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THE EIGHTY-THIRD

ANNUAL REPORT

UPON THE

HEALTH OF LEICESTER

FOR THE YEAR 1931

BY

C. KILLICK MILLARD, M.D., D.Sc.

MEDICAL OFFICER OF HEALTH.

APPENDICES

INCLUDING

I. REPORT of the TUBERCULOSIS OFFICER.
II. REPORT on the ISOLATION HOSPITAL AND SANATORIUM.
III. REPORT on the CITY GENERAL HOSPITAL.
IV. REPORT of the MATERNITY and CHILD WELFARE MEDICAL OFFICER.
V. REPORT of the CITY ANALYST.
VI. REPORT of the CHIEF SANITARY INSPECTOR.
VII. REPORTS on the V.D. CLINICS.

LEICESTER:
LEICESTER CO-OPERATIVE PRINTING SOCIETY LIMITED, 99 CHURCH GATE.

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" J. M. WALKER.

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(As constituted January 1st, 1932.)

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Tuberculosis Officer and Assistant M.O.H. ..	WYVILLE S. THOMSON, M.D., D.P.H.
Assist. Tuberculosis Officer	E. G. LAWRIE, M.B.
Medical Supt. Isolation Hospital & Sanatorium ..	H. STANLEY BANKS, M.D., D.P.H.
Assist. Medical Officers	J. H. WEIR, M.B. V. FREEMAN, M.R.C.S., D.P.H.
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Orthopædic Surgeon	LESLIE MORRIS, M.D., F.R.C.S.

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Maternity Home	„ EDITH BRADSHAW.
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Assist. to Public Analyst	J. G. LUNT, B.Sc., A.I.C.
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Isolation Hospital and Sanatorium	Mrs. ADAMS. Miss J. THOMPSON.
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Asst. Steward	S. WHATSIZE.
Clerks	Miss HALLAM. L. HEATHERLEY.
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1. Holds Sanitary Inspector's Certif. Roy. San. Inst.
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13. Holds Certif. for Maternity and Child Welfare Workers of the Roy. San. Inst.
14. Holds new Health Visitors' Certificate.
15. Holds State Registered Nursing Certificate.

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SUMMARY OF STATISTICS

FOR THE YEAR 1931.

CITY OF LEICESTER.

Population at Census, 1931	239,111
,, (estimated) at Mid-year 1931	241,300
Marriages	2,182
Marriage-rate	18.08
Births	3,684
Birth-rate	15.26
Deaths (corrected for transferable deaths)	2,984
Death-rate	12.36
Deaths under One Year	235
Infant Mortality (per 1,000 Births)	63.78
Zymotic-rate (per 1,000 population)	.54
Respiratory-rate ,, ,, ...	1.90
Cancer-rate ,, ,, ...	1.47
Tuberculosis-rate ,, ,, ...	1.28
Phthisis-rate ,, ,, ...	1.08

Area of City (in acres)	8,582
Number of persons per acre at Census, 1931 ..	27.8
Number of persons per Tenement at Census, 1921 ..	4.28
Number of Inhabited Tenements, January, 1932 ..	63,434
Number of Empty Houses, January, 1932	316
Number of Empty Cottages, January, 1932 ..	106
Rateable value (1st November, 1931)	£1,610,657
General Rate for the year, 1931-32 ..	13s. 10d. in the £

	England & Wales	107 Great Towns (Population exceeding 50,000) including London	London
Birth-rate	15.8	16.0	15.0
Death-rate	12.3	12.6	12.4
Infant Mortality (per 1,000 Births)	66	72	65

(Registrar General's Figures.)

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HEALTH DEPARTMENT,
GREY FRIARS,
LEICESTER.
30*th June*, 1932.

To the Chairman and Members of the Health Committee.

LADIES AND GENTLEMEN,

I beg to present my Thirty-first Annual Report on the health of Leicester, viz. for the year 1931.

Once again it may be said that the retrospect is favourable, although it is true that both the death-rate, infant mortality and the tuberculosis death-rate were all a little higher than in the previous year. The figures for 1930, however, were exceptionally low, and a similar increase for 1931 was general throughout the country.

A comparison with other large towns shows that Leicester was well below the average both as regards general death-rate and infant mortality.

The deaths from cancer showed a slight decrease, and in view of the frequency with which an increase has had to be recorded this is something to be thankful for.

The year under review was a census year. The Census revealed that Leicester's population had been over-estimated to the extent of nearly 4,000. The explanation of this is, no doubt, that Leicester people have gone to live beyond the City boundaries to an even greater extent than was realised.

The Census figures are discussed in the report and reference is made to the large increase in population in the districts around Leicester (p. 1).

Minor smallpox again proved very prevalent during the past year; indeed, the number of fresh cases was the largest recorded. A very large amount of the time of the Medical Officer of Health and Sanitary staff was taken up in endeavouring to combat the disease. Towards the end of the year the outbreak appeared to have been terminated, but within a few weeks it again broke out (in January, 1932) being apparently reintroduced from outside. Fortunately, the extremely mild character of the disease, as compared with true or Asiatic smallpox, was maintained throughout,

and only one death (in a young infant) was recorded. I wish to express my thanks to the Sanitary Inspectors for the painstaking and efficient way in which they helped to control the outbreak by assisting me in the supervision of contacts.

Reference is made on p. 15 to the satisfactory reduction which is taking place in Leicester in the mortality from measles.

I would draw attention, in that portion of the report for which I am personally responsible, to the section dealing with "rheumatism," which is such a fruitful cause of sickness, invalidity, inability to work, and, indirectly, of death (p. 25).

I would also draw attention to the reference to an important report on the subject of tuberculosis issued by the Ministry of Health, which deals, amongst other things, with the question of pulmonary tuberculosis in childhood.

I wish also to draw attention to the valuable reports submitted by the Chief Officers of the various Sub-Departments of the Health Department, viz. :—

Dr. W. S. Thomson, Tuberculosis Officer (p. 45) ;

Dr. H. Stanley Banks, Med. Supt. City Isolation Hospital and Sanatorium (p. 61) ;

Dr. E. C. Hadley, Med. Supt. City General Hospital (p. 95) ;

Dr. E. B. Berenice Humphreys, M.&C.W. Medical Officer (p.107);

Mr. F. C. Bullock, B.Sc., City Analyst (p. 129) ;

Mr. F. G. McHugh, Chief Sanitary Inspector (p. 145) ;

And by the V.D. Medical Officers, Dr. Bessie Symington and Dr. C. Hamilton Wilkie (p. 161).

A perusal of these reports will indicate the vast range of work which is now controlled by your Committee and its various Sub-Committees. If I may pick out one report for special comment I would say that the excellent and exhaustive report of Dr. Banks is evidence of the great amount of work, much of it of an advanced character, which is being carried on at the City Isolation Hospital and Sanatorium, Groby Road.

I am, Ladies and Gentlemen,

Your obedient servant,

C. Killick Millard

Medical Officer of Health.

Medical Officer of Health's Report

FOR THE YEAR 1931.

PART I.

Statistical.

Population.

The result of the Census, taken in April, 1931, showed the population of Leicester to be 239,111. The population estimated to mid-year, 1931, was 241,300. The Registrar General's estimate for the year 1929, the same figure being used again for 1930, was 245,200, from which it appears that the population had been over-estimated, to the extent of nearly 4,000.

The population of the City at the previous Census, in 1921, was 234,143, so that the intercensal increase was only 4,968.

In the ten years, 1921-30, the number of births registered was 42,604, and the number of deaths, 29,684, indicating a "natural increase" of population, or excess of births over deaths, of 12,920. But for the effects of migration, this increase, added to the 1921 census population, would have made the population in 1931 to be 247,063. The fact that the 1931 census population was nearly 8,000 less than this figure indicates how greatly emigration has exceeded immigration.

The 1931 Census.

As in the past a census has only occurred every ten years it is necessarily an event of great importance to all interested in statistics.

The following is a brief statement of what the census revealed in Leicester and Leicestershire.

The population of the City was found, as stated above, to be 239,111, an increase of only 4,968 upon the figure recorded at the previous census. This was a proportional increase of only 2.1 per cent. in the ten years.

In the administrative county, on the other hand, the population was found to be 302,683, an increase of 42,357, or 16.3 per cent.

The increase varied greatly in different parts of the County, being only 2.2 per cent. at Ashby, whilst it was no less than 46.3 per cent. in Oadby, and 97.8 per cent. in Blaby. The explanation of these great contrasts is easy. Ashby is a small country town almost stationary as regards population. Oadby and Blaby, on the other hand, adjoin Leicester, and the great increase in the populations of these two districts is, of course, due to the overflow of the population of Leicester into these adjoining areas.

The actual increase in population in the various districts around Leicester is shown below :—

District.	1921 Population.	1931 Population.	Actual Increase.	Per cent. Increase.
Oadby	3,229	4,724	1,495	46.3
Thurmaston ..	2,206	3,723	1,517	68.8
Wigston	9,102	11,393	2,291	25.2
Blaby	16,565	32,761	16,196	97.8
Barrow-on-Soar ..	25,209	30,857	5,648	22.4
	42,311	75,458	33,147	78.3

The total increase in population in these five districts contiguous to Leicester, amounts to 33,147 in the ten years. The greater part of this increase is doubtless due to Leicester's overflow population.

Improved transport facilities by motor bus and motor car have undoubtedly encouraged people to move out further from the centre of the city than formerly. Moreover, the fact that Leicester is now largely built up has necessitated both the Corporation and private builders going out beyond the city boundaries in order to find sites for the erection of houses.

A large part of both the Park (Saffron Lane) Building Estate and the Braunstone Estate are outside the City. In addition, numerous private building estates are to be seen on practically all the main roads leading from Leicester.

From the health point of view this tendency towards decentralisation and spreading out of population into the surrounding

country is very much to the good. The loss to the rates is sometimes deplored; but this is probably not so serious as is sometimes supposed. For what is lost in rates is largely compensated for by what is saved on social services.

Previous Census Figures (Leicester City).

Census.	Population.	Increase.
1901	211,581	—
1911	227,242	15,661
1921	234,190	6,948
1931	239,111	4,921

CENSUS RESULTS IN OTHER LARGE TOWNS.

Many other large towns have doubtless had similar experience to Leicester, but whatever the cause great contrasts are shown.

Thus, the population of Sheffield was stationary. Salford declined 4.5 per cent.; Barnsley, 4.8 per cent.; Rhondda, 13.1 per cent. On the other hand, Northampton increased 1.6 per cent.; Nottingham, 2.4 (much the same figure as Leicester); Birmingham, 8.7; Coventry, 14.3.

The average percentage increase in the 83 County Boroughs was 3.6 per cent.

The population of the Administrative County of London decreased to the extent of 2.0 per cent. On the other hand, certain places near London increased greatly. Thus, Hendon increased from 57,529 to 115,682, more than doubling; and Dagenham, increased from 9,127 to 89,365, nearly ten times as great; London, of course, is practically built up and almost all new houses have to be built outside.

Future Quinquennial Census.

The important decision has now been taken to hold a census every five years instead of every ten. Such a step has long been advocated by medical officers of health on the ground that it would enable much more reliable statistics to be calculated.

Marriages.

The number of marriages solemnised in Leicester during the year was :—

In Church of England	1,097
Elsewhere	1,085
Total	2,182

The marriage-rate was 18.08; the figures for previous years are given in Table 10. The 1931 figure is about an average.

Births.

The corrected number of births for the year was 3,684 (M. 1,838, F. 1,846). This is a reduction of 188 on the figures for the previous year.

The **Birth-rate** was 15.26, this being (with the exception of the last year of the war) the lowest figure on record. It is, however, only a small fraction lower than the figure (15.29) for 1929.

Still-Births.

The number of still-births notified was 110 (80 by midwives and 30 by doctors). The number of still-births interred at the City Cemeteries was 173.

Illegitimacy.

The number (corrected) of illegitimate births was 182, equal to 4.9 per cent. of the total births. The figure for the previous year was 5.2 per cent.

Deaths.

The number of deaths of persons properly belonging to Leicester, after making the usual corrections for institutional and transferable deaths, was 2,984, (M. 1,500, F. 1,484). The number was 240 greater than in the previous year.

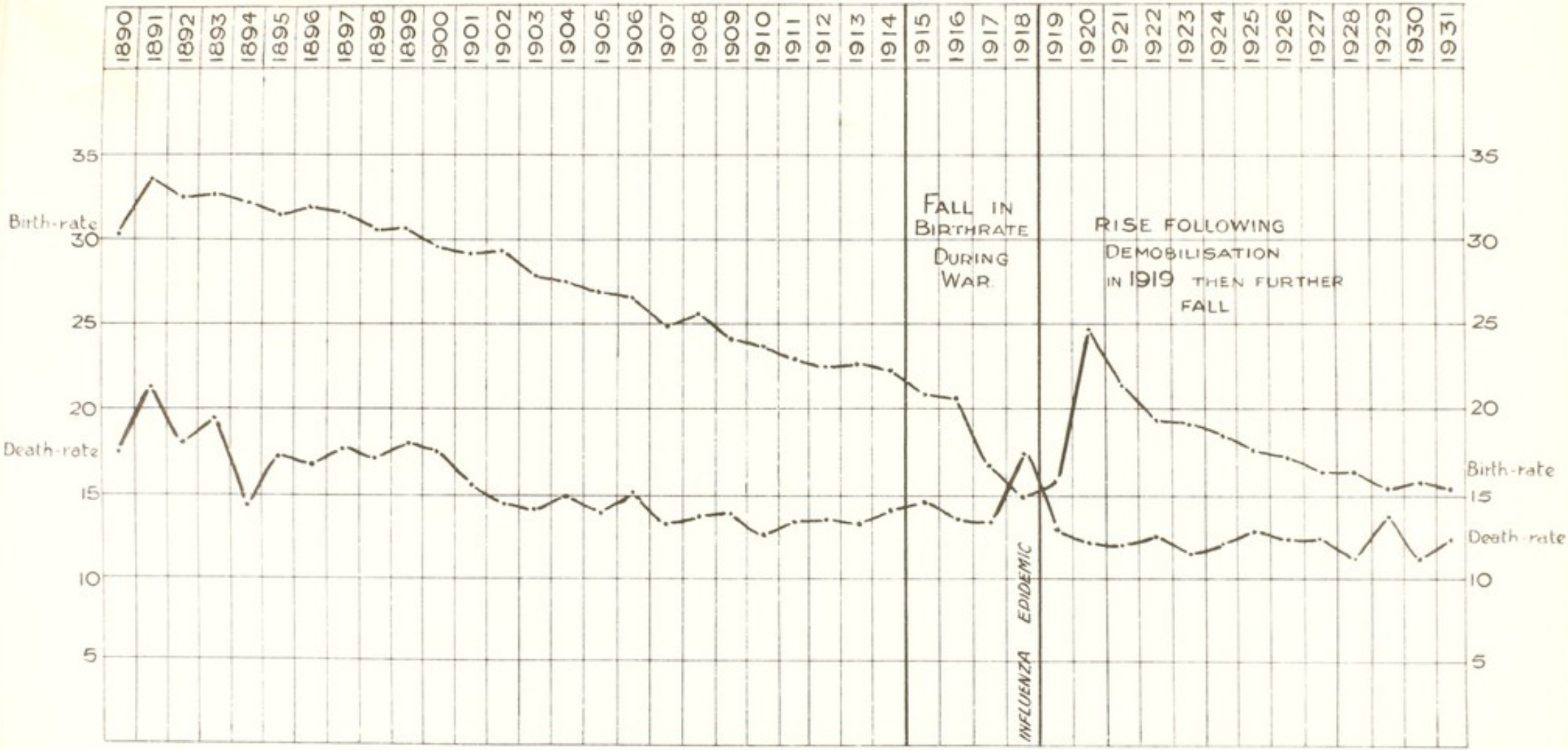
The **Death-rate** was 12.36. Although this is higher than the rate for the previous year, it cannot be regarded as excessive as the rate has only three times fallen below 12.0 per 1,000.

In view of the fact that we now know that the population of the City has been over-estimated, which means that the birth and death-rates in recent years have come out slightly lower than they should have done, it has been thought desirable to revise the statistics which are based on population for the intercensal years, 1922-30. These will be found in Table 10.

The revised death-rates for the past five years, are :—

1926	..	..	..	12.42
1927	..	..	..	12.69
1928	..	..	..	11.44
1929	..	..	..	14.20
1930	..	..	..	11.39

Birth and Death Rates in Leicester 1890-1931.



Infant Mortality.

The corrected number of deaths of infants under one year of age was 235, which, calculated per 1,000 births, gives an infant mortality rate of 63.78. Only once before, viz., in the previous year (when the rate was 55.78) has a lower figure ever been recorded. The next lowest figure was 70.8 in 1928. The result, therefore, may be regarded as very satisfactory, for had it not been that the rate for 1930 was so very much lower than any figure hitherto recorded we should have again created a record. A similar increase in infant mortality occurred throughout the country.

Leicester to-day is well below the average of the large towns as regards infant mortality, coming eleventh out of a list of 38.

ZYMOTIC DEATH-RATE.

The deaths from zymotic diseases are given in Table 8. They numbered 131, not including deaths from pneumonia which is not usually counted as a zymotic disease.

The **zymotic-rate** was 0.54.

There was no death from scarlet fever, one each from smallpox and enteric (the latter was a very doubtful case), and two from puerperal fever. Measles and whooping cough together caused 23 deaths, which is a favourable figure compared with many years.

On the other hand, cerebro-spinal fever caused nine deaths, which is rather more than usual.

COMPARATIVE WARD STATISTICS.

Leicester is divided into 16 municipal wards, but the census figures for each ward not being yet available it is necessary to estimate the ward populations, as in previous years, from the number of inhabited houses. The different wards, as is usually the case in most cities, vary greatly as regards population, area, and social status of the inhabitants. The more favoured wards socially, and also geographically, are situated in the outskirts, to the south and west. Knighton Ward, or rather that part of it known as Stoneygate, is almost entirely residential. So also are Westcotes and Spinney Hill, though to a less extent. Belgrave, Aylestone, Latimer, the Castle, and the Abbey wards are good working-class wards; whilst Newton, St. Margaret's and Wyggeston wards include the poorest and least desirable districts in the City.

The principal vital statistics for each Ward are given in Tables 1 and 2. Below we merely give the Wards with the highest and lowest rates.

Ward Death-Rates.

Highest.			Lowest.		
Wycliffe	..	17.6	St. Martin's	..	6.3
Wyggeston	..	15.6	Knighton	..	8.5
Newton	..	13.6	Aylestone	..	8.8

Ward Phthisis-Rates.

Highest.			Lowest.		
Wyggeston	..	2.03	St. Martin's	..	0.0
Charnwood	..	1.70	Knighton	..	0.3
Newton	..	1.61	De Monftort	..	0.3

Ward Infant Mortality-Rates.

Highest.			Lowest.		
Newton	..	163	Knighton	..	21
St. Margaret's		125	Wycliffe	..	25
Wyggeston	..	98	Westcotes	..	42

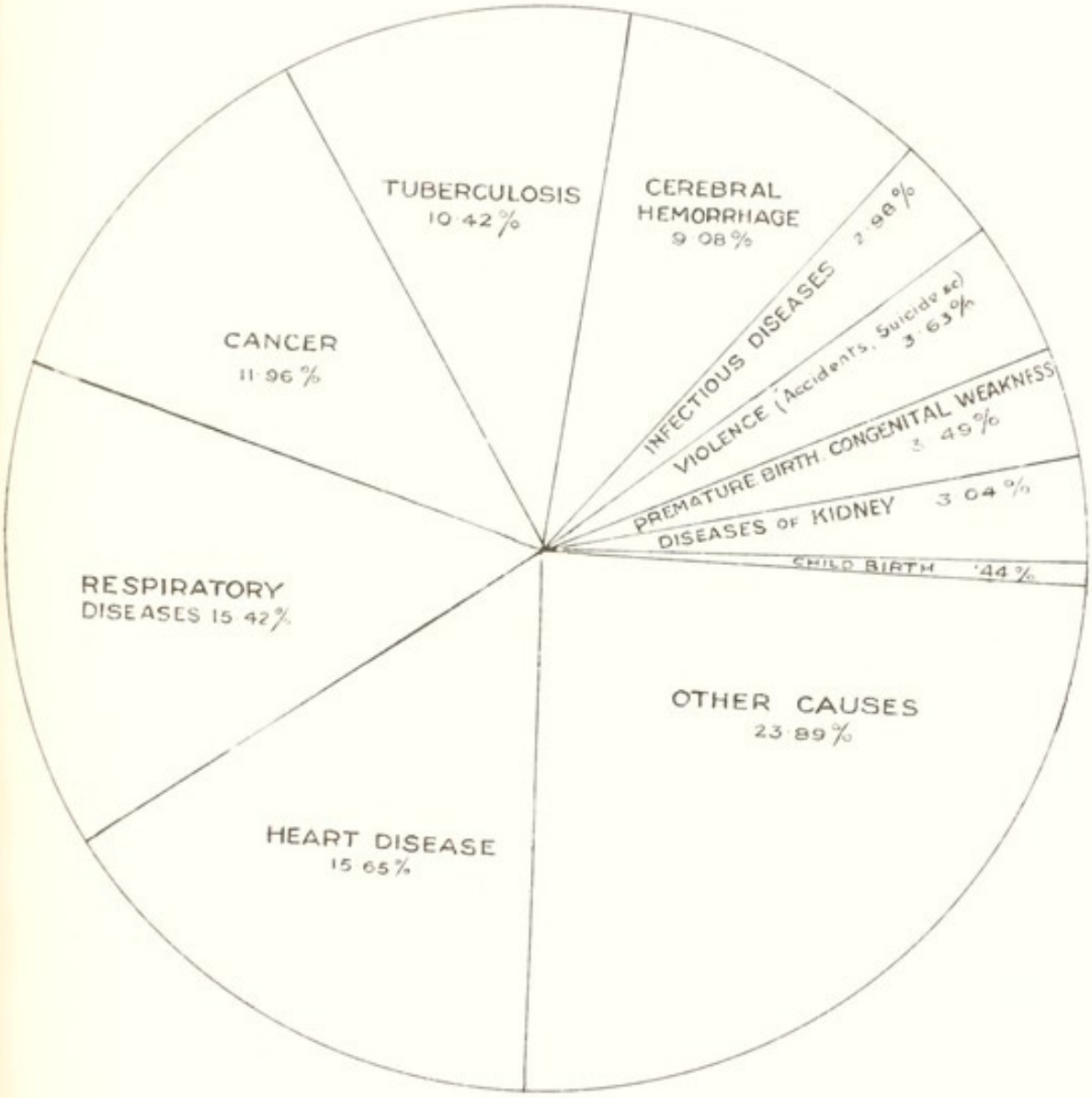
Ward Birth-Rates.

Highest.			Lowest.		
Wyggeston	..	20.0	De Montfort	..	6.2
Latimer	..	16.3	Knighton	..	8.7
Aylestone	..	15.4	St. Martin's	..	10.0

It will be noticed that St. Martin's Ward comes out remarkably well, especially when we consider its central position. It is true that this is quite the smallest of the municipal wards and the population is comparatively small. Therefore, it would not be wise to attach too much importance to the statistics for a single year. But it is certainly noteworthy that it should have the lowest death-rate of any ward in 1931, and that there was not a single death from tuberculosis. These figures were so striking that I had them worked out quite independently with exactly the same result. Even as regards infant mortality, although St. Martin's was not one of the three lowest wards, it was well below the average, viz. :— only 52 per 1,000 births as compared with 64 for the whole City.

GRAPH II

PROPORTION OF DEATHS FROM PRINCIPAL CAUSES TO TOTAL DEATHS 1931



St. Martin's Ward statistics have improved materially during recent years, as is shown by the following figures :—

Year.	Death-rate.	Infant Mortality.	Phthisis Death-rate.
1925 ..	21.0	147	.87
1926 ..	20.2	142	2.20
1927 ..	12.6	132	0.45
1928 ..	10.7	137	0.46
1929 ..	12.5	41	0.48
1930 ..	11.4	38	0.52
1931 ..	6.3	52	0.00

VITAL STATISTICS IN OTHER LARGE TOWNS.

The principal statistics of other important centres of population will be found in Table 24.

The average for the 38 Large Towns (with populations over 100,000, but excluding London) were as follows :—

	Birth-rate.	Death-rate.	Infant Mortality.
38 Large Towns ..	16.6	13.1	77
Leicester	15.3	12.4	64

The figures for Leicester are, therefore, well below the average.

The great contrasts between different towns is remarkable, e.g. :—

Birth-rate ..	highest	Sunderland	..	21.8
	lowest	Huddersfield	..	12.3
Death-rate ..	highest	South Shields	..	15.6
	lowest	Coventry	..	10.0
Infant Mortality ..	highest	South Shields	..	115
	lowest	Southampton	..	47

PART II.

Zymotic and other Specific Diseases or Causes of Death.

MINOR SMALLPOX (Variola Minor).

Cases during the year (1931), 1,353. Deaths, one.

Minor smallpox, during the year under review, caused more trouble than in any previous year, the number of cases occurring being 1,353, as against 1,192 in the previous year, the highest number hitherto recorded. The fact that of this large number of cases only one proved fatal, and that a young infant, proves how mild in character is the present variety of smallpox.

The 1931 visitation, being part of a wave of prevalence extending over several years, and affecting many other parts of the country more or less, it will be well to briefly state the facts regarding previous years.

The disease was absent from Leicester from 1905 till 1924—a period of 19 years—with the trifling exception of two solitary imported cases which occasioned no spread.

From 1924 onwards the incidence of the disease has been as follows :—

Year.		Cases.	Deaths.
1924	..	5	—
1925	..	72	—
1926	..	—	—
1927	..	7	—
1928	..	90	—
1929	..	320	—
1930	..	1,192	1 (infant)
1931	..	1,353	1 (infant)
Total	..	3,039	2

These 3,039 cases were spread over a period of eight years, nearly all the cases occurring in five years.

In 1925 there was a moderate outbreak, 72 cases occurring, and again in 1928 the disease succeeded in establishing itself ; and from May of that year until May of 1929, 197 cases occurred. Then there was a respite for three months, after which the disease was again introduced ; and all through 1930 and 1931 it was very prevalent, indeed these were the worst two years we have ever experienced so far as mere numbers are concerned.

The accompanying graph shows the monthly fluctuations in the prevalence of the disease during the past four years.

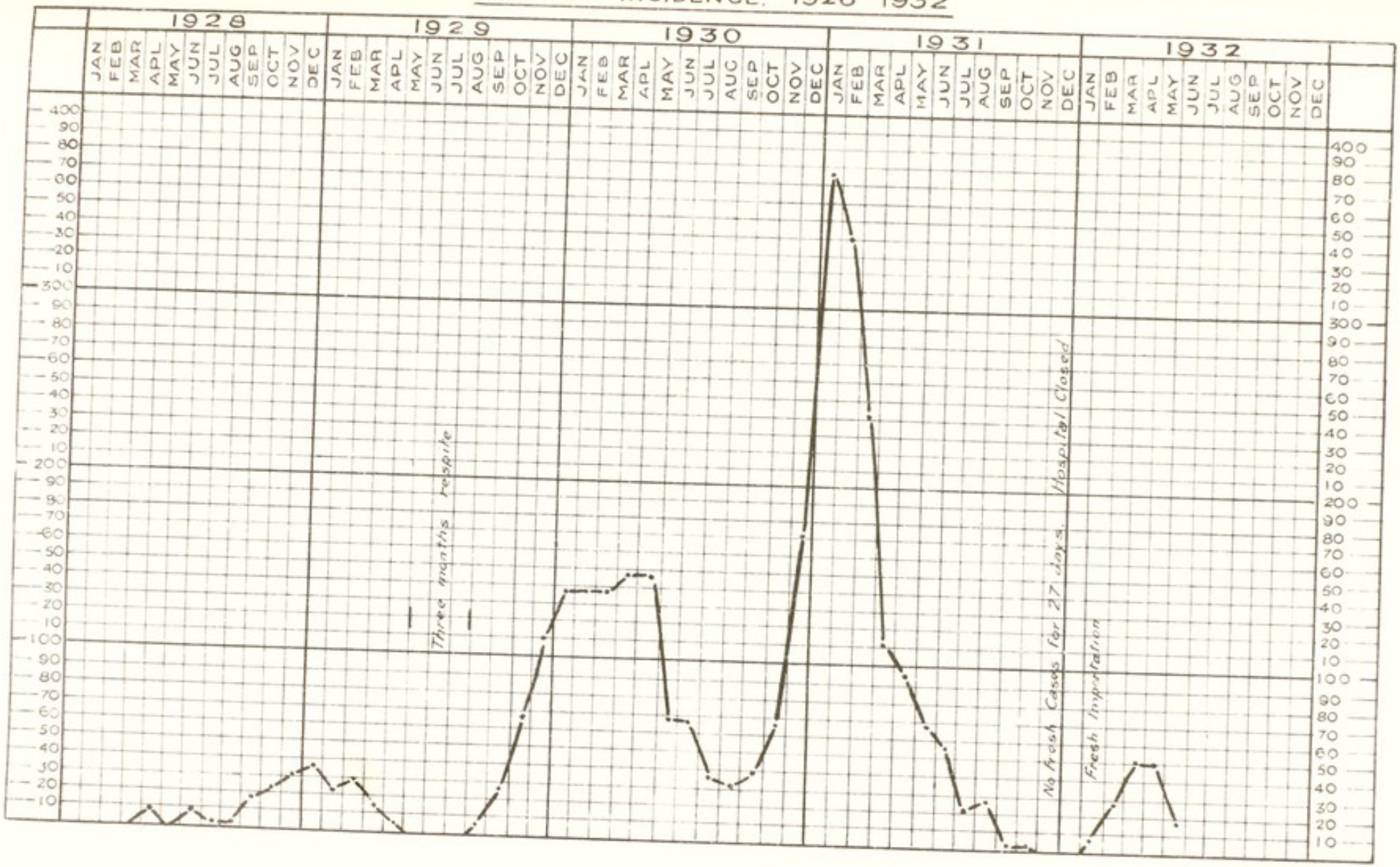
At the end of 1931, we at length succeeded—as we believed—in clearing the city and getting rid of the disease. The number of fresh cases dwindled down till at last there were none, and the last case was discharged from hospital. No fresh cases were reported after 22nd December, 1931, for a period of 27 days. The last patient was discharged and the hospital was closed. Unfortunately, there were still a few cases occurring in the neighbourhood of Leicester, and on January 18th, a fresh case arose probably infected from outside the city. In February further importations took place and an outbreak occurred in connection with a cinema which could clearly be attributed to a visit from a young man (with the eruption out on him) from a neighbouring village. This man also infected his sweetheart living in Leicester and members of her family before the nature of his illness was recognised. Then the disease got introduced into a factory in another part of Leicester, and a number of cases occurred amongst the employees who lived in all parts of the city. In this way the disease again got a foothold in the present year (1932), though up to the time of writing (June) it has not succeeded in attaining any serious degree of prevalence, at all comparable to what occurred in the two previous years.

Clinical Character of the Cases occurring in 1931.

The usual very mild clinical type of case was maintained throughout the year under review, differing in no respect from what had been observed in previous years. Occasional cases, it is true, were much more severe than the average, having profuse eruptions, and sometimes also acute pre-eruptive symptoms. These early symptoms, however, quickly subsided with the appearance of the eruption, and the subsequent progress of the case was almost always rapid and quite satisfactory. The early symptoms, we

MINOR SMALLPOX.

MONTHLY INCIDENCE. 1928-1932



may observe, which closely resemble influenza, do not leave behind the weakness and prostration which are so characteristic as a sequel to the latter disease.

The great majority of the cases, say 90 per cent., were very slight, whilst a substantial proportion of these can only be described as trivial, with very little constitutional disturbance and only a few scattered pimples. These extremely slight cases are more common amongst children.

Particulars of the one Fatal Case in 1931 (Ref. No. 747).

This was an infant, F.H., 10 days old, born in a house where an "overlooked" case had occurred three weeks before. It was a very large family, and the mother and eight other children caught the disease. All were comparatively mild cases. The mother's eruption had appeared on February 2nd, and she was confined on February 4th. The infant had no eruption at birth but the spots appeared on February 11th, so presumably it had been infected before birth. The eruption was rather profuse. The child died suddenly on February 14th, ten days after birth.

It is interesting to note that of 14 persons in this family only three escaped catching the disease, these being the father (who had been vaccinated in the army) and a grown-up son and daughter, who both had slight symptoms, but did not have to lay up and saw no spots. Whether they had abortive attacks or not is uncertain. The outbreak in this family shows how infectious the complaint often is, especially if the nature of the first case (as in this instance) is not recognised and no precautions taken.

This young infant is only the second death due to smallpox since 1904, the other one being also in a young infant.

Condition as to Vaccination.

The following figures relate to the cases occurring in the year 1931. The cases have been classified as follows:—

Vaccinated	108
Unvaccinated	1,245
Vaccination doubtful	0
Total	1,353

Of the 108 vaccinated cases, 105 stated that they had been vaccinated in infancy and had marks on their arms.

Two men had been vaccinated in the army, in 1915 and 1916 (referred to below) and one case, aged 78, stated that vaccination had been performed at age of 20.

The cases vaccinated in infancy were nearly all in elderly or middle-aged persons. The age distribution was as follows :—

60 years and over	35	cases
40 to 60 years	62	,,
30 to 40 years	4	,,
20 to 30 years	3	,,
Under 20 years (age 16)	1	,,
	105	

Against the apparently weak infection of minor smallpox the protection conferred by vaccination seems to hold good for a longer period than in the case of major smallpox.

In considering the above figures, however, due weight must be given to the fact that in Leicester, owing to the virtual abandonment of compulsory vaccination during the past 45 years, only a very small proportion of the population under 45 years of age has been vaccinated in infancy.

A more striking indication of the duration of the protection of vaccination is afforded by the very small number of cases which occurred amongst the large number of men who were vaccinated during the war. There were very many instances of such men being in the closest possible contact (e.g., husbands sleeping with their wives who had smallpox). Yet, as mentioned above, only two cases occurred where men vaccinated in the army during the war contracted the disease.

The particulars of these two cases were as follows :—

No. 1178, J.H., aged 41. Was vaccinated in Army in 1915. Has several distinct vaccination scars on the right arm. Very sparse eruption, only about half a dozen " spots " altogether, but definite pre-eruptive symptoms. Treated at home. Previous case in the house.

No. 582, H.B., aged 31. Was vaccinated in 1916. Had only a few " spots " and was not regarded as a very definite case. Treated in hospital.

Some medical officers of health, including the writer, are inclining more and more to the view that since minor smallpox is such a mild, not to say trivial, affection—and since for practical purposes it may be regarded as non-fatal, the wisdom of the policy of striving to prevent it from taking its natural course, as regards spread, is open to serious question. For minor smallpox confers protection against major smallpox, protection which there is good reason to believe is complete and life-long. If this is so, minor smallpox (as a means of protecting against major smallpox) has a definite advantage over vaccination, the protection conferred by which wears off with the passage of time.

Another question calling for serious consideration is the wisdom of applying the name "smallpox" to the minor variety. It is true that the disease we are considering is, from the scientific point of view, undoubtedly a variety of smallpox, but the name "smallpox" in the public mind has always connoted hitherto a very terrible and fatal disease. If the same name continues to be applied to a disease which, from the practical point of view, is so very mild and not fatal, it is inevitable that the term "smallpox" will soon cease to connote a serious disease; indeed, the public will come to regard it with contempt. This might be very unfortunate in the event of major smallpox again appearing in this country. There would also be important advantages from the international point of view in dropping the name smallpox.

If, however, the Ministry of Health are not prepared to sanction this course, the alternative should be always to refer to it as "minor smallpox." This is the course we are adopting in Leicester. It is generally admitted now that minor smallpox "breeds true," and that there is no evidence that it has ever given rise to major smallpox.

Vaccination of Contacts.

Vaccination is offered to the other inmates of all houses where a case of smallpox occurs, except where the first case is discovered too late for vaccination to be of much avail. In view, however, of the fact that minor smallpox is not dangerous to life, whilst there is undoubtedly an element of risk in vaccination, no matter how carefully it be performed, I have not felt justified in pressing it, and only about one third of all contacts are willing to be done.*

* Since this was written I have very largely abandoned the vaccination of contacts, at least for the time being.

The unfortunate deaths from post vaccinal encephalitis which occurred at Wigston, a few miles from Leicester, in May, 1931, have undoubtedly had an effect in turning many people against vaccination. Nor is this to be wondered at.

The circumstances of the two cases referred to were tragic enough, though the complication is, happily, very rare. The children were healthy twins, aged 4½ years, and were vaccinated with the parents full consent. The father was employed under the Education Committee in Leicester. Although there appeared to be nothing wrong with the vaccination, which followed a normal course, they were taken ill, about 12 days later, with encephalitis, and both cases proved fatal. The cases were enquired into by the Ministry of Health and the doctor concerned was exonerated from any blame. It is believed that the vaccination, in cases like these, "activates" some other virus which is the actual cause of the encephalitis; but it has to be admitted that but for the vaccination the encephalitis would not occur. Such cases must, therefore, be regarded as deaths due to vaccination.

VACCINATION RETURN FOR 1931.

Vaccinations Registered:—			
Public	96	165	
Private	69		
Exemption Certificates received ..			3,595
Certificates of Insusceptibility ..			6
Births (corrected)			3,684

There were no prosecutions for default. The vaccinations amounted to 4.5 per cent. of the births.

SCARLET FEVER.

Cases, 404. Deaths, 0. Case Mortality, 0.0 per cent.

Previous year.

Cases, 423. Deaths, 2. Case Mortality, 0.4 per cent.

Removed to Hospital, 271. Proportion removed, 67 per cent.

For the third year in succession, scarlet fever may be said to have been non-epidemic. The special treatment by intravenous injections of serum has been continued. (See report on Isolation Hospital, Appendix II.) It has apparently cut down the duration of stay in hospital to a very low figure.

DIPHTHERIA.

Cases, 115. Deaths, 6. Case Mortality, 5.2 per cent.

Previous year.

Cases, 198. Deaths, 7. Case Mortality, 3.5 per cent.

Removed to Hospital, 109. Proportion removed, 95 per cent.

Average for previous Five Years.

Cases, 318. Deaths, 18. Case Mortality, 5.6 per cent.

The year 1931, like the previous year, was a very favourable one as regards both number of cases and of deaths. The figures are, indeed, a record. The reductions in deaths I believe to be largely due to the intensive treatment with antitoxin adopted by Dr. Banks.

Details will be found in the Isolation Hospital report.

At the same time we know that both the prevalence and fatality of diphtheria are subject to remarkable fluctuations, and it will be wise to be prepared for an increase in the case mortality, as well as an increase in the number of cases, should the type of disease change.

TYPHOID (ENTERIC) FEVER.

Five cases were notified but of these three can be definitely excluded as not being typhoid. In a fourth case, which occurred in an institution in Leicester where the patient had long been resident, the diagnosis was based chiefly upon the bacteriological finding, there being but little clinical evidence, I was informed, to suggest this disease. The fifth case was the only undoubted case, and the infection was contracted at the patient's own home away from Leicester.

Such a record, at most two cases, and possibly only one, in twelve months, indicates the extent to which typhoid fever has vanished from Leicester.

MEASLES.

At one time epidemics of measles, causing a heavy sacrifice of child life, used to occur fairly regularly every alternate year. Happily, there is definite evidence that things are improving and it is now six years since a heavy mortality was caused by this disease.

Nor is this all. If we take the deaths from measles for the past 30 years, and express them as a rate per 1,000 births (which is

obviously fairer than per 1,000 population, since measles deaths occur almost exclusively amongst young children) and if we take quinquennial averages rather than single years, we find that in Leicester there has been, during the last three five-yearly periods, a steady and striking decline in measles mortality. The accompanying Graph, No. IV., shows the position at a glance. Whether this decline will further continue it is impossible to predict. Apparently, no comparable reduction in measles mortality has occurred in the country generally.

WHOOPING COUGH.

It is customary to consider whooping cough and measles more or less together. They both cause their chief mortality during the first two or three years of life and to some extent one disease seems to prepare the way for the other. It is specially disastrous if an epidemic of the one coincides with, or follows close upon, the heels of the other.

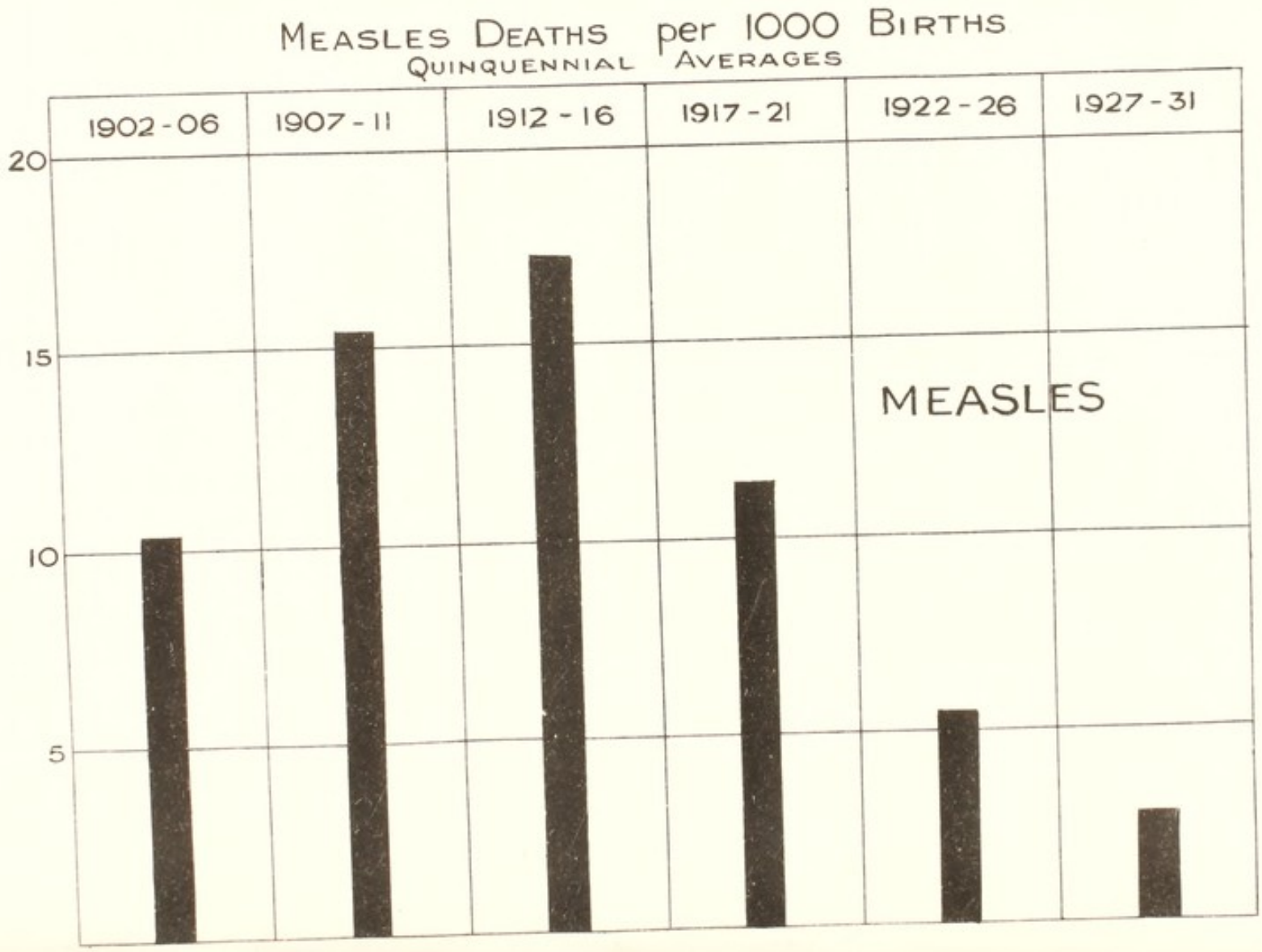
The deaths from whooping cough during the past 30 years have been worked out in the same way as those for measles, as described above, and the results are shown in Graph No. V. It will be seen that whilst during the five-yearly period, 1902-6, the mortality from the two diseases was almost exactly the same, the mortality from whooping cough fell, whilst that from measles for the next two five-yearly periods went up. Whooping cough has remained at the reduced level, and during the last five years it has, indeed, fallen a little further, but it does not show the rather dramatic fall shown by measles in the last fifteen years.

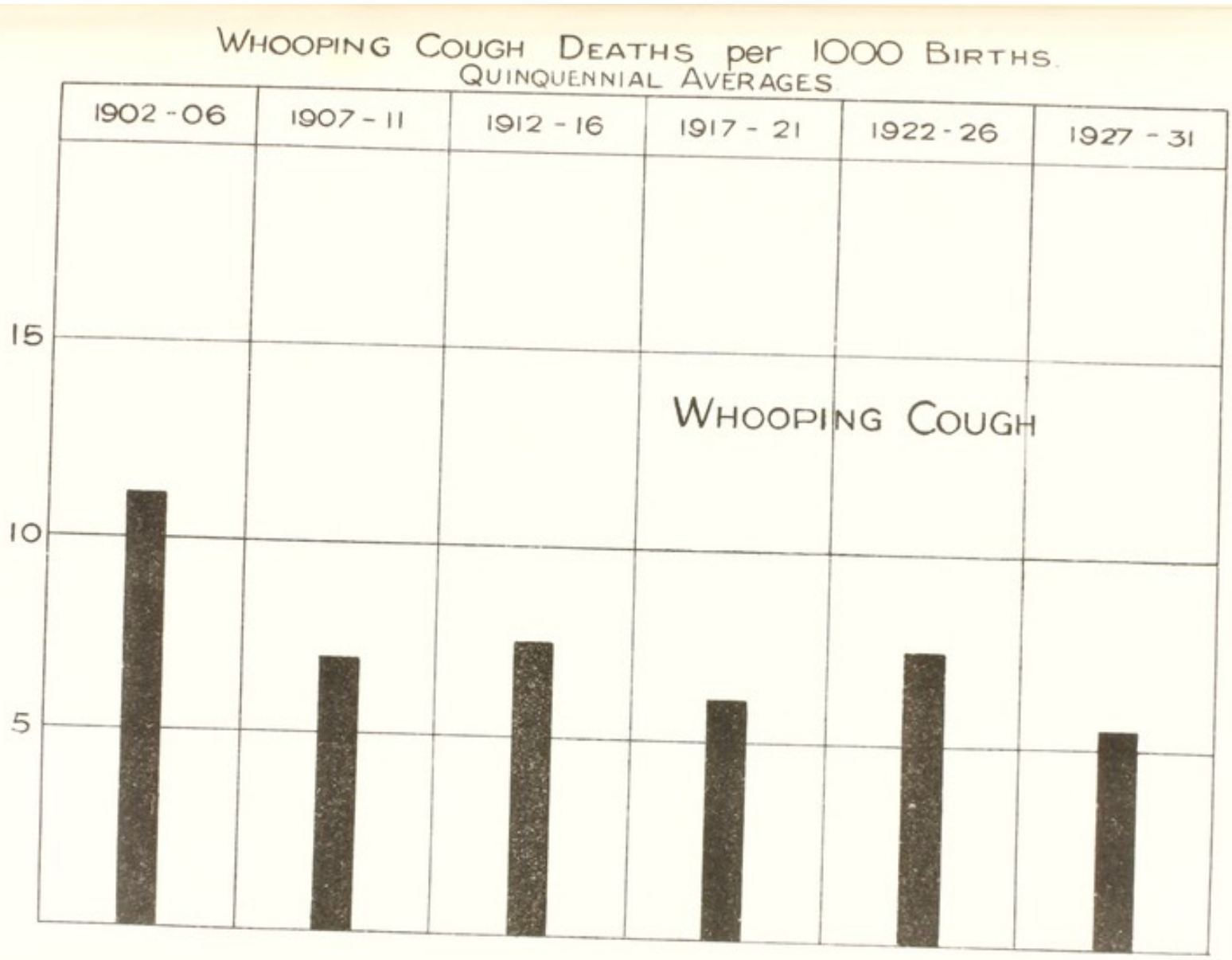
CEREBRO-SPINAL FEVER.

This disease has been showing a definite tendency to increase during the past few years, the figures since 1924 being 2, 2, 4, 4, 4, 8, 11, and now last year 16. Of these 16 cases, six proved fatal. As the disease is such a serious one a few observations are called for.

Of the 16 cases, nine were in children below school age, two cases were in the age group 5-15, and five were over 15 years. The cases occurred scattered throughout the City. In only two cases were the addresses in proximity. These two cases occurred on opposite sides of the same street, and almost simultaneously. Both cases were very young children, but, beyond this, investigations (made personally) failed to elicit any common connection or contact.

GRAPH IV


MEASLES DEATHS per 1000 BIRTHS
QUINQUENNIAL AVERAGES
1902-06
1907-11
1912-16
1917-21
1922-26
1927-31
20
15
10
5
MEASLES


WHOOPING COUGH DEATHS per 1000 BIRTHS.
QUINQUENNIAL AVERAGES
1902 - 06
1907 - 11
1912 - 16
1917 - 21
1922 - 26
1927 - 31
15
10
5
WHOOPING COUGH

The families did not know one another. The facts of course suggest that they were both infected from the same carrier, and this view is given some support by the fact that a third case occurred about a fortnight later in the same neighbourhood. Except for these cases, however, there was no geographical connection between any of the cases. Twelve of the cases occurred in the first quarter of the year and only four in the remaining three quarters. During the first quarter of 1932, there have been only two cases.

There has been a tendency towards an increase in this disease during recent years throughout the country, the number of fatal cases having gone up from 365 in 1926 to 632 in 1930, an increase of 73 per cent. in five years. Moreover, the increase has not been confined to England and Wales, but has affected Scotland also. In the United States the increase has been considerably greater than in this country.

During the year the Ministry of Health issued a special report, No. 65, on this disease, dealing particularly with a scheme for collecting the results of serum treatment.

As regards treatment of this disease, good results are being obtained by Dr. Banks by the intensive intravenous injection of serum. See Dr. Banks' report, Appendix II.

CANCER.

The deaths from cancer (malignant disease) numbered 357, of which 161 were in males and 196 in females. This is a decrease of 15 on the figure for the previous year, for which we must be thankful. Although the deaths from females, as is usually the case, exceed those for males, this can largely be accounted for by the excess of females in the population. Indeed, taking the country as a whole, the Registrar General shows, in his Statistical Review for 1930, just issued, that if due allowance is made for the proportion of elderly women in the population—and cancer is essentially a disease of the latter half of life—the female death-rate from cancer is actually less than that for males. It is true that women suffer very much more from cancer of the sex organs (the breast and uterus being such common sites), but against this, males suffer more from cancer of most other organs, and especially so in the case of cancer of the mouth.

During the year under review the Ministry of Health issued a further circular (No. 1186) on cancer, dealing especially with cancer of the lip, tongue and skin, and based largely on a technical report

(No. 59) which had been published in the previous year by the Departmental Committee on Cancer.

The circular points out that in cancer of the three organs mentioned a character is usually present which should facilitate early recognition and treatment, viz. :—the persistence, prior to the development of the cancer, of an apparently harmless condition which can be removed by treatment or watched for the onset of the cancerous change. On the lip or tongue this condition often takes the form of a small crack or fissure or chronic ulcer which may persist for long periods, even years, and ultimately become cancerous. On the skin the "pre-cancerous" condition may take the form of warts or "white patches."

It is pointed out that cancer of the three organs here considered, but especially of the lip and tongue, is far more common in males than in females (about 3½ to one). In the case of cancer of the lip the mortality (and presumably the incidence) in males is more than ten times that in females. Another very curious feature is this. In males cancer nearly always attacks the lower lip (27 to one) whilst in females this preference for the lower lip is very much less obvious (only three to one). Naturally, one wonders whether differences in the smoking habits of the two sexes can account for the striking contrast, but the Ministry state that no adequate explanation has yet been put forward.

As regards cancer of the tongue, this also is roughly ten times as common in males as in females. Cancer of the tongue is less curable than cancer of the lip, and unfortunately it is much more common. The mean age at death is about 61 years. At the outset cancer of the tongue presents the appearance of an ulcer with a hard edge, which gives rise to pain when in contact with hot or acid foods.

Wherever there is the slightest reason to suspect cancer in any part of the body, expert medical advice should be sought **at once.** In no other disease is delay in this respect fraught with more danger. Whatever treatment is adopted it is far more likely to be successful if the disease is caught early. Once the cancerous process has spread and involved adjacent or distant parts the chance of a cure becomes remote.

Statistics relating to cancer in Leicester in 1931 will be found in Tables 14 and 15. The proportion of cancer deaths to deaths from all causes was 11.9, as compared with 13.5 in the previous year. This is a distinct improvement.

CANCER CONTROL CLINIC.

It was with the primary object of providing facilities for early diagnosis that the Leicester Cancer Clinic was started five years ago.

It is undoubtedly a fact that very many people do not seek medical advice in cases of cancer until the disease is comparatively far advanced. Often in the incipient stages—when a cure is most possible—cancer causes no pain and but little inconvenience, and it is all too easy for the victim to persuade him or herself that the condition is nothing serious. Added to this is a psychological factor: There are many people, who, if they have a lurking fear that certain symptoms may mean cancer, purposely avoid seeking advice which may make them face unpleasant facts. Questions of expense will also be a deterrent with some, and reluctance to face the ordeal of an out-patient department of a big hospital may influence others.

The Leicester Cancer Clinic is essentially a diagnosis, not a treatment, clinic. In addition to providing facilities for earlier recognition of the disease it serves a useful purpose as propaganda.

Amongst other methods adopted to make the existence and function of the Clinic known, one of the best is the exhibition every week in public tram cars of a printed card, with the following notice :—

CITY HEALTH DEPARTMENT.

CANCER CONTROL CLINIC.

It is now recognised that many cases of cancer can be definitely cured.

The results obtained by treatment with Radium and X-Rays, if begun soon enough, are very encouraging.

The object of the Clinic is to discover the disease early if it exists, or to reassure those whose fears are groundless.

The Clinic is held at the HEALTH OFFICES, GREY FRIARS, on Tuesday evenings, at 6.30 p.m.

It is open free of charge to any case, of either sex, where the possiblity of cancer, in any part of the body, is suspected.

If you have any cause for suspicion, do not fail to seek skilled advice at once.

DELAY MAY BE DISASTROUS.

Health Department,
Grey Friars,
Leicester.

Although patients are invited to come to the Clinic any Tuesday evening, a doctor is only in attendance every other week; but the nurse is always present, and takes down name and address and

other particulars and encourages patients to come the following week unless the case is too urgent to wait. The reason for this is that the number of patients attending was not felt to be sufficient to justify the weekly attendance of a doctor.

During the year under review there were 24 Clinic sessions and the total number of fresh cases attending was 50. Of these eight were found to be cases of cancer or suspected cancer and were referred to the Royal Infirmary. Thirty-four cases were various non-malignant tumours or other affections, including eight cases of mastitis. In one case diagnosis was uncertain. One was an old-standing case of cancer which had been operated on and who called for examination ; and in six cases nothing abnormal was discovered and the patients were sent away reassured.

TUBERCULOSIS.

The number of fresh cases notified and deaths registered during 1931, was as follows :—

	Cases.	Deaths.
Pulmonary Tuberculosis (phthisis)	511	262
Other forms	61	49
	572	311

Calculated per 100,000 of the population, the phthisis death-rate was 108, and the tuberculosis death-rate was 128. These figures are higher than the previous year, which was exceptionally low. This is rather disappointing. For comparison with previous years, see Table V. If tuberculosis mortality be considered over a period of years a definite decline is to be seen, apart from accidental fluctuations.

Tuberculosis Death-rate.

Four-yearly Average.	Rate per 100,000
1907-1910	167
1911-1914	159
1915-1918 (War years)	179
1919-1922	143
1923-1926	140
1927-1930	126
1931	129

Number of Cases Notified.

There has been a substantial decline in the number of fresh cases notified, viz., from 734 and 648 in the two previous years to 572. This figure is indeed the smallest number for very many years. This is quite compatible with an increase in the number of deaths, as the latter may be considered as related to the notification of two or three years before. Moreover, it would be unsafe to assume that the fall in the number of fresh cases discovered necessarily indicates a real reduction in the disease though we are justified at least in hoping as much.

Institutional Treatment for Advanced Cases.

It is now generally agreed that infection from the sick to the healthy most frequently takes place in the later stages of this disease when tubercle bacilli are being excreted in maximum quantity. It is in these later stages, therefore, that institutional treatment is most desirable from the point of view of prevention of spread of the disease. Obviously, in the small and too often over-crowded homes of the poor, isolation of the sick and, ultimately, the dying person is most difficult, indeed, almost impossible.

At present, the accommodation for advanced cases of tuberculosis at Groby Road Sanatorium is very limited—one block of about 26 beds for females and one of 36 for males, which is quite insufficient for the needs of the City. Consequently, many of these advanced cases have to be accommodated at the City General Hospital.

A strong case can be made out for increasing the accommodation for this class of case at Groby Road, so that practically all cases of pulmonary tuberculosis, in whatever stage, could be treated in the one institution.

Report of Tuberculosis Officer.

For fuller particulars concerning tuberculosis and of the work done at the Tuberculosis Dispensary, see Dr. Thomson's Report, Appendix I.

Work done for Tuberculosis at Sanatorium.

The Report of Dr. Stanley Banks, Medical Superintendent at Groby Road Sanatorium, Appendix II., gives full particulars of the large amount of good work done in that institution for sufferers from this disease. Dr. Banks is very hopeful of the results to be

obtained by the operation known as artificial pneumothorax, which is now being applied to many more cases than formerly.

Pulmonary Tuberculosis in Childhood.

Dr. Banks also refers to the change in professional opinion which is taking place as to the true character of the cases hitherto regarded as pulmonary tuberculosis in childhood. According to this view the great majority of these cases are not really tubercular in character and should not be regarded as manifestations of this disease.

The very valuable investigation carried out by Dr. J. H. Weir, Senior Resident Medical Officer at the Groby Road Sanatorium, for the purpose of his M.D. thesis, and for which he was awarded a gold medal by his University, strongly supports this view.

As important questions of practical policy were affected by the new view of this group of cases, it was thought desirable to discuss the matter with the Medical Department of the Ministry of Health.

Ministry of Health Report on Tuberculosis.

The Medical Officer of Health accordingly had an interview with Dr. A. S. MacNalty, the Senior Medical Officer at the Ministry in charge of tuberculosis work. It was then learnt that the Ministry were about to publish a special report by Dr. MacNalty on the whole question of tuberculosis, and an advance proof of this report was kindly supplied. The report itself was published early in the present year.

The report is a very valuable and exhaustive one, running to 172 pages. It surveys the whole field, including the results of Sanatorium treatment.

Section XV. deals with tuberculosis in childhood, and it is clear that Dr. MacNalty largely accepts the new view as to the rarity of true *pulmonary* tuberculosis in children. After reviewing the evidence he sums up :—

> (1) Clinical pulmonary tuberculosis in the child is a rare disease, but when present is of serious import. It is almost invariably due to infection by the human tubercle bacillus.
>
> (2) Non-pulmonary tuberculosis is a common disease in the child. It may be due to infection either by the human or bovine type of tubercle bacillus.

He also writes :—" Many beds in sanatoria are filled by children who are not suffering from pulmonary tuberculosis at all or in whom no accurate diagnosis has been made. It is unjustifiable both from a social and an economic standpoint to stigmatise and to treat these children as tuberculous patients. . . . The number of beds required in hospitals and sanatoria for the treatment of this disease in the child should be comparatively few."

Reference may also be made to some other sections of this important report. Section III. deals with conditions diminishing personal resistance to infection and refers to the influence in favouring tuberculosis of fatigue, malnutrition, poverty, alcohol, and of certain other diseases.

Section IV. deals with external circumstances and conditions favouring infection by tuberculosis, and in particular, with overcrowding. Statistics are quoted showing the high incidence of tuberculosis in overcrowded families.

Section X. is an examination of the results of sanatorium treatment. The report points out how difficult it is to arrive at a just evaluation of these results. The Ministry have laid it down that a case of pulmonary tuberculosis shall not be regarded as having " recovered " until five years have elapsed without any signs or symptoms of active disease. But apart from actual " recovery " the object of sanatorium treatment is to render the disease " quiescent."

Experience shows that the best results are obtained where patients are admitted at a comparatively early stage of the disease and especially prior to the stage when tubercle bacilli appear in the sputum. But the criticism may be made that there is an element of doubt in such cases whether the patients, or all of them, really are suffering from tuberculosis, or whether they would have died from tuberculosis even if not sent to a Sanatorium. Another factor influencing results is the length of time patients remain under treatment, a larger proportion becoming " quiescent " if the duration of stay is increased. For various reasons, however, it is often impossible to secure a sufficiently long stay.

Then there is the tendency to relapse after return home in those cases which have become quiescent whilst in the sanatorium. Therefore, in order to assess the true value of sanatorium treatment it is most necessary to study the after-histories of patients. Other factors affecting the end-results of sanatorium treatment are the

ages of patients, their economic status, and the home environment to which they return after they leave the sanatorium.

Again, in most sanatoria many patients are admitted, for one reason or another, in whom any chance of "recovery" is very remote. Such cases, of course, tend to depreciate the results achieved.

These are some of the many difficulties.

The report avoids making any very definite conclusion which can be quoted as to the value of sanatorium treatment, beyond the following (p. 99) :—

> "Early diagnosis, careful selection (frequently often a preliminary course of hospital treatment) and a period of treatment adequate to the needs of each individual are indispensable. Sanatorium treatment will then yield excellent results.
>
> "Unfortunately, the English returns of the results of treatment in residential institutions during recent years show that these *desiderata* are rarely present. The result is that annually only about . . . 18 per cent. of all cases treated are discharged with quiescent disease."

Again (p. 103) :—

> "In the consideration of sanatorium treatment and its results it becomes apparent that this is the most hopeful and favourable method, at present available, of curing pulmonary tuberculosis or of prolonging the life of the tuberculous. It has also been shown that institutional treatment is an important measure of public health inasmuch as by the segregation of infectious cases and by education in hygienic conduct, it diminishes the risk of infection in the community. The financial outlay upon the provision and maintenance of tuberculosis sanatoria is therefore justified."

So much for the Ministry's report.

It is, of course, now well recognised that sanatorium treatment, even under the most favourable conditions, has very definite limitations. As carried out in practice, where a rigid selection of cases is impracticable, the results are in many ways disappointing. Whether artificial pneumothorax is going to materially modify the position remains to be seen. When one remembers the enthusiasm with which such things as tuberculin treatment, graduated exercise, and "auto-inoculation," &c., &c., were hailed when first introduced

it is wisest perhaps not to expect too much. But when all is said the fact remains that sanatorium treatment still holds the field, as Dr. MacNalty says, and as quoted above, " as the most favourable method at present available for curing pulmonary tuberculosis or of prolonging the life of the tuberculous."

RHEUMATISM.

Increasing attention is now being given to the group of diseases included under the generic name of " rheumatism." The name is not a good one because very diverse and probably quite unconnected pathological conditions share this name, and this inevitably leads to much confusion. First there is classical " acute rheumatism " or rheumatic fever. Then, there are groups of conditions—tonsilitis, chorea, &c.—believed to be allied to acute rheumatism. There is also the group of cardiac conditions, especially valvular disease of the heart, which are all too common as sequelæ of acute rheumatism. Then there is rheumatoid arthritis—chronic rheumatism of the joints ; and lastly, there is a group of conditions which constitute " muscular rheumatism," also chronic in character. Acute rheumatism is more common in childhood, but chronic rheumatism is essentially a disease, or rather group of diseases, of later life.

As indicating the vast amount of ill-health and incapacity for work caused by " rheumatism," the Ministry of Health, in a special report on " The Incidence of Rheumatic Diseases," issued in 1924, stated that the general attack-rate from " rheumatism " was 27.6 per 1,000 insured persons, being considerably higher in males than in females.

Amongst every 1,000 insured males there were (during 12 months) :

Rheumatic fever	1 case
Sub-acute rheumatism	3 ,,
Muscular rheumatism	6 ,,
Lumbago	10 ,,
Sciatica	3 ,,
Rheumatoid Arthritis	1 ,,
Osteo-arthritis and gout	3 ,,
Unclassified	1 ,,
Total	28 ,,

Moreover, it was stated that no less than one sixth of the total sick absence due to all diseases in males was caused by " rheumatic " diseases, and more than half of the sick absence (for both sexes) was due to the chronic joint diseases, which indicates how very prolonged and intractable is this category of rheumatic disease.

A later report on " Acute Rheumatism in Children " was issued in 1927 ; whilst in the same year the Medical Research Council also issued a report dealing with rheumatic diseases in childhood with special reference to social conditions.

Chronic Rheumatism.

Recognising the importance of this field of medicine and the need for more attention being given to it, the British Red Cross Society, in 1930, opened a special Demonstration Clinic in Peto Place, London.

In the Report of the Clinic for the year 1931 it is stated that the number of new cases during the 12 months was 3,046, and in addition there were 659 new private patients. The latter pay fees fixed at the rates usually charged by consultants and masseuses in private practice. The general patients pay a minimum fee of 4s. per attendance with treatment, or 30s. for a course of nine attendances with treatment. Cases unable to pay the minimum fees are investigated by an almoner and if found suitable are admitted free or at special rates.

Many cases are paid for by Approved and Benefit Societies.

The total attendances during the year were 86,967, including 9,075 attendances of private patients. These figures give an idea of the scale on which the Clinic is run and the great response by the public to the facilities provided. Every attendance is by appointment, so that there is very little waiting. Every new case must bring a written recommendation from their own doctor. No exception is made to this rule.

No in-patient accommodation is provided at the Clinic, but by arrangements with the L.C.C. ten beds have been reserved for Clinic patients at St. Charles' Hospital.

The Medical Board report that the cases attending the Clinic can be classified as follows :—

	Per cent.
Group A.—Patients suffering from some sequel of rheumatic fever	1.9
Group B.—Patients suffering from some non-articular form of rheumatism (muscular rheumatism, lumbago, sciatica, &c.)	36.4
Group C.—Patients suffering from some articular form of rheumatism	52.8
Group D.—Patients suffering from non-rheumatic conditions	8.9

"In assessing the results of treatment, several difficulties present themselves. A great deal will naturally depend on the stage of the disease at which the patient had arrived when he first came up for treatment. . . . An investigation into the results of treatment at the Clinic in 500 consecutive unselected cases was as follows:—

	Per cent.
Worse	0.8
Unchanged	22.6
Slightly improved	16.2
Greatly improved	46.6
Cured	13.8

"It is observed that no definite conclusion can yet be drawn regarding the relation of dental sepsis to rheumatism, but an attempt is being made to follow up the results obtained."

"A number of investigations and researches are now being undertaken by the various physicians and specialists attached to the Clinic."

Sir George Newman, commenting on the work of the Clinic, says that its experience shows, beyond question, that there is an urgent demand for the special treatment which such a Clinic can supply over and above what is being provided by the great general hospitals.

Prevention.

Before it is practicable to devise means for preventing a disease, it is obviously necessary to study the conditions which cause or at least favour its development. With this end in view the Medical Research Council sponsored an important piece of research work, and the results of this are embodied in the report mentioned above. The investigation was carried out by the London Committee for Child Life Investigation, under the Chairmanship of Dr. G. F. Still.

The report begins by stating that one of the few things certainly known about acute rheumatism in children is that it is more common among the classes from which hospital patients are drawn than among the well-to-do. Three groups of rheumatic cases were investigated with special reference to social conditions. These three groups were (1) at St. Thomas's Hospital, London ; (2) at the Hospital for Sick Children, Great Ormond Street, London ; and (3) at the Royal Hospital for Sick Children, Glasgow. In each case a comparable group of non-rheumatic children was taken for purpose of control.

The investigations proved difficult, laborious and complicated, but it was possible to formulate certain conclusions, which were to the following effect.

Infectivity. It was not proved definitely that infection was spread from the sick to the healthy, but the evidence suggested that it was quite possible that this might, to some extent, be taking place. Thus, out of 382 persons sleeping in the same room as 192 rheumatic children, 50, or 15 per cent., were rheumatic. This is suggestive, but, in the absence of control figures, not conclusive.

Social Conditions.

(a) **Maternal Care.** This was rather less good in the rheumatic than in the control groups.

(b) **Clothing.** Less good in the rheumatic groups, but on the whole remarkably good.

(c) **Parents.** Definitely higher proportion with alcoholic propensities amongst the rheumatic groups.

(d) **Father's Occupation.** Evidence inconclusive that there was any difference as between the better paid and lower paid occupations.

(e) **Housing.** Differences insignificant.

(f) **Sanitation.** Definitely higher proportion of rheumatic children found in houses where sanitary arrangements were not good.

" There appeared to be no difference of any significance between the social standing of the rheumatic families and of the control families. Cleanliness of the children and presence of vermin about the same."

As regards underground dwellings, dampness, ventilation, no significant difference could be found.

There was also no sufficient evidence that heredity played any important part.

Dr. Still summarises these results as follows :—

" Inquiry was made into the home conditions as regards sleep and play, and general management, maternal care, exposure to cold and damp, clothing, sleeping accommodation, cleanliness, distance from school, also the occupation and health of the parents and their income. Housing was investigated with special reference to locality and dampness, the number of rooms per family, the ventilation and sanitary accommodation ; vermin and dirt was also considered.

" Overcrowding of rooms did not seem to be more common amongst the rheumatic families than amongst the controls, nor was there any appreciable difference between the two as regards sanitation in London, but in Glasgow the proportion of rheumatic families living in houses with bad sanitation was appreciably larger. Neither ventilation nor lighting appeared to be any worse in the houses of the rheumatic families. It will be seen that the findings are largely negative."

Some authorities believe that it is the class above the very poor who suffer most from the incidence of acute rheumatism.

As against these findings, however, Dr. Fenton, M.O.H. for Kensington, one of the London boroughs which has given special attention to this subject, is of the opinion that in his borough a definite connection can be traced between acute rheumatism in children and poverty, malnutrition, overcrowding and bad houses. He has been unable, however, to trace a connection between rheumatism and dampness. As regards the latter point it is of interest to learn that acute rheumatism is fairly common in Egypt, which, of course, is noted for its exceptionally dry climate.

As regards non-articular (muscular) rheumatism, there is a consensus of opinion that this is often caused by the presence of some septic focus, e.g., in the tonsils or teeth or other parts of the body, and the work done by throat and nose clinics and by dental clinics is, therefore, probably all to the good as regards prevention of this form of rheumatism.

Special forms of articular rheumatism are associated with certain diseases, e.g., V.D. (gonorrhœa) and scarlet fever.

The general conclusion one is forced to come to, however, is that at present we know but little of the factors favouring " rheumatism," and therefore that there is not a great deal one can do as regards prevention.

Treatment.

A good deal, however, can be done in the way of treatment.

It is chiefly towards the group of rheumatic affections in childhood that local health authorities are now beginning to turn their attention, and in this category it is believed that appropriate treatment may minimise the very serious after effects. The London County Council have established a number of "Rheumatism Supervisory Centres," or Clinics, to which children suspected of suffering from rheumatism in one or other of its forms are referred through the school medical service and other channels for treatment and supervision. Medical officers, who are specialists in this branch of medicine, have been appointed to take charge of these centres. The children are studied individually and kept under skilled medical supervision; whilst parents are advised as to the special treatment called for and as to the mode of life most desirable. Although it is too soon yet to pronounce a final verdict on the utility of these centres, the L.C.C. are sufficiently impressed with their value to continue opening additional ones. In their report for 1930 it is stated that 1,387 new cases attended during the year, and the total attendances were 6,670.

Institutional Treatment.

The recognised treatment for acute rheumatism is absolute rest in bed combined with the administration of some preparation of salicylic acid. The period of rest has to be prolonged and the transition from rest to exercise needs to be carefully graduated. For many cases such treatment can best be given in an institution.

In connection with the supervisory centres referred to above a certain number of beds have been made available at institutions under the control of the L.C.C., notably at Queen Mary's Hospital, Carshalton, and High Wood Hospital, Brentwood. These beds are used for such cases as require immediate in-patient treatment, either because of the severity of their symptoms or because of unsatisfactory home conditions. Such cases, moreover, continue to receive supervision and after-care after their discharge, and this is continued even after they have ceased to be of school age. During 1930, 639 cases in the L.C.C. area were nominated for special hospital treatment by voluntary hospitals, by school medical officers, by medical officers of supervisory centres, by the Invalid Children's Aid Association, or by private practitioners. Of these cases, 324 were actually admitted.

Amongst individual local authorities who have taken special action may be mentioned the Boroughs of Kensington, Paddington, and Holborn. In these areas the experiment is being tried of making acute rheumatism compulsorily notifiable. The object of this measure is primarily to ensure, as far as possible, that cases receive proper treatment both during and after the acute stage, and the latter object can often be accomplished by referring cases to a supervisory centre where such exists. Notification also has a value from the etiological and statistical standpoint.

As regards statistics, the L.C.C. has a register which, at the end of 1930, contained 16,911 names, the proportion of boys to girls being about three to two.

One of the objections to compulsory notification, however, is the great uncertainty which at present exists in the matter of diagnosis. A very large proportion of the cases are so indefinite that there may be much difference of opinion as to whether they should be reckoned as notifiable or not.

Of the cases which so far have been treated in special hospitals, 11.6 per cent. were classed as "acute rheumatism," 60.9 per cent. as "sub-acute rheumatism," and 27.5 per cent. as "chorea."

In 55 per cent. of the cases the heart was affected, whilst in 26 per cent. there was established valvular disease.

The Position in Leicester.

A valuable report on "Rheumatism and Heart Disease in Children of School Age" was included in the Annual Report of the School Medical Officer (Dr. Allan Warner) for the year 1923. In this report, Dr. Warner pointed out that "rheumatism" was much more common in children than was generally recognised, and he attributed this to the symptoms in childhood being so different to those in adult life. He gave a table classifying 314 children who were found by medical inspection to be suffering from organic heart disease or chorea, and the result of his analysis was as follows:—

Chorea	137	cases
Chorea with acute rheumatism	50	,,
Acute rheumatism	87	,,
Tonsilitis, &c.	27	,,
Congenital heart disease	13	,,
Total	314	,,

No doubt, medical practitioners may hold different opinions as to how many of these cases ought properly to be classed as "rheumatic," but all would agree probably that there are very many cases included in such a group which are rheumatic, and which need special treatment, including a certain proportion which need institutional treatment which would often need to be prolonged if permanent benefit is to result.

At present the Royal Infirmary can only find room for a limited number of such cases, and the question therefore arises whether beds can be found for them elsewhere, e.g., in the City General Hospital. This is one of the questions now before the Committee.

If such beds are to be provided, however, it seems very desirable that it should be in conjunction with a Supervisory Centre such as has been referred to above. Such centre should, if possible, be under the care of the same physician who has charge of the beds.

The scheme would then be quite comparable to that in operation in Leicester for orthopædic cases.

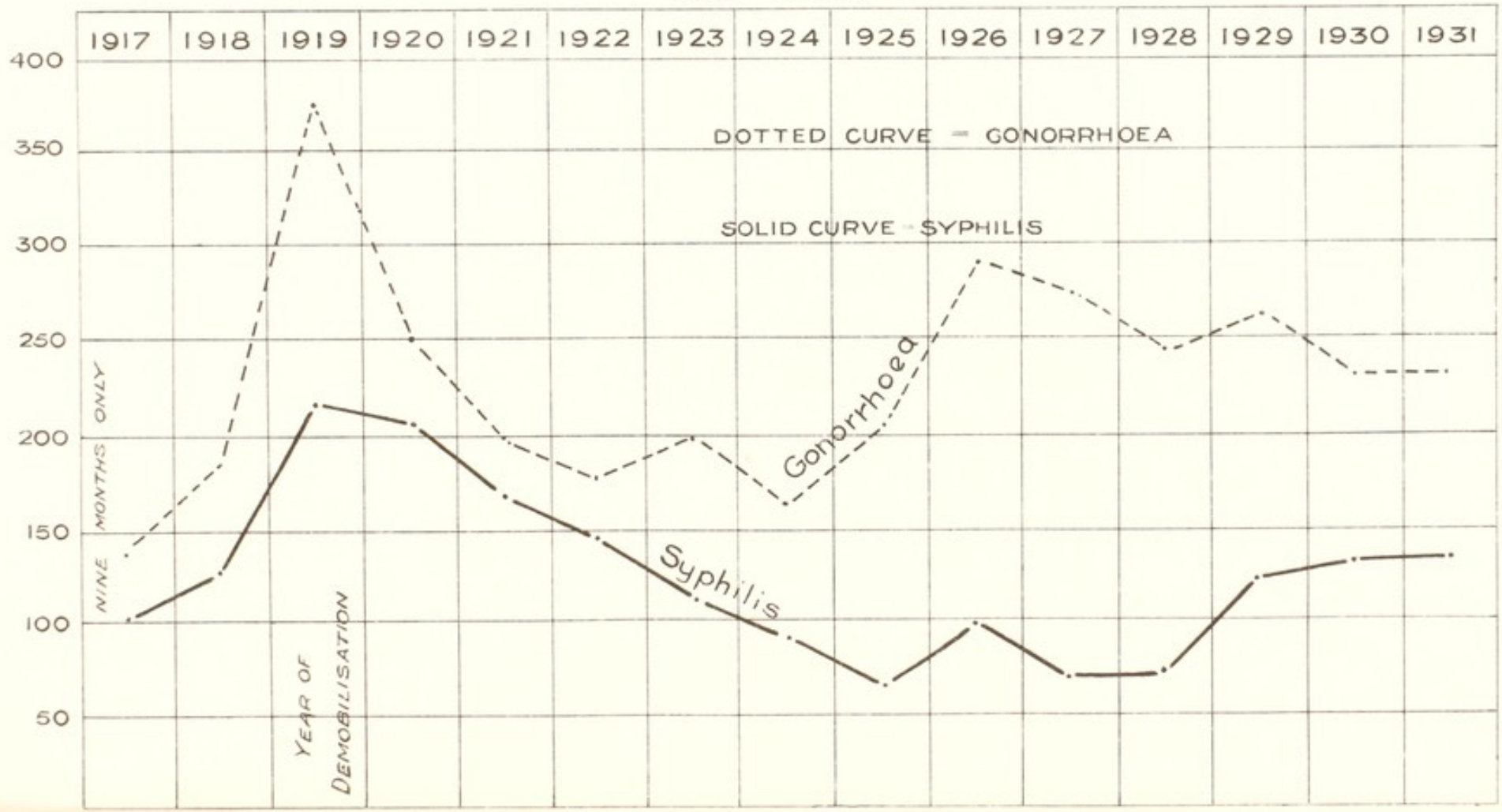
It may be mentioned however, in passing, that the claims of certain other special groups of diseases need to be considered when allocating beds for special purposes, e.g., gastric and intestinal cases and cases of defective metabolism. This also is an important group and calls for specialised study.

VENEREAL DISEASE.

Venereal diseases not being notifiable we can only judge of their prevalence indirectly. A rough index is afforded by the number of fresh cases which present themselves for treatment at the V.D. treatment centre held at the Royal Infirmary. The accompanying graphs, Nos. VI. and VII., based on the figures for each year since the centre was started, shows the position at a glance. During the past few years there has not been much change either up or down. It is something to think that, as far as we can judge, these disastrous diseases are not increasing, but on the other hand it is saddening to have to admit that such essentially "preventable" diseases are not diminishing. One wishes one could do more to bring home to the youth of our city, of both sexes, the terrible danger to health of illicit intercourse. Venereal disease is the poison in the cup, and whoever tastes of that cup is liable to imbibe the poison in doing so. Some taste in ignorance of the danger, others in recklessness in spite of having been warned; but in the former case one feels that a responsibility rests on those who might

GRAPH VI

VENEREAL DISEASES
NEW CASES IN MALES (CITY ONLY)
ROYAL INFIRMARY CLINIC
1917 - 1931.



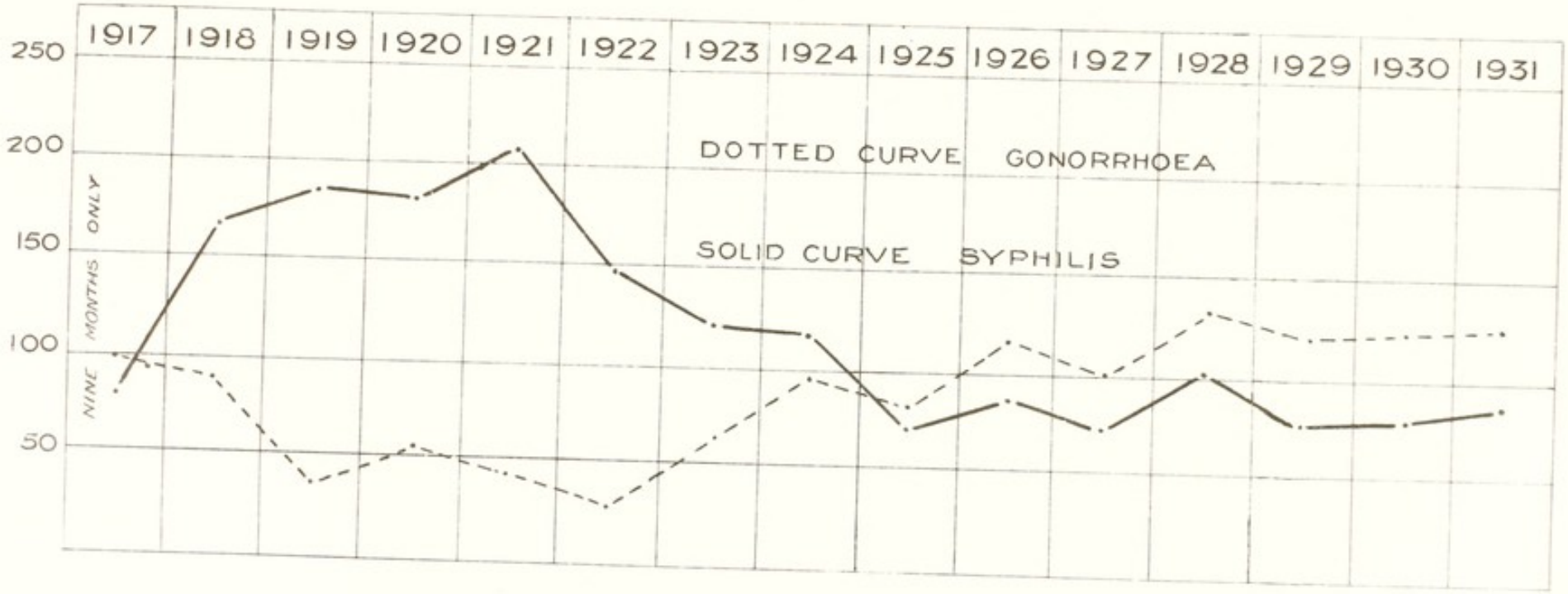
This ... Venereal Diseases in Males in 1919 which accompanied Demobilisation after the War, was very marked, ... was followed by a steady decline ...

VENEREAL DISEASES

NEW CASES IN FEMALES (CITY ONLY)

ROYAL INFIRMARY CLINIC

1917 - 1931.



The curves for Venereal Diseases in Females are very different from those in Males. The number shown as new cases is only the number coming forward for treatment and not the number actually occurring of which we have no official record. The apparent increase since 1925 can partly be accounted for by a difference in classification.

have uttered a warning. The difficulties surrounding this subject are admittedly great, not the least being the sharp difference of opinion as to the best way of uttering the warning.

The notices exhibited by the Health Committee, with the co-operation of the Sanitary Committee, in our public conveniences are undoubtedly one very valuable means of reaching the public, as they must be seen by vast numbers of the population.

Since my last report, Mr. H. J. Blakesley, F.R.C.S., who had carried on the male clinic ever since it was first started, has died, and his place has been filled by Dr. Hamilton Wilkie, who came to us from the V.D. Department of the Glasgow Corporation. Dr. Wilkie took up his new work last autumn. His report and that of Dr. Bessie Symington for the female clinic will be found in Appendix VII.

SCABIES (ITCH).

A bathing and treatment centre for this contagious and very unpleasant affection is provided at the Health Department. Fortunately the affection is not nearly so common as it was some years ago when the centre was started after demobilisation after the war. Last year the number of cases dealt with was 33, as against 29 in the previous year.

Of these 33, 30 were in children, and 3 in adults.

In most cases the affection is very amenable to treatment, but in some cases many visits have to be made before a cure is effected.

PART III.

Administrative and General.

HOUSING OF THE WORKING CLASSES.

The following table shows the number of new houses which have been erected in Leicester during the past eleven years by private enterprise and by the Corporation.

Number of New Houses Erected.*

	By Private Enterprise. Without Subsidy.	By Private Enterprise. With Subsidy.	By Housing Committee.	Total.
1921 ..	21	87	392	500
1922 ..	114	—	260	374
1923 ..	135	—	84	219
1924 ..	336	70	114	520
1925 ..	298	239	513	1050
1926 ..	374	303	1036	1713
1927 ..	726	265	1590	2581
1928 ..	481	523	587	1591
1929 ..	348	680	396	1424
1930 ..	583	—	505	1088
1931 ..	632	—	372	1004
Total for 11 years	4048	2167	5849	12064

N.B.—Of the 5,849 houses erected by the Corporation, 2,210 were outside the City boundary.

It will be seen that in the 11 years during which post-war building has been taking place a grand total of 12,064 new houses have been built ; 5,849 by the Corporation, and 6,215 by private enterprise. Of the houses erected by the Corporation, 2,210, or 37 per cent., were beyond the City boundary. These extra-mural houses probably represent a population of nearly 10,000 Leicester people living in the County in Corporation houses.

*Figures supplied by the City Surveyor and City Housing Architect.

As regards the number of houses erected by private enterprise, it is two years now since the Government subsidy was discontinued. The immediate effect was to cause a big drop in the total number of houses erected by private builders, but as will be seen by the figures in the second column, the number of non-subsidy houses is increasing—348, 583, 632. This is satisfactory as far as it goes, but there is still a very serious shortage of houses in Leicester.

OVERCROWDING.

Two special reports on the subject of overcrowding were presented to the Committee during the year under review, and a third report in March of the present year. Overcrowding undoubtedly constitutes a very serious problem in Leicester in spite of all that has been done in the direction of building new houses.

The name and address of the Medical Officer of Health has to appear in every rent book, and this probably explains why so many unfortunate overcrowded families write to or call personally on the Medical Officer of Health, appealing to him to help them. Many of the appeals are really pitiful. The condition of overcrowding are often very bad—5, 6, 7 or more persons sleeping in one bedroom. They ask, what are they to do? They have usually applied to the Housing Department long ago and several times since, but either they have not been accepted or they have been told that they must wait their turn, and have heard nothing further. Often the financial circumstances of the family are not considered satisfactory. The father may be out of work or only in irregular work. Some cases, realising the impossibility of their paying the rent of a Corporation house, have not thought it worth while to apply. Unfortunately, the presence of a large family, although of course it greatly increases the need for a larger house, also increases the financial difficulty so long as the children are dependent. This indeed, is largely the *crux* of the difficulty.

The day before these lines were penned two mothers of families came to my office to ask me again to try and help them to get a Corporation house. They had first appealed to me over a year ago and were still in the same overcrowded conditions, only more so, as another baby had appeared on the scene in each house. Both these families are occupying two-roomed cottages. In the one case, father, mother and five children all sleep in the one small bedroom. The mother states that the five children all sleep in one bed. In the other case there is a father, mother and grandmother and six children. In this case there are eight sleeping in

the one room and one sleeping downstairs. Both these families are in receipt of Public Assistance.

In my special reports to the Health Committee on this subject I have given a number of illustrative cases, all of which I have verified myself by personal visits and by reports from the health visitors, and I could give very many more if it would be of any use.

There are three main causes for overcrowding in Leicester :—

1. **The great shortage of working-class houses.**
2. **Poverty.**
3. **Large Families.**

1. **Shortage of Houses.** It would almost seem as if the shortage of houses is, if anything, getting more acute in spite of the new houses which have been built ; but whether this is so or not there can be no question that an acute shortage does exist. Statements made to me over and over again by different people convince me of this, and enquiries made of the more important house agents in the City are to the same effect.

This day on which I write these words a respectable and superior young woman, married eighteen months, but without children, has been to see me and tells the following story. She and her husband are occupying a good six-roomed house but without bathroom in a respectable neighbourhood for which they pay 17s. 6d. a week rent. They took the house last September and then discovered it was infested with bugs. They set to work to try and eradicate them. They did everything they could think of to get rid of them, but as the trouble reappeared they decided that they could not stay. For some months they have been trying hard to get another house. They heard of one at 16s.—not nearly so good as their present one—kitchen detached from the house, no water laid on. They did not like it, but thought of taking it, but someone else stepped in, offered 18s. 6d. and got the house. They heard of another house at 20s. It was at Oadby outside Leicester, and the increased fares would have added to the cost, but they decided to take it only to find that they were too late. Another house was offered to them, but it was 27s. which was beyond their means. They have been round to all the house agents, but they have nothing to offer much under 30s. Yet this couple have everything to commend them as tenants, no children, no arrears of rent, obviously of a superior class, and the wife as well as the husband going to work. If such people fail to get a house, what chance is there for people with families of children and in poor circumstances ?

2. **Poverty.** Poverty is a terrible handicap in every respect, but especially so in the matter of overcrowding. Naturally, landlords give preference to those prospective tenants who are better off and look askance at those who are least able to pay their rent regularly. Overcrowded families who are in poverty, no matter how great their housing needs, stand little chance from private landlords, nor are the latter to be blamed for this. As one house agent, to whom I appealed, said to me : " If the Corporation will not help such cases, how can you expect a private landlord to do so ? "

3. **Large Families.** This cause is so obvious that only a brief reference need be made to it. Unfortunately, overcrowding, poverty, and large families operate in a " vicious circle." A large family clearly needs a larger house than a small family. A large house naturally costs more than a small house, but (so long as the children are dependent) the father of a large family has less money to spend on rent. The only solution of this fundamental difficulty seems to be to provide a Corporation house of adequate size and to fix the rent in proportion to the means to pay, taking into consideration, of course, the total income and the number of dependent children. As a matter of fact this principle has been accepted in connection with the fixing of rents in the case of tenants displaced from the Green Street clearance area, and I wish very much that it could be extended to meet the case of overcrowding. Some people are afraid that such a principle might encourage people to have still larger families. Personally, I do not think it would have this effect at all. It is well known that the effect of a rise in the standard of life is to diminish the birth-rate, and a decent house is the first and most essential step in raising the standard of life.

I gladly acknowledge the good, indeed the splendid, work which has been done by the Housing Committee in providing most excellent municipal houses for those of the working classes who are in a position to pay for them. Without these houses the condition of things would undoubtedly have been very much worse. But far more houses will need to be built, either by private or municipal enterprise, before the present shortage of working class houses is overtaken.

There is some difference of opinion as to whether such new houses as are built should go to those who most need them, even though the return in rent will be smaller, or whether it should go to those who can pay the standard rent even though their housing need is less. The advocates of the latter policy believe that the

relief of overcrowding can be left to the process known as "filtering up." For this process to be effective it is probable that a much larger number of houses would need to be built than is likely to be accomplished in any reasonable time. Certainly, up to the present the effect, if any, has been small.

In this connection reference may be made to an arrangement come to between the Health and Housing Committees under which the latter shall provide a limited number of houses for which the Health Committee shall select the tenants and fix the rent, the deficit being borne by the Health Committee. If this arrangement were extended adequately and the rents fixed low enough to meet the needs of the very poor, I believe it would go a long way towards solving the problem. Up to the present (May 2nd, 1932), the number of houses allocated in this way has been only 62, and not all of them have gone to relieve overcrowding. Nine have been given to tenants whose houses were demolished under demolition orders, and four to tenants whose houses were demolished by the owners, leaving only 49 for cases of overcrowding during a period of two years since the arrangement was begun. Many cases of pitiful overcrowding which have been on our books for over twelve months are still unrelieved.

THE SLUM PROBLEM IN LEICESTER.

The slum problem in Leicester, as in many other places, tends to be rather a controversial subject. Whilst all are agreed that it is imperative that some action should be taken there is a difference of opinion as to just what that action should be.

As Medical Officer of Health for the City and chief professional adviser of the Health Committee, I have realised that rather a heavy responsibility rested upon me. I have, therefore, studied the question closely and have arrived at certain definite conclusions. These conclusions I have put forward not only in previous Annual Reports, but in several special reports. It is possible that some members of the Committee may have thought that I have been unduly insistent on this question. If this is so, I can only plead the importance of the subject from a health point of view, together with its admitted complexity, as my justification.

In the present report I do not propose to go over the ground again and will content myself with a brief statement of the present position.

Clearance Areas.

Two schemes are in hand, (1) The Green Street-Sandacre Street Area ; and (2) The Redcross Street Area.

(1) Green Street-Sandacre Street Area.

This area of 3¼ acres comprises 235 houses with a population of 898.

Originally brought forward in 1928, this scheme had received the approval of the City Council in February, 1929, but was held up owing to the situation created by the "Derby case," pending the passing of the 1930 Housing Act. In October, 1930, the City Council again confirmed the scheme and in due course, after a large amount of necessary detail work had been carried out, the scheme went forward to the Ministry of Health. They held their Public Inquiry on January 19th of the present year (1932). In the meantime, however, the Town Clerk had succeeded in arranging terms with a large number of the house owners in the area. The Ministry made their Order confirming the scheme (with the exception of six houses in New Parliament Street) on 27th February, and at the time of writing (June) the work of re-housing the tenants is being rapidly carried out and the work of demolition has begun.

Differential Renting Scheme for Displaced Tenants.

The Housing Committee have devised a scheme of differential renting based upon (a) the total family income, and (b) the number of children. Details of this scheme are given in Appendix VIII., p. 202. This scheme has enabled the displaced tenants to obtain Council houses at an average rent much below what has hitherto been charged for such houses. It is true that these are special houses (erected on the Tailby Estate) and the cost of building has been a little lower than houses erected under the 1924 Act, but the accommodation provided is excellent and undoubtedly they will be a great boon to those families fortunate enough to get them. It is to be hoped that many more of these houses will be erected.

Suggested Modification of Scheme.

The differential renting scheme has been carefully worked out and in most cases the concessions granted are generous. The only modification I would suggest, but it is a very important one, is that a more liberal allowance should be made for children. The present allowance works out at only 2s. 6d. per head, whether the person is a baby or an adult. This is substantially less than the Public Assistance Committee allow, and clearly it does not meet the extra cost entailed in feeding and clothing a child. As an

example of how this works in the case of large families I will give an actual concrete case. Man, wife and five children, the eldest nine years old ; the total income is derived from the father's wages as a labourer, £2 5s. 0d. per week. He has to pay 10s. 6d. rent under the scheme, whereas they were formerly paying only 5s. 2d. The wife states that whilst they appreciate the house very much, they find it a hard struggle to make ends meet. In contrast with this case, compare the case of a man, wife and only one child, income £3 10s. 0d., who also pay only 10s. 6d., this being the maximum rent charged under the scheme for an A3 type house. Surely, where a man has seven people to provide for, and only 45s. a week total income, it is too much to expect him to pay practically one-fourth of that income in rent.

In view of the fact that it is the **children** who should be our first consideration in every re-housing scheme, one cannot but feel that some modification in the scheme is called for. As it is desirable that any concessions granted should come out of "the pool" (i.e., the government subsidy *plus* the Local Authority's contribution), any further concessions in one direction will mean less in another. I would suggest, therefore, that the maximum rent should be raised from 10s. 6d. to 11s. 6d. or 12s., for even at the latter figure the houses will be splendid value—and the rent still much below an economic rent. Undoubtedly many of those who are moving into these houses could well afford the figure suggested. If it be thought undesirable to do this, then the only alternative would be to raise the Local Authority's contribution above the £3 15s. 0d. p.a. which is the minimum (but not the maximum) fixed by the Act.

(2) **Redcross Street Area.**

The decision to make this a Clearance Area was only arrived at in the present year, and application to the Ministry has not yet been made.

The area is less than half the size of the previous area, containing 112 houses, with a population of 367.

It is sub-divided into four separate areas.

CREMATION.

The number of cremations taking place at the Leicester Crematorium during the year was 89 as compared with 119 in the previous year. The reduction is easily explained by the opening of a crematorium at Nottingham in January, 1931, which has diverted practically all cremations from the Nottingham area and some of those from the Derby area also, which formerly came to

Leicester. But for this fact the number of cremations would not only have been maintained, but probably increased. Indeed, even without the Nottingham cremations the number was larger than in any year except the two immediately preceding years. Judging by the number of cremations (36) during the first quarter of the present year (1932) the popularity of cremation is continuing to increase, and only once before has the figure for the first quarter been exceeded. It is quite probable that in a year or two we shall have as many or more cremations without the Nottingham area as we previously had before the Nottingham crematorium was opened. The number of cremations carried out at the new crematorium at Nottingham during 1931 was 70.

The total number of cremations which have now been carried out at the Leicester Crematorium since it was opened in 1902, amounts to 1,057. In the first eleven years 1902-1913, 142 cremations were effected. The crematorium was then closed for about 12 months whilst the furnace was entirely reconstructed. By way of comparison it may be stated that in the last 10 years, 1922-1931, the number has been 687.

Amongst persons of note cremated at Leicester during the year may be mentioned: Lt.-Col Sir Samuel Faire, J.P., D.L., Herbert Simpson (formerly Mayor of Leicester), J. G. McAlpin, J. G. Parr, Robert J. Lees, Sarah Sloan, Margaret G. Carnley, Captain H. L. Rockeby, and Sir H. C. Crockett.

Cost of Cremation (including Referee's Fee, but not including Cost of Medical Certificates).

For persons residing within the City of Leicester at time of death ..	£4	4 0
For persons not so residing	£6	6 0

Mr. Addison, Superintendent of the Crematorium, estimates the actual cost of carrying out a cremation for fuel, labour, maintenance and supervision, at £1. 0s. 0d., but this makes no allowance for capital charges and depreciation.

It is interesting to learn how the ashes are disposed of after cremation. The following is an analysis of the cremations in 1931 (figures taken from Superintendent's Report).

Scattered in Garden of Remembrance ..	51
Taken away for disposal elsewhere	35
Placed in Niches	2
Awaiting instructions	1
	89

The following figures illustrate the growth of the cremation movement in Great Britain.

	1910	1920	1931
Crematoria	13	14	21
Cremations	840	1,796	5,195

In the last eleven years, therefore, the numbers have been nearly trebled.

SUN BATHING.—HELIOTHERAPY.

In my Annual Report for 1929 reference was made to the remarkable curative results obtained, in suitable cases, by heliotherapy, i.e., by the direct exposure of the surface of the body to the health-giving rays of the sun. It was pointed out that the effect was largely indirect, by increasing the natural powers of resistance to various disease processes. The value of sun bathing as a health-giving " cult " was also emphasised.

The difficulty in this climate is that the sun is so capricious and uncertain that even where facilities exist but little opportunity occurs for making use of them. This has doubtless discouraged many local authorities from making provision for sun-bathing.

Undoubtedly the most popular way of making provision for sun-bathing is to combine it with open-air water bathing in the form of a " Lido." A scheme for provision of this kind was discussed by the Parks and Baths Committee but was not proceeded with largely on account of the expense.

I understand that there is a prospect of some provision for sun-bathing to be made this summer by private enterprise.

MATERNITY AND CHILD WELFARE.

The detailed report on this very important branch of the work of the Health Department, I have handed over, as was the case in the previous year, to Dr. E. B. B. Humphreys, Medical Officer in Charge of this sub-department. The work has increased remarkably during the past decade, and is now of sufficient magnitude and specialisation to call for a separate report as in the case of the other sub-departments.

Dr. Humphreys has written an excellent report and under these circumstances no further observations on my part are called for.

PUBLIC ABATTOIR SCHEME.

Leicester badly needs a public abattoir. The present slaughter house accommodation in the City is quite inadequate and altogether out of date. That is the best one can say about it! That the present state of things has been tolerated so long is due to the special difficulties surrounding the question. It is several years now since the Markets Committee, acting upon a strong representation made by the Health Committee, prepared and brought before the Council a scheme for a municipal public abattoir. Financial conditions led to the scheme being deferred for a period! It was then again brought forward and approved. The sanction of the Ministry of Health was obtained and a provisional tender was accepted. Most unfortunately, the financial crisis necessitated the scheme being again held up.

Speaking as Medical Officer of Health, and knowing how very badly improved slaughter-house facilities are needed, I can only say I sincerely hope that the "hold-up" is only temporary.

APPENDIX I.

Report of the Tuberculosis Dispensary for 1931.

By WYVILLE S. THOMSON, M.D., D.P.H., Edin.,
Tuberculosis Medical Officer.

Premises.

The Tuberculosis Dispensary, situated at 59 Regent Road, is the centre for dealing with all work in connection with Tuberculosis in the city. The premises to which removal was made from the Health Department, Grey Friars, in February, 1930, are much larger than those formerly occupied. Though not so centrally situated and rather noisy owing to the large amount of traffic now diverted this way, they are proving very satisfactory.

Staff.

There has been no change in the Medical Staff, the medical work having been carried on by Dr. Thomson with the half-time assistance of Dr. Lawrie. No change during the past twelve months has taken place in the Nursing Staff, which consists of three fully trained nurses, each being responsible for the visitation over one-third of the city.

The clerical work is still in the capable hands of Miss Heaton. She is assisted by Miss Breward, who took the place of Miss Battle who unfortunately developed Tuberculosis of the spine and had to be removed to Sanatorium, where she is still under treatment and making satisfactory progress.

Notification Register.

Tuberculosis being a notifiable disease, all persons suffering from it must be notified, and their names entered in the Register. At the beginning of 1927 the Notification Register was thoroughly revised. The names of all patients who had left the district were removed, as well as those whom we could no longer regard as suffering from Tuberculosis, and only those with definite tubercular disease were retained on the Register.

The following are the figures on the Notification Register on December 31st, 1931 :—

PULMONARY			NON-PULMONARY			TOTAL CASES
Males	Females	Total	Males	Females	Total	
1,666	1,669	3,335	152	172	324	3,659

During the past year 67 names were removed from the Register of patients who had kept well for at least five years and who were regarded as having " recovered."

Notifications.

There has been a considerable reduction in the number of persons notified as suffering from Tuberculosis during the past year—572 as compared with 648 in 1930. The pulmonary notifications were 511 as compared with 582 in 1930, and the non-pulmonary were 61 as compared with 66 in 1930. It will be noticed that the number of notifications is apt to fluctuate considerably from year to year, but that for 1931 is easily the lowest figure ever recorded.

Of the 511 pulmonary notifications, 216 were reported by your Tuberculosis Officer and 10 of the 61 non-pulmonary cases.

The following table gives the number of notifications since 1918 :—

1918	..	Pulmonary,	746 ;	Non-pulmonary,	82 ;	Total,	828
1919	..	,,	658 ;	,,	47 ;	,,	705
1920	..	,,	572 ;	,,	59 ;	,,	631
1921	..	,,	497 ;	,,	105 ;	,,	602
1922	..	,,	566 ;	,,	43 ;	,,	609
1923	..	,,	692 ;	,,	71 ;	,,	763
1924	..	,,	725 ;	,,	65 ;	,,	790
1925	..	,,	606 ;	,,	77 ;	,,	683
1926	..	,,	650 ;	,,	77 ;	,,	727
1927	..	,,	700 ;	,,	80 ;	,,	780
1928	..	,,	668 ;	,,	117 ;	,,	785
1929	..	,,	657 ;	,,	77 ;	,,	734
1930	..	,,	582 ;	,,	66 ;	,,	648
1931	..	,,	511 ;	,,	61 ;	,,	572

The following table gives the sex and age period of those notified during 1931 :—

Age Periods	0-1	1-5	5-10	10-15	15-20	20-25	25-35	35-45	45-55	55-65	65 & up.	Total
Pulmonary												
Males ..	—	3	12	10	24	40	67	37	33	26	7	259
Females ..	2	4	12	11	38	51	62	32	29	7	4	252
Non-Pulmonary												
Males ..	1	4	8	3	4	3	5	1	—	—	1	30
Females ..	—	2	2	4	6	8	4	2	2	1	—	31

Deaths.

Unfortunately the deaths for 1931 show an increase over 1930. The figure for 1930 was the lowest ever previously recorded, viz., 271, being 227 pulmonary and 44 non-pulmonary deaths. The figure for 1931 is 311, being 262 pulmonary and 49 non-pulmonary deaths. There has therefore been an increase of 35 pulmonary deaths and 5 non-pulmonary. This increase is disappointing, but with the exception of 1930 (271 deaths) and 1928 (307 deaths) it is the lowest recorded figure and is very much better than 1918 when the figure of 398 was reached.

Thirty-four children under 15 years of age are included in the 311 deaths. Of these 5 died from pulmonary and 29 from non-pulmonary tuberculosis.

In view of the greatly improved housing conditions and higher standard of life of the working classes, we may confidently look for a gradual decline in the deaths from tuberculosis. But in order to accelerate this, greater provision should be made for the institutional treatment of advanced and highly infective cases, who, where they are a source of danger to others, should be retained in institutions until they die.

The following table gives number of deaths each year since 1918:

1918 ..	Pulmonary,	316 ;	Non-pulmonary,	82 ;	Total,	398
1919 ..	,,	264 ;	,,	62 ;	,,	326
1920 ..	,,	255 ;	,,	72 ;	,,	327
1921 ..	,,	278 ;	,,	73 ;	,,	351
1922 ..	,,	294 ;	,,	67 ;	,,	361
1923 ..	,,	285 ;	,,	36 ;	,,	321
1924 ..	,,	287 ;	,,	62 ;	,,	349
1925 ..	,,	305 ;	,,	59 ;	,,	364
1926 ..	,,	282 ;	,,	43 ;	,,	325
1927 ..	,,	283 ;	,,	63 ;	,,	346
1928 ..	,,	265 ;	,,	42 ;	,,	307
1929 ..	,,	266 ;	,,	53 ;	,,	319
1930 ..	,,	227 ;	,,	44 ;	,,	271
1931 ..	,,	262 ;	,,	49 ;	,,	311

An analysis of the pulmonary deaths which occurred during 1931 shows, in the first portion of the following tables those who had had Sanatorium treatment, the stage of the disease when first examined and the length of time elapsing between notification and death. In the second portion of the table similar information is given about those who had not had Sanatorium treatment. In the third portion details are given of those who were never examined at the Dispensary—chiefly patients in other institutions, e.g., the Mental Hospital and the City General Hospital. Included here are also those better class patients who did not desire examination at the Dispensary.

These three tables account for 241 deaths. In addition there were 21 deaths of patients who had never been notified as suffering from tuberculosis. This gives the total of 262 pulmonary deaths.

An analysis of the non-pulmonary deaths shows that a large proportion (40 out of 49) were due to acute forms of tuberculosis, viz., Tuberculous Meningitis or Miliary Tuberculosis. Sanatorium Treatment is of little or no avail in such cases. Some time previously one of those dying from Meningitis had been treated in Sanatorium as a pulmonary case; another had been treated both at

ANALYSIS OF DEATHS.

PULMONARY CASES HAVING HAD SANATORIUM TREATMENT.

Stage when first examined	Died within one month of notification	Within two months	Within three months	Within six months	Within twelve months	Within 18 months	Within two years	Within three years	Lived three years or over
Stage I. T.B.—ve 29 ..	—	—	—	1	1	4	2	4	17
Stage II. T.B.—ve 14 ..	1	—	—	4	—	—	—	—	9
Stage III. T.B.—ve 3 ..	1	—	—	—	1	—	—	—	1
Stage I. T.B.+ve 27 ..	—	1	—	1	6	5	3	2	9
Stage II. T.B.+ve 40 ..	1	1	2	3	6	12	5	2	8
Stage III. T.B.+ve 15 ..	—	1	1	—	2	4	1	1	5
Total 128	3	3	3	9	16	25	11	9	49

PATIENTS NOT HAVING HAD SANATORIUM TREATMENT.

Stage when first examined	Died within one month of notification	Within two months	Within three months	Within six months	Within twelve months	Within 18 months	Within two years	Within three years	Lived three years or over
Stage I. T.B.—ve 5 ..	1	1	1	—	2	—	—	—	—
Stage II. T.B.—ve 12 ..	3	2	1	1	2	1	—	—	2
Stage III. T.B.—ve 2 ..	1	—	—	1	—	—	—	—	—
Stage I. T.B.+ve 9 ..	1	2	—	2	3	1	—	—	—
Stage II. T.B.+ve 18 ..	3	2	3	3	4	1	1	—	1
Stage III. T.B.+ve 15 ..	8	6	—	1	—	—	—	—	—
Total 61	17	13	5	8	11	3	1	—	3

PULMONARY CASES NOT EXAMINED AT OR IN CONNECTION WITH THE DISPENSARY.

TOTAL	Died within 1 month of notification.	Within 2 months	Within 3 months	Within 6 months	Within 12 months	Within 18 months	Within 2 years	Within 3 years	Lived 3 years or over
52	16	7	4	7	6	2	–	–	10

Sanatorium and at Holt for Pulmonary Tuberculosis; a third had had treatment for nearly 5 years at Sanatorium for Tuberculosis of the Knee-joint, and one case dying from Generalised Tuberculosis had previously been treated in Sanatorium for Tuberculosis of the Ribs. Of the remaining 9 surgical deaths, 3 were due to Tuberculosis of the Spine, 1 to Tuberculosis of the Knee-joint, 3 to Tuberculosis of the Intestines, 1 to Tuberculosis of the Kidneys, and 1 to Tubercular Mastoiditis. None of these 9 cases had had treatment at Groby Road Sanatorium.

Dispensary Register.

In the Dispensary Register (not to be confused with the Notification Register) are entered the names of all patients examined at or in connection with the Dispensary. Many of those examined are, of course, found to be non-tubercular. Others have to be

examined repeatedly before one can come to a definite decision. As soon as a negative decision is arrived at, the name is crossed off the Register. Similarly the names of those patients who remove to other areas outside the City boundary are taken off, and an intimation is sent to the Medical Officer of Health of the district to which they remove. Also on the death of a patient the name is removed, so that the Register, which is kept thoroughly up to date, contains the names of all tubercular patients as long as they are under Dispensary supervision.

The number on this Register is likely to be smaller than that on the Notification Register, as those who are not examined at the Dispensary (e.g., better class patients and those in certain institutions such as the Mental Hospital), do not appear in it.

The following tables made out for the Ministry of Health from information contained in this Register for the year 1931 may prove of interest :—

ANALYSIS OF CASES ON DISPENSARY REGISTER

DIAGNOSIS	Pulmonary				Non-Pulmonary				Total			
	Adults		Children		Adults		Children		Adults		Children	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
A New Cases examined during the year:—												
(a) Definitely Tuberculous	178	170	20	16	15	15	10	6	193	185	30	22
(b) Diagnosis not completed	—	—	—	—	—	—	—	—	31	33	15	14
(c) Non-Tuberculous..	—	—	—	—	—	—	—	—	92	121	65	50
B Contracts examined:—												
(a) Definitely Tuberculous	4	1	—	3	—	—	—	—	4	1	—	3
(b) Diagnosis not completed	—	—	—	—	—	—	—	—	1	2	1	3
(c) Non-Tuberculous..	—	—	—	—	—	—	—	—	14	33	81	76
C Cases written off Dispensary Register as:—												
(a) Recovered.. ..	21	18	5	11	3	1	5	3	24	19	10	14
(b) Non-Tuberculous and diagnosis not confirmed	—	—	—	—	—	—	—	—	116	157	152	140
D Number of Cases on Dispensary Register on December 31st:—												
(a) Definitely Tuberculous	1161	1173	348	297	60	71	77	58	1221	1244	425	355
(b) Diagnosis not completed	—	—	—	—	—	—	—	—	62	55	23	19

1. Number of persons on Dispensary Register on January 1st, 1931	3,308	3. Number of cases transferred to other areas and cases "lost sight of" ..	194
2. Number of patients transferred from other areas and "lost sight of" cases returned	72	4. Number of "T.B. plus" cases on Dispensary Register ..	762

PULMONARY TUBERCULOSIS.

Supplementary Annual Return showing in summary form (*a*) the condition at the end of 1931 of all patients remaining on the Dispensary Register and (*b*) the reasons for the removal of all cases written off the Register. The Table is arranged according to the years in which the patients were first entered on the Dispensary Register as definite cases of pulmonary tuberculosis, and their classification at that time.

	Condition at the time of the last record made during the year to which the return relates.		Previous to 1926.					1926.					1927.					1928.				
				Class T.B. plus.					Class T.B. plus.					Class T.B. plus.					Class T.B. plus.			
			Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus).	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus).	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus).	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus).
(*a*) Remaining on Dispensary Register on 31st December.	Disease arrested.	Adults (M	160	20	6	—	26	35	6	—	—	6	69	9	1	—	10	26	2	1	—	3
		Adults (F	155	16	2	—	18	44	2	1	—	3	49	—	—	—	—	22	1	—	—	1
		Children	233	—	—	—	—	109	—	—	—	—	136	—	—	—	—	65	—	—	—	—
	Disease not arrested.	Adults (M	28	29	12	1	42	6	5	2	1	8	8	11	11	2	24	32	21	17	—	38
		Adults (F	45	29	15	1	45	19	2	6	2	10	22	4	7	4	15	60	29	14	3	46
		Children	46	4	—	—	4	16	1	—	—	1	32	—	—	—	—	65	2	—	—	2
	Condition not ascertained during the year		73	7	8	—	15	29	2	1	2	5	27	2	1	—	3	30	1	—	—	1
	Total on Register.. ..		740	105	43	2	150	258	18	10	5	33	343	26	20	6	52	300	56	32	3	91
(*b*) Not now on Dispensary Register and reasons for removal therefrom.	Discharged as Recovered.	Adults (M	—	—	—	—	397	4	1	1	—	2	—	—	—	—	—	—	—	—	—	—
		Adults (F	—	—	—	—	401	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Children ..	—	—	—	—	706	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Transferred or otherwise removed from Dispensary Register		—	—	—	—	1460	60	5	10	3	18	42	1	4	2	7	26	7	—	1	8
	Dead.	Adults (M	—	—	—	—	1343	22	23	34	31	88	48	15	35	15	65	16	13	24	15	52
		Adults (F	—	—	—	—	1036	24	14	22	30	66	31	5	21	24	50	15	12	21	10	43
		Children ..	—	—	—	—	401	6	—	1	—	1	5	—	—	—	—	4	—	—	1	1
	Total written off		—	—	—	—	5744	125	43	68	64	175	126	21	60	41	122	61	32	45	27	104
	GRAND TOTALS ..		—	—	—	—	5894	383	61	78	69	208	469	47	80	47	174	361	88	77	30	195

PULMONARY TUBERCULOSIS—continued from previous page.

Condition at the time of the last record made during the year to which the return relates.			1929. Class T.B. minus.	1929. Class T.B. plus. Group 1.	1929. Class T.B. plus. Group 2.	1929. Class T.B. plus. Group 3.	1929. Total (Class T.B. plus).	1930. Class T.B. minus.	1930. Class T.B. plus. Group 1.	1930. Class T.B. plus. Group 2.	1930. Class T.B. plus. Group 3.	1930. Total (Class T.B. plus).	1931. Class T.B. minus.	1931. Class T.B. plus. Group 1.	1931. Class T.B. plus. Group 2.	1931. Class T.B. plus. Group 3.	1931. Total (Class T.B. plus).
(a) Remaining on Dispensary Register on 31st December.	Disease arrested.	Adults M	7	3	—	—	3	—	—	—	—	—	—	—	—	—	—
		Adults F	11	1	—	—	1	—	—	—	—	—	—	—	—	—	—
		Children	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Disease not arrested.	Adults M	20	47	25	1	73	42	58	19	3	80	54	53	35	4	92
		Adults F	57	33	16	2	51	62	32	18	1	51	77	36	30	4	70
		Children	93	3	—	—	3	67	1	—	—	1	30	—	1	—	1
	Condition not ascertained during the year		28	2	3	—	5	10	3	2	—	5	—	—	—	—	—
	Total on Register.. ..		234	89	44	3	136	181	94	39	4	137	161	89	66	8	163
(b) Not now on Dispensary Register and reasons for removal therefrom.	Discharged as Recovered.	Adults M	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Adults F	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Children ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Transferred or otherwise removed from Dispensary Register		18	12	7	—	19	14	4	4	1	9	6	1	1	—	2
	Dead.	Adults M	11	19	31	15	65	18	14	30	15	59	9	6	11	4	21
		Adults F	10	8	18	11	37	5	3	11	13	27	2	3	7	10	20
		Children ..	5	—	1	—	1	1	—	—	—	—	1	1	1	—	2
	Total written off		44	39	57	26	122	38	21	45	29	95	18	11	20	14	45
GRAND TOTALS ..			278	128	101	29	258	219	115	84	33	232	179	100	86	22	208

NON-PULMONARY TUBERCULOSIS.

Condition at the time of the last record made during the year to which the return relates.			Previous to 1926.					1926.					1927.					1928.				
			Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.
(a) Remaining on Dispensary Register on 31st December.	Disease arrested.	Adults M	1	1	—	1	3	—	—	1	1	2	2	—	—	—	2	5	2	—	1	8
		Adults F	5	1	1	—	7	2	—	1	—	3	2	—	1	—	3	2	1	—	2	5
		Children ..	16	1	1	4	22	8	3	1	2	14	3	9	—	9	21	4	2	—	6	12
	Disease not arrested.	Adults M	—	—	1	—	1	—	—	1	—	1	1	—	—	—	1	1	—	—	—	1
		Adults F	2	—	—	—	2	2	—	—	—	2	1	—	—	—	1	4	4	1	—	9
		Children ..	1	—	—	—	1	1	—	1	1	3	4	—	—	1	5	7	1	—	1	9
	Condition not ascertained during the year ..		4	1	2	3	10	—	—	1	3	4	1	2	—	—	3	—	2	1	—	3
	Total on Dispensary Register on December 31st ..		29	4	5	8	46	13	3	6	7	29	14	11	1	10	36	23	12	2	10	47
Transferred to Pulmonary ..			—	—	—	—	40	—	—	—	—	—	—	1	—	—	1	1	—	—	1	2
(b) Not now on Dispensary Register and reasons for removal therefrom.	Discharged as Recovered.	Adults M	—	—	—	—	26	2	—	—	—	2	—	—	—	—	—	—	—	—	—	—
		Adults F	—	—	—	—	44	—	—	—	—	—	—	1	—	—	1	—	1	—	—	1
		Children ..	—	—	—	—	47	2	—	—	—	2	1	1	4	—	6	—	—	—	2	2
	Transferred or otherwise removed from Register ..		—	—	—	—	75	4	3	1	5	13	3	1	1	1	6	3	1	1	1	6
	Dead.	Adults M	—	—	—	—	98	4	1	2	—	7	2	2	—	—	4	1	1	1	1	4
		Adults F	—	—	—	—	154	—	—	—	—	—	—	—	1	—	1	2	2	—	1	5
		Children ..	—	—	—	—	173	—	—	1	—	1	—	—	—	—	—	1	1	—	—	2
	Total written off Dispensary Register		—	—	—	—	617	12	4	4	5	25	6	5	6	1	18	7	6	2	5	20
	GRAND TOTALS (exclud'g those transferred to Pulmonary) ..		—	—	—	—	663	25	7	10	12	54	20	16	7	11	54	30	18	4	15	67

NON-PULMONARY TUBERCULOSIS—continued from previous page.

Condition at the time of the last record made during the year to which the return relates.			1929.					1930.					1931.				
			Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.
(a) Remaining on Dispensary Register on 31st December.	Disease arrested.	Adults M	1	1	—	—	2	—	—	1	—	1	—	—	—	—	—
		Adults F	1	—	1	—	2	1	—	1	1	3	—	—	—	—	—
		Children ..	2	3	—	4	9	3	1	—	3	7	—	—	—	—	—
	Disease not arrested.	Adults M	3	1	1	1	6	4	—	—	—	4	4	3	3	4	14
		Adults F	1	—	—	1	2	4	—	—	—	4	8	3	—	1	12
		Children ..	4	1	—	3	8	6	1	—	4	11	8	4	—	2	14
	Condition not ascertained during the year ..		3	—	—	2	5	—	2	—	2	4	—	—	—	—	—
	Total on Dispensary Register on December 31st ..		15	6	2	11	34	18	4	2	10	34	20	10	3	7	40
Transferred to Pulmonary ..			—	—	1	—	1	2	—	2	—	4	—	—	—	—	—
(b) Not now on Dispensary Register and reasons for removal therefrom.	Discharged as Recovered.	Adults M	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Adults F	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Children ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Transferred or otherwise removed from Register ..		3	—	—	1	4	—	—	—	—	—	—	1	—	—	1
	Dead.	Adults M	3	—	1	—	4	—	1	1	1	3	1	1	—	—	2
		Adults F	—	1	1	—	2	—	3	—	—	3	—	—	—	1	1
		Children ..	1	2	—	—	3	2	1	—	1	4	1	1	—	—	2
	Total written off Dispensary Register		7	3	2	1	13	2	5	1	2	10	2	3	—	1	6
	GRAND TOTALS (exclud'g those transferred to Pulmonary ..		22	9	4	12	47	20	9	3	12	44	22	13	3	8	46

Other tables giving information relating to age periods, sex, occupations, &c., will be found on pages 172-173.

Tuberculosis Dispensary as the "Centre for Diagnosis."

The Tuberculosis Dispensary continues to hold its place as the "Centre for Diagnosis," and doctors have no hesitation in sending patients whenever they have any doubt as to the presence or absence of Tuberculosis. Notes from 92 different doctors requesting an opinion on 460 cases were received and dealt with during the past twelve months. In addition, many patients, not under medical attention, called on their own initiative desiring to know whether they had consumption.

Contacts to the number of 197—chiefly those with symptoms which might be due to tubercular trouble—have been repeatedly examined. In this way one finds cases in the early stages of the disease.

The Ministry of Pensions regularly send their cases for examination, in many of whom an opinion is desired as to the presence or absence of Tuberculosis, but as might be expected, the number of these examinations has fallen considerably during recent years.

Clinical Examinations.

Altogether 3,522 clinical examinations were made as compared with 3,615 the previous year. Particulars are as follows :—

	Men.	Women.	Children.	Total.
First examinations ..	323	354	317	994
Re-examinations ..	744	940	844	2,528
Total ..	1,067	1,294	1,161	3,522

Bacteriological Examinations.

Bacteriological examinations to the number of 1,468 have been made for the tubercle bacillus, as compared with 1,393 in 1930. Of these 401 were examined for doctors in practice in the City, and the remainder were obtained from patients examined at the Tuberculosis Dispensary. Sputum examination, if there be expectoration, forms part of the complete examination of every patient sent for an opinion, before reporting to the doctor.

The following figures give the results of examinations :—

Nature of Specimen	Positive	Negative	Total
Specimens of Sputum :—			
From Practitioners.. ..	76	325	401
From Patients examined at Dispensary	316	748	1,064
Specimens other than sputum ..	—	3	3
Total ..	392	1,076	1,468

Patients Passed for Sanatorium Treatment.

The "Admissions Committee," consisting of two or more members of the Hospital and Dispensary Committee, attends at the Tuberculosis Dispensary each Monday afternoon, and, in conjunction with the Tuberculosis Officer and Medical Superintendent of the Sanatorium, interviews and selects from patients examined during the previous week, cases for Sanatorium Treatment. During the past year 428 patients were passed for a course of Sanatorium treatment; 382 adults (of whom 9 were surgical), 6 children (surgical cases), and 40 children (pulmonary cases). In 1930 the total was 497, being 403 adults (of whom 14 were surgical), 15 children (surgical cases), and 75 children (pulmonary cases).

Thirteen of the adult pulmonary cases had previously received Sanatorium treatment as children.

Unfortunately, owing to our limited accommodation, many patients who desired admission or re-admission to Sanatorium had to be refused. The waiting list is carefully studied each week before deciding whether a patient can be admitted (or re-admitted) to Sanatorium. Often we have had to keep patients on the waiting list for months, to the serious detriment of their health, before they could be admitted to Sanatorium.

During the past year, instead of putting names on the waiting list, when we have known that a considerable time must elapse before the patient could be admitted to Sanatorium we have preferred to recommend their admission to the City General Hospital, pointing out that that institution is now under the care of the Health Committee, just as is the Sanatorium.

Throughout the year, owing to the continued prevalence of Smallpox, the Children's Sanatorium at Anstey Lane has continued to be used as a Smallpox Hospital—the purpose for which it was originally intended. Accommodation was provided in one of the blocks of the Isolation Hospital for a small number of children with Pulmonary Tuberculosis.

Patients Passed for Admission to the City General Hospital.

In June, 1931, it was decided by the Health Committee that cases of Tuberculosis could only be admitted to the City General Hospital if recommended by the Tuberculosis Officer. Previous to this, a recommendation by the general practitioner was all that was required and it occasionally happened that patients who had never been notified as suffering from tuberculosis, and were therefore unknown to this Department, were admitted. Since this date

to the end of the year, the Tuberculosis Officer has recommended 55 tubercular patients for admission to the City General Hospital. This number includes cases of acute illness requiring immediate attention, as well as others who could not be accepted for treatment at Groby Road Sanatorium. It is satisfactory to report that it has always been possible to have patients admitted **immediately** to that institution.

Patients on Dispensary Treatment.

Medical benefit is available for most patients by means of the State Insurance, Public Medical Service, &c., so that only those patients not so provided for are dealt with at the Dispensary. During the year 202 patients received weekly treatment at the Dispensary, and at the end of the year there were 82 patients attending the Dispensary each week. All other patients are advised to attend periodically for advice.

Those children who have had a course of treatment and been discharged from Sanatorium are advised to attend the Dispensary once a week in order that they may be kept under careful supervision. When fit for school an intimation is sent to the School Medical Officer.

Attendances.

The total number of attendances of patients at the Tuberculosis Dispensary during the year was 12,259 (as compared with 13,049 in 1930), a weekly average of nearly 250.

Domiciliary Treatment.

Those insured patients under the State Insurance who, for one reason or another, do not receive Sanatorium Treatment, besides others discharged from the Sanatorium, are recommended for "Domiciliary Treatment" under their panel doctors. An intimation to this effect is sent to the doctor, and quarterly reports on the patient's condition are sent by the doctor to the Tuberculosis Officer. During the year 531 patients received Domiciliary Treatment, and at the end of the year 376 insured patients were receiving such treatment. 803 quarterly reports were sent in regarding patients under Domiciliary Treatment.

Visits.

There are three nurses on the Dispensary Staff who spend about one third of their time indoors and two thirds outdoors visiting newly notified cases besides all those patients whose names are on the Dispensary Register. As one nurse is constantly required for

the indoor work, only two nurses can be visiting at a time. They give advice both verbal and printed to each patient and obtain full particulars as to the home conditions, contacts, &c. Their total visits for the year amounted to 7,700. In order to ensure regular visitation to each patient the card index system was adopted for each nurse.

The number of visits paid by the Medical Officer for the purpose of consultation was 294 as compared with 282 in 1930.

Sleeping Shelters.

Eight ex-sanatorium patients have had the use of sleeping shelters, two for over 5 years, two for over 2 years, two for over 12 months, and two for under twelve months.

Most of the original sleeping shelters, which had been in use for many years, are completely worn out. Four new ones have already been obtained and others are being purchased as required.

Unfortunately those persons most requiring shelters very often have not the necessary ground on which they could be erected.

Additional Nourishment.

The Health Committee grant milk to necessitous cases, under arrangements made by the Ministry of Health. They can do so up to a sum not exceeding £2 per thousand of the population per annum, and are thus enabled to carry on the grant formerly made by the Insurance Committee. Now, however, all persons, whether insured or non-insured (e.g., children), can have this benefit.

In April, 1927, the Committee decided to purchase only Grade A (T.T.) milk for this purpose.

Mr. Councillor C. E. Keene has again dealt with the applications for milk. He attends at the Dispensary every alternate Friday and reviews each case every four weeks. I desire here to record my appreciation for the very thorough way in which he deals with them.

During the past year 144 persons were granted milk (as compared with 158 in 1930) free of charge, at a total cost of £406 18s. 3½d. Last year the total expenditure was £431 8s. 9d., and for 1929 the figure was £461 8s. 10d.

At the end of the year 66 patients were in receipt of a daily allowance of free Grade A (T.T.) milk.

Nursing of Bedridden and Surgical Cases.

The Health Committee, by an arrangement with the District Nursing Association, provides the services of a nurse to assist bedridden cases of Pulmonary Tuberculosis and those surgical cases in need of dressings, &c. This work is under the general supervision of the Tuberculosis Officer, and each patient having the services of a district nurse is periodically visited by one of the Tuberculosis Health Visitors. During the past year 97 cases received assistance in this way. Altogether 4,887 visits were paid at a total cost of £244 7s. 0d. The figures in the previous year were 5,521 costing £276 1s. 0d.

After-Care.

Many of the previous headings such as visits, use of sleeping shelters, additional nourishment, nursing of bedridden cases, &c., might well have been included under the term "After-Care." A very important branch of the work consists in looking after patients after their discharge from Sanatorium.

The After-Care Committee, with Mr. Councillor Hincks as Chairman, meets once a quarter and deals with reports from the Tuberculosis Officer and each of the nurses.

We have at the present time 3,404 patients with signs of tubercular disease on our Dispensary Register. Our endeavour is to keep in touch with each of these patients by visitation by the nurses and regular examination at the Dispensary as long as their names remain on the Register.

It is found that the patients very much appreciate these visits, and the knowledge that they are not allowed to drift after leaving Sanatorium stimulates them to help themselves. They seek advice in many different directions, and the nurses have been able to help and encourage them in many different ways.

A difficult problem is finding suitable work for tubercular patients. One cannot blame employers for hesitating to engage them. Many of them are only fit for light work and cannot be depended upon to turn up with the same regularity as healthy individuals. Light outdoor work, such as would be desirable for tubercular persons, is extremely difficult to obtain and is almost always unremunerative; so for a married man with dependents it is out of the question. Yet we know that in many cases a return to arduous indoor work is simply asking for trouble.

This problem of suitable work, difficult in normal times, is at present very much accentuated when so many able-bodied men are out of work.

Applications for financial assistance from 10 patients were dealt with, and clothing, dentures, &c., granted where necessary. The total cost was £12 1s. 2d. For 1930 the sum expended was £30 12s. 8d., for 1929 £35 17s. 4½d., for 1928 £55 9s. 4d., for 1927 £40 12s. 4d., for 1926 £51 4s. 10d., and for 1925 £71 1s. 9d.

In addition to this, many gifts of clothing which the nurses had received were distributed to necessitous patients and at Christmas, thanks to a large number of " Dinner Tickets " received, many of our tubercular families were ensured of a good Christmas dinner.

Thanks also to the kindness of the late Canon Sturdee, for the 7th year in succession, we received a large number of toys, which were distributed during the past Christmas to about 100 of the poorer class children who attended the Dispensary. Needless to say, these were very much appreciated.

WYVILLE S. THOMSON.

APPENDIX II.

Report on the Isolation Hospital and Sanatorium for the Year 1931.

By H. STANLEY BANKS, M.A., M.D. (Glas.), D.P.H. (Camb.),

Medical Superintendent.

Table A at the end of this Report shows the number of cases of the various diseases admitted, discharged and died. In this table the crude figures for discharges and deaths have been adjusted by allowing for altered diagnosis.

SCARLET FEVER.

General Statistics.

Number of cases discharged :	
(With diagnosis of S.F. on admission)	266
Altered diagnosis: (mostly tonsillitis and various rashes)	20
Number of verified cases discharged	246
Number of Deaths caused by Scarlet Fever ..	1
(County case admitted in late stage for mastoid operation).	

Concurrent Double Infections, admitted to the Wards :

Scarlet Fever and Whooping Cough	2
„ „ „ Chickenpox	2
„ „ „ Diphtheria	1

Cross Infections.

For the second year in succession not a single cross infection with any of the common fevers occurred, although Whooping Cough, Chickenpox and Diphtheria were introduced into the wards. In a few cases a secondary tonsillitis occurred and some of these may have been due to cross-infection.

Freedom from cross-infection is a great gain in a Fever Hospital, and is not commonly attained. In this case, it may, I think, reasonably be ascribed to the short average stay in hospital which has been made possible by intra-venous anti-toxin treatment.

Return Cases notified	5
Return case-rate per cent. of discharges ..	1.9

This figure, although far from excessive, must be taken as a maximum, since those notified were not in all cases verified by admission to hospital.

Complications.

Present on admission	Cases.	Results.
Old Otitis or Chronic Otorrhœa	8	cleared up .. 8
Acute Nephritis	1	,, .. 1
Others of minor degree (adenitis, rhinitis, &c.)	15	,, .. 15
Occurring after admission :		
Acute Suppurative Otitis Media	3	cured .. 3
	(i.e., perforation healed : ears dry 7 days	
Acute Mastoiditis (in a case of chronic Otitis)	1	cured .. 1
Albuminuria	2	,, .. 2
Cervical gland abscess (acute exacerbation of chronic) ..	1	,, .. 1
Secondary Tonsillitis or Adenitis (mild)	13	,, .. 13
Septic Onychia	1	,, .. 1

In addition there were 15 minor septic skin foci, chiefly slight abrasions at the angle of the mouth, which were so mild that they cannot properly be classed as complications.

Total complications occurring after admission (all mild) ..	20
Total complicated cases	17
Complication case rate (calculation on verified cases discharged)	8.1 per cent.
Complicated case rate	7.4 per cent.
Average duration of residence in hospital of all verified cases. (Total patient days divided by number of cases discharged.)	18 days

INTRA-VENOUS ANTI-TOXIN.

The vast majority of the cases were treated with intra-venous anti-toxin on the day of admission, as described in the last three Annual Reports. Statistics relating to this group of cases are as follows :—

Number of cases treated			222
Percentage of all verified cases so treated			90.2
Average duration of residence in hospital (excluding six cases retained in hospital for long periods on account of conditions unrelated to Scarlet Fever, e.g., Whooping Cough)			**15 days**
Immediate serum reaction (thermal) with rigor			16 per cent.

Complications.	Cases.	Result.	
Present on admission :			
Old Otitis, Minor Sepsis, &c.	20	cleared up	20
Occurring after admission :			
Acute Suppurative Otitis Media	3	,,	3
Case (1). Ear discharge 5th day after admission : earache before admission : Otitis probably present when serum given.			
Case (2). Ear discharge in 4th week : associated with Adenitis. Batch of serum used at this time did not appear to be strongly specific.			
Case (3). Ear discarge 13th day after admission : dosage of serum insufficient (6.5 c.c.) : this case also developed Adenitis.			
Acute Mastoiditis (developed in a case of chronic Otitis)			1
Albuminuria : 13 days' duration : case treated with ? weak batch of serum			1
Re-infection			1
This case treated with intra-venous anti-toxin on admission, developed a second attack of scarlet fever, in the fourth week, having been retained in the ward for this period on account of abrasions at the angles of the mouth.			
Simple Tonsillitis or Adenitis			10
(All mild cases with few days pyrexia only), comprising :—			
(a) Acute exacerbation of chronic Adenitis	2		
(b) Probable cross infection (ulcerative tonsillitis)	2		
(c) Occurring in cases injected with weak batch of serum or with ineffective dose	7		
Suppurative Adenitis (Acute exacerbation of chronic Adenitis)			1
Minor Septic Foci (abrasions at angle of mouth, &c.), (not included amongst the complications)			11
Complications noted after discharge of patient from hospital			nil
2 cases had abrasions at angle of mouth, and 1 case had hordeolun. These are considered too trivial to be classed as complications.			
Total complications in the intra-venous group			17
Complication case rate			7.6 per cent.
Total complicated cases in the intra-venous group			13
Complicated case rate			5.8 per cent.

All cases treated with intra-venous serum were definite cases of Scarlet Fever, with temperature, rash and faucial injection or œdema, ranging from mild to severe types. The following were among the more severe types treated :—

Type of Disease.

Septic Type :—

Sloughing Faucial Ulcers with much Oedema 6

Semi-Septic Type :—

Extensive Faucial Exudate with much Oedema .. 6

Pyæmic Type 1

Case T.F. Man act 19. Septic scald of foot with lymphangitis and lymphadenitis, followed by generalised scarlatiniform eruption of lobster-like colour : fauces and palate injected. Temp. 103. Frequent rigors and sweating. Pain, tenderness and swelling over left triceps.

Treatment :—3 phials (30 c.c.) anti-toxin intra-venously at 7 p.m. on day of admission : next day all trace of illness had disappeared : temp. normal : felt well : no pain nor swelling : rash semi-faded. Discharged after 10 days' residence.

After-Supervision of Intra-venous Anti-toxin Group.

As in the three previous years, all cases in this group were invited to report at an out-patient clinic in the city for medical examination on a date one to two weeks after their discharge. As a routine, the urine was tested for albumin. No difficulty was found in obtaining full information in all these cases. No complications of Scarlet Fever were observed, with the possible exception of three minor skin abrasions (infective foci).

Intra-Muscular Anti-toxin.

Scarlet Fever Anti-toxin was injected **intra-muscularly** in 9 cases because of the following conditions :—

Veins inaccessible 6
Very mild case 1
Scarlet Fever doubtful 2

No Anti-toxin was administered in 17 cases, the reasons given being as follows :—

Cases admitted after the 5th day of disease 11
Very mild or doubtful cases 5
Serum sensitive from previous serum injection 1

It will be observed from the above that the treatment of Scarlet Fever by the **intra-venous** injection of anti-toxin was again the routine method of choice. The results of this treatment in over 1,000 cases, over a period of 4 years appear to justify the method. By this method, (1) the acute stage is rapidly terminated, (2) complications are very largely prevented, (3) desquamation seldom occurs, and (4) the period of residence in hospital may be very materially reduced. It is hoped that a further article dealing with this subject in detail will be issued in the present year to the medical press.

DIPHTHERIA.

General Statistics.

Cases Discharged :—

With diagnosis of Diphtheria on admission	131
Diagnosis altered from Diphtheria	31
,, ,, to Diphtheria	2
Verified cases discharged	102
Number of Deaths	8
Death-rate per cent. of verified and completed cases ..	7.3
Death-rate per cent. of verified and completed cases, excluding laryngeal cases and cases dying approximately within 24 hours of admission	3.6

Cause of Deaths.

(a) **Severe Toxic or Malignant Diphtheria (Group A).**

m. age 6 : Hæmorrhagic when admitted on 6th day of disease ; practically moribund : died within 48 hours of admission.

m. age 4 : Extremely toxic case when admitted about 4th (or later) day of disease : extensive membrane : peri-adenitis : fœtor : restlessness : **anuria** from admission. Did not respond to large intra-venous dose of anti-toxin (100,000 units) nor to intra-venous glucose : died 2½ days after admission, **from suppression of urine and early heart failure.**

(b) **Laryngeal Diphtheria.**

f. age 16 months : Admitted as urgent case of faucial and laryngeal Diphtheria in 4th day of disease : severe croup with much retraction of chest wall : asphyxia pallida : child exhausted. Treatment :—Immediate tracheotomy: anti-toxin 20,000 units intra-venously : died 23 hours after admission with signs of extensive **bronchial** diphtheria, causing collapse of lungs.

m. age 3 : Faucial and laryngeal diphtheria in 10th day of disease : severe croup : asphyxia pallida. Immediate tracheotomy : died within 1 hour of admission.

m. age 3½ : Faucial and laryngeal diphtheria in 6th day of disease : severe croup : asphyxia livida, with approaching exhaustion. Treatment :—Immediate tracheotomy and 28,000 units anti-toxin intra-venously : death 2 hours later. Postmortem : membrane in trachea and **bronchi.**

m. age 14 months : Severe croup : asphyxia pallida. Treatment :—Immediate tracheotomy and 28,000 units anti-toxin intra-muscularly : died 36 hours later. Postmortem : extensive membrane covering larynx, trachea, and **bronchi**, down to the small bronchi in each lung.

(c) **Untreated till very late stage.**

m. age 5 : Admitted from Leicester Royal Infirmary where operation had been performed to relieve pus in right knee-joint : at same time diphtheritic membrane was found in the fauces : on admission dirty membranous exudate on fauces and pouring nasal discharge—a very late, not a malignant case. Treatment :—30,000 units anti-toxin intra-venously. Died 6 weeks later from post-diphtheritic paralysis of pharynx, diaphragm, heart and palate.

m. age 16 months : Admitted from Leicester Royal Infirmary, with faucial and nasal exudate and signs of broncho-pneumonia ; no fœtor nor peri-adenitis. Treatment :—24,000 units anti-toxin intra-muscularly : died 3 weeks later from post-diphtheritic paralysis of pharynx and heart.

Classification and Summary of Diphtheria Cases—Year 1931.

Classification.*	Cases.	Deaths.	Complications.									Treatment. Average dose of Anti-toxin.		Average stay in Hospital.
			Post-Diphtheritic Paralysis.								Others.			
			Heart (extra-systoles)	Heart (severe).	Diaphragm	Pharynx.	Palate.	Ocular.	Limbs.	Anuria.		Intra-venous. Units.	Intra-muscular. Units.	Days.
Group A (early)	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Group A (late) (recovered cases)	3	–	3	–	–	–	2	–	1	–	–	110,000	–	75
Group A (late) (fatal cases)	2	2	–	1	–	–	–	–	–	1	–	120,000	–	2
Total Group A	5	2	3	1	–	–	2	–	1	1	–			
Group B (early)	6	–	2	–	–	–	–	–	2	–	–	30,000	–	57
Group B (late)	7	–	3	–	–	–	1	1	–	–	1	37,000	–	62
Total Group B	13	–	5	–	–	–	1	1	2	–	1			
Group C I. (moderate)	31	1	2	1	–	–	1	–	1	–	7	18,000	or 16,000	44
Group C II.(mild)	13	–	–	–	–	–	–	–	–	–	2	16,000	or 10,000	32
Total Group C	44	2	2	1	–	–	1	–	1	–	9			
Septic	10	1	1	1	1	1	–	–	–	–	1	20,000	or 12,000	38
Laryngeal	8	4	–	1	–	–	–	–	–	–	1	16,000	or 14,000	41
Nasal	20	–	2	–	–	–	–	–	–	–	1	8,000	or 8,000	37
Bacteriological	2	–	–	–	–	–	–	–	–	–	–	nil	or nil	37

* Group A = Malignant or severely Toxic Cases.
Group B = Moderately Toxic Cases.
Group C = Slightly or Non-toxic Cases—I. moderate; II. mild.
Septic = Cases associated with Pyogenic or Putrefactive Organisms and showing œdema and ulceration.
Laryngeal = Cases in which Laryngeal Symptoms predominate.
Nasal = Cases in which Nasal Symptoms predominate.
Bacteriological = Cases in which Swabs are positive, but with no symptoms nor signs of disease.
"Early" = Cases admitted on or before 3rd day of disease.
"Late" = Cases admitted after 3rd day of disease.

Discussion.

Diphtheria was of exceptionally low prevalence during 1931. For the first time in 25 years the Diphtheria Ward block was closed for a period (6 weeks during the summer).

The number of cases treated was so small that no conclusions can be drawn from the figures. The death-rate was considerably higher than in the previous four years, chiefly due to the laryngeal cases. The malignant or highly toxic group of cases numbered only five, of which two died and three recovered. One of the fatal cases, admitted at a reasonably early stage, did not appear to

respond to anti-toxin, even in intensive dosage. This may possibly have been one of those cases of Diphtheria Gravis recently described by Anderson and McLeod (Leeds).

Altered Diagnosis :—

Acute Tonsillitis or Faucitis, &c.	25
Vincent's Angina	1
Rhinitis	2
Septic Scarlet Fever	2
Broncho-Pneumonia	1
Scarlet Fever to Diphtheria	2
	33

In cases where there was doubt as to the diagnosis, the Schick test was applied on admission, provided that it was considered safe to withhold serum. When the test was negative the diagnosis was altered with confidence, and the patient was generally discharged in a few days. When the test was positive, and there was no clinical evidence of diphtheria, active immunisation against the disease was commenced. The re-agent employed was, at first, toxoid, and later toxoid-anti-toxin floccules (T.A.F.). These cases were not necessarily kept in hospital until the immunising course was concluded. They were discharged as soon as fit, and came up as out-patients for the remaining injections.

Double Infections on Admission :—

Diphtheria and Chickenpox (Incubation Stage) ..	1
Diphtheria and Mumps (Incubation Stage)	1
Diphtheria and Pneumonia	1

Cross Infection of Diphtheria Wards

The Diphtheria block was crossed with mumps during the third quarter, when two cases occurred, as a result of the introduction of a case of mumps in the incubation stage, as noted above. This was the only instance of "cross-infection," as the term is usually understood. There were, in addition, however, at least seven cases of catarrhal throat infections which were probably passed from patient to patient or staff to patient during the winter months.

Operations.	Cases.	Recovered.	Died.
Tracheotomy	4	–	4
Tonsillectomy in virulent carrier ..	1	1	–

Virulence Tests.

Animal inoculation tests for virulence of positive swabs were done chiefly in two groups of cases, (1) cases admitted with positive

swabs, but with little or no clinical evidence of diphtheria (chiefly nasal swabs), and (2) convalescent cases with persistent positive swabs. In these groups the virulence test affords valuable information upon which appropriate action can be based.

In 10 cases the test was performed, 6 being positive and 4 negative.

Schick Tests.

In 32 cases, in which doubt existed as to the diagnosis, the Schick test was performed, 19 being positive and 13 negative. All positive cases were immunised against diphtheria, either actively or passively.

Active Immunisation against Diphtheria.

In 7 cases in whom the Schick test was positive, without clinical evidence of diphtheria, a course of 3 injections of toxoid or of floccules (T.A.F.) was given instead of anti-toxin, with a view to the production of permanent immunity against diphtheria.

ENTERIC FEVER.

Only one verified case occurred, a girl age 19 years, who was ascertained to be suffering from Paratyphoid B. Fever. The infection had presumably been acquired whilst she was living at her home in a Lincolnshire village. She recovered, but became a temporary " carrier " of the organism for a time. She was detained in hospital until quite free from infection, a period of 75 days.

CEREBRO-SPINAL FEVER.

The steadily-increasing incidence of this disease in recent years continued in 1931, when there were 15 cases treated, with 6 deaths. In the three previous years the number of cases treated, was 2, 7, and 9 respectively.

The cases were treated by intensive intra-venous serum, occasionally by intra-thecal serum, and, in addition, daily or twice daily lumbar puncture, or cisternal puncture where the lumbar route failed. The serum available for treatment did not appear to be strongly specific, and large doses were therefore given. The mortality-rate in this small series was 40 per cent.

Recovered Cases, 9.

m. age 2¼ : Had intra-venous serum : lumbar puncture 18 times : 49 days in hospital.

f. age 3 : Had intra-venous serum : lumbar puncture 3 times : 41 days in hospital.

m. age 26 : Had intra-venous and intra-thecal serum : lumbar puncture 41 times : 63 days in hospital : recurrence on 27th day after admission.

m. age 4 : Had intra-venous serum, and lumbar puncture 27 times : 95 days in hospital : reached the chronic stage, but eventually recovered.

m. age 10 : Intra-venous and intra-thecal serum, and lumbar puncture 25 times : 88 days in hospital : complication—partial hemiplegia.

f. age 3½ : Intra-venous serum, and lumbar puncture 16 times : 51 days in hospital.

m. age 1½ : Intra-peritoneal serum, and lumbar puncture 19 times : 49 days in hospital.

f. age 19 : Intra-venous serum, and lumbar puncture 14 times : 36 days in hospital.

f. age 21 : A staff nurse in the cerebro-spinal fever ward, apparently infected from a fatal fulminating case : treated in the septicæmic stage of the disease (when meningococci were present in blood films) with 210 c.c. serum intra-venously. Recovered from acute illness after a few hours : 36 days in hospital.

Fatal Cases, 6.

m. age 19 : Intra-venous serum 200 c.c. and lumbar puncture 4 times : an acute fulminating case with petechial spots and coma : died after 3 days.

f. age 10 : Admitted 6th day of disease : died after 4 days in hospital.

m. age 2 : Admitted 11th day of disease : lumbar puncture 14 times : intra-venous serum : died after 31 days.

f. age 6 months : Admitted 7th day of disease : had intra-peritoneal serum, lumbar puncture 16 times and cisternal puncture 17 times : died after 36 days.

f. age 2½ months : Intra-venous and intra-thecal serum : 6 lumbar punctures : died after 9 days.

f. age 5 weeks : Intra-venous serum 100 c.c. : died after 7 days.

PUERPERAL FEVER.

The number of cases of this disease treated in the past five years has risen gradually, being 1, 4, 7, 13 and 14 respectively. Of the 14 cases treated in 1931, 12 recovered and 2 died. The routine treatment comprised daily glycerine drainage, and scarlatinal anti-toxin as a prophylactic against septicæmia.

Recovered Cases, 12.

Puerperal Sapræmia associated with retained placental tissue	10
Puerperal Sapræmia associated with septic tears ..	1
Puerperal Scarlet Fever	1

The complications in above cases were :—

Cystitis	2
Mastitis	1
Pelvic Cellulitis	2

In all cases an endeavour was made to maintain the supply of breast milk, unless definitely contra-indicated, so that the

mother could subsequently nurse the child. These cases were reported to the Maternity and Child Welfare department, on their discharge from hospital.

Fatal Cases, 2.

Pelvic Cellulitis and Embolism	1
Streptococcal Septicæmia (verified by blood culture) with metastatic abscess, purpuric eruption, &c. In this case, delivery was normal, uterus was empty, but there was purulent discharge from the cervix.	

ERYSIPELAS.

Cases discharged	22
Died	1

Site.

Face and Neck	22
Leg	1

Age incidence varied from 1 year and nine months to 73 years.

Complications.

These were confined to 3 cases :—

(1) **m. age 1¾ :** Admitted with extensive ulceration of mouth and wandering erysipelas : developed acute broncho-pneumonia and multiple abscesses : general condition extremely poor, having been previously treated at Royal Infirmary for 3 months for debility and mal-nutrition. Recovered and discharged in state of good health after 127 days residence.

(2) **f. age 53 :** Admitted in poor general state of health : developed cellulitis of scalp and neck : recovered after 75 days residence.

(3) **m. age 20 :** Developed axillary and back abscesses : 41 days in hospital.

Fatality.

m. age 34 : Admitted with facial erysipelas and acutely delirious : committed suicide, while in delirium, by cutting his throat with a broken feeding cup.

At an inquest on this case by Coroner and jury, the hospital authorities were exonerated from all blame.

Treatment of erysipelas, as in previous years, was by ultra-violet light in erythema dosage. No serum was given. The ultra-violet light method was found to be very satisfactory in general.

Average duration of residence in hospital (excluding cases (1) and (2) above) was 12 days.

MEASLES.

Cases discharged	30
Complicated by broncho-pneumonia	14
Deaths	4

(1) **f. age 2 :** Acute broncho-pneumonia : died 24 hours after admission.

(2) **m. age 2 :** Acute broncho-pneumonia : mentally deficient : died after 4 days in hospital.

(3) **f. age 11 months :** Acute broncho-pneumonia and well-marked rickets : died 10 hours after admission.

(4) **m. age 2½ :** Admitted late in course of disease with broncho-pneumonia : died 6 days after admission.

Complications occurring in remaining 20 cases.

Tonsillitis	1
Tabes Mesenterica	1
Septic Finger	1
Ulcerative Stomatitis	1
Rhinorrhœa	1
Chronic middle ear disease with abscess tracking from mastoid (transferred to Royal Infirmary for operation)	1

Acute Middle Ear Disease.

Supervening on previous Otitis	2
Primary cases	4

WHOOPING COUGH.

Three cases were admitted, two being complicated by Broncho-Pneumonia, and one by Chickenpox. All recovered. The duration of residence was 23, 31, and 34 days respectively.

PNEUMONIA.

Apart from the cases noted above of Broncho-Pneumonia, following Measles and Whooping Cough, there were three cases of acute Lobar Pneumonia admitted. One child, aged 1 year and 8 months, died ; the other two recovered.

SMALLPOX.

Anstey Lane Hospital was again continuously in use during 1931 as a Smallpox Hospital.

Admissions numbered 951, discharges 1,023, and there were also 46 contacts admitted for observation. The latter were all vaccinated on admission, but in 9 cases vaccination was too late and an attack of Smallpox occurred.

Fifty-two of the patients admitted (all middle aged or elderly persons) had been vaccinated in infancy and none had been re-vaccinated. There were no deaths.

The type of disease was in all cases minor smallpox. Although in some cases spots were numerous, there was no case of confluent or hæmorrhagic rash or of secondary fever.

The cases were classified according to the nature of the eruption as :—

Discrete	30
Mild	142
Very Mild	779

The following cases are worthy of comment :—

(1) **f. age 31 :** Pregnant, and in labour on admission : child stillborn.

(2) **f. age 5 :** Admitted with Smallpox and in the incubation stage of Measles.

(3) **f. age 5 :** Admitted with Smallpox and in the incubation stage of Measles.

(4) **m. age 17 :** Admitted with Smallpox : later acute Lobar Pneumonia occurred.

(5) **f. age 22 :** Admitted with Smallpox : a diagnosis of appendicitis had been made in the prodromal stage, and appendicectomy had been performed.

Treatment was negligible except in a few discrete cases where continuous fomentations or baths were applied for a few days. There were no complications of any moment, and no permanent disability.

OTHER INFECTIOUS DISEASES.

	Number of cases.	Recovered.	Died.
Mumps	4	4	–
German Measles	1	1	–
Encephalitis Lethargica (Sleepy Sickness) ..	2	1	1
Tuberculous Meningitis	1	–	1
Chickenpox	2	2	–
Meningo-Encephalitis (streptococcal) ..	1	–	1
Healthy Infants admitted with Mothers (Puerperal cases)	3	3	–
Various	10	10	–
Ophthalmia Neonatorum (gonococcal) ..	2	2	–

Twins, aged 12 days : cured after intensive treatment lasting 27 and 45 days ; no blindness ; some loss of vision in 1 eye in 1 case.

IONISATION IN OTITIS MEDIA.

As in past years, all cases of ear discharge persisting for more than a few days had zinc ionisation of the ears performed at intervals of four or five days until the ears were dry. Results were again very satisfactory. In all cases of acute suppuration, where the ear discharged for the first time, the condition was cured, that is, the perforation was healed and the ear was dry at least seven days, when the case was discharged from hospital.

The numbers were as follows :—

		Cured by Ionisation.
Acute Suppurative Otitis Media following Scarlet Fever	5	5
" " " " " Diphtheria or allied conditions	2	1*
" " " " " Measles ..	4	4

In addition there were 12 cases of old Otitis, in whom discharge recommenced while in hospital :—viz., after Scarlet Fever 7, after Diphtheria, &c. 3, and after Measles 2. These were also treated by ionisation and the ears became dry in 11 out of the 12 cases.

TUBERCULOSIS.

Table D at the end of this Report gives the classification of patients on admission to the Sanatorium and Hospital wards for Tuberculosis, and also their condition at time of discharge. No patients have been classified as " quiescent," as it is considered that, in general, insufficient data exist at time of their discharge to permit of this term being used in relation to their state of disease.

The salient features of Table D are :—

(1) Group T.B. Minus.

The proportion of all adult pulmonary cases in whose sputum the tubercle bacillus was not found was increased somewhat as compared with the two previous years. This cannot be due to an insufficient number of sputum examinations being made, as was the case some years ago. The number of sputum examinations has, in fact, materially increased. Further, the number of " Observation " cases, all of whom automatically fall into this group, has only slightly increased, as compared with 1930. (72 as compared with 62 in 1930.) The conclusion would appear to be that a larger number of early cases have been received for treatment than in former years. Possibly a greater number of cases of pleurisy with effusion are having Sanatorium treatment. The following table shows the position :—

* In the other case, Mastoiditis occurred and the case was transferred to the Royal Infirmary, for operation.

Year.	CLASS T.B. MINUS.		Specimens of Sputum examined for T.B.
	Adult Pulmonary Cases in this Group.	Percentage of all Adult Pulmonary Cases.	
1927	187	55	332
1928	136	41	1168
1929	80	20.9	1536
1930	89	22	1489
1931	101	30	2163

(2) Duration of Residential Treatment.

The average duration of residence of all adult pulmonary cases discharged or died was 17 weeks. This compares with 16½ weeks in 1930. Longer residence for sanatorium patients, which is generally desirable was facilitated to some extent by the definite use, throughout the year, of Ward Block II. (formerly used for Scarlet Fever) as a preliminary rest ward for adult female sanatorium patients. Here the women spend a preliminary 2 or 3 months resting in bed in the general wards before they are transferred to the cubicles of the Sanatorium. This measure (which has been made possible owing to the curtailment of the stay in hospital of Scarlet Fever cases, consequent upon the use of anti-toxin intravenously), has proved very valuable. A general ward is better than a cubicle when patients are in bed. There is a cheerier spirit when they are all together and entering more, as they do, into one another's joys and sorrows they tend to forget their own worries and to drop their morbid self-interest.

The classes T.B. Minus and T.B. Plus, Group I., may be taken to represent "Sanatorium Cases" as distinguished from "hospital cases." Such "Sanatorium" cases numbered 145, and of these 65, or 45 per cent., had less than 3 months' treatment, and 72, or 50 per cent., had 3 to 6 months' treatment. A fair proportion of these cases had, in addition, a period of about 2 months' treatment at the Convalescent Home, Holt, Norfolk.

Some progress is being made in inducing suitable cases to prolong their stay in the Sanatorium. The chief limitations to this policy are (1) inadequate sanatorium accommodation, and (2) the economic circumstances of the patient. Subject to these considerations patients are, in general, urged to spend at least

6 months in the Sanatorium as a preliminary to 2 to 3 years self-treatment at home in accordance, as far as possible, with sanatorium principles. If they must work during the latter period, they are urged to take daily rests, to have 10 hours in bed at night, and to rest most of the week-end. A "rest cure" for at least 3 years, which is believed to be at the foundation of the modern conception of the healing of tuberculous lesions, is the ideal which is definitely and consistently held out to the patients in the "Sanatorium group."

(3) Non-Pulmonary Tuberculosis.

The work of the Surgical Tuberculosis Block (No. IX.) forms an integral part of the municipal orthopædic scheme, and was, indeed, the starting point of the scheme. Mr. Leslie Morris, F.R.C.S., Orthopædic Surgeon, visits and supervises the work, and there is close co-operation with the orthopædic department of the City General Hospital. The cases under treatment are tuberculosis of bones and joints, chiefly hip-joints and spines.

During the ten years since this work commenced in Groby Road, there have been many changes in the technique of treatment. There has been a more or less continuous evolution in the appliances and methods used for immobilisation of the affected parts. Methods now appear to be, in a broad sense, stabilised, although many improvements in detail are constantly being made. Some years ago a disquieting feature of this work was that in a proportion of the cases the disease appeared to progress, sometimes to an alarming extent, during the course of treatment. After much investigation, the trouble was believed to be traced to the fact that the methods then in use failed to provide for **continuous** immobilisation day and night. It is believed that the improved methods which have been gradually evolved in recent years do much to overcome this difficulty, and results of treatment are much improved.

A new feature of the treatment of adult spinal cases was the use of the spinal graft operation (Albee). This method promises to shorten the period of treatment of these cases by at least 12 months.

During the year 18 cases were discharged and 2 died. Some of these cases were under treatment for very long periods, owing to the fact that, as explained above, the disease progressed for a time after admission, and a correspondingly longer period was then required to effect healing.

The cases discharged were :—

Name	Age	Sex	Disease	Duration of Treatment	Result	Appliance fitted at time of Discharge
M.B.	9	f.	T.B. Hip	177 weeks	Quiescent	Walking Thomas' splint, patten and crutches.
J.K.	29	m.	Hip and Multiple	199 ..	*N.M.I.	Double abduction frame. Transfer to City General Hospital.
N.M.	9	m.	Hip	109 ..	Quiescent	Thomas', patten and crutches.
C.N.	5	f.	Hip	186 ..	*N.M.I.	Double abduction frame. Transfer to C.G.H.
F.C.	6	m.	Spine	146 ..	Quiescent	Ernst support.
G.W.	22	m.	Foot	98 ..	Well	Amputation : Pylon support.
B.B.	9½	f.	Hip	108 ..	Quiescent	†P.O.P. Spica and crutches.
G.P.	17	f.	Hip	107 ..	Quiescent	Thomas' patten and crutches.
A.B.	16	f.	Hip and Knee	44 ..	Quiescent	Deformities corrected.
F.S.	24	m.	Hip	88 ..	Improved	Double abduction frame.
G.S.	19	m.	Shoulder	71 ..	Quiescent, Arthrodosis operation	†P.O.P.
M.G.	10	f.	Spine	61 ..	*N.M.I.	Transfer to C.G.H.
J.P.	31	m.	Wrist	24 ..	Quiescent	†P.O.P.
E.O.	29	f.	Chest Wall with sinus	12 ..	Improved	
C.E.	6	m.	(?) Ankle	6 ..	No disease detected	
B.M.	34	f.	Abscess (?) Rib	9 ..	Quiescent	
C.L.	26	m.	Elbow + Multiple	16 ..	Improved	†P.O.P. Elbow. Transfer to C.G.H.
E.D.	50	f.	Spine and Abscess	6 ..	*N.M.I.	†P.O.P. Spinal case. Transfer to C.G.H.
THE FOLLOWING WERE FATAL :—						
J.T.	20	m.	Multiple	7 ..	Died	T.M. Meningitis
S.H.	22	m.	Multiple	13 ..	Died	Generalised tuberculous disease.

* N.M.I. = No material improvement. † P.O.P. = Plaster of Paris.

(4) Observation for Purpose of Diagnosis.

There were 62 adult patients admitted for periods varying from about 1 week to 2 months, so as to verify or exclude a diagnosis of pulmonary tuberculosis. This is a useful and necessary provision for the discovery of early cases. Of these cases 32 were diagnosed as tuberculous and retained for treatment, 13 were discharged as non-tuberculous, and 17 were considered " doubtful."

(5) Pulmonary Tuberculosis in Children.

Anstey Lane Hospital, which for many years was in use as a Children's Sanatorium with 50 beds, was again utilised for its original purpose as a Smallpox Hospital during the year. It was therefore found impossible to treat all the children who were

certified to be suffering from pulmonary tuberculosis and in need of institutional treatment. A few of the children (22) were, however, accommodated in the wards at Groby Road. The opportunity was taken of continuing on this group of children the investigation referred to in last year's report. The investigation of 100 cases was completed during the year, and, since the result may bring about an important change of policy, the salient features of the enquiry are here recorded.

A STUDY OF ALLEGED PULMONARY TUBERCULOSIS IN CHILDREN OF SCHOOL AGE.

One hundred children of school age, certified as suffering from pulmonary tuberculosis, and admitted for treatment as such, were subjected to various tests with the object of obtaining more data on which to base a diagnosis. The tests included (1) a Von Pirquet tuberculin test in every case, (2) a Mantoux (intra-dermal) tuberculin test (1 in 100 or 1 in 10 dilution) on the negative Pirquet reactors, (3) repeated examinations of sputum, laryngeal swab, fæces or stomach washings for T.B., (4) X-Ray film of the chest. These tests were additional to a careful enquiry for history of contact with pulmonary tuberculosis, history of complicated measles, or whooping cough or of pneumonia in earlier childhood, and a careful physical examination of the chest with interpretation of the findings in the light of new knowledge acquired during the course of the investigation. At the same time a detailed survey was made of the literature of the subject in the course of which upwards of 150 books and papers were consulted.

The bulk of this work was done by the senior assistant medical officer, Dr. J. H. Weir, who collated the facts and embodied them in a thesis, for which he was awarded by his University the degree of M.D. with gold medal.

The conclusions reached may be briefly summarised as follows :

1. Of the 100 children examined, 41 did **not** react to either the Pirquet or Mantoux tuberculin test, and were therefore presumably **not** infected with tuberculosis.

2. Of the remaining 59 cases, 53 were positive tuberculin reactors, 4 reacted very slightly and 2 were doubtful. This group had presumably at some time been infected with the tubercle bacillus, but except in one case (a case of pleurisy with effusion) there was no clear evidence that they were suffering from tuberculous disease.

3. On a survey of all the evidence obtained, the diagnosis made in the 100 cases were :—

Chronic Pulmonary Catarrh or Pulmonary Fibrosis	66
Chronic Bronchitis	23
Malnutrition from various other causes ..	10
Pleurisy with effusion	1
	100

4. " Chronic Pulmonary Catarrh " is the name applied (Duncan Leys, 1927), to a chronic disease of the base of the lung, resulting from an attack of severe or complicated measles or whooping cough or of pneumonia in infancy or early childhood. It may lead on to pulmonary fibrosis or to bronchiectasis. The disease is subject to acute exacerbations. It may be greatly aggravated by the presence of naso-pharyngeal catarrh or sepsis. Common symptoms are malnutrition, lassitude, cough, sweating, and bouts of pyrexia ; physical signs may be gross at times, including coarse basal rales and rhonchi, and these tend to recur at intervals. Treatment for a few months under open-air conditions, i.e., by rest, good food and fresh air, generally yields good results temporarily, but the condition tends to relapse unless treatment is very prolonged.

5. " Chronic Pulmonary Catarrh " is a disease entirely different from pulmonary tuberculosis. Children suffering from it should not be labelled as cases of pulmonary tuberculosis, nor treated under a tuberculosis scheme.

6. A scheme of treatment of " chronic pulmonary catarrh " limited to school children is unsatisfactory, because at this age the disease has generally become chronic. The only satisfactory way is to treat it in its earliest stages, prophylactically, i.e., to treat under open-air and good nursing conditions all complicated cases of measles, whooping cough and pneumonia contracted in the pre-school age period. All cases showing signs of lung involvement should have a period of convalescent sanatorium or " preventorium " treatment following upon the efficient nursing of the acute condition. Various types of ill children, such as " lung cripples " of this kind, and " heart cripples " following rheumatism may be grouped together for such convalescent open-air treatment.

School children in whom the disease has become established should also have occasional periods of this type of convalescent treatment, and in their case attendance at an open-air school for a prolonged period should follow.

These conclusions are, in my view, so well supported by the evidence obtained, that it seems imperative to reconsider from this point of view, the present scheme for dealing with so-called pulmonary tuberculosis in children of school age.

SPECIAL FEATURES OF SANATORIUM WORK.

Lectures to Patients.

The medical superintendent continued his periodic lectures to sanatorium patients with the object of teaching them how to conduct their own cure and of encouraging them to persist with it. The idea is slowly gaining ground that 3 months in the Sanatorium, by itself, is insufficient, but that it requires at least 3 years of controlled, disciplined, restful life to effect healing of even slight tuberculous lesions in the lungs.

Special Treatment.

(a) **Artificial Pneumothorax :**

New cases induced (unilateral)	31
„ „ „ (bilateral)	4
Refills	585
Replacements of pleural fluid by air	59
Other minor operations	89

This treatment is becoming more and more popular, and since bilateral artificial pneumothorax was commenced, the indications for the treatment have become much wider. It is now the definite policy to induce unilateral pneumothorax in all cases in which there is a definite lesion on one side, and where the other lung appears healthy, as shown by X-Ray, and to induce partial bilateral pneumothorax in all cases showing acute lesions on both sides, particularly both upper lobes, and always providing that there appears to be a reasonable portion of lung on one or other side healthy. Such a policy, as the "Lancet" remarks, constitutes "a revolution in Sanatorium treatment." It means active medical treatment for a large proportion of all sanatorium cases, and as such treatment continues for a number of years in each individual case after discharge from the Sanatorium, it may be seen that the increase in medical work involved is very considerable. Nevertheless, the results already obtained are so promising and so helpful because

of the atmosphere of hope engendered amongst the patients, that no other course than an active pursuit of this policy is thinkable.

(b) **Sanocrysin** (gold injections) **Treatment :**

Sanocrysin injections	5

This form of treatment was relatively neglected during 1931 because it seemed more profitable to spend the available time of the medical staff on pneumothorax treatment. Sanocrysin is still believed to be useful in its place, that is, where there is a fresh infiltration in the lung, without cavitation, and it is often combined with unilateral pneumothorax. At the moment, however, bilateral pneumothorax seems to offer a greater return for the expenditure of time and energy involved on the part of the medical staff.

New X-Ray Equipment.

During 1931 the X-Ray room was enlarged to double its former size ; dressing rooms containing cubicles were added, one for males and one for females ; a viewing room and film store was provided, and the developing room was enlarged and re-designed. Into this greatly improved building, a six-valve transformer set and a very efficient raidographic screening stand designed for 2-metre technique in chest radiography, were installed. This highly efficient unit, provided at a cost of about £2,500, was opened in November, 1931. It provides excellent conditions under which modern fast radiography of the chest may be practised.

During the greater part of the year the X-Ray work was carried on under difficulties, with the old apparatus housed temporarily in the Ultra-Violet Light room. The following work was done in this department :—

X-RAY.

In-Patients.

Radiograms of Lungs	448
,, ,, Bones and Joints	63
Screen examinations of Lungs	152
Total (In-patients)	663

Out-Patients.

Radiograms of Lungs (cases from Tuberculosis Dispensary)	437
,, ,, Bones and Joints (cases from Orthopædic Clinic)	96
,, ,, Bones and Joints (others)	33
Screen examinations of Lungs (Artificial Pneumothorax) ..	81
Total (Out-patients)	647

ULTRA-VIOLET LIGHT.

Owing to the building alterations this work was interrupted in the latter part of the year. The following figures relate only to the first quarter and the the month of December :—

Carbon Arc and Mercury Vapour Light Baths.

Pulmonary Tuberculosis	..	..	..	518 treatments
Surgical Tuberculosis	..	..	..	199 ,,

PATIENTS' WORK SCHEMES (Occupational Treatment).

The object of this scheme, as described fully in previous reports, is to provide interesting and suitable light occupation for patients as an essential part of their treatment in the sanatorium. Working with the hands is a wonderful solace to the mind. What a pleasure in these circumstances and in a period of enforced idleness to be taught how to make a leather handbag, a decoration in bead work, a stool or chair of cane or sea-grass. For a woman what more pleasant than to work at baby clothes ? The cares of home or business melt away from a mind so engaged. Calmness and serenity take their place. With contentment comes better appetite and sleep, and a gradual **adjustment** to the new environment.

With many patients all working together in this spirit, eager to pursue the new handicraft, to exploit the new knowledge, and perhaps to make a few shillings towards their expenses in the process, certain problems formerly the bugbear of Sanatorium life find a ready solution. There is, for example, no loafing, and there is no difficulty, except on the rarest occasions, with Sanatorium discipline. The staff, freed from the distraction of these matters, can bend their energies to treatment instead of police work. Co-operation between patients and staff becomes whole-hearted. A very notable change has taken place in the Sanatorium in recent years in this respect, and it is due partly to the better operation of the handicraft scheme, partly to the more widespread use of active medical treatment (artificial pneumothorax), and partly again to a better understanding of the value of prolonged rest.

In more detail, the work scheme includes (a) work for bed patients from the moment they arrive in the Sanatorium (if they are well enough) ; (b) work for patients who are up "on grade" ; and (c) work for patients after they have left the Sanatorium. In all cases a certain limited number of hours' work is prescribed. Bed patients are generally taught to make fancy leather articles, and the women may have knitting or sewing. Male patients up for more than 4 hours go to the workshops where the Welfare Supervisor keeps them busily engaged in various light sedentary

jobs, of which definite creative handicraft work always forms the main part. Female patients up for more than 4 hours enter an afternoon class conducted by the Sanatorium Sister for the making of infant garments of approved pattern for sale at the Child Welfare Centres. When the time comes to leave the Sanatorium patients are urged to continue with this type of light work at home for a time before commencing regular work. Heavy manual work, such as gardening, forestry, digging, wheeling barrows, &c., formerly in favour in certain sanatoria, is not now allowed. As the chief factor in the cure of tuberculosis is believed to be rest, it is obvious that sedentary or other very light occupation is most favoured.

The financial arrangements involved are conducted through the "Gilroes Handicrafts Fund" operated by the Welfare Supervisor. Leather, cane, beads, wool and other materials are bought by the fund in quantity, and either sold in small lots to the patients who effect their own sales of the finished articles, or are made up into finished articles by the patients, and sold by the Welfare Supervisor for the benefit of the fund. Owing to the difficulty of effecting sales, the former method is now more largely adopted. Consequently the financial transactions of the Gilroes Handicrafts Fund are few, although the actual work turned out is considerable. The following are the figures :—

Gilroes Handicrafts Fund.	£	s.	d.
Income during 1931	52	16	7
Expenditure during 1931	47	14	8
Balance as at 31st December, 1931	60	9	6

Number of leather articles made	1866
Stool frames	24
Beadwork articles	128
Assistance in making surgical appliances	24
Pads, straps, &c, for surgical appliances	54
Dressing trolleys	3
Bath trolley	1
Bed cradles	2

Poultry Farm.

Transactions during financial year, 1st April, 1931, to 31st March, 1932.

Number of birds in stock, 31st March, 1932	Fowls	214
Number of Eggs produced		27,094
Number of birds killed for the table		77
Expenditure on foodstuffs, &c.	£152	0s. 1d.
Income from sale of eggs and birds	£189	3s. 1d.

Piggeries

Financial year, April, 1931—March, 1932.

Number of pigs in stock, 31st March, 1932		22
Pigs fattened and sold		25
Expenditure on food, straw, store pigs, &c. (excluding wages)	£61	5s. 8d.
Income	£139	5s. 10d.

CONVALESCENT SANATORIUM AT "HOME PLACE," HOLT.

	Number Treated and Discharged	Average Period of Treatment	Average Gain in Weight
Men ..	54	7 weeks	5 lbs.
Women ..	52	9 ..	$6\frac{1}{4}$ ..
Children ..	12	9 ..	$3\frac{1}{4}$ ..

Classification of Cases Treated.

	Men.	Women.	Children.
Class T.B. Minus	23	24	12
Class T.B. Plus, Group I. ..	12	13	—
Class T.B. Plus, Group II. ..	19	14	—
Class T.B. Plus, Group III. ..	—	1	—
	—	—	—
Total	54	52	12

This seaside convalescent branch sanatorium, accommodating at present 26 patients, was opened in May, 1929, with the object of extending the period of treatment of ambulatory patients and providing for them change of air and scene. It was hoped that suitable patients would proceed to Holt to complete Sanatorium treatment as soon as they were fit enough to leave Groby Road. Unfortunately it has not been found possible to fill all the beds with patients of the type desired, chiefly owing to the fact that only one sex can be treated at a time and therefore admissions must be in large groups intermittently rather than in small numbers continuously. During the year there were 4 such periods of about 10 to 12 weeks each, 2 for men and 2 for women and children. At the beginning of each period, after the suitable patients from Groby Road had been accommodated, the remaining beds were filled with cases selected by the Tuberculosis Officer from those in attendance at the Dispensary. Owing to this difficulty a number of patients who would in ordinary circumstances be considered to have disease too far advanced for this type of treatment were passed for admission to Holt. Reference to the table above shows that approximately one-third of the adult patients were in the stage of the disease classified as T.B. Plus, Group II., that is, a moderately advanced stage.

It does not follow that these moderately advanced patients did not benefit from this treatment. On the contrary, the immediate results were good in the vast majority. It is obvious, however, that in patients of this type, not much in the way of permanent improvement can be expected, and it is doubtful whether the

expenditure incurred in providing this type of treatment for such patients is economically justified.

THE LABORATORY.

In the first full year's working of the new Laboratory, in 1931, the total number of investigations were increased by over 20 per cent. The chief difference was in the examinations of sputum for T.B., which increased from 1,489 to 2,163 in 1931, and also in the tests for T.B. in milk, which increased from 24 to 150.

The new Laboratory has been found to provide excellent facilities for the work required. All three medical officers on the staff hold Certificate A licence from the Home Office, which empowers them to perform animal inoculation tests.

The amount of work done is shown below :—

Nature of Specimen.	Number.	Result.	
		Positive.	Negative.
Swabs for Diphtheria :			
(a) from Practitioners	386	51	335
(b) from Wards	524	93	431
Swabs for Vincent's Angina ..	27	11	16
Swabs for Ophthalmia Neonatorum ..	2	2	—
Sputum for Tubercle Bacilli ..	2163	579	1584
Fæces ,, ,, ,, ..	19	—	19
Urine ,, ,, ,, ..	26	2	24
Pleural Fluids ,, ,, ..	75	22	53
C.S.F. Fluid ,, ,, ..	5	—	5
Pus for ,, ,, ..	41	18	23
Sputum for Pneumococci	17	—	—
C.S.F. for Meningococci	197	—	—
Vaginal Smears for Gonococci ..	3	2	1
Blood for Widal Test	18	6	12
Urine examined microscopically ..	215	—	—
Hæmatology.			
Blood Sedimentation Tests	141	—	—
Polynuclear Counts	11	—	—
Complete Blood Counts	13	—	—
Biochemistry.			
Urea Concentration Tests	2	—	—
Blood Sugar Estimations	34	—	—
Inoculation Tests.			
Inoculations for T.B.	15	4	11
Virulence Tests for Diphtheria (with Controls)	12	1	11
Pink Disease (Investigation carried out for L.R.I.)	6	—	6
Urine for T.B. (Investigation carried out for L.R.I.)	2	—	2
Inoculation for Tubercle in Milk (Investigation carried out for Health Department)	150	15	135
Post-Mortem Examinations ..	21	—	—

STAFF.

Health.

The health of the Staff generally was good. There were, however, several cases of acute infectious disease. One nurse contracted Scarlet Fever, two Diphtheria, and one Cerebro-Spinal Fever. The two who contracted diphtheria were probationers who had recently joined the staff, one of whom had not been Schick tested, and the other had been found to be Schick positive but had not completed her course of immunising injections. The nurse who contracted Cerebro-Spinal Fever had been in attendance on a very malignant (and fatal) case of this disease. She herself became acutely ill with cerebral symptoms, and meningococci were found in films of her blood. She had a very large intravenous dose of anti-meningococcal serum (210 cc.) and recovered completely within a day or two.

One nurse was removed to the Royal Infirmary for Appendicectomy.

The following illnesses amongst the staff were treated in the wards :—

Recurrent Acute Rheumatism and Carditis ; death from Cardiac failure	1 maid
Scarlet Fever	1 nurse
Diphtheria	2 nurses
Cerebro-Spinal Fever	1 nurse
Mumps	1 nurse
Vincent's Angina and Alveolar Abscess	1 nurse
Eczema of Face	1 nurse
Scabies	2 nurses
Laryngitis	1 nurse
Fracture of Radius and Ulna	1 maid
Operation for Hernia	Engineer

Immunisation of Nursing Staff against Diphtheria.

The Schick test was performed on all probationer nurses not previously tested, 17 in number, of whom 10 were found to be positive. The latter were immunised by three weekly injections of toxoid-antitoxin floccules (T.A.F.) which has so far been found to be the best immunising agent. Reactions were generally absent, but in one or two cases a mild local reaction occurred. One nurse contracted mild diphtheria a few weeks after the first injection, i.e., before the immunising course was completed.

Five nurses who had 6 months previously been immunised against diphtheria were re-tested by the Schick test and all were then found to be negative reactors, and therefore had presumably acquired immunity to the disease.

BUILDINGS AND EQUIPMENT.

New Building.

The new boiler house and chimney with two new and larger Lancashire boilers and all accessories was completed and brought into use. This central heating unit now provides ample heating power for the institution and is capable of meeting the demands of any reasonable extension. The cost, defrayed out of capital, amounted to £8,925.

Enlarged X-Ray Dept. and New X-Ray Plant.

The X-Ray room was doubled in size, and dressing rooms with cubicles for males and females were added, as was also a viewing room and film store, and a unit room for the new transformer. The developing room was enlarged and redesigned to provide a wet side for developing and a dry side for changing films, &c.

A new 3-phase 6-valve transformer by Solus Electrical Co. was installed at a cost of £750, and a new tele-radiographic screening stand, for chest radiography at 2 metres, by Siemens, at a cost of £330. The latter apparatus allows the tube to be rotated through an angle of 180 degrees in any direction, while still being centred to the screen, and it also allows of the patient being rotated in a circle, by means of a turntable, during screen examinations. The transformer was tested and found to pass a current of 1,000 milliamperes at 85 kilovolts through a series of tubes arranged in parallel. The apparatus is therefore capable of giving a higher current than any known X-Ray tube will stand. It is therefore capable of the fastest chest radiography possible at the present time.

Further alterations and improvements in buildings, equipment and grounds were made in addition to those detailed in the four last annual reports :—

Heating System :—Still further additional radiators were installed in the wards so as to allow of a temperature of 60° F. being reached in winter, without the use of fires. The central ward fireplaces were removed in certain wards.

Thermostatic control was installed experimentally in Ward III. So far it has been very successful. By this system any desired temperature, generally 55°F., having been set on the thermometer, the steam inlet to the radiators automatically opens and closes so as to keep the temperature of the ward constantly at the desired level.

A steam steriliser for crockery, &c., was installed in the kitchen of Ward X. Annexe.

Main Kitchen :—A two-pan electric fish fryer was installed.

Laundry :—The scheme of re-equipment of the laundry was completed by the installation of a second ironing machine in the room formerly used as an engineers' workshop. The walls in the washing room were tiled to a height of 5 feet.

Lighting :—The Sanatorium cubicles (Ward X.) were rewired, to provide a bracket light over each bed, a wireless plug and a bell to each bed, all with white bakelite flush-type switches.

The Sisters' sitting room was rewired and modern central and wall electric fittings installed.

Alterations to Administrative Block :—The Nurses' dining room was enlarged by about one-third by bringing into it the space formerly occupied by the old laboratory, a store, and part of the corridor. The old dispensary was re-designed to form a Matron's Office and to enlarge the existing cloakroom. The end of the main corridor containing the resident medical officers' quarters was shut off by swing doors. The room formerly used as a matron's office was rewired, redecorated and refurnished to form an Assistant Matron's sitting room.

Engineers' Workshop, &c. :—The room formerly used as an engineers' workshop and which originally formed part of the laundry reverted to its original purpose and was used to house a new ironing machine.

A new, much larger and better equipped engineers' workshop was formed by utilising the old boiler house. The latter was divided into two, longitudinally by building a brick partition. One half was used as a switch room, in which was fitted an entirely new switchboard for the complete control of the lighting and power circuits of the institution. The other half was fitted with the necessary shafting, benches, machines and tools to make an excellent workshop. The lighting of the new workshop was greatly improved by fitting long windows into both sides of the sloping roof.

Ward Equipment :—40 new beds were provided for the Sanatorium cubicles. These can be moved on three 6-inch ball-bearing wheels, each provided with a nipple for grease-gun lubrication like a motor chassis. This arrangement allows the beds to be easily moved out from the wall of the cubicle for nursing purposes, as well as being very easily moved out to the open air on the verandah. The back of each bed is removable and can be adjusted to form a back rest.

A re-designed form of combined bedside table, locker and seat for the use of pulmonary tuberculosis patients was introduced, and Block II. (now used as a preliminary rest ward for the Sanatorium) was equipped with them.

GROUNDS.

The ground around the enlarged X-Ray room was appropriately laid out.

The field at the back of the Sanatorium, which had often been water-logged, was thoroughly drained by means of a system of land drains.

Certain new paths were formed for greater convenience. The floral display in the grounds was maintained up to a high standard.

TABLE A.

Number of Patients Admitted, Discharged and Died during 1931.

Disease.	Remaining 31st December, 1930. (As diagnosed on admission)	Admitted during Year. (As diagnosed on admission)	Discharged during Year. (As verified after correction of diagnosis)	Died during Year. (As verified after correction of diagnosis)	Remaining 31st December, 1931. (As diagnosed on admission)
Scarlet Fever	18	271	246	1	22
Diphtheria	22	118	102	8	13
Enteric Fever	—	1	1	—	—
Measles	—	28	30	4	—
Erysipelas	1	26	22	1	4
Cerebro-Spinal Fever ..	1	14	9	6	—
Puerperal Fever ..	1	14	12	2	1
Other Diseases	3	58	80	11	1
Smallpox	79	951	1023	—	7
Smallpox Contacts ..	4	46	49	—	1
Tuberculosis :—					
Observation Cases ..	6	84	73	—	17
Adults	101	345	317	18	111
Surgical	36	16	18	2	32
Children	19	6	23	—	2
Discharged Soldiers ..	2	2	2	—	2
	——164	——453	——433	——20	——164
Total	293	1980	2007	53	213

TABLE B.

Patient Days.

	For 12 months ending Dec. 31st, 1931.	For 12 months ending March 31st, 1932.
Smallpox	14041	5625
Smallpox Contacts	614	364
Scarlet Fever	4777	5775
Diphtheria	4508	3205
Enteric Fever	95	120
Cerebro-Spinal Meningitis ..	624	271
Puerperal Fever	444	387
Other Infectious Diseases ..	2012	1987
Tuberculosis :—		
Adults	41273	43258
Discharged Soldiers ..	564	687
Children	645	395
Surgical Cases	12051	11895
Observation Cases	3100	3542
	84748	77511

SUMMARY.

Infectious Diseases	27115	17734
Tuberculosis	57633	59777
Total	84748	77511

TABLE C.

As required by the Ministry of Health.

A.—Average Number of Beds Available for Patients during the Year 1931.

——	Observation.	Pulmonary Tuberculosis.		Non-Pulmonary Tuberculosis.		Total
		"Sanatorium" Beds	"Hospital" Beds	Disease of Bones and Joints	Other Conditions	
Adult Males ..	2	30	36	6	..	74
Adult Females ..	2	20	46	6	..	74
Children under 15	1	..	..	15	..	16
Total ..	5	50	82	27	..	164

B.—Return showing the Extent of Residential Treatment during the Year 1931.

			In Institutions on Jan. 1	Admitted during the year.	Discharged during the year.	Died in the Institutions.	In Institutions on Dec. 31
Number of Patients	Adults.	M.	64	186	173	11	66
		F.	53	174	158	9	60
	Children.		41	9	29	..	21
Number of Observation Cases	Adults.	M.	2	23	25	..	..
		F.	4	34	37	..	1
	Children.		..	27	11	..	16
	Total		164	453	433	20	164

TABLE D.

As required by the Ministry of Health.

"HOME PLACE," HOLT.

A.—Average Number of Beds Available for Patients during the Year 1931.

——	Observation.	Pulmonary Tuberculosis.		Non-Pulmonary Tuberculosis.		Total
		"Sanatorium" Beds.	"Hospital" Beds.	Disease of Bones and Joints	Other Conditions	
Adult Males ..	..	..	..	..	..	..
Adult Females ..	..	..	..	..	..	..
Children under 15	..	..	..	..	..	..
Total ..	..	..	..	..	..	26

B.—Return showing the Extent of Residential Treatment during the Year 1931.

			In Institutions on Jan. 1.	Admitted during the year.	Discharged during the year.	Died in the Institutions.	In Institutions on Dec. 31
Number of Patients	Adults.	M.	..	54	54	..	..
		F.	..	52	52	..	..
	Children.	M.	..	5	5	..	..
		F.	..	7	7	..	..
Number of Observation Cases	Adults.	M.	..	..	..	..	..
		F.	..	..	..	..	..
	Children.	M.	..	..	..	..	..
		F.	..	..	..	..	..
Total		..	..	118	118	..	..

TABLE E. As required by the Ministry of Health.

RESULTS OF TREATMENT. GROBY ROAD SANATORIUM.

Classification on admission to the Institution.		Condition at time of discharge.	Duration of Residential Treatment in the Institution.												TOTAL.
			Under 3 months.			3–6 months.			6–12 months.			More than 12 months.			
			M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
PULMONARY TUBERCULOSIS.	Class T.B. minus.	Quiescent	–	–	–	–	–	–	–	–	–	–	–	–	–
		Not Quiescent	23	22	12	16	34	8	1	5	–	–	–	–	121
		Died in Institution ..	–	–	–	–	–	–	–	–	–	–	–	–	–
	Class T.B. plus Group 1.	Quiescent	–	–	–	–	–	–	–	–	–	–	–	–	–
		Not Quiescent	10	10	–	9	13	1	1	1	–	–	–	–	45
		Died in Institution ..	–	–	–	–	–	–	–	–	–	–	–	–	–
	Class T.B. plus Group 2.	Quiescent	–	–	–	–	–	–	–	–	–	–	–	–	–
		Not Quiescent	20	8	–	58	17	1	9	9	–	1	2	–	125
		Died in Institution ..	–	–	–	–	–	–	–	–	–	–	–	–	–
	Class T.B. plus Group 3.	Quiescent	–	–	–	–	–	–	–	–	–	–	–	–	–
		Not Quiescent	6	7	–	9	17	–	4	7	–	–	1	–	51
		Died in Institution ..	6	8	–	2	–	–	1	1	–	–	–	–	18
NON-PULMONARY TUBERCULOSIS.	Bones and Joints.	Quiescent or Arrested ..	–	–	–	–	–	–	–	–	–	–	–	2	2
		Not Quiescent	–	1	1	2	–	–	–	1	–	4	1	4	14
		Died in Institution ..	–	–	–	–	–	–	–	–	–	–	–	–	–
	Abdominal.	Quiescent or Arrested ..	–	–	–	–	–	–	–	–	–	–	–	–	–
		Not Quiescent	–	–	–	–	–	–	–	–	–	–	–	–	–
		Died in Institution ..	–	–	–	–	–	–	–	–	–	–	–	–	–
	Other Organs.	Quiescent or Arrested ..	–	–	–	–	–	–	–	–	–	–	–	–	–
		Not Quiescent	–	2	–	–	–	–	–	–	–	–	–	–	2
		Died in Institution ..	2	–	–	–	–	–	–	–	–	–	–	–	2
	Peripheral Glands.	Quiescent or Arrested ..	–	–	–	–	–	–	–	–	–	–	–	–	–
		Not Quiescent	–	–	–	–	–	–	–	–	–	–	–	–	–
		Died in Institution ..	–	–	–	–	–	–	–	–	–	–	–	–	–

TABLE E 1. As required by the Ministry of Health.
"HOME PLACE," HOLT.

Classification on admission to the Institution.		Condition at time of discharge.	Duration of Residential Treatment in the Institution.												TOTAL.
			Under 3 months.			3–6 months.			6–12 months.			More than 12 months.			
			M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
PULMONARY TUBERCULOSIS.	Class T.B. minus.	Quiescent	–	–	–	–	–	–	–	–	–	–	–	–	–
		Non-quiescent	22	24	7	1	–	5	–	–	–	–	–	–	59
		Died in Institution ..	–	–	–	–	–	–	–	–	–	–	–	–	–
	Class T.B. plus Group 1.	Quiescent	–	–	–	–	–	–	–	–	–	–	–	–	–
		Non-quiescent	10	13	–	2	–	–	–	–	–	–	–	–	25
		Died in Institution ..	–	–	–	–	–	–	–	–	–	–	–	–	–
	Class T.B. Plus Group 2.	Quiescent	–	–	–	–	–	–	–	–	–	–	–	–	–
		Non-quiescent	19	14	–	–	–	–	–	–	–	–	–	–	33
		Died in Institution ..	–	–	–	–	–	–	–	–	–	–	–	–	–
	Class T.B. plus Group 3.	Quiescent	–	–	–	–	–	–	–	–	–	–	–	–	–
		Non-quiescent	–	1	–	–	–	–	–	–	–	–	–	–	1
		Died in Institution ..	–	–	–	–	–	–	–	–	–	–	–	–	–
NON-PULMONARY TUBERCULOSIS.	Bones and Joints.	Quiescent or Arrested ..	–	–	–	–	–	–	–	–	–	–	–	–	–
		Non-quiescent	–	–	–	–	–	–	–	–	–	–	–	–	–
		Died in Institution ..	–	–	–	–	–	–	–	–	–	–	–	–	–
	Abdominal.	Quiescent or Arrested ..	–	–	–	–	–	–	–	–	–	–	–	–	–
		Non-quiescent	–	–	–	–	–	–	–	–	–	–	–	–	–
		Died in Institution ..	–	–	–	–	–	–	–	–	–	–	–	–	–
	Other Organs.	Quiescent or Arrested ..	–	–	–	–	–	–	–	–	–	–	–	–	–
		Non-quiescent	–	–	–	–	–	–	–	–	–	–	–	–	–
		Died in Institution ..	–	–	–	–	–	–	–	–	–	–	–	–	–
	Peripheral Glands.	Quiescent or Arrested ..	–	–	–	–	–	–	–	–	–	–	–	–	–
		Non-quiescent	–	–	–	–	–	–	–	–	–	–	–	–	–
		Died in Institution ..	–	–	–	–	–	–	–	–	–	–	–	–	–

APPENDIX III.

Report on the City General Hospital, Leicester, for the Year 1931.

By ERNEST C. HADLEY, M.D., B.S. (Lond.), F.R.C.S.E., &c.,

Medical Superintendent.

This hospital, which was opened for the reception of patients on September 28th, 1905, was "appropriated" by the Health Committee of the Leicester City Council under the Public Health Acts, 1575 to 1926, as extended by Section 14 (2) of the Local Government Act, 1929, on April 1st, 1930, which was the "appointed day" under the new Act, from which date the hospital was re-named the City General Hospital.

The mode of admission and conditions of eligibility for treatment were altered as from that date, suitable cases being accepted at the discretion of the Medical Superintendent on the recommendation of the patient's own doctor, a condition of admission being that the patient is usually resident within the City of Leicester.

It is important to realise that the hospital on that date ceased to be a Poor Law Institution.

During the year a special Orthopædic and Surgical Tuberculosis Department has been opened, as it was considered that there was a real need in the City for such a Department, this belief has already been fully justified. Two Wards have been set apart, and are being equipped and adapted for this special branch of Surgery and Mr. Leslie Morris, F.R.C.S., Orthopædic Surgeon, has been placed in charge of this department.

Medical Practitioners of the City have been notified that Acute General Medical and General Surgical and Orthopædic and Surgical Tuberculosis Cases and Maternity Cases are eligible for admission as In-Patients. Phthisical Cases should be referred to Dr. Thomson, Tuberculosis Medical Officer, and Infectious Cases to Dr. Banks, Medical Superintendent, City Isolation Hospital, in the first instance.

It should be noted that Saturday Hospital contributors are now eligible for admission as patients to this Hospital, as the Saturday Hospital Committee have agreed to be responsible for their financial obligations.

General Features of the Hospital.

The hospital is situated on a site comprising approximately 108 acres, 29 acres of which have been acquired during the last few months. It is 336.55 feet above sea level, the highest point on this side of the valley in which Leicester lies ; for example, Leicester Market is 207 feet, Victoria Park 290 feet, and Spinney Hill Park 262 feet respectively above sea level.

The original site of 62 acres cost £6,920 and the buildings £79,575. The hospital consists of four two-storey Pavilions each containing four wards or units.

The Large Wards, 16 in number, are 88 feet 6 in. long, 24 feet wide and 12 feet high, having a cubical space of 25,488 feet and contain 28 beds, giving a cubical space for each patient of 910$\frac{2}{7}$ feet.

Heating and Ventilation :—These wards are heated by two central open fire stoves and four wall radiators with one central radiator.

Inlets and outlets are provided by means of Tobin tube ventilators and Leggot's hopper fanlight openers, and ventilators behind the radiators, also exit flues, &c.

Sanitary Arrangements :—Each large ward is provided with a sanitary annexe which can be entered either from the ward or the corridor, and is so arranged that it is entirely cut off from the building by a lobby and closed doors with ample cross draught for ventilation.

Bath Rooms :—In each corridor, between the large ward and the main corridor, there is a bathroom fitted with two baths.

Lavatory :—In this corridor is also a lavatory with five basins.

Linen Stores :—There are two Linen Stores to each ward fitted up with shelves and cupboard.

Side Wards and Balcony Beds :—Each large ward has adjacent to it a Three-bedded Ward 19 ft. 6 ins. by 15 ft. by 12 ft., and a Single-bedded Ward 14 ft. by 10 ft. 6 ins. by 12 ft. ; also four balcony beds.

Ward Kitchens :—Adjacent to the large ward is a Ward Kitchen and Pantry which has observation windows so that nurses can have an oversight of their patients when working in this room.

Heating and Lighting :—The whole building is heated on the low pressure steam principle and lighted by electric light provided by the Leicester City Electricity Department ; gas is also laid on to serve as a standby in case of failure of the electric light.

The Laundry :—All the washing required by the hospital is done in the Steam Laundry which is fitted with soap boilers, washing machines, hydro extractors, callenders, drying horses and washing troughs, &c.

The Boiler House :—The Boiler House is fitted up with two Lancashire boilers, each 28 ft. by 7 ft. 6 ins., and adjacent to the boiler house is an engineer's shop, pump room, switch room, economiser, and incinerator, painters' shop and carpenters' shop and fire escape house. Water is heated by means of Calorifiers, one for each pavilion and one for the administrative buildings, which are placed in the main subway.

The Tower :—The Tower which surrounds the main chimney stack is used for the storage of water and other purposes.

The total height of the Tower is 130 feet. The height of the bottom of the tank from the ground is 90 feet. The octagonal tank, made of cast iron, holds 24,000 gallons.

Water :—Water is obtained from the City of Leicester Corporation, and in addition soft water from the roofs of the building collected in an underground tank which is capable of holding 50,000 gallons of water which is used for laundry purposes.

MATERNITY HOSPITAL.

The Maternity Hospital is situated on the East side of the Infirmary at a distance of about 300 yards. It contains two wards of four beds each, a labour room and ward kitchen, and bedrooms for a Sister and a Pupil Midwife.

The New Nurses' Dormy House (extension of Nurses' quarters) :—This building was erected on an open site to the North-East of the main building and, opened in 1926, it provides an additional 36 separate bedrooms for nurses ; also a lounge and quiet room. This building was planned to allow of future extension.

The building is of three storeys and is in striking contrast to the rest of the hospital. It is heated by means of hot-water radiators.

Subway :—A spacious subway extends from one end of the hospital building to the other under the main corridor, which is 600 feet long, and branch subways pass under each of the wards, so that easy access can be obtained to all pipes, cables, &c.

The hospital, of course, is also equipped with all that is necessary for the treatment of every kind of complaint, by way of Operating Theatre, X-Ray Room, Sterilizing Room, Clinical Laboratory, Post-Mortem Room, &c.

During the year under review a general scheme of structural improvement has been begun, thus :—

1. Wash hand basins with mixing taps have been installed in eight of the sixteen large Wards.
2. Stott's Hot Water boilers have been installed in eight of the Ward service rooms and steam at boiler pressure has been extended throughout the Hospital, which has rendered such an installation possible.
3. The Engineer's shop has been re-organised and equipped with labour-saving tools, which has greatly increased the efficiency of this Department.

ORTHOPÆDIC DEPARTMENT.

The following is the Report on the Orthopædic Department by Mr. Leslie Morris, M.D., F.R.C.S., Orthopædic Surgeon.

In the course of the last year, an important addition has been made in the City Orthopædic Service in the allocation of two wards at the City General Hospital to form an Orthopædic Department.

This department provides accommodation for cases of surgical tuberculosis and orthopædic cases which require a long period of treatment in hospital ; and, in the case of children, educational facilities as well. In this way it is a link in the chain of activities already evident in the Orthopædic Clinic at Richmond House, the Maternity and Child Welfare Centres, the Tuberculosis Dispensary, and the Isolation Hospital.

Since its institution in April, 1931, the work in these wards, and the demands upon its beds, have more than justified themselves.

Eighty-seven patients have been treated in the wards, and 111 operations in connection with these cases performed.

The wards in use at present are Nos. 1 and 5. In the former are treated the women and children, in the latter the men and boys.

Each ward-block consists of a main ward with small verandahs attached, kitchen, bath room, &c., linen room, and three side wards. In the case of ward 1, these side rooms are used as a post-operative recovery room, a plaster room, and a school room. In the school room all children in the Hospital attend and receive suitably graded teaching according to their condition and progress. In ward 5, the side rooms are used for a recreation room and for the massage department. Theatre work is done in the main theatre of the Hospital, the special instruments and accessories having been supplied.

Staff.

This consists of the Surgeon in charge of Orthopædics, assisted by one of the resident medical officers of the Hospital. One trained orthopædic and one general trained sister, assisted by one staff nurse, two senior nurses and four day and two night-probationers. It has been found difficult to obtain a suitable staff for the department and some re-organisation in this matter will be called for. The massage department is in charge of a part-time qualified masseuse.

Scope of the Work.

Cases admitted to the wards are derived from the following sources :—

1. Health Department ; Cases of surgical tuberculosis and cases referred by the Maternity and Child Welfare Centres.

2. Education Committee ; School Children requiring long stay treatment or whose home conditions are such that to lie in bed there for a long period cannot be satisfactory.

3. Cases referred to the Department from the wards of the Hospital.

4. Cases referred from the Guild of the Crippled.

5. Cases referred by arrangement with the Leicestershire Health and Education Committees.

The Clinic at Richmond House serves as the chief examination and follow-up centre.

Future.

Plans for the extension of the Orthopædic Department have already been passed. When the work has been carried out, verandah accommodation for open-air treatment will be available for all these cases. This is imperative in the treatment of surgical tuberculosis and practically so in any disease requiring long-stay institutional treatment.

The Department will provide a first-rate orthopædic unit for the City. Such a Hospital is recognised as indispensable for the modern treatment of orthopædics, surgical tuberculosis and fractures, and it is hoped that its facilities will be available for and made use of by all authorities.

THE RESIDENT MEDICAL, NURSING AND DOMESTIC STAFF.

Medical.

Medical Superintendent and General Operating Surgeon	1
Resident Medical Officers	2

Nursing.

Matron	1
1st Assistant Matron	1
2nd Assistant Matron and Home Sister	1
3rd Assistant Matron and Sister Tutor	1
Night Superintendent	1
Assistant Night Sister	1
Maternity Sister	1
Massage and X-Ray Sister	1
Ward Sisters	14
Theatre Sister	1
Relief Sisters	2

All the above Nursing Staff are fully qualified State registered Nurses and all hold the C.M.B. Diploma.

Probationer Nurses	66

Probationer Nurses are in training for a period of four years and during that time are expected to pass the State Examinations and the C.M.B. Examination.

Head Laundress	1
Lodge Porter and Portress	2
Domestic Staff	15
Total Resident Staff	112

The total number of beds provided at this Hospital (excluding 32 balcony beds) are :—

Sixteen large Wards (28 beds each)	448
Side Wards	50
Maternity Block	8
Total of Permanent Beds	506
Balcony Beds	32
Total	538

The number of Patients remaining on Dec. 31st, 1930, was	409	
Admitted during 1931	2329	
		2738
Discharged during 1931	1780	
Died during 1931	552	
Remaining on Dec. 31st, 1931	406	
		2738
The average number of beds occupied during the last 12 months has been		396.9
The highest number		463
The lowest number		351
Average stay of patients		52.917 days
Number of Patient days		144,889
Number of Confinements		127
Number of Operations performed		170
Number of X-Ray Films taken		607

CLASSIFICATION OF CASES TREATED during Twelve Months—January 1st, 1931, to December 31st, 1931.

MEDICAL CASES.

I. General Infections.

Chorea, rheumatic	9	Parotitis	3
Diphtheria	1	Pertussis	21
Dysentry	1	Rheumatism, Acute	26
Influenza	32	,, Subacute	13
Measles	27	Varicella	3
Miliary Tuberculosis	1	Variola	5

II. Digestive System.

Achlorhydria	1	Glossitis	2
Colitis	5	Jaundice, Catarrhal	1
Enteritis	2	Liver, Cirrhosis	3
Gastritis	21	,, Hepatitis	1
Gastro-enteritis	25	,, Syphilitic	2
Malnutrition	16	Stomatitis	1

III. Metabolic Disorders and Endocrinal Diseases.

Acromegaly	1	Goitre	2
Diabetes Insipidus	1	Gout	5
Diabetes Mellitus	17	Myxœdema	2
Exophthalmic Goitre	3		

IV. Children's Diseases.

Convulsions	4	Malnutrition	16
Errors of Dietary	20	Prematurity	9
Gastro-enteritis	32		

V. Diseases of the Heart and Circulation.

Aneurysm	1	Fatty Degeneration	2
Arterio-sclerosis	22	Hypertrophy	2
Auricular Fibrillation	14	Hyperpiesis	5
Congenital Heart	1	Myocarditis	63
Dilatation	4	Pericarditis	2
Endocarditis, various	52		

VI. Diseases of the Nervous System.

Cerebral Hæmorrhage	35	Disseminated Sclerosis	5
,, Claudication	2	General Paralysis of Insane	3
,, Embolism	2	Progressive Muscular Atrophy	4
,, Thrombosis	54	Paraplegia	5
Amyotonia Congenita	1	Paralysis Agitans	4
Cerebral Softening	4	Spastic Diplegia	1
Encephalitis Lethargica	1	,, Paraplegia	3
Post ,, ,,	5	Sciatica	8
Meningitis, Pneumonic	3	Tabes Dorsalis	2
,, Serous	1	Transverse Myelitis	1
,, Suppurative	1	Status Epilepticus	4
Epilepsy	32	Concussion of Brain	2

VII. Mental Disorders.

Dementia	6	Melancholia	2
Hysteria	5	Neurasthenia	32
Imbecility	5	Suicidal	5
Insanity	35		

VIII. Affections of Bones, Joints, and Fibrous Tissue.

Lumbago	8	Rickets	12
Rheumatoid Arthritis	8	Osteo-arthritis	4

IX. Respiratory Disease.

Asthma	4	Lobar Pneumonia	35
Atrophy of the Lung	1	Phthisis	165
Bronchiectasis	4	Pleurisy	28
Broncho-pneumonia	51	Pneumonic Phthisis	3
Laryngismus Stridulus	1	Syphilis of Lung	6

X. Kidney Diseases.

Adolescent Albuminuria	1	Renal Syphilis	2
Hæmaturia	1	Uræmia, Chronic	5
Nephritis, Acute	7	,, Acute	5
,, Chronic	22		

XI. Intoxications.

Alcoholism, Methylated	1	Chlorodyne Drinker	1
,, Chronic	14	Delirium Tremens	2

XII. Skin Diseases.

Dermatitis	6	Impetigo Contagiosa	1
Dermatitis Herpetiformis	1	Intertrigo	1
Eczema	21	Phtheiriasis	1
Erythema Nodosum	2	Psoriasis	3
Erythema Pernio	3	Tinea Tonsurans	13
Furunculosis	7	Scabies	9
Herpes Zoster	1	Sycosis Barbae	2
Impetigo	11		

XIII. Blood Diseases.

Acute Lymphatic Leukæmia	1	Spleno-medullary Leukæmia	1
Anæmia, Pernicious	1	Von Jaksch's Pseudo-Leukæmia	1
,, Secondary	3		

SURGICAL DISEASES.

I. Alimentary System.

Achylasia	1	Fistula-in-ano	1
Acute Intestinal Obstruction	2	Gall Stones	3
Appendicitis	6	Gastric Ulcer	8
Carcinoma, Colon	3	Duodenal Ulcer	3
,, Tongue	3	Jejunal Ulcer	1
,, Rectum	10	Gastroptosis	1
,, Liver	3	Hæmorrhoids	10
,, Cæcum	1	Herniæ, various	30
,, Stomach	10	Hurschprung's Disease	1
,, Gall Bladder	3	Peritonitis, Adhesive	1
,, Œsophagus	2	,, Pelvic	1
,, Pancreas	1	,, Suppurative	2
,, Cheek	1	,, Tuberculous	5
Cholecystitis	4	Prolapsus Recti	6
Congenital Pyloric Stenosis	2	Multiple Abscesses of Liver	1

II. Urino-Genital System.

Balanitis	1	Syphilis	61
Carcinoma Prostate	3	Pyelitis	5
Congenital Cystic Disease of Kidney	1	Pyonephrosis	1
Cystitis	11	Stone in Kidney	1
Enlarged Prostate	15	Stricture of Urethra	4
Gonorrhœa	7	Tuberculous, Kidney	1
Hydrocele	2	,, Epididymitis	1
Hydronephrosis	1	,, Orchitis	1
Phimosis	8	Paraphimosis	1

III. Affections of Mouth, Throat, Teeth, Ears and Eyes.

Alveolar Abscess	2	Rhinitis	1
Extractions	16	Polypi Ear	1
Gingivitis	2	Mastoiditis	5
Laryngitis	2	Sinus Thrombosis	1
Sarcoma of the Larynx	2	Cataract	4
Œdema of the Glottis	1	Conjunctivitis	11
Cleft Palate	1	Blepharitis	2
Tonsils and Adenoids	9	Cervical Adenitis	4
Tonsillitis, Suppurative	6	Otitis Media	12
,, Non-suppurative	9		

IV. Diseases of Bones and Joints.

Arthritis and Ankylosis of Joints	15	Fractures, Femur	29
Tuberculous Necrosis	12	,, Humerus	6
Contusions and Bruises	35	,, Tibia and Fibula	9
Deformities	20	,, Pelvis	4
Dislocations	4	,, Ribs	4
Sarcoma of Femur	1	,, Colles	4
Spinal Caries	5	,, Clavicle	1
Sprains	10	,, Scapula	1
		,, Mandible	4
		,, Nasal Bones	1
		,, Radius	1

V. Respiratory.

Carcinoma of Lungs	1	Traumatic Pneumonia	1
Empyema	7		

VI. Maternity and Gynæcological.

Abortions	27	Mastitis, Interstitial	1
Adherent Placenta	1	,, Hæmatoma	1
Ante and Post Partum Hæmorrhage	1	,, Suppurative	8
Births	110	,, Carcinoma	9
Carcinoma, Uterus	9	Ovarian Cystadenoma	1
,, Ovary	1	Parametritis	1
Confinements	127	Pregnant, ante natal	16
Craniotomy	2	Perineal Abscess	2
Cystic Ovaries	1	Phlegmasia Alba Dolens	1
Dysmenorrhœa	1	Placenta Prævia	3
Eclampsia	1	Prolapsus Uteri	6
Ectopic Gestation	1	Puerperal Mania	2
Erosion of Os	2	Residual Broad Ligament Abscess	1
Fibroids of Uterus	2	Ruptured Perineum	3
Hæmolytic Septicæmia	1	Subinvolution	1
Hyperemesis	3	Suppurative Barth-olinitis	2
Incarcerated Gravid Uterus	1	Uterine Displacements	2
Leucorrhœa	3	Uterine Sapræmia	3
Metrorrhagia	8	Vulvitis	1

VII. Miscellaneous.

Abrasions and Contusions	21	Lupus	3
Abscesses	8	Phlebitis	7
Burns and Scalds	5	Rodent Ulcer	2
Carbuncles	6	Senile Gangrene	5
Cellulitis	10	Septic Wounds	36
Elephantiasis	1	Septicæmia	3
Erysipelas	22	Ulcers	32
Foreign Bodies	5	Varicose Veins	10
Incised Wounds	8	Venous Thrombosis	2
Lymphangitis	3		

VIII. Tumours, various situations.

Malignant, Carcinoma and Sarcoma	70
Benign	8

CAUSES OF DEATHS—January 1st, 1931, to December 31st, 1931.

I. Alimentary System and Nutritional Diseases.

Cholecstitis	1	General Miliary Tuberculosis	1
Cirrhosis of Liver	6	Perforated Gastric Ulcer	1
Colitis	1	Prematurity	6
Diabetes Mellitus	6	Septic Peritonitis	1
Diaphragmatic Hernia	1	Insufficient Vitality at Birth	3
Enteritis	1	Tuberculous Peritonitis	1
Gastro-enteritis	16	Multiple Abscesses of Liver	1

II. Respiratory System.

Bronchitis, acute	8	Pleurisy	3
,, chronic	16	Pneumonia, Lobar	19
Empyema	3	,, Broncho	15
Phthisis	62	Pneumonic Phthisis	1

III. Circulatory System.

Acute Lymphatic Leukæmia	1	Fatty Degeneration of Heart	2
Aortic Aneurysm	1	Hyperiesis	1
Arterio-sclerosis	6	Mitral Stenosis	1
Auricular Fibrillation	9	Myocarditis	32
Congenital Heart	1	Pericarditis	3
Coronary Atheroma	1	Senile Gangrene	9
Dilatation of Heart	4	Valvular Disease	17

IV. Nervous System.

Abscess of Cerebrum	1	Meningitis, Tuberculous	5
Cerebral, Softening	1	Paralysis Agitans	4
,, Diplegia	1	Paraplegia	1
,, Thrombosis	37	Progressive Muscular Atrophy	1
,, Hæmorrhage	23	Spastic Paraplegia	1
,, Embolism	4	Suppurative Meningitis	2
Disseminated Sclerosis	1	Thrombosis of Cerebral Arteries	1
Epilepsy	1		

V. Bones, Joints, Deformities, &c.

Acromegaly	1	Rickets	2
Fractured Femur	9	Tertiary Syphilitic Osteo-myelitis	1
,, Humerus	1	Tuberculous Spine	1
Osteo-arthritis	3	,, Mastoiditis	1
Rheumatoid Arthritis	2		

VI. Urino-Genital System.

Congenital Cystic Disease of both Kidneys	1	Nephritis, chronic	7
Cystitis	3	Pyelonephritis	1
Enlarged Prostate	4	Stricture of Urethra	1
Extravasation of Urine	2	Tertiary Syphilis	3
Nephritis, acute	6	Uræmia	6

VII. Miscellaneous.

Alcoholism	1	Pyæmia	2
Erysipelas	3	Senile Decay	93
Exophthalmic Goitre	2	Septicæmia	2
Myxœdema	1	Vincent's Angina	1
Post Partum	1		

VIII. Malignant Growths.

Carcinoma—		**Carcinoma** *(continued)*—	
Abdomen	1	Pharynx and Larynx	1
Breast	5	Penis	2
Cervix Uteri	3	Prostate	2
Colon	3	Rectum	6
Lips and Cheeks	2	Stomach	9
Liver, Bile Ducts and Gall Bladder	4	Tongue	1
Œsophagus	2	**Sarcoma**—	
Palate and Fauces	2	Lymphadenoma	1
Pancreas	1	Inguinal Glands	1

Total Deaths	552
Inquests	11
Post-Mortem Examinations	54

APPENDIX IV.

Report on Maternity and Child Welfare.

By E. B. BERENICE HUMPHREYS, M.B., Ch.B., Edin.,

Maternity and Child Welfare Medical Officer.

The statutory Maternity and Child Welfare Committee (appointed under the provisions of The Maternity and Child Welfare Act, 1918), consists, in Leicester, of the full Health Committee, together with four co-opted members. Actually the work is carried out by a Sub-Committee of ten members of the Health Committee, together with the four co-opted members, which meets each month.

Health Visitors.

There are now fourteen District Health Visitors, with Mrs. Reed as Superintendent Health Visitor, and their names and qualifications are set out on page vi.

The duties of the Health Visitors comprise their work on the district and attendance at the Infant Welfare and other Centres. Each Health Visitor has a district and is responsible for the home visiting in all cases of children under five years of age. Infants whose births are notified to the Medical Officer of Health are visited as soon as is practicable after the tenth day in the cases notified by midwives, and after the fourteenth day in cases where a doctor is known to be in charge of the case. Thereafter the frequency of the visits is determined by the conditions found at the first visit. The Health Visitor does not visit certain well-to-do homes, where she has reason to believe that adequate supervision and care of the child are provided for. The actual number who are not visited at all is small; the Health Visitor usually calls once at the house and then decides whether further visits will be desirable.

During the first year of life, each child is visited approximately once a month. After that age, every effort is made to obtain a continuous record of all children known to the Department and the aim of the Health Visitor is to visit or see all children between one

and five years old at least twice a year during that period. This object has not yet been fully achieved, partly owing to the concentrated attention which is being paid to the children under one year, and partly owing to the difficulty and time spent in tracing children who do not remain long at one address. But the ex-babies and toddlers need to be kept under supervision, and attendance at an Infant Welfare Centre, though complementary and not a substitute for the home visiting of the Health Visitor, is an important factor in this connection.

The following is a statistical report on the work done by the Health Visitors during 1931 :—

The corresponding figures for 1930 are shown in brackets.

Number of first visits to children under one year old	3,605	(3,599)
Number of re-visits to children under one year old	15,110	(13,103)
Number of visits to cases of Ophthalmic Neonatorum	70	(135)
Number of visits to children one to five years old	6,478	(4,968)
Number of visits to ante-natal cases ..	424	(614)
Number of other visits	4,503	(5,546)
Attendances of Health Visitors at Schools for Mothers and Infant Welfare Centres	1,051	(918)
Attendances of Health Visitors at Ante-Natal Clinics	114	(82)

The work of the Health Visitors at the School for Mothers and Infant Welfare Centres is dealt with under that heading.

The figures for the year, as well as showing a maintenance of the work in general, indicate a definite increase in the amount of visiting to children aged one to five years ; the need for this has been stressed from time to time and has been referred to above.

It will be seen that in addition to routine visits to children under five years of age, the Health Visitors pay special visits in connection with all cases of Ophthalmia Neonatorum which are notified, mainly to ensure that the treatment prescribed by the doctor is being diligently carried out.

In connection with ante-natal cases, 424 visits were paid. Most of these visits are paid at the request of the Maternity and Child Welfare Medical Officer and are concerning failure on the part of the women to re-attend at the ante-natal clinic. The remainder of the visits are paid to expectant mothers who have

not made provision for their confinement. They are urged to engage the services of a midwife or doctor and once the Health Visitor is assured that this has been done, she does not continue her ante-natal visits as such.

During the year 1931, many of the home visits have been made under the Children Act of 1908, which will be dealt with under a separate heading.

SCHOOLS FOR MOTHERS AND INFANT WELFARE CENTRES.

There were no new Centres opened during the year. There are sixteen Centres in Leicester (and also the Infants' Milk Depot) at which mothers may attend and bring their children under five years of age, and a complete list of Centres is set out below :—

Name.	President.	Day of Meeting.
Western Road	Mrs. Beale	Monday
Curzon Street	Mrs. Mantle	,,
Clipstone Street	Mrs. Banks	,,
Aylestone Road	Miss Windley	Tuesday
Bedford Street	Mrs. Millard	,,
18 King Street (Milk Depot)	—	,,
Cavendish Road	Mrs. Johnson	,,
Wesley Hall	Mrs. Taylor	,,
Coleman Road	Mrs. Herbert	Wednesday
Fosse Road	Mrs. Gibbs	,,
Justice Street ..	Miss Went Mrs. Bouskell	,,
Uppingham Road	Mrs. Judge	,,
Belgrave Hall	Mrs. Mantie	Thursday
Clarendon Park	Mrs. Roberts	,,
Highcross Street	Mrs. Viccars	,,
Saffron Lane	Miss Fletcher	,,

At **Clarendon Park Centre,** Miss Partridge, who has been President for many years, was reluctantly compelled to resign. She was succeeded by Mrs. Roberts, who was already a voluntary worker at the Centre.

At **Uppingham Road Centre,** Mrs. Flint was compelled to resign owing to ill-health, and was succeeded, for a time, by Mrs. Stewart Smith who was not able, however, to continue in office. The vacancy has now been filled by Mrs. Judge, who has been a voluntary worker at Curzon Street Centre for many years.

The total number of sessions held during the year was 733 and the total attendances of mothers was 38,720.

A session is held each week, and there is a doctor in attendance to give free advice to the mother about her child and herself in relation to the child. When any treatment is considered necessary the mother is advised as to where she should obtain it. All cases see the doctor on their first visit and thereafter as occasion demands. Efforts are made to ensure that all children—the babies, the ex-babies and the toddlers—are brought to the notice of the doctor at regular intervals, so that defects may be prevented or discovered at an early age, and appropriate treatment recommended.

As far as accommodation permits, each Centre has a room set apart as a Nursery where mothers may leave their toddlers in the care of one or more voluntary workers, who keep their children happily and safely occupied while the mothers are free to derive the maximum benefit from the other activities of the Centre.

The following medical practitioners conduct the medical consultations at the various Infant Welfare Centres each week :— Dr. F. Armitage, Dr. Gertrude Austin, Dr. Lucy Simpson Davies, Dr. Moffatt Holmes, Dr. Catherine Mitchell, and Dr. P. E. Snoad. Dr. E. Gordon Lawrie, the Assistant Tuberculosis Officer, attends at four Centres, and the Maternity and Child Welfare Medical Officer at one Centre and the Infants' Milk Depot each week for the same purpose.

A Health Visitor is attached to each Infant Welfare Centre and, as far as possible, her district work is in the neighbourhood of the Centre which she attends, so as to ensure continuity of the district and clinical work. It is chiefly through the home visiting of the Health Visitor that the existence and objects of the Infant Welfare Centres are made known to new mothers and the Health Visitor's knowledge of the home conditions should be available for the doctor at the Centre. Similarly, the Health Visitor should be in close touch with the doctor to ensure that the medical advice given at the Centre is carried out.

In addition to the medical consultations, much useful work in the teaching of various branches of Mothercraft continues to be carried on at the Centres. Special attention is paid to the matter of suitable clothing for infants and children under five years of age, and mothers are encouraged to make the various garments from patterns which are available, rather than to purchase from the

supply of garments, suitable in design and material, which is maintained at the Centres. Mention should be made of a very successful "knitting class" for children's garments which is a regular feature at the weekly session of one of the Centres attended by mothers from one of the poorest areas in the City.

A series of fortnightly "talks" is maintained at the Centres. The syllabus includes ante-natal supervision, the care of the nursing mother, breast feeding and artificial feeding of infants, general management of the baby and toddler, elementary hygiene and the laws of health. Topical and seasonal subjects are also taken from time to time. The majority of these "talks" are given by Mrs. Reed, the Superintendent Health Visitor, and by Nurse Prior, who is attached to the Department as a part-time official in this capacity. At High Cross Street Centre and occasionally at some of the other Centres, the Health Visitor gives the fortnightly "talk."

There are two Infant Welfare Centres which differ from the others in that the premises are permanently rented by the Corporation, and are open daily. These are the Infants' Milk Depot, 18 King Street, and the Highcross Street Infant Welfare Centre.

1.—The Infants' Milk Depot, which was established at premises in Belgrave Gate in 1906 is now accommodated at 18 King Street. The new premises, situated near the centre of the City, have been occupied for more than a year and prove to be much more convenient. There are separate rooms on the ground floor for the storage and sale of dried milk, &c., and for the weighing of babies. In addition there is a partially covered in yard at the side of the premises, which makes a convenient storage place for perambulators. The first floor has four small rooms which have been equipped to serve various clinics and are used for four sessions in each week.

Mrs. Stanion continues as manageress and there are two assistants for the routine work in connection with the sale of dried milk. It is the Central Depot for the sale of dried milk and other infant foods, and for the distribution of dried milk and other foods and drugs to the various Infant Welfare Centres.

The premises are opened throughout the day and mothers may attend at any time to have their babies weighed and to receive advice from Mrs. Stanion. The Maternity and Child Welfare Medical Officer conducts a weekly clinic for children attending the Milk Depot.

The details of the work for 1931, expressed numerically, are as follows :—

	(1931)	(1930)
Number of New Cases	479	612
Number of Infant Clinics held	47	85
Attendances at Clinic	839	1,234
Number of Children Weighed (in addition)	4,913	5,249

It will be seen that there was a general decrease in the attendances throughout the year. As regards the Infant Welfare Centre, it was considered adequate to hold one session each week, instead of two, which accounts for the decrease under this heading, though the average attendance per session was 17.8 as compared with 14.5 in the previous year. The general figures have shown a slow decline for several years and this was more marked in 1931, probably due to the transferring of the work from premises where it had been carried on for 26 years. It is evident that the use of dried milk as a food for infants is not so great as in former years. An indication of the change in the character of the work in connection with the Milk Depot, is the fact that of the 4,913 children weighed during the year, 1,323 were entirely breast fed and 116 partially breast fed. In addition, a total of 173 test feeds were carried out during the year.

2.—Highcross Street Infant Welfare Centre. These premises comprise a three-storey house of eight rooms, five of which are actually in use daily. Two health visitors are attached to the Centre and are responsible for the home visiting in the surrounding district. One or other of the Health Visitors is always in attendance at the Centre and mothers may attend at any time to receive advice about their children, or themselves in relation to their children, or to have their babies and toddlers weighed. Dried milk is also supplied from this Centre. Medical consultations are held on Thursday afternoons and a fortnightly " talk " to mothers is given by the Health Visitor on Tuesday afternoons. From time to time, the President of this Centre arranges a series of classes of some general or practical interest to the mothers. A conveniently designed window in the front room of the ground floor is available for the display of diagrams, pictures, and models of babies and toddlers, suitably clothed, and is a useful adjunct to the mothercraft taught at the Centre. It is also possible for test feeding (in connection with the maintenance of breast milk) to be carried out here and increasing use of these facilities is being made by the doctors at the Infant Welfare Centres and by the Health Visitors.

The details of the work for 1931, expressed numerically, are as follows :—

	(1931)		(1930)	
Number of New Cases	157		189	
Attendances of children under one year	2,396	3,007	2,629	2,944
Attendances of children aged 1 to 5 years	611		315	
Advice to mothers	258		—	
Attendances for dried milk, &c. ..	1,742		—	
Number of Clinics held	49		49	
Attendances at Clinic (mothers) ..	2,020		1,757	
Number of Consultations ..	763		695	

It will be seen that while the number of new cases is less than during the previous year, yet the total number of children brought to the Centre, apart from the clinic, is a slight increase (63) on the previous year. Actually, the increase is in the attendance of children aged 1 to 5 years, which was nearly double that of the previous year. This is a very gratifying result of a definite effort to teach the mothers the need to have their children supervised beyond the period of infancy.

Ante-natal Clinics.

There are three municipal clinics for the expectant mother, viz. : The City of Leicester Maternity Home, Westcotes Drive (Friday morning and afternoon), for those women who have booked their confinement at this Home ; The Infants' Milk Depot (Tuesday morning), and Highcross Street Centre (Wednesday morning). The medical work at these clinics is carried out by the Maternity and Child Welfare Medical Officer. The women who attend include :—

1. Those who come independently, or are referred by a Health Visitor and have not made arrangements concerning their confinement. They continue to attend until such arrangements are made, when details of their case are sent to the person booked to attend the confinement, and with whom arrangements are made as to subsequent attendance at the clinic.

2. Those who are referred to the clinic by midwives. The Central Midwives Board has set up a certain standard of ante-natal work for midwives which not all of them are competent to attain and they are therefore instructed to utilise the facilities of the ante-natal clinic. Further, while a competent midwife is able to carry out the supervision as set out by the Central Midwives Board, and so form an opinion of her patient in relation to child-bearing, she is not in a position to judge of the woman's general health. As this is a vital factor in relation to pregnancy, at least one medical

examination is necessary in all cases. The ante-natal clinic affords this facility for those cases for whom no doctor is booked and midwives are slowly availing themselves of it.

With the patient's consent, a written medical report is sent to the midwife after the first consultation, and subsequently as required.

3. Those who are sent by medical practitioners. Occasionally, a doctor sends his own cases to the ante-natal clinic, and the same procedure as for midwives' cases is carried out in the matter of medical reports.

4. Those who have already engaged a doctor for their confinement. Such women are informed that they cannot attend unless the doctor who has been engaged expressly wishes this.

In addition to the routine medical examination at the ante-natal clinic, their educational value is an important consideration. They afford an excellent opportunity for the teaching of Mothercraft, and the guidance and encouragement in the matter of making baby clothes, on rational lines, provides the women with suitable and useful work during the latter months of their pregnancy. Also special emphasis is laid on the subject of breast-feeding ; those who are anxious to do this are encouraged and supervised, and those who have some prejudice against suckling their child are told of its advantages and urged to do so. It is the exception to find a healthy woman who cannot breast feed, and there are but few general conditions which contra-indicate it.

What appears to be the most important criticism levelled against ante-natal clinics is that the woman is not supervised by the person who eventually attends her in childbirth. This is certainly not an ideal arrangement, but judging by the majority of women who attend the clinic, they would not, of their own accord, place themselves under the supervision of their own doctor during their pregnancy. The existence of an ante-natal clinic serves to indicate to women that they need definite and skilled supervision during their pregnancy. The clinic should cause them to seek advice, and to seek it earlier than has been the custom hitherto, whether they go to a clinic, to their own doctor or to a midwife.

In addition to preventing or providing for certain complications at the confinement, the work at an ante-natal clinic should have a bearing on the neo-natal deaths and deaths from prematurity. While much has been done to reduce infant mortality in general, the problem of the feeble infant who dies at birth or within a few

days is still a serious one. Its relation to the general health of the mother during pregnancy, with which is associated the question of a suitable diet, is becoming more recognised and it is by instructing the pregnant women as to her mode of life and her daily food that the numbers in this special age group of infant deaths can be reduced.

The number of ante-natal clinic sessions held and the attendances during 1931 were as follows :—

	Number of Session.	Attendances: New Cases.	Old Cases.
18 King Street Centre	38	141	365
Highcross Street Centre	51	158	305
Municipal Maternity Home ..	99	237	603

Maternity and Child Welfare Dental Clinic.

By arrangement with the School Medical Service Department, dental treatment is available for expectant and nursing mothers, and for children under five years of age who are recommended by the doctors at the Infant Welfare Centres and ante-natal clinics. One of the Dental Surgeons sets aside one afternoon each week for the treatment of such cases at the School Clinic.

The following are the figures for 1931 :—

	(1931)	(1930)
Number of New Cases	125	101
Number of Attendances	367	288
Number of Cases completed treatment ..	81	81
Extractions—Permanent Teeth	310	309
Temporary Teeth	78	52
Anaesthetics—Local	138	123
Gas	10	7
Fillings	25	27
Scalings	7	5
Dentures	22	15
Prosthetic Dressings	100	70
Dressings	14	
Consultations	64	—
Repairs	4	4
Number of Clinic Sessions held	43	45
Number of Cases under Treatment on 31st December, 1931	44	—

It will be seen from the above figures that the amount of work at this clinic continues to increase, and it is a distinct advantage, when inducing reluctant mothers to obtain dental treatment, to be able to offer them a definite appointment for this purpose.

Municipal Maternity Home.

The Municipal Maternity Home, situated in Westcotes Drive, was opened in August, 1920. It provides accommodation for 26 beds, together with one isolation bed.

The number of confinements in the Home each year has been as follows :—

1920 (five months only)	139	1926	455
1921	339	1927	445
1922	345	1928	515
1923	394	1929	504
1924	444	1930	475
1925	438	1931	349

It will be seen that the number of cases admitted has fallen considerably during the last two years. It was in May, 1930, that the Maternity Home Sub-Committee resolved to exclude cases which were resident outside the City boundary ; and the fact that 90 county patients are included in the total for the year 1929 will account to a large extent, for the decrease in the number of admissions. But this explanation does not appear to account entirely for the decrease in the number of patients, and it is a matter of concern that the accommodation which the Home affords, accessible from all parts of the city, yet away from noisy traffic, is not in greater demand.

A tabular statement of the work done at the Home is given in Table 17, and a financial statement in Table 20.

The ante-natal clinic for women who have booked to have their confinement at the Maternity Home is held on the premises for two sessions in each week (Friday morning and afternoon).

Training of Midwives.—The Municipal Maternity Home is an approved Training School for pupil midwives and during the year 11 general trained nurses and 3 untrained persons were accepted for training. One pupil midwife was in training at the beginning of the year. Nine pupils successfully passed the examination of the Central Midwives Board, two pupils were unsuccessful and four pupils were still in training at the end of the year.

Midwifery Lectures for Pupil Midwives.—The arrangement continues whereby a combined lecture course for pupil midwives from the three recognised training schools in Leicester is held, half at the Municipal Maternity Home and half at the

Leicester and Leicestershire Maternity Hospital. Income is derived from the fees of the pupils attending the courses and out of the funds so obtained all expenses, including lecturers' fees, have to be paid.

One lecture at the close of each course, dealing with the relationship of the midwife to the local supervising authority, is given by the Medical Officer of Health.

Staff.—Dr. T. W. Allen continues as the Medical Officer on call for the Municipal Maternity Home and Miss E. Bradshaw as Matron.

Day Nursery.

The Corporation took over the work of the Leicester Day Nursery Society in July, 1920, and since February, 1923, the work has been carried on at the premises in St. Martin's Lane (formerly St. Martin's Vicarage).

Mothers who are obliged to go to work and who would have difficulty in finding a suitable daily nurse woman, may leave their children, up to five years of age, under skilled supervision and healthy conditions throughout the day for a nominal charge. In addition, there are facilities for those working mothers who wish to continue to breast feed their children. Such mothers return to the Nursery for this purpose during their dinner hour and are also provided with a nutritious mid-day meal for a very nominal sum. Most of the mothers who are breast feeding when they first visit the Nursery are glad to avail themselves of these facilities and the arrangement works well. The house provides good accommodation for the nurseries and for the staff and the open-air playground, with its sand pit, is a great asset to the nursery and a joy to the children. Except in very severe weather, it is possible to accommodate all the children out of doors in the playground, the babies, suitably clad, in cots and the older children happy at their games in play pens or in the sand pit.

The Maternity and Child Welfare Medical Officer visits the Day Nursery at frequent intervals and is also in constant touch with the Matron as to any doubtful cases of admission.

Attendances.—The Day Nursery was open during the year for 250 full days and for 49 half days (Saturdays). The total full-day attendances were 8,726 and the half-day attendances 1,828.

Teaching of Mothercraft.—The arrangement with the Education Committee for the teaching of Mothercraft at the Day Nursery to school girls continues. During the year 184 girls attended from the following schools :—Elbow Lane, King Richard's Road, Holy Trinity, St. Mary's, Chester Street, Mantle Road and Willow Street.

The girls come in groups of not more than eight, one group attending in the morning and one in the afternoon, each group attending for a period of four weeks. The total attendances of schoolgirls were 2,818, and the daily average 14.

Staff.—Miss Alice M. Mason continues as Matron of the Day Nursery and is assisted by a staff of two Sisters, and probation nurses as required.

Midwives.

A list of midwives who, during 1931, notified their intention to practice in the City of Leicester is appended (Table 16). Their inspection has been carried out by periodic visits to their homes. Special visits, as required, are also made and midwives are in close touch with the Inspector of Midwives concerning any emergencies which arise in their practice. The standard of the work, of necessity, varies with the individual midwife and supervision is necessary to a greater extent in some cases, though there were only two " bona-fide " midwives practising within the area during the year and the number of patients attended by them was small. The midwives are constantly reminded that the function of the Local Supervising Authority, through the Inspector of Midwives, is to ascertain that the rules of the Central Midwives Board are faithfully and promptly carried out and to assist them to this end, when they are in any difficulty.

Registered Nursing and Maternity Homes.

A list of registered Nursing and Maternity Homes in the City, at the end of 1931, with details as to registered accommodation, is set out in Table 29.

During the year there were five applications for registration and these were granted by the Maternity and Child Welfare Sub-Committee. One was a transfer to larger premises where there is accommodation for eight patients, one was for 4 beds for " nerve, borderland and chronic medical cases," and one for 2 beds for maternity and chronic medical patients. Two registrations granted

during the year were subsequently cancelled at the request of the keeper of the Home. In one Home previously registered, the Committee sanctioned the registration of an additional bed as an emergency measure, and in another registered Home, the number of beds was reduced to two.

The registered Homes were inspected periodically during the year by the Maternity and Child Welfare Medical Officer. The accommodation and facilities vary considerably in the different registered homes, but every effort is being made to secure in all the homes, a high standard of efficiency.

Assistance in Necessitous Cases.

A special Sub-Committee, of which Mrs. Cooper continues as Chairman, meets each fortnight to consider applications for help in necessitous cases of mothers or children under five years of age. Every application has to be made in writing on a form which has been specially drawn up and requires a full statement of all sources of income, together with particulars as to rent, number of dependent children, &c. This statement is frequently checked by application to the employer and the Health Visitor appends a report on the case. Further, a medical certificate is required concerning the condition of the person for whom help is sought. This is usually supplied at the Infant Welfare Centre or ante-natal clinic, but a certificate from a private practitioner is accepted in cases which cannot attend a centre.

The following figures show the amount and variety of assistance given during the year :—

	(1931)	(1930)
Number of new cases granted milk	381	403
Number of old cases granted milk	1,019	1,212
Number of gallons of milk granted free ..	5,507	6,078
Number of cases granted dried milk free ..	94	96
Number of cases admitted to the Day Nursery at reduced rate	55	26
Number of cases admitted to the Day Nursery free	4	3
Number of cases admitted to the Maternity Home at reduced rate	4	5
Number of cases in which doctor's fees were remitted	28	31
Number of cases in which total fees for midwives were allowed	9	12
Number of cases in which part fees for midwives were allowed	6	10
Number of cases in which dental fees were remitted	2	—
Number of cases in which no action was taken..	82	74

Local Government Act, 1929.

We have now had more than a complete year's experience of the working of the Local Government Act, 1929.

The two sections of the Act which concerned the Maternity and Child Welfare Department were the care of destitute children under five years of age and the supervision of children under seven years who were nursed "for gain."

Up to the present, the Maternity and Child Welfare Committee has not taken over the care of destitute children under five years of age.

As regards the work under the Children Act, this was transferred to the Child Welfare Department, and each Health Visitor is an authorised inspector of children under seven years of age who are taken for gain. At the time of the transfer, 37 such children were registered within the City and during the nine months ended December, 1930, 36 further notices of reception were received and approved by the Maternity and Child Welfare Committee. During 1931, the year under review, 34 notices of reception concerning 27 children were received from 34 persons. In one instance, the Maternity and Child Welfare Committee decided that the nurse woman should not receive children for gain as her other duties did not permit her to give adequate care to such children.

Special record cards are in use for the purpose of recording particulars as to the type of nurse woman, premises, other occupants of the house, and the condition of and provision made for the nurse child. A separate cot is insisted on for all infants. The Health Visitor pays her preliminary visit as soon as a notice of reception is received and the report on this visit is submitted to the Maternity and Child Welfare Committee before the notice of reception is approved by them. Thereafter, the children are visited at least once in each month to ensure that a satisfactory standard is maintained for these children. During 1931, the Health Visitors paid 420 visits to children in the care of persons who receive them for reward.

Treatment of Children under Five Years of Age at the School Clinics.

The arrangement continues between the Education and Health Committees for the treatment of children under five years of age at the Orthopædic and Light Department provided at Richmond House in connection with the School Medical Service. The children are recommended for treatment, on special forms, by the doctors at the Infant Welfare Centres.

The following particulars are taken from the report of the School Medical Officer :—

Artificial Sunlight Clinic.

The total number of children under five years treated in 1931 was 201, and of these 164 were new admissions during the year. (This figure is only five less than the number actually referred for treatment).

The number of infants who finished their course was 83. Appended are details :—

Rickets, 54 : In practically every case favourable results were obtained.
Malnutrition, 12 : Excellent results were obtained in eleven infants. In one case treatment was abandoned owing to a congenital defect.
Anæmia, 5 : The infants in this group did fairly well.
Debility, 6 : The best results were in these cases associated with anæmia.
Various, 6 : All cases did well.

Abandoned Treatment.

There were 45 cases in this group. Generally, only a few treatments had been received. The commonest reason given was that the mother was unable to attend.

Orthopædic Clinic.

During 1931, 47 children under five years, were referred for consultation at the Orthopædic Clinic. Of these 42 were treated, either at the School Clinic, or, when recommended by the Orthopædic Surgeon, were admitted to the City General Hospital where provision has now been made for the prolonged institutional treatment necessary in these cases. Only three cases failed to attend at the Clinic for a consultation, and of these, two were taken elsewhere for treatment. Two infants referred at the end of 1931, were treated early in 1932.

In addition to provision for Artificial Sunlight and Orthopædic treatment, arrangements with the Education Committee were completed in 1931 whereby minor ailments, squint, nose, ear and throat defects, in children under five years, may be referred from Infant Welfare Centres for treatment at the School Clinics.

Birth Control Clinic.

The establishment of a Municipal Birth Control Clinic was sanctioned by the City Council in 1930 and the first session was held on 26th March, 1931. Advice is given to those married women, attending Maternity and Child Welfare Centres, who

need it on medical grounds. This is in accordance with Memo. 153/m.c.w. of the Ministry of Health. A weekly session is held and each patient accepted for advice is medically examined by a woman doctor. Patients return to the Clinic, as required, and all women who have been advised are being followed up, though it is too soon to report on the results of advice given.

The following particulars refer to the nine months ended December 31st, 1931 :—

Total number of patients who sought advice		60
Number of patients accepted for advice	42	
Number of patients who were refused advice ..	18	
	—	60

Concerning the 42 women who were accepted for advice, the following are particulars of the medical reason for the advice :—

Husband :	Active Tuberculosis	6
	Mental disease (at home)	2
Children :	Tuberculous	2
Mother :	Active Pulmonary Tuberculosis	10
	Other Tuberculous disease	3
	Gynæcological condition following childbirth ..	4
	Complications of pregnancy and childbirth ..	7
	Chronic Nephritis	4
	Various other conditions	4
		42

Further, some particulars as to age and number of pregnancies in these women may be of interest and are set out in the following table :—

Number of Pregnancies.	Under 25 years.	25 to 35 years.	35 to 45 years.	Totals.
1	1	3	–	4
2	3	4	–	7
3	2	3	2	7
4	2	1	2	5
5	–	3	–	3
6	–	4	–	4
7	1	1	1	3
8	–	–	2	2
9	–	–	1	1
10	–	1	2	3
11	–	–	2	2
13	–	–	1	1
Totals	9	20	13	42

It will be seen that advice was given to only four women who had had but one pregnancy, a living child in each case, and the reason for advising was the serious ill-health of the mother. Generally speaking, advice was given to mothers of comparatively large families. One of the most urgent cases needing advice was a delicate woman of 24 years who was seen early in the year at the ante-natal clinic, pregnant for the seventh time in seven years. She had one miscarriage and one stillborn child. She had to spend several weeks in hospital before her last confinement. Her general health is still poor, but she is doing her best to bring up her five children, two of whom are delicate.

Naturally, the greater importance is attached to data of those women who are accepted for advice, but in view of the limitations of the clinic, particulars of the women who were refused advice are not without interest.

Reasons for Refusal :

1.	Living in the county	1	
2.	Living in a Corporation house, but outside city boundary	1	
3.	Not attending M. & C. W. Centre	1	
4.	No medical grounds for advice	15	
		—	18

Under (2), the woman was certainly a suitable case on medical grounds. She was aged 41 years, and was suffering from marked anæmia and general debility. She had had 14 pregnancies ; three of the children had died in infancy. It is an anomaly that because the corporation house into which she has moved is outside the city boundary, she has to be refused the advice of which she stands in need.

Under (3), the woman has active pulmonary tuberculosis and her physician has advised her not to have another child, but the younger of her two children is now over five years of age, so that she has no reason for attending an Infant Welfare Centre. It is fortunate that she has not become pregnant during the last six years, but as she is still under 30 years of age, further pregnancies are probable.

Under (4), the chief reason for seeking advice was the fear of a large family. The following table indicates the number of pregnancies and age of the women who were refused advice :—

Number of Pregnancies.	20 to 25 years.	25 to 35 years.	35 to 45 years.	Totals
1	1	2	–	3
2	3	2	–	5
3	1	3	1	5
4	–	–	1	1
6	–	1	1	2
12	–	–	1	1
14	–	–	1	1
Totals	5	8	5	18

Two of the three women with one child each were anxious to space their children, rather than avoid a large family. The third woman, with one child, aged 2 months, dreaded a further pregnancy because of what she considered to be extreme age for child-bearing (34 years). When reassured, she went away expressing the hope that she would have a small family within the next few years.

It will thus be seen that, in spite of its limitations, the Birth Control Clinic has a definite and useful place in the scheme of maternity and child welfare. The writer would welcome its extension to include those married women known to be suffering from active pulmonary tuberculosis. Many of these receive Sanatorium treatment but, on their discharge, do not attend an Infant Welfare Centre and thus are not referred to the Birth Control Clinic for the advice on contraception which they need.

Puerperal Pyrexia and Puerperal Fever.

During the year, 40 notifications were received, 34 cases of puerperal pyrexia and six cases of Puerperal Fever. These included seven cases of Pyrexia and one of Fever in women whose homes were in the county and they are not included in the following tables which set out various data of interest concerning these cases :

	Puerperal Pyrexia.	Puerperal Fever.
Confined at home	14	5
Confined in a Maternity Home	13	–
Attended at confinement by a doctor.. ..	12	2
Attended at confinement by a midwife ..	15	3
Treated at home	4	–
Treated in a Maternity Home	12	–
Transfers to Hospital :—		
(Puerperal Pyrexia 11 : Puerperal Fever 5)		
City Isolation Hospital	9	3
Royal Infirmary	2	–
City General Hospital	–	2

Result of Treatment:

	Recovered.	Died.	Recovered.	Died.
At home	4	–	–	–
In Maternity Home.. ..	12	1	–	–
In City Isolation Hospital ..	8	1	2	1
In Royal Infirmary ..	2	–	–	–
In City General Hospital ..	–	–	2	–

The attributable causes in the 27 cases of Puerperal Pyrexia were difficult labour 2, complications of labour 3, breast abscess 5, phlebitis 1, influenza 2, pneumonia 1, septicæmia and sapræmia 4, constitutional disorder 2, abortion 1, rheumatism 1, cause not defined 5. It will thus be seen that while some cases notified early as Pyrexia proved to be definite cases of Puerperal Fever, in others the cause was not directly connected with childbirth.

Under the Notification of Puerperal Pyrexia and Puerperal Fever Regulations, a medical practitioner may seek the co-operation of the public health authorities in four ways, viz. : a bacteriological examination, a second medical opinion, a trained nurse, and hospital treatment. Actually, during the year, a second medical opinion was called in for one case, and 11 cases were transferred to municipal hospitals.

Under Memo 156/m.c.w. of the Ministry of Health, the services of a consultant, from a panel approved by the local authority are now available in all cases of difficulty arising ante-natally, or during the confinement or lying-in period, but these regulations were not put into operation until early in 1932.

Maternal Mortality.

During the year there were 15 deaths registered, including deaths associated with but not strictly due to childbirth. Of these, five were due to Puerperal Sepsis and 10 were due to "other accidents and diseases of pregnancy and parturition." As the gross number of births registered was 3,950 (corrected number was 3,684, but for this purpose the gross number is the figure to be taken), this gives a maternal mortality rate of 3.79 per 1,000 births as compared with 4.79 in 1930, and a Puerperal Sepsis rate of 1.26, as compared with 1.9 in 1930. The latest figures available for England and Wales are a maternal mortality rate of 4.40, and a Puerperal Sepsis rate of 1.92 for 1930.

The cause of death and age incidence for 1931 are shown in the following table :—

Cause of Death	All Ages.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.
Puerperal Sepsis	2	1	–	1	–	–
Septic Abortion	2	–	–	2	–	–
Placenta Prævia	2	–	1	1	–	–
Post-partum Hæmorrhage	1	–	–	1	–	–
Eclampsia ..	3	–	–	1	–	2
Contracted Pelvis	1	–	1	–	–	–
Shock Craniotomy	1	1	–	–	–	–
Spontaneous Rupture of Uterus	1	–	–	–	–	1
Hyperemesis Gravidaum ..	1	1	–	–	–	–
Heart Disease in Pregnancy	1	–	1	–	–	–
	15	3	3	6	–	3

Through the cordial co-operation of the various members of the medical profession concerned, it has been possible to obtain the fullest details concerning the pregnancy and the confinement in all these cases. In 10 women, the initial illness occurred at home, two women were in a general hospital and three were in a maternity home. Of the 10 women who were taken ill at home, two were removed to the Isolation Hospital, and five to a general hospital. The remaining three died at home, in two cases the death was so sudden that removal was not possible and in the third case, it was not considered advisable. One patient was transferred from a maternity home to a general hospital so that death took place at home in three cases, in general hospital in eight cases, in isolation hospital in two cases, in a maternity home in two cases.

The two cases of Puerperal Sepsis were in women who had apparently normal confinements.

In the two cases of abortion, one was in a single woman in whom the condition was procured. The other was a married woman who died 16 days after the initial illness.

In the two cases of Placenta Prævia, one was promptly removed to hospital while the other was at home under constant medical supervision.

The case of Post-partum Hæmorrhage was in a woman who had a severe accident at home in the first stage of labour.

In the three cases of Eclampsia, one was sudden and unexpected and the patient died before she could be removed to hospital, though medical attention was promptly available, and two were in women who were under their doctor's care throughout pregnancy and became ill after their confinement in a maternity home.

The case of Contracted Pelvis was in a single woman who refused any ante-natal supervision and did not summon the midwife until labour was well advanced. She was removed to hospital for operation.

The case of Shock and Craniotomy was under her doctor ante-natally and no difficulty was anticipated, but a natural delivery proved to be impossible and the patient was removed to hospital.

The case of Spontaneous Rupture of the Uterus was in a woman with three previous pregnancies. She was seen frequently by a doctor before confinement and difficulty was anticipated. The labour was complicated and the poor, general condition of the patient was a contributing factor to the cause of death.

The case of Hyperemesis Gravidaum occurred in a woman who was removed to hospital when four months pregnant. She died three days after admission.

The case of Heart Disease was admitted to hospital when five and a half months pregnant and cæsarean section was performed but the woman died two weeks after admission.

It will thus be seen that in no case was there any difficulty in obtaining prompt and skilled treatment for these women, many of whom were actually under constant medical supervision. In one case, that of an unmarried woman, it is regrettable that she refused ante-natal supervision as the difficult confinement which followed, could have been anticipated.

From this detailed survey, one is left with the conclusion that, in the present state of our knowledge, these 15 deaths (with one exception) must be regarded as largely unpreventable.

Staff.

The staff was increased by the appointment of an additional Health Visitor, and Miss M. Ash took up her duties in April, 1931.

Miss D. M. Johnson resigned her post in August and was replaced by Miss H. E. Rich.

Mrs. M. E. Williams relinquished her post in October, upon reaching the retiring age, and Miss B. M. Langton was appointed and commenced duties in December, 1931.

Miss L. Wright, who has been on the staff since 1921, was granted sick leave from October, 1931, and has since resigned her post owing to continued ill-health.

E. B. BERENICE HUMPHREYS.

May, 1932.

APPENDIX V.

Report of the City Analyst

For the Year 1931.

By F. C. BULLOCK, B.Sc., F.I.C.

Introduction.

I have the honour to present my third Annual Report on the work carried out in the City Analyst's Laboratory.

During the year 1931, 2,023 samples were received for chemical or bacteriological examination. In addition, bacteriological tests were made on 18 samples also examined chemically, and 145 determinations were made on the sulphurous acid content of the atmosphere, giving a total of 2,186 examinations.

Of the 1,338 samples taken under the Food and Drugs (Adulteration) Acts, 75 (5.5 per cent. of total) were certified as adulterated, or as not complying with the Regulations.

No new legislation of note affecting the work of the Public Analyst was passed during the year. The main Acts and Regulations now in force are as follows :—

Food and Drugs (Adulteration) Act, 1928.
Sec. 4 of Milk and Dairies (Amendment) Act, 1922.
Milk (Special Designations) Order, 1922.
Sale of Milk Regulations, 1901 & 1912.
Sale of Butter Regulations, 1902.
Public Health (Condensed Milk) Regulations, 1923 & 1927.
Public Health (Dried Milk) Regulations, 1923 & 1927.
Public Health (Preservatives, &c., in Food) Regulations, 1925–1927.
Agricultural Produce (Grading and Marking) Act, 1928.
Artificial Cream Act, 1929.
Fertilisers and Feeding Stuffs Act, 1928.
Rag Flock Acts, 1911 & 1928.

A Departmental Committee was appointed during the year to enquire into the working of the Food Acts, but their deliberations were subsequently cut short on the score of National economy.

This is to be regretted. The present laws are by no means satisfactory; and, while causing at times much anxiety to honest shopkeepers, nevertheless fail to give full protection to the consuming public. In consequence, the ways of those administering the Food Laws are beset with difficulties. Present day conditions differ widely from those the original Act was designed to meet; and it is to be hoped that before long another effort will be made to bring in some workable legislation that will effectively control the trade in the many new lines of food now on the market.

Three matters throwing light on the present unsatisfactory position will be referred to here in brief :—

(a) In July, 1930, a Bill to set up a standard for cheese went through its first reading without opposition. This Bill sought to define " cheese " as containing not less than 45 per cent. of butter fat in the dry solid matter. A substance containing a smaller proportion of fat would come under the category of " Skimmed Milk Cheese," and the amount of fat would have to be declared. Unfortunately, the Bill was not proceeded with.

It was thus considered quite in order in 1931 by reputable Leicester firms to sell as " Milk Cheese " substances having the following compositions :—

Sample No.	Water Per cent.	Fat Per cent.	Protein Per cent.	Fat as percentage of Total Solids.
1123	78.7	0.20	16.75	1.0
1125	79.0	0.48	15.6	2.3
1166	77.2	0.10	18.1	0.4
1179	77.8	0.17	16.7	0.8

Such substances form a highly unbalanced diet consisting of the curd of separated milk loaded with water, and would be more suitable for drying and making into knife handles. Nevertheless, the price charged was of the same order as that for ordinary cheese (10d. lb.), and it was not possible to secure convictions.

(b) In 1930, the position with regard to the composition of factory made jam was realised to be so unsatisfactory that manufacturers themselves took the initiative; and, in collaboration with representatives of the Society of Public Analysts, the members of the Jam Section of the Food Manufacturers' Federation agreed that all jam made by them should conform to certain standards laid down, and be labelled accordingly. These standards are open to criticism, and they certainly have not failed to receive it; nevertheless, the departure is a real advance.

The position with regard to Strawberry Jam for instance is now as follows :—

First Quality	Strawberry Jam must contain at least	42%	strawberries.
Second ,,	Strawberry Jam must contain at least	20%	,,
First ,,	Strawberry and Gooseberry Jam must contain at least	20%	,,
,, ,,	Gooseberry and Strawberry Jam must contain at least	10%	,,
Second ,,	Strawberry and Gooseberry Jam must contain at least	10%	,,
,, ,,	Gooseberry and Strawberry Jam must contain at least	5%	,,

To be sure of even five per cent. of the fruit whose name occurs on the label is something, if not very much ; and the stronger the criticism levelled against the present standards, the greater the implied reflection against the conditions prevailing before the standards were introduced.

(c) Chopped or shredded suet sold in a carton is essentially a product of recent years ; and naturally, such an article was not provided for in the parent Act of 1875. Moreover, no attempt at legal control of its composition has yet been made.

Now, whereas raw beef suet frequently contains 98 per cent. of fat and seldom less than 95 per cent of fat, shredded suet, as sold mixed with rice flour, seldom contains as much as 90 per cent. of fat, and frequently as little as 70 or 75 per cent. of fat. Yet claims are invariably made on the carton that "x parts of so-and-so's shredded suet go as far as x+y parts of raw suet."

The rice flour though harmless, is much cheaper than the suet ; and since it has no cooking value considered as suet, any excess over and above what is required for keeping the shreds separate must be considered as a cheap adulterant, increasing the weight of the food to the prejudice of the purchaser.

A resolution was passed by the Public Analysts' Committee towards the end of 1931 to the effect that, pending a legally authorised standard, a shredded suet should be considered adulterated by the addition of excess of rice flour if it contained less than 83 per cent. of fat.

In conclusion, I have great pleasure in recording the satisfactory services throughout the year of Mr. J. G. Lunt and Mr. J. L. Pinder.

During the year Mr. Lunt obtained the Fellowship of the Institute of Chemistry (Branch E), and Mr. Pinder passed his Inter. Science Examination (London University).

Summary of Samples for 1931.

The samples examined and reported on are classified in Table A.

TABLE A.

Category.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Total.
Foods and Drugs	349	318	306	365	1338
Bacterial Milks	58	61	61	67	247
Fertilisers and Feeding Stuffs ..	–	6	6	1	13
Rag Flocks	6	–	–	–	6
Food Samples submitted by Public	3	1	2	–	6
Health Department Samples ..	31	23	41	51	146
Water Department Samples ..	44	43	37	40	164
Various other Departments ..	34	10	29	15	88
Miscellaneous Samples.. ..	1	–	8	6	15
Total	526	468	490	545	2023

Milk Samples.

The number of milk samples examined month by month, and the number found faulty is shown in Table B.

TABLE B.

Milk Samples Analysed during 1931.

Month.	Formal Samples.	Informal Samples.	Samples reported "not genuine."	
			Formal.	Informal.
January ..	43	24	–	2
February ..	66	18	–	1
March ..	44	18	2	1
April	46	21	1	1
May	44	18	3	–
June	40	39	4	1
July	24	21	1	2
August ..	60	21	1	1
September ..	49	20	1	–
October ..	42	21	–	–
November ..	43	31	2	1
December ..	54	20	7	–
	555	272	22	10
	Total 827		Total 32	

The number of milk samples reported "not genuine" form 3.9 per cent. of the total.

The monthly average compositions of the samples analysed are given in Table C. The percentage of fat shows a steady decrease from 4 per cent. in January, reaching a minimum value of 3.42 per cent. in June, and then increases gradually to 3.93 in November. The non-fatty solids as usual show a much more restricted range of variation; the extreme values being 8.83 per cent. in July and 8.91 per cent. in February, March and November.

Similar figures have been obtained in previous years, and they leave no doubt as to the generosity of the present legal standards, which only require 3 per cent. of fat and 8.5 per cent. of milk solids other than fat. These facts are clearly brought out in Graph VIII.

TABLE C.

Average Composition of Milk Samples.

Month.	No. of Samples.	Fat.	Solids not Fat.
		%	%
January	67	4.0	8.86
February	84	3.75	8.91
March	62	3.72	8.91
April	67	3.65	8.88
May	62	3.67	8.90
June	79	3.42	8.86
July	45	3.58	8.83
August	81	3.64	8.85
September ..	69	3.77	8.90
October	63	3.89	8.87
November ..	74	3.93	8.91
December ..	74	3.82	8.87
	827	3.75	8.87

The defective milk samples enumerated in Table B are set out in greater detail in Table D.

All the milk samples received were tested for Boric Acid, Formaldehyde, Hydrogen Peroxide and Nitrites. In no case was any trace of preservative found present.

TABLE D.

Milk Samples reported "Not Genuine."

No.	Formal or Informal.	Nature of Deficiency.	Action taken.
145	Informal	2% deficient Solids not Fat	Caution by M.O.H.
146	,,	1% ,, ,, ..	,,
405c	,,	10% ,, Fat ..	,,
416c	,,	26% ,, ,, ..	,,
287	Formal	57% ,, ,, ..	,,
294	,,	2% ,, Solids not Fat .	No action.
430c	Informal	20% ,, Fat ..	Interview & Caution.
584	Formal	3.0 per 100,000 dry dirt ..	Prosecution ; £5 fine.
653	,,	4% added water ..	Caution.
656	,,	6% ,, ,, ..	,,
683	,,	6% deficient fat ..	,,
698	,,	5% ,, ,, ..	,,
468c	Informal	6% ,, ,, ..	,,
717	Formal	3% ,, ,, ..	,,
744	,,	13% ,, ,, ..	County Council asked
748	,,	5% ,, ,, ..	to follow up.
490c	Informal	51% ,, ,, ..	Following up Sample ; Genuine.
1001c	,,	3.3% ,, ,, ..	Caution by M.O.H.
831	Formal	10% ,, ,, ..	,,
1024c	Informal	10% ,, ,, ..	,,
1888	Formal	8% ,, ,, ..	,,
987	,,	4.5% added water ..	,,
1069c	Informal	3% deficient fat ..	,,
1291	Formal	Excessive dirt ..	,,
1298	,,	Repeat of 1291 : " Not so clean as desirable "	,,
1391	,,	45.3% deficient Solids not Fat	Prosecution : £2 fine
1394	,,	2% ,, ,,	Nil.
1494	,,	11.8% added water ..	Caution by M.O.H.
1497	,,	6.4% ,, ,, ..	,,
1619	,,	8.1% ,, ,, ..	,,
1622	,,	3.6% ,, ,, ..	,,
1706	,,	4.5% ,, ,, ..	,,

The results of Bacteriological Examinations of samples of Graded Milk taken under the Milk (Special Designations) Order, 1922, are set out in Table E.

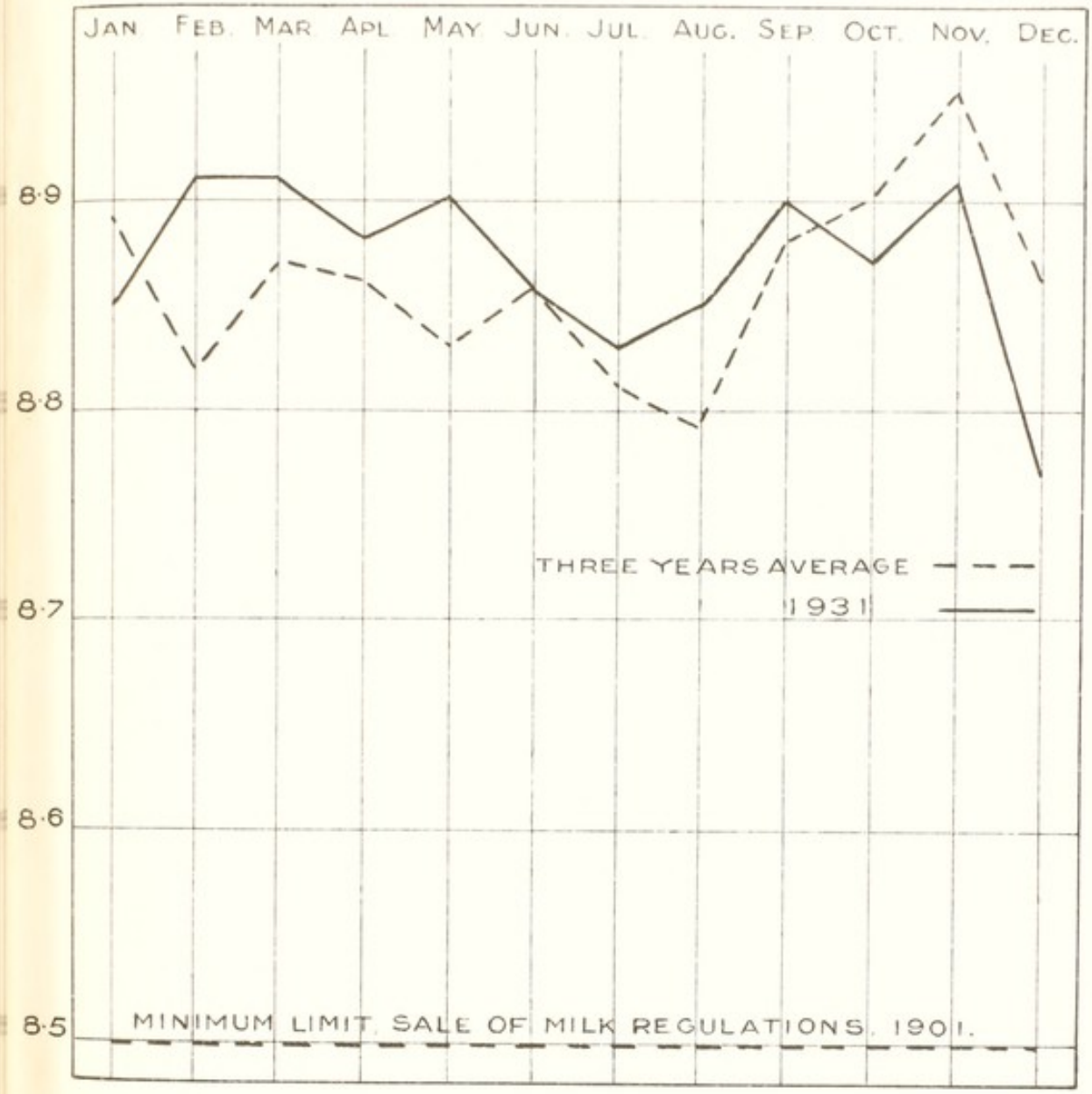
TABLE E.

Grade.	Total No. examined.	Passed as satisfactory.	Total count too high.	B. Coli too numerous.
Certified	15	14	1	0
Grade "A" (T.T.) ..	40	34	3	5
Grade "A"	140	122	7	18
Pasteurised	8	3	5	0
Sterilised	11	10	1	1
Bottled Milk & Loose Milks	33	26	2	5
Total ..	247	209	19	29

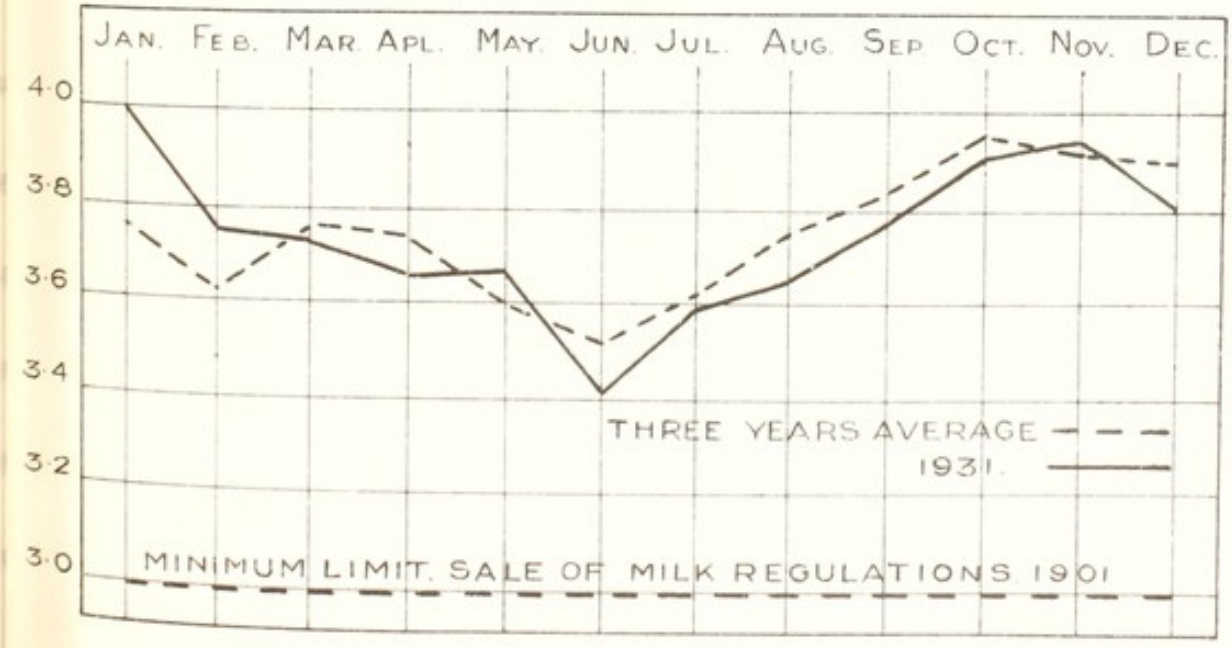
GRAPH VIII

VARIATION IN AVERAGE COMPOSITION OF MILK SAMPLES

NON-FATTY SOLIDS %



FAT %.



93 per cent. of the Certified Milk Samples were passed as satisfactory.

85 ,, ,, Grade "A" (T.T.) Milk Samples were passed as satisfactory.

87 ,, ,, Grade "A" Milk Samples were passed as satisfactory.

38 ,, ,, Pasteurised Milk Samples were passed as satisfactory.

Foods and Drugs.—Tables F. and G. give the samples of Food other than milk, and drugs examined during the year, and Table H. shows the defective samples and the action taken.

TABLE F.

Foods analysed during 1931.

Sample.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
Tea	—	7	1	—	8
Coffee and Coffee Mixtures	6	1	8	6	21
Coffee Essence	—	2	—	—	2
Cocoa	—	4	1	—	5
Butter	18	8	3	6	35
Margarine	—	6	4	—	10
Lard	12	—	4	—	16
Cheese, Milk Cheese, &c...	13	—	11	8	32
Suet	—	—	—	11	11
Cream	—	10	3	—	13
Ice Cream	—	6	—	—	6
Rice	—	—	—	8	8
Macaroni	—	—	—	6	6
Sago	3	4	—	2	9
Tapioca	3	5	—	1	9
Pearl Barley	—	—	—	6	6
Mustard and Mustard Mixtures	2	—	—	4	6
Pepper	15	—	—	—	15
Mixed Spice	4	—	—	—	4
Gravy Salt	—	4	—	—	4
Sauce	—	2	—	—	2
Pickles	—	2	—	—	2
Sugar	—	5	—	—	5
Jam	12	—	1	—	13
Bread	—	6	—	—	6
Flour	6	—	2	—	8
Potted Beef	3	—	—	—	3
Sausage, Polony, &c. ..	6	7	11	—	24
Brawn	1	—	—	—	1
Bacon	—	—	1	—	1
Confectionery	1	1	—	—	2
Clear Mints	6	—	—	—	6
Mineral Waters	—	—	6	—	6
Beer	—	—	13	—	13
Spirits	—	—	—	12	12
Wine (Non-Alcoholic) ..	—	—	—	6	6
Vinegar	—	—	6	—	6
Dried Fruits	—	—	2	16	18
Mincemeat	—	—	—	6	6
"Cokernut"	—	—	—	1	1
	111	80	77	99	367

TABLE G.

Drugs Analysed in 1931.

Sample.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
Salts, Epsom	6	—	6	12	24
,, Glauber's	—	—	—	12	12
Sodium Bicarbonates ..	—	—	6	—	6
Borax	—	—	—	6	6
Glycerine	6	—	6	—	12
Sweet Spirits of Nitre ..	6	—	—	—	6
Lime Water	—	—	7	—	7
Prescriptions	—	—	—	6	6
Tablets	—	—	4	—	4
,, Aspirin	—	4	2	—	6
,, Phenacetin ..	—	4	—	—	4
,, Bismuth	—	—	—	6	6
Celery Pills	—	—	—	1	1
Oil, Camphorated ..	6	—	—	6	12
,, Eucalyptus	—	6	—	—	6
,, Castor	—	—	—	6	6
Powders, Seidlitz ..	—	4	—	—	4
,, Gregory's ..	—	6	3	—	9
,, Compound Liquorice ..	—	6	—	—	6
Ground Ginger	1	—	—	—	1
	25	30	34	55	144

TABLE H.

Defective Samples other than Milk.

No.	Description.	Formal or Informal.	Nature of Adulteration.	Action Taken.
261	Sausage	Informal	82/10⁶ SO_2 not declared	Dismissed on payment of Costs.
262	,,	Formal	80/10⁶ ,, ,, ,,	
773	,,	Informal	176/10⁶ ,, ,, ,,	Formal sample taken.
783	,,	Formal	131/10⁶ ,, ,, ,,	Prosecution : 10s. fine.
810	,,	Informal	Boric Acid, .017%	Formal sample taken.
813	,,	,,	260/10⁶ SO_2 not declared ..	Following up sample genuine.
817	,,	Formal	Boric Acid, .015% ..	£1 fine.
811	Polony	Informal	,, ,, .055% ..	Formal sample taken.
818	,,	Formal	,, ,, .056% ..	£1 fine.
165	Cheese	Informal	2.0 grains per lb. Tin ..	Stock withdrawn from Sale.
168	,,	,	Mites and Mould causing potential danger	Stock withdrawn from Sale.
1123	,,	,,	97.8% deficient in fat ..	Caution by M.O.H.
1122	,,	,,	Mis-description	,, ,,
1125	,,	Formal	94.9% deficient in Fat ..	,, ,,

TABLE H.—continued.

No.	Description.	Formal or Informal	Nature of Adulteration.	Action Taken.
1166	Milk Cheese	Informal	99.0% deficient in Fat .. 0.03% Boric Acid	Prosecution: Cases dismissed on payment of 10s. Costs.
1179	„	Formal	99% deficient in Fat ..	
795	Cream	Informal	.20% Boric Acid	Prosecution authorised but withdrawn.
796	„	Formal	.24% „ „	
797	„	„	.21% „ „	
838	„	„	.26% „ „	£2 fine.
839	„	„	.26% „ „	£2 fine.
771	Margarine	Informal	Labelled incorrectly ..	Caution: Vendor's attention drawn.
772	„	„	„ „ ..	
894	„	„	„ „ ..	
900	Butter	„	1.2% F.F.A. in excess ..	Caution by M.O.H.
837	„	Formal	1.0% „ „ ..	
230	Sago	Informal	100% Tapioca	Letter sent to local Grocers' Association 6 weeks to advise members given.
544	„	„	100% „	
549	„	„	100% „	
344	„	„	100% „	
1373	Suet	Informal	False label	Wrote to manufacturers
1374	„	„	2.2% excess Starch ..	
1375	„	„	False label	
1376	„	„	2.2% excess Starch also false label	
1381	„	„	False label	
1311	Brandy	Formal	37.6° Under proof	Caution: Wrote to Licensed Victuallers' Association.
360	Sp. Aeth. Nit.	Informal	27.0% deficient Ethyl Nitrite	Caution by M.O.H.
362	„	„	17.7% „ „ „	
838	Gregory's Powder	„	29.8% deficient MgO ..	Following up samples taken.
859	„	„	64.2% „ „ ..	
860	„	„	46.2% „ „ ..	
864	„	Formal	18.5% „ „ ..	Caution by M.O.H.

Preservatives in Food other than Milk.

Thirty-five samples of Butter and 10 samples of Margarine were tested for Boric Acid and Formaldehyde; in no case was any found present. Thirty-two samples of cheese were tested for Boric Acid. A trace (0.03 per cent.) was discovered in one sample of Milk Cheese. Thirteen samples of Cream were tested for Boric Acid, Formalin and Hydrogen Peroxide. Boric Acid in amounts ranging from 0.20 per cent. to 0.26 per cent. was found in five samples. Five samples of sugar were analysed for sulphite bleach. Although 70 parts per million of Sulphur Dioxide are permitted by the Regulations, the amounts found only averaged five parts per million. Thirteen samples of Jam were examined for sulphite, salicyclic acid and benzoic acid. Sulphur Dioxide is permitted up to 40 parts per million. The average amount found present was

30.0 parts per million ; the limit of 40 being slightly exceeded in only one sample.

Thirty miscellaneous meat foods were examined for Boric Acid and Sulphur Dioxide. Sausages and sausage meat are allowed 450 parts per million of Sulphur Dioxide, and the presence of this preservative must be declared. No preservative is permitted in any other meat food.

Five samples of sausage were found containing undeclared Sulphur Dioxide, two samples of sausage and two samples of polony were condemned on account of the presence of Boric Acid.

Six samples of Mint Sweets contained an average amount of Sulphur Dioxide of 88 parts per million. No sample was condemned for excess.

Thirteen samples of Beer contained an average of 30 parts per million of Sulphur Dioxide. The Regulations permit 70 parts per million ; the highest amount found in any one sample was 64 parts per million.

Six samples of Sweetened Mineral Waters averaged 20.5 parts per million of Sulphur Dioxide. Benzoic Acid was absent in every case.

Six Non-alcoholic Wines were tested for Sulphur Dioxide, Salicylic Acid and Benzoic Acid. 350 parts of Sulphur Dioxide are permitted by the Regulations ; the amounts found present were 125, 360, nil, 210, 260 and nil respectively.

Twenty-five samples of miscellaneous Dried Fruits were examined for Sulphur Dioxide. All contained less than the permitted amounts, these ranging from 100 parts per million for Candied Peel to 2,000 parts for Dried Pears.

Twenty-four samples of prepared starchy foods were examined for Sulphur Dioxide. Sago was practically free from this chemical, while the whiter Tapioca contained usually about 40 parts per million.

It is apparent then, that, as a result of the Public Health (Preservatives, &c. in Food) Regulations, 1925, now in force, Sulphur Dioxide is, at the present time, the most commonly used Food Preservative in this country. Benzoic Acid, though permitted in certain cases, is seldom used, probably because it is not

very efficient. Formalin and Salicylic Acid appear to be about obsolete, but Boric Acid, though forbidden, is being abandoned with considerable reluctance by certain trades.

Sago and Tapioca.

In four cases out of nine, Tapioca was supplied when Sago was asked for. Although they are of about equivalent food value and cost, Sago and Tapioca are quite distinct articles, the following being the principal points of difference :—

Sago is obtained from the pith of the trunk of a palm tree. Tapioca is a starchy preparation derived from the root of several plants belonging to the N.O. Euphorbiaceæ.

Sago is yellowish or brownish in colour, whereas Tapioca is nearly pure white. The difference in flavour is appreciable.

The amount of protein matter in Sago tends to be slightly higher than in Tapioca.

Although both these articles are permitted to contain up to 100 parts per million of Sulphur Dioxide, the samples of genuine Sago examined were free from sulphite, whereas all the Tapioca examined contained appreciable amounts of sulphite.

Admitting that the average purchaser may not be greatly prejudiced when supplied with Tapioca although he asked for Sago, what is the position of the conscientious vendor who endeavours to supply the genuine article in spite of its slightly revolting appearance ? He is probably prejudiced in his sales eventually in favour of the vendor who supplies the white and therefore **apparently** purer article, which is not Sago at all, but really Seed Pearl Tapioca.

Moreover, if Tapioca is permitted to be called Sago, what are discriminating people to ask for when they really want Sago ?

From both points of view, it is desirable that the two articles should go under their proper names.

The Council of the local Grocers' Association was communicated with on the matter, and they agreed that the practice of selling Tapioca and calling it Sago was wrong and undesirable, and should cease. A period of grace in which all the members of the Association could be notified was asked for and granted.

Flour.

Of six samples examined, three contained chemical improvers of the persulphate type, and one contained added phosphate. This form of tampering with a natural product is not at present illegal.

Margarine.

Three samples were not labelled in accordance with the Food and Drugs (Adulteration) Act, 6 (3) (c), and were therefore reported against. In connection with two of these samples, the following report was made to the Health Committee at the time :—

" In appraising the seriousness or triviality of this offence, the following considerations should be borne in mind :

Butter and modern Margarine are very similar substances, differing only in price, chemical composition and nutritive value. In appearance, they are indistinguishable ; and in flavour and texture, they can often be differentiated only with difficulty.

The Regulations governing the wrapping and packing of Margarine are very clearly set out in the Food and Drugs Act, and their purpose is to widen the existing slight difference between the two articles, Margarine and Butter, in order to protect the public from getting the one instead of the other as a result of fraud, carelessness or accident.

The measures adopted for the purpose in this country are not nearly so drastic as those adopted abroad. For instance, in Australia, margarine must be coloured pink ; in Denmark and other countries, it must not be coloured yellow . . . In Germany, margarine must contain at least 10 per cent. of Sesame Oil, a substance which is easy of detection.

In this country, the Regulations simply require that when margarine is sold by retail, the outside of the outer wrapper shall bear the word MARGARINE in half-inch block letters, no other printed matter beyond a statement of the weight appearing on the label.

Nothing could be simpler than this, and I can only recommend that the slightest departure from this specification should be regarded as evasion. . . ."

Drugs.

A list of the drugs analysed during the year is given in Table G. All the samples were genuine except the following :—

Sweet Spirit of Nitre.

Two samples were deficient of 27.0 per cent. and 17.7 per cent. respectively of their normal amounts of Ethyl Nitrite. This defect develops spontaneously in full strength samples when the bottles are stored for some time, a slight loss of nitrite occurring every time the stopper is removed. Storage in the dark in small bottles is the precaution usually taken by pharmacists.

Gregory's Powder.

Three informal samples out of six were deficient of magnesia, the deficiencies being 29.8 per cent., 64.2 per cent., and 46.2 per cent. respectively. Inaccuracy of dispensing appears to be the explanation of this defect. Following up formal samples were correct in two cases. The vendor who originally supplied an article 64.2 per cent. deficient of magnesia was still 18.5 per cent. short in the repeat sample. A caution was issued.

Private Samples.

Only six samples were submitted privately under Section 17 (2) of the Act, as follows :—

Sweets	2	Orange	1
Milk	1	Sausage	1
Jelly Cubes	1		

The Sweets were alleged to have made children sick. This effect is not entirely unconnected with the most wholesome of sweets. However, arsenic and other irritant poisons were tested for, but none were found.

The Jelly Cubes were found to be badly infected with Penicillium moulds, and were certified as unfit for food.

The Orange contained three live larvæ resembling those of the common fly.

The Sausage was cooked when submitted, and was alleged to have induced violent stomach pains on eating. Nothing injurious was found present, and on making enquiries, a priori reasons for stomach disorder in that particular instance came to light.

The public are probably largely unaware of their powers under the Act to have doubtful articles of Food analysed at a nominal price.

Fertilisers and Feeding Stuffs Act, 1926.

This Act came into force 1st July, 1928, and is intended to protect purchasers of substances used for fertilising the soil and substances used for feeding cattle and poultry.

The following informal samples were taken during the year :—

TABLE I.

SAMPLE.	Number.	Number Unsatisfactory.		
		Composition Incorrect.	Statutory Declaration Defective.	TOTAL.
Compound Fertiliser ..	3	0	2	2
Sulphate of Ammonia ..	1	0	0	0
Nitrate of Soda ..	2	0	1	1
Kainite	1	0	1	1
Ichthemic Guano ..	1	0	1	1
Sulphate of Potash ..	1	0	0	0
Bone Meal	1	1	0	1
Poultry Meal	2	0	2	2
Barley Meal	1	0	0	0

Thus in seven cases out of 13, vendors appeared not to have grasped the requirements of the Act as regards labelling their goods.

The Bone Meal was only slightly defective in one constituent ($P_2 O_5$) and contained a large excess of nitrogen. It was really better value for money than indicated ; but, according to a rigid interpretation of the Act, a technical infringement existed.

Two of the Compound Fertilisers contained excessive amounts of Nitrogen, Potash and Phosphoric Acid. The makers evidently allowed a big " Factor of Safety " in case of uneven mixing.

Rag Flock Act, 1911.

The Act requires that the soluble chlorine in Rag Flock, determined in a definite manner, shall not exceed 30 parts per 100,000.

Six samples gave the following results :—

TABLE J.

Sample No.	319	320	321	322	323	324
Chlorine in parts per 100,000	12.0	60.5	6.6	22.2	11.6	6.8

No. 320 was new material exempt under the Rag Flock Act (1911) Amendment Act, 1928.

Miscellaneous Samples examined for various Committees.

Health Committee.

Rainwaters	35
Drinking Waters (Chemical) ..	30
,, ,, (Bacterial) ..	5
Soft Water	2
Well Water	2
Leakage Water	2
River Water	1
Bath Waters	34
Breast Milk	4
Mussels	1
Oysters	1
Fertilisers	1
Clothes Dirt	1
Disinfectants	2
Grits	15
Grit Slides	14
	150

Water Committee.

Waters (Chemical)	47
,, (Bacteriological) ..	76
,, (Biological)	36
Lead-painted Plates	1
Iron Pipes	2
Sands	2
	164

Fire Brigade.

Solvents	2
Cement	1
	3

Isolation Hospital.

Milk	14

City General Hospital.

Boiler Water	1
Milk	5
Butter	2
	8

City Mental Hospital.

Milk	1

Tramways Committee.

Oil	23
Petrol	2
Petrol Deposit	1
Disinfectant	4
	30

City Surveyor.

Boiler Compounds	2

Public Assistance Committee.

Tea Infusions	6

Sanitary & Baths Committee.

Fertilisers, &c.	16

Police.

Ricoal	1
Cigarette Holder	1
	2

H.M. Prison.

Milk	1

Atmospheric Pollution.

Regular readings were obtained through the year from the three Standard Deposit Gauges placed at Town Hall, Milton Street and Western Park.

The mean monthly deposits obtained were as follows :—

(Quantities expressed in English tons per square mile.)

		Town Hall.	Milton Street.	Western Park.
Insoluble Matter	Tarry matter	.30	.33	.10
	Soot ..	6.44	5.24	1.00
	Ash ..	13.41	10.80	2.18
Soluble Matter	Volatile Matter ..	3.15	3.77	1.69
	Ash ..	6.05	4.99	2.22
Sulphate		2.96	2.69	1.09
Chloride		0.88	0.76	0.47
Ammonia		0.20	0.36	0.11
Total Solids ..		29.35	25.13	7.19

For the year ending 31st March, 1931, Western Park, for the third year in succession, had the least average monthly deposit of any of the places where gauges are installed.

In November, determination of the sulphurous acid present in the atmosphere was commenced, and regular readings are now being obtained.

We find that the amount of sulphurous acid present in the atmosphere varies tremendously from place to place and from time to time. According to figures obtained in November and December, the concentration of sulphurous acid in the air is almost nil in the open country, and only about three parts per 100,000,000 in the outer suburbs. In the centre of Leicester it is highest during the day (average value in November 33.0 parts per 100,000,000), falls off consistently during the night (14.0 parts per 100,000,000), and reaches a comparatively low figure of six to seven during week ends.

The amount of sulphurous acid in the atmosphere reaches its maximum during foggy weather (80.0 parts per 100,000,000 recorded on morning of 17th December, 1931), and tends to be reduced to some extent by rain and to a greater extent by wind.

F. C. BULLOCK.

APPENDIX VI.

Report of Chief Sanitary Inspector.

Staff.

The inspection staff consists of a Chief Inspector, two Meat Inspectors, whose whole time is occupied at the Corporation Slaughterhouses at the Cattle Market, and fourteen District Sanitary Inspectors.

There were a number of changes in the staff during the year.

Inspector resigned.	District appointed to	New Inspector appointed to fill Vacancy.	District from
W. W. Baum	Rugby R.D.C. ..	T. Hines ..	Leicester
S. W. Barker	Ware U.D.C. ..	H. Clough ..	Norwich
J. Eckersley	County Borough of Dudley	A. Welton ..	Sheffield
S. Beever ..	Durham R.D.C. ..	G. H. Watmough	Darlington
T. Parry ..	Isle-of-Man Local Government Board	R. V. Fiddes ..	Sheffield

The average length of service of these five inspectors with the Leicester Corporation is four years and eight months.

During the winter session 1930-31 a third year's course in "Animal Biology and Bacteriology" was taken by several of your sanitary inspectors, while others took a course in "Sanitary Science as applied to Buildings and Public Works" together with Surveying work.

The ordinary routine work has been much interfered with during the past year owing to the detaching of six inspectors for special Slum Area survey work. This is reflected in the small number of visits paid, as compared with the previous year, to Factories and Workshops, Dairies and Milkshops, Ice Cream premises, Offensive Trade premises, the number of Smoke Observations taken and the number of Drain Tests done.

No increase in the inspection staff has been made although an enormous amount of work is entailed in inspecting and scheduling properties in Slum Areas and an increase is well warranted.

Synopsis of Sanitary Inspection Work.

An " inspection " is the first visit made to premises.

A " re-inspection " is a visit made after notice has been given for the remedying of a defect.

	Inspections.	Re-inspections.	Total.
Re Accumulations	103	26	129
Re Animals, Poultry, Swine, &c.	74	15	89
Ashpits and Ashbins ..	225	103	328
Bakehouses—Factory ..	78	—	78
Non-Factory ..	118	4	122
Canal Boats	30	—	30
Cesspools	1	—	1
Closets—Water	531	159	690
Pails	27	—	27
Cold Stores	239	—	239
Common Lodging Houses—Day	373	—	373
Night	35	—	35
Complaints Received ..	1658	1372	3030
Complaints Confirmed ..	1736	3826	5562
Cowsheds	22	—	22
Dairies, Milkshops and Milkstores	300	—	300
Dangerous Structures ..	12	5	17
Drains—Smoke Tests ..	2713	—	2713
Chemical Tests ..	15	—	15
Colour Tests ..	186	—	186
Drains Inspected	3950	4521	8471
Entertainment Houses ..	21	—	21
Factories	78	5	83
Fish Frying Premises ..	79	4	83
Food Manufacturing Premises	152	—	152
Houses re Contagious Disease..	2475	6	2481
Houses re Contagious Disease Enquiry	4173	—	4173
Houses re Disinfection ..	258	—	258
Housing Acts—Houses ..	678	4066	4744
Special Visits	187	—	187
Other Buildings	26	7	33
Houses Let in Lodgings—Day	2	—	2
Night	—	—	—
Hotel and Restaurant Kitchens	29	—	29
Ice Cream Premises.. ..	36	—	36
Markets—Cattle	—	—	—
Retail Meat ..	536	—	536
Fish and Fruit ..	580	—	580
Wholesale Fish and Fruit	431	—	431
Wholesale Meat ..	207	—	207
Wholesale Tripe ..	58	—	58
Meeting with Owner or Tradesman	3003	—	3003
Merchandise Marks Act ..	984	—	984
Agricultural Produce (Grading and Marking) Act ..	643	—	643
Carried forward ..	27062	14119	41181

	Inspections.	Re-inspections.	Total.
Brought forward ..	27062	14119	41181
Offensive Trade Premises ..	78	—	78
Other Foodshops	253	—	253
Outworkers	—	—	—
Piggeries	11	—	11
Shops—Meat	1551	—	1551
Fish	472	—	472
Fruit	395	—	395
Slaughterhouses—Corporation	2799	—	2799
Private ..	7329	—	7329
Schools	7	—	7
Smoke Observations ..	150	—	150
Special Visits re Smoke ..	258	—	258
Special Visits	2945	—	2945
Sewers, &c.	20	—	20
Street Gullies	3	—	3
Streets or Back Roads ..	—	—	—
Tips	23	6	29
Urinal—Public	46	—	46
Private	15	—	15
Van Dwellings	113	7	120
Wells	—	—	—
Workshops and Workplaces (excluding Bakehouses) ..	201	—	201
Yards and Courts	475	10	485
Grand Totals ..	44206	14142	58348

Notices—Served	—Informal ..	.. ..	1319
	—Formal ..	.. ..	136
Complied with	—Informal ..	.. ..	1043
	—Formal ..	.. ..	58
Samples—Food and Drugs Acts	..	.. ..	1338
Water	..	.. ..	38
Bacteriological ..	..	.. ..	253
Milk for T.B.	..	.. ..	120
Rag Flocks Act	..	.. ..	6
Fertiliser and Feeding Stuffs Act	..	.. ..	13

CANAL BOATS.

The whole of the "available" boats on the register, viz.: 52 are "Narrow" boats. Thirty boats were inspected during the year; these were occupied by 36 males, 14 females, 13 children over five years and 10 under five years.

The condition of the boats was clean and satisfactory.

A local firm of boat builders have given up business and many local firms owning canal boats have had their boats lying idle.

One boat was raised after being sunk and thoroughly overhauled and re-painted.

DISINFECTION.

The total number of articles of clothing, bedding, &c., disinfected by steam during the year was 6,168. The number of houses or parts of houses disinfected was 2,551.

DRAINS.

Voluntary Cleansing of Stopped Drains by Health Department

Ninety-seven drains were attended to, and of these 44 were unstopped immediately. In the remaining 53 cases the owners' attention had to be called to them.

ADMINISTRATION OF FACTORY AND WORKSHOPS ACT, 1901.

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

1.—Inspection of Factories, Workshops and Workplaces.

Premises. (1)	Number of		
	Inspections. (2)	Written Notices. (3)	Prosecutions. (4)
Factories	83	14	—
Workshops	201	—	—
Total	284	14	—

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

Particulars. (1)	Number of Defects		Number of Prosecutions. (4)
	Found. (2)	Remedied. (3)	
Nuisances under the Public Health Act:—			
Want of Cleanliness ..	3	3	—
Want of Ventilation ..	1	1	—
Overcrowding	—	—	—
Other Nuisances ..	4	2	—
Sanitary Accommodation Insufficient	4	3	—
Offences under the Factory and Workshops Act ..	—	—	—
Total	12	9	—

3.—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)..	24	543	22	145

4.—Other Matters.

CLASS (1).

Matters notified to H.M. Inspector of Factories:—

Failure to affix Abstract of the Factory and Workshops Acts (S. 133, 1901)		None
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshops Acts (S. 5, 1901)	Notified by H.M. Inspector	12
	Reports (of action taken) sent to H.M. Inspector	12
Underground Bakehouses (S. 101) in use at the end of the year		1

Habitually Filthy Occupiers of Dwelling-Houses.

Legal proceedings were instituted under our Local Act against three occupiers of dwelling-houses for being habitually filthy, with the object of ordering them to quit their dwellings, but in only one case was an order obtained.

The persons one has trouble with are usually old, infirm and unable to take proper care of themselves or their dwelling places.

Power is really needed by general legislation to enable sanitary authorities to remove such persons to proper institutions. Some authorities—Bradford and Bootle to mention two—have obtained such powers under Local Acts. In Leicester our powers are inadequate. I find these old people are a source of trouble for many years and far too frequently they are ultimately found dead in their dwellings surrounded by filth and squalor—a coroner's enquiry resulting.

In one of our cases during 1931 an old spinster of 77 years in a filthy and verminous condition, died within 48 hours of being moved to our City General Hospital.

Another case is in hand at the present time where Police Court proceedings have failed, although during the past seven or eight

years something like fifteen cart loads of rubbish and filth have been removed by us from places where the woman has lived.

Improvements to Houses.	No. of Houses.
Separate internal water supply in place of taps in common yards	130
Additional water closets	181

TABLE A.

	Tons.	Cwts.	Qrs.	Lbs.
Meat	78	6	2	6
Fish	22	5	2	12
Fruit	1	10	2	10
Vegetables	13	9	3	11
Rabbits				2176
Preserved Foods (Tinned Goods)				9986
Poultry				23
Eggs				5000
Hares				17

MEAT.

TABLE B.

Total weights of British and Imported Meat and Offal rejected, at various premises.

	Tons.	Cwts.	Qrs.	Lbs.
British Meat ..	65	16	–	27
Imported Meat ..	–	14	3	1
British Offal ..	11	7	2	1
Imported Offal ..	–	8	0	5
Total Weight ..	78	6	2	6

	British Meat.				Imported Meat.				British Offal.				Imported Offal.			
	Tons.	Cwts.	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.
Shops	–	7	–	27	–	3	3	15	–	–	–	15	–	–	2	10
Private Slaughterhouses	12	13	3	4	–	–	–	–	3	13	–	9	–	–	–	–
Cattle Market ,,	51	17	–	2	–	–	–	–	7	14	–	9	–	–	–	–
Cold Stores	–	–	–	–	–	2	2	7	–	–	–	–	–	1	2	8
Retail Market ..	–	–	2	14	–	–	3	7	–	–	–	24	–	–	–	–
Wholesale Market .. (Imported)	–	–	–	–	–	7	2	–	–	–	–	–	–	5	3	15
Railway Stations ..	–	17	2	8	–	–	–	–	–	–	–	–	–	–	–	–
Totals ..	65	16	–	27	–	14	3	1	11	7	2	1	–	8	0	5

TABLE C.

Total weights of Carcases, Parts of Carcases, and Offal, rejected for all diseases.

	Carcase.				Parts of Carcase.				Offal.				Total.			
	Tons.	Cwts.	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.
Tuberculosis ..	26	17	2	17	10	16	0	10	5	4	2	4	42	18	1	3
Other defined Diseases	24	16	3	19	3	5	2	9	6	2	3	25	34	5	1	25
Total ..	51	14	2	8	14	1	2	19	11	7	2	1	77	3	3	0

TABLE D.

Total number of Carcases found affected, for various diseases.

Carcases affected with Tuberculosis.	Carcases affected with other defined diseases.	Total number of Carcases affected. (All diseases)
1664	2693	4357

Number of healthy Carcases examined not available.

TABLE E.

Number of Carcases showing evidence of Tuberculosis and number of entire Carcases rejected.

	Beasts.	Calves.	Pigs.	Total.
Number of Carcases affected ..	386	1	1277	1664
Number of entire Carcases rejected	88	1	33	122

TABLE F.

Total number of Carcases rejected for Tuberculosis and other defined diseases.

Disease.	Bulls.	Cows.	Heifers.	Bullocks.	Calves.	Sheep.	Lambs.	Pigs.	Total of all Carcases.
Tuberculosis ..	2	60	19	7	1	–	–	33	122
Other defined diseases ..	–	30	8	15	26	212	44	96	431
Totals ..	2	90	27	22	27	212	44	129	553

TABLE G.

Total Number of all Carcases, parts of Carcases, and Offal, rejected for all diseases.

Disease.	Carcases.	Parts of Carcase.	Offals of Carcase.	Total number affected.
Tuberculosis	122	1298	244	1664
Other defined diseases ..	431	225	2037	2693
Totals	553	1523	2281	4357

TABLE H.

Total number of Carcases, parts of Carcases and Offal condemned in :—

	Carcases.	Parts of Carcase.	Offals of Carcase.	Total number affected.
Corporat'n Slaughter Houses (including Co-operative Society Slaughter House at Cattle Market) ..	407	1321	1876	3604
Private Slaughter Houses ..	126	155	343	624
Shops, Markets and other Premises	20	47	62	129
Totals	553	1523	2281	4357

TABLE I.

Tabulated List of other defined Diseases and their incidence in Carcases rejected.

Disease.	Cows.	Heifers.	Bullocks.	Calves.	Sheep.	Lambs.	Pigs.	Total.
Actinomycosis	1	–	1	–	–	–	–	2
Dropsy	6	5	3	2	102	20	3	141
Fever—Acute	6	–	1	2	29	5	7	50
Joint Ill	–	–	–	4	–	–	–	4
Lymphadenitis	–	–	–	–	1	–	–	1
Pneumonia	1	1	1	–	7	4	3	17
Decomposition	–	–	–	3	10	1	1	15
Emaciation	1	–	–	1	5	7	–	14
Asphyxia	1	–	–	2	11	2	10	26
Dead Animals	–	1	–	1	21	1	25	49
Immaturity	–	–	–	7	–	–	–	7
Bruising—Extensive ..	–	–	1	–	17	2	–	20
Gangrene	1	–	–	–	–	1	1	3
Septic Metritis	2	–	–	–	–	–	–	2
Septicæmia	1	–	1	–	–	–	15	17
Pyæmia	–	–	–	–	1	–	–	1
Septic Mammitis ..	1	–	–	–	1	–	1	3
Johnnes' Disease ..	6	–	6	–	–	–	–	12
Jaundice	–	–	–	1	1	–	3	5
Swine Erysipelas ..	–	–	–	–	–	–	2	2
Acute Peritonitis ..	2	1	–	2	3	1	3	12
Black Leg	1	–	1	–	2	–	–	4
Arthritis	–	–	–	–	–	–	1	1
Physicked	–	–	–	1	–	–	–	1
Swine Fever	–	–	–	–	–	–	21	21
Uræmia	–	–	–	–	1	–	–	1
Total	30	8	15	26	212	44	96	431

SAMPLING.

Food and Drugs (Adulteration) Act.

NUMBER OF SAMPLES TAKEN FOR CHEMICAL ANALYSIS.

1927	1928	1929	1930	1931
847	927	1552	1519	1338

Milk (Special Designations) Order, 1923.

NUMBER OF SAMPLES TAKEN FOR BACTERIOLOGICAL EXAMINATION.

1927	1928	1929	1930	1931
308	330	376	264	253

EXAMINATION OF MILK FOR PRESENCE OF TUBERCLE BACILLI.

Milk and Dairies (Consolidation) Act, 1915.

(This Act came into operation on 1st September, 1925.)

Number of samples of milk taken for microscopical and biological examination for Tubercle Bacilli—

1928	1929	1930	1931
120	120	86	120

	Number of Samples taken.	Number reported containing Tubercle Bacilli.	Number reported negative.	Number unsatisfactory although negative as regards Tubercle Bacilli.
Cowkeepers with premises outside City boundaries ..	120	13	101	6
Totals ..	120	13	101	6

Percentage of Milk samples containing Tubercle Bacilli 10.83

County Herds.

Of the 120 samples of milk produced outside the city, the 13 which were reported to contain Tubercle Bacilli were referred to the County Authority for action.

The post-mortem examinations of the guinea pigs inoculated with the milk for which unsatisfactory reports, although negative as regards T.B. were received, are as follows :—

(1) Died from causes other than Tuberculosis.	This supply stopped coming into Leicester and could not be repeated.
(2) Died from causes other than Tuberculosis.	This was a repeat of a sample numbered 2 on 1930 report.
	A further sample was taken and was satisfactory.
(3) Died from causes other than Tuberculosis.	This sample was repeated and was satisfactory.
(4) Peritoneal blood stained effusion, liver enlarged, spleen enlarged and degenerated, lungs injected right side of the heart engorged with tarry blood. The organism was recovered in pure culture from a sterile heart puncture and was a hæmolytic gram negative coccobacillus.	This sample was repeated and was satisfactory.
(5) Died from causes other than Tuberculosis.	This supply stopped coming into Leicester and could not be repeated.
(6) Animal died from causes not Tubercular.	This sample will be repeated.

Sample numbered 1 in 1930 report was repeated and report received that repeat sample was Tubercular (in spleen and inguinal glands). This was referred to the County Authority for action.

Sample numbered 3 in 1930 report was repeated and report received was satisfactory.

SLAUGHTERHOUSES.

Particulars of all Slaughterhouses in the City.

Registered Private Slaughterhouses	42
Licensed Private Slaughterhouses (includes one Knacker's Yard)	2
Corporation Slaughterhouses situated at Cattle Market and let off as Private Slaughterhouses	18
Total Slaughterhouses	62

SMOKE ABATEMENT.

Action taken re smoke nuisances :—

Observations taken of Chimney Stacks	150
Chimneys reported for causing nuisance	2
Cautions by Inspectors	3
Interviews of Engineers or Stokers by Inspectors ..	1
Informal Notices or Letters sent	3
Chimneys reported to Health Committees	2
Prosecutions	Nil

POLICE COURT PROCEEDINGS.

Public Health Acts.	
For the Abatement of Nuisances	4
Diseased Meat	1
Public Health (Meat) Regulations, 1924	1
Food and Drugs (Adulteration) Act	6
Leicester Corporation Act, 1921 ;	
Filthy dwelling houses	3

LEGAL PROCEEDINGS.

Acts, Byelaws or Regulations under which proceedings were instituted.	Default or Offence.	Result.	Fines. £ s. d.	Costs. £ s. d.
Public Health Acts and Leicester Corporation Acts	Failure to comply with notice to abate nuisance arising from defective drains	Case adjourned for one month. Case withdrawn on completion of works	—	—
Public Health Act, 1875 ..	Keeping pigeons so as to be a nuisance	Order of Court to abate nuisance within 28 days	—	0 5 0
Public Health Acts, 1875–1925	Nuisance from filthy state of land owing to use of same by Van Dwellers	Order of Court to abate nuisance within 28 days and to prohibit use of land by van dwellers for period of 2 years. (Special costs.) ..	—	2 3 6
Public Health Act, 1875 ..	Failure to comply with a notice to abate a nuisance caused by defective eaves spouts	Work done before hearing of case. Case withdrawn on payment of costs	—	0 5 0
Public Health Acts ..	Being in possession of meat intended for sale, the meat being diseased and unfit for the food of man	Butcher and his son convicted. Case against slaughterman dismissed ..	40 0 0	2 0 0
Leicester Corporation Act, 1921	Habitually maintaining dwelling house in a filthy condition. Justices order obtained for purposes of inspection	Court ordered tenant to quit the dwelling house within 7 days. (2s. per day for 11 days)	1 2 0	—
Ditto	Ditto	Case dismissed	—	—
Ditto	Ditto	Case adjourned for one month. Dwelling house cleaned ..	—	0 10 0
		Carried Forward	41 2 0	£5 3 6

LEGAL PROCEEDINGS—Continued.

Acts, Byelaws or Regulations under which proceedings were instituted.	Default or Offence.	Result.	Fines. £ s. d.	Costs. £ s. d.
		Brought forward	41 2 0	5 3 6
Foods & Drugs (Adulteration) Act, 1928	Selling milk containing an excessive amount of dirty sediment (3 parts per 100,000)	Conviction	5 0 0	—
Ditto	Selling "Skimmed Milk Cheese" as "Milk Cheese"	Dismissed on payment of costs ..	—	0 5 0
Ditto	Selling sausages containing sulphur dioxide, the same not being declared to purchaser	Dismissed on payment of costs ..	—	0 5 0
Ditto	Selling sausages containing sulphur dioxide, the same not being declared to purchaser	Conviction	0 10 0	—
Ditto	Selling polonies and sausages containing an excess of Boron preservatives. Sausages 0.015 per cent.; polonies 0.056 per cent.	Conviction : 20s. in each case ..	2 0 0	—
Ditto	Selling cream containing boric acid. Three defendants, one having supplied the other two with the article.	Defendant who supplied the cream to the other two was convicted. Case against two latter withdrawn	4 0 0	—
Public Health (Meat) Regulations, 1924 (Part IV.—Stalls)	Failure to cause stall to be screened at the sides and back	Conviction	1 0 0	—
		Total	53 12 0	5 13 6

F. G. McHUGH M.R.San.I., M.S.I.A., *Chief Sanitary Inspector.*

Reports of the V.D. Medical Officers.

1. Report on Male V.D. Clinic for Year 1931.

By C. HAMILTON WILKIE, M.B., Ch.B., B.Sc.

The total number of patients seen for the first time during the year was 598 (City, 404 ; County, 194). Of these 261 suffered from gonorrhœa and 121 from syphilis. The remaining 216, after examination and observation, were found to be free from any venereal disease.

Of the City patients 175 had gonorrhœa, 78 syphilis, and 151 no signs of venereal disease.

The total number of attendances of all patients was 17,847 (City, 14,228 ; County, 3,619).

The total number of intramuscular and intravenous injections given was 3,668 (City, 2,465 ; County, 1,203).

To patients suffering from gonorrhœa, 11,477 intra urethral irrigations were given. A large number of these cases required in addition, prostatic and urethral massage, instrumentation and vaccine treatment.

The total number of patients admitted to the wards was 57 (City, 30 ; County, 27).

Those patients who defaulted before completion of treatment numbered as follows :—

Syphilis . .	55	Gonorrhœa . .	56

Defaulters after completion of treatment but before final tests numbered :—

Syphilis . .	28	Gonorrhœa . .	78

The number of cases transferred to other clinics was :—

Syphilis . .	20	Gonorrhœa . .	25

The number transferred from other clinics :—

Syphilis . .	13	Gonorrhœa . .	17

The number of cases dismissed as cured during the year was :—

Syphilis . .	26	Gonorrhœa . .	140

Since taking up my new duties as Senior V.D. Medical Officer on 1st October last, new facilities for treating patients suffering from gonorrhœa have been begun in the form of a new irrigating room. When completed it will enable patients to receive their treatment much more quickly and, it is hoped, will encourage patients to attend more regularly until they are cured.

I am pleased to state that the number of cases appearing with no evidence of venereal disease is increasing.

There is still much to be done concerning the numbers of cases who default before they are proclaimed cured.

Our lack of control over defaulters, chiefly on account of the policy of secrecy, results in many spreading venereal disease.

In the treatment of cases of syphilis of the nervous system, intravenous injections of Tryparsamide have been instituted. This drug is undoubtedly one of the best for such cases.

C. HAMILTON WILKIE, M.B., Ch.B., B.Sc.,
Medical Officer in Charge of Male V.D. Dept.,
Leicester Royal Infirmary.

2. Report on Female V.D. Clinic for Year 1931.

By BESSIE W. SYMINGTON, M.D., B.S. (Lond.)

The total number of patients seen for the first time was 359, viz. :—

113 suffering from syphilis.
123 ,, ,, gonorrhœa.
123 showing no signs of venereal disease.

This year there has been a greater number, than in former years, of patients who have availed themselves of the Clinic for diagnosis—those who have been afraid that they have caught disease, but in whom no sign has been found.

The number of City patients examined for the first time was 245, viz. :—

69 suffering from syphilis.
86 ,, ,, gonorrhœa.
90 showing no sign of disease.

Syphilis.

Treatment has been by :—

(*a*) Injection ;
(*b*) Drugs given by mouth ;
(*c*) Drugs given by inunction.

The chief drugs used for injection have been

(*a*) Neokharsivan
(*b*) Stabilarsan
} by the intravenous method.
(*c*) Bismuth—in various preparations given intramuscularly.

Drugs containing arsenic have been given in slightly smaller strengths, but the doses have been more numerous. By this method, the aim has been to cause less arsenical poisoning.

Twelve intravenous injections has been the routine number but this is not always reached. Four cases of arsenical dermatitis, and two cases of jaundice have been admitted to the ward.

Sulfarsenol has been used intramuscularly for babies and children when the intravenous method cannot be used.

Metarsenobenzene has been tried, but at present with little success.

Mercury, potassium iodide, and bismuth are also given by mouth.

The number of early cases of syphilis has decreased by half. Thirteen have been diagnosed this year.

The total number of injections given at all Clinics—male and female—City and County—was 6,133, and of these, 1,609 were given to City female patients.

Out-Patients.

The total number of attendances was 9,251. 6,900 were seen by the Medical Officers at the Clinics, and 2,351 were seen at other times for prescribed treatment.

The total attendances of City patients numbered 6,855. Of these 2,588 attended for syphilis and 3,960 were for gonorrhœa. 307 attendances were made by patients not suffering from venereal disease for diagnosis and observation.

Gonorrhœa is General and Local.

General.—Treatment for the anæmia caused by the disease is always given. Iron and emulsions are chiefly used. Alkalies are always given.

Local.—For disinfection of vagina, cervix and urethra :—

(1) Dressings, tampons, or pessaries are used. Douches are seldom given.
(2) Irrigation of the bladder is carried out as routine in all cases where the urethra is infected.
(3) Instillation of glycerine into the body of the womb is used frequently.

In gonorrhœal rheumatism, vaccines with or without Contramine have been tried with varying success.

In-Patients.

The total number of days of in-patient treatment in 1931 was 2,777. Of these

533 were given to patients suffering from syphilis.
2112 ,, ,, ,, ,, gonorrhœa.
132 were days of treatment given to babies born in the maternity ward.

One hundred and forty-one cases were admitted during the year :—

43 suffering from syphilis.
90 ,, ,, gonorrhœa.
8 babies were born in the maternity ward. One showed signs of infection of syphilis.
3 premature babies were also born in the ward, in each case the mother was suffering from gonorrhœa.

This year more cases have been admitted for ante-natal treatment and patients have been confined in their own homes.

Amongst other cases admitted were :—

1 case of abdominal operation for serious complications of gonorrhœa.

3 cases of dilatation and curettage for chronic endometritis after long local treatment for gonorrhœa.

2 cases of abscess of Bartholine's Gland opened under anæsthesia. Others were done in the out-patient department.

13 cases of salpingitis for rest and treatment without operation.

5 cases of acute gonorrhœal rheumatism.

12 children under the age of 9 years with acute gonorrhœal vulvo-vaginitis.

5 cases of keratitis.

2 cases of ophthalmia neonatorum treated by advice of the Ophthalmic Surgeon.

1 case of serious nephritis.

2 cases of anal fistula following chronic gonorrhœa.

1 case of intrathecal injection.

The number of cases discharged after completion of treatment has been 208. Twenty-nine cases were transferred for continuation of treatment to other Clinics.

BESSIE W. SYMINGTON,

Medical Officer of Female V.D. Clinic.

3. Report on Work for Venereal Diseases at St. Mary's Home, 1 Ashleigh Road, for Treatment of City Patients, 1931.

This department is for young unmarried girls chiefly under 23 years of age.

The work is carried out in three parts :—

(1) Work in the hostel containing 9 beds, 4 being kept specially for maternity cases, with cots for the babies.

(2) Work in the Clinics held weekly on Thursday nights.

(3) Daily work carried out by the Sister-in-Charge as prescribed.

The total number of new cases admitted to the Hostel was 36 and 5 babies. Those suffering from primary syphilis numbered 8.

Nineteen City cases and one baby were dealt with. Of these :—

2 were suffering from syphilis only.
10 ,, ,, ,, gonorrhœa and syphilis.
7 ,, ,, ,, gonorrhœa only.

Out-Patients.

The total number of new cases admitted numbered 46.

1,847 attendances have been made. Of these, 1,521 attendances for individual attention by Medical Officer ; 326 for treatment as prescribed.

The total number of injections given has been 329.

One visit of inspection has been made by the City Medical Officer of Health and two members of the Health Committee.

BESSIE W. SYMINGTON, M.D., B.S. (Lond.).

APPENDIX VIII.

STATISTICAL TABLES.

TABLE 1.

MUNICIPAL WARDS. VITAL STATISTICS, 1931.

WARD. (1)	No. of Inhabited Tenements, Jan., 1932. (2)	Estimated Population, Jan., 1932. (3)	No. of Persons per Tenement, Census, 1921. (4)	Births (corrected). (5)	Deaths. (6)	Deaths under 1 year. (7)
1. St. Martin's	472	1,897	4.02	19	12	1
2. Newton	2,090	8,673	4.15	110	119	18
3. St. Margaret's	3,036	12,720	4.19	192	170	24
4. Wyggeston	3,283	14,248	4.34	285	223	28
5. Latimer	3,927	18,221	4.64	298	234	15
6. Charnwood	1,960	8,192	4.18	112	95	8
7. Wycliffe	2,603	10,412	4.00	119	184	3
8. De Montfort	1,622	7,055	4.35	44	81	4
9. The Castle	3,101	13,086	4.22	167	168	16
10. Westcotes	7,434	30,107	4.05	355	299	15
11. The Abbey	5,385	24,824	4.61	304	246	16
12. Belgrave	4,930	21,346	4.33	272	203	14
13. West Humberstone ..	5,311	24,855	4.68	294	246	23
14. Spinney Hill	7,490	31,607	4.22	400	302	21
15. Knighton	5,506	21,418	3.89	187	184	4
16. Aylestone	5,284	24,729	4.68	383	218	27

TABLE 2.

MUNICIPAL WARDS. VITAL STATISTICS, 1931.

WARD.	Birth-rate.	Death-rate.	Infant Mortality.	Zymotic rate.	Phthisis rate.	Average Phthisis Rate, Years 1912-21.	Average Phthisis Rate, Years 1922-31.
1. St. Martin's	10.0	6.3	52	—	—	1.34	1.08
2. Newton	12.6	13.6	163	0.57	1.61	1.77	1.47
3. St. Margaret's	15.0	13.3	125	1.10	1.10	1.87	1.46
4. Wyggeston	20.0	15.6	98	0.42	2.03	1.77	2.06
5. Latimer	16.3	12.8	50	0.38	1.15	1.55	1.35
6. Charnwood	13.6	11.5	71	—	1.70	1.46	1.26
7. Wycliffe	11.4	17.6	25	0.28	0.86	1.19	0.91
8. De Montfort	6.2	11.4	90	0.28	0.28	0.76	0.63
9. The Castle	12.7	12.8	95	—	0.76	1.11	1.31
10. Westcotes	11.7	9.9	42	0.33	0.83	0.99	0.92
11. The Abbey	12.2	9.9	52	0.44	0.88	1.22	1.05
12. Belgrave	12.7	9.5	51	0.14	0.98	1.11	0.94
13. West Humberstone	11.8	9.8	74	0.32	1.16	1.52	1.04
14. Spinney Hill	12.6	9.5	52	0.15	0.72	0.92	0.85
15. Knighton	8.7	8.5	21	0.18	0.28	0.60	0.55
16. Aylestone	15.4	8.8	70	0.56	0.80	0.87	0.85

TABLE 3.
Deaths in each Ward, classified for Age and Cause, 1931.

WARD.	0 to 1 year.	1 to 5.	5 to 60.	Over 60 years.	Total all ages.	Influenza.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Typhoid Fever.	Other Zymotics.	Total.	Diarrhoea.	Phthisis.	Respiratory Diseases.	Developmental Disease.	Cancer.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1. St. Martin's	1	..	6	5	12	..	..	..	..	..	..	..	..	..	..	2	9	1	12
2. Newton	18	6	45	50	119	2	..	..	2	..	..	1	5	2	14	18	73	7	119
3. St. Margaret's ..	24	7	61	78	170	1	3	..	2	2	1	5	14	4	14	29	93	16	170
4. Wyggeston	28	8	87	100	223	2	1	..	..	1	..	2	6	3	29	36	128	21	223
5. Latimer	15	17	87	115	234	3	2	..	..	1	..	1	7	3	21	37	141	25	234
6. Charnwood	8	1	30	56	95	..	..	..	..	..	..	..	..	2	14	7	56	16	95
7. Wycliffe	3	2	48	131	184	1	..	..	..	..	..	2	3	1	9	35	113	23	184
8. De Montfort ..	4	1	20	56	81	1	..	..	..	..	..	1	2	1	2	11	53	12	81
9. The Castle	16	2	51	99	168	..	..	..	..	..	..	..	..	2	10	27	109	20	168
10. Westcotes	15	6	99	179	299	6	..	..	..	1	..	3	10	1	25	35	190	38	299
11. The Abbey	16	7	96	127	246	8	1	..	1	..	..	1	11	3	22	37	140	33	246
12. Belgrave	14	4	70	115	203	2	1	..	..	..	..	..	3	..	21	38	116	25	203
13. West Humberstone ..	23	14	89	120	246	1	3	..	..	..	..	4	8	4	29	35	137	33	246
14. Spinney Hill ..	21	4	112	165	302	2	1	..	1	..	..	1	5	2	23	43	193	36	302
15. Knighton	4	2	52	126	184	2	..	..	..	..	..	2	4	..	6	25	119	30	184
16. Aylestone	27	7	86	98	218	7	2	..	2	2	..	1	14	2	20	31	128	23	218
Infirmary	38	28	204	75	345	..	..	..	1	..	..	3	4	6	6	43	231	55	345
City General Hospital ..	36	10	160	342	548	1	..	..	..	..	..	3	4	15	66	69	350	44	548
City Mental	..	..	27	38	65	..	..	..	..	..	1	..	1	..	4	8	46	6	65
Isolation Hospital ..	6	10	32	..	48	..	3	..	..	6	..	12	21	1	19	3	4	..	48

Deaths in Institutions have been subtracted from the Wards in which the Institutions are situated ; and (except in the case of the Workhouse and Mental Hosp.) have been distributed to the Wards to which they belong. Deaths of persons transferred from the Workhouse to the City General Hospital, however, have not been distributed, as the home addresses of such persons are not obtainable.

TABLE 4.

(As required by Ministry of Health).

TUBERCULOSIS.

NOTIFICATIONS ON FORM A.

No. of Primary Notifications.

Age Periods.	Pulmonary.		Non-Pulmonary.	
	Males.	Females.	Males.	Females.
0—1	—	2	—	—
1—5	3	4	4	1
5—10	12	12	8	2
10—15	9	8	3	3
15—20	23	37	4	6
20—25	39	49	3	7
25—35	57	55	5	4
35—45	36	31	1	2
45—55	32	29	—	2
55—65	25	6	—	1
65 and upwards ..	7	4	1	—
Total Primary Notifications	243	237	29	28
Total Notifications on Form A. ..	283	273	35	30

The total number of fresh cases notified during 1931 on Forms A. and B., excluding cases previously notified, was:—

Pulmonary	511
Non-Pulmonary	61
Total	572

TABLE 4a.

TUBERCULOSIS CASES.

Supplemental Return.

Age Periods.	Pulmonary.		Non-Pulmonary.	
	Males.	Females	Males.	Females.
0—1	..	..	2	2
1—5	..	1	6	4
5—10	1	1	1	1
10—15	2	4	..	6
15—20 .. .	2	1	1	1
20—25	2	4	2	2
25—35	13	13	..	..
35—45 .. .	3	4	1	..
45—55	2	2	..	..
55—65 .. .	4	3	1	1
65 and upwards ..	1	2	1	..
Total Cases ..	30	35	15	17

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)
*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 (War Years.)	325	143	76	33	401	177
1916 (War Years.)	306	135	67	29	373	165
1917 (War Years.)	343	157	78	35	421	193
1918 (War Years.)	316	145	82	37	398	182
1919	264	111	62	26	326	138
†1920	255	107	72	30	327	138
1921	278	116	73	30	351	147
1922	294	123	67	28	361	151
1923	285	119	36	15	321	135
1924	287	120	62	25	349	146
1925	305	127	59	24	364	152
1926	282	118	43	17	325	136
1927	283	118	63	26	346	144
1928	265	110	42	17	307	128
1929	266	110	53	21	319	132
1930	227	94	44	18	271	112
1931	262	108	49	20	311	129

* The rates for the years 1903-10 were revised in the light of the 1911 Census.

† The rates for the years 1920-1930 were revised in the light of the Census of 1921 and 1931.

TABLE 6.

Age and Sex Distribution of Deaths from Phthisis in 1931.

Age Period.	Males.	Females.	Total.
0—1	..	1	1
2—4	..	2	2
5—9	1	1	2
10—14	..	1	1
15—19	8	10	18
20—24	20	19	39
25—34	24	34	58
35—44	34	14	48
45—54	30	17	47
55—64	22	11	33
65 and upwards ..	7	6	13
All ages ..	146	116	262

Occupations of Persons Dying from Phthisis in 1931.

	M.	F.
SHOE TRADE :		
Finishers	9	2
Clickers	9	..
Rivetters	1	..
Pressmen	3	..
Machinists	3	3
Various	13	5
Total in Shoes ..	38	10
*Hosiery Trades ..	8	15
Labourers	23	..
Clerks	4	3
Tailoring Trade ..	1	3
Vanmen	8	..
Soldiers	..	..
Engineers	3	..
Painters ..	1	..
Dressmakers	..	1

	M.	F.
Army Pensioners ..	..	..
Boxmakers	1	..
Porters	3	..
Licensed Victuallers ..	2	..
Shop Assistants ..	10	1
Warehousemen ..	6	..
Various	35	6
Occupations not stated (includes Married Women, Widows, Children and Persons of no occupation)	3	77
Total	146	116

* 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 Cases notified of the principal Notifiable Diseases for the Fourteen Years, 1918-1931.

Disease.	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931
Smallpox	0	6	0	0	0	0	5	72*	0	6*	90*	320*	1192	1353
Scarlet Fever	583	579	946	714	619	576	335	774	477	620	1971	517	423	404
Diphtheria	154	272	471	324	168	142	429	350	366	309	461	253	198	115
Enteric Fever	34	30	15	27	9	6	5	4	3	3	6	2	5	3
Erysipelas	101	131	127	84	101	87	96	126	110	132	141	158	99	108
Puerperal Fever	6	11	18	21	12	7	11	7	22	9	10	11	12	8
Puerperal Pyrexia	..	..	..	..	..	..	..	..	21	34	45	25	50	32
Phthisis	746	658	572	497	566	692	725	606	650	700	668	657	582	511
Other Forms of Tubercle ..	82	47	59	105	43	71	65	77	77	80	117	77	66	61
Ophthalmia	51	101	101	87	66	53	28	37	36	38	24	35	32	14
Cerebro-Spinal Fever ..	2	4	7	4	0	3	2	2	4	4	4	8	11	16
Poliomyelitis	3	3	4	2	1	1	12	..	81	8	8	4	3	..
Measles	1686	262	(Notification discontinued.)											
Encephalitis Lethargica ..	..	..	9	10	6	12	22	26	14	9	7	4	3	7
Pneumonia	..	..	131	138	177	209	247	239	143	236	239	364	202	216
Chickenpox	..	..	..	..	..	..	..	639	..	..	..	..	..	..
Totals	3448	2098	2460	2013	1768	1859	1982	2959	2004	2188	3791	2435	2878	2848

* The figures include cases discovered by the Medical Officer of Health.

TABLE 8.

Showing the number of Deaths from Zymotic (or Germ) Diseases in the Thirteen Years 1919-1931.

Disease.	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931
Smallpox	0	0	0	0	0	0	0	0	0	0	0	1	1
Measles	1	83	7	48	21	0	43	8	18	1	17	5	14
Scarlet Fever	2	2	1	7	2	4	10	5	3	4	2	2	0
Diphtheria	30	41	28	20	9	35	34	37	11	17	13	7	6
Whooping Cough ..	11	23	33	25	31	18	69	21	29	7	56	8	9
Enteric Fever	3	3	2	3	2	1	1	0	1	0	0	1	1
Diarrhœa	23	21	30	16	38	62	57	40	22	50	27	33	40
Enteritis	31	48	67	42	22	19	10	5	2	0	0	0	0
Erysipelas	6	0	5	1	2	8	10	9	5	0	0	0	3
Influenza	330	15	47	80	31	39	55	15	54	18	214	27	39
Puerperal Fever	4	8	6	5	3	3	7	11	2	7	3	8	2
Cerebro-Spinal Fever ..	8	6	3	3	0	0	3	5	2	0	4	4	9
Poliomyelitis	2	0	1	1	0	0	0	7	2	0	0	1	0
Encephalitis Lethargica ..	0	6	5	4	4	7	10	9	7	3	12	8	7
Pneumonia	0	225	207	224	210	218	245	168	208	187	284	206	238
Totals	451	481	442	479	375	409	554	340	366	294	632	311	369

N.B.—In calculating the Zymotic rate since 1923, all the above deaths have been included except pneumonia. Particulars of deaths from Tuberculosis are given in Tables 5 and 6.

TABLE 9.—Vital Statistics of whole District during 1931 and previous years. City of Leicester.

Year.	Population estimated to middle of each year, revised in light of 1921 Census.	Births.			Total Deaths Registered in the District.		Transferable Deaths.		Net Deaths belonging to the District.			
		Uncorrected Number.	Nett.						Under 1 Year of Age.		At all Ages.	
			Number.	Rate.	Number.	Rate.	Of Non-residents registered in the District.	Of Residents not registered in the District.	Number.	Rate per 1000 Net Births.	Number.	Rate.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1918	217,537	3286	3246	14.92	3981	18.30	277	179	351	108.1	3883	17.84
1919	235,847	3811	3774	15.99	3098	13.13	241	226	370	98.0	3083	13.06
1920	236,873	5934	5905	24.91	2535	10.69	173	512	528	89.4	2874	12.13
1921	237,900	5074	5097	21.42	2527	10.62	182	532	438	85.9	2877	12.09
1922	238,240	4729	4646	19.50	2675	11.22	181	544	408	87.8	3038	12.71
1923	238,580	4647	4593	19.25	2396	10.04	182	560	386	84.0	2774	11.63
1924	238,920	4466	4380	18.33	2511	10.50	218	638	346	77.4	2931	12.27
1925	239,260	4316	4197	17.54	2709	11.32	212	637	368	87.6	3134	13.10
1926	239,600	4268	4119	17.19	2542	10.60	214	649	319	77.4	2977	12.42
1927	239,940	4124	3965	16.53	2657	11.07	273	660	298	75.1	3044	12.69
1928	240,280	4216	3988	16.60	2395	9.96	268	621	282	70.7	2748	11.44
1929	240,620	4044	3747	15.57	2946	12.24	277	748	301	80.3	3417	14.20
1930	240,960	4171	3872	16.07	2345	9.73	204	603	216	55.7	2744	11.39
1931	241,300	3950	3684	15.28	2673	11.09	342	653	235	63.7	2984	12.38

Number of inhabited tenements, January, 1932 .. 63,434
Average number of persons per house, Census, 1921 .. 4.28

Area of District in acres (exclusive of area covered by water) .. 8,582

Note.—This Table has been filled in, in accordance with the instructions given on the form supplied by the Ministry of Health.

TABLE 10.

LEICESTER BOROUGH.

Showing estimated Population, Marriage-rates, Birth-rates, and Death-rates (General and Zymotic) per 1000 living during the last 83 years, 1849-1931.

Year. (1)	Estimated Population. (2)	Marriage Rate. (3)	Birth Rate. (4)	Death Rate. (5)	Zymotic (Death) Rate. (6)	Infant Mortality. (7)
1849	58,736	21.58	36.96	28.73	7.05	
1850	59,788	24.04	37.45	23.64	4.13	
1851	60,760	21.11	40.11	25.57	5.48	
1852	61,467	22.96	38.83	28.84	8.42	
1853	62,181	22.90	36.71	27.02	5.45	
1854	62,903	20.40	39.06	25.11	6.65	
1855	63,624	19.14	36.16	23.55	2.87	
1856	64,366	20.02	37.32	21.16	3.10	
1857	65,119	20.60	37.48	27.58	8.19	
1858	65,835	19.14	34.54	28.76	8.07	
1859	66,663	22.56	37.77	24.59	4.99	
1860	67,456	19.80	38.05	20.47	1.27	
1861	68,638	18.58	37.01	25.25	5.71	
1862	70,986	21.30	38.07	23.38	3.01	
1863	73,413	25.74	40.00	29.95	7.96	
1864	75,922	25.68	41.01	26.96	5.41	
1865	78,516	25.38	41.09	25.02	5.20	208.9
1866	81,197	24.94	42.02	23.33	3.37	205.1
1867	83,970	22.18	41.66	24.59	4.31	226.2
1868	86,837	22.62	41.32	28.15	7.88	256.6
1869	89,804	21.12	41.87	25.60	5.10	229.0
1870	92,873	21.22	40.90	27.33	7.24	235.2
1871	95,823	23.06	41.55	26.07	5.83	252.4
1872	98,251	23.90	42.36	26.95	8.23	231.3
1873	100,741	24.00	44.14	23.83	5.05	208.4
1874	103,294	20.90	42.34	24.29	3.83	222.6
1875	105,913	22.36	40.31	27.28	6.56	242.0
1876	108,599	22.64	44.02	23.58	5.26	199.9
1877	111,355	21.24	42.68	23.48	3.21	188.7
1878	114,182	19.38	41.85	21.89	4.18	205.2
1879	117,083	19.48	40.11	22.64	3.06	187.3
1880	120,059	19.60	40.04	24.73	6.48	220.1
1881	123,146	18.66	38.26	21.55	4.45	204.8
1882	116,275	19.02	38.46	20.04	3.23	194.4
1883	129,483	18.64	37.26	19.18	2.56	190.7
1884	132,773	17.3	36.5	22.1	4.2	233.5
1885	136,147	16.3	34.3	19.3	3.3	193.5
1886	139,606	17.4	34.8	19.6	2.8	216.5
1887	143,153	16.6	32.7	19.1	3.0	215.8
1888	146,790	15.4	32.7	18.1	2.4	204.7
1889	150,520	16.0	31.8	16.6	2.3	209.6
1890	154,344	16.5	30.4	17.7	2.1	203.7

TABLE 10—Continued.

Year. (1)	Estimated Population. (2)	Marriage Rate. (3)	Birth Rate. (4)	Death Rate. (5)	Zymotic (Death) Rate. (6)	Infant Mortality. (7)
*1891	†177,353	19.1	33.5	21.2	3.3	214.5
1892	180,550	16.7	32.2	18.0	2.5	197.7
1893	183,900	15.8	32.6	19.7	3.5	220.4
1894	187,250	16.7	32.0	14.5	1.9	161.9
1895	190,600	16.4	31.2	17.4	3.0	206.6
1896	194,100	17.5	32.0	16.8	2.9	185.7
1897	197,600	16.7	31.6	17.9	1.9	206.0
1898	201,250	17.7	30.5	17.2	3.4	191.1
1899	204,900	17.5	30.6	18.1	3.4	196.0
1900	208,600	17.3	29.7	17.8	3.6	174.1
1901	212,498	17.1	29.0	15.7	2.3	178.0
1902	213,974	16.3	29.5	14.8	1.5	153.3
1903	215,461	16.5	27.9	14.2	1.4	161.3
1904	216,958	17.0	27.5	15.0	2.0	161.1
1905	218,464	17.2	26.9	14.0	1.6	146.5
1906	219,980	16.1	26.6	15.1	2.4	166.2
1907	221,508	16.6	24.9	13.4	.9	130.1
1908	223,046	16.0	25.4	13.9	1.6	129.7
1909	224,595	15.7	24.1	14.0	1.3	126.6
1910	226,154	17.1	23.7	12.4	.7	126.3
1911	227,634	16.6	22.9	13.4	1.4	130.0
1912	229,294	16.3	22.5	13.5	.9	109.0
1913	230,970	16.4	22.8	13.3	.7	119.3
1914	232,664	16.7	22.1	14.1	1.1	119.9
1915	232,664	24.1	20.8	14.9	.5	122.8
1916	225,907	18.3	20.7	13.6	.8	104.8
1917	217,537	16.6	16.9	13.5	.7	105.0
1918	217,537	18.6	14.9	17.8	.5	108.1
1919	236,059	21.3	15.3	13.0	.3	98.0
1920	236,874	23.5	24.9	12.1	.8	89.4
1921	237,900	20.0	21.4	12.0	.5	85.9
1922	238,240	19.38	19.50	12.71	.5	87.8
1923	238,580	18.26	19.25	11.63	.4	84.0
1924	238,920	17.70	18.33	12.27	.7	79.0
1925	239,260	17.90	17.54	13.10	1.3	87.6
1926	239,600	17.14	17.19	12.42	.7	77.4
1927	239,940	18.00	16.53	12.69	.5	75.1
1928	240,280	19.44	16.60	11.44	.2	70.7
1929	240,620	19.54	15.57	14.20	1.3	80.3
1930	240,960	18.28	16.07	11.39	.42	55.7
1931	241,300	18.08	15.26	12.36	.54	63.7

* All figures after 1891 refer to extended Borough.

† This is the population of the extended Borough. The figures in the other columns for the same year refer to the old Borough.

The figures since 1892 have been revised in the light of the census figures of the different census years—1901, 1911 and 1921. The population for the year 1920 having been considerably over-estimated has necessitated important corrections in that year.

TABLE 11. City of Leicester.

INFANT MORTALITY DURING THE YEAR 1931.

Net Deaths from stated Causes at various Ages under 1 Year of Age.

Cause of Death.	Under 1 Week	1 to 2 Weeks	2 to 3 Weeks	3 to 4 Weeks	Total under 1 Month	1 to 3 Months	3 to 6 Months	6 to 9 Months	9 to 12 Months	Total Deaths under 1 Year
All Causes Certified.	78	9	14	8	109	40	31	32	23	235
Smallpox	1	–	–	–	1	–	–	–	–	1
Chicken-pox	–	–	–	–	–	–	–	–	–	–
Measles	–	–	–	–	–	1	–	1	2	4
Spina bifida	1	–	–	–	1	–	1	1	–	3
Whooping-cough	–	–	–	–	–	1	4	2	–	7
Diphtheria and Croup	–	–	–	–	–	–	–	–	–	–
Erysipelas	–	–	–	–	–	–	–	–	–	–
Tuberculous Meningitis	–	–	–	–	–	–	1	3	–	4
Abdominal Tuberculosis	–	–	–	–	–	–	–	–	–	–
Other Tuberculous Diseases	–	–	–	–	–	–	–	–	1	1
Meningitis (*not Tuberculous*)	–	–	1	–	1	1	1	1	2	6
Convulsions	5	–	1	1	7	3	–	2	1	13
Laryngitis	–	–	–	–	–	–	–	–	–	–
Bronchitis	–	–	3	2	5	3	–	1	1	10
Pneumonia (all forms)	–	1	1	3	5	10	11	14	10	50
Diarrhœa	–	–	2	–	2	7	7	4	4	24
Enteritis	–	–	–	–	–	1	1	–	–	2
Colitis	–	–	–	–	–	–	–	–	–	–
Gastritis	–	–	–	–	–	–	–	–	–	–
Syphilis	–	–	–	–	–	–	–	–	–	–
Rickets	–	–	–	–	–	–	–	–	–	–
Suffocation (overlying)	1	1	–	–	2	3	1	–	–	6
Injury at Birth	5	1	–	–	6	–	–	–	–	6
Atelectasis	2	–	–	–	2	–	–	–	–	2
Congenital Malformations	8	2	3	2	15	1	–	1	1	18
Premature Birth	37	3	1	–	41	2	–	–	–	43
Atrophy, Debility and Marasmus	16	1	2	–	19	3	2	2	1	27
Other Causes	2	–	–	–	2	4	2	–	–	8

Net Births in the Year { legitimate, 3,502. illegitimate, 182.

Net Deaths in the Year of { legitimate infants, 213. illegitimate infants, 22.

TABLE 12.

VENEREAL DISEASE.

Form V.D. (R.), as required by Ministry of Health.

Statement showing the services rendered at the Treatment Centre during the year 1931, classified according to the areas in which the patients resided.

	Leicester.	Leicester-shire.	Rutland.	Warwick-shire.	Northamp-tonshire.	Stafford-shire.	TOTAL.
A. Number of cases from each area dealt with during the year *for the first time* and found to be suffering from :—							
Syphilis	123	84	–	–	–	–	207
Soft Chancre	–	–	–	–	–	–	–
Gonorrhœa	239	120	–	–	–	–	359
Conditions other than Venereal	241	98	–	–	–	–	339
Total	603	302	–	–	–	–	905
B. Total number of attendances of all patients residing in each area	21083	6015	–	–	–	–	27098
C. Aggregate number of "In-patient days" of all patients residing in each area	1905	2369	–	–	–	–	4274
D. Number of doses of arsenobenzol compounds given in the Out-patient Clinic and In-patient Department to patients residing in each area	2511	1338	–	–	–	–	3849

TABLE 13.

VENEREAL DISEASE CLINICS AT ROYAL INFIRMARY.

NEW CASES AND RENEWED ATTENDANCES. (City Cases only.)

Year.	New Patients.						Renewed Attendances.			
	Males.			Females.			Males.		Females.	
	Syph.	Gon.	Not V.D.	Syph.	Gon.	Not V.D.	Syph.	Gon.	Syph.	Gon.
*1917 ..	101	138	Records not complete.	79	99	Records not complete.	696	1285	413	674
1918 ..	125	184		166	90		1313	2759	1429	1058
1919 ..	218	374		184	35		1934	4319	1741	631
1920 ..	205	250		181	56		3426	5360	2081	812
1921 ..	168	198		208	45		3707	4423	3030	944
1922 ..	148	179		149	29		3725	4026	2456	1448
1923 ..	111	198		123	66		3465	4859	2948	2279
1924 ..	93	166		119	98		3595	5528	2516	2364
1925 ..	66	202		72	84		3446	7228	2245	2143
1926 ..	99	291		90	118		3123	8323	2143	2428
1927 ..	70	275	90	75	102	79	3164	9761	2557	2591
1928 ..	71	246	117	104	136	60	2946	10420	2970	3619
1929 ..	125	266	106	80	126	42	3321	10085	2529	4372
1930 ..	134	232	117	83	129	67	4125	9778	2639	3863
1931 ..	78	175	151	69	86	90	3324	10269	2555	3928

*Nine Months only.

TABLE 14.

CANCER STATISTICS, 1903-31.

Year.	Total Cancer Deaths.	Cancer Deaths—per cent of Total Deaths.	Cancer Death-rate per 100,000 Population.
1903 ..	192	6.2	89
1904 ..	213	6.5	98
1905 ..	180	5.8	82
1906 ..	168	5.0	76
1907 ..	199	6.6	89
1908 ..	214	6.8	95
1909 ..	195	6.1	86
1910 ..	200	7.1	88
1911 ..	236	7.7	103
1912 ..	226	7.2	98
1913 ..	252	8.1	109
1914 ..	269	8.1	115
1915 ..	219	6.4	94
1916 ..	228	7.3	100
1917 ..	255	8.6	117
1918 ..	309	7.9*	132
1919 ..	249	8.0	108
1920 ..	257	8.9	104
1921 ..	307	10.6	129
1922 ..	276	9.0	116
1923 ..	274	9.8	114
1924 ..	281	9.5	116
1925 ..	318	10.1	131
1926 ..	395	13.2	163
1927 ..	324	10.6	132
1928 ..	349	12.7	142
1929 ..	357	10.4	145
1930 ..	372	13.5	151
1931 ..	357	11.9	148

*In 1918 the total deaths from all causes were very high so that the per cent. figure was proportionately lower.

TABLE 15. DEATHS FROM CANCER, 1931.

Classified according to Age, Sex and Organ Affected.

Organ Affected.	Under 40 years		40–60 years.		Over 60 years.		All Ages.	
	M.	F.	M.	F.	M.	F.	M.	F
Lip	–	–	–	–	1	–	1	–
Tongue	–	–	–	–	5	1	5	1
Jaw	–	–	1	–	–	–	1	–
Mouth	–	–	–	1	3	–	3	1
Larynx	–	1	2	1	4	2	6	4
Oesophagus	–	–	3	2	9	4	12	6
Stomach	1	2	14	15	25	19	40	36
Intestines	–	–	–	2	2	9	2	11
Colon	–	1	5	5	12	12	17	18
Rectum	–	–	3	2	19	13	22	15
Liver	–	1	3	5	8	9	11	15
Pancreas	–	–	2	–	2	3	4	3
Spleen	–	–	–	1	–	–	–	1
Lungs	–	–	4	2	–	3	4	5
Kidney	–	–	–	–	–	–	–	–
Bladder	–	–	2	1	8	3	10	4
Prostate	–	–	2	–	7	–	9	–
Testicle	–	–	1	–	–	–	1	–
Ovary	–	–	–	3	–	2	–	5
Uterus	–	2	–	9	–	7	–	18
Breast	–	2	–	11	–	26	–	39
Bones	2	–	–	1	3	–	5	1
Other Forms or not specified	–	–	3	7	5	6	8	13
Total	3	9	45	68	113	119	161	196

TABLE 16.

MIDWIVES PRACTISING IN LEICESTER, 1931.

Reg. No.	Name.	Address.
*32386	Adcock, Hannah	56 Clarendon Park Road.
*74975	Ball, Mabel	Maternity Home, Westcotes Drive.
*42983	Bamber, Mabel E.	12 Portman Street.
† 2760	Blyth, Eliza	13 Fairfield Street.
*55200	Bradshaw, Edith	Maternity Home, Westcotes Drive.
*79367	Bryan, Georgina	Sundial Nursing Home, Aylestone Road.
*57274	Camacho, M.S.	649 Aylestone Road.
‡*73803	Carr, Beatrice Ellen	106 Kedleston Road.
§*67186	Carroll, Elizabeth	Tweedbank, Bolsover Street.
*74368	Carter, M.	Sundial Nursing Home, Aylestone Road.
*31591	Chandler, Sarah	16 Lincoln Street.
*73062	Clarke, V. E.	34 Welland Street.
*26697	Davies, Amelia M.	129 Beaconsfield Road.
*72670	Davis, Catherine	14 Uplands Road.
*36754	Dawkins, Jemima	1 Pool Road.
‡*66243	Dodson, Sarah E.	35 Windley Road.
*50887	East, Florrie	11 New Bridge Street.
§*68879	Eden, Lily	5 Thoresby Street.
*43711	Else, Charlotte	Maternity Hospital, Causeway Lane.
‡*67246	Eyre, Blanche G.	14 Lincoln Street.
*54768	Fayerbrother, Jessie	58 Loughborough Road.
*77108	Fearn, Edna D.	13 Perseverance Road.
*45160	Gardner, Gertrude	3 Elmfield Avenue.
30974	Gawthorne, Fanny	45 Aylestone Road.
*77225	Gordon, Mary C.	Fosse Road Nursing Home, Fosse Road.
*15683	Gray, Jean	Maternity Hospital, Causeway Lane.
*82304	Green, Doris B.	35 Windley Road.
§*60388	Harding, Laura	70 Lytton Road.
*75166	Haynes, Nellie E.	19 The Newarke.
*26452	Heggs, Mary Louisa	Maternity Hospital, Causeway Lane.
‡*37583	Hicks, Louisa S. A.	58 Bassett Street.
*78922	Hollingworth, Margaret E. ..	Maternity Home, Westcotes Drive.
*55864	Holyoak, Elsie E.	187 Sheridan Street.
*70143	Hopkins, Margaret Lucy ..	39 Hallam Crescent East.
*27110	Hosking, C. A.	63 Rancliffe Crescent.
5223	Howsam, M.	90 Sylvan Street.
*78299	Hughes, Betty	Maternity Hospital, Causeway Lane.
‡*25486	Hunt, Annie Amelia	166 Charnwood Street.
*70351	Hurd, Hilda Mary	34 Diseworth Street.
‡*41739	Ingham, Adelaide	58 Loughborough Road.
*66160	Japlin, Annie	Jesmond Dene, Narborough Road.
*73398	Kingswell, Doris E.	Maternity Home, Westcotes Drive.
*77418	Kirk, Veronica	67 Upper Tichborne Street.

*Holds Certificate of Central Midwives' Board.
†Holds Certificate of London Obstetrical Society.
‡Trained at Maternity Hospital, Causeway Lane.
§Trained at Municipal Maternity Home.

TABLE 16—continued.

Reg. No.	Name.	Address.
*49292	Lander, Mildred E.	Beryl-dene, Melton Avenue.
*11389	Laughton, Annie	236 Clarendon Park Road.
*51258	Ledger, Sarah E. M.	205 Birstall Street.
*39726	Lord, Helena	56 Clarendon Park Road.
*41332	Martin, Lilian M. E.	301 Clarendon Park Road.
* 4096	Martin, Rene Mary	193 Narborough Road.
‡*49841	McCaull, Jean	85 Narborough Road.
*39092	Metcalf, Elizabeth	56 Clarendon Park Road.
*65416	Nixon, Edith Mary	380 Fosse Road South.
‡*30688	Noon, Lucy A.	1 Spence Street.
‡*67428	Pateman, Clara	20 Warwick Street.
*43317	Payne, Lilian Emily	7 Gipsy Road.
*66629	Peel, Lilian May	27 Strathmore Avenue.
*76559	Penrose, Mary H.	337 Fosse Road North.
‡*36784	Pilsworth, Maria	54 Blackbird Road.
‡*49911	Potter, Frances A.	85 Narborough Road.
*69217	Reading, Elsie May	Maternity Home, Westcotes Drive.
*77256	Rimmington, May	54 Kensington Street.
*69226	Ritchie, Ethel A. R.	11 Newtown Street.
*47772	Roberts, Betsy C.	179 Winstanley Drive.
*74783	Roberts, Dorothy C. F. ..	64 Regent Road.
*32775	Robus, Ada	Myrtledene, St. Ives Road.
*79864	Royce, May W.	Maternity Hospital, Causeway Lane.
*72390	Saunders, Rose Lilian.. ..	517 Saffron Lane.
*81191	Schollick, Muriel	Maternity Hospital, Causeway Lane.
*81192	Schollick, Rene	Maternity Hospital, Causeway Lane.
*80504	Shercliff, Gwendolen Ivy ..	102 Hopefield Road.
*28446	Sinister, Edith A. R... ..	36 Wood Hill
*69730	Smith, Edith E.	9 Laurel Road.
*79163	Smith, Emily	45 Tewkesbury Street.
*75428	Smith, Lillie	Maternity Hospital, Causeway Lane.
‡*55034	Smith, Mary A.	32 Narborough Road.
*33745	Smith, Sarah Eliza	87 Harrison Road.
*58618	Starmer, E.	7 Warwick Street.
*62104	Steans, Dulcie E.	56 Clarendon Park Road.
*33774	Wakeling, Ada	25 Melton Road.
*74223	Whittington, E. G.	1 Spence Street.
*82026	Wilson, Grace M.	5 Thoresby Street.
*24962	Wright, Catherine A.	193 Narborough Road.

*Holds Certificate of Central Midwives' Board.
†Holds Certificate of London Obstetrical Society.
‡Trained at Maternity Hospital, Causeway Lane.
§Trained at Municipal Maternity Home.

TABLE 17.

MUNICIPAL MATERNITY HOME, WESTCOTES DRIVE.

Return relating to Maternity Homes maintained or subsidised by the Council, as required by the Ministry of Health, for Year 1931.

Form M.C.W. 96a.

1. Name and Address of Institution :—
   Municipal Maternity Home, Westcotes Drive, Leicester.
2. Number of beds in the Institution 26
3. Number of cases admitted during the year 349
4. Average duration of stay .. .. 15 days
5. Number of cases delivered by—
   (a) Midwives 276
   (b) Doctors 53
6. Number of cases in which medical assistance was sought by a midwife 80
7. Number of cases notified as—
   (a) Puerperal Fever .. .. —
   (b) Puerperal Pyrexia .. .. —
8. Number of cases of pemphigus neonatorum .. .. .. —
9. Number of infants not entirely breast-fed while in the Institution 4
10. (a) Number of cases notified as ophthalmia neonatorum .. 1
    (b) Result of treatment in each case. Eyes quite clear of discharge and normal when discharged 14th day.
11. (a) Number of maternal deaths .. .. —
    (b) Cause of death in each case.
12. (a) Number of fœtal deaths—
    (i) Stillborn... 6
    (ii) Within 10 days of birth 1

    (b) Cause of death in each case and results of post-mortem examination (if obtainable)—
    (i) Ante-partum hæmorrhage, premature twins.
    (ii) Prematurity and ante-partum hæmorrhage.
    (iii) Ante-partum hæmorrhage.
    (iv) Post-maturity.
    (v) Craniotomy.
    (vi) Prematurity.
    (vii) Precipitate labour in patient's own home. No one in attendance at birth. Child cried—died few minutes later.

TABLE 18.

City of Leicester.

ISOLATION HOSPITAL AND SANATORIUM.

Income and Expenditure for the two years ending 31st March, 1932.

EXPENDITURE.	Year 1930–31.	Year 1931–32.
	£ s. d.	£ s. d.
Salaries and Wages	12695 15 3	12757 7 9
Superannuation: Corporation's Contributions and Additional Allowances	430 13 11	432 17 9
Provisions	9039 8 10	7568 14 10
Drugs, Medical Appliances, &c.	2556 6 2	1373 19 10
Fuel, Light, Water and Power	4639 1 6	4338 18 9
Furniture, Bedding and Linen	1383 0 4	1257 5 4
Crockery and Hardware	179 10 5	189 7 9
Uniforms and Dresses	159 7 9	206 0 2
Cleaning Materials	279 16 9	222 1 7
Laundry Materials	178 19 9	164 2 0
Purchase of Washing Machine	495 6 6	..
Structural Renewals, Repairs and Painting (excluding wages)	2991 14 0	4855 1 0
Grounds, &c. (excluding wages)	372 15 9	339 6 11
Transport (excluding wages)	407 9 1	708 8 4
Printing, Stationery, Postage and Telephone	194 8 3	176 3 8
Rates and Insurance	1504 2 6	1446 2 0
Miscellaneous	394 11 3	276 10 1
Sanatorium School—Salaries, &c.	530 0 7	216 10 2
Occupational Treatment—Wages, Materials, &c.	742 13 3	690 2 0
X-Ray and Light Treatment Supplies	223 7 4	396 18 4
Loan Charges:—		
Interest	1252 9 8	1447 7 0
Repayment of Debt	1080 7 6	1648 16 2
Total Expenditure	£41731 6 4	£40712 1 5
Less Sale of Produce (including supplies from Garden, &c., to Institution) and Miscellaneous Income	1488 5 11	1319 12 10
Net Expenditure for Maintenance	£40243 0 5	£39392 8 7
Net Expenditure per Patient Day	8 4	10 2
Income for Maintenance of Patients	681 16 1	628 0 10
Net Cost (including Loan Charges)	£39561 4 4	£38764 7 9
Number of Patient Days	96,852	77,511

28th June, 1932.

ALFRED RILEY,
City Treasurer.

TABLE 19.

City of Leicester.

CITY GENERAL HOSPITAL.

Income and Expenditure for the two years ending 31st March, 1932.

EXPENDITURE.	Year 1930-31 £ s. d.	Year 1931-32 £ s. d.
Salaries and Wages :—		
Medical Staff	1563 5 0	1733 8 11
Nursing Staff	5490 0 2	5673 5 7
Other Staff	5525 8 8	6513 15 7
Corporation's Contributions to Superannuation Fund under Act of 1922	367 5 7	367 12 6
Superannuation Allowances under Act of 1896	342 16 9	353 3 0
National Insurance	292 12 7	308 17 8
Provisions :—		
Staff	3730 13 10	3651 16 9
Patients	7860 14 1	6965 6 4
Clothing :—		
Staff	275 4 4	172 1 3
Patients	468 16 1	436 8 3
Drugs and Medical Appliances	2133 11 1	2307 5 10
Fuel, Light and Water	4110 8 5	4240 4 11
Laundry :—Wages and Materials	1446 13 11	1342 16 4
Furniture and Fixtures	1032 14 2	425 0 9
Hardware and Crockery	324 19 9	328 7 1
Bedding and Linen	652 14 1	832 17 1
Cleaning Materials	516 4 8	389 4 9
Disinfectants	25 10 10	22 5 9
Education and Training Sundries	78 15 10	97 16 1
Buildings, Plant and Machinery :—		
Additions and Alterations	248 8 7	1317 13 1
Renewals and Repairs	903 0 1	830 6 4
Painting and Decorating	466 16 11	357 13 9
Maintenance of Grounds	734 8 2	783 16 6
Removal of Patients	232 17 0	251 9 0
Travelling Expenses	534 2 11	276 6 10
Other Transport		70 7 10
Printing and Stationery	351 15 6	249 17 8
Telephone	129 9 9	79 1 9
Funerals	8 6 0	..
Sundries	203 11 11	204 2 8
Rates	2619 16 10	1713 16 4
Insurance : Fire, &c.	78 8 3	111 7 0
Disposal of Sewage	131 10 0	128 3 9
Farm and Garden	550 13 4	225 1 10
Loan Charges :—		
Interest	987 8 10	1187 5 0
Repayment of Debt	3870 7 6	3943 2 11
Total Expenditure	48289 11 5	47891 6 8
Less Miscellaneous Income	90 3 6	136 9 2
Net Expenditure for Maintenance	£48199 7 11	£47754 17 6
Net Expenditure per Patient Day	6 1	6 6

INCOME.		
Income for Maintenance :—		
Mental Deficiency Committee	870 2 6	471 8 6
Other Local Authorities	265 10 1	304 2 2
Relatives and Patients (including Ministry of Pensions for Treatment of Ex-Servicemen)	3136 19 2	3385 3 0
Education Committee	..	377 9 9
	£4272 11 9	£4538 3 5
Net Cost (including Loan Charges)	£43926 16 2	£43216 14 1
Number of Patient Days	158,321	146,349

ALFRED RILEY,
City Treasurer.

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TABLE 20.

City of Leicester.

MATERNITY HOME, WESTCOTES DRIVE.

Income and Expenditure for the Two years ending 31st March, 1932.

	Year 1930–31.	Year 1931–32.
EXPENDITURE.	£ s. d.	£ s. d.
Salaries	799 9 11	770 9 6
Superannuation : Corporation's Contributions	50 14 8	51 7 4
Insurance	39 8 1	36 1 4
Rates	250 6 10	244 3 5
Furniture and Equipment	83 9 7	49 7 6
Repairs, Painting, &c.	90 13 11	105 9 9
Fuel, Light and Water	533 9 4	520 7 1
Provisions	1007 14 3	831 15 4
Drugs and Medical Requisites	241 9 8	141 3 0
Laundry and Cleaning Materials (excluding Wages)	208 17 4	369 4 0
Garden and Grounds	175 16 5	178 11 4
Clothing and Linen	152 13 0	99 13 8
Lecture Fees, &c.	102 13 6	82 15 0
Printing, Stationery, Postage and Telephone	38 13 2	49 12 8
Sundries	23 17 2	32 6 10
Architect's Fees :—Proposed Extension ..	..	150 0 0
Loan Charges :—		
Interest	567 11 2	428 0 0
Repayment of Debt	430 8 0	572 7 3
Total Expenditure	£4797 6 0	£4712 15 0
INCOME.		
Maternity Fees	2240 4 6	1651 3 6
Training Fees	198 0 0	113 2 0
Rent of Garages, &c.	159 15 0	145 13 0
Sundries	1 8 3	..
Contribution by Ministry of Health in aid of Training of Midwives	165 0 0	50 0 0
Produce supplied by Garden to Institution	27 3 7	37 2 10
Total Income	£2791 11 4	£1997 1 4
Net Cost (including Loan Charges) ..	£2005 14 8	£2715 13 8

28th June, 1932.

ALFRED RILEY,
City Treasurer.

TABLE 21.

City of Leicester.

DAY NURSERY.

Income and Expenditure for the Two Years ending 31st March, 1932.

	Year 1930-31.	Year 1931-32.
EXPENDITURE.	£ s. d.	£ s. d.
Salaries	715 6 8	701 9 5
Superannuation : Corporation's Contributions	37 2 3	36 4 9
Insurance	26 9 5	24 19 3
Rent and Rates	359 15 8	357 15 0
Furniture and Equipment	58 14 8	70 16 2
Repairs, Painting, &c.	51 0 1	60 19 9
Fuel, Light, Water and Cleaning	223 16 2	223 7 8
Provisions	607 10 1	575 14 10
Drugs and Medical Requisites	7 2 8	8 8 3
Laundry	139 7 4	97 3 9
Uniforms and Clothing	87 2 1	83 13 2
Printing, Stationery, Postage and Telephone	8 9 6	8 13 0
Lecture Fees	31 10 0	10 10 0
Sundries	35 4 9	27 2 6
	£2388 11 4	£2286 17 6
INCOME.		
Maintenance Charges	734 10 7	665 2 5
Contribution from Education Committee in respect of Mothercraft :		
Tuition	150 0 0	150 0 0
Meals for School Girls	60 2 0	53 12 0
Meals for Mothers	20 0 0	24 5 6
	£964 12 7	£892 19 11
Net Cost	£1423 18 9	£1393 17 7

ALFRED RILEY,
City Treasurer.

28th June, 1932.

TABLE 22.

City of Leicester.

INFANTS' MILK DEPOT.

Income and Expenditure for the Two Years ending 31st March, 1932.

EXPENDITURE.	Year 1930-31.	Year 1931-32.
	£ s. d.	£ s. d.
Salaries and Wages	494 12 10	522 11 3
Superannuation: Corporation's Contributions	20 9 5	23 11 7
Purchase of Milk, &c.	2003 5 5	1587 6 0
Medical Requisites, &c.	41 5 11	49 17 6
Rent, Rates, Taxes and Insurance	102 2 8	145 6 0
Fuel, Light and Water	43 17 7	44 10 10
Telephone	10 18 5	8 19 8
Printing, Stationery and Sundries	42 7 1	26 13 1
Alterations, &c., King Street Premises ..	268 9 10	..
Total Expenditure	£3027 9 2	£2408 15 11
INCOME.		
Sale of Milk, Virol, &c.	2467 9 10	1843 5 8
Maternity and Child Welfare Account:		
Proportion of Salary of Manageress ..	150 0 0	150 0 0
Proportion of Rent	..	53 19 6
Total Income	£2617 9 10	£2047 5 2
Net Deficiency	£409 19 4	£361 10 9

28th June, 1932.

ALFRED RILEY,
City Treasurer.

TABLE 23.

City of Leicester.

HOME PLACE SANATORIUM, HOLT.

Income and Expenditure for the two years ending 31st March, 1932.

	Year 1930–31.	Year 1931–32.
EXPENDITURE.	£ s. d.	£ s. d.
Salaries and Wages	394 10 11	379 2 7
Superannuation : Corporation's Contributions	9 15 0	10 5 0
Insurance	24 2 9	25 4 0
Medical Attendance	100 0 0	100 0 0
Wages of Engineer and Gardeners	425 18 4	449 6 0
Rates and Land Tax	94 3 11	104 13 5
Fuel, Light and Water	176 14 9	173 14 1
Provisions	759 7 3	818 3 7
Medical Requisites	14 14 6	15 4 4
Laundry	22 18 0	27 3 3
Buildings, &c.—Repairs and Painting	237 12 3	151 13 7
Upkeep of Grounds, &c. (excluding Wages)	163 14 0	86 8 8
Transport	43 0 1	53 8 11
Travelling Expenses of Committee and Officials	74 12 4	54 0 0
Furniture	67 13 8	118 3 4
Purchase of Pigs, &c.	27 9 6	63 18 8
Miscellaneous	109 11 10	83 16 7
Total Expenditure	£2745 19 1	£2714 6 0
INCOME.		
Sale of Pigs	68 0 0	31 0 0
Garden Produce (including supplies to Institution)	120 19 3	129 13 2
Acknowledgment	..	1 0
Total Income	£188 19 3	£160 14 2
Net Cost	£2556 19 10	£2553 11 10

ALFRED RILEY,
City Treasurer.

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TABLE 24.

Monthly Rainfall and mean Temperature during 1931, as recorded at the City Mental Hospital.

Figures supplied by Dr. J. Francis Dixon.

MONTH.	Rainfall in inches.	Mean Temperature Fahr.
January	1.81	36.51
February	2.61	38.21
March	0.23	38.48
April	3.28	46.10
May	3.02	51.87
June	2.12	58.46
July	3.50	76.25
August	3.91	57.38
September	2.73	52.80
October	0.61	47.19
November	2.14	45.30
December	0.805	40.00

Total rainfall in 1931 .. .. 26.765 inches.
No. of days on which rain fell (.01 inches or more) .. 177

Rainfall in previous years.

	Inches of rain	No. of days on which rain fell
1930	31.44 ..	200
1929	25.52 ..	260
1928	26.41 ..	210
1927	32.59 ..	210
1926	26.78 ..	186
1925	23.06 ..	175
1924	28.49 ..	198
1923	25.03 ..	201
1922	29.23 ..	187
1921	19.03 ..	136
1920	25.10 ..	192
1919	30.98 ..	191
1918	24.52 ..	190

TABLE 25.

Showing Births, Vaccinations and Smallpox in Leicester, 1838-1931

Year (1)	Births (2)	Vaccinations Regist'd Public and Pvt. (3)	Smallpox Deaths (4)	Smallpox Cases (5)	Year (6)	Births (7)	Vaccinations Regist'd Public and Pvt. (8)	Exemptions Granted (9)	Smallpox Deaths (10)	Smallpox Cases (11)
1838	1815	Not known	11	..	1885	4683	1842	..	..	8
1839	2024	..	50	..	1886	4863	1122	..	..	1
1840	1967	..	56	..	1887	4695	471	..	..	10
1841	1972	..	31	..	1888	4814	314	..	..	22
1842	1942	..	..	..	1889	4796	172	..	..	..
1843	2035	..	..	..	1890	4699	131	..	..	..
1844	2087	..	9	..	1891	4790	92	..	..	..
1845	2197	..	164	..	1892	5816	133	..	6	38
1846	2213	..	12	..	1893	6006	249	..	15	320
1847	2005	..	1	..	1894	5995	133	..	..	8
1848	2003	..	31	..	1895	5962	75	..	..	4
1849	2171	1613	66	..	1896	6212	86	..	..	..
1850	2239	1240	5	..	1897	6252	81	..	..	..
1851	2437	1292	2	..	1898	6152	92	..	..	..
1852	2387	1637	52	..	1899	6273	156	167	..	..
1853	2283	1843	11	..	1900	6207	343	598	..	..
1854	2467	2275	..	..	1901	6169	357	500	..	4
1855	2301	1771	..	..	1902	6313	1237	1500	5	18
1856	2402	1771	1	..	1903	6018	2487	1029	21	406
1857	2441	1880	17	..	1904	5981	1232	1044	4	307
1858	2276	2026	53	..	1905	5888	987	1112	..	5
1859	2518	1447	3	..	1906	5865	1073	1080	..	1
1860	2567	1766	2	..	1907	5534	1093	1256	..	..
1861	2540	1614	1	..	1908	5680	659	2401	..	..
1862	2723	1388	..	..	1909	5431	660	2367	..	..
1863	2937	1608	5	..	1910	5380	564	2335	..	..
1864	3114	1916	104	..	1911	5222	475	2964	..	..
1865	3226	1183	10	..	1912	5182	447	3173	..	..
1866	3412	1641	3	..	1913	5278	436	3391	..	1
1867	3496	1544	2	..	1914	5144	293	3438	..	..
1868	3588	3379	1	..	1915	4851	192	3812	..	..
1869	3760	3560	..	..	1916	4684	222	3931	..	..
1870	3799	3103	..	..	1917	3688	193	3287	..	..
1871	3982	3230	12	Not known	1918	3246	146	2724	..	..
1872	4162	4456	346	,,	1919	3774	154	2954	..	..
1873	4447	3692	2	,,	1920	5905	201	5364	..	..
1874	4374	3764	..	,,	1921	5097	234	4662	..	..
1875	4270	3527	1	1	1922	4646	173	4286	..	..
1876	4781	3426	..	..	1923	4593	284	4109	..	..
1877	4753	3653	6	12	1924	4380	260	4062	..	5
1878	4779	3372	1	8	1925	4197	283	3908	..	72
1879	4697	3146	..	..	**1926**	**4119**	**234**	**3710**	..	..
1880	4860	2886	..	1	1927	3965	172	3684	..	7
1881	4712	3417	2	6	1928	3988	192	3712	..	90
1882	4857	3106	5	29	1929	3747	192	3517	..	320
1883	4825	1958	3	12	1930	3872	186	3825	1	1192
1884	4851	1763	..	6	1931	3684	165	3595	1	1353

The figures in this Table prior to the year 1890 are taken from the Fourth Report of the Royal Commission on Vaccination, App. 3, Tables 5, 6 and 51.

In 1863-64, owing to the Smallpox epidemic which prevailed, there were 4,320 additional public vaccinations performed by the Medical Officers to the Guardians These were chiefly vaccinations of children omitted in previous years. They are not included in the figures for the two years in question.

TABLE 26.

Vital Statistics* of the 38 Large Towns (excluding London and residential towns round London) with populations of over 100,000, 1931.

TOWN.	Population for 1931	Birth Rate.	Death Rate.	Infant Mortality.	Diphtheria Death Rate.
Birkenhead	148,500	18.4	13.4	86	0.15
Birmingham ..	1,012,700	17.1	11.6	70	0.06
Blackburn	123,900	12.4	14.2	60	0.02
Bolton	179,200	13.7	13.5	80	0.01
Bradford	300,900	13.6	14.3	71	0.03
Brighton	145,000	13.5	14.0	54	0.11
Bristol	399,900	15.1	11.9	50	0.08
Cardiff	223,800	16.8	12.8	77	0.11
Coventry	168,900	14.7	10.0	59	0.07
Derby	143,600	16.2	11.4	63	0.11
Gateshead	123,700	20.1	13.8	101	0.01
Huddersfield ..	114,300	12.3	13.7	61	0.03
Hull	315,200	19.2	13.2	81	0.30
Leeds	486,400	14.8	13.4	77	0.18
Liverpool	862,900	21.6	14.2	94	0.22
Manchester	773,900	16.0	13.8	85	0.08
Middlesbrough ..	138,900	21.4	14.1	100	0.02
Newcastle-on-Tyne	284,400	17.8	13.4	92	0.02
Norwich	126,800	15.4	12.1	55	0.08
Nottingham ..	270,900	17.2	13.6	82	0.01
Oldham	141,900	13.6	14.3	106	0.01
Plymouth	207,500	16.5	14.8	67	0.09
Portsmouth	248,400	17.5	12.9	55	0.05
Preston	120,100	15.7	13.8	89	0.03
Rhondda	142,230	17.1	13.4	81	0.16
St. Helens	108,300	20.1	12.5	88	0.06
Salford	225,900	16.0	14.2	97	0.14
Sheffield	517,300	15.0	11.3	69	0.01
South Shields ..	114,200	20.7	15.6	115	0.02
Southampton ..	175,600	17.3	11.4	47	0.07
Southend-on-Sea ..	118,400	11.6	12.4	48	0.08
Stockport	126,600	13.6	13.9	79	0.12
Stoke-on-Trent ..	279,900	18.6	13.0	100	0.06
Sunderland	187,600	21.8	14.4	99	0.06
Swansea	165,500	16.8	11.6	70	0.07
Walsall	104,300	19.5	11.3	74	0.11
Wolverhampton ..	134,400	17.1	12.0	69	0.09
Average	—	16.6	13.1	77	0.07
†LEICESTER	241,300	15.3	12.4	64	0.02

*Provisional figures only. From Registrar-General's Quarterly Return No. 333.

†These differ slightly from the corresponding figures calculated locally and used in the rest of this report.

TABLE 27.

HOUSING CONDITIONS

For year ended 31st December, 1931.

GENERAL STATISTICS.

Area (acres)	8,582
Population (1931)	241,300
Number of inhabited houses (1921)	54,657
Number of families or separate occupiers (1921)	—
Number of inhabited tenements, January, 1932	63,434
Rateable Value, 1st November, 1931	£1,610,657

HOUSING.

Number of new houses erected during the year :—	
(a) Total	1,004
(b) With State assistance under the Housing Acts :	
(i) By the Local Authority	372
(ii) By other bodies or persons	Nil

1.—Unfit Dwelling Houses—Inspection.

(1) Total number of dwelling houses inspected for housing defects (under Public Health or Housing Acts)	6,308
(2) Number of dwelling houses which were inspected and recorded under the Housing Consolidated Regulations, 1925	865
(3) Number of dwelling houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	2
(4) Number of dwelling houses (exclusive to those referred to under the preceding sub-heading) found to be not in all respects reasonably fit for human habitation	863

2.—Remedy of Defects without Service of Formal Notices.

Number of defective dwelling houses rendered fit in consequence of informal action by Local Authority or their officers	983

3.—Action under Statutory Powers.

A—*Proceedings under Section* 17 *of the Housing Act*, 1930 :

(1) Number of dwelling houses in respect of which Notices were served requiring repairs	2
(2) Number of dwelling houses which were rendered fit after service of formal notices :	
(a) By owners	2
(b) By Local Authority in default of owners	—
(3) Number of dwelling houses in respect of which Closing Orders became operative in pursuance of declarations by owners of intention to close	0

B—*Proceedings under Public Health Acts:*

(1) Number of dwelling houses in respect of which notices were served requiring defects to be remedied ..	5,443
(2) Number of dwelling houses in which defects were remedied after service of formal notices:	
(a) By owners	55
(b) By Local Authority in default of owners ..	3

C—*Proceedings under Section* 19 *of the Housing Act,* 1930:

(1) Number of representations made with a view to the making of Closing Orders	1
(2) Number of dwelling houses in respect of which Closing Orders were made	—
(3) Number of dwelling houses in respect of which Closing Orders were determined, the dwelling houses having been rendered fit	—
(4) Number of dwelling houses in respect of which Demolition Orders were made	1
(5) Number of dwelling houses demolished in pursuance of Demolition Orders	2
(6) Number of dwelling houses demolished under Housing Act, 1925, S. 11	1
(7) Number of dwelling houses demolished under local Act	1

TABLE 28.

MEASLES AND WHOOPING COUGH DEATHS AND MORTALITY per 1,000 BIRTHS.

Quinquennial Period.	Births	Measles Deaths	Mortality per 1,000 Births	Whooping Cough Deaths.	Mortality per 1,000 Births
1902–6 ..	30,065	312	10.3	354	11.1
1907–11 ..	27,247	420	15.4	191	7.0
1912–16 ..	25,139	437	17.3	190	7.5
1917–21 ..	21,710	248	11.4	134	6.1
1922–26 ..	21,935	120	5.5	164	7.4
1927–31 ..	19,256	55	2.8	109	5.6

TABLE 29.

LIST OF REGISTERED NURSING HOMES

(INCLUDING MATERNITY HOMES.)

ADDRESS.	NO. OF BEDS.
9 Mere Road	1
13 Beckingham Road	5
Central Nursing Home, 33 Severn Street ..	6
40 Farnham Street	2
229 Melton Road	7
Home of Twilight Sleep, 3 Elmfield Avenue ..	10
49 St. Barnabas' Road	2
56 Clarendon Park Road	9
32 Narborough Road	2
193 Narborough Road	9
66 Uppingham Road	4
2 Melbourne Street	2
"Coneston," Thoresby Street	2
38 Cromford Street	1
Maternity Hospital, Causeway Lane	26
58 Loughborough Road	6
348 Aylestone Road	11
Sundial Nursing Home, Aylestone Road ..	12
22 Vicarage Lane	3
337 Fosse Road North	11
18 Ashleigh Road	4
85 Narborough Road	8
11 Newtown Street	2
1 Pool Road	3
306 Aylestone Road	2

TABLE 30.

DIPHTHERIA IN LEICESTER.

Cases notified and details registered during each quarter during years 1924-31. (From Registrar General's Quarterly Report).

Year	Quarter	Cases	Deaths	Case Mortality %
1924	First	57	7	12.3
	Second	36	5	13.8
	Third	76	7	9.2
	Fourth	252	14	5.5
1925	First	152	11	7.2
	Second	76	8	10.5
	Third	38	4	10.5
	Fourth	81	9	11.1
1926	First	94	18	19.1
	Second	92	12	13.0
	Third	82	4	4.8
	Fourth	99	4	4.4
1927	First	73	7	9.5
	Second	42	0	—
	Third	61	2	3.2
	Fourth	136	2	1.4
1928	First	134	5	3.7
	Second	84	7	8.3
	Third	138	6	4.3
	Fourth	107	2	1.8
1929	First	56	2	3.5
	Second	42	5	11.9
	Third	48	2	4.1
	Fourth	107	4	3.7
1930	First	74	3	4.0
	Second	35	1	2.8
	Third	45	1	2.2
	Fourth	44	2	4.5
1931	First	50	6	12.0
	Second	14	3	21.3
	Third	24	1	4.1
	Fourth	27	0	—

Table 31.

HOUSING ACT, 1930—DIFFERENTIAL RENTING SCHEME.

	A. 3 TYPE HOUSES.						B. 4 TYPE HOUSES.			
Suggested Rent.	0 Children. Income.	1 Child. Income.	2 Children. Income.	3 Children. Income.	4 Children. Income.	5 Children. Income.	6 Children. Income.	7 Children. Income.	8 Children. Income.	9 Children. Income.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
14/3	–	–	–	–	–	–	2 8 9	2 11 3	2 13 9	2 16 3
14/–	–	–	–	–	–	–	2 8 6	2 11 0	2 13 6	2 16 0
13/9	–	–	–	–	–	–	2 8 3	2 10 9	2 13 3	2 15 9
13/6	–	–	–	–	–	–	2 8 0	2 10 6	2 13 0	2 15 6
13/3	–	–	–	–	–	–	2 7 9	2 10 3	2 12 9	2 15 3
13/–	–	–	–	–	–	–	2 7 6	2 10 0	2 12 6	2 15 0
12/9	–	–	–	–	–	–	2 7 3	2 9 9	2 12 3	2 14 9
12/6	–	–	–	–	–	–	2 7 0	2 9 6	2 12 0	2 14 6
12/3	–	–	–	–	–	–	2 6 9	2 9 3	2 11 9	2 14 3
12/–	–	–	–	–	–	–	2 6 6	2 9 0	2 11 6	2 14 0
11/9	–	–	–	–	–	–	2 6 3	2 8 9	2 11 3	2 13 9
11/6	–	–	–	–	–	–	2 6 0	2 8 6	2 11 0	2 13 6
11/3	–	–	–	–	–	–	2 5 9	2 8 3	2 10 9	2 13 3
11/–	–	–	–	–	–	–	2 5 6	2 8 0	2 10 6	2 13 0
10/9	–	–	–	–	–	–	2 5 3	2 7 9	2 10 3	2 12 9
10/6	1 10 0	1 12 6	1 15 0	1 17 6	2 0 0	2 2 6	2 5 0	2 7 6	2 10 0	2 12 6
10/3	1 9 9	1 12 3	1 14 9	1 17 3	1 19 9	2 2 3	2 4 9	2 7 3	2 9 9	2 12 3
10/–	1 9 6	1 12 0	1 14 6	1 17 0	1 19 6	2 2 0	2 4 6	2 7 0	2 9 6	2 12 0
9/9	1 9 3	1 11 9	1 14 3	1 16 9	1 19 3	2 1 9	2 4 3	2 6 9	2 9 3	2 11 9
9/6	1 9 0	1 11 6	1 14 0	1 16 6	1 19 0	2 1 6	2 4 0	2 6 6	2 9 0	2 11 6
9/3	1 8 9	1 11 3	1 13 9	1 16 3	1 18 9	2 1 3	2 3 9	2 6 3	2 8 9	2 11 3
9/–	1 8 6	1 11 0	1 13 6	1 16 0	1 18 6	2 1 0	2 3 6	2 6 0	2 8 6	2 11 0
8/9	1 8 3	1 10 9	1 13 3	1 15 9	1 18 3	2 0 9	2 3 3	2 5 9	2 8 3	2 10 9
8/6	1 8 0	1 10 6	1 13 0	1 15 6	1 18 0	2 0 6	2 3 0	2 5 6	2 8 0	2 10 6
8/3	1 7 9	1 10 3	1 12 9	1 15 3	1 17 9	2 0 3	2 2 9	2 5 3	2 7 9	2 10 3
8/–	1 7 6	1 10 0	1 12 6	1 15 0	1 17 6	2 0 0	2 2 6	2 5 0	2 7 6	2 10 0
7/9	1 7 3	1 9 9	1 12 3	1 14 9	1 17 3	1 19 9	2 2 3	2 4 9	2 7 3	2 9 9
7/6	1 7 0	1 9 6	1 12 0	1 14 6	1 17 0	1 19 6	2 2 0	2 4 6	2 7 0	2 9 6
7/3	1 6 9	1 9 3	1 11 9	1 14 3	1 16 9	1 19 3	2 1 9	2 4 3	2 6 9	2 9 3
7/–	1 6 6	1 9 0	1 11 6	1 14 0	1 16 6	1 19 0	2 1 6	2 4 0	2 6 6	2 9 0
6/9	1 6 3	1 8 9	1 11 3	1 13 9	1 16 3	1 18 9	2 1 3	2 3 9	2 6 3	2 8 9
6/6	1 6 0	1 8 6	1 11 0	1 13 6	1 16 0	1 18 6	2 1 0	2 3 6	2 6 0	2 8 6
6/3	1 5 9	1 8 3	1 10 9	1 13 3	1 15 9	1 18 3	2 0 9	2 3 3	2 5 9	2 8 3
6/–	1 5 6	1 8 0	1 10 6	1 13 0	1 15 6	1 18 0	2 0 6	2 3 0	2 5 6	2 8 0
5/9	1 5 3	1 7 9	1 10 3	1 12 9	1 15 3	1 17 9	2 0 3	2 2 9	2 5 3	2 7 9
5/6	1 5 0	1 7 6	1 10 0	1 12 6	1 15 0	1 17 6	2 0 0	2 2 6	2 5 0	2 7 6
5/3	1 4 9	1 7 3	1 9 9	1 12 3	1 14 9	1 17 3	1 19 9	2 2 3	2 4 9	2 7 3
5/–	1 4 6	1 7 0	1 9 6	1 12 0	1 14 6	1 17 0	1 19 6	2 2 0	2 4 6	2 7 0

TABLE 32.

Deaths during 1931 of Persons belonging to City of Leicester as classified by the Medical Officer of Health according to Disease, Sex and Age-period.

Causes of Death.	Sex	All Ages	0—	1—	2—	5—	15—	25—	45—	65—	75—
All Causes	M	1500	130	33	21	33	64	153	445	331	290
	F	1484	105	17	15	30	65	144	378	314	416
1. Enteric fever	M	–	–	–	–	–	–	–	–	–	–
	F	1	–	–	–	–	–	–	–	1	–
2. Smallpox	M	–	–	–	–	–	–	–	–	–	–
	F	1	1	–	–	–	–	–	–	–	–
3. Measles	M	6	1	3	2	–	–	–	–	–	–
	F	8	3	1	4	–	–	–	–	–	–
4. Scarlet fever	M	–	–	–	–	–	–	–	–	–	–
	F	–	–	–	–	–	–	–	–	–	–
5. Whooping cough ..	M	6	4	1	–	1	–	–	–	–	–
	F	3	3	–	–	–	–	–	–	–	–
6. Diphtheria	M	4	–	1	1	2	–	–	–	–	–
	F	2	–	1	–	1	–	–	–	–	–
7. Influenza	M	20	3	1	–	1	–	1	8	2	4
	F	19	1	–	1	–	1	1	3	8	4
8. Encephalitis lethargica	M	3	–	–	1	–	–	1	1	–	–
	F	4	–	–	–	–	–	1	2	–	1
9. Meningococcal meningitis	M	11	3	1	1	–	1	1	2	1	1
	F	1	–	–	–	1	–	–	–	–	–
10. Tuberculosis of respiratory system ..	M	141	–	–	–	1	28	56	50	4	2
	F	121	1	1	1	2	29	50	30	7	–
11. Other tuberculous diseases	M	32	2	7	2	6	7	6	2	–	–
	F	17	2	1	2	6	3	1	1	1	–
12. Cancer malignant disease	M	161	–	–	–	–	–	6	65	64	26
	F	196	–	–	–	–	2	15	87	50	42
13. Rheumatic fever ..	M	2	–	–	–	2	–	–	–	–	–
	F	–	–	–	–	–	–	–	–	–	–
14. Diabetes	M	6	–	–	–	–	–	2	2	2	–
	F	17	–	–	–	–	–	1	3	7	6
15. Cerebral hæmorrhage, &c.	M	131	–	–	–	–	3	3	38	49	38
	F	140	–	–	–	–	–	5	39	52	44
16. Heart disease ..	M	200	–	1	1	1	2	13	76	70	36
	F	267	1	1	–	5	6	18	82	74	80
17. Arterio-sclerosis ..	M	35	–	–	–	–	–	–	10	10	15
	F	31	–	–	–	–	–	3	3	7	18

TABLE 32—continued.

Causes of Death.	Sex	All Ages	0—	1—	2—	5—	15—	25—	45—	65—	75—
18. Bronchitis	M	88	5	–	–	–	–	2	16	24	41
	F	112	4	1	1	–	–	1	17	34	54
19. Pneumonia (all forms)	M	141	28	12	4	2	8	14	37	21	15
	F	97	19	7	4	2	1	9	18	14	23
20. Other respiratory diseases	M	12	–	–	–	–	–	1	5	4	2
	F	10	1	–	–	1	1	1	4	2	–
21. Ulcer of stomach or duodenum ..	M	9	–	–	–	–	–	1	5	3	–
	F	1	–	–	–	–	–	–	1	–	–
22. Diarrhœa, &c. ..	M	22	14	3	–	1	1	–	3	–	–
	F	18	12	1	–	–	–	–	1	–	4
23. Appendicitis and typhlitis	M	5	–	–	–	3	1	–	1	–	–
	F	8	–	–	–	2	1	–	4	1	–
24. Cirrhosis of liver ..	M	16	–	–	–	2	–	1	7	4	2
	F	3	–	–	–	–	–	1	2	–	–
25. Acute and chronic nephritis	M	54	–	–	–	–	2	7	21	15	9
	F	37	1	–	–	–	2	3	19	5	7
26. Puerperal sepsis ..	M	–	–	–	–	–	–	–	–	–	–
	F	2	–	–	–	–	1	1	–	–	–
27. Other accidents and diseases of pregnancy and parturition ..	M	–	–	–	–	–	–	–	–	–	–
	F	11	–	–	–	–	1	8	2	–	–
28. Congenital debility and malformation, premature birth ..	M	58	58	–	–	–	–	–	–	–	–
	F	46	46	–	–	–	–	–	–	–	–
29. Suicide	M	29	–	–	–	–	2	7	15	5	–
	F	14	–	–	–	–	1	4	9	–	–
30. Other deaths from violence	M	41	2	1	5	5	4	4	12	8	–
	F	24	2	–	1	3	4	4	7	1	2
31. Other defined diseases	M	266	9	2	4	6	5	27	69	45	99
	F	273	8	3	1	7	12	17	44	50	131
32. Causes ill-defined or unknown	M	1	1	–	–	–	–	–	–	–	–
	F	–	–	–	–	–	–	–	–	–	–

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