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THE SEVENTIETH
ANNUAL REPORT
UPON THE
HEALTH OF LEICESTER,
For the Year 1918,

BY
C. KILLICK MILLARD, M. D., D. Sc.,
*Medical Officer of Health; Medical Superintendent of the Borough Isolation
Hospital and Sanatorium; Chief Administrative Tuberculosis Officer.*

INCLUDING
REPORT ON TUBERCULOSIS.
REPORT on the SANATORIUM AND ISOLATION
HOSPITAL.
REPORT of the PUBLIC ANALYST.
REPORT of the CHIEF INSPECTOR.
REPORT of the FOOD INSPECTOR.
AND
REPORTS OF THE REFUSE DISPOSAL AND
STREET CLEANSING DEPARTMENTS.

LEICESTER:
THE BLACKFRIARS PRESS, LTD., 17 ALBION STREET.

BOROUGH OF LEICESTER.

SANITARY COMMITTEE.

Chairman :

ALDERMAN WINDLEY, J.P.

Vice-Chairman :

MR. WALKER.

MR. ADNITT	ALD. HUDSON
DR. ASLETT.	MR. JOHNSON
ALD. BANTON, J.P.	.. MITCHELL
ALD CHAPLIN, J.P.	.. PERKINS
DR. CROSSLEY, J.P.	.. J. W. SMITH
MR. S. FOLWELL	.. SQUIRE
.. GEARY	.. E. J. UNDERWOOD
.. HAND	.. WILFORD
.. HILL	ALD. YEARBY
.. HOLMES	

The Committee meet every alternate Friday in the Committee Room, Town Hall, at 3-30 p.m.

The Committee is divided into the following Sub-Committees :—

- Isolation Hospital, Sanatorium, and Dispensary.
(Chairman, Ald. Windley.)
- Cleansing and Refuse Disposal. (Chairman, Mr. Walker.)
- Sanitary Inspection and Accounts. (Chairman, Mr. Mitchell.)
- Maternity and Infant Welfare. (Chairman, Ald. Windley.)

TOWN HALL, LEICESTER,

August, 1919.

To the Chairman and Members of the Sanitary Committee.

GENTLEMEN,

I have the honour to present to you my Annual Report on the Health of Leicester for the year 1918.

From the point of view of the Public Health the great event of the year was the terrible epidemic of influenza, which caused a death-roll in Leicester, as in so many other places, quite without parallel in modern times. The epidemic is referred to at length in Part II. of this Report, and some reference to it is also made in Appendix II. in the Hospital Report.

The death-rate for the year was necessarily much higher than would have been the case but for the epidemic, being 17.84 per thousand, as compared with 13.54 in the previous year.

The birth-rate was only 14.92 and for the first time was below the death-rate. But just as abnormal circumstances swelled the number of deaths, so abnormal circumstances—the large number of men away from the country—reduced the number of births. During the present year, 1919, the births are considerably in excess of the deaths.

The campaigns against infant mortality, and against venereal disease—the great racial poison—have been actively continued. It is useless for more babies to be born unless they are born healthy, and likely to grow up into healthy men and women.

The termination of the war has brought with it fresh problems and opened up fresh fields of activity in the sphere of Public Health. The creation of a Ministry of Health is evidence of the greatly increased importance now rightly attached to all matters appertaining to the health of the community.

The ancient town of Leicester has now been restored to its old status of a city. May the new City of Leicester prove worthy of the title by the increased care it bestows upon the welfare of all its citizens.

My best thanks are once again due to your veteran Chairman, Alderman Windley, whose interest in public health matters never grows old in spite of advancing years, and whose long and ripe experience is quite unique in the history of municipal government; also to all the members of the Committee for the confidence and support they have uniformly extended to me.

I am, gentlemen,

Your obedient servant, ,

C. Killick Millard

Medical Officer of Health.

SUMMARY OF STATISTICS*

FOR THE YEAR 1918.

BOROUGH OF LEICESTER.

Population (estimated) at Mid-year 1917	217,537
Population at Census, 1911, 227,242.	
Marriages	2,030
Marriage-rate	18·66
Births	3,246
Birth-rate	14·92
Deaths (corrected for transferable deaths)	3,883
Death-rate	17·84
Infant Mortality (per 1,000 Births)	108·1
Zymotic-rate	·58
Diarrhœa-rate	·06
Respiratory-rate	2·86
Cancer-rate	1·42
Tuberculosis-rate	1·82
Phthisis-rate	1·45
<hr/>	
Area of Borough (in acres)	8,582
Number of persons per acre at Census, 1911	26·4
Number of persons per Tenement at Census, 1911	4·41
Number of Inhabited Tenements, Census, 1911	51,481
" " " " July, 1918	54,279
Number of Empty Houses, July, 1918	166
Rateable value (November 1st, 1918)	£1,158,955
Rates in the £, 1917-18:	s. d.
Poor Rate	1 10
General District Rate	7 9
Borough extended in year 1891.	
<hr/>	

96 GREAT TOWNS.

(For Comparison.)

Birth-rate	17·6
Death-rate	18·2
Infant Mortality	106

* For principal rates, calculated on the population figures suggested by the Registrar General, see p. 72.

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Medical Officer of Health's Report

FOR THE YEAR 1918.

PART I.

STATISTICAL.

Population.

The uncertainty as to the true population of the City, due to the inevitable disturbance caused by the war, persists. There is no reason, however, to think that any material change has taken place—either in the direction of an increase or decrease—during the year under review as compared with the previous year, and, therefore, for the sake of continuity it has seemed best to adhere to the same figure for population as was employed in 1917, viz., **217,537**.

The Registrar General, however, is employing in his office different figures, using a separate figure for death rates on the one hand, and for birth and marriage rates on the other, viz., 203,008 for the former and 227,463 for the latter. I am convinced, however, from local knowledge that the figure 203,008—which has been arrived at by a formula applied to the whole country, irrespective of local conditions—is altogether too low. Still, in order that the local statistics may, if desired, be compared with the rates published by the Registrar General, a table is given at the end of the Report giving the principal statistics worked out on the basis of the Registrar General's population.

The principal reason for believing that the Registrar General's figure is altogether too low is this: At the last census, in 1911, the number of inhabited tenements was 51,481, and the number of persons per tenement was found to be 4.41. There is no sufficient reason for thinking that the number of

persons per tenement has decreased since then. Indeed, owing to the shortage of houses, it is a fact that in many cases two families are having to share a house because they cannot get a house of their own. There is also the further fact that owing to their husbands being in the army (we are referring to the past year) many wives with their children gave up their homes and went to live with their parents. It seems most improbable, therefore, to say the least, that the number of persons per tenement should be less than it was in 1911. But from a return made by the Overseers, it appears that there were, last year (November), 54,279 inhabited tenements, or 2,798 more than at the census. Assuming then that the number of persons per tenement was only the same as at the census, viz., 4.41, the population of the City should be $54,279 \times 4.41$, or 239,370.*

In view of the very flourishing condition of industry in Leicester throughout the war, and the effect which this must have had in attracting population, it is not at all improbable that this last named figure is much nearer the mark than the figure arrived at by the Registrar General of 203,008.

However, a fresh census is due the year after next, and we shall then learn what is the true population of the City.

Marriages.

The first effect of the war was to cause a great increase in the number of marriages, as shown by the figure for the year 1915, when there were 50 per cent. more marriages registered in Leicester than in 1913, the year before the war. The number fell off in subsequent years, but not so much as might have been expected in view of the number of marriageable young men who have been killed. During 1918 the number of marriages was 2030, which is still above the average peace-time figure. We may assume, therefore, that the general effect of the war has been to encourage matrimony. Possibly the Separation Allowance for the wives of soldiers has had something to do with this.

The *Marriage-rate* was 18.66.

* Since the above was written the Executive Officer for the Local Food Control Committee (Mr. A. H. Bennett, O.B.E.) estimates the population of the city for 1919, on the basis of the number of ration cards issued, to be 240,000.

Births.

The number of births registered in 1918 was: Males 1,666, females 1,620, total 3,286. Certain corrections have to be made for births not properly belonging to the City, owing to women coming to Leicester (to the Maternity Hospital and private lying-in homes) to be confined. This reduces the corrected births to 3,246, as compared with 3,688, 4,684, 4,851, and 5,144 in the previous four years. Much of the reduction in the number of births which has taken place during the first few years must be regarded as a war phenomenon due to the absence of so many potential fathers from the country, but part of it, no doubt, is due to the tendency unmistakably manifested in this and most civilised countries, on the part of the more intelligent and educated classes, to be satisfied with smaller families than was formerly the case. It is very unlikely that we shall ever revert to the high birth-rates which prevailed 20 or 30 years ago, though no doubt there will be some recovery next year now that the war is over and so many men have returned from abroad.

The *Birth-rate* was 14.92.

ILLEGITIMATE BIRTHS.—These numbered 221, as compared with 226, 262 and 248 in the previous three years.

STILL-BIRTHS.—Of these 115 were notified, 42 by doctors and 73 by midwives. The number of bodies of still-born infants buried at the Borough Cemeteries was 144, so that 29 cases escaped notification. This is a smaller default than in the previous year.

Deaths.

Deaths of soldiers have been excluded as in previous war years, and the usual corrections made for institutional and transferable deaths. Subject to these corrections, the number of deaths of residents of Leicester was 3,883, of which 1,825 were of males, and 2,058 of females.

This is an increase of 938 as compared with the previous year, but practically the whole of this increase is to be accounted for by the terribly fatal epidemic of influenza.

For the first time on record the number of deaths exceeded the births (deaths, 3,883; births, 3,246), and a similar contrast occurred throughout the country. Much alarm at this has been expressed in certain quarters. The explanation was, as already stated, the reduction of the births owing to so many men being absent from the country, and the terrible inflation of the number of deaths by the influenza epidemic.

Happily the war is over, and most of the men have returned to their homes; whilst we can only hope that the influenza epidemic was a catastrophe which will rarely if ever occur again. The recrudescence of the epidemic in the early part of the present year 1919 was very regrettable and will seriously affect this year's death-rate, but in its severity the disease was not nearly so appalling as it was in the autumn outbreak. It is unlikely, therefore, that the deaths will again exceed the births.

The *Death-rate*, calculated on the population figures mentioned (217,537), was 17.84.

INFANT MORTALITY.

The number of deaths of infants under one year of age was 351, equivalent to an infant mortality rate of 108.1 per 1,000 children born. Although this is slightly higher than the figure for the two previous years (105.0 and 104.8) it may be regarded as satisfactory when compared with the average of past years, as is shown by the following table:—

Quinquennial Period.	Average Infant Mortality.			
1892-1896	194.4
1897-1901	189.2
1902-1906	158.1
1907-1911	128.5
1912-1916	115.1
1917	105.0
1918	108.1

The very great reduction in infant mortality which has been effected in Leicester, chiefly in the past ten years, is specially gratifying in view of the efforts which have been put forth in connection with mother and child welfare work. No doubt

much of the reduction has been due to other causes, e.g., reduction in the birth-rate, the improved standard of living, and lessened virulence of infant diarrhœa; but we are justified in claiming that some, at least, of the improvement has been due to the work which has been done by health visiting, schools for mothers, infants' milk depôt, infants' consultations, etc.

The reduction which has already been effected encourages still further efforts, because the infant mortality is still very much higher than it need be, judging by the low rate (about 60-80) which prevails in the most favoured districts of the City. We certainly must not be satisfied until we see the rate permanently below 100, or even below 90, a figure already reached by certain towns.

Deaths of Illegitimate Infants.

These numbered 68 (compared with 58 in the previous year), and as there were 221 illegitimate births, the rate works out at 308 per 1,000, or nearly three times as high as in the case of children born in wedlock.

The problem of safeguarding the lives of illegitimate infants is a very difficult one. The basic fact with which we have to deal is that the "unwanted child," whether born in or out of wedlock, gets less care and attention than the child whose advent is hailed with joy and thankfulness. No doubt we find here one explanation of the high rate of infant mortality which usually exists with a high birth-rate; and for the same reason we can understand why infant mortality usually falls as the birth-rate falls.

The adverse influence is of course intensified in the case of unhappy infants who not only are not wanted, but whose presence too often brings disgrace upon the mother and handicaps her in her efforts to obtain a livelihood.

Increased attention is now being paid to the problem of illegitimacy, and it is sincerely to be hoped that in the future some of the disabilities under which the unmarried mother and illegitimate child have hitherto suffered will be removed.

ZYMOTIC MORTALITY.

It has been usual in calculating Zymotic Mortality only to reckon the deaths from the seven principal zymotics; and on this basis the zymotic mortality for 1918 was only .58, which is quite a satisfactory figure. But influenza, though not hitherto counted as a principal zymotic disease, is of course a zymotic or "germ" disease, and the death-rate from this alone amounted to 4.09.

CANCER DEATH-RATE.

The number of deaths from cancer and other forms of malignant disease was 309, of which 129 were in males and 180 in females. Only 29 of these deaths were in persons under 40 years of age, 121 were between the ages of 40 and 60, and 168 were over 60 years. Nothing further of much practical importance appears to have been discovered as to the causation or cure of this greatly dreaded disease, and the only advice that can be given is for those attacked to have the nature of their illness diagnosed as quickly as possible in order that an operation for removal may be performed before the disease has spread too far.

WARD STATISTICS.

(See Tables 1—4.)

A comparison between the vital statistics of the different districts of a town is always of interest and is often of great value. It enables an approximate estimate to be formed of the relative healthiness of different areas and of the influences bearing upon the public health. It is only possible, however, to take as units for comparison definite areas of which the population is known, or can at least be estimated. For this reason we are limited to a comparison between different municipal wards. It is the case, however, in most of the wards in Leicester that they are composite areas, consisting of an admixture of districts of very different character, especially as regards the social position of the inhabitants. As is well known, social position affects vital statistics to such an extent as to swamp most other influences. For this reason it would be an advantage, were it possible, to be able to compare much smaller areas than municipal wards.

Death Rates.

Knighton Ward is an example of a ward inhabited almost entirely—or at least to a quite preponderating extent—by families belonging to the well-to-do classes, together with domestic servants. Amongst the latter class both the birth and death-rates are naturally extremely low, because when they marry or get old they usually cease to be domestic servants and leave the district. For this reason it is not surprising that Knighton Ward almost invariably has a lower death-rate than any other ward. This was the case in 1918, the figure being 11.8. Next came Aylestone with 12.5. As Aylestone contains a large proportion of working-class population, this low figure is much more remarkable. Moreover, this is not an accidental occurrence, for the death-rate in Aylestone has been consistently low for several years. We are justified, therefore, in regarding Aylestone, in spite of the fact that it lies so low, as a very healthy part of Leicester. Other wards with low rates in 1918, as well as in previous years, are Westcotes, Spinney Hill, The Abbey, and De Montfort.

On the other hand, the wards with high death-rates in 1918 are St. Martin's, Wyggeston, Newton, and St. Margaret's. St. Martin's rate was by far the highest, viz., 25. This, however, was exceptional as St. Martin's has not generally been one of the highest death-rate wards.

Birth-Rates.

De Montfort Ward, as usual, has the lowest birth-rate, viz., 8.1, followed by Knighton, 9.0; Westcotes, 10.2; and Spinney Hill, 11.2. At the other end of the scale we find Wyggeston, 19.9; St. Martin's, 19.6; Newton, 17.4; The Castle, 16.9. All birth-rates were abnormally low owing to the war.

Infant Mortality.

The best wards were Knighton, 31 per 1,000 births (this is an extremely low figure); Aylestone, 58 (also a very favourable figure); Spinney Hill, 88; The Castle and Wycliffe, each 89.

Nearly always we find that when the birth-rate is high, then the rate of infant mortality is high also. Undoubtedly there is a very high degree of correlation between birth-rate and

infant mortality, and it is probable that much of the decline in the latter which has taken place in recent years is really ascribable to the falling birth-rate. As babies become less common they become more precious; also the mother of a small family is able to devote more time and lavish more care upon her baby than is the case with the overworked and distraught mother of a very large family.

Zymotic Rates.

The death-rate from the zymotic diseases, other than influenza, was lowest in De Montfort, Knighton, The Abbey, and St. Martin's; and highest in W. Humberstone, Belgrave, and Latimer.

Phthisis Rate.

The phthisis rate was lowest in De Montfort, Knighton, Aylestone and Belgrave; and highest in St. Martin's, Wyggeston, and West Humberstone.

Speaking generally, the chief point for note in the vital statistics of the various wards in 1918 was the bad position, much worse than usual, of St. Martin's Ward, and the good position of Aylestone. As regards St. Martin's, the population of the ward is so small, under 3,000, that considerable fluctuation in statistics is liable to occur from year to year, so that too much importance need not be attached to the figures for a single year.

PART II.

ZYMOTIC DISEASES.

INFLUENZA.

By far the most important event in the health record of the year 1918 was the great epidemic of influenza. Indeed, so widespread and fatal was it that it stands out as altogether the most serious visitation of modern times. It was, of course, part of the great pandemic of influenza which spread all over this country, all over Europe, and, indeed, throughout the whole world, apparently irrespective of climate, country or race.

So far as Leicester was concerned, the epidemic was divided into three well-defined and separate waves. The first was at its maximum in June and July, 1918, and may be referred to as the Summer Wave; the second in October and November, the Autumn Wave; and the third in February and March, 1919, the Spring Wave. The first wave was the least serious, and caused approximately 100 deaths (influenza 70, pneumonia and bronchitis 30). The second wave was by far the most serious and caused, in round numbers, 1,000 deaths (influenza 800, pneumonia and bronchitis 200), whilst the third wave was intermediate in severity, causing approximately 500 deaths (influenza 300, pneumonia and bronchitis 200).

Taking the total of the three waves we may say that the influenza epidemic of 1918-1919, with its complications, was responsible for something like 1,600 deaths. This is equal to seven per thousand of the population. These figures give some idea of the gravity of the visitation, but what made the actual situation so terrible in October and November was the suddenness with which the second, or Autumn Wave, burst upon the city, and the appalling rapidity with which it spread. The Summer Wave in June and July had passed over and had not given rise to serious alarm, although causing considerable inconvenience, and during August and September the city was

apparently nearly free from the disease. However, in the week ending October 12th five deaths from influenza were recorded, and then, without further warning, the storm broke. In the week ending October 19th the deaths from influenza had jumped to 54, and all parts of the city were found to be affected. Whole families were attacked almost simultaneously, father, mother and children all being down together. Many works and businesses were disorganised owing to so many of the employees being away ill, and the public services had great difficulty in carrying on for the same reason. From the outset the virulence of the disease was apparent. Two or three well-known residents were amongst the earlier victims. All classes seemed to be affected alike, irrespective of social status, and from all sides came reports of the very serious nature of the illness, and the rapidity with which it often proved fatal. The medical profession were "run off their legs," and were soon quite unable to cope with all the urgent calls which came pouring in upon them. The District Nursing Association were also inundated with calls, and the supply of private nurses was quickly exhausted.

It was evident that a visitation of unparalleled gravity in the history of the city had occurred, and the news that so many other towns were also suffering severely only aggravated the situation by making it more difficult—indeed, almost impossible—to obtain assistance from outside.

In the third week, i.e., that ending October 26th, no less than 194 deaths were recorded from influenza alone, as well as numerous deaths from pneumonia and bronchitis, making the total deaths registered in that week 283, as compared with an average number of 50 or 60.

And now a sinister and quite unprecedented difficulty arose. The undertakers in the city found themselves unable to cope with the number of funerals required, and a deputation came to the City Hall to ask for assistance. In the next week, ending November 2nd—as it so happened this was just when the Great War was approaching its final climax—the epidemic reached its maximum. In that week 262 deaths from influenza were recorded, 40 from pneumonia and bronchitis, with 56 from other causes, making a total number of deaths

for the week of 358. Thereafter the epidemic happily declined, the total deaths from all causes in the succeeding weeks being 219, 156, 71, 85, 70, 50.

The complete figures for the epidemic are given in Table 10.

Steps taken to cope with the Epidemic.

At the outset of the visitation, as soon as its seriousness was recognised, a conference took place between the Sanitary Committee and representatives of the Medical Profession, and the measures to be taken to cope with the situation were discussed. It was readily agreed that the Corporation should give all possible assistance in the matter of emergency medical attendance, nursing, etc. Accordingly, the following steps were taken. The ordinary work in connection with School Medical Inspection, Tuberculosis, and Infant Welfare was suspended, and the medical and nursing staffs in connection with these departments were put on to assist in treating and nursing influenza cases. In this way the services of three medical officers (Dr. Allan Warner, Dr. W. S. Thomson, and Dr. Mary Weston) were secured, as well as of about eight nurses. The nurses were placed at the disposal of the Superintendent of the District Nursing Association (Miss Mearns), or sent to assist at the Isolation Hospital; whilst the medical officers visited cases of influenza which were unable to get a doctor or whose own doctor was unable to cope with his work. The part-time services of a fourth medical officer (Dr. Macleod) were also secured and similarly utilised; and several women with some nursing experience were engaged, whole or part-time, either for payment or voluntarily. Amongst the latter were several school teachers.

One of the most pressing requirements in connection with the nursing of patients was the need for assistance during the night. In many households the friends of persons seriously ill (often delirious) were being worn out by continuous attendance day and night. Appeals were therefore made through the local Press for volunteers (either paid or unpaid) for night-work. The response was not as large as the occasion required, but several women and two or three men came forward. They were placed at the disposal of the District Nursing Association and rendered invaluable service.

Hospital Accommodation.

It was quickly found that hospital treatment for cases which could not be properly looked after at home was urgently required, and on a large scale. The only institution willing from the first to admit cases was the Poor Law Infirmary.*

It was decided, therefore, to empty several wards at the Isolation Hospital, Groby Road, by sending home cases of tuberculosis and of convalescent Scarlet Fever. In this way some 70 beds were rendered available for influenza patients and were quickly utilised. The service of the Fire Brigade Motor Ambulance was secured and greatly facilitated the removal of the patients. Many of the cases were of a most distressing character. In some instances whole families were ill, several members of a household being dangerously ill simultaneously, with no one to look after them, and on more than one occasion one case was found already dead in the house, and others lying dangerously ill. Naturally the cases selected for removal to hospital were usually the more severe cases, and for this reason the death roll at the hospital was very heavy. Altogether the number of cases removed to hospital during the October and November wave was 96, of which 27 proved fatal. In the February wave the number removed to hospital were 73, of which 19 proved fatal. The strain thrown upon the nursing staff at the hospital was very severe, but, led by the matron (Miss Davies), they never faltered and rendered really splendid service. Naturally, the disease being so widespread, many of the staff developed it; but, on the whole, I cannot say that our nurses suffered any more severely than those at other public institutions which were not admitting the disease. One nurse, unfortunately, died. In the light of what we now know about influenza, I think it is doubtful if persons who nurse those sick with the disease, run very much risk in so doing. The wearing of masks, which has been recommended by some, was not practised. An offer was made to the staff to provide them if desired, but they were not. In view of the great doubt which exists as to their effectiveness

* This opportunity is taken to express appreciation of the splendid services rendered by this institution and of the self-sacrificing efforts made by the Medical Superintendent (Dr. Hadley), the Matron (Miss Masters), and their staff in dealing with a large number of urgent cases.

as a protection, and of their undoubted irksomeness and inconvenience, it was not thought desirable to press them. The fact is we do not really know at all how the infection of influenza is conveyed. A series of experiments was carried out by the U.S. Government with a view of conveying the disease intentionally. A large number of men (volunteers) were taken, and the experiments included sitting by the bed side of patients, conversing with them; making patients cough in the mens' face; spraying secretion from patients' throats into their nostrils; and finally actually inoculating with patients' blood. Although about 40 men were thus tested, and patients in different stages of the disease were used, not one of the experiments succeeded, i.e., not a single individual contracted the disease. In another series of similar experiments, in which about 60 men were purposely exposed to infection in the same way, the result was the same—not one contracted the disease! Of course, no masks were worn, or other precautions taken. Such a result is, no doubt, very astonishing, and is quite contrary to what one would have anticipated. Further research must be undertaken before we can explain how the infection is spread or why it should be diffused with such great rapidity.

The Disposal of the Dead.

As already mentioned, the undertakers in the city appealed to the Corporation for help. Their staff being depleted by the war, and the emergency being so unprecedented and unexpected, they were unable to cope with it unaided. Their chief difficulty was to obtain a sufficient supply of coffins. As a preliminary, a few corporation employees were lent to them, but this not being nearly enough, the Tramways Department (under Mr. T. R. Smith, the Tramways Engineer) came to the rescue, and manufactured a large number of coffins (100 in all) until the emergency was passed. These were supplied to undertakers at cost price. A difficulty was also experienced by the undertakers in getting bodies removed to the cemeteries, and to meet this, the Health Department borrowed an ambulance from the Local Branch of the Red Cross Society, and removed bodies to the cemetery mortuaries whenever requested by undertakers to do so. In one or two special cases of urgency bodies were buried by the Corporation.

The Work of Organisation.

All through the epidemic the Health Department had necessarily a very busy time. We were in close telephonic communication with the District Nursing Association (Miss Mearns), the Isolation Hospital, medical practitioners, undertakers, etc., and served as a sort of "Clearing House." The difficulties of the situation were much increased by the fact that the staff employed were themselves falling victims to the disease, but very fortunately neither Miss Mearns, Miss Davies (Matron at the Isolation Hospital), nor the M.O.H. were attacked.

Local Government Board Inquiry.

Leicester was one of the towns selected by the L.G.B. for detailed investigation, and Dr. M. B. Arnold, one of the Board's Medical Inspectors, visited Leicester on several occasions and spent about a fortnight in conducting investigations. The Health Department rendered him all the assistance possible. The best method of carrying out the investigations was discussed with the M.O.H., and it was agreed that he should have the services of some of the Sanitary Inspectors in order to make a systematic house to house inquiry as to the incidence of the disease during the different waves, and to obtain other data. Representative streets were selected in different parts of the city—and every fifth house was visited and the desired particulars obtained and noted. In this way 1,061 houses were visited, and the number of persons concerning whom particulars were obtained was 4,619, or about two per cent. of the total population.

The following is a brief resumé of the results obtained as summarised from Dr. Arnold's Report:—

I. PROPORTION OF POPULATION ATTACKED.

The number of influenza attacks amongst these persons from May, 1918, to date of inquiry in March, 1919, was 1,387; 164 of these were in persons attacked twice, and six in persons attacked three times. The number of persons attacked was, therefore, 1,311.

The attacks were distributed over the three waves as follows:—

			No. of attacks amongst sample population,		Percentage attacked,
Summer Wave	...	...	295	...	6.3
Autumn Wave	...	...	678	...	14.6
Spring Wave	...	...	370	...	8.0
Intermediate Cases	...	...	44	...	—

We may conclude therefore—if the sample population be a fair sample of the whole of Leicester—that about six per cent. of the people of Leicester were attacked by influenza in the Summer Wave, 1918, about fourteen or fifteen per cent in the Autumn Wave, and about eight per cent. in the Spring Wave, 1919. This only amounts to just under 30 per cent., leaving 70 per cent. as having escaped. The general impression at the time was that a considerably larger proportion of the population were attacked. Impressions, however, are notoriously unreliable. Naturally the numbers attacked would make more impression upon the imagination than the numbers escaping. Even 30 per cent. of the population of Leicester represents over 65,000 persons. Moreover, the epidemic was concentrated on a comparatively very short period, measured by weeks only.

3. AGE INCIDENCE.

The incidence of the disease upon different age periods in the sample population was as follows:—

Age Period.			Attack-rate.
0-15 years (childhood)	...	...	29.3%
15-45 years (prime of life)	...	...	35.5%
Over 45 (after middle age)	...	...	21.0%

These figures show that persons in the prime of life were attacked in greater proportion than either children or elderly persons, the latter being least susceptible of all.

3. SEX INCIDENCE.

Amongst the sample population 27 per cent. of males and 31 per cent. of females were attacked, showing a slightly heavier incidence upon females.

4. MORTALITY.

Out of 1,387 attacks investigated in the sample population there were 32 deaths, equivalent to a case mortality of 2.3 per cent. This was for the three waves combined. Taken separately we find that the case mortality was very low in the Summer Wave, there being 295 cases in the sample population without a death. It was highest in the Autumn Wave, viz., 26 deaths out of 678 persons attacked, or 3.8 per cent, whilst out of 370 cases in the Spring Wave, six died, equal to 1.6 per cent.

6. IMMUNITY.

Apparently some considerable degree of immunity is conferred by a previous attack, though quite a number of persons attacked, say 12 per cent., had had the disease before. There were no deaths, however, in second attacks amongst the sample population.

There were many instances when only some of an invaded household were attacked, the remainder escaping altogether.

The investigation carried out in Leicester throws no light, unfortunately, on the mode in which the disease spreads. We are still in the dark as to this. Although commonly supposed to be spread "through the breath," we have no real proof that this is so; and on the other hand the experiments carried out by the U.S. Government, and already referred to, throw considerable doubt upon this assumption. The disease has now become of such tragic importance that it is most necessary that its etiology should be better understood. We should then be in a much better position to cope with it.

SMALLPOX.

No notified case of smallpox occurred in Leicester in 1918. As a matter of fact, however, a man suffering from a mild unrecognised attack of smallpox did pass through Leicester and stayed one night with friends in the town, but it was never suspected that he was suffering from smallpox until some days later when his wife and child developed the disease at his home in another town. Precautions were taken, and it was thought desirable to notify all medical practitioners in the

city in order that they might be on their guard in case any secondary cases arose. Fortunately, however, no spread occurred.

With the exception of one solitary imported case of smallpox which occurred in 1913, there has been no other known case in Leicester since 1906.

Reference may be made here to a course of three Milroy Lectures delivered in London by Dr. J. G. McVail before the Royal College of Physicians, entitled "Half a Century of Smallpox and Vaccination." Thirty years ago Dr. McVail published a book on Vaccination in which he prophesied that the abandonment of infant vaccination in Leicester would inevitably be followed by disaster. It is interesting to note that in the recent lectures referred to, although the case of Leicester is frequently referred to, Dr. McVail does not repeat his prophesies. On the other hand, he states that although infant vaccination is largely falling into disuse in many parts of the country besides Leicester, other means of coping with the disease have been so far perfected that he does not anticipate any very widespread prevalence, even if some recrudescence of the disease should follow upon the Great War.

Vaccination in 1918.

The number of vaccinations registered and "exemptions" granted during the year was: Public, 83; private, 63; total, 146; exemptions, 2,724. The total number of births registered during the year was 3,246, so that the vaccinations only amounted to 4.5 per cent. of the children born, whilst the exemptions amounted to 83 per cent. During the past 34 years, 1885-1918, the vaccinations registered amount to an average of quite 10 per cent. of the children born.

SCARLET FEVER.

Cases, 583; Deaths, 5; Case Mortality, 0.8 per cent.

Cases removed to Hospital, 389, or 66 per cent.

For the past six years scarlet fever has given comparatively little trouble in Leicester, either as regards prevalence or fatality. For several years the case mortality has been less than one per cent.

The disease is totally different in its character from what it was a generation ago, being altogether a less serious and formidable disease. Not only is the fatality far less, but the tendency to complications, such as ear discharge, kidney trouble and glandular abscess, is very much less. For these and other reasons the isolation of this disease in hospital is probably not a matter of very great importance.

DIPHThERIA.

Cases, 154; Deaths, 15; Case Mortality, 9.7 per cent.

Cases removed to Hospital, 147, or 95 per cent.

Diphtheria, also, has not given serious trouble in Leicester for a good many years, but, unlike scarlet fever, its case mortality remains rather high, in the neighbourhood of ten per cent.

Fortunately, the type of disease experienced during recent years has not been very infectious and it is rare that more than one case occurs in a house. The etiology of the disease is still obscure. There has been little evidence in Leicester to support the view that there is a close connection between diphtheria and drain defects.

In cases of diphtheria with symptoms of laryngeal obstruction, it is most important that early removal to hospital should be secured, for if an operation should be required every hour's delay may make a difference to the chances of recovery. Even if the symptoms of obstruction are only slight it is always desirable that the medical attendant should at once ring up the Isolation Hospital and not depend upon a notification sent by post, for it frequently happens that the symptoms become rapidly more acute during the night.

FREE SUPPLY OF ANTI-DIPHThERITIC SERUM.

A supply of anti-diphtheritic serum (Antitoxin) is kept at the Health Department, Town Hall. This is supplied free to medical practitioners for use in cases occurring in the city and which are being treated at home.

TYPHOID OR ENTERIC FEVER.

Cases, 34; Deaths, 4; Case Mortality, 12.0

Cases removed to Hospital, 10, or 29.4 per cent.

The number of cases of typhoid fever notified during the year, viz., 34, was higher than has been the case for several years. This, however, is explained by the fact that an outbreak occurred at the City Mental Hospital, which accounted for 23 of the cases. Deducting these, there were only 11 cases, these apparently being sporadic and unconnected, with the exception of two which occurred simultaneously in one house, and of a third which could be traced to a previous one in the same house. Two cases possibly contracted the disease when visiting away from Leicester.

EPIDEMIC DIARRHŒA AND ENTERITIS.

During 1918 the total number of deaths registered as due to diarrhœa was only 15, and to "enteritis" 26, or a total of only 41. Moreover, seven of the enteritis deaths were in persons over five years of age. Also, not all these deaths were during the summer months and were not therefore strictly of the epidemic type. The enormous decline in epidemic diarrhœa which has taken place in Leicester during recent years is one of the most satisfactory features of local vital statistics.

MEASLES.

Cases notified, 1,686; Deaths, 59; Case Mortality, 3.5 per cent.

Cases removed to Hospital, 34.

The epidemic of measles which, beginning towards the end of 1915, was present all through 1916 and 1917, continued through the early part of 1918. The number of cases notified during the three years notification has been in force was: 1916, 3,807 cases; 1917, 4,572 cases; 1918, 1,686 cases. During the second half of 1918 and the first half of 1919 the city has been comparatively free from the disease.

I have nothing to add to what I have written about this disease in previous years, except to say that it is a much more serious disease than scarlet fever now is, and warrants

everything being done that can be done to arrest its ravages. At the same time I fear that neither notification nor school closure are likely to have any very great effect in reducing its prevalence.

CEREBRO-SPINAL FEVER AND POLIOMYELITIS.

Only two cases of cerebro-spinal fever were reported, one of which proved fatal. There were three cases of acute poliomyelitis, and one of these also proved fatal. We as yet know very little as to the causation of these diseases.

Outbreak of Obscure Disease believed to be allied to the above.

In April and May a series of cases was reported to the M.O.H. presenting a group of symptoms which at first it was thought was suggestive of a rare disease known as "Botulism," and due to the consumption of tainted food. Similar cases occurred about the same time in various parts of the country. Altogether some 14 cases were reported in Leicester, but it is probable that about half of these can be ascribed to some recognised disease, e.g., poliomyelitis, cerebral abscess, etc., and may therefore be excluded. The remainder presented certain special symptoms, e.g., drowsiness or stupor; a blank, helpless facial expression; dropping of the upper eyelids (ptosis); double vision (diplopia); elevation of temperature (pyrexia). Most of the cases were very seriously ill and several proved fatal; the others gradually recovered.

The outbreak was made the subject of an inquiry by the L.G.B., and Lt.-Col. Monckton Copeman and Dr. Hancock, Medical Inspectors of the Board, came to Leicester at different times, and visited the cases in company with the M.O.H. Subsequently Major Draper, of the U.S. Army, who had had experience of a somewhat similar outbreak in New York, also visited Leicester at the request of the L.G.B. and investigated the cases.

The exact nature of the disease does not appear to have been officially determined.

OPHTHALMIA NEONATORUM.

(Ophthalmia of the Newly-born.)

There were 59 cases of this serious affection notified, 20 being reported by doctors, 32 by midwives, six by Health Visitors, and one by doctor and midwife. Ten of the cases reported by midwives were probably not ophthalmia, but owing to there being slight discharge were reported in order to be on the safe side. Of the remaining 49 cases, 43 were finally reported as having quite recovered, three died, two occurred in the P.L. Infirmary, and one left the town.

All cases other than those in institutions are visited repeatedly to make sure that treatment is being given, either under a private medical practitioner or at the Royal Infirmary. In cases where the child has to go to the latter institution difficulty is sometimes experienced in getting anyone to take it, as it usually means a daily visit and sometimes twice a day. In such cases we sometimes pay a neighbour to undertake this duty.

TUBERCULOSIS.

Figures for year 1918.

	Cases Notified.		Deaths.	
Pulmonary Tuberculosis (phthisis) ...	746	...	316	
Other forms of Tuberculosis ...	82	...	82	
			—	
Total, all forms ...	828	...	398	
			—	

The death-rate for pulmonary tuberculosis was 145 per 100,000 population, as compared with 158 in the previous year, when the rate was abnormally high. The rate for all forms was 183 as compared with 194. The diminution is welcome, but the rate is still far too high.

The administrative measures for dealing with the disease have been on the same lines as in previous years. Details will be found in the abbreviated report of Dr. Thomson on the work of the Tuberculosis Dispensary and in the Sanatorium Report. Cordial co-operation continues to exist between the Sanitary Committee and the Borough Insurance Committee.

SCABIES.

As was mentioned in the last report, Leicester, in common with most other towns, has experienced a very considerable increase in the prevalence of scabies or "itch" amongst the civil population. There is good reason to believe that this is a war phenomenon, being due to the spread of the disease from soldiers when home on leave. The number of school children absent from school on account of "itch" had become a very serious matter, the disease often persisting for many months. In order to cope with the trouble the Sanitary Committee decided to open a bathing station. Much difficulty was experienced in finding suitable premises, and ultimately it was decided to utilise the top floor at the Tuberculosis Dispensary for the purpose. This was done, the necessary structural alterations, which were not serious, were carried out, and the bathing station was ready for use early in 1919. Only one bath was installed in the first instance, but pipe connections were left for a second bath should it be found to be necessary.

Figures showing the extent the bath has been used will appear in the next Annual Report, but I am satisfied that the bathing station is filling a long-felt want.

VENEREAL DISEASE.

The year 1918 was the second complete year of the organised campaign against venereal disease which was begun in 1916. Indeed, from the point of view of treatment, the first year, 1917, was not quite complete, as it only covered a period of nine months, the treatment scheme arranged in conjunction with the Royal Infirmary having come into operation at the end of March, 1917.

The campaign is divided into two separate lines of attack.

- 1—Educational Propaganda.
- 2—Diagnosis and Treatment.

The Education Propaganda is carried on by the Leicester Branch of the National Council for Combating Venereal Disease (Chairman, Col. C. J. Bond, C.M.G., F.R.C.S.), to which body this part of the work has been delegated by the Corporation.

The Report of the Branch for the year under review has been printed and circulated. One of the principal activities was the organisation of lectures on sex hygiene for scholars attending the Evening Continuation Classes in the city.

The reports of the Medical Officers in charge of the Venereal Disease Clinics at the Royal Infirmary are as follows:—

I.—MAJOR H. J. BLAKESLEY'S REPORT.

ROYAL INFIRMARY,

LEICESTER.

TO THE LEICESTER CITY COUNCIL AND THE LEICESTERSHIRE
COUNTY COUNCIL.

GENTLEMEN:

I beg to report on the work of the Male Venereal Department at the Leicester Royal Infirmary under the control of the Ministry of Health and your Councils for the year 1918.

I have continued to receive the support of the Board of Governors of the Royal Infirmary, and special assistance from Dr. Mackarell, the Pathologist.

During the period in question 342 new patients presented themselves for treatment; of these 139 were proved to be suffering from Syphilis and 203 from Gonorrhœa; 5,021 renewed attendances were made by patients during the year.

In every case the discharges or blood were submitted to pathological examination on one or more occasions for the purpose of confirming the diagnosis and as a test of progress towards recovery.

SPECIAL TREATMENT.—722 intravenous injections of Salvarsan substitutes, and 601 intramuscular injections of mercury were given for the Syphilitic patients. 3,000 irrigations of medicated lotions were administered to the Gonorrhœa patients.

Having regard to the fact that in the time available at the Royal Infirmary, namely 326 hours, 5,021 patients were prescribed for and specially treated, which gives a fraction less than four minutes per patient treated, I am of opinion that the number of clinics and time available must be increased

in the near future, to deal with the larger numbers in attendance and those likely to attend, as well as to enable special scientific attention to be given to the more difficult cases.

It cannot too urgently be brought to the notice of patients the advisability of seeking early medical treatment when suffering from those diseases, as such deplorable results are effected by delay, both to the patients themselves and those who may become infected by them.

I am, Gentlemen,

Yours faithfully,

HENRY J. BLAKESLEY, F.R.C.S., Eng.

Medical Officer i/c of the Male
Venereal Diseases Department of
the Leicester Royal Infirmary.

May 10th, 1919.

N.B.—90 patients were admitted to the Venereal Wards, nearly all of whom were circumcised or other operation was performed on them.

2.—DR. SYMINGTON'S REPORT.

REPORT OF THE FEMALE VENEREAL CLINIC HELD AT THE ROYAL INFIRMARY DURING 1918.

During the year 1918 the work of the Venereal Disease Department at the Royal Infirmary has increased, so that another clinic has been started, making a total of three clinics of two hours duration each week.

The total number of attendances made during the year was 3,306.

Of these 2,038 were made for treatment of syphilis, and 1,244 for treatment of gonorrhoea.

Patients attending for the first time have numbered 377.

Of these 139 were proved to be suffering from syphilis and 103 from gonorrhoea.

About 70 have been found to be suffering from both diseases.

Into the ward, containing three beds, 52 patients have been admitted.

Patients treated are of varied ages. Calculated roughly :

44 per cent. are from 20 to 30 years.

24 per cent. are from 1 to 20 years.

30 per cent. are from 30 onwards.

Treatment by injection of some salvarsan substitute has been carried out in all suitable cases of syphilis together with medicines. The amount given is regulated by the examination of the blood from time to time, and the general condition of the patient.

Under this treatment the patients improve in general health very markedly, and in certain cases no medical or pathological signs of disease are present, but sufficient time has not yet elapsed to vouch for definite cure.

Treatment of gonorrhœa in women is still far from satisfactory in the clinics. Patients will not present themselves soon enough after infection, and the seriousness of the disease in women is not recognised sufficiently. Few come for treatment before one or two months have elapsed after infection. These patients require immediate treatment in the ward to stop development of the disease which, if neglected, becomes chronic, and social conditions make this at present practically impossible. Out of the 25 patients suffering from gonorrhœa admitted to the ward in 1918 no case in which treatment has commenced within the first two months has shown signs of recurrence, or developed any serious complication.

Treatment of pregnant women, babies, and young children has been commenced, and will become of great importance, but at present facilities are not available.

BESSIE W. SYMINGTON,

Medical Officer of Female Venereal Clinic.

PART III.

ADMINISTRATIVE ACTION.

ADMINISTRATION OF FACTORY AND WORKSHOPS
ACT, 1901.

In connection with Factories, Workshops, Workplaces and Home Work.

Report of the Medical Officer of Health for the year
1918 for the County Borough of Leicester.

1.—Inspection of Factories, Workshops and Workplaces.

Including Inspections made by Sanitary Inspectors or Inspectors
of Nuisances.

Premises. (1)	Number of		
	Inspections. (2)	Written Notices. (3)	Prosecutions. (4)
Factories	79	30	None
Workshops	291	39	None
Workplaces (other than Outworkers premises)	None	None	None
Total	370	69	None

2.—Defects found in Factories, Workshops and Workplaces.

Particulars. (1)	Number of Defects.			Number of Prosecu- tions. (5)
	Found. (2)	Remedied (3)	Referred to H.M. Inspector. (4)	
Nuisances under the Public Health Acts:—				
Want of Cleanliness ...	36	19	None	None
Want of Ventilation ...	1	1	"	"
Overcrowding	None	None	"	"
Other Nuisances	39	21	"	"
Sanitary Accommodation				
Insufficient	3	2	"	"
Offences under the Factory and Workshop Act ...	None	None	"	"
Total	79	43	None	None

Home Work.

The number of lists received from employers was as follows :

	Twice in the year.		Once in the year.	
	Lists.	Outworkers.	Lists.	Outworkers.
Wearing Apparel (making)	42	754	29	445

Registered Workshops.

The number of workshops on the Register is 899.

HOUSING OF THE WORKING CLASSES ACT.

The following statement shows the number of houses dealt with during 1918:—

Number of dwelling houses inspected under and for the purpose of Section 17 of the Housing, Town Planning, &c., Act, 1909	...	...	...	7,371
Number of dwelling houses which on inspection were considered to be in a state so dangerous or injurious to health as to be unfit for human habitation	...	...	...	13
Number of representations made to the local authority with a view to the making of Closing Orders	...	...	...	13
Number of Closing Orders actually made:—				
Housing and Town Planning Act	...	...	...	0
Local Act	...	...	...	0
Number of dwelling houses the defects in which were remedied without the making of Closing Orders	...	...	...	4
Number of dwelling houses which after the making of Closing Orders were put into a fit state for human habitation	...	...	...	0
General character of the defects found to exist	{ general dilapidation and want of repair. 			
Number of dwelling houses in which repairs are in hand	...	...	...	9

Shortage of Houses

In Leicester, in common with most other towns, an acute shortage of houses exists. This has been referred to in the last two annual reports, and the condition has become worse instead of better. This is due to the fact that the men have returned from the war but no new houses have yet been built. Consequently there are not nearly enough houses to supply the demand, and in many instances two families have to share a house. Any house which becomes vacant is at once snapped up, and it is stated that prospective tenants frequently have to pay considerable sums to the outgoing tenant "for the key," in order to secure a house about to become vacant. Poor people with large families of children are specially to be pitied, as the difficulty in obtaining a house is much intensified in their case. Higher up in the social scale often the only way to obtain a house is to buy one, and the price of houses has become much inflated. It is unnecessary to enlarge further upon the state of things prevailing, as it is only too well known by everyone, but as Medical Officer of Health it is my duty to point out the urgent need, on health grounds, of more houses being provided as quickly as possible.

A scheme for the provision of 350 houses by the Corporation on land adjoining Coleman Road has been approved by the Ministry of Health and is now being proceeded with. The site has been very carefully laid out on garden suburb lines, the plans having been selected by competition. It is intended to proceed with a further scheme on land already purchased.

MATERNITY AND CHILD WELFARE.

This important work has been actively continued and extended during the year under review, indeed it is now one of the principal activities of the Health Department. The work is carried on in close conjunction with certain voluntary organisations, viz., the Leicester Health Society; the Newton Ward Infant Welfare Centre Committee; and the Leicester Day Nurseries Society. A full description of relative spheres of each was given in the last report.

Health Visitors.

Five whole-time Health Visitors were employed during 1918, the number having been now increased to seven. The work accomplished by them during the year may be summarised as follows:—

Visits to Births (first visits)	2257
.. .. Measles cases	1893
.. .. Ophthalmia cases	240
.. .. Pre-natal cases	438
Re-visits to Births	9148
Visits to Scabies cases	860
Special and School visits	1436

In addition, assistance was given at the Milk Depot during absence of the Manageress, etc.

The Health Visitors each devote one or more afternoons a week to attendance at the Schools for Mothers; one Health Visitor and the Manageress at the Milk Depot each attend one afternoon at a Pre-natal Clinic.

The Manageress of the Infants' Milk Depot is qualified as a Health Visitor and her work is equivalent to that of an additional Health Visitor.

“Schools for Mothers.”

There are now ten infant welfare centres or schools for mothers in the city. They are “run” by the Leicester Health Society, and each is under a Lady President assisted by other voluntary workers. The Corporation now defrays almost all the expense of running these schools, paying the rent of the premises and providing doctors and nurses. The schools meet once a week in the afternoons, and a medical officer attends every other week for infant consultations.

The addresses of the schools, names of Superintendents, and days when held are as follows:—

School.	Superintendent.	Day.
1. Western Road.	Mrs. Pochin.	Monday.
2. Curzon Street.	Mrs. Turner.	Monday.
3. Knighton Street.	Miss Windley.	Tuesday.
4. Wellington Street.	Mrs. Hayward (resigned).	Tuesday.
5. Bedford Street.	Mrs. Millard.	Tuesday.
6. Wesley Hall.	Mrs. Leadbeater.	Tuesday.
7. Clarendon Park.	Mrs. Partridge.	Wednesday.
8. Overton Road.	Mrs. Cuffin.	Wednesday.
9. Belgrave Hall.	Mrs. Mantle.	Thursday.
10. Justice Street.	Mrs. Disney.	Thursday.

Infants' Milk Depot.

The Infants' Milk Depot, run by the Corporation, has now been in operation for 14 years and has long since proved its great utility. 343 cases remained on the books on January 1st, 501 new cases were admitted; 534 were discharged; and there were remaining on books, December 31st, 310. The wholesale price of dried milk has continued to advance, but is now Government controlled.

Infant Consultations are held at the Depot twice a week. The total attendance of infants was 1370, the total number of consultations being 91, giving an average attendance of 17.2. The number of weighings of infants at the Depot, apart from the consultations, was 3370.*

The balance sheet for the financial year ending March 31st, 1919, was:—Payments, £3327 2s. 11d.; Receipts, £2894 12s.; Deficit, £432 10s. 11d.

THE LEICESTER HEALTH SOCIETY.

The good work which is being accomplished by this society was fully described in the last Annual Report. Since then the Corporation has agreed to still further relieve the society of its chief financial burdens, but it continues to play a most important role by providing and organising the voluntary element which is so valuable in connection with maternity and child welfare work.

* In the Report for 1917, the corresponding figure was, owing to a misprint, erroneously given as 450, instead of 4,450.

The Babies' Nursing Home, Victoria Road.

This was started in 1917 under the auspices of the Health Society, but the control and finance was delegated to a special sub-committee. The building is well situated and adapted for the purpose, having formerly been a private nursing home, but much difficulty has hitherto been experienced in obtaining an adequate staff. For this reason the number of babies dealt with has been much less than could have been accommodated. The Corporation makes a contribution of £500 per annum and in return has the right of nominating cases for admission either free or at a reduced charge.

THE NEWTON WARD CENTRE.

Affiliated with the Health Society is the Newton Ward Infant Consultation Centre Committee. This committee has for some years undertaken the responsibility of the infant welfare work in Newton Ward, and has carried on the work very efficiently. The Corporation has now agreed to pay the rent of the premises of the Centre (in Highcross Street) and to provide the Medical Officer.

THE LEICESTER DAY NURSING SOCIETY.

This society also is affiliated with the Health Society. It has opened three day nurseries in the city, in Rutland Street, Talbot Lane, and Melton Road. One Matron is in charge of the three, an arrangement which is believed to make for efficiency and economy. The Board of Education makes a substantial grant, and a contribution is also given by the Corporation. A considerable amount is received from the payments of mothers.

THE ADMINISTRATION OF THE MIDWIVES ACT.

During the year the Midwives Act has been administered as usual. There are 31 midwives practising in the Borough. Nineteen of these are trained, the remainder being "bona fide" midwives in practice before the passing of the Act, who were therefore allowed to be registered.

Now that a medical woman (Dr. Ada MacMillan) has been appointed on the staff of the M.O.H. to supervise Maternity and Child Welfare Work, she has naturally taken on the work of supervising midwives.

BACTERIOLOGICAL DIAGNOSIS.

In connection with certain infectious diseases the Health Department is prepared to examine bacteriologically, free of charge, specimens from suspected cases in order to assist diagnosis. The diseases are typhoid fever (blood), diphtheria (throat swabs), cerebro-spinal fever (spinal fluid), tuberculosis (sputum), and venereal disease. Outfits for collecting specimens, with directions, can be obtained from the Medical Officer of Health, Town Hall, or in case of tuberculosis, from the Tuberculosis Dispensary, St. Nicholas Street.

CREMATION.

Cremation appears to be increasing in popularity, slowly, no doubt, but apparently surely. As regards the Leicester Crematorium at Gilroes, more cremations took place in 1917 than in any previous year, and in 1918 there was a still further increase. The figures were as follows:—

CREMATIONS AT GILROES.

1915	...	22	1917	...	29
1916	...	23	1918	...	43

Part of the increase during the past year must be ascribed to the exceptional mortality caused by the influenza epidemic, the cause of death in eight of the 43 cases being due to that disease.

Sentiment, which has hitherto been the chief reason why comparatively few people have been cremated, will very probably in the future lead to a great increase in its popularity. The idea appears to be gaining ground that it is "nicer" for the inevitable disintegration of the body to be brought about swiftly by means of the purifying flame, rather than by the slow process of nature which occurs in "earth burial."

The Roman Catholic Church unfortunately still maintains its uncompromising hostility to cremation, but the Church of England and the Nonconformist Bodies raise no objection. Indeed, amongst those cremated in Britain during the past year was the late Bishop Boyd Carpenter.

DISINFECTION.

The total number of articles of clothing, bedding, etc., disinfected by steam during the year was 2404. The number of houses or parts of houses disinfected was 1291.

FOOD INSPECTION.

During the year Inspector Tyldesley has carried on this work alone, Mr. Sowerbutts (1st Lieut., A.S.C.) being still with the Army.

A report by Mr. Tyldesley on the year's work is given in Appendix V.

PUBLIC HEALTH MILK AND CREAM REGULATIONS.

During the year the Public Analyst has examined 113 samples of milk for preservatives. In no case were any found to be present.

The regulations as regards the labelling of cream, I believe, are being generally observed in the Borough.

THE USE OF HORSE-FLESH FOR HUMAN FOOD.

During the early part of 1918, at the time when there was a great shortage in the country of butchers' meat, efforts were made to encourage the use of horse-flesh as a substitute. Altogether three or four shops were opened for the sale of horse-flesh, and in two at least of them a considerable trade was done. The Markets Committee set aside a slaughter house at the Aylestone Road Abattoir for the exclusive purpose of slaughtering horses, in order that the meat might be properly dressed.

On health grounds there is not the slightest objection to the use of horse-flesh for food. The horse is essentially a cleanly animal in both its habits and feeding, and horse-flesh is perfectly wholesome and quite palatable. The writer used horse-flesh in his own household exclusively for a number of weeks, and no objection to it was raised either by family or servants. The chief difference in physical character between the flesh of the horse and that of the ox is that the former is darker and has a slightly sweet taste, also the fat does not set so firm when cold and is less palatable. If appropriately cooked, however, horse-flesh is not easy to distinguish from beef, and a lady in Leicester with a fairly large household informed me that she had been using it for some time without the family being aware of the fact.

From the point of view of national economy there is obviously much to be said in favour of utilising horse-flesh for food. Hitherto, quantities of valuable nutritious food have been wasted, so far as the feeding of human beings is concerned. In the "piping times" of peace and plenty before the war this was a matter of less importance, though even then many of the poor were underfed. But to-day, with world-wide scarcity of supplies, and high prices, any kind of waste is to be deprecated.

It is a mistake to suppose that horse-flesh is only obtainable from old and quite worn-out animals. Many horses have to be killed for various reasons, e.g., lameness or accident, whilst still in good condition, and when the carcass can be sold for food the price it will realise makes it worth while to slaughter the animal before it has been "worn out." This fact constitutes an argument which should appeal to our humane sentiments, for the last year or two of the life of a horse which is being "worn out" must often be attended, it is to be feared, with much cruelty.

APPENDIX I.

REPORT

OF THE

TUBERCULOSIS DISPENSARY

For 1918,

By WYVILLE S. THOMSON, M.D., D.P.H., Edin.

Tuberculosis Medical Officer.

Staff.

During the year the medical work of the Dispensary has been carried on single-handed by Dr. Thomson. The nursing and clerical staff remain as before. Patients on treatment are seen every Tuesday and Friday between 10 and 1 o'clock, and those at work on Mondays and Thursdays between 6 and 8. Chest examinations are made in the forenoons when time permits, and every afternoon is devoted to this work.

The Dispensary was closed for rather over three weeks during October and November, the Medical Officer and nurses devoting all their energies at this time in assisting the general practitioners and district nurses during the serious influenza epidemic.

The Dispensary as a Centre for Diagnosis.

This is now thoroughly appreciated both by medical men and the general public, the numbers of cases sent by doctors for an opinion being 205. Much of the Medical Officer's time was devoted to the examination of recruits sent by the National Service Medical Board. Cases were also examined for the Local Tribunal and the Pensions Committee.

SUMMARY OF WORK DONE IN 1918.

	Men.	Women.	Children.	Total.
First Examinations ...	449	223	125	797
Re-examinations ...	123	97	8	228

Examinations of "Contacts."

Owing to the large amount of time spent on examination of cases and specimens for the Military Authorities this work has again been curtailed. Only those contacts having symptoms suggestive of phthisis have been examined.

Bacteriological Work.

Six hundred and twenty-two specimens of sputum have been examined. 255 were sent by the medical practitioners and 229 by the Recruiting Medical Board; the remainder were taken from patients at the Dispensary.

Visits.

The two Dispensary nurses made a total of 2,370 visits, including 647 first visits, and the Medical Officer made 180 visits. The visits have in the majority of cases been made to pulmonary cases, but visits were also paid by the nurses to non-pulmonary cases, e.g., glandular and joint cases. Advice both verbal and printed, is given, and particulars obtained.

Where defects are found in the houses they are reported to the Sanitary Inspector.

Sleeping Shelters.

We have twelve shelters available for lending to patients for use on their own ground, free of charge. During the year 17 persons have had use of the shelters—four patients for over 12 months, two for over 2 years, three for over 3 years, one for over 4 years, and one for over 5 years.

Number of Notifications.

In the report of last year figures were given showing that there had been a gradual decrease in the number of notifications of tuberculosis since 1915, but it was pointed out that owing to the numbers being discharged from the army on account of tuberculosis there would probably be an increase during 1918. This forecast has proved correct, the pulmonary notifications having increased from 655 during 1917 to 746 in 1918. This increase is not, however, entirely due to military notifications. The influenza epidemic, unfortunately accounted for the onset of phthisis in a large number of cases.

STATISTICS FOR 1918.

Patients remaining January 1st	109
New Patients admitted	126
Discharged	159
Remaining December 31st	76

All of the 76 patients on the books at the end of the year were adults, of whom 42 were at work and 34 were unfit for work.

RESULTS OF TREATMENT.

	Much Improved.	Improved.	No Improvement.	Worse.	Total.
Stage I.	20	33	4	0	57
.. I-II.	17	26	9	1	53
.. II.	5	17	4	1	27
.. II-III.	0	5	6	1	12
.. III....	0	6	2	2	10
Total	42	87	25	5	159

Tuberculin Treatment.

As in previous years, tuberculin has been given to suitable patients desiring this form of treatment.

W. S. THOMSON,

Medical Officer.



APPENDIX II.

REPORT
ON THE
**WORK OF THE ISOLATION HOSPITAL
AND SANATORIUM FOR 1918.**

During the year 1918 the number of new patients admitted was as follows:—

Infectious Cases	...	...	...	693
Military Cases	...	...	...	987
Tuberculosis	...	...	...	572
				2252

The total number dealt with is slightly less than in 1917, which was the heaviest year on record, but otherwise was greatly in excess of previous years.

The complete return of patients admitted, discharged or died is given in Table A.

Influenza Cases.

The outstanding feature of the year was the admission of influenza cases during the terrible outbreak which occurred in the City in November. Owing to the unparalleled severity of the visitation the need for institutional treatment became urgent, and it was decided to take immediate and drastic steps to meet it. Accordingly some 70 tuberculosis patients and about 30 Scarlet Fever patients were sent home, and thereby two pavilions together with Anstey Lane Hospital were set at liberty, and after disinfection were available for influenza. The accommodation was ready none too soon. The Fire Brigade lent their motor ambulance, and bad cases of influenza from homes where it was well-nigh impossible to look after and nurse them properly were soon pouring in. Many of the cases were of a very serious character. Some were delirious, some were virtually dying, nearly all were very seriously ill.

The Matron (Miss Davies), the Resident Medical Officers (Drs. Wyngaert and Macmillan) and the nursing staff all worked splendidly. I would specially mention the names of the Sisters in Charge, viz., Sisters Linsley, Fry, Cooper, Nicholls and Watts. The number of the nurses had necessarily to be considerably augmented. To do this the help of several V.A.D. nurses was secured and the names of Miss Flint, Mrs. Jones, Mrs. Manship, Miss Payne, Miss Peach, Mrs. Smalley, Miss Spencer, Mrs. West may be mentioned. Some of the Health Visitors and Tuberculosis Nurses were also transferred temporarily to the service of this Institution.

As indicating the strain put upon the medical and nursing staff, it may be mentioned that during the first 14 days, when the "rush" was at its maximum, 72 influenza patients were admitted and 19 proved fatal, some within a few hours of admission. Delirium, high fever, and extreme prostration were marked features of the disease as seen amongst the cases admitted to hospital, and consequently a very great deal of nursing attention was required.

Although the death roll was undoubtedly heavy it must be remembered that the cases were selected for hospital just because they were severe and because the friends found themselves unable to deal with them at home. In some cases whole families were ill at home together. No case was refused on account of its severity if it really seemed the proper course to remove it, and in more than one instance the case was so rapid that death had occurred before the ambulance arrived.

The first cases of influenza were admitted to the institution at the end of October, and the epidemic was virtually over by the end of the year although a few cases still remained under treatment. Altogether 96 cases were admitted during the year, and of these 27 proved fatal. The hospital was again utilised during the further epidemic of influenza which occurred in February and March 1919, and on that occasion 73 cases were admitted. These will be reported upon next year.

There can be no question but that the Hospital rendered invaluable service to the inhabitants of Leicester during what

was undoubtedly the severest ordeal that the town has ever had to pass through in modern times.

Scarlet Fever.

389 cases were admitted, and two proved fatal. There is nothing special to report under this head. It is many years now since scarlet fever caused much trouble in Leicester. Not only was the fatality very low, but there were very few serious complications.

Diphtheria.

147 cases of this disease were admitted. In 19 instances operative treatment was required. Intubation was performed in 14 cases, of which three died; and tracheotomy in five, of which two died. The total number of deaths amongst the diphtheria cases was 15, equal to a case mortality of 10.2 per cent.

Military Cases.

The number of cases sent to the Hospital by the Military Authorities during the year was 987. The majority of these were convalescent sick and wounded cases, but some were cases of infectious disease (scarlet fever, diphtheria, cerebro-spinal fever, measles, erysipelas) and some were pulmonary tuberculosis. The latter were usually cases awaiting discharge from the Army to be followed by transfer to a sanatorium in their own area.

Now that the war is over it is interesting to note the total number of military cases which were dealt with for varying periods at the Groby Road Institution during the war—i.e., from October, 1914, to March, 1919—was 4,260.

Although the majority of the cases were convalescent, not a few were serious cases, and all of them required some medical and nursing attention. Considering that these military cases were in addition to the civilian patients, which were admitted as usual, such a record is, I think, one which the Hospital may legitimately congratulate itself upon. Moreover, there is no doubt that the institution had a good reputation amongst the

soldiers, and we were repeatedly told that they liked being transferred to Groby Road. I believe also that the Military Authorities were well satisfied with the accommodation and treatment provided.

Work of the War Games Committee and West End Association.

The best thanks of the institution are again due to the War Games Committee (Chairman, Counc. C. Squire; Hon. Sec., Mr. W. G. Gibbs, ably assisted by Mr. T. Smith) for continuing to provide tobacco, cigarettes, matches, note paper, etc., for our soldier patients; whilst the West End Association (Chairman, Mr. Tarratt) have again done much for the soldiers, and have presented two bookcases and a large number of books. Many other friends have also done much to brighten the men's stay in hospital.

Hospital Concerts.

The bi-weekly concerts and entertainments, organised by Mr. W. H. Brain, were continued in the soldiers' wards until the end of the war. Mr. Brain carried on this good work almost from the beginning of the war. The Hospital Committee marked their appreciation of his efforts by presenting him with an illuminated address. Also, weekly concerts, arranged by St. Martin's Old Boys' Association, have been given in the consumptive wards. In connection with the latter the names of Messrs. Goodman and Heath must specially be mentioned. These entertainments have done much to brighten hospital life. The best thanks of the Institution are due to all those ladies and gentlemen who have taken part, many of the artistes having visited the Hospital repeatedly.

Honorary Chaplain.

Canon Gedge, who for so many years has acted as Honorary Chaplain to the Institution, has had to retire through failing health. I take the opportunity of saying how greatly his work was appreciated, both by patients and staff. He

has been succeeded by the Rev. F. O. Scott, who is also much liked, and devotes one or more afternoons a week to visiting the Hospital. A Nonconformist minister also attends.

Medical Staff.

Dr. Wyngaert and Dr. Ada Macmillan were the resident medical officers during the greater part of the year under review. The former has since returned to his own country, Belgium; and Dr. Macmillan has been transferred to the Town Hall as Maternity and Child Welfare Medical Officer. Both were efficient and popular officers.

TABLE A.
Number of Patients Admitted, Discharged and Died during 1918.

DISEASE.	Remaining 31st December, 1917.	Admitted during Year.	Discharged during Year.	Died during Year.	Remaining 31st December, 1918.
Scarlet Fever	24	389	357	2	54
Diphtheria	16	147	138	15	10
Enteric Fever	0	10	10	0	0
Measles	22	34	52	4	0
Cerebro-Spinal Fever	0	2	1	1	0
Influenza	0	96	60	27	9
Other Infectious Diseases	0	15	12	2	1
Soldiers	98	987	991	7	87
Tuberculosis:—					
Insured	48	313	285	34	42
"Class X" *	1	12	6	3	4
"Class Y" †	0	4	3	1	0
Non-insured	10	36	36	7	3
Children	37	152	159	6	24
Poor-law adults	20	53	32	14	27
Poor-law children	9	3	4	0	8
TOTAL	285	2253	2146	123	269

* "Class X" implies insured patients for whom the Sanitary Committee and not the Insurance Committee are responsible.

† "Class Y" implies insured patients not belonging to Leicester.

TABLE B.

Patient Days

					For 12 months ending March 31st, 1919.
Scarlet Fever	...	...	...	...	13848
Diphtheria	...	...	...	...	4944
Enteric Fever	...	...	...	...	530
Measles	...	...	...	...	311
Influenza	...	...	...	...	3073
Other Infectious Diseases			...	...	358
Soldiers	...	...	...	...	31687
Tuberculosis :—					
Insured	...	...	...	...	22409
Discharged Soldiers			...	...	2405
Non-insured		...	...	...	2778
Children	...	...	...	...	12374
Poor Law Adults	...	...	...	...	8965
“ .. Children	...	...	...	...	3246
“ Class Y ” †	...	...	...	...	143
					107,071

† Insured, but not belonging to Leicester.

SUMMARY.

Infectious Diseases	...	...	...	23,064
Tuberculosis	...	...	...	52,320
Soldiers	...	...	...	31,637
Total	..	...	...	107,071

TABLE C. Borough of Leicester.
ISOLATION HOSPITAL AND SANATORIUM.

**Receipts and Payments during two years ending
31st March, 1919.**

PAYMENTS.	Year 1917-18.			Year 1918-19.		
	£	s.	d.	£	s.	d.
Salaries and Wages	3764	7	2	4513	6	5
Meat	2679	18	2	1973	16	5
Other Provisions	5461	11	9	5210	5	0
Furniture, Fittings and Domestic Utensils	399	7	0	204	12	1
Bedclothing, Towelling, &c. ...	310	15	6	225	12	4
Fuel, Light and Water	2225	13	4	3067	2	0
Rates, Insurance and Telephone Alterations and Repairs	492	6	8	451	8	9
Horsehire, Horsekeep and Ambulance	154	0	0	229	1	1
Drugs and Medical Appliances... ..	745	15	5	746	2	5
Advertising, Printing and Stationery	105	8	10	114	3	8
Grounds: Gardeners' Wages, Materials, &c.	691	17	6	689	17	8
Cleaning Materials	263	15	5	289	16	6
Clothing and other expenses (Poor Law patients)	154	13	5	127	9	2
Sundries	300	8	9	246	11	7
Garden Colony (Payments less Receipts)	19	6	10	...		
Total Payments	18347	13	4	18675	12	6
RECEIPTS.						
Maintenance of Consumptive Patients (Leicester Board of Guardians)	2566	6	6	2327	15	8
Ditto (Leicester Insurance Committee)	1884	12	6	2542	1	1
Other Maintenance Receipts ...	240	7	2	101	2	6
Pumping Cemetery Sewage ...	75	0	0	75	0	0
Sale of Pigs, Hay, &c.	199	8	0	242	0	8
Sale of Thermometers and Sundries	38	17	0	53	0	3
Government Grant towards cost of Treatment of Tuberculosis	2834	0	0	3358	0	0
Treatment of Soldiers	7502	8	6	6608	13	9
Total Receipts	15340	19	8	15307	13	11
Net cost (excluding Loan Charges)	£ 3006	13	8	3367	18	7
No. of Patient days	119,038			107,071		

W. PENN-LEWIS,

May, 1919.

Borough Treasurer.

APPENDIX III.

REPORT OF PUBLIC ANALYST

For the Year 1918.

CORPORATION BUILDINGS,

HORSEFAIR STREET,

LEICESTER.

THE CHAIRMAN AND MEMBERS OF THE SANITARY COMMITTEE.

GENTLEMEN,

I have to report that during the year 1918 342 samples were submitted for analysis under the Sale of Food and Drugs Act.

Twenty samples of milk were found to be adulterated. As no preservatives were found in 113 samples specially tested, it would appear that Dairymen are finding careful cooling of the milk to be sufficient for keeping purposes during the few hours necessary for distribution.

All other substances examined were of the nature demanded by the purchaser.

As compared with previous years there was a distinct improvement in the samples of flour.

Owing to the Coupon System necessitated by war conditions it was impossible to obtain butter, margarine, lard or spirits in quantity sufficient for analysis, without previous disclosure of the reason for purchase; consequently no samples were taken. As the supply of these articles was controlled by official authorities the public interest was doubtless conserved by them.

I am, Gentlemen,

Yours obediently,

S. F. BURFORD.

TABLE A.
Summary showing Samples taken and submitted for Analysis during 1918.

Nature of Samples.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total for Year.	
	Samples taken.	Found Adulterated.	Samples taken.	Found Adulterated.	Samples taken.	Found Adulterated.	Samples taken.	Found Adulterated.	Samples taken.*	Found Adulterated.
Milk (New) ...	65	9	76	2	66	5	62	4	269	20
Coffee ...	12	...	...	...	...	...	6	...	18	...
Cocoa ...	...	...	6	...	...	...	6	...	12	...
Flour ...	6	...	6	...	...	...	...	...	12	...
Camphorated Oil ...	...	...	...	...	2	...	...	...	2	...
Laudanum ...	...	...	...	...	2	...	...	...	2	...
Pepper ...	...	...	6	...	...	...	...	...	6	...
Ginger ...	...	...	6	...	...	...	...	...	6	...
Epsom Salts ...	...	...	...	...	6	...	...	...	6	...
Rice ...	...	...	...	...	6	...	...	...	6	...
Cod Liver Oil ...	...	...	...	...	2	...	...	...	2	...
Honey ...	1	...	...	...	...	...	...	...	1	...
Total ...	84	9	100	2	84	5	74	4	342	20

* Of the total samples, 18 samples of coffee, 12 of cocoa, 12 of flour, 6 of pepper, 6 of ginger, 6 of rice, 6 of Epsom salts and 2 of laudanum were taken informally.

TABLE B.
Particulars of Adulterated Samples in 1918.

No. of Sample.	Nature of Sample.	Nature and Amount of Adulteration.	Action Taken and Remarks.
21	New Milk	8 per cent. of added water	Prosecuted. Fined £1.
23	"	23 per cent. deficient in fat	" " £1.
28	"	7 per cent. added water	" " £1.
41	"	Below limit in non-fatty solids	No action taken.
43	"	Abnormal and deficient in non-fatty solids	" "
44	"	"	" "
49	"	4 per cent. of added water	Cautioned by Town Clerk.
54	"	49 " " "	Prosecuted. Fined £5 and costs.
81	"	8 " " "	Cautioned by Town Clerk.
110	"	20 " " "	Prosecuted. Case dismissed.
182	"	10 per cent. deficient in fat	No action taken.
231	"	4 per cent. of added water	Cautioned by Town Clerk.
253	"	14 " " "	Prosecuted. Fined £1
255	"	19 " " "	" " £1.
256	"	20 per cent. deficient in fat	" " £1.
265	"	5 per cent. of added water	Cautioned by Town Clerk.
309	"	27 " " "	Prosecuted. Fined £1 10s.
326	"	6 " " "	Cautioned by Town Clerk.
329	"	6 " " "	Cautioned by Town Clerk.
331	"	24 " " "	" " " " Fined £5.

APPENDIX IV.

Summary of Report of Chief Inspector,

FRANCIS BRALEY.

STATEMENT A.**Showing the work done by the Sanitary Staff during the year 1918.**

	No. of Visits.
Systematic House to House Inspection	7,371
Investigations of Complaints	22,630
Visits to ascertain the progress of Sanitary and Informal Orders	14,658
Visits in connection with Infectious Diseases	3,521
Visits to Common Lodging Houses	386
Visits to Bakehouses	554
Visits to Canal Boats	35
Visits to Workshops	291
Visits to Factories	79
Visits to Births	8,845
Visits to Dairies and Milk Shops	528
Visits to Cowsheds	80
Visits by Meat Inspectors	12,325
Other visits	5,623
	<u>76,926</u>
Samples of Food, &c., purchased for Analysis under Adulteration Acts	342
Observations for the purpose of Smoke Prevention	674
Stacks reported for Smoke Nuisance	7
Filthy Houses reported to Medical Officer of Health	119
Dilapidated Houses	34
Prosecutions under the Public Health and Local Acts	13
Letters received	1,022
Letters sent out from the Offices	5,220
Drains Tested (Smoke and Fluid)	325

Orders issued :—Formal 358, Informal 2,993.

STATEMENT B.

In connection with the Inspection of Factories and Workshops,
79 Sanitary defects were found, and Formal and Informal
Notices served.

STATEMENT C.

The quantity of Meat, &c., condemned by the Inspectors of
Foods during the year 1918 was as follows:—

					Tons.	Cwts.	Qrs.	Lbs.
Meat	...	...	...	...	39	10	2	22
Fish	...	...	...	...	36	6	1	12
Fruit	...	...	...	...	—	18	2	17
Vegetables ..	...	...	...	.	4	9	3	0
								No.
Rabbits	...	...	...	...	...	2,911		
Preserved Foods	...	...	...	...	...	4,930		
Poultry	...	...	...	...	...	233		
Eggs	...	...	...	...	...	6,173		
Hares	...	...	...	...	...	5		
Partridges	...	...	...	...	...	64		

APPENDIX V.

SUMMARY OF REPORT
OF
INSPECTOR OF FOOD.

The amount of food voluntarily surrendered or seized is given in Statement C in the Chief Inspector's Report.

The number of carcasses destroyed during the year for tuberculosis was as follows:—

Whole carcasses—Cows	...	...	33
" " Bullock	...	...	1
" " Bull	...	...	1
" " Pigs	...	...	4
		Total	39
			—
Forequarters of Cows	...	...	11
Hindquarters of Cows	...	...	2
		Total	13
			—

In addition to the above carcasses, 1 ton 10 cwts. of offals were destroyed on account of localised tuberculosis.

Leicester is known as No. 5 area, which includes Leicester, Rutland, and parts of Northampton, Lincoln, Nottingham and Derby. The Government authorities have taken several of the Corporation slaughterhouses at the Cattle Market and have appointed as their agents The Leicester Dairy Farmers' Co-operative Union. Their business is to slaughter all animals that are to be sold on a dead weight basis. Also, calves may only be slaughtered at the said slaughterhouses. Any casualty beasts from the above area may only be slaughtered at the Government slaughterhouses.

During the greater part of the year condemned meat and fish has been utilised for the purpose of extracting fat, also for pig and poultry food, and has realised the sum of £126 5s. 3d.

During the year a prosecution was instituted against a person for selling horseflesh as beef for human food. Defendant was convicted and fined £10. The same defendant was also convicted and fined £2 for not exhibiting the necessary sign on the premises.

There was also a prosecution against a person for exposing bad fish. The defendant was convicted and fined 20s.

I beg to remain,

Your obedient Servant,

MARTIN TYLDESLEY,

Inspector of Food.

APPENDIX VI.

REFUSE DISPOSAL DEPARTMENT.

SUMMARY OF REPORT

for 1918

Of the Superintendent, Mr. J. L. FREER.

The Plant consists of 61 carts, 45 railway wagons, 3 slop carts, and 1 tip wagon.

The number of men employed is 126, with 42 horses.

AMOUNT OF REFUSE COLLECTED.

	Tons.
From Portable Ash-bins (56,271)	32,693
From Ash-pits	3,155
Trade Refuse	2,270
Various (Specials)	213
From Knighton District (House Refuse) ...	2,057
	<hr/>
Total Tons	40,388

Of the above quantity, 3,658 tons were taken to Manure Wharves and Tips; the remainder was burnt at the Destructors.

The amount of stable manure collected was 5,768 cart loads, and from the Beast Market 313—total, 6,081.

The sales of manure during 1918 were as follows:—355 railway wagon loads, weight 2,620 tons, £355; 136 cart loads, 136 tons, £17 2s. 6d.—total, 2,756 tons, £372 2s. 6d.

TRADE REFUSE.

4376 loads of trade refuse (weight, 2270 tons) were removed and taken to the Destructors, the payment received amounting to £547 15s. 0d. A charge of 2s. 6d. per load was made for collecting and burning trade refuse, or 2s. per ton for burning only.

2161 dilapidated dust-bins were reported; these are renewed by the landlord.

"TATTING."

The saleable articles picked out of the house refuse are sold, and one half of the proceeds is divided amongst the men. The amount received by the men averaged nearly 1s. 6d. per week per man.

Value of Detinned and Galvanized Scrap, &c., sold:—
Detinned scrap, £311 10s. 6d.; galvanized scrap, £144 10s. 3d.; rags, bones, bottles, &c., £1172 10s. 2d.; also paper, £297 4s. 3d.—total, £1925 15s. 2d.

HOSPITAL SATURDAY SOCIETY.

All workers in this department subscribe one penny weekly, the total amount raised last year being £27 8s. 4d.

DESTRUCTORS.

AMOUNT OF REFUSE RECEIVED AT THE DESTRUCTORS.

	Nedham Street.	Mill Lane.	Lero.	West Humberstone.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.
Delivered by Corporation	8,213	9,020	9,921	9,576	36,730
Delivered by Tradesmen	99	580	449	35	1,163
Total for year ...	8,312	9,600	10,370	9,611	37,893

J. L. FREER,
Superintendent.

APPENDIX VII.

STREET CLEANSING DEPARTMENT

REPORT for 1918.

STREET CLEANSING.—The particulars of the streets swept in normal times are as follows:—

	Hand-swept.	Machine-swept.
Once per week	37 miles	20½ miles.
Twice ,,	7½ ,,	22 ,,
Three times per week ...	½ ,,	10 ,,
Four ,, ,,	¼ ,,	3¾ ,,
Six ,, ,,	½ ,,	10 ,,
	45¾ miles.	66¼ miles.

The total length of the roads swept is 112 miles.

Owing to the depletion of the staff by the war the work of the Department has, of course, suffered very materially; we are, however, gradually getting the men back and hope shortly to shew something like pre-war results.

STAFF AND WORKING HOURS.—At the time of writing the staff numbers 104—including three temporary men—as against 125 in pre-war days; a reduction of 21.

The hours worked each week are now 47, as against 54 previously; the wages paid to all able-bodied men being 28s. per week plus 30s. war bonus.

Orderly boys seem to be a thing of the past, not a single lad having been employed on this work for some considerable time, and only very rarely do we get any applications, which are at once dropped when the wages paid are mentioned.

In place of the orderly boys four young men with hand-trucks are employed in keeping the main thoroughfares in the centre of the city tidy during the daytime.

COURTS AND BACKWAYS.—212 courts and alleys are receiving regular attention each week.

SNOW REMOVAL.—Only three falls of snow were experienced during the year, and two of these were slight, the number of loads removed being 1,658, as compared with 1,798 during the previous year. The cost of removal in excess of our own staff was £166 19s. 8d.

STREET WATERING.—Six hired horses were engaged on this work in addition to six of our own. These horses were mostly employed in sprinkling the streets directly in front of the sweepers in order to serve the double purpose of watering the streets in the ordinary way and also enable the sweepers to work in some comfort.

The work carried out by the Tramways Department's electric watering tanks was as follows:—Loads spread, 1,445; quantity in gallons, 2,215,185; cost, £258 17s. 11d. A further increase has been made in the charge for spreading water by these tanks, it being now 3s. 7d. per load, compared with 2s. 4d. per load in pre-war days.

SUMMARY OF LOADS OF MATERIALS HANDLED.—Sweepings collected (dry), 7,224; sludge, 3,849. Manure collected, 300. Market Refuse, 649. Manure re-carted to gardens, 391. Sweepings (ditto), 1,751. Snow removed, 1,658. Gravel spread, 818. Water spread, 7,765. Stable Refuse, 312. Miscellaneous, 656. Total, 25,541.

H. F. WIGFIELD, Superintendent.

APPENDIX VIII.



STATISTICAL TABLES.

TABLE 1.
MUNICIPAL WARDS. VITAL STATISTICS, 1918.

WARD.	(1)	(2)	(3)	(4)	(5)	(6)
	No. of Inhabited Tenements July, 1918.	Estimated Population.	Births.	Deaths.	Deaths under 1 year.	
1. St. Martin's	577	2590	51	65	12	
2. Newton ...	2173	9126	159	179	23	
3. St. Margaret's	3125	13386	204	225	27	
4. Wyggeston	3567	15373	307	329	45	
5. Latimer ...	3811	17683	294	311	34	
6. Charnwood	2011	8687	110	140	11	
7. Wycliffe ...	2794	11020	157	226	14	
8. De Montfort	1692	7444	61	104	13	
9. The Castle	3174	13775	234	230	21	
10. Westcotes ...	6019	25400	261	355	28	
11. The Abbey	4625	21552	298	300	34	
12. Belgrave ...	3905	16947	210	275	21	
13. West Humberstone ...	4301	19499	304	424	29	
14. Spinney Hill	5720	25282	284	359	25	
15. Knighton ...	4117	17291	157	205	5	
16. Aylestone ...	2658	12439	155	156	9	

TABLE 2.
MUNICIPAL WARDS. VITAL STATISTICS, 1918.

WARD.	Birth-rate.	Death-rate.	Infant Mortality.	Zymotic rate.	Diarrhoea rate.	Phthisis rate.	Average Phthisis rate last 10 years.
1. St. Martin's	19.6	25.0	235	3.4	.3	3.4	.92
2. Newton	17.4	19.6	144	4.7	0.0	1.3	1.82
3. St. Margaret's	15.2	16.8	132	3.8	0.0	1.7	1.71
4. Wyggeston	19.9	21.4	146	4.7	.2	2.1	1.86
5. Latimer	16.6	17.5	115	4.8	.1	1.9	1.57
6. Charnwood	12.6	16.1	100	4.3	0.0	1.6	1.45
7. Wycliffe	14.2	20.5	89	3.8	0.0	.9	1.15
8. De Montfort	8.1	13.9	213	2.5	.1	.4	.60
9. The Castle	16.9	16.6	89	4.2	0.0	1.3	1.30
10. Westcotes	10.2	13.9	107	4.0	0.0	1.3	1.06
11. The Abbey	13.8	13.9	114	3.4	0.0	1.2	1.15
12. Belgrave	12.3	16.2	100	5.3	0.0	.8	1.07
13. West Humberstone	15.5	21.7	95	6.4	0.0	2.0	1.52
14. Spinney Hill	11.2	14.1	88	3.6	0.0	.9	.96
15. Knighton	9.0	11.8	31	2.8	0.0	.5	.56
16. Aylestone	12.4	12.5	58	4.5	0.0	.5	.92

TABLE 3. MUNICIPAL WARDS.**Average Rates for Five Years, 1914-1918.**

WARD.	Average Rates.		
	Death-rate.	Birth-rate.	Infant Mortality.
(1)	(2)	(3)	(4)
1. St. Martin's	15.1	18.0	175
2. Newton	18.7	23.5	170
3. St. Margaret's	16.4	21.5	148
4. Wyggeston	22.0	25.1	188
5. Latimer	15.1	23.0	120
6. Charnwood	15.2	15.9	132
7. Wycliffe	16.1	17.4	80
8. De Montfort... ..	12.8	10.2	144
9. The Castle	14.2	19.9	93
10. Westcotes	10.7	13.6	89
11. The Abbey	11.9	19.4	94
12. Belgrave	14.1	19.7	104
13. West Humberstone	13.5	20.3	90
14. Spinney Hill... ..	10.3	14.7	89
15. Knighton	9.3	13.2	50
16. Aylestone	11.4	17.2	93
Whole Borough	17.84	14.92	108

TABLE 4.
Deaths in each Ward from all causes in 1918.

No.	WARD.	Age Group						Total all ages.	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
		0 to 1 year.	1 to 5.	5 to 60.	Over 60 years.	Total all ages.																
1.	St. Martin's ...	12	5	31	17	65	...	...	1	...	...	...	...	8	9	1	9	10	36	...	56
2.	Newton ...	23	19	76	61	179	...	...	7	...	...	...	...	35	43	...	12	34	85	5	136
3.	St. Margaret's ...	27	25	109	64	225	...	...	5	1	...	2	...	44	52	...	24	45	102	2	173
4.	Wyggoston ...	45	41	136	107	329	...	...	6	...	...	...	...	62	73	4	33	57	159	3	256
5.	Latimer ...	34	41	152	84	311	...	...	4	...	...	3	...	75	85	3	31	56	131	2	226
6.	Charnwood ...	11	17	71	41	140	...	...	3	...	...	1	...	34	38	...	14	16	70	2	102
7.	Wycliffe ...	14	13	94	105	226	...	...	2	...	...	1	...	39	42	...	11	36	134	3	184
8.	De Montfort ...	13	5	41	45	104	...	...	1	...	...	...	...	16	19	1	3	16	64	1	85
9.	The Castle ...	21	18	105	86	230	...	...	5	...	...	1	...	52	59	1	18	20	130	2	171
10.	Westcotes ...	28	31	180	116	355	...	...	2	...	...	...	...	97	104	1	34	54	158	4	251
11.	The Abbey ...	34	28	152	86	300	...	...	4	2	...	2	...	63	75	1	28	68	126	2	225
12.	Belgrave ...	21	31	137	86	275	...	...	11	1	...	1	...	71	91	1	15	31	136	1	184
13.	West Humberstone ...	29	44	216	135	424	...	...	...	...	...	1	...	119	125	1	40	71	184	3	299
14.	Spinney Hill ...	25	23	185	126	359	...	...	...	1	...	2	...	85	92	...	24	56	184	3	267
15.	Knighton ...	5	8	108	84	205	...	...	5	...	...	3	...	46	49	...	10	20	126	...	156
16.	Aylestone ...	9	15	76	56	156	...	...	5	...	...	...	...	19	56	1	7	22	70	...	100
	Infirmery ...	2	13	142	34	191	...	...	...	...	...	...	...	7	7	...	2	36	146	...	184
	Union Workhouse ...	...	...	1	3	4	...	...	...	...	...	...	...	1	1	...	...	3	...	...	3
	Borough Asylum ...	...	...	63	39	102	...	...	...	...	...	...	2	20	22	1	16	5	58	...	80
	Isolation Hospital ...	4	14	91	6	115	...	...	5	1	12	1	1	30	50	...	61	3	1	...	65
	Poor Law Infirmery ...	3	6	112	280	401	...	...	...	...	...	...	...	63	63	...	7	37	294	...	338

Deaths in Institutions have been subtracted from the Wards in which the Institutions are situated; and (except in the case of the Workhouse and Asylum) have been distributed to the Wards to which they belong. Deaths of persons transferred from the Workhouse to the Poor Law Infirmery, however, have not been distributed, as the home addresses of such persons are not obtainable.

TABLE 5.

Showing Number of Deaths from Tubercular Diseases
in Leicester in past years.

Year.	Phthisis.*		Other Tuberculous Diseases.		Total Tuberculous Deaths.	
	Deaths.	Rate per 100,000 Population.	Deaths.	Rate per 100,000 Population.	Deaths.	Rate per 100,000 Population.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1898	221	109	137	68	358	177
1899	202	98	129	63	331	161
1900	230	110	144	69	374	179
1901	271	127	80	38	351	165
1902†	272	127	86	40	358	168
1903	266	123	111	51	377	175
1904	353	163	96	44	449	207
1905	288	132	87	40	375	171
1906	339	154	71	32	410	187
1907	275	124	99	44	374	169
1908	287	128	104	46	391	175
1909	290	129	82	36	372	166
1910	281	124	77	34	358	158
1911	288	126	66	28	354	155
1912	284	123	89	38	373	162
1913	301	130	82	35	383	165
1914	273	117	88	37	361	155
1915	325	143	76	33	401	177
1916	306	135	67	29	373	165
1917	343	157	78	35	421	193
1918	316	145	82	37	398	182

* In comparing the Phthisis figures for the years prior to 1901 with the figures for later years, it will be noticed that an apparent increase in the phthisis rate has occurred. It will also be seen, however, that there has been a proportionate decrease in the rate for "other tubercular diseases." The explanation is that in 1901 a different method of classification was adopted whereby a certain number of cases which had hitherto been classified as other tubercular diseases were transferred to the heading of "phthisis."

† The rates for the years 1902-10 have been revised in the light of the 1911 Census.

TABLE 6.

Age and Sex Distribution of Deaths from Phthisis in 1918.

Age Period.	Males.	Females.	Total.
0 to 5 ...	2	3	5
5 „ 10 ...	...	3	3
10 „ 20 ...	15	28	43
20 „ 30 ...	30	41	71
30 „ 40 ...	36	32	68
40 „ 50 ...	37	28	65
50 „ 60 ...	22	14	36
60 „ 70 ...	11	11	22
70 „ 80 ...	2	1	3
Over 80 ...	...	...	...
Total ...	155	161	316

Occupations of Persons Dying from Phthisis in 1918.

	M.	F.		M.	F.
SHOE TRADE:					
Finishers ...	16	...	Army Pensioners ...	3	...
Clickers ...	7	...	Cigar Makers ..	1	2
Riveters ...	4	...	Railway Porters ...	1	...
Pressmen ...	6	..	Teacher ...	1	...
Machinists ...	1	10	Plumbers ...	2	...
Various ...	16	4	Dressmakers ...	...	3
Total in Shoes ...	50	14	Hawker ...	...	1
Hosiery Trade* ...	7	24	Bakers ...	3	...
Labourers ...	9	...	Gardeners ...	1	...
Clerks ...	9	2	Printers ...	4	...
Tailoring Trade ...	1	1	Various ...	28	13
Vanmen ...	2	...	Occupations not stated		
Elastic Web Weavers ...	1	3	(includes Married		
Engineers ...	10	...	Women, Widows,		
Motor Drivers ...	2	...	Children, and		
Commercial Travellers ...	2	...	Persons of no		
Shopkeepers ...	3	1	occupation) ...	15	97
			Total ...	155	161

A large number of *married* women are engaged in the Hosiery Trade, but these are not included for in the case of deaths of married women and widows, only the husband's occupation is registered.

TABLE 7.

Showing the number of Notification Certificates for and number of Deaths from the Principal Zymotic Diseases for the seven years, 1912-1918.

DISEASE	1912.		1913.		1914.		1915.		1916.		1917.		1918.	
	Notifica- tions.	Deaths.	Notifica- tions.	Deaths.	Notifica- tions.	Deaths.	Notifica- tions.	Deaths.	Notifica- tions.	Deaths.	Notifica- tions.	Deaths.	Notifica- tions.	Deaths.
Small Pox ...	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Scarlet Fever ...	1295	13	548	7	577	5	332	2	647	2	573	3	583	5
Diphtheria ...	220	21	185	19	136	19	156	27	115	11	128	18	154	15
Enteric Fever ...	56	7	21	1	18	6	13	2	9	2	3	2	34	4
Erysipelas ...	170	5	192	5	258	9	338	18	154	7	114	5	101	1
Puerperal Fever ...	10	4	18	2	11	4	25	12	16	5	4	0	6	6
Phthisis ...	827	284	872	301	730	273	901	325	730	506	655	343	746	316
Other forms ...	...	89	329	82	138	88	159	76	134	67	98	78	82	82
Ophthalmia ...	...	0	15	0	55	0	61	0	67	0	66	0	51	0
Cerebro-Spinal Fever ...	...	2	...	1	...	0	5	2	7	7	4	2	2	1
Acute Poliomyelitis ...	...	1	..	0	...	0	4	2	3	1	5	1	3	1
Measles ...	...	96	...	31	...	97	...	73	3807	140	4572	98	1686	59
Totals ...	2581	522	2181	449	1923	501	1994	539	5689	548	6232	550	3448	490

(TABLE 8. L.G.B. Table 1.)
Vital Statistics of whole District during 1918 and previous years. Borough of Leicester.

YEAR. (1)	Population estimated to middle of each year, revised in light of 1911 Census. (2)	BIRTHS.		TOTAL DEATHS REGISTERED IN THE DISTRICT.		TRANSPERABLE DEATHS.		NET DEATHS BELONGING TO THE DISTRICT.				
		Un-corrected Number. (3)	Nett. Number. (4)	Rate. (5)	Number. (6)	Rate. (7)	Of Non-residents registered in the District. (8)	Of Residents not registered in the District. (9)	Under 1 Year of Age.		At all Ages.	
									Number. (10)	Rate per 1000 Nett Births. (11)		Number. (12)	Rate. (13)
1913	230,970	5222	5278	22.85	2817	12.19	126	397	630	119.3	3088	13.36
1914	232,654	5091	5144	22.10	2996	12.87	145	431	617	119.9	3282	14.10
1915	232,664	4832	4851	20.84	3363		195	217	596	122.8	3385	14.98
1916	225,907		4684	20.73	3110		176	159	491	104.8	3093	13.69
1917	217,537	3710	3688	16.95	3020	13.88	234	161	388	105.0	2948	13.54
1918	217,537	3286	3246	14.92	3981	18.30	277	179	351	108.1	3883	17.84
Total population at all ages	...	...	...	...	217,537	Area of District in acres (exclusive of area covered						
Number of inhabited houses	...	...	...	...	54,279	by water)						
Average number of persons per house	...	...	...	...	4.41	...						

NOTE.—This Table has been filled in in accordance with the instructions given on the form supplied by the Local Government Board.

TABLE 9. (L.G.B. Table IV.) Borough of Leicester.

INFANT MORTALITY DURING THE YEAR 1918.

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.	76	18	17	11	122	59	55	58	57	351
Small-pox ... ..	...	...	...	...	...	...	...	...	...	...
Chicken-pox ... ..	...	...	...	...	...	...	...	...	...	...
Measles ... ..	...	...	...	...	...	...	1	1	8	10
Scarlet Fever ... ..	...	...	...	...	...	...	...	1	...	1
Whooping-cough ... ..	...	...	...	1	1	5	1	4	6	17
Diphtheria and Croup ... ..	...	...	...	...	...	...	...	1	...	1
Erysipelas ... ..	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis ... ..	...	...	...	...	...	...	2	1	2	5
Abdominal Tuberculosis ... ..	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases	1	...	...	...	1	1	2	2	...	6
Meningitis (<i>not Tuberculous</i>)	...	...	...	...	...	1	1	1	3	6
Convulsions	6	2	3	...	11	2	7	1	2	23
Laryngitis ... ..	...	...	...	...	...	...	...	...	...	...
Bronchitis ... ..	...	1	...	1	2	7	5	6	7	27
Pneumonia (all forms) ... ..	...	1	...	...	1	4	12	17	13	47
Diarrhoea ... ..	...	...	...	...	...	5	4	2	1	12
Enteritis	1	...	...	2	3	6	2	5	...	16
Gastritis ... ..	...	...	...	...	...	2	2	1	1	6
Syphilis ... ..	...	...	1	1	2	2	2	...	...	6
Rickets ... ..	...	...	...	...	...	...	...	...	...	...
Suffocation (overlying) ... ..	...	...	...	...	...	3	2	2	...	7
Injury at Birth ... ..	...	...	...	...	...	...	...	...	...	...
Atelectasis	2	...	...	...	2	...	1	...	...	3
Congenital Malformations	5	...	...	...	5	...	...	...	...	5
Premature Birth	45	9	7	2	63	6	2	...	...	71
Atrophy, Debility and Marasmus	12	3	3	2	20	9	6	4	...	39
Other Causes	4	2	3	2	11	6	3	9	14	43

Nett Births in the Year (legitimate, 3,025.
illegitimate, 221.

Nett Deaths in the Year of (legitimate infants, 283.
illegitimate infants, 68.

TABLE 10.

INFLUENZA EPIDEMIC, 1918—1919.
Influenza Deaths—Age and Sex Distribution.

Week ending.	0—5		5—15		15—25		25—35		35—45		45—60		Over 60		Total Deaths each Week
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
June 15	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
.. 22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
.. 29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
July 6	...	...	...	...	...	...	1	...	...	...	1	2	1	5	
.. 13	1	...	2	...	...	4	1	4	...	2	...	1	2	5	22
.. 20	...	2	...	...	2	5	...	4	1	2	2	3	5	1	27
.. 27	1	...	...	...	...	...	...	...	...	...	1	...	3	2	7
Aug. 3	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
.. 10	...	...	...	...	...	...	...	...	1	1	...	...	...	...	2
.. 17	...	...	...	...	...	...	...	...	...	...	2	1	...	...	3
.. 24	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
.. 31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sept. 7	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
.. 14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
.. 21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
.. 28	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Oct. 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
.. 12	...	...	1	...	1	3	...	...	...	...	...	...	...	...	5
.. 19	5	7	1	6	1	5	3	10	3	5	1	4	2	1	54
.. 26	11	16	21	18	7	20	19	39	4	10	11	11	6	1	194
Nov. 2	10	17	21	16	22	26	33	47	12	15	8	16	10	9	262
.. 9	11	16	7	10	11	13	14	26	4	7	9	6	5	8	147
.. 16	1	7	...	3	1	5	3	15	6	4	1	7	5	7	65
.. 23	...	1	1	...	...	3	2	3	...	2	...	4	2	2	20
.. 30	...	1	...	...	...	4	...	3	1	3	1	2	...	3	18
Dec 7	...	...	...	3	1	1	2	1	2	1	3	...	1	3	18
.. 14	1	1	...	1	...	...	1	3	1	...	1	...	...	...	9
.. 21	1	...	...	...	...	1	1	3	...	...	2	2	1	...	11
.. 28	1	...	...	...	...	...	1	1	...	...	...	...	...	...	3
1919															
Jan. 4	...	...	1	1	...	...	...	...	...	...	...	...	...	...	2
.. 11	...	1	...	...	...	...	1	...	...	1	...	...	...	...	3
.. 18	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
.. 25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Feb. 1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
.. 8	...	...	...	...	...	...	1	...	...	...	1	...	...	...	2
.. 15	...	...	...	...	...	...	...	3	...	1	2	2	2	2	12
.. 22	2	5	2	1	2	5	3	11	1	6	4	5	3	10	60
March 1	8	5	2	3	3	11	5	10	7	2	4	8	10	13	91
.. 8	5	6	2	...	3	2	...	7	4	2	6	3	2	8	50
.. 15	3	4	1	1	1	6	2	3	2	2	5	1	6	4	41
.. 22	2	...	...	...	...	3	1	1	2	...	3	2	4	1	19
.. 29	...	...	...	1	1	...	...	...	1	...	...	...	1	2	6
April 5	...	...	...	...	...	3	1	...	...	...	...	...	4	...	8
.. 12	...	...	...	...	...	...	1	1	...	...	...	...	1	...	3
Totals	63	90	62	64	58	120	95	195	53	66	66	82	78	84	1176

TABLE 11.

**Showing principal Vital Statistics for Leicester
in 1918.**

Calculated (1) on the population adopted by M.O.H. (217,537); and (2) on the differential population adopted by Registrar General, viz. (a) for Death Rates, 203,008; (b) for Marriage Rate and Birth Rate, 227,463.

	(1)	(2)
General Death-rate	14.92	19.12
Zymotic .. .. .	.58	.64
Diarrhoea .. .. .	.06	.06
Respiratory	2.86	3.06
Cancer	1.42	1.51
Tuberculosis	1.82	1.94
Phthisis	1.45	1.55

The rate of Infant Mortality is, of course, unaffected, this rate being calculated not upon population but upon the number of births.