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Leicestershire County Council.

ANNUAL REPORT

OF THE

Medical Officer of Health

FOR THE YEAR 1918.

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Officers of the Medical Department 1918.

T. ROBINSON, M.R.C.S., L.R.C.P., D.P.H. (Camb.)

County Medical Officer of Health.

Chief School Medical Officer.

Chief Tuberculosis Administrative Officer.

Tuberculosis Medical Officer:

J. T. CROWE, L.S.A. (Lond.), L.M.S.S.A. (Lond.)

Assistant:

* N. A. COWARD, M.D., CH.B. (Edin.), D.P.H. (Oxon.)

Assistant School Medical Officers:

* J. ARNOLD FAIRER, M.D., CH.B., D.P.H. (Man.)

* L. T. CHALLONER, M.R.C.S., L.R.C.P.

Health Visitors, School Nurses, Tuberculosis Inspectors
and Inspectors of Midwives:

AMES, Miss A., (Castle Donington District).

% ASBERY, Miss M. J., (Ashby-de-la-Zouch District).

% BRADLEY, Miss A. E. (Hinckley District).

BRUNSDON, Mrs. P., (Market Harborough District).

% † BURGESS, Miss M.

FLETCHER, Mrs. S. (Lutterworth District).

% † HUGHES, Miss S.

% REID, Miss A. M., (Melton Mowbray District).

SHAW, Miss M. (Market Bosworth District).

% SNAPE, Miss L. E. (Markfield District).

% WARREN, Mrs. A. (Loughborough District).

WRIGHT, Mrs. A. E. (Billesdon District).

These Officers are Trained Nurses and hold the Certificate of the Central Midwives Board. Those marked % hold the Sanitary Inspectors Qualifying Certificate also.

Chief Clerk:

* A. W. OAKEY, C.R.S.I.

* On National Service.

† On National Nursing Service.

The County
Sanitary and Housing Committee,
1918.

CHARLES GOODACRE, Esq. (Chairman).

(Later) J. W. BLACK, Esq. (Chairman).

Cope, T. (*ex-officio*)
Dalglish, R. (*ex-officio*)
Eggington, W.
Forsell, J. T.
Goodman, J. A.
Hill, W. F.
Hubbard, Beeby
Hayr, W. T.
Kinton, G.
McCarthy, M.

Murray-Baillie, F. D.
Parsons, C. H.
Pickard, A.
Pochin, V. R.
Sanders, J. W.
Stubbs, W.
Topham, L. T.
Turville-Petre, O. H.
Whitwell, H. J.
Wilson, C.

REPORT
December. 1919.

Mr. Chairman, My Lord Duke, and Gentlemen,

I have the honour to present my Twenty-first Annual Report on the health of Leicestershire—that for the year 1918.

The Birth Rate of 16'9 is a new low record but is only very slightly below that of the previous year. The Death Rate is the highest for many years—the chief cause of the increase being Influenza.

The one outstanding and gratifying feature of the Report is the favourable Infant Mortality Rate. This for the year is 79 per 1,000 births, which compares with 97 per 1,000 births for England and Wales.

The Death Rates from the seven principal Zymotic Diseases were generally favourable; that from Scarlet Fever being exceptionally so, as there were only two deaths in the whole county during the year.

The number of deaths from Phthisis (301) shows a considerable increase over the average for the previous five years (242). The number of notifications was less, but this return is totally unreliable.

I have the honour to be,

Mr. Chairman, My Lord Duke, and Gentlemen,

Your obedient servant,

T. ROBINSON,

County Medical Officer.

17 Friar Lane,

Leicester.

REPORT.

Area.—The Area of the Administrative County at the Census of 1911 was 524,197 acres. Of this area the Urban Districts comprise 39,801 acres and the Rural 484,396.

Statistics.—A summary of the chief statistical information relating to the Urban and Rural Districts and the County as a whole, is given below. The respective returns for Rural England and Wales are given as a comparison.

All the rates are calculated per thousand of the estimated population, with the exception of the Infant Mortality rate, which is calculated per thousand registered net births.

The system of enquiry as to the transferable death returns remains the same, whereby a correct record of deaths of persons actually belonging to the County—and each individual Parish—is ensured.

CHIEF STATISTICS.—SUMMARY.

		LEICESTERSHIRE COUNTY, 1918.						ENGLAND AND WALES, 1918.		
		Urban.		Rural.		Whole County.				
		No.	Rate.	No.	Rate.	No.	Rate.	Rates.		
Population (for Birth-rate)		107,281		148,048		255,329		—		
Population (for Death-rate)		95,747		132,131		227,878		—		
Births		1811	16·88	2515	17·00	4326	16·94	17·7		
Deaths (all causes and all ages)		1548	16·17	2224	16·83	3772	16·55	17·6		
* „ (under one year)		153	*84·	187	*74·	340	*79·	97·		
„ (total Zymotic)		70	0·73	108	0·82	178	0·77	—		
Deaths from—										
The seven principal Zymotic Diseases.	Small Pox	0	0·0	0	0·0	0	0·0	0·0		
	Enteric Fever	1	0·01	6	0·04	7	0·03	0·03		
	Measles	15	0·16	36	0·26	51	0·22	0·28		
	Whooping Cough	22	0·23	31	0·23	53	0·23	0·29		
	Diphtheria	20	0·21	19	0·14	39	0·17	0·14		
	Scarlet Fever	2	0·02	0	0·00	2	0·009	0·03		
*†Diarrhoea (under 2 years)		10	*5·52	16	*6·36	26	*6·01	10·99		
								†Percentage of Total Deaths.		
								Urban.	Rural.	County.
The five chief causes of Death.	Influenza	321	3·35	542	4·10	863	3·78	20·74	24·37	22·88
	Phthisis	135	1·41	166	1·26	301	1·32	8·73	7·46	8·00
	Heart Disease	98	1·02	191	1·45	289	1·27	6·33	8·59	7·66
	Pneumonia	138	1·44	146	1·10	284	1·24	8·91	6·56	7·52
	Cancer	104	1·08	171	1·29	275	1·21	6·72	7·69	7·29

NOTES.—The Rates are calculated per thousand of the population except where marked (*) which are per thousand registered births.

† The Diarrhoea Rates per thousand of the population are : Urban, 0·10 ; Rural, 0·12 ; whole County, 0·11.

‡ Rates based upon the total number of deaths are much lower than they normally would be because of the inflated return on account of Influenza and Pneumonia.

The principal feature of this return is that all the rates, with the exception of Diphtheria and the Birth rate, are better than the respective rates for England and Wales.

Diphtheria for several years has been relatively higher in Leicestershire as compared to the rest of the country. More cases of Diphtheria occurred in the north-western portion of the County, and here the deaths from this disease are higher. This area for years past has always had a greater proportion of cases.

The rate for 1917 was 0.14 as against the rest of the country 0.13. This year the rate is 0.17 as against the rest of the country 0.14, so that although the country rate has increased 0.01 per 1,000, the rate for Leicestershire has increased 0.03 per 1,000.

The Birth rate will be seen to be 16.94 per 1,000 compared to 17.7 for England and Wales, a difference of 0.76 per 1,000. Compared with last year's return the Birth rate is lower by only 0.26 per 1,000 (in 1917 it was lower by 2.5), and this decrease occurs nearly entirely in the Urban Districts, as the Rural District Birth rate for 1917 and 1918 is practically the same.

The Death rate has risen 3.55—a marked increase from the rise of 0.4 of 1917. This has been entirely caused by the Influenza epidemic, which was responsible for nearly 23 per cent. of the total deaths of the County. To some extent must be added Pneumonia, which occasioned a further 7.5 per cent. of the total deaths, doubtless many of these cases being sequelæ of Influenza.

The Death rate from Phthisis has again advanced the rate, being 1.32 against 1.20 for 1917. The number of deaths totalled 301, being 24 more than last year.

The most gratifying feature of the whole Report is the much-reduced Infant Mortality rate as compared to the rate for England and Wales. The figures are—Rate for Leicestershire 79, against 97 for England and Wales.

Population.—The Registrar-General has again supplied two estimates for the population—one for calculating the Birth rate and the other for arriving at the Death rate. The former is an estimate of the total population based on the assumption that the ratio between total and civilian populations is the same in the sanitary areas as it is in England and Wales as a whole, whilst the latter is the estimated civilian population of the various Sanitary Districts in 1918. The respective figures are 255,329 and 227,878.

The following Table shows the population for each of the last five years, and it will be seen that the natural increase (*i.e.*, the number of births in excess of deaths) of the population in the County is only 554, compared with 1,425 for 1917. The average

natural increase of the previous four years is 2,070. This fall is practically entirely caused by the increased number of deaths produced by the Influenza epidemic.

YEAR	URBAN			RURAL			COUNTY		
	Populat'n Estimated	Incr. + or Dec - over prev. year	Natural Incre'se	Populat'n Estimated	Incr. + or Dec - over prev. year	Natural Incre'se	Populat'n Estimated	Incr. + or Dec - over prev. year	Natural Incre'se
1914	105,057	+ 995	1108	151,933	+ 1220	1329	256,990	+ 2215	2437
1915	102,787	-2270	966	146,320	-5613	1190	249,107	-7883	2156
1916	99,909	-2878	1086	140,311	-6009	1179	240,220	-8887	2265
1917	97,082	-2827	674	134,213	-6098	751	231,295	-8925	1425
1918	95,747	-1335	263	132,131	-2082	291	227,878	-3417	554

Births.—The total number of births registered in the County during the year was 4,326, 1,811 being in the Urban and 2,515 being in the Rural Districts. The respective rates were:—County 16·94, Urban 16·88, and Rural 17·0. As previously noted, the Birth rate, compared to the rate for England and Wales, shows a fall of 0·76 per 1,000. A comparison with last year's return shows that the Birth rate for the County is lower by only 0·26, and this decrease occurs chiefly in the Urban areas. There were 107 fewer births this year than in 1917; the Urban Districts showing a decrease of 79, and the Rural of 28.

YEAR	URBAN		RURAL		COUNTY		Rate for Rural Englnd and Wales.
	Net No. Registered	Rate	Net No. Registered	Rate.	Net No. Registered	Rate.	
1914	2404	22·8	3196	21·0	5600	21·8	22·2
1915	2369	23·0	3105	21·2	5474	22·0	20·7
1916	2270	21·1	3027	22·9	5297	19·7	17·8
1917	1890	17·5	2543	17·0	4433	17·2	17·8
1918	1811	16·9	2515	17·0	4326	16·9	17·7

Deaths.—The total deaths from all causes, at all ages, is 3,772, giving a rate of 16·55 against 17·6 for England and Wales. On comparing the following Table it will be seen that there were 764 more deaths in 1918 than in the previous year, hence the Death rate for the County is higher than in 1917—16·55, against 13·0—a difference of 2·55. The Death rate, however, of England and Wales has risen in the corresponding period from 14·4 to 17·6—a difference of 3·2. Hence the County Death rate compares favourably with that of England and Wales, the whole country having been swept by the virulent outbreak of Influenza, which accounted for the marked universal increase of deaths.

The three chief causes of death in 1917 were Heart Disease (to which 10·5 per cent. of the total deaths were due), Cancer (8·5 per cent.), and Pulmonary Tuberculosis (9 per cent.). To these three chief causes of death have been added this year two others, viz., Influenza and Pneumonia, which together caused 30·4 per cent. of the total deaths.

In order, the chief causes of death in 1918 were:—Influenza 22·9 per cent., Pulmonary Tuberculosis 8 per cent., Heart Disease 7·7 per cent., Pneumonia 7·5 per cent., Cancer 7·3 per cent.

YEAR	URBAN.		RURAL.		COUNTY.		Rate for Rural Engl'nd and Wales.
	Net No. Registered	Rate	Net No. Registered	Rate	Net No. Registered	Rate	
1914	1296	12·3	1867	12·3	3163	12·3	12·4
1915	1403	13·6	1995	13·8	3398	13·7	13·6
1916	1184	11·8	1858	13·1	3042	12·6	14·0
1917	1216	12·5	1792	13·3	3008	13·0	14·4
1918	1548	16·2	2224	16·8	3772	16·6	17·6

The analysis of Mortality for England and Wales is shown on the following page for comparison.

Birth-rate, Death-rate, and Analysis of Mortality during the Year 1918.
(Provisional figures, Populations estimated to the middle of 1918 have been used for the purposes of this Table.)

	BIRTH- RATE PER 1,000 TOTAL POPULA- TION.	ANNUAL DEATH RATE PER 1000 CIVILIAN POPULATION.							RATE PER 1000 BIRTHS.		
		All Causes.	Enteric Fever.	Small-Pox.	Measles	Scarlet Fever.	Whooping cough.	Diphtheria.	Violence	Diarrhoea and Enteritis (under 2 Years).	Total Deaths under One Year.
England and Wales	17.7	17.6	0.03	0.00	0.28	0.03	0.29	0.14	0.49	10.99	97
96 Great Towns, including London - (Census Populations exceeding - 50,000).	17.6	18.2	0.02	0.00	0.36	0.04	0.34	0.15	0.49	14.46	106
148 Smaller Towns (Census Popula- tions 20,000—50,000)	17.9	16.1	0.03	—	0.25	0.02	0.25	0.14	0.38	9.73	94
London	16.1	18.9	0.02	—	0.42	0.03	0.43	0.16	0.56	15.67	107
Leicestershire	16.94	16.55	0.03	0.00	0.22	0.009	0.23	0.17	0.30	6.01	79

Zymotic Diseases.—In the last two years—1916 and 1917—there was a decrease in the number of deaths, but the improvement has not been maintained. The number of deaths from Zymotic Diseases has risen to 178, against 132 and 130 in the years 1916 and 1917 respectively. The Zymotic Death rate this year is 0·8, against 0·6 in 1917. This increase is chiefly due to more deaths occurring from Measles (51 against 36), and Whooping Cough (53 against 27), compared with the previous year. The record for the quinquennium is given below:—

YEAR	URBAN.		RURAL.		COUNTY.		Rate for Rural England and Wales
	No.	Rate.	No.	Rate.	No.	Rate.	
1914	95	0·9	84	0·6	179	0·7	0·8
1915	125	1·2	96	0·6	221	0·9	0·9
1916	51	0·5	81	0·5	132	0·5	..
1917	57	0·6	73	0·5	130	0·6	..
1918	70	0·7	108	0·8	178	0·8	..

Infantile Mortality.—The Infantile Mortality rate for the County is particularly gratifying. Whilst not as low as in 1916, it is 2 per thousand lower than last year, and the figure (79) for Leicestershire compares favourably with the figure (97) for the rest of the country. With the exception of the year 1916, this is the lowest record for the County. It is a matter for congratulation that the rate is 18 lower than that of England and Wales.

YEAR	URBAN		RURAL		COUNTY		Rate for Rural England and Wales.
	No.	Rate	No.	Rate	No.	Rate	
1914	245	102	264	83	509	91	93
1915	241	102	289	93	530	97	..
1916	165	62	209	69	374	71	91
1917	157	83	203	80	360	81	97
1918	153	84	187	74	340	79	97

Infectious Diseases Notifications.—The Schedule below gives the numbers of each disease notified in the Urban and Rural Districts with totals for the County during the year under review. To last year's list a new disease has been added, viz., Para-Typhoid Fever, of which only one case has been notified in the County.

DISEASE.				URBAN DISTRICTS.	RURAL DISTRICTS.	ADMINIS- TRATIVE COUNTY.
Notification Act.	Diphtheria (including Membranous Croup) ..	121	137	258		
	Erysipelas	32	42	74		
	Scarlet Fever	184	119	303		
	Enteric Fever	6	22	28		
	Continued Fever	—	—	—		
	Puerperal Fever	1	1	2		
	Chicken Pox	10	19	29		
	Impetigo	—	—	—		
Public Health Act.	Measles	1405	2235	3640		
	German Measles	44	92	136		
	Tuberculosis (Lungs) ..	176	179	355		
	Ditto (other forms) ..	23	22	45		
	Ophthalmia Neonatorum ..	4	4	8		
	Poliomyelitis	—	2	2		
	Cerebro Spinal Meningitis ..	1	—	1		
	Paratyphoid Fever	—	1	1		
TOTALS	Notification Act	354	340	694		
	Public Health Act	1653	2535	4188		
GRAND TOTALS ..				2007	2875	4882

Small-Pox.—During the year no case of Small-Pox has been notified. The two Small-Pox Hospitals belonging to the Leicestershire Small-Pox Hospital Committee, at Snarestone and Syston, are kept in absolute readiness to receive patients at practically a moment's notice.

Scarlet Fever.—The statistical information relating to Scarlet Fever is as follows:—

AREA.	No. of Notifications.	No. of Deaths.	Attack rate.	Case fatality percent	Death rate.	Death rate for Rural England and Wales.
Urban Districts	184	2	1'92	1'08	0'02	} 0'03
Rural Districts	119	0	0'90	..	0'00	
Whole County, 1918 ..	303	2	1'33	0'66	0'009	
Last 10 years' average ..	560	12	2'0	2'1	0'05	

There were only 303 notifications, a decrease of 63 on last year, when an epidemic at Lutterworth accounted for 81 cases. Only 2 deaths occurred this year, and both of these were reported from the Urban Districts. The type of disease was exceptionally mild, and only three schools were closed on its account in the County. The greatest number of cases was notified from the Market Harborough Urban District, where 109 cases occurred (a percentage of practically 36 of the whole County).

In Market Harborough, Scarlet Fever which had occurred sporadically from January until the end of July at the rate of 1 a month in this area, became epidemic during August, and extended through September to the end of November. Although the Medical Officer of Health reports that it was a mild type of attack throughout, yet, with the number of cases, it is gratifying to note that only one death occurred amongst the 109 affected. The County Death rate compares exceptionally well with the rate for England and Wales.

Diphtheria and Croup.—The following Table gives the statistics of the disease:—

AREA.	No. of Notifica- tions.	No. of Deaths.	Attack rate.	Case fatality percent.	Death rate.	Death rate for Rural England and Wales.
Urban Districts	121	20	1.26	16.6	0.21	0.14
Rural Districts	137	19	1.03	13.8	0.14	
Whole County, 1918 ..	258	39	1.13	15.11	0.17	
Last 10 years' average ..	345	37	1.38	10.38	0.18	

The Diphtheria mortality rate for Leicestershire has always been higher than the rate for the rest of the Country.

The deaths numbered 39, an increase of 5 on last year's return, whilst the number of cases notified totalled 258, being 38 more than in 1917. For some years the Diphtheria mortality has been comparatively high, and this year has been no exception, the Death rate being 0.17, against 0.14 for Rural England and Wales.

As was the case last year, the highest number of deaths (11) occurred in the Coalville area, and this district suffered the same number of deaths in 1917. Six deaths were recorded in Barrow Rural and 3 in Thurmaston Urban Districts.

Two deaths occurred in each of the following Districts:—Melton Urban, Loughborough Rural, Ashby Rural, Lutterworth Rural, and Melton Rural.

The remaining 9 deaths were single ones in different districts. The majority of the deaths (28 out of the 39 cases, or 71.8 per cent.) occurred between the ages of 5 and 15, only 1 being over 15, whilst the remaining 10 were under 5 years of age.

The statement that this disease is more fatal to females than males is confirmed by the statistics of Leicestershire, where 22 deaths occurred of the former against 17 of the latter, again last year the deaths were 21 to 13.

Erysipelas.—Seventy-four cases of this disease were notified in the County showing a decrease of 6 from last year. Forty-two cases occurred in the Rural and 32 in the Urban Districts, with only 1 fatality.

Typhoid Fever.—The statistics relating to Typhoid Fever are given below:—

AREA.	No. of Notifications.	No. of Deaths.	Attack rate.	Case fatality percent.	Death rate.	Death rate for Rural England and Wales.
Urban Districts	6	1	0'06	16'6	0'01	} 0'03
Rural Districts	22	6	0'16	27'2	0'04	
Whole County, 1918 ..	28	7	0'12	25'0	0'03	
Last 10 years' average ..	65	11	0'31	16'6	0'04	

Twenty-six cases were notified last year with 6 deaths. This year 7 deaths occurred in the 28 cases notified, hence there is a slight rise in the case fatality per cent., but the Death rate remains the same for both years, viz., 0'03, which corresponds identically with the Death rate for England and Wales from this disease.

The deaths occurred in the following districts, Ashby Urban, Ashby Rural, and Hinckley Rural (1 in each), and 4 in the Rural District of Blaby. The County Death rate from this disease shows a satisfactory improvement on the decennial average.

Puerperal Fever.—The available statistics for Puerperal are as follows:—

AREA.	No. of Notifications.	DEATHS.				Case fatality per cent.
		No.	RATE.			
			Per 1000 births.	Per 1000 of popula- tion.		
Urban Districts	1	1	0'55	0'01	100'00	
Rural Districts	1	3	1'19	0'02	..	
Whole County 1918 ..	2	4	0'92	0'017	..	
Last 10 years' average ...	9	5	0'86	0'02	55'5	

Several of the cases of this disease have not been notified, as there are 4 deaths reported and only 2 notifications received. Hence a correct case fatality cannot be given, and the above return is not dependable, and is not capable of comparison. Strict supervision prevails as regards all certified midwives in cases of this disease. Inquiries are made at once from the County Health Department immediately such a case is notified to ascertain whether a certified midwife has been in attendance, and, if so, whether she was in any way culpable for the development of the disease. This year, as also last year, no action was taken against any midwife.

Tuberculosis.

AREA.	No. of Notifications.		No. of Deaths.		Case fatality per cent.		Attack rate.		Death rate.	
	Lungs	Other	Lungs	Other	Lungs	Other	Lungs	Other	Lungs	Other
Urban Districts ..	176	23	135	19	76.7	82.6	1.8	0.2	1.4	0.24
Rural Districts ..	179	22	166	22	92.7	100.0	1.3	0.17	1.2	0.16
Whole County 1918	355	45	301	41	84.8	91.1	1.5	0.19	1.3	0.18
Last 5 years' aver.	409	97	238	73	58.1	75.2	1.7	0.39	0.9	0.3

Pulmonary Tuberculosis alone is responsible for 8 per cent of the total deaths of the County, and ranks second this year in the diseases responsible for the highest number of deaths from any defined cause. This is a decrease of 1 per cent. on the previous year, yet this year the number of deaths from Phthisis is greater than in 1917. This decrease in percentage with an increase of deaths is due to the marked total increase of deaths this year consequent on the Influenza epidemic; the actual Tuberculosis Death rate having risen from 1.2 to 1.32 per 1,000 of the County population in the two years under review. Hence the deaths from Phthisis are slowly, as in previous years, but steadily, increasing; the case incidence and the mortality is higher amongst the males than the females. The deaths number 301, of which 160 occurred in the male and 141 in the female population.

The occupations of 300 notifications of Pulmonary Tuberculosis were ascertained to be as follows:—

Trade or Occupation.	No.	Trade or Occupation.	No.	Trade or Occupation.	No.
Domestic Duties	75	Ironworkers ..	4	Painters ..	1
Hosiery Workers	57	Blacksmiths ..	4	Travellers ..	1
School Children ..	53	Teachers ..	4	Dental Mechanics	1
Shoe Operatives	27	Bricklayers ..	4	Tailors ..	1
Miners ..	27	Quarrymen ..	3	Postmen ..	1
Shop Assistants...	9	Bakers ..	2	Signalmen ..	1
Clerks ..	7	Gardeners ..	2	Plumbers ..	1
Engineers ..	6	Tailoresses ..	2		
Butchers ..	5	Turners ..	2	Total ..	300

It will be seen that after housewives and scholars, hosiery workers head the list; Pulmonary Tuberculosis occurs amongst them at a rate more than double that of either miners or boot operatives.

As there were 355 cases notified of Pulmonary Tuberculosis and 301 deaths, the ratio of notifications to deaths was as 1·17 to 1.

The following Table gives a complete summary of the year's notifications, differentiating Pulmonary from non-Pulmonary Tuberculosis, and showing sex and age distribution.

NOTIFICATIONS OF TUBERCULOSIS

During the period Jan. 1st to Dec. 31st, 1918.

AGE PERIODS.	PRIMARY NOTIFICATIONS.											Total Notifications (including cases previously notified by other doctors.)	
	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 up- wards		Total
Pulmonary													
Males ..	..	5	13	13	27	26	41	33	15	2	5	180	192
Females ..	..	3	16	9	18	33	44	22	7	1	3	156	163
Non-Pulmonary													
Males ..	1	5	4	1	2	1	1	1	1	..	..	17	17
Females ..	..	9	2	3	5	2	4	2	..	..	1	28	28
Total ..	1	22	35	26	52	62	90	58	23	3	9	381	400

It will be noted that of the 381 primary notifications 204 (or 53 per cent.) occurred between the ages of 15 and 35, showing that Tuberculosis is chiefly encountered in the most strenuous working period of life. Twenty-two per cent. of the notifications occurred

in children under 15, 22 per cent. between the ages of 35 and 55, whilst only 3 per cent. occurred in persons over the latter age.

The treatment of persons suffering from Pulmonary Tuberculosis is undertaken by the County Council in their own Institutions, which are all situated in the County.

The Sanatorium is at Mowsley, near Market Harborough, where there is accommodation for 50 patients. Here adults and children of both sexes are treated. There is no out-patient department at Mowsley. Out-patient departments, however, are attached to the two residential dispensaries at Hinckley and Coalville.

These residential observation dispensaries have accommodation for 22 male patients at Hinckley, and 8 female patients at Coalville.

There are additional out-patient departments at Leicester, Loughborough, and Melton Mowbray.

In all, 368 new patients were visited by the County Health Visitors, and 194 subsequent visits were made making a total of 562 visits for the year.

The main object of the visits is to instruct the patient in carrying out in every detail the orders of the doctor in attendance. Advice is given to the patient as to the necessity of proper ventilation, etc., and especially with regard to the prevention of the spread of infection to other members of the household.

STATEMENT OF WORK carried out in connection with the Institutional
Treatment of Tuberculosis during the period from 1st Jan. 1918, to the
**31st Dec 1918, and sundry particulars in connection with the scheme of
treatment.**

I.—DISPENSARIES.

Situation of Dispensary stating whether main or branch Dispensary) or Visiting Station.	Number of persons, including contacts, who were examined for the first time during the period from 1st January, 1918, to the 31st December, 1918, at or in connection with the Dispensary or visiting Station and were :—			Number of persons diagnosed to be suffering from Tuberculosis who were treated or supervised at or in connec- tion with the Dispensary or visiting Station during the year.	
	Diagnosed as suffering from Tuberculosis.	Total number Examined		Insured	Uninsured
		Insured	Uninsured		
Coalville, Residential and Visiting	47	33	14	97	44
Hinckley, Residential and Visiting	51	41	10	101	16
Melton Mowbray, Visiting only	35	24	11	50	31
Loughborough, Visiting only	53	37	16	85	22
Leicester, Visiting only	90	69	21	136	42
Totals	276	204	72	469	155

**II.—SANATORIA, HOSPITALS, AND OTHER RESIDENTIAL INSTITUTIONS, FOR THE TREATMENT OF
PULMONARY TUBERCULOSIS (including Observation Beds at Dispensaries.)**

(1) Name and Situation of Institution.	(2) Number of Beds available for patients sent by the Council.	(3) Number of Patients who were sent by the Council during the year ended December 31st, 1918.		(5) Number of Patients sent by the Council who were discharged from or died in the Institution during the year ended 31st December, 1918.		(7) Total number of days during which the Patients referred to in columns 5 and 6 had been resident in the Institution.		(9) Average number of days which the Patients referred to in columns 5 and 6 were resident in the Institution.		(11) Number of Patients sent by the Council who were under treatment on the 31st Dec., 1918.	
		Insured	Uninsured	Insured	Uninsured	Insured	Uninsured	Insured	Uninsured	Insured	Uninsured
Mowsley Sanatorium, North Kilworth, Rugby	50*	96	9	95	9	9,581	1117	101	124	25	2
	..	..	24	..	28	..	5728	..	204.5	..	12
Hinckley Residential Dispensary, Manor House, Bond St., Hinckley	22	93	6	92	6	4280	225	46.5	37.5	11	..
	...	..	17	..	15	..	872	...	58	...	2
Coalville Residential Dispensary, Bakewell St., Coalville, Leicester	8	29	14	30	14	1396	775	46.5	55	3	1
	..	..	9	..	9	...	387	..	43	..	3
Totals ..	80*	218	79	217	81	15,257	9,104	..	..	39	20

Number of Shelters provided by the Council up to 31st December, 1918, for lending out to patients for use at their homes, 40. (* 10 being in Shelters.)

The Health Visitor gives advice on home nursing, the improvisation of a separate bed for the sufferer, the necessity of good food, clothing, and boots. A report is forwarded to the County Health Department stating the number of inmates in the house, the sleeping arrangements, number of occupants of the bedroom, etc. Any obvious defects in sanitation—bad drainage, and insufficient ventilation, etc.—are duly reported and steps are taken through the local Sanitary Authorities to remedy such defects.

Every effort is made to keep in touch with patients on their return after leaving the Sanatoria to help them in their fight against the disease, and to see that the rules for the preservation of health and the prevention of infection which they have learnt at these Institutions are continued when at home. Many cases return much improved in health, but some, unfortunately, relapse because they neglect to continue at home the treatment and definite routine which they have been taught at the Sanatorium.

Ophthalmia Neonatorum.—Only 8 cases of this disease were notified—a welcome decrease from 14 of last year—4 occurring in the Urban and a similar number in the Rural Districts.

As soon as a case of this disease is notified, inquiries are instituted into its origin, and the County Health Visitors are immediately informed of the occurrence. Strict supervision is made of all certified practising midwives in reference to this disease, and action taken if necessary.

Measles.—This appended Table shows the statistics relating to Measles and also German Measles.

AREA.	Notifications.		Deaths.		Case fatality percent Measles	Death rate for R. England & Wales	Schools Closed.		
	Measles	German Measles	Measles	Rate.			No.	Average period	Children affected
Urban Districts ..	1405	44	15	0·16	1·06	0·28	76	3½	10844
Rural Districts ...	2235	92	36	0·26	1·61				
Whole County, 1918	3640	136	51	0·22	1·40				

These diseases were more prevalent than last year, there being 90 more cases and 15 more deaths. The increase entirely occurred in Measles (170 more notifications), German Measles falling from 216 cases to 136.

Although the Death rate rose from 0·16 last year to 0·22 in 1918, this latter figure is quite satisfactory when compared with the rate for England and Wales.

Whooping Cough.—Fifty-three deaths occurred from Whooping Cough. The particulars are as follows:—

AREA.	DEATHS.			SCHOOLS CLOSED.		
	Leicestershire.		Rate for England and Wales	No.	Average Period in Weeks.	Children Affected.
	No.	Rate.				
Urban Districts	22	0·23	0·29	23	3½	1596
Rural Districts	31	0·23				
Whole County 1918 ..	53	0·23				

The number of deaths is practically double that of last year (53 against 27), and as a result the Death rate has increased from 0·12 to 0·23. However, the Country Death rate has increased in a larger ratio—0·13 to 0·29. Hence the type of disease encountered this year has been of a more severe form both in Leicestershire and the rest of England.

The County Death rate (0·23) is quite satisfactory compared with that for England and Wales (0·29), and is relatively better than last year.

Diarrhoeal Diseases.

AREA.	DEATHS UNDER 2 YEARS OF AGE.			
	No.	Rate per 1000 population	Rate per 1000 Births.	England and Wales. Rate per 1000 Births.
Urban Districts	10	0·10	5·52	10·99
Rural Districts	16	0·12	6·36	
Whole County 1918 ..	26	0·114	6·01	

The deaths under 2 years of age were 73 in 1913, 72 in 1914, and decreased to 60 in 1915, and 27 in 1916. Last year the total was 25, whilst this year there are 26 deaths.

This marked improvement has been noted and persisted since 1915, and demonstrates the value of the work performed to diminish the prevalence of these infantile diseases, caused, as they are essentially, by unsuitable food, want of cleanliness in its preparation, storage, etc., and insanitary conditions.

This work has devolved on the County Health Visiting Staff, and it is gratifying to record such a marked improvement in the Death rate from infantile diarrhoeal diseases.

The organisation of Infant Welfare Centres throughout the County, and the value of their work on the protection and preservation of infant life, cannot be over-estimated. In all there were 53 deaths of all ages from Diarrhoeal Diseases, and of this total 25, or 47.1 per cent., were of babies (*i.e.*, under 1 year of age), of which 16 occurred in the males and 9 in the females.

Cerebro-Spinal Fever.—When a notice is received of a patient whose symptoms are suspicious of Cerebro-Spinal Fever, Dr. Mackarell—the bacteriologist specially appointed for the purpose by the County Council—is informed, visits and investigates the case. Should the diagnosis be Cerebro-Spinal Fever, examination is made, in conjunction with the Medical Officer of Health of the District, of all contacts.

Although only one notification was received during the year under consideration, two deaths were reported; hence, as all the cases were obviously not notified, it is impossible to give an accurate fatality return.

Of the 2 deaths, 1 occurred in the Urban and 1 in the Rural Districts.

In 1917, 9 cases were notified, and there were 5 deaths, hence this year compares favourably with the previous year.

Poliomyelitis.—Only 2 cases were notified during the year, and yet 3 deaths occurred, all of these being in the Rural Districts. In the previous year only 2 cases were notified and no fatality.

Alcoholism.—Not a single death has been recorded from this disease either last year or this.

Cirrhosis of the Liver.—The excellent record of last year (12 deaths in all) has been beaten this, for only 7 deaths have been registered—4 Urban and 3 Rural.

Organic Heart Disease.—This disease, which for the last 2 years has headed the list as the chief cause of death in the County, has fallen to the third position; the first and second causes this year being Influenza 22·9 per cent. and Pulmonary Tuberculosis 8 per cent.

In 1917, 326 deaths from Organic Heart Disease were registered; this year only 289 were recorded, of which 191 occurred in the Rural and 98 in Urban areas.

Comparing last year's statistics there has been a slight increase of deaths (5·5 per cent.) from this disease in the Rural areas, with a marked decrease (32·4 per cent.) in the Urban Districts.

The percentage of total deaths from this disease in the County is 7·66; it was 10·5 last year, and 11·6 and 10·6 in 1916 and 1915, showing a marked improvement this year as compared with previous years.

Cancer.—This disease, which occupies the fifth place in the chief causes of death, was last year third on the list, but this position is accounted for by the fact that two other chief causes have been added this year, viz., Influenza and Pneumonia.

Without these two latter, Cancer occupies the same position as last year.

275 deaths occurred (an increase of 9 more deaths than in 1917) which is equivalent to a percentage of 7·29 of the total deaths from all causes in the County.

Last year the percentage was 8·5, a decrease of 1·21 per cent. This decrease in percentage with an increased number of deaths seems fallacious, but is accounted for by the larger number of deaths which have occurred this year.

Congenital Debility.—This sub-division includes for statistical purposes Malformations and Premature Births. The deaths totalled 138, an increase of 3 only on last year, and is a considerable improvement on the years 1916 and 1915, when the deaths numbered 155 and 214 respectively. Of these 138 deaths, 64 occurred in the Urban and 74 in the Rural Districts. A comparison with last year shows that there were 5 less deaths from Congenital Debility in the Rural, but 8 more in the Urban Districts.

There was a marked disproportion in the number of male compared to female deaths from Congenital Debility, etc. The actual deaths being 83 males and 55 females.

Diseases of the Respiratory Organs.—The number of deaths from these diseases has most markedly increased. Collectively, Bronchitis, Pneumonia, and other respiratory diseases accounted for 455 deaths in 1916 and 451 last year. This year the number totalled 542, and of these Bronchitis claimed 219 and Pneumonia 284, as compared to 227 and 186 respectively in 1917.

The increase of nearly 100 deaths from Pneumonia must be considered as one of the sequelæ of the Influenza epidemic, this disease often supervening on a severe attack of Influenza.

The age distribution of Bronchitis and Pneumonia and other respiratory diseases was as follows:—

Age.	No. of Deaths.		
	Bronchitis.	Pneumonia.	Other Respiratory Diseases.
Under one	27	38	1
1 to 2	17	44	..
2 to 5	7	41	5
5 to 15	4	19	2
15 to 25	1	14	2
25 to 45	3	51	6
45 to 65	33	39	8
65 & upwards	127	32	15
Totals ..	219	284	39

This record shows that no less than 23 per cent. of these deaths were of children under 2 years of age, and 12 per cent. were of infants. *These deaths were, to a large extent, preventible,* and show that the work of the Infant Centres cannot be over-estimated.

Influenza.—A virulent epidemic which swept over the whole of the country, and also over the entire world, accounted for 863 out of the 3,772 deaths in the County—a proportion of practically 23 per cent. of the total deaths.

This disease, which has occurred sporadically since the last great epidemic of 1889 and 1890, first attacked Leicestershire early in May, and during the next three months rapidly over-ran the County. Fortunately this first outbreak was a comparatively mild form of illness, but the true epidemic of Influenza, which occurred in November and December, was of a much more serious and virulent type.

The highest mortality occurred during these two months, and practically the whole of the populace was attacked, whole families suffering from the disease at the same time. The period of incubation averaged two days, varying from 12 hours to four or five days. The spread of the disease was in most cases by direct contact, and this accounts for the prostration of whole families at one time followed by infection of adjoining houses, neighbours being attacked whilst assisting a stricken household.

Of the three types of Influenza—respiratory, abdominal, and cerebral—the former predominated, a few cases only of the abdominal type being encountered, whilst several cases were observed with cerebral symptoms.

The virulence of the epidemic was shown by the rapidity of the onset followed in a day or so (in some cases within a few hours) by pulmonary complications—Lobar or Broncho-Pneumonia—ending all too often fatally. The severity of the condition when Pneumonia supervened as a complication was extreme, and far beyond that of ordinary Pneumonia.

The appended Table shows the deaths occurring from Influenza in the Urban and Rural Districts, with particulars as to age and sex distribution.

AGE.	URBAN DISTRICTS.			RURAL DISTRICTS.			WHOLE COUNTY.		
	M.	F.	Total	M.	F.	Total	M.	F.	Total
Under one	3	..	3	10	7	17	13	7	20
1 to 2	7	3	10	13	10	23	20	13	33
2 to 5	11	18	29	27	24	51	38	42	80
5 to 15	18	30	48	29	33	62	47	63	110
15 to 25	19	30	49	38	47	85	57	77	134
25 to 45	48	67	115	82	108	190	130	175	305
45 to 65	26	24	50	26	44	70	52	68	120
65 and over	9	8	17	26	18	44	35	26	61
ALL AGES	141	180	321	251	293	542	392	471	863

This record shows that the greatest mortality occurred between the ages of 25 and 45 (305 deaths out of 863, or 35.3 per cent.), and supports the observations of various authorities that persons in the prime of life were those mostly affected. A separate Table is given of the deaths in the Urban and Rural Districts showing the sex distribution:—

			Male.	Female.	Total.
Urban	...	...	141	180	321
Rural	...	...	251	291	542
County	...	...	392	471	863

The most noticeable feature of this Table is that the female deaths exceeded the male by 79. It will be observed that more deaths occurred in the Rural than in the Urban Districts in the proportion of 24.4 to 20.7, and possibly this may be accounted for by the fact that efficient nursing is more easily procurable in the Urban than Rural areas.

Schools Closed.—The following is the detailed School Closure record for the year:—

Diseases.	No. of Departments Closed.	Average Period of Closure in Weeks.	No. of Children affected by the Closure.
Chicken Pox	8	2 $\frac{3}{4}$	681
Chicken Pox and Measles ..	3	3 $\frac{1}{2}$	249
Chicken Pox and Mumps ..	..	..	..
Coughs and Colds	4	4	214
German Measles	..	..	..
Influenza	281	2 $\frac{3}{4}$	32974
Measles	76	3 $\frac{1}{2}$	10844
Measles and Mumps	1	4	141
Measles and Whooping Cough	..	..	..
Diphtheria	4	3	747
Mumps	6	4 $\frac{1}{2}$	527
Scarlet Fever	3	4	774
Whooping Cough	23	3 $\frac{1}{2}$	1596
Totals	409	3	48792

Notification of Births Act, 1907.—The same procedure under this Act obtains as in former years. The total number of Births during the year was 4,197, of which 4,104 were notified under the above Act, and 93 were reported by the Registrars.

QUARTERLY RETURNS.

Number of Doctors, Certified Midwives, and Uncertified Women who were in attendance at the time of the birth, as recorded by notifications:—

	Doctors.	Midwives.	Other Women.	Total	4104
1st Quarter ..	515	412	—	927	
2nd „ ..	513	459	—	972	
3rd „ ..	485	559	—	1044	
4th „ ..	585	576	—	1161	

Number of Doctors, Certified Midwives, and Uncertified Women whose names were given to me by the Registrars:—

	Doctors.	Midwives.	Other Women.	Total.	93
1st Quarter ..	28	11	1	40	
2nd „ ..	20	4	—	24	
3rd „ ..	9	2	1	12	
4th „ ..	14	3	—	17	

Full total of all Doctors', Certified Midwives', and Uncertified Women's cases:—

	Doctors.	Midwives.	Other Women.	Total.
1st Quarter ..	543	423	1	967
2nd „ ..	533	463	—	996
3rd „ ..	494	561	1	1056
4th „ ..	599	579	—	1178
	2169	2026	2	4197

Sale of Food and Drugs Acts.—The Acts relating to the sale of Food and Drugs, and the Regulations made thereunder, are administered in this County by the Police.

The following is a Record of the work done under the Public Health (Milk and Cream) Regulations, 1912, during 1918. A copy of this return has already been forwarded to the Local Government Board.

1. Milk; and Cream not sold as Preserved Cream.

	(a) No. of Samples examined for the presence of a preservative substance.	(b) No in which a preservative was reported to be present.
Milk	136	None
Cream	0	None

2. Cream Sold as Preserved Cream.

(a)			(b)			(c)	(d)
Instances in which samples have been submitted for analysis to ascertain if statements on labels as to preservatives are correct.			Determinations made of milk fat in cream sold as preserved cream.			Instances where (apart from analysis) the requirements as to labelling or declaration of preserved cream in Art. v (1) and the provision in Art. v (2) have not been taken.	Particulars of each case in which regulations have not been complied with, & action taken.
¹ Statements correct.	² Statements incorrect.	TOTAL	¹ Above 35 p.c.	² Below 35 p.c.	TOTAL		
0	0	0	0	0	0	None	None

3. Thickening Substances.

(a) Evidence of their addition to cream or preserved cream.	(b) Action taken.
None	None

4. Other observations.

The 136 samples of Milk were all taken with the usual formalities under the Sale of Food and Drugs Act.

Billeting of Troops, Soldiers on Furlough, Etc.—Sanitary supervision of all troops billeted in the County is undertaken by the Health Officers in conjunction with the Military Authorities.

In addition to this, all soldiers on leave from home stations or over-seas who come in contact with any communicable disease during their stay are not allowed to return to their units until quarantined. The period of quarantine is undergone at Glen Parva Barracks, after which the soldier returns to his unit. Thus the Army is protected from disease being introduced from civilian sources.

Similarly all soldiers before proceeding from their units on leave have to obtain a medical certificate that they are free from infectious disease or vermin, which ensures the protection of the civilian population against infection from the Army.

All soldiers sent out from Military stations on farm work in the County have their billets and quarters inspected by the district Sanitary Inspectors, who inspect and report upon their sanitary condition.

All the above work is carried out through the County Health Department, in conjunction with the Medical Officer in charge of Glen Parva Barracks.

Causes of Death in Rural Areas 1918.

[illegible]

Name (Printed)		Age (Years)		Sex		Height (Inches)		Weight (Pounds)		Measurements	
1. ...		...		...		...		...		...	
2. ...		...		...		...		...		...	
3. ...		...		...		...		...		...	
4. ...		...		...		...		...		...	
5. ...		...		...		...		...		...	
6. ...		...		...		...		...		...	
7. ...		...		...		...		...		...	
8. ...		...		...		...		...		...	
9. ...		...		...		...		...		...	
10. ...		...		...		...		...		...	
11. ...		...		...		...		...		...	
12. ...		...		...		...		...		...	
13. ...		...		...		...		...		...	
14. ...		...		...		...		...		...	
15. ...		...		...		...		...		...	
16. ...		...		...		...		...		...	
17. ...		...		...		...		...		...	
18. ...		...		...		...		...		...	
19. ...		...		...		...		...		...	
20. ...		...		...		...		...		...	
21. ...		...		...		...		...		...	
22. ...		...		...		...		...		...	
23. ...		...		...		...		...		...	
24. ...		...		...		...		...		...	
25. ...		...		...		...		...		...	
26. ...		...		...		...		...		...	
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28. ...		...		...		...		...		...	
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49. ...		...		...		...		...		...	
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51. ...		...		...		...		...		...	
52. ...		...		...		...		...		...	
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81. ...		...		...		...		...		...	
82. ...		...		...		...		...		...	
83. ...		...		...		...		...		...	