to well-defined rules.

Table II. NOTTINGHAMSHIRE. Vital Statistics for the Year 1913.

RURAL DISTRICTS.

RURAL DISTRICTS.	Area in Acres, exclusive of area covered by water.	Persons per Acre.	Families or Separate Occupiers at Census 1911.	Persons per Family at Census 1911.	Population, Census, 1911.	Population estimated to the middle of 1913.	Births.		Deaths under one year of age.		Total Deaths registered at all ages.		* Nett Deaths at all ages belonging to the District *	Nett Death Rate, i.e., Death Rate corrected for Transferable Deaths.	Average Nett Death Rate for the ten years 1903—1912.	Death Rate from all Tuberculous Diseases, per 1000 of population.	Death Rate from Seven principal Zymotic Diseases per 1000 of population.
							Number.	Rate. *	Number.	Rate per 1000 Births registered.	Number.	Death Rate. *					
BASFORD	61,868	·67	9,260	4·5	41,961	42,825	1,111	25·9	101	90	428	9·9	470	10·5	13·2	0·77	0·50
BINGHAM	66,574	·21	3,438	4·2	14,593	14,745	280	18·9	20	71	249	16·8	178	12·6	13·1	0·74	0·68
BLYTH AND CUCKNEY	28,208	·17	1,102	4·5	4,956	5,013	108	21·5	11	101	59	11·7	68	13·5	13·6	1·2	0·79
EAST RETFORD	92,740	·15	3,444	4·2	14,774	15,081	296	18·7	15	50	168	10·6	181	11·4	14·2	1·33	0·13
LEAKE	17,073	·21	902	4·1	3,720	3,722	74	19·8	2	27	38	10·2	42	11·2	13·8	1·07	0·80
MISTERTON	14,268	·28	962	4·1	4,015	4,020	116	28·8	5	43	46	11·4	48	11·9	14·4	0·25	0·50
NEWARK	36,619	·22	2,014	4·1	8,335	8,395	171	20·3	14	81	81	9·6	86	10·2	12·7	0·83	0·59
SKEGBY	11,956	·57	1,427	4·8	6,990	7,697	237	30·8	25	105	90	11·7	96	12·4	12·5	0·78	0·91
SOUTHWELL	117,638	·16	4,778	4·09	19,573	19,675	373	18·9	21	56	250	12·7	248	12·6	15·1	0·66	0·40
STAPLEFORD	4,860	2·08	2,232	4·5	10,007	10,400	259	24·9	35	135	119	11·4	131	12·5	12·8	0·60	1·44
Notts. Parishes administered by SHARDLOW	2,360	·16	80	4·9	392	392	9	22·9	..	..	2	5·1	4	10·2	8·0	2·55	..
Totals for Rural Districts ..	454,164	·28	29,639	4·35	129,316	131,965	3,034	22·9	249	82	1,530	11·5	1,552	11·7	13·5	0·82	0·59

* Rates calculated per 1,000 of the Estimated Population.

** The Nett Deaths are 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; the question of "residence" or "non-residence" is decided according to rules laid down by the Registrar-General.

Table III. NOTTINGHAMSHIRE. Cases of Infectious Disease notified during the Year 1913.

BOROUGHS AND URBAN DISTRICTS.

BOROUGHS AND URBAN DISTRICTS.	Small Pox.	Diphtheria (including Membranous Croup).	Erysipelas.	Scarlet Fever.	Enteric Fever.	Puerperal Fever.	Cerebro-Spinal Fever.	Poliomyelitis.	Pulmonary Tuberculosis.	Other Forms of Tuberculosis.	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.
MANSFIELD (Borough)	..	66	36	202	12	2	..	..	88	53	459	Yes	18 17	Small Pox. Scarlet Fever	82
NEWARK (Borough)	..	53	6	13	5	..	..	..	35	11	123	Yes	20	Diphtheria. Scarlet Fever Small Pox.	82
EAST RETFORD (Borough)	..	56	26	34	1	..	..	..	10	6	133	Yes	12 8	Scarlet Fever Small Pox.	61
ARNOLD	..	47	1	90	1	..	..	..	5	4	148	* ‡	..	..	10
BEESTON	..	9	6	24	1	..	..	..	12	1	53	*	..	..	0
CARLTON	..	40	25	93	2	1	..	..	52	19	232	* ‡	..	..	4
EASTWOOD	..	11	4	..	..	..	..	..	4	2	21	‡	..	..	5
HUCKNALL TORKARD	..	13	10	50	..	1	..	..	11	6	91	‡ Yes	30	Small Pox.	0
HUTHWAITE	..	3	3	53	2	..	..	..	5	7	73	Yes	12	Small Pox.	0
KIRKBY-IN-ASHFIELD	..	9	18	86	9	..	..	..	34	7	163	Yes	10	One	0
MANSFIELD WOODHOUSE	..	12	14	45	1	1	..	..	24	22	119	†	..	..	0
SUTTON-IN-ASHFIELD	..	28	11	70	16	2	..	..	18	6	151	Yes	10	Small Pox.	0
WARSOP	..	12	3	117	1	..	..	1	2	1	137	§	..	..	0
WEST BRIDGFORD	..	7	2	24	..	..	..	..	9	4	46	‡	..	..	5
WORKSOP	..	3	8	137	..	..	..	..	15	13	176	** Yes	16	Small Pox.	107
TOTAL	..	369	173	1038	51	7	..	1	324	162	2,125		153		356

† There is an arrangement with the Mansfield Corporation to admit cases of Small Pox 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 may 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.

§ Arrangements have been made with the North Derbyshire Hospital Board to receive cases of Infectious Disease.

Table IV. NOTTINGHAMSHIRE. Cases of Infectious Disease notified during the Year 1913. RURAL DISTRICTS.

RURAL DISTRICTS.	Small Pox.	Diphtheria (including Membranous Croup).	Erysipelas.	Scarlet Fever.	Enteric Fever.	Puerperal Fever.	Cerebro-Spinal Fever.	Polionyelitis.	Pulmonary Tuberculosis.	Other Forms of Tuberculosis.	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.
BASFORD	..	92	23	134	6	2	..	..	31	13	301	Yes	28	Enteric Fever Scarlet Fever Diphtheria	124
BINGHAM	..	9	10	27	4	..	..	..	19	7	76	‡	..	..	0
BLYTH AND CUCKNEY	..	8	..	13	..	..	..	..	8	3	32	Yes	16	Scarlet Fever and Diphtheria or Enteric Small Pox is sent to Wrksp	21
EAST RETFORD	..	6	6	24	3	..	..	..	23	4	66	§	..	..	0
LEAKE	..	1	..	1	1	..	..	..	3	..	6	†	..	..	0
MISTERTON	..	5	..	13	..	..	..	..	5	1	24	Yes	11	Scarlet Fever Diphtheria and Small Pox	7
NEWARK	..	2	15	17	..	..	..	..	3	9	46	** No	..	..	0
SKEGBY	..	9	9	32	1	..	..	..	4	..	55	No	..	..	0
SOUTHWELL	..	11	6	89	2	..	..	..	11	4	123	Yes	12	Scarlet Fever or Diphtheria and Small Pox	75
STAPLEFORD	..	5	12	4	..	..	..	..	10	1	32	*	..	..	0
NOTTS. PARISHES administered by SHARDLOW	..	..	..	..	..	..	..	..	1	..	1	***	..	..	0
TOTALS	..	148	81	354	17	2	..	..	118	42	762		67		227

‡ An arrangement has been made with the Basford Rural District Council to take cases of Scarlet Fever, Diphtheria, or Enteric Fever into their Isolation Hospital.

† 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; and has also made arrangements with the Draycott Isolation Hospital, in Derbyshire.

** The Newark Borough Isolation Hospital is situated in the Rural District, but is not available for patients from the Rural District.

*** An arrangement has been made with the Shardlow Joint Hospital at Draycott to take cases from this district.

§ There is a temporary arrangement with the Borough of Retford to admit a limited number of cases of Scarlet Fever into their Hospital.

Table V. NOTTINGHAMSHIRE. Vital Statistics for the Year 1913.

WHOLE ADMINISTRATIVE COUNTY.

	Area in Acres.	Persons per Acre.	Families or Separate Occupiers at Census, 1911.	Persons per Family at Census, 1911.	Population, Census, 1911.	Population Estimated to the middle of 1913.	Births.		Deaths under 1 year.		Total Deaths registered at all Ages.		Nett Deaths corrected for "Transferable" Deaths.	* Nett Death Rate. Corrected for "Transferable" Deaths.	* Average nett Death Rate for the ten years 1903-1912.	* Death Rate from all Tuberculous Diseases. 1913.	* Death Rate from seven principal Zymotic Diseases, 1913.
							Number.	* Rate.	Number.	Rate per 1,000 Births.	Number.	* Death Rate.					
URBAN DISTRICTS	66,896	3·2	46,597	4·6	214,878	230,342	6,335	27·5	699	110	2,779	12 6	2,883	12·5	13·1	1·03	1·14
RURAL DISTRICTS	454,164	·28	29,639	4·35	129,316	131,965	3,034	22·9	249	82	1,530	11·5	1,552	11·7	13·5	0·82	0·59
WHOLE ADMINISTRATIVE COUNTY.	521,060	·66	76,236	4·5	344,194	362,307	9,369	25·8	948	101	4,309	11·8	4,435	12·2	13·3	0·95	0·94

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

Table VI. Causes of Death during the Year 1913. URBAN DISTRICTS.

DISTRICTS.	Enteric Fever.	Small Pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Croup.	Influenza.	Erysipelas.	Phthisis (Pulmonary Tuberculosis).	Tuberculous Meningitis.	Other Tuberculous Diseases.	Cancer, Malignant Disease.	Rheumatic Fever.	Meningitis.	Organic Heart Disease.	Bronchitis.	Pneumonia (all forms).	Other Diseases of Respiratory Organs.	Diarrhœa and Enteritis.	Appendicitis & Typhlitis.	Cirrhosis of Liver.	Alcoholism.	Nephritis and Bright's Disease.	Puerperal Fever.	Other Accidents and Diseases of Pregnancy and Parturition.	Congenital Debility and Malformation, including Premature Births.	Violent Deaths, excluding Suicides.	Suicides.	Other Defined Diseases.	Diseases ill-defined or unknown.	All Causes.
MANSFIELD ..	2	..	3	1	3	2	5	1	30	6	15	32	3	5	45	40	42	4	42	4	3	1	11	2	4	53	29	2	152	23	565
NEWARK	1	..	2	..	7	3	2	..	15	3	4	19	..	..	16	18	16	2	3	..	1	1	4	..	..	9	9	2	46	30	213
EAST RETFORD ..	..	..	..	..	1	3	2	1	3	1	5	17	..	5	20	12	12	3	3	..	3	1	5	..	..	12	3	..	59	..	171
ARNOLD	..	..	..	6	..	11	..	1	8	1	3	9	..	1	16	10	6	4	8	..	1	1	4	..	3	16	2	1	42	..	154
BEESTON	..	..	..	1	3	..	..	..	11	3	..	11	1	..	13	9	4	1	6	..	1	..	2	..	1	16	8	..	32	..	123
CARLTON	..	..	2	1	5	5	2	..	15	4	8	14	1	3	27	11	16	5	2	2	2	..	4	1	..	18	7	7	44	3	209
EASTWOOD	..	..	1	..	1	1	1	..	1	..	1	5	..	..	5	8	6	1	2	1	..	..	1	..	..	7	3	1	22	..	68
HUCKNALL TORKARD	..	..	..	1	3	2	..	1	8	2	5	13	..	..	24	21	20	..	11	..	2	1	7	..	1	25	7	1	54	20	229
HUTHWAITE ..	..	..	..	..	4	..	..	..	7	1	1	4	..	..	12	12	3	..	7	..	..	..	..	..	..	9	4	..	16	..	80
KIRKBY-IN-ASHFIELD ..	..	..	3	2	..	1	..	1	15	2	4	6	..	3	5	23	26	2	1	..	1	..	2	..	2	33	5	3	56	..	196
MANSFIELD WOODHOUSE ..	..	..	2	..	1	4	..	..	6	3	5	5	..	1	5	12	18	1	17	3	..	..	2	1	..	17	4	..	33	10	150
SUTTON-IN-ASHFIELD ..	2	..	2	..	2	4	2	..	11	2	3	14	1	4	26	15	25	3	19	1	2	1	..	..	2	22	8	1	97	2	271
WARSOP	2	..	6	2	1	2	1	..	..	1	2	4	..	..	6	8	7	4	5	..	..	..	1	..	..	10	5	1	9	..	77
WEST BRIDGFORD	1	..	..	..	1	..	2	..	6	1	..	15	..	..	17	6	3	..	1	1	1	..	6	..	2	7	2	2	23	13	110
WORKSOP	..	..	13	1	1	..	2	..	12	3	2	25	1	5	27	21	21	1	8	..	5	..	8	..	1	30	11	1	68	..	267
TOTAL	8	..	34	15	33	38	19	5	148	33	58	193	7	27	264	226	225	31	135	12	22	6	57	4	16	284	107	22	753	101	2,883

Table VII. Causes of Death during the Year 1913. RURAL DISTRICTS.

DISTRICTS.	Enteric Fever.	Small Pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Croup.	Influenza.	Erysipelas.	Phthisis (Pulmonary Tuberculosis).	Tuberculous Meningitis.	Other Tuberculous Diseases.	Cancer, Malignant Disease.	Rheumatic Fever.	Meningitis.	Organic Heart Disease.	Bronchitis.	Pneumonia (all forms).	Other Diseases of Respiratory Organs.	Diarrhœa and Enteritis.	Appendicitis and Typhlitis.	Cirrhosis of Liver.	Alcoholism.	Nephritis and Bright's Disease.	Puerperal Fever.	Other Accidents and Diseases of Pregnancy and Parturition.	Congenital Debility and Malformation, including Premature Birth.	Violent Deaths, excluding Suicides.	Suicides.	Other Defined Diseases.	Diseases ill-defined or unknown.	All Causes.
BASFORD	..	..	3	..	4	6	8	..	24	3	6	37	1	10	57	39	39	10	9	3	1	..	10	1	3	45	22	4	123	2	470
BINGHAM	..	..	..	..	2	2	5	..	11	..	..	19	..	2	27	12	12	..	6	1	1	1	3	..	1	6	3	..	58	6	178
BLYTH AND CUCKNEY	..	..	..	1	1	2	..	..	5	..	1	4	..	1	7	1	2	1	..	1	1	..	2	..	..	5	5	..	23	5	68
EAST RETFORD ..	1	..	..	..	..	1	2	..	20	..	..	10	..	..	21	17	7	..	..	..	2	..	4	..	1	7	4	2	43	39	181
LEAKE	1	..	1	..	..	..	..	..	3	1	..	5	..	..	3	1	2	..	1	..	..	..	2	..	..	..	1	..	21	..	42
MISTERTON	..	..	..	..	..	..	..	..	1	..	..	4	..	1	9	7	1	..	2	..	..	..	1	..	..	3	3	..	16	..	48
NEWARK	..	..	..	..	3	..	1	..	6	1	..	8	1	1	12	4	9	..	2	..	..	..	1	..	4	4	5	1	21	2	86
SKEGBY	..	..	..	..	2	1	..	..	5	1	..	6	..	2	7	2	9	..	4	..	..	..	3	..	1	8	4	..	41	..	96
SOUTHWELL ..	1	..	2	1	..	3	4	1	10	1	2	16	..	1	30	14	8	9	1	2	4	..	8	1	..	8	10	1	44	66	248
STAPLEFORD ..	..	..	..	..	2	..	3	..	3	..	3	7	..	2	19	13	6	3	13	..	..	2	1	..	2	13	3	..	26	10	131
Notts. Parishes administered by SHARDLOW ..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	4
TOTAL	3	..	6	2	14	15	23	1	89	7	12	116	2	20	193	110	95	23	38	7	9	3	35	2	12	99	61	8	417	130	1,552

Table VIII. NOTTINGHAMSHIRE. URBAN DISTRICTS.
Causes of, and Ages at Death during the Year 1913.

CAUSES OF DEATH.	Nett Deaths at the subjoined ages of "Residents" whether occurring within or without the District.								
	All Ages.	Under 1 year.	1 and under 2 yrs.	2 and under 5 yrs.	5 and under 15 yrs.	15 and under 25 yrs.	25 and under 45 yrs.	45 and under 65 yrs.	65 and upwards
All causes { Certified	2844	685	149	123	118	133	348	555	733
All causes { Uncertified ..	39	14	..	..	..	..	8	11	6
Enteric Fever	8	..	..	..	..	2	4	1	1
Small Pox	..	..	..	..	..	..	..	..	..
Measles	34	6	13	11	4	..	..	..	..
Scarlet Fever	15	..	..	10	4	1	..	..	..
Whooping Cough	33	9	16	7	1	..	..	..	..
Diphtheria and Croup ..	38	1	4	13	18	1	1	..	..
Influenza	19	..	..	..	..	2	4	3	10
Erysipelas	5	1	..	..	..	..	1	2	1
Phthisis (Pulmonary Tuberculosis)	148	2	2	3	6	32	75	23	5
Tuberculous Meningitis ..	33	6	8	7	4	5	3	..	..
Other Tuberculous Diseases ..	58	10	4	10	11	10	9	3	1
Rheumatic Fever	7	..	..	..	3	1	1	1	1
Meningitis	27	9	5	..	7	3	1	2	..
Organic Heart Disease ..	264	3	..	2	7	9	35	99	109
Cancer, malignant disease ..	193	..	..	2	..	2	20	115	54
Bronchitis	227	52	7	1	2	4	10	45	106
Pneumonia (all forms) ..	225	82	38	21	10	5	24	28	17
Other diseases of Respiratory Organs	31	1	..	4	1	..	5	10	10
Diarrhœa and Enteritis ..	135	97	22	5	1	1	2	2	5
Appendicitis and Typhlitis ..	12	..	..	1	2	1	4	4	..
Alcoholism	6	..	..	..	..	..	1	3	2
Cirrhosis of Liver	22	..	..	..	..	..	6	8	8
Nephritis and Bright's Disease	57	2	1	2	..	6	7	29	10
Puerperal Fever	4	..	..	..	..	1	3	..	..
Other accidents and diseases of Pregnancy & Parturition	16	1	..	..	..	2	13	..	..
Congenital Debility and Malformation, including Premature Birth	284	278	5	1	..	..	..	..	..
Violent Deaths, excluding Suicide	107	10	..	4	13	17	38	17	8
Suicides	21	..	..	..	..	5	6	10	..
Other Defined Diseases ..	753	107	23	19	23	23	80	148	330
Diseases ill-defined or unknown	101	22	1	..	1	..	3	13	61
All causes	2883	699	149	123	118	133	356	566	739

Table IX. NOTTINGHAMSHIRE. RURAL DISTRICTS. Causes of, and Ages at Death during the Year 1913.

CAUSES OF DEATH.	Nett Deaths at the subjoined ages of "Residents" whether occurring within or without the District.								
	All ages.	Under 1 year.	1 and under 2 yrs.	2 and under 5 yrs.	5 and under 15 yrs.	15 and under 25 yrs.	25 and under 45 yrs.	45 and under 65 yrs.	65 and upwards
All causes (Certified	1524	245	33	41	65	57	175	288	620
All causes (Uncertified ..	28	4	..	..	..	1	1	9	13
Enteric Fever	3	..	..	..	1	1	1	..	..
Small Pox	..	..	..	..	..	..	..	..	..
Measles	6	1	3	1	1	..	..	..	..
Scarlet Fever	2	..	..	1	1	..	..	..	..
Whooping Cough	14	10	1	2	1	..	..	..	..
Diphtheria and Croup	15	1	..	2	12	..	..	..	..
Influenza	23	1	..	..	1	..	2	8	11
Erysipelas	1	..	..	..	..	..	..	..	1
Phthisis (Pulmonary Tuberculosis)	89	1	1	..	8	21	38	16	4
Tuberculous Meningitis ..	7	1	..	5	1	..	..	..	..
Other Tuberculous Diseases ..	12	4	1	1	2	2	2	..	..
Rheumatic Fever	2	..	..	..	..	..	1	1	..
Meningitis	20	3	3	6	2	2	2	2	..
Organic Heart Disease ..	193	..	..	1	3	5	21	56	107
Cancer, malignant disease ..	116	..	..	1	..	..	12	51	52
Bronchitis	110	24	5	5	3	2	..	12	59
Pneumonia (all forms) ..	95	25	10	3	4	10	16	16	11
Other diseases of Respiratory Organs	23	..	..	3	4	..	4	2	10
Diarrhœa and Enteritis ..	38	24	4	2	1	..	..	2	5
Appendicitis and Typhlitis ..	7	..	..	..	3	2	..	1	1
Alcoholism	3	..	..	..	..	..	..	3	..
Cirrhosis of Liver	9	..	..	..	..	..	1	3	5
Nephritis and Bright's Disease	35	..	..	1	1	..	4	17	12
Puerperal Fever	2	..	..	..	..	..	2	..	..
Other accidents and diseases of Pregnancy & Parturition	12	2	..	..	..	1	9	..	..
Congenital Debility and Malformation, including Premature Birth	99	98	..	1	..	..	..	..	..
Violent Deaths, excluding Suicide	61	5	..	2	7	3	21	13	10
Suicides	8	..	..	..	..	1	2	3	2
Other Defined Diseases ..	417	41	4	4	8	7	33	81	239
Diseases ill-defined or unknown	130	8	1	..	1	1	5	10	104
All causes	1552	249	33	41	65	58	176	297	633

Table X. NOTTINGHAMSHIRE. WHOLE COUNTY.
Causes of, and Ages at Death during the Year 1913.

CAUSES OF DEATH.	Nett Deaths at the subjoined ages of "Residents" whether occurring within or without the District.								
	All Ages.	Under 1 year.	1 and under 2 yrs.	2 and under 5 yrs.	5 and under 15 yrs.	15 and under 25 yrs.	25 and under 45 yrs.	45 and under 65 yrs.	65 and upwards
All causes (Certified	4368	930	182	164	183	190	523	843	1353
All causes (Uncertified ..	67	18	..	..	..	1	9	20	19
Enteric Fever	11	..	..	..	1	3	5	1	1
Small Pox	..	..	..	..	..	..	..	..	..
Measles	40	7	16	12	5	..	..	..	..
Scarlet Fever	17	..	..	11	5	1	..	..	..
Whooping Cough	47	19	17	9	2	..	..	..	..
Diphtheria and Croup.. ..	58	2	4	15	30	1	1	..	..
Influenza	42	1	..	..	1	2	6	11	21
Erysipelas	6	1	..	..	..	..	1	2	2
Phthisis (Pulmonary Tuberculosis)	237	3	3	3	14	53	113	39	9
Tuberculous Meningitis ..	40	7	8	12	5	5	3	..	..
Other Tuberculous Diseases ..	70	14	5	11	13	12	11	3	1
Rheumatic Fever	9	..	..	..	3	1	2	2	1
Meningitis	47	12	8	6	9	5	3	4	..
Organic Heart Disease ..	457	3	..	3	10	14	56	155	216
Cancer, malignant disease ..	309	..	..	3	..	2	32	166	106
Bronchitis	337	76	12	6	5	6	10	57	165
Pneumonia (all forms) ..	320	107	48	24	14	15	40	44	28
Other diseases of Respiratory Organs	54	1	..	7	5	..	9	12	20
Diarrhœa and Enteritis ..	173	121	26	7	2	1	2	4	10
Appendicitis and Typhlitis ..	19	..	..	1	5	3	4	5	1
Alcoholism	9	..	..	..	..	..	1	6	2
Cirrhosis of Liver	31	..	..	..	..	..	7	11	13
Nephritis and Bright's Disease	92	2	1	3	1	6	11	46	22
Puerperal Fever	6	..	..	..	..	1	5	..	..
Other accidents and diseases of Pregnancy & Parturition	28	3	..	..	..	3	22	..	..
Congenital Debility and Malformation, including Premature Birth	383	376	5	2	..	..	..	..	..
Violent Deaths, excluding Suicide	168	15	..	6	20	20	59	30	18
Suicides	29	..	..	..	..	6	8	13	2
Other Defined Diseases ..	1170	148	27	23	31	30	113	229	569
Diseases ill-defined or unknown	231	30	2	..	2	1	8	23	165
All causes	4435	948	182	164	183	191	532	863	1372

Table XI. NOTTINGHAMSHIRE. URBAN DISTRICTS.

INFANT MORTALITY. 1913.

Nett Deaths from stated causes at various Ages under 1 Year of Age.

CAUSE OF DEATH.	Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-3 Months	3-6 Months	6-9 Months	9-12 Months	Total Deaths under 1 Year.
All causes { Certified	167	48	28	29	272	140	97	93	82	684
All causes { Uncertified	5	..	..	1	6	3	5	..	1	15
Small-pox	..	..	..	..	..	..	..	..	..	..
Chicken-pox	..	..	..	..	..	..	..	..	..	..
Measles	..	..	..	..	..	..	1	1	4	6
Scarlet Fever	..	..	..	..	..	..	..	..	..	..
Diphtheria and Croup	..	..	..	..	..	..	..	1	..	1
Whooping Cough	..	..	1	..	1	2	3	2	1	9
Diarrhœa	1	2	2	1	6	16	10	13	8	53
Enteritis	1	1	..	..	2	14	15	8	2	41
Tuberculous Meningitis	..	..	..	..	..	1	1	1	2	5
Abdominal Tuberculosis	..	..	..	..	..	3	1	3	1	8
Other Tuberculous Diseases	..	..	..	..	..	..	..	3	1	4
Congenital Malformations	16	5	2	..	23	4	..	..	2	29
Premature Birth	94	16	8	7	125	14	3	..	..	142
Atrophy, Debility and Marasmus ..	35	9	4	8	56	36	17	6	6	121
Atelectasis	5	2	..	..	7	..	..	..	..	7
Injury at Birth	6	..	..	..	6	..	..	..	..	6
Erysipelas	..	..	..	1	1	..	..	..	..	1
Syphilis	..	2	..	..	2	3	2	..	1	8
Rickets	..	..	..	..	..	..	..	..	..	..
Meningitis *(not Tuberculous)*	..	.	1	..	1	1	1	3	3	9
Convulsions	8	2	4	5	19	15	10	10	4	58
Gastritis	..	..	..	..	..	1	2	3	..	6
Laryngitis	..	..	..	..	..	..	1	..	..	1
Bronchitis	..	2	5	3	10	9	10	12	11	52
Pneumonia (all forms)	..	2	..	1	3	16	15	17	27	78
Suffocation, overlying	1	..	..	..	1	1	2	..	..	4
Other Causes	5	5	1	4	15	7	8	10	10	50
All Causes	172	48	28	30	278	143	102	93	83	699

Nett Births in the year { Legitimate, 6104. / Illegitimate, 231.

Nett Deaths in the year of { Legitimate Infants, 648. / Illegitimate Infants, 51.

Table XII. NOTTINGHAMSHIRE. RURAL DISTRICTS.

INFANT MORTALITY. 1913.

Nett Deaths from stated causes at various Ages under 1 Year of Age.

CAUSE OF DEATH.	Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-3 Months	3-6 Months	6-9 Months	9-12 Months	Total Deaths under 1 Year.
All causes — Certified	57	11	16	9	93	42	56	26	28	245
All causes — Uncertified	2	..	..	1	3	..	1	..	..	4
Small-pox	..	..	..	..	..	..	..	..	..	..
Chicken-pox	..	..	..	..	..	..	..	..	..	..
Measles	..	..	..	..	..	..	..	..	1	1
Scarlet Fever	..	..	..	..	..	..	..	..	..	..
Diphtheria and Croup	..	..	..	..	..	..	1	..	..	1
Whooping Cough	..	..	..	..	..	..	6	2	2	10
Diarrhœa	..	..	1	..	1	..	7	1	..	9
Enteritis	..	..	..	..	..	2	8	3	2	15
Tuberculous Meningitis	..	..	..	..	..	..	..	1	..	1
Abdominal Tuberculosis	..	..	..	..	..	..	1	..	1	2
Other Tuberculous Diseases	..	..	..	..	..	..	..	1	1	2
Congenital Malformations	1	2	2	..	5	1	..	1	..	7
Premature Birth	28	4	2	3	37	7	3	..	..	47
Atrophy, Debility and Marasmus	10	3	6	3	22	12	8	..	2	44
Atelectasis	3	..	..	..	3	..	..	..	..	3
Injury at Birth	4	..	..	..	4	..	..	..	..	4
Erysipelas	..	..	..	..	..	..	..	..	..	..
Syphilis	..	..	..	..	..	1	..	..	..	1
Rickets	..	..	..	..	..	..	..	..	..	..
Meningitis *(not Tuberculous)*	..	..	..	..	..	1	2	..	1	4
Convulsions	4	1	2	1	8	5	5	2	2	22
Gastritis	..	..	..	..	..	2	1	..	..	3
Laryngitis	..	..	..	..	..	..	..	..	..	..
Bronchitis	..	1	2	..	3	6	5	6	4	24
Pneumonia (all forms)	1	..	..	1	2	1	5	7	10	25
Suffocation, overlying	1	..	..	..	1	..	1	1	..	3
Other Causes	7	..	1	2	10	4	4	1	2	21
All Causes	59	11	16	10	96	42	57	26	28	249

Nett Births in the year { Legitimate, 2915. / Illegitimate, 119.

Nett Deaths in the year of { Legitimate Infants, 233. / Illegitimate Infants, 16.

TABLE XIII. NOTTINGHAMSHIRE. Abstract of Vital Statistics.

Year.	Estimated Population at the *middle* of the year.	Annual Increase of Population.	Persons per Acre.	Separate Families.	Persons per Family.	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 Transferable Deaths.	Death Rate corrected for Transferable Deaths, and for age and sex distribution.	Deaths from the Seven 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	·46	..	..	8007	33·9	147	4051	16·7	..	..	..
1893	240,026	3256	·46	..	..	7949	33·1	..	4087	17·0	..	..	..
1894	243,965	3939	·47	..	..	7747	31·7	130	3585	14·7	..	..	..
1895	248,060	4095	·48	..	..	8066	32·5	154	4128	16·6	..	..	..
1896	252,282	4222	·49	..	..	8154	32·3	138	3987	15·8	..	..	..
1897	256,667	4385	·5	..	..	8186	31·8	152	4115	16·0	..	..	1·7
1898	261,224	4557	·505	..	..	8117	31·0	151	4187	16·0	..	..	1·74
1899	265,952	4728	·51	..	..	8266	31·0	161	4375	16·4	..	..	2·01
1900	270,862	4910	·52	..	..	8292	30·6	160	4617	17·0	..	..	1·75
1901	275,971	5109	·53	59,114	4·6	8636	31·3	145	4139	14·9	..	14·3	1·79
1902	282,563	6592	·54	..	..	8920	31·5	138	4116	14·5	14·5	13·9	1·07
1903	289,001	6438	·55	..	..	9072	31·3	134	4146	14·3	13·9	13·3	1·20
1904	295,586	6585	·56	..	..	9379	31·7	139	4375	14·8	14·5	13·9	1·77
1905	302,321	6735	·57	..	..	8880	29·3	126	4451	14·7	14·8	14·2	1·70
1906	309,209	6888	·59	..	..	9088	29·3	121	4148	13·4	13·7	13·1	1·33
1907	316,355	7146	·60	..	..	8962	28·3	127	4479	14·1	14·3	13·7	1·42
1908	323,461	7106	·62	..	..	9818	30·3	119	4367	13·5	13·7	13 1	1·06
1909	330,831	7370	·63	..	..	9740	29·4	106	4324	13·0	13·3	12·7	0·97
1910	338,937	8106	·64	..	..	9554	28·2	110	4261	12·5	12·7	12·2	1·08
1911	345,930	6993	·66	76,236	4·5	9453	27·3	125	4435	12·8	13·1	12·5	1·98
1912	355,046	9116	·68	..	..	9213	25·9	93	4059	11·4	11·8	11·4	0·80
1913	**362,307**	**7261**	**·66**	..	..	**9369**	**25·8**	**101**	**4309**	**11·8**	**12·2**	11·8	**0·94**
For comparison—													
1913	England and Wales				..	..	23·9	109	..	13·7	..	13·4	
	96 Great Towns				..	..	25·1	117	..	14·3	..	14·7	
	145 Smaller Towns				..	..	23·9	112	..	12·8	..	13·0	
	England and Wales less the 241 Towns				..	..	**22·3**	**96**	..	**13·1**	..	**12·1**	

The Statistics for England and Wales are those published in the Quarterly Return of the Registrar-General for January, 1914. 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 75th Annual Report. The alterations, however, are usually very slight.

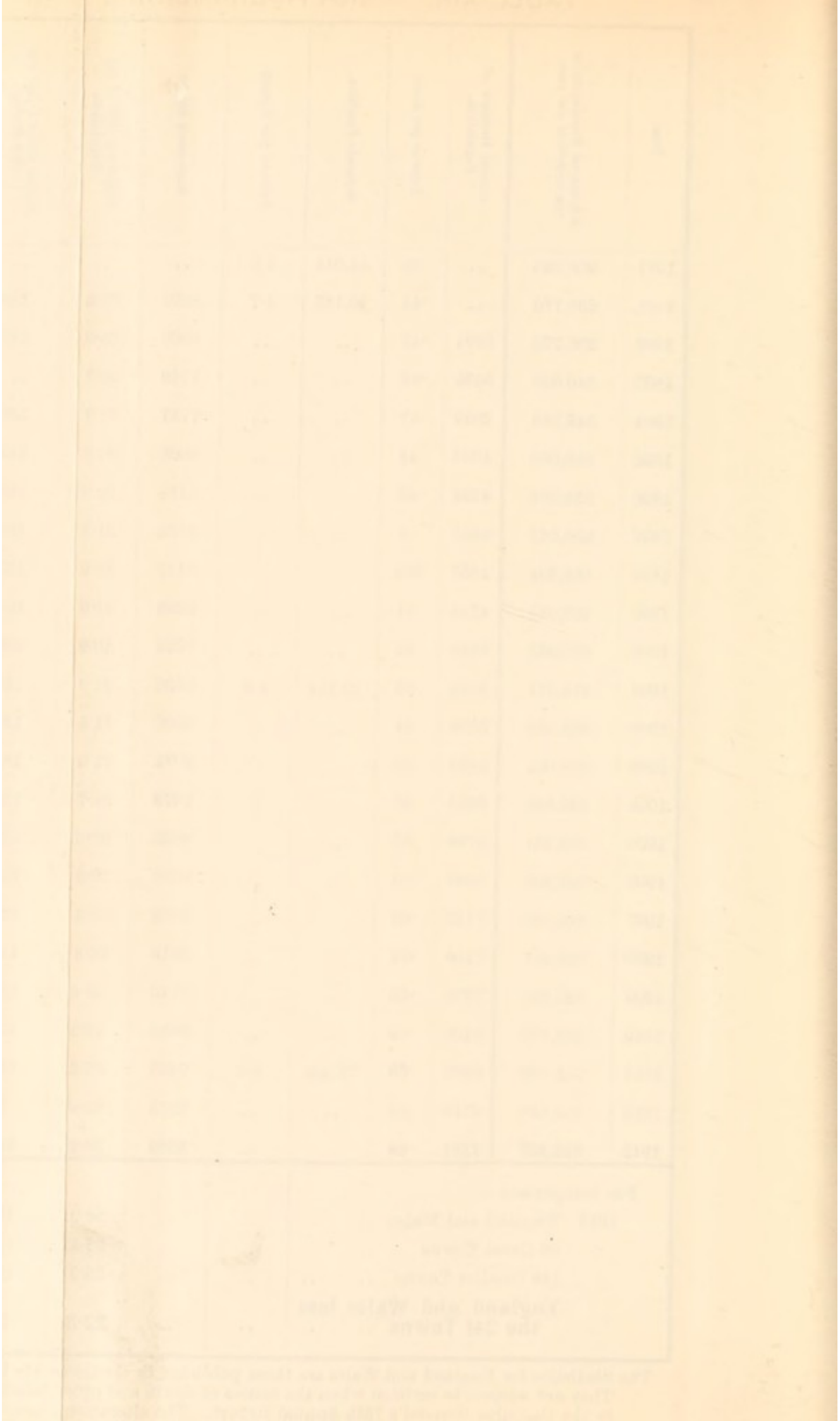


Table XIV. NOTTINGHAMSHIRE. RAINFALL.

DISTRICT.	Total depth in inches, 1913.	No. of Rainy Days, 1913.	Depth in inches, 1912.	No. of Rainy Days, 1912.	Depth in inches, 1911.	No. of Rainy Days, 1911.	Depth in inches, 1910.	No. of Rainy Days, 1910.	Depth in inches, 1909.	No. of Rainy Days 1909.	Depth in inches, 1908.	No. of Rainy Days, 1908.	Depth in inches, 1907.	No. of Rainy Days, 1907.	Depth in inches, 1906.	No. of Rainy Days, 1906.	Depth in inches, 1905.	No. of Rainy Days, 1905.	Depth in inches, 1904.	No. of Rainy Days, 1904.	Depth in inches, 1903.	No. of Rainy Days, 1903.	Depth in inches, 1902.	No. of Rainy Days, 1902.	Height of gauge above ground.	Height above Sea level.	STATION AND OBSERVER.
EAST RETFORD .. (Urban)	**22·81**	**170**	33·5	214	23·28	182	27·89	206	30·21	201	21·26	183	24·68	191	20·44	168	17·35	158	19·86	166	29·51	187	19·69	169	1 ft.	74 ft.	J. D. KENNEDY, Esq., Market Square, Retford.
BEESTON	**24·34**	**174**	33·89	202	21·99	173	29·61	195	28·56	188	25·54	185	27·75	193	26·47	185	20·44	184	21·65	174	35·00	203	21·84	190	9 ins.	206 ft.	F. ROTHERA, Esq., M.D., Manor House, Beeston.
EASTWOOD	**26·89**	**181**	38·74	221	22·06	185	..	..	28·62	205	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	**25·23**	**140**	35·52	178	19·29	140	25·86	166	27·22	162	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. S. MAYLAN, Selston Waterworks, near Annesley, Nottingham.
BASFORD	**23·66**	**165**	33·07	201	19·49	178	30·42	229	28·99	194	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	**21·91**	**138**	32·02	178	17·38	144	25·77	180	23·91	146	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.	Corporation Farm, Stoke Bardolph, Nottingham.
BASFORD	**23·72**	**160**	33·19	203	21·13	175	27·55	193	26·03	196	21·690	186	25·390	194	24·030	178	19·510	168	21·11	**174**	..	..	..	..	9 ins.	65 ft.	F. W. DAVIES, Esq., Burton Joyce Waterworks, Nottingham.
BLYTH & CUCKNEY	**22·34**	**164**	33·45	190	19·29	160	24·87	184	27·83	189	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)	**22·57**	**172**	31·65	212	21·4	183	26·66	..	27·88	..	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 ..	**23·44**	**174**	30·91	206	19·93	185	26·12	219	27·18	214	21·10	198	..	..	..	..	..	..	..	..	..	..	..	..	1 ft.	131·27 ft.	H. HANDFORD, Esq., M.D., Southwell.
KINGSTON & RATCLIFFE ..	**22·01**	..	29·06	185	18·01	156	26·56	204	25·29	218	21·08	181	22·76	183	21·26	165	..	..	..	..	..	..	..	..	..	..	J. DUNLOP, Esq., Midland Agricultural & Dairy College, Kingston, Derby.