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Leicestershire County Council.

ANNUAL REPORT

OF THE

Medical Officer of Health

FOR THE YEAR

1929

J. A. FAIRER, M.D., D.P.H.
County Medical Officer.

CONTENTS.

TABLES.

17, Friar Lane,

Leicester,

Mr. Chairman and Gentlemen,

I have the honour to submit the Annual Report on the health of the County for 1929.

The Vital Statistics show that the year was an unhealthy one for the country as a whole. This was probably due to the severe wintry weather of the first three months of the year.

The salient features of the vital statistics of the county reveal :

(1) *An estimated Increase in the population* of 3,500 during the year, so that the population of Leicestershire is now estimated to be 295,300. The chief centres of this increase are as follows:—Blaby Rural (2,050), Barrow Rural (430), Loughborough Urban (310), Hinckley Rural (280), Hinckley Urban (220), Billesdon Rural (190), Oadby Urban (175), Harborough Urban (141) Districts.

Decreases in population are estimated to have occurred in Coalville Urban (180), Melton Urban (70), Ashby Rural (70), Shepshed Urban (53), Belvoir Rural (36), and Ashby Urban (34) Districts.

The corresponding estimated increases for 1928 and 1927 were 8,100 and 4,000 respectively, so that the total estimated increase in the County population in the last three years has been 15,600—a yearly average increase of 5,200.

(2) *A slight decrease in the Birth Rate.*

The Birth Rate has fallen from 17.4 to 17.0; the births for 1929 totalling 5,013, as compared with 5,074 for the previous year. The Birth Rate, however, compares favourably with the corresponding rate for England and Wales, *i.e.*, 16.3.

(3) *Increase in Deaths of all Ages.*

Last year I was able to report a fall in the Death Rate from 11.6 to 10.5. This year, however, the death rate has risen to 12.29, the deaths totalling 3,629 as compared with 3,059 in 1928—an increase of 570 deaths. This is chiefly due to increased deaths in the following diseases :—Influenza 188, Heart Disease 106, Pneumonia 93, Bronchitis 61, Cancer 51, Phthisis 36, Cerebral Hæmorrage 35.

A noticeable feature is the large number of deaths from Influenza (237), Pneumonia (219), and Bronchitis (204), and these three diseases alone increased the number of deaths by 342 as compared with last

year's figures. Previous allusion has been made to the severity of the winter which was most marked in January, February, and March.

The Zymotic Death Rate has increased from 0.23 to 0.35. This is chiefly accounted for by an increase in the number of deaths occurring from Whooping Cough (36 as against 5 last year), and 10 more deaths this year from Diphtheria.

(4) *Slight Increase in the Infantile Mortality.*

Although only 5 more infants under 12 months died this year as compared with 1928 this affects the Infantile Mortality Rate, which is now 57 (last year's figure of 55 was the lowest ever recorded). The figure for England and Wales, however, during the year shows a more marked increase, having risen from 65 to 74.

During the year an epidemic of Small Pox occurred, commencing in July, in the Shepshed and Ibstock districts. This epidemic unfortunately became widespread throughout the Western side of the County, and latterly affected areas in the vicinity of Leicester, necessitating the opening of the Small Pox Hospitals at Snarestone and Syston. Smaller epidemics which occurred in the early months of the year were fortunately quickly suppressed, but this more recent outbreak has extended well into the year 1930. Whilst of a non-virulent type this epidemic has necessitated much vigilance and extra work, and on account of its mild symptoms detection has been more difficult and, as a consequence. infection has more rapidly spread.

Full details are given in the Report of the work of the Infant Welfare Centres and Ante-Natal Clinics, and a separate Report is given of the work of the County Laboratory. The work of the latter has steadily increased, and I am convinced that the routine of the bacteriological examination of milk throughout the County is showing beneficial results in a cleaner milk supply for the consumer. I hope in my next year's School or Annual Health Report to give particulars of the advances made towards the increased production of graded milk in the County, and also the provision of fresh clean milk in the schools.

Full particulars of the work of the Health Department are given under each sub-section of the Report, and this introduction is simply to call attention to the most salient features.

The only change in the Medical Staff has been the resignation of Dr. Mackintosh on his appointment as County Medical Officer of Health of Northamptonshire in January, 1930. Dr. Davidson was then promoted to the position of Senior (Administrative) Assistant Medical Officer, and Dr. C. Metcalfe Brown was appointed to the vacancy which thus occurred.

I am indebted to Dr. Coward for his contribution on "Tuberculosis Mortality," and also to Dr. Davidson for his assistance in the compilation of this Report. The latter had to edit it from the admirably kept records of his predecessor, Dr. J. M. Mackintosh, to whose enthusiastic zeal I would also like to pay a tribute.

I wish to express my appreciation of the advice which is so readily given to me by my predecessor, Dr. Robinson, the Consulting Medical Officer. Copies of all reports are forwarded to him, and his comments and observations have been of considerable value and assistance.

In conclusion, I should like to thank the Chairman and members of the Public Health Committee for their support and assistance, and also all the members of my staff who have so loyally supported me during the past year.

I have the honour to be,

Mr. Chairman and Gentlemen,

Your obedient Servant,

J. A. FAIRER,

County Medical Officer of Health.

THE COUNTY PUBLIC HEALTH AND HOUSING COMMITTEE, 1929.

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

BASTARD, W.
BRIERS, A. J.
BROUGHTON, A. H.
FORSELL, J. T.
FULLER, B.
GOODACRE, C.
GOODMAN, J. A.
HUBBARD, B.
JACQUES, J. T.
KINTON, G. (deceased).
LEVERS, G. T.
MARTIN, Lt.-Col., R. E., C.M.G., (*ex-officio*).
POCHIN, V. R. (*ex-officio*).
RIPPIN, W. H.
STUBBS, W.
TANDY, E. W.
TIMMS, R. (*Vice-Chairman*).
WARD, G.
WHITWELL, H. J.
WILSON, C.
WRIGHT, W. H.

MATERNITY AND CHILD WELFARE COMMITTEE.

This Committee consists of the whole of the members of the Public Health and Housing Committee, with the addition of the following ladies :—

MRS. A. SHIRLEY ATKINS.
MRS. E. E. BUCKINGHAM.
MRS. S. M. JOYCE.
HON. MRS. MURRAY-SMITH.
MRS. F. T. PILKINGTON.
MRS. G. SPENCER (appointed June, 1929).
MRS. W. WRIGHT (deceased).

OFFICERS OF THE MEDICAL DEPARTMENT.

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

J. A. FAIRER, M.D., D.P.H.
County Medical Officer.
School Medical Officer.
Administrative Officer for Tuberculosis and Maternity and Child Welfare.

N. A. COWARD, O.B.E., M.D., D.P.H.
Senior Assistant County Medical Officer.
Clinical Tuberculosis Officer.

J. M. MACKINTOSH, M.A., M.D., D.P.H. (Resigned).
Assistant County Medical Officer.
Senior Assistant School Medical Officer.
Medical Officer for Maternal Mortality.

J. F. DAVIDSON, M.B., Ch.B., D.P.H.
Assistant County Medical Officer (appointed as above October, 1929).

S. E. MURRAY, M.B., B.S., L.M.S.S.A.
Assistant School Medical Officer.

J. B. DALTON, M.B., Ch.B.
Assistant School Medical Officer.
Medical Officer for Venereal Diseases.

MARY E. WESTON, M.B., B.S. (Lond.).
Assistant Infant Welfare Officer.
Assistant School Medical Officer.

G. G. BUCHANAN, M.B., Ch.B., D.P.H. (Resigned).
Assistant Tuberculosis Officer.

S. W. LANE, M.R.C.S., L.R.C.P. (Appointed February, 1929).
Assistant Tuberculosis Officer.

CONSTANCE WALTERS, B.Sc., M.B., B.Ch.
Assistant Infant Welfare Officer.
County Oculist.

DENTAL STAFF:

P. ASHTON, L.D.S., Chief Dental Surgeon.
A. E. WARD, L.D.S.
S. H. BRENAN, L.D.S. (Resigned) } Assistant Dental Surgeons.
C. L. R. McLELLAN, L.D.S. (Appointed April, 1929).

All the above are Full-time Officers of the County Council.

HEALTH VISITORS:

*Mrs. A. Warren, S.R.N. (Superintendent).

Mrs. A. D. Antrobus, S.R.N.
Miss A. J. Bailey, S.R.N.
*Miss G. Bennett, S.R.N.
Mrs. S. J. Bourne, S.R.N.
Mrs. P. Brunsdon, S.R.N.
*Miss G. E. Butler, S.R.N.
*Mrs. F. E. M. Cade.
Miss G. I. Carryer, S.R.N.
Miss W. M. Cruikshank, S.R.N. (Appointed June, 1929).
Miss M. A. Dilworth, S.R.N.
Mrs. E. A. Dollman, S.R.N. (Resigned).
Miss L. Fox, S.R.N.
Miss T. M. Griffiths, S.R.N.
Miss M. A. Hunt, S.R.N.
*Miss K. A. Marsh, S.R.N.
Miss E. H. Seabrook.
Miss W. A. Simmons, S.R.N.
Mrs. E. E. Wright, S.R.N.

Those marked * hold the Certificate of Sanitary Inspector.

All the above are fully trained Nurses and hold the Certificate of the Central Midwives' Board. The Superintendent also holds the Child Welfare Workers' Certificate. Miss Bennett, Miss Butler, and Miss Carryer have the Health Visitors' Certificate of the Ministry of Health, and Miss Cruikshank holds the Health Visitors' Certificate of the Scottish Board of Health.

The Offices of the Health Department are divided into four main sections :—

General, and Maternity and Child Welfare Department :
Chief Clerk (H. Burditt) and five assistants.

Tuberculosis :
Chief Clerk (H. Collington) and three assistants.

School Medical Service :
Chief Clerk (W. A. Thornton) and three assistants. There are also three assistants in the Dental Department.

Laboratory :
Assistant Bacteriologist (J. N. Graham) with one junior assistant.

REPORT.

STATISTICS AND SOCIAL CONDITIONS OF COUNTY.

		Urban	39,915
Area in acres	524,197	Rural	484,282
Population (Census 1921)			260,326
,, (Estimated 1929)			295,300
,, Urban	120,900		
,, Rural	174,400		
Number of Inhabited Houses (1921)			58,849
Number of Families or Separate Occupiers (1921)			60,560
Reduced Rateable Value			£1,231,320
Estimated Product of Penny Rate			£4,795

STATISTICS AND SOCIAL CONDITIONS OF COUNTY.

In the County of Leicester there are three main occupational groups —Agricultural, Mining and Quarrying, and Industrial—but there is little evidence in the general statistics of any effect arising from occupation or environment being prejudicial to the general health of the people. In the mining and industrial areas, where trade depression has long been prevalent, it is probable that there may have been some lowering of the general standard of health through dietetic deficiencies, and with this possibility in view constant observation is being maintained on the school population of these districts.

A notable development in housing schemes has occurred in practically all parts of the County boundary adjacent to the City of Leicester. This extension which has taken place in a relatively short period of time has been most noticeable in the areas of Lubbesthorpe, Braunstone, and Birstall. The subsequent increase in the County population has resulted in a considerable amount of additional work on the part of the County Health Staff, and has caused a considerable strain on the general administrative provisions in existence in the County.

The abnormally cold weather prevailing in the early months of the year accounted for a large incidence and an increased mortality rate in Influenza, Pneumonia, Bronchitis, and other Pulmonary conditions. In

addition the County has experienced a widespread epidemic of a mild form of Small Pox. A full survey of the present epidemic of this disease is given in a subsequent section of the report.

EXTRACT FROM THE VITAL STATISTICS OF THE YEAR.

		Total.	Males.	Females.
Births	Legitimate	4,841	2,445	2,396
	Illegitimate	172	91	81
	Total Births	5,013	2,536	2,477

Birth Rate per 1,000 of population 17.0.

Deaths Total 3,629. Death Rate 12.29.

Number of women dying in, or in consequence of childbirth :—

Sepsis 9. Other Causes 15

Deaths of infants under one year of age per 1,000 births :—

Legitimate 55.6 Illegitimate 98.8

Total Rate per 1,000 ... 57

Deaths from Measles (all ages)	9
,, ,, Whooping Cough (all ages)	36
,, ,, Diarrhœa (under 2 years)	17

INFANT MORTALITY.

The Infant Mortality rate for 1929 is 57, as contrasted with the similar rate for 1928 of 55, which was a record figure for the County. It will be noted that the figure for England and Wales for 1929 in comparison with the County shows a more marked increase, the rate having risen from 65 to 74.

In a survey of the experience of Leicestershire in Infant Mortality during the last five years, viz., 1925, 1926, 1927, 1928, 1929, it will be observed that the rate has fallen from 71 to 57.

The decrease in the mortality figure cannot be attributed solely to the influence of any one agency, but, in my opinion, much credit in this most valuable result must be given to the Maternity and Child Welfare Service whose educational and clinical activities have not only benefited

directly the lives of the mothers and children but have indirectly stimulated the interest and help of the general public in the entire question of the care and control of the young child.

INFANT MORTALITY.

Year.	URBAN.		RURAL.		WHOLE COUNTY		Rate for England and Wales.
	No.	Rate.	No.	Rate.	No.	Rate.	
1925	147	71	201	71	348	71	75
1926	133	65	151	53	284	58	70
1927	136	66	182	64	318	65	68
1928	112	55	169	56	281	55	65
1929	**114**	**57**	**172**	**57**	**286**	**57**	**74**

DEATHS.

The Death Rate of the County has risen concurrently with that of the country as a whole.

In 1928 the Death Rate was 10.5, this year it is 12.29, the deaths having increased by 570, *i.e.*, 3,059 to 3,629.

The seven chief causes of deaths with rates and percentages are given in the following table :—

The Seven Chief Causes of Death.	Urban		Rural		Whole County		Percentage of Total Deaths		
	No.	Rates	No.	Rates	No.	Rates	Urban	Rural	Whole County
Heart Disease ...	231	1·91	373	2·14	604	2·05	16·0	17·0	16·6
Cancer	152	1·30	254	1·46	406	1·37	10·5	11·6	11·2
Phthisis	101	0·83	138	0·79	239	0·81	7·0	6·3	6·6
Influenza	81	0·67	156	0·89	237	0·80	5·6	7·1	6·5
Cerebral Haemorrhage	80	0·66	147	0·84	227	0·77	5·6	6·7	6·3
Pneumonia ...	73	0·60	146	0·84	219	0·74	5·1	6.7	5.8
Bronchitis	98	0·81	106	0·60	204	0·69	6·8	4·8	5·6

Rates calculated per 1,000 of population.

In my introductory letter particulars are given as to the increased number of deaths and their probable causation.

The following table shows the net number of registered deaths, with corresponding rates (Urban and Rural) in Leicestershire and England and Wales during the five years 1925, 1926, 1927, 1928, and 1929 :—

DEATHS.

Year	URBAN.		RURAL.		WHOLE COUNTY		Rate for England and Wales
	Net No. Registered	Rate	Net No. Registered	Rate	Net No. Registered	Rate	
1925	1319	11·57	1808	11·26	3127	11·39	12·2
1926	1196	10·35	1750	10·66	2946	10·53	11·6
1927	1351	11·45	1943	11·79	3294	11·61	12·3
1928	1186	9·88	1873	10·89	3059	10·48	11·7
1929	**1441**	**11·91**	**2188**	**12·55**	**3629**	**12·29**	**13·4**

A brief survey reveals that the Death Rate of the County has consistently been lower than that of the country as a whole.

ZYMOTIC DEATHS.

Although there have been fewer cases admitted to the Isolation Hospitals, the number of deaths has been higher and the rate has increased from 0.23 to 0.35. The Zymotic Deaths numbered 104, as compared with 69 last year, an increase of 35. This increase is due entirely to 31 more deaths from Whooping Cough and 10 more from Diphtheria. Fortunately there were 6 fewer deaths from Measles and 4 fewer deaths from Diarrhœa.

Number notified with corresponding Rates for Urban and Rural Districts and for Whole County :

YEAR	URBAN.		RURAL.		WHOLE COUNTY.	
	No.	Rate.	No.	Rate.	No.	Rate.
1925	74	0·7	56	0·4	130	0·5
1926	43	0·37	43	0·26	86	0·31
1927	30	0·25	41	0·25	71	0·25
1928	23	0·19	46	0·27	69	0·23
1929	**36**	**0·30**	**68**	**0·39**	**104**	**0·35**

BIRTH RATE.

There is a slight decrease in the Birth Rate from 17.4 to 17 per 1,000, the births for 1929 totalling 5,013 as compared with 5,074 in the previous year. The Birth Rate, however, compares favourably with the corresponding rate for England and Wales, *i.e.*, 16.3.

Of the births recorded 2,536 were males and 2,477 were females, *i.e.*, 102.4 males to 100 females. As noted in previous reports there is a much higher proportion of male to female births amongst the illegitimate children. In 1927 this ratio was 108 males to 100 females; in 1928 the ratio was 113 males to 100 females; and in 1929 the ratio was 112 males to 100 females.

Summary of Birth Statistics, Urban, Rural, and Whole County.

	Urban		Rural		Whole County		England and Wales
Population	120,900		174,400		295,300		
	No.	Rate	No.	Rate	No.	Rate	Rate
Births ...	1997	16·5	3016	17·3	5013	17·0	16·3

GENERAL PROVISION OF HEALTH SERVICES FOR THE AREA.

A complete summary of the Public Health Services available in the County has been compiled and published in book form for the purpose of providing a reference for the General Practitioners of the area and for any others whose work or interests are related to the Administration of the County Public Health Service.

GENERAL HOSPITAL PROVISION.

A (1) FEVER HOSPITALS:

The Authority responsible for the isolation of cases of infectious disease in the County is the Leicestershire Isolation Hospitals Committee. The personnel of this Committee is identical with the Public Health and Housing Committee of the County Council.

The administration of the various Institutions is supervised by Sub-committees who make visits of inspection at periodic intervals. All general questions relating to the administration of Isolation Hospitals should be referred to the County Medical Officer who acts as Administrative Medical Adviser to the Committee.

All urgent communications, *e.g.*, relating to the admission of cases of Infectious Disease to Isolation Hospitals should be addressed to the Clerk of the Isolation Hospitals Committee, Mr. J. Baylis, 17, Friar Lane, Leicester—Telephone No. 59302 Leicester; Home Telephone No. 7616 Leicester.

The Hospitals provided by the County Council for the treatment of Infectious Diseases, excluding Small Pox, are as follows :—

(a) Permanent Hospitals :

Blaby	17 beds.
Hinckley	23 ,,
Melton	23 ,,

(b) Temporary Hospitals :

Loughborough ...	9 beds.
Ibstock	12 ,,
Swannington	4 ,,
Moira	6 ,,

The above Hospitals have given much useful service in the past; but, as I have stated in previous reports, in the light of modern requirements for the treatment of infectious disease they are somewhat obsolete both with regard to structure and equipment. As the result of the rapid and comfortable transport which is nowadays available the function of the small hospitals scattered in various parts of the County is largely negatived, and the present conception of the administration and control of infectious diseases tends towards the concentration of all infectious cases in a central hospital. Such an arrangement allows centralisation of both administrative and clinical services with subsequent advantages to patients and community alike.

In the near future a combined Sanatorium and Isolation Hospital will be erected at Markfield, and in this Institution 54 beds will be reserved for the treatment of infectious diseases.

Ambulance Facilities.

Motor Ambulances are stationed at the Isolation Hospitals at Blaby and Melton Mowbray. Horse-drawn ambulances are available at Hinckley, Loughborough, and Ibstock. Short local journeys are undertaken by these horse-drawn ambulances, while the services of the motor ambulances are always available for journeys of greater distance.

A (2). SMALL POX.

The County Small Pox Hospitals at Syston and Snarestone are available for the isolation of these cases, the former having accommodation for 25 patients and the latter for 23 patients.

In July, 1929, at the commencement of the Small Pox epidemic, fully reported elsewhere, Snarestone Hospital was opened. This Hospital was in continuous service from that date until the end of the year; 189 cases were admitted and treated in the Instituton during that period.

In August, 1929, Syston Hospital was commissioned for service when 6 cases were transferred from Snarestone. Fourteen further cases were admitted from the County during the four months it was opened, but in addition 62 cases were by arrangement received from the City of Leicester. This Hospital was open until November, 1929, when a decrease in the number of cases allowed of its closure.

During the year a total of 218 cases of Small Pox occurred in the County. 203 cases were treated in the County Small Pox Hospitals, while the remaining 15 were admitted to other Institutions, viz., 8 to Leicester City Hospital and 7 to Bagthorpe Hospital, Nottingham.

Ambulance Facilities.

A special ambulance reserved for the work undertakes the transport of all Small Pox cases in various parts of the County.

II. Maternity Hospitals.

The County Council makes provision for the reception of County cases in the following Maternity Hospitals:—

(1) The Leicester and Leicestershire Maternity Hospital.
(2) St. Saviour's Home, Northampton.
(3) The Hospital of St. Cross, Rugby.

III. Children.

The County Council subsidises in-patient treatment for children at various approved Convalescent Homes and Orthopædic Hospitals.

IV. Orthopædics.

The County Council reserves beds as required in the following Orthopædic Hospitals :—

Mansfield Orthopædic Hospital, Northampton.

Warwickshire Orthopædic Hospital, Coleshill.

Harlow Wood Orthopædic Hospital, Mansfield.

V. Convalescent Home Provisions.

The County Council provides Convalescent Home treatment for various groups of cases, particulars of which are given elsewhere in this report.

VI. Institutional Provision for Unmarried Mothers.

Provision is made for these cases by arrangement with :

St. Saviour's Home, Northampton.

Salvation Army Home, Birmingham.

Diocesan Home, Ely.

VII. Provision for Illegitimate and Homeless Children in the area.

Arrangements for the care of these children are made according to the requirements of the individual cases.

General Ambulance Facilities.

The removal of Tuberculosis cases is undertaken by the County Council ambulance, while transport for the other groups is arranged locally.

CLINICS AND TEATMENT CENTRES.

Maternity and Child Welfare Centres.

Centre.	Day.	Time.
Anstey.	2nd and 4th Mondays.	2.30 p.m.
Asfordby.	2nd and 4th Thursdays.	2.30 p.m.
Ashby-de-la-Zouch.	Thursdays.	2.30 p.m.
Barrow-on-Soar.	2nd and 4th Wednesdays.	2.45 p.m.
Barwell.	2nd and 4th Thursdays.	2.30 p.m.
Birstall.	2nd and 4th Wednesdays	2.30 p.m.
Blaby.	1st and 3rd Tuesdays	2.15 p.m.
Bottesford.	2nd and 4th Wednesdays	1.45 p.m.

Centre	Day.	Time.
Coalville.	Tuesdays.	2.30 p.m.
Cosby.	1st and 3rd Wednesdays.	2.30 p.m.
Desford.	1st and 3rd Thursdays.	2 p.m.
Donisthorpe.	Wednesdays.	2.30 p.m.
Enderby.	1st and 3rd Wednesdays.	2 p.m.
Earl Shilton	1st and 3rd Thursdays.	2.45 p.m.
Evington.	1st Thursdays.	2.30 p.m.
Fleckney.	2nd and 4th Thursdays. This Centre was closed in September, 1929.	
Glenfield.	2nd and 4th Wednesdays.	2.30 p.m.
Hinckley.	Tuesdays.	2.30 p.m.
Humberstone.	1st and 3rd Wednesdays.	2.30 p.m.
Hugglescote.	2nd and 4th Mondays.	2.30 p.m.
Ibstock.	2nd and 4th Thursdays.	2.30 p.m.
Kibworth.	2nd and 4th Wednesdays.	2.30 p.m.
Lubbesthorpe.	1st and 3rd Mondays.	2.30 p.m.
Lutterworth.	1st and 3rd Thursdays.	2.30 p.m.
Melton Mowbray.	Wednesdays.	2 p.m.
Mountsorrel.	Tuesdays.	2 p.m.
Measham.	Mondays.	2.30 p.m.
Narborough.	2nd and 4th Thursdays.	2.30 p.m.
Oadby.	2nd and 4th Wednesdays.	2.45 p.m.
Quorn.	Wednesdays.	2.30 p.m.
Rearsby.	1st and 3rd Tuesdays.	2.30 p.m.
Rothley.	1st and 3rd Mondays.	2.30 p.m.
Shackerstone.	1st and 3rd Tuesdays.	2.30 p.m.
Shepshed.	1st and 3rd Wednesdays.	2.30 p.m.
Sileby.	Tuesdays.	2.45 p.m.
South Wigston.	2nd and 4th Tuesdays.	2.30 p.m.
Stathern.	1st and 3rd Mondays.	2.30 p.m.
Syston.	Mondays.	2.30 p.m.
Thurmaston.	Tuesdays.	2.30 p.m.
Wigston Magna.	2nd and 4th Thursdays.	2.30 p.m.
Whetstone.	2nd and 4th Tuesdays.	2.30 p m.
Whitwick.	Mondays.	2.30 p.m.

ANTE-NATAL CENTRES.

Hinckley.—One Session per month (1st Monday), 2.30 p.m.
Wigston Magna.—One Session per month (2nd Friday), 2.30 p.m.

Eye Treatment and the Provision of Spectacles for Children attending Infant Welfare Centres.

In January, 1929, arrangements were made to examine and provide spectacles for children attending the County Infant Welfare Centres. The work is undertaken by Dr. Constance Walters, the County Oculist, who is also an Assistant Medical Officer under the Maternity and Child Welfare Service.

Examinations, treatment, and the issue of prescriptions are free for all cases. In the case of parents who are not necessitous the spectacles are obtained from any qualified private optician; in cases where difficulty is experienced in obtaining the spectacles through the latter channel they can be supplied through this Department. Spectacles for children of necessitous parents are provided on a scale adopted by the Maternity and Child Welfare Committee.

Before any examination or treatment is commenced the consent in writing of the responsible parent or guardian is obtained.

The following is the record of the work carried out during the year.

14 children were examined and spectacles were prescribed in 11 cases. Of these the parents paid the cost in 10 instances, and in the remaining one the charge, amounting to 3s. 5d., was paid by the Maternity and Child Welfare Committee. Six parents obtained the spectacles privately, and 5 through this Department.

In my opinion the service carries out invaluable preventive work in the control of eye conditions occurring in young children. It is an established fact that in practically all cases of eye defects in children it is essential that treatment should be provided as early as possible in the child's life. Many defects of a serious nature when adequately treated at this age yield to the measures adopted with life-long benefit to the vision of the case. I am confident that in future years, when this service becomes fully developed, the benefits derived from it will be incalculable.

SCHOOL CLINICS.— For the treatment of minor ailments.

Leicester:

County Health Department, 17, Friar Lane.

Every Saturday from 10 a.m. to 12 noon. Cases seen by appointment.

A Dental Clinic and an Ophthalmic Clinic are also held at this address every Saturday morning.

Coalville :

Primitive Methodist Schoolroom.

Tuesdays and Fridays 10 a.m. to 12 noon.

School Medical Officer attends on Tuesdays.

Hinckley :

Mission Room.

Tuesdays from 10 a.m. to 12 noon.

School Medical Officer attends every Session.

Melton Mowbray :

Town Hall.

Wednesdays and Fridays from 10 a.m. to 12 noon.

School Medical Officer attends on Wednesdays.

Dental and Ophthalmic Clinics are held at routine intervals in various parts of the County.

Institutional and Operative Treatment.

1. Adenoids and Enlarged Tonsils.
2. Ringworm.
3. Defective Vision.
4. Physically and Mentally Defective Children.

Full particulars of these are given in the School Annual Report.

Orthopædic Clinics.

All applications for Orthopædic treatment should be made in the first instance to the County Medical Officer, by whom the necessary arrangements will be made. The Clinics available for diagnosis and treatment are as follows :—

(1) *Coalville Clinic.*

Primitive Methodist Schoolroom, Marlborough Square, Coalville. Mondays and Wednesdays, 2.30 p.m.

This Clinic is entirely under the auspices of the County Council.

Additional Clinics which work in co-operation with the County Health Department are as follows :—

Leicester Royal Infirmary.

Daily by arrangement.

Loughborough Cripples' Guild.

Packe Street, Loughborough. Daily by arrangement.

A full survey of the County Orthopædic scheme will be found on page 42 of this report.

Artificial Light Clinics.

Artificial light treatment is available for County cases at the Leicester Royal Infirmary, by special arrangement with that Institution and the County Health Department. Similar treatment is available at the Loughborough Cripples' Guild and Mowsley Sanatorium.

TUBERCULOSIS DISPENSARIES PROVIDED BY THE COUNTY COUNCIL:

LEICESTER: 17, Friar Lane, Leicester.

Wednesdays at 10 a.m. for Routine Cases.
Thursdays at 10 a.m., special cases by appointment only.

LOUGHBOROUGH: John Street Clinic.

Thursdays 10 a.m.

HINCKLEY: Manor House, Bond Street.

Mondays 10 a.m.

COALVILLE: Bakewell Street Dispensary.

Fridays 10 a.m.

MELTON MOWBRAY: 5a, Nottingham Street.

Tuesdays 10 a.m.

All cases unfit to attend the Out-Patient Dispensaries are visited at their own homes by the Tuberculosis Medical Officers on the request of the General Practitioner in attendance.

These Dispensaries are intended not only for the observation or supervision of Tuberculous patients, but any doubtful case which is not notified may be referred by General Practitioners for opinion at the times and days stated above.

No action is taken under the County Scheme in any case unless with the consent of the patient's own Doctor.

Domiciliary Nursing.

Home Nursing of advanced cases of Tuberculosis is carried out by arrangement with the County Nursing Association. The selection of suitable cases rests with the General Practitioner in attendance, to whom application should be made in the first instance. The case is then reported by him to the Tuberculosis Officer for approval.

Shelters with Beds and Bedding are provided for the use of patients where suitable accommodation is available. Application for shelters should be made to the Tuberculosis Officer. Approval is given chiefly in cases of overcrowding or where the lack of a separate room for the patient involves risk of infection to others. Patients who have been provided with shelters are visited at regular intervals by the County Health Visitors or the Staff of the County Nursing Association.

Extra Nourishment is granted to selected patients who are in very poor circumstances. Each case is reported by the Tuberculosis Medical Officer to the Committee for the consideration of financial circumstances.

Medical Help in the form of dressings, water cushions, bed rests, etc., is also granted in certain cases.

Home Visiting.— Regular Home Visiting of all notified cases is carried out by the Health Visitors of the County Council. Their duties include supervision of home conditions and family contacts, giving instruction with regard to disinfection, and reporting on general health matters.

Notification of Births Acts.

Notifications of Births, with the exception of those occurring in Loughborough Municipal Borough and Market Harborough Urban District, must be made to the County Medical Officer within 36 hours of the birth. A supply of cards and envelopes for this purpose is despatched on application to Doctors and Midwives.

The County Health Visitors visit for the purpose of giving advice as to the feeding and care of the infants. Subsequent visits are made as required until the child reaches the age of five years.

Puerperal Fever and Puerperal Pyrexia, and Ophthalmia Neonatorum.

On receipt of a copy of notification from a District Medical Officer of Health, the Health Visitor for the respective district is instructed to visit immediately and report on the case. Subsequent visits are made as required.

(N.B.).—A free supply of Anti-streptococcal serum can be obtained by a Medical Practitioner from Loughborough General Hospital, or from Messrs. Boots Ltd., Market Street, Leicester, providing that the case is immediately reported to the County Medical Officer, and that he furnishes

a certificate stating the case is necessitous. The Maternity and Child Welfare Committee must be satisfied that the cost of the serum cannot be recovered from the husband or person liable.

In addition to the provision for necessitous cases of the above anti-streptococcal serum, costing 4s. 7d. per 10 ccs., approval has been obtained for the issue of a new serum manufactured by Messrs. Parke, Davis and Co., at a cost of 25s. per 10 c.c.s for such cases. During the year serum was supplied for two necessitous cases at a total cost of £3 : 8 : 4.

Treatment Centres for Venereal Diseases Provided or Subsidised by the County Council.

Out-patient Clinics are held as follows :—

Institution.	Medical Officer.	Sessions.
Leicester Royal Infirmary.	Dr. H. J. Blakesley. Dr. H. Atkinson.	*Male* :— Mondays 3.30 p.m. Wednesdays (Old Cases) 6.30 p.m. Thursdays 5.0 p.m. Fridays 6.30 p.m.
Ditto.	Dr. Bessie Symington.	*Female* :— Mondays 6.30 p.m. Wednesdays (Old Cases) 4.0 p.m. Fridays 3.30 p.m.
Loughborough General Hospital.	Dr. J. B. Dalton.	*Male* :— Mondays 5.15—6.15 p.m. *Female* :— Mondays 4.0 to 4.45 p.m.

Payment of travelling expenses is made to those patients attending Out-Patient Clinics whose financial circumstances are considered necessitous.

Free supplies of Arsenobenzol Compounds are issued from the County Health Department to those General Practitioners who are authorised to administer them.

Pathological examinations are made in the County Laboratory, 17, Friar Lane, Leicester, specimens for Wassermann tests being despatched from there to the Leicester Royal Infirmary.

LABORATORY :

The following is a summary of the investigations carried out in the County Laboratory :—

Throat Swabs for Diphtheria.
Sputa for Tubercle Bacilli.
Bacteriological Milk Examinations.
Hair for Ringworm.
Blood Counts (differential); complete counts when possible.
Water Analysis (Public Supplies).
Films for Gonococci.
Exudate for S. Pallida.
Widal Tests.
Urine Examination (Chemical and Bacteriological).
Fæces for B. Typhosus.
Pus for Organisms.
Serous Fluids.
Cerebro-spinal Fluid (General and Cytological).
Blood for Wassermann Test.

All the above examinations are performed for General Practitioners free of charge. The specimens for Wassermann Test are forwarded to the Leicester Royal Infirmary, but no charge is made if they are sent through the County Laboratory.

Specimens of Cerebro-Spinal Fluid for Cerebro-Spinal Meningitis are charged to the Local Authorities concerned at the flat rate of £2 : 2s. per case where the patient is visited and lumbar puncture performed by a member of the Health Department, and 10s. 6d. when the fluid is collected by the General Practitioner in attendance and forwarded to the Laboratory by post or train.

Bacteriological examinations of specimens of milk are charged for at a fee of 2s. 6d. each when examined under the County Scheme. The fee is paid by the Local Authority sending the samples. Private samples can be examined at a charge of 3s. 6d.

Samples of water from public supplies are analysed free of charge.

Throat Swabs from Isolation Hospitals are paid for at the rate of 2s. each by the Isolation Hospitals Committee, and specimens of sputum for Tubercle Bacilli are paid for by the Public Health Committee at the rate of 2s. 6d. per specimen.

When epidemics of Diphtheria occur amongst school children all the scholars are medically inspected by one of the Medical Staff, and throat swabs taken from any possible "carriers" who might be a source of infection.

MILK AND DAIRIES (CONSOLIDATION) ACT, 1915.

On receipt of a notice from the Medical Officer of Health of another Sanitary Authority that Tubercle Bacilli have been found in a sample of milk produced in this County and supplied to his area, arrangements are made for the inspection of cattle on the affected farm by the County Council Veterinary Surgeon. Any animal found on inspection to be tuberculous or whose milk gives a positive result to biological tests, is dealt with under the Tuberculosis Order, 1925.

Samples of milk are obtained through the Sanitary Inspectors of the District Councils by the County Health Department from herds in which there is a suspicion of Tuberculosis. If a sample is found to contain Tubercle Bacilli, the procedure indicated in the preceding paragraph is carried out.

SALE OF FOODS AND DRUGS ACTS.

The duties under these Acts are carried out by the County Police.

TUBERCULOSIS ORDER, 1925.

This Order is administered by the Diseases of Animals Sub-Committee, and notifications relating to any bovine animal, suffering, or appearing to be suffering from Tuberculosis, should be sent to the Clerk of the County Council, 10, New Street, Leicester.

RIVERS AND STREAMS.

The County Council, acting through the Public Health Committee, carries out the duties under the Rivers Pollution Prevention Acts.

Sewage Works and Sewage Farms, and Rivers and Streams which receive their effluent, are periodically inspected by the County Medical Staff. Any communications or complaints regarding the pollution of rivers or streams should be addressed to the County Medical Officer.

On the other hand, complaints regarding the repair of houses, water supply, defective sewers and drains, should be sent to the local Sanitary Authority. For convenience of reference a list of the District Medical Officers of Health is given below :—

MEDICAL OFFICERS OF HEALTH.

URBAN :—

District.	Name and Address.	
Ashby-de-la-Zouch	Dr. T. Forsyth	Hugglescote.
Ashby Woulds	Dr. R. Logan	Ashby-de-la-Zouch.
Coalville	Dr. A. Hamilton	Coalville.
Hinckley	Dr. J. H. Donnell	Hinckley.
Loughborough	Dr. N. B. M. Blackham	Loughborough.
Market Harborough	Dr. C. T. Scott	Market Harborough.
Melton Mowbray ...	Dr. J. E. O'Connor	Kirby Muxloe.
Oadby	Dr. J. E. O'Connor	Kirby Muxloe.
Quorndon	Dr. J. E. O'Connor	Kirby Muxloe.
Shepshed	Dr. T. Bell	Shepshed.
Thurmaston	Dr. J. E. O'Connor	Kirby Muxloe.
Wigston	Dr. J. E. O'Connor	Kirby Muxloe.

RURAL :—

District.	Name and Address.	
Ashby-de-la-Zouch	Dr. T. Forsyth	Hugglescote.
Barrow-upon-Soar ...	Dr. J. E. O'Connor	Kirby Muxloe.
Belvoir	Dr. F. J. H. Martin	Bottesford.
Billesdon	Dr. J. E. O'Connor	Kirby Muxloe.
Blaby	Dr. J. E. O'Connor	Kirby Muxloe.
Castle Donington ...	Dr. J. T. Fletcher	Castle Donington.
Hallaton	Dr. J. E. O'Connor	Kirby Muxloe.
Hinckley	Dr. J. E. O'Connor	Kirby Muxloe.
Loughborough	Dr. N. B. M. Blackham	Loughborough.
Lutterworth	Dr. J. E. O'Connor	Kirby Muxloe.
Market Harborough	Dr. J. S. Macbeth	Kibworth Beauchamp.
Market Bosworth ...	Dr. T. G. Kelly	Desford.
Melton Mowbray ...	Dr. J. E. O'Connor	Kirby Muxloe.

PREVALENCE OF, AND CONTROL OVER, INFECTIOUS AND OTHER DISEASES.

With regard to notifiable infectious diseases in general the most marked feature during 1929 was the Small Pox epidemic, 230 cases being notified. A concurrent epidemic of Chicken Pox also prevailed, and although Chicken Pox is not compulsorily notifiable in all areas of the County, 332 cases were notified in the areas in which notification is the rule. At the end of the year these epidemics showed no signs of abating, though fortunately they continued to be mild in character. There were no deaths from Small Pox in the County during the year.

The Scarlet Fever epidemic of 1928 declined markedly, and, although the number of cases notified in 1929 was high, it was only about half the number notified in the previous year.

The figure for Primary Pneumonia showed a marked increase on the previous year. More than half the cases notified in 1929 occurred in the first quarter of the year. The prolonged severe frosts which were experienced during that period were no doubt important contributory factors to this phenomenon.

The other notifiable diseases showed no noteworthy change relative to the incidence in previous years.

DIPHTHERIA.

362 cases of Diphtheria were notified during 1929, a decrease of 33 on last year. The total number of cases was nevertheless high. The disease occurred in all districts, but more markedly in Melton Mowbray, Wigston, Cosby, and Earl Shilton.

321 cases were admitted to the Isolation Hospitals (*i.e.*, 89 per cent. of the total number.) Diphtheria was responsible for 34 deaths.

It is a matter of sincere regret for me to report that the number of deaths from Diphtheria has increased, despite the fact that the total number of cases was less.

SCARLET FEVER.

664 cases of Scarlet Fever were notified, the Rural Districts being more affected than the Urban Districts. 428 cases (*i.e.*, 64.4% of the total number) were admitted to Isolation Hospitals, and 5 deaths occurred.

MEASLES.

The Elementary School Weekly Returns show a decrease in the number of cases of Measles. Only two schools were closed on account of this disease, and certificates of reduced attendance were granted to 15 schools.

INFLUENZA.

The disease reached epidemic proportions in the County during the year. In 1928, 49 deaths from Influenza were recorded, while in 1929 the number of deaths increased by 188. It is worthy of note that of the 237 deaths in the county, 81 occurred in the Urban areas (total population 120,900) and 156 occurred in the Rural areas (total population 174,400).

This disease increased markedly so far as school children were concerned during 1929. 46 certificates of reduced attendance were issued as compared with 5 in 1928.

PUERPERAL FEVER AND PUERPERAL PYREXIA.

Eleven cases of Puerperal Fever and 22 of Puerperal Pyrexia were notified as compared with 12 and 27 respectively in 1928. The number of deaths due to Puerperal Sepsis was 9.

ENTERIC FEVER.

The total number of notifications of Enteric Fever was 7 as against 14 last year. One case of Dysentery was also recorded. There was no local concentration of cases such as would warrant special investigation. 5 cases were treated in the Isolation Hospitals.

OPHTHALMIA NEONATORUM.

The following is the record for 1929 :—

Cases.			Vision Un-impaired	Vision Impaired	Total Blindness	Deaths
Notified	Treated					
	At Home	In Hospital				
18	13	5	17	1	—	—

The total number of cases this year is the same as in 1928, but in only one case has there been any impairment of vision as compared with two in the previous year.

SMALL POX.

Mild Small Pox which for many years has been present in South Africa as Amaas and in Egypt and South American countries as Alastrim has only been prevalent in England since 1920.

Since then the number of cases has steadily increased, and the mildness of the infection is shown by the fact that only 47 deaths occurred in the 14,764 cases notified in England during 1927.

For several years prior to 1929 Leicestershire had been singularly fortunate in having a relatively small share of the total cases occurring in England. During the year 1926 no cases of Small Pox occurred in the County, and this immunity continued during 1927 until the last week of the year when one case was notified and removed to Bagthorpe Hospital, Nottingham.

In 1928, 25 cases were notified, and of these Syston Small Pox Hospital received 21 from February until June. The remaining 4 cases, contacts with City cases, occurred in November and December, and were admitted to Leicester City Small Pox Hospital. No further cases occurred until April, 1929, when 6 cases were notified and admitted to Leicester City Small Pox Hospital.

It is noteworthy that the small local outbreaks in the period December, 1927, to April, 1929, were quickly suppressed and no general spread occurred, due no doubt to the unceasing vigilance of the Local Medical Officers of Health and the County Public Health Staff.

In July, 1929, however, the extensive outbreak of Small Pox in Leicestershire commenced, and this epidemic continued throughout the year; 218 County cases being admitted to hospital.

The first 3 cases of minor Small Pox were reported from Ibstock, and since the County Small Pox Hospitals were closed because the County had been free of Small Pox for several months, they were sent to Bagthorpe Hospital, Nottingham. Further cases occurred in rapid succession in Ibstock, Thringstone, and Ashby-de-la-Zouch, and on the 28th July the first of the many cases at Shepshed was discovered. Snarestone Small Pox Hospital was opened on the 24th July, and has continued to receive cases since that date.

The following is a summary of the Hospitals used for the isolation and treatment of Small Pox during the year with the number of County cases received at each Institution. These figures do not include transfers from one Hospital to another.

Hospital.	Period.	No. of Cases Admitted.
Leicester City Hospital	24/4/29—15/5/29	6
Bagthorpe Hospital, Nottingham	6/7/29—26/8/29	7
Snarestone Hospital	24/7/29—31/12/29	189
Syston Hospital	26/8/29—30/11/29	14
Leicester City Hospital	1/12/29—31/12/29	2
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In addition, the Leicester City cases which were treated at County Small Pox Hospitals in the periods given above were distributed as follows :—

Snarestone Hospital	5 cases.
Syston Hospital	62 cases.

The origin of the Small Pox epidemic in a County such as Leicestershire is often extremely difficult to trace, especially in a country such as England where Small Pox may be said to have become endemic. In this outbreak, however, there is considerable evidence to support the belief that the principal, if not the only point of origin, was Heather Brickyard, and that a case of Small Pox was imported thither from Derbyshire as early as the beginning of May. Workers from all the neighbouring towns and villages (including Shepshed, Ibstock, etc.), are employed in this brickyard, and there is little doubt that early cases from the brickyard carried the infection into miners' families and through them the Coalville, Ibstock, and Thringstone cases arose.

With the modern increase of travel facilities and the rapid intermingling of the local population as the result of cheap excursions and numerous cars and omnibuses, together with the congregation of the population in confined premises such as cinemas and theatres, it is not difficult to imagine how infection can be rapidly spread through a comparatively unprotected community.

The cause of the Shepshed epidemic was investigated with extreme care by Dr. Mackintosh, and in this connection Dr. Bell in his report to the Shepshed Urban District Council states, "We were most fortunate in getting the services of Dr. Mackintosh who conducted his investigations and acted as my Deputy in a kindly, tactful, patient and thoroughly efficient way."

So far as the origin of the epidemic at Shepshed is concerned one cannot do better than again quote from Dr. Bell's report as follows :—

"The disease had become fairly prevalent before it was recognised as Small Pox, greatly owing to the prevalence of Chicken Pox amongst children during the months of April, May, and June. During June and July a few adults suffered from what was called Chicken Pox. Doubts were raised as to whether these cases were Chicken Pox or Small Pox, but the diagnosis was confirmed by other medical men. It was not until a Leicester resident employed in Shepshed was found to be suffering from Small Pox (July 27th, 1929) that these cases were regarded as Small Pox."

Again, Dr. Mackintosh in his report to me on his labours during the month of August at Shepshed, says :—"It is easy to be wise after the event, and there is little doubt that a number of cases had already occurred in Shepshed and elsewhere before a definite diagnosis of Small Pox was made, but minor Small Pox is very hard to diagnose at any time, and in Shepshed the discovery of the earlier cases was rendered much more difficult by the existence of a concurrent epidemic of Chicken Pox."

Every responsible medical man will agree with these views, and the wonder is not that Small Pox should have spread but that it should not have affected many more individuals than was actually the case.

To illustrate the enormous volume of work which requires to be undertaken in dealing with an outbreak of Small Pox, even in a very restricted area, the following is a summary of the steps taken to secure control of "missed" cases at Shepshed :—

(1) All the School Departments were visited and every child inspected. The names and addresses were taken of all absentees during the three weeks previous to inspection.

(2) The factories were visited, and the names and addresses of all workers absent owing to sickness were taken. The Managers of the factories gave their cordial co-operation in this matter.

(3) Systematic visits were made to all cases, and contacts in the 12 houses already known to be infected, and in addition every individual reported to be absent from school or factory was examined.

(4) Through the courtesy of H.M. Inspector of Factories, a list of all factory out-workers was obtained, and it was arranged that the Sanitary Inspector should pay regular visits to every factory in the district. Both the General Practitioners in Shepshed kindly agreed to notify any suspected cases and any occurrence of illness in infected houses.

(5) Daily visits were paid to every School Department, a list of absentees being obtained, and also to every home in which a case had occurred, to all contacts and to every case notified by the Doctors.

The following Table shows the incidence of Small Pox month by month in the various Urban and Rural Districts which were affected by the disease during the year :—

District	April	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Ashby R.D.	—	8	—	—	—	4	—	12
Ashby U.D.	—	1	1	—	—	—	—	2
Barrow R.D.	—	—	—	—	—	1	1	2
Blaby R.D.	3	—	—	—	5	—	2	10
Billesdon R.D.	—	—	—	—	—	—	1	1
Coalville U.D.	—	1	3	4	7	1	—	16
Hinckley R.D.	—	—	—	—	1	4	1	6
Loughborough U.D.	—	—	6	6	—	1	1	14
Lutterworth R.D.	1	—	—	—	—	—	—	1
Mkt Bosworth R.D.	—	11	6	31	19	7	2	76
Melton Mowbray R.D.	2	—	—	—	—	—	—	2
Oadby U.D.	—	—	—	—	—	1	2	3
Quorn U.D.	—	—	3	1	—	—	—	4
Shepshed U.D.	—	11	22	16	2	9	5	65
Wigston U.D.	—	—	—	—	—	1	3	4
								218

It is readily seen that the large majority of the cases occurred in the Urban District of Shepshed and at Ibstock, and that the epidemic at these Centres showed signs of decline towards the end of the year.

Owing to the large number of cases occurring in Leicester City, and as many County workers travel daily to work in City factories where Small Pox has occurred, one fears that Small Pox will continue to recur especially in County districts adjacent to the City. Unfortunately these fears are not groundless as evidenced by the occurrence in November and December of fresh foci of infection in the Urban Districts of Oadby and Wigston, and in the Rural Districts of Blaby, Barrow, and Billesdon.

. . . . . .

The following Table shows the cases admitted to the County Small Pox Hospitals during the year, divided into age groups and sub-divided according to sex. A number of cases from Leicester City are included in these figures :—

TOTAL ADMISSIONS.

Age—Groups.	Male.	Female.	Total.
0—5	12	7	19
5—10	21	15	36
10—20	42	47	89
20—30	37	15	52
30—40	14	25	39
40—50	7	6	13
50—60	7	6	13
60—70	2	1	3
70—80	3	1	4
	145	123	268

Of these 268 cases only 22 (8.2%) had been vaccinated. None of the cases admitted had been vaccinated since infancy. These figures do not include cases vaccinated as contacts in which the vaccination was performed too late to avert Small Pox invasion. The following Table shows the vaccinated cases divided into age groups and sub-divided according to sex :—

VACCINATED ADMISSIONS.

Age—Groups.	Male.	Female.	Total.
0—5	—	—	—
5—10	—	—	—
10—20	—	—	—
20—30	—	—	—
30—40	1	1	2
40—50	3	2	5
50—60	4	5	9
60—70	2	1	3
70—80	3	—	3
	13	9	22

The ages of the two cases occurring in age group 30—40 were 36 and 38 respectively.

These figures demonstrate the following facts:—

(1) Of the 268 cases, 246 had never been vaccinated.

(2) Small Pox in the vaccinated occurred only in cases over 35 years of age, that is to say, not a single case of Small Pox occurred in persons vaccinated within the last 35 years.

The efficacy of vaccination as a prophylactic measure in dealing with Small Pox requires no further proof, but it is interesting to note that the experience in Leicestershire is that vaccination in infancy protects for a long period of years, and it is reasonable to assume that so far as the present mild form of Small Pox is concerned had the vaccinated cases been re-vaccinated about the age of 30, little or no Small Pox would have occurred in the vaccinated population of the County. If the Small Pox epidemic had been of the severer type, however, primary vaccination would probably not have protected for so long a period.

MATERNITY AND CHILD WELFARE SERVICE.

During the year under review an immense amount of useful work has been undertaken by the County Maternity and Child Welfare Service. There are 42 Centres under the auspices of the County Council in Leicestershire, and of these Centres 12 open weekly, 29 open twice a month, and 1 opens monthly. A County Health Visitor is in

attendance at each meeting, and in addition a Medical Officer visits at least once a month. The general work of the Service is maintained under three main groups, viz. : (a) Clinical, (b) Educational, and (c) Administrative. The following report affords a brief summary of the existing arrangements under these sections.

(*a*) *Clinical Work.*

At their first visit to the Centre all babies and children under five years of age are examined fully by the Medical Officer. This examination is a very complete one including an investigation of the heart, lungs, abdomen, and entailing a general survey of the state of the child's development. In addition careful enquiries are made with regard to the child's dietary and complete clinical notes are recorded in the individual Welfare Record Card.

Furthermore, the Medical Officer makes a re-examination at twelve-monthly intervals of every child in attendance at the Centre, while any case of illness, debility, etc., is seen by the Medical Officer at each visit. The clinical card forms a very complete summary of the child's medical history throughout the early years of life, and administrative arrangements have now been made whereby it will be possible to transfer all these particulars from the Welfare Record Cards to the Schedules of School Medical Inspection. In this way continuity of Clinical records will be available from early infancy to the final stages of school life.

Constant observation is maintained by the Medical Officers in relation to the feeding and nutrition of babies, and to the general dietetic requirements of young children. Careful enquiry is made into the type of feeding that each child receives, and individual instruction of a continued nature is given to all mothers whose children's dietary seems unsuitable or incomplete.

A special note is made of the nature of the feed in the first twelve months of life, and for general purposes the following headings are employed :—(a) Breast-fed (over three months in duration), (b) fresh cow's milk, and (c) dried milk or patent foods. In 1,778 cases investigated for these dietetic observations in the first twelve months of life 1,142 or 64.3% were breast-fed ; 395 or 22.2% received fresh cow's milk, and 241 or 13.5% were fed on dried milk or patent foods. These figures approximate very closely to the corresponding figures of last year, but it is satisfactory to note the high percentage of breast-fed children in comparison with the percentages recorded in the other groups.

The teaching of the Staff with regard to this question may be summarised in the following way :—(a) In the first instance all mothers are recommended to breast feed their children, (b) in cases of failure of the breast milk supply, fresh cow's milk (preferably of Grade "A" standard) is advised, and (c) in cases of exceptional difficulty or intolerance to these methods, dried milk is recommended over a temporary or permanent period as the case necessitates.

It is worthy of note that this teaching intensively practised for years is gradually bearing results, and it is definitely apparent that mothers on the whole are becoming more and more accustomed to the use of natural foods in preference to patent articles.

This most valuable objective with its direct and vital bearing on the proper foundations for later life by adequate dietetic methods has undoubtedly been gained through the patient instruction of Welfare workers, and I consider that this is perhaps the most valuable single result arising from the whole Mother and Child Welfare Service.

The Medical Officers made 3,244 clinical examinations during the year, and 1,291 children were examined for the first time. The total number of weighings by the Health Visitors was 21,945.

The principle defects observed at routine visits to Welfare Centres during 1929 were :—

Bronchitis 151, Phimosis 85, Umbilical Hernia 81, Skin Conditions 49, Naso-pharyngitis 46, External Eye Conditions 35, Rickets 31, Ear Disease 23, Strabismus 19, Other Hernia 18, Thread Worms 13, Congenital Deformity 13, Congenital Heart Disease 6, Marasmus 4.

The useful extension of Ophthalmic treatment to the Infant Welfare Service, commenced in 1928, has been continued with excellent results throughout the year. Fourteen such cases were examined by the County Oculist, and much excellent preventive work has been secured by this branch of the Service. The scheme, of course, applies only to cases in which the parents are unable to pay a full medical fee.

(*b*) *Educational.*

In addition to individual instruction at the clinical examinations the Medical Officers and Health Visitors gave 822 talks on general health subjects during the year.

The general scheme of instruction includes (a) the care of the Mother, Ante-Natal and Post-Natal (with special reference to the necessary preparation for the advent of the child); (b) the care of the Baby—feeding, bathing, clothing, etc., and (c) the care of the Toddler with special reference to diet, exercise, rest, etc., etc. In addition, talks are given on the infectious diseases and many other subjects especially incident to local or other prevailing conditions.

Throughout these talks particular care is taken to ensure the thorough understanding and comprehension of the preventive aspect of Welfare work. At the commencement of each year the objects of Welfare work are clearly presented. The following extract being from a pamphlet available for distribution to the mothers :

"The object of the Infant Welfare Centre is to give advice and help on all matters relating to the general health and welfare of the mother and her child. The Welfare Centre carries out this object by teaching mothers the simple laws of diet and of the general conduct of life, and the principles underlying the management of children, so that both mothers and children may possess a high standard of resistance both to illness and to the everyday wear and tear of life.

"One of the special benefits to be obtained from the Centre is that young babies and even older children can be weighed regularly, and the progress of their early lives accurately judged. In short, the Centre does not exist to treat disease but to prevent disease, and with this object in view, mothers should take every opportunity for consulting the Medical Officer in attendance at the Centre.

"It may be that Mothers will sometimes think that their troubles are too small or too insignificant for medical advice, but it is to be specially emphasised that no ailment is too trifling for attention and advice. The Doctors at the Centre will always give sympathetic help on any matter which is causing the mother anxiety, and it is their special desire that mothers should come to them whenever they find themselves in any difficulty, no matter how small and paltry it may seem."

The above section on the objects of a Welfare Centre is contained in a pamphlet produced by Dr. Mackintosh, Dr. Davidson, and Dr. Weston on "Advice to Mothers on the Care of the Baby." This pamphlet deals in detailed fashion with (a) *What the Baby Needs* (Fresh Air, Suitable Clothing, Daily Bath, Rest); (b) *Breast-Feeding* (General Advice, Times

of Feeding and Method of Feeding, Common Causes of Failure in Breast-Feeding); (c) *Care of the Nursing Mother* (Diet, Exercise, Rest, etc.); (d) *Bottle-Feeding* (The Feeding-Bottle, Preparation of Cow's Milk, Quantity and Times of Feeding, with Table of Instructions, Treatment of Milk in the Home, Care of Milk, and Cleanliness of Milk Vessels); (e) *Weaning* (with Special Dietetic Chart, and General Notes).

This pamphlet is not given to every mother in attendance at the Centre, but only to those whose needs appear to require it, as I am of opinion that widespread distribution of such literature tends to lessen its value.

I feel certain that this educational work results in real benefit to the mothers and children. Progress must of necessity be slow, but I am confident that the simple rules and facts of health, personal and environmental, conveyed to the mothers in these talks will play a great part in the future in laying sure foundations for healthy and virile life in the succeeding generations. The results of this work, therefore, cannot be adjudged at the moment, but I am confident that in the fulness of time when a reckoning comes to be made it will be found that this teaching has been invaluable in the creation of higher standards of living.

Furthermore, it appears to me that the implantation of basic health knowledge in audiences of this type touches the heart of the whole question of the public's co-operation in an endeavour towards the prevention of disease by raising the individual and communal standards of health. It is to the mothers who are the controllers of both children and homes that we must look for the observation of those principles which form the basis of all health work. The use of these simple health measures in the home is an absolute essential if the general sanitary and health provisions of the present day are to fulfil their complete function.

During the year the Medical Officers made 471 visits to Welfare Centres. The visits of the individual Medical Officers were as follows: Dr. Fairer 26, Dr. Mackintosh 47, Dr. Davidson 40, Dr. Coward 45, Dr. Weston 130, Dr. Walters 158, and Dr. Lane 25. In addition, Dr. Weston and Dr. Walters made 11 visits each to Ante-Natal Centres.

It is interesting to note that in the County ten years ago (viz., 1919) there were 18 Centres, and the Medical Officers made 133 visits.

In the course of the present year new Centres were opened at Birstall, Lubbesthorpe, and Hugglescote. At Birstall and Hugglescote the Centres give promise of doing excellent work, and their record in

the first year of their existence is very satisfactory. Since the inception of the Lubbesthorpe Centre both Medical Officer and Health Visitor have been overwhelmed by the number of mothers seeking their aid. Two Medical Officers have been required to attend together to enable even a small amount of the work to be undertaken.

The Centre at Fleckney was closed in September on account of lack of local interest and poor average attendance.

Infant Welfare work in Leicestershire has reached a stage of development when it is opportune to survey its general administrative requirements. Two main factors arise in our survey. Firstly, that certain Centres, by growth and development in consequence of the population which they serve, have reached a level of attendance and work which demands the attendance of a Medical Officer at more frequent intervals than once a month; secondly, other Centres through lack of interest and non-appreciation of the work have failed to maintain a reasonable standard of attendance and efficiency. Lack of interest in these latter Centres has demonstrated that their actual benefit to the community is out of proportion to the expenses which their administration entails.

From this investigation it has become apparent that distinction must be made between these types of Centres so that the services of the Medical Officers and Health Visitors would be available for the Clinics whose needs are most urgent.

After careful consideration in conjunction with the Ministry of Health, it has been decided to close two Centres, viz., Bottesford and Shackerstone, and to alter the meetings at Quorn, Donisthorpe, and Measham, from weekly to fortnightly intervals.

It is regrettable that these changes have to be made, but, in general fairness to the community it is essential that expenditure of both money and time should be commensurate with the results obtained. These new arrangements may seem to cause hardship to the smaller communities where undoubtedly Infant Welfare work does much good, but with limited resources available this Department must of necessity give service to those areas where the benefits of the work can reach the greatest numbers. Consequent on these alterations it will now be possible to provide at such Centres as Lubbesthorpe, Hinckley, Coalville, etc., the attendance of a Medical Officer at weekly or fortnightly intervals instead of as at present monthly visits. Furthermore, the remaining Centres will be administered on similar lines according to the requirements which they present.

I am confident that the service will gain in power and efficiency under the new scheme, and that the benefits of its work will be distributed to greater advantage.

Supply of Milk to Necessitous Mothers.

This section of the work is under the direct supervision and control of the County Maternity and Child Welfare Committee, to whom all applications for grants of milk are submitted. Grants of milk are made to (a) Expectant Mothers, (b) Nursing Mothers, and (c) Children under five years of age whose requirements on medical grounds necessitate assistance.

Careful investigation of each case is made both with regard to the medical and financial circumstances. The Administrative Staff take every precaution to avoid making grants to non-necessitous cases, and in accordance with existing regulations no grants are made to cases in receipt of Poor Law relief. It is essential for the welfare of the scheme that the most stringent inquiry should be made into every case with a view to preserving the benefits of the service for those who are genuinely in need of help. There can be no doubt but that the grant of milk has done much to preserve and stabilise the health and physical condition of many children and mothers whose domestic financial circumstances would not have permitted the extra nourishment required.

The quality of the milk supplied is of the best description, and Grade "A" milk is distributed in all areas in which it can be obtained.

As far as possible the mothers in receipt of grants are required to attend the local Infant Welfare Centre where the case may be under the constant supervision of the Medical Officer of the Clinic.

In 1929, 742 applications for milk grants were received, and 727 were approved by the Committee for periods not exceeding two months, after which time the cases were reconsidered. The total amount expended on this service was £631 0s. 7d., this figure being an increase of £43 4s. 11d. on that of the previous year.

MATERNITY HOSPITALS.

The Leicester and Leicestershire Maternity Hospital has been approved by the Council for the reception of County cases, and a grant of £50 was made to this Institution.

Provision is made for the reception of unmarried expectant mothers at St. Saviour's Home, Northampton.

In addition to the provision at St. Saviour's Home, Northampton, arrangements have been made during the year for the Ely Diocesan Home, Cambridge, and the Salvation Army Home, Birmingham, to receive cases if required.

During 1929 seven applications were considered and approved by the County Maternity and Child Welfare Committee. The admissions were as follows :—St. Saviour's Home 2, Salvation Army Home, Birmingham, 1, Ely Diocesan Home 1, two cases were found to be unsuitable and were not admitted, while one case refused the offer of help.

The County Council allows the expenditure of £25 a year for the Convalescent home treatment of Nursing Mothers. One case received treatment. The total cost was £4 2s. 6d.

Arrangements have been made with the Warwickshire County Council to receive at their Maternity Home at Rugby, maternity cases from Leicestershire near the Warwickshire boundary.

Hospital of St. Cross :

Arrangements have been made with this Institution to admit complicated maternity cases (other than Puerperal Fever or Puerperal Pyrexia) from this County.

(*a*) *Emergency Cases.*

The County Maternity and Child Welfare Committee undertake the responsibility for the payment of the cost of such cases (£3 3s. 0d. per week) provided that the County Medical Officer is notified as soon as possible after the patient's admission. The recovery of the whole, or part of the charge is subsequently considered by the Committee.

(*b*) *Ordinary Cases.*

Approval of the Maternity and Child Welfare Committee must be obtained before an ordinary case can be admitted. Some contribution towards the cost will be required, except in necessitous cases.

During 1929 one emergency case was admitted to the Hospital. After considering the financial circumstances of the patient the Committee decided to grant £2 2s. 0d. towards the cost of treatment.

Treatment of Children.

In addition to the provision made for the treatment of Tuberculous children at the County Sanatorium, the Children's Convalescent Home, Woodhouse Eaves, provides accommodation for pre-tubercular children and for cases of early closed tuberculosis, from 5 to 10 years of age. Ill-nourished and delicate children from 3 to 5 years are also received.

Fifteen beds at this Home are reserved for County cases. The Home is under the supervision of the Senior Tuberculosis Officer.

The following is an excerpt from the Report for 1929 of Dr. Tuckett, Medical Officer of the Home :—

"The Charnwood Forest Convalescent Home was opened for 45 weeks, and during this period 71 patients were admitted, against 66 last year. We had an ideal summer for the children, and they all made wonderful improvement in health. Average gain in weight was 5 lbs. 5 ozs. The children who slept out on the open-air balcony made far better improvement than those who slept in the Wards.

The Home has been given an Ultra-violet Ray (Mercury Vapour) lamp, which has been in use since August 28th, and all the patients have had treatment three times a week.

The general health has been remarkably good since that date, no colds or coughs, and so the children thoroughly enjoy their sun baths. It is a great addition to the Home.

Several local applications have been necessary, and boils and glands in the neck have been treated with good success.

In all 34 patients admitted under the Leicestershire County Council have received the Ultra-violet ray treatment since August, 1929."

(Signed) W. REGINALD TUCKETT,
Medical Officer.

Summary of Cases Treated during 1929.

	Tuberculosis.	M. & C.W.	Total.
Total No. of Children Admitted ...	50	21	71
Average Stay of each Child (in days)	57.3	51.4	55.6
Average Gain in Weight	6lbs. 1oz.	3lbs. 4ozs.	5lbs. 5ozs.

State of health on discharge:

	Tuberculosis.	M. & C.W.	Total.
Satisfactory	2	—	2
Improved	21	12	33
Much Improved	27	7	34
Stayed in for short period only	—	2	2

Diseases for which children were admitted:

Pre-Tuberculosis	49	—
Surgical T.B.	1	—
Debility	—	18
Bronchitis	—	2
Rickets	—	1

NURSING IN THE HOME.

Nature of the Arrangements in the Area.

(*a*) *General.*

The general Nursing services in Leicestershire are undertaken by the County Nursing Association in conjunction with the County Council. The Association has extended this work to such a degree that its services practically cover the entire County.

(*b*) *Tuberculosis.*

Under the County Tuberculosis scheme the County Nursing Association undertakes on behalf of the County Council the nursing of home cases of Tuberculosis where suitable.

(*c*) *Infectious Diseases.*

The County Maternity and Child Welfare Committee have made arrangements as from April 1st, 1928, with the Leicester City Nursing Association for the nursing of cases of Measles, Whooping Cough, and Ophthalmia Neonatorum in children under five years of age on the Saffron Lane Estate of the County at the rate of 1s. 3d. per visit. This arrangement is subject to the following conditions:—

(1) That the District Nursing Association on receiving a request for nursing services for any of the above cases shall notify the County Medical Officer of the facts giving the date of the first visit made or proposed to be made.

(2) That requests for nursing services received by the County Medical Officer for any of these cases be notified to the City District Nursing Association.

(3) That accounts shall be submitted to the County Medical Officer monthly, and that they should include all charges for visits made in a calendar month.

From the date of the inception of the scheme 5 cases of Measles have been nursed under the auspices of the Association, and 77 visits have been made at a total cost of £4 16s. 3d.

COUNTY ORTHOPÆDIC SCHEME.

I append a Report from Dr. Davidson, Senior Assistant School Medical Officer, on the County Orthopædic Scheme :—

In the administration of an Orthopædic scheme in a County such as Leicester, the one basic principle to be secured is that of continuity of service. The ideal scheme would embody a Central County Orthopædic Hospital with contributory Out-patient Clinics in the various districts. In this way there would be secured complete clinical continuity with, in addition, central control of all administrative requirements. Such an arrangement is not a practical proposition in Leicestershire at the moment, but at all times an endeavour has been made to obtain a degree of continuity in all branches of the present Leicestershire Orthopædic service. Failure in this object, however, must be confessed in certain instances. For example, it may happen that cases are examined at the Clinic by one Surgeon and are treated in hospital by another Surgeon, while again the maintenance of complete clinical records of all County cases is fraught with great difficulty where the cases are in attendance at Clinics which are not under the full control of the County Council. The bad results from these examples of failure of continuity of service are largely negatived in the one instance by the co-operation of the Surgeons and in the other instance by the courtesy of the administrative and clinical staffs. There remains, however, to some degree the feeling of the lack of that power and efficiency which would most certainly come from a unified clinical service with a central administrative control.

The County Orthopædic scheme serves the Maternity and Child Welfare Department, the School Medical Inspection Department, and the Tuberculosis Department. The results obtained in all sections of the service have been so outstanding and noteworthy that it is in every

way desirable to use the utmost endeavour in the future towards securing an extension in the scope and practice of the Orthopædic Department. Increased facilities for diagnosis, treatment and after-care supervision will undoubtedly result in greater financial obligations, but when the immense benefits, both individual and communal, are taken into consideration the results will undoubtedly outweigh the burden of additional expenditure.

With these considerations in view it seems opportune to consider the future development of the service. The first step in this direction involves the formation of additional out-patient Clinics, and the appointment of a County Orthopædic Sister. In the near future it may be possible to obtain sanction for new Clinics at Hinckley and Leicester. With these additions to the existing arrangements a very large part of the County would be adequately served, and there would then be a sufficiency of work for the employment of a full-time Orthopædic Sister.

I append a summary of the provisions of the existing scheme for Orthopædic treatment in the County.

(a) In-patient Treatment :

Hospitals Available :

(1) Coleshill Orthopædic Hospital, Warwickshire. serving the North-Western area of the County.

(2) Manfield Orthopædic Hospital, Northamptonshire, serving the Southern area of the County.

(3) Harlow Wood Orthopædic Hospital, Nottinghamshire, serving the Northern area of the County.

Cases are admitted to these Institutions through the contributory Clinics, and in necessitous cases the County Council bear part or whole of the expenses involved.

(b) Out-patient Treatment (including After-care Supervision).

Clinics Available.

(a) Coalville Clinic.

Coalville Clinic which is administered entirely by the County Council serves the North-West area of the County. This centre continued until October, 1929, under the direction of Mr. S. A. S. Malkin, as Orthopædic Surgeon. About this period, however, Mr. Malkin resigned his

appointment at Coleshill Hospital, and in the interests of continuity of treatment a change in personnel was arranged whereby Mr. Malkin reserved his services for the Loughborough Clinic and Mr. Allan, of Coleshill Hospital, was appointed to take over Coalville Clinic.

During the first nine months of the year three weekly sessions (2 hours in duration) were held, but since October the work has been confined to two sessions (3 hours in duration) per week. A fully trained Orthopædic Sister attends at every session, and provides all types of Orthopædic treatment, viz., massage, remedial exercises, electrical treatment, radiant heat, plaster work, etc., etc. The Orthopædic Surgeon visits the clinic one session per month when he examines all cases in attendance. During the year, 1,029 attendances were made at this Clinic.

A noteworthy feature of the work of this Clinic is the complete provision of after-care supervision for cases discharged from hospital. The discharged patient is kept under observation for a considerable period, and any adjustment of apparatus, or any additional treatment that may be necessary is provided before the case passes from the control of the Orthopædic Staff.

It will be especially noted that complete continuity of treatment is secured at this Clinic through the fact that both in-patient and out-patient treatment is carried out by one Surgical and Nursing Staff. Furthermore, administrative continuity is secured through all arrangements, financial and clerical, being under the control of the Health Department.

The Clinic presents a most excellent record of work accomplished during the year, and the completeness of its success augers well for future developments on similar lines.

The excellent results obtained from the Clinic are largely due to the whole-hearted enthusiasm of the Orthopædic Sister in charge, and her valuable and unselfish service is most praiseworthy. Again the efforts of the Voluntary Committee have had much to do with the general success of the Clinic, and the Department takes this opportunity of recording its thanks for the services which they have so freely rendered.

(*b*) *Loughborough Cripples' Guild.*

This Clinic which is available for Orthopædic treatment in the Northern part of the County is associated with its parent institution, the Nottingham Cripples' Guild. It differs from Coalville in this, that

the financial responsibility rests entirely on the Voluntary Committee. The local Education Authorities, Leicestershire County Council, and Loughborough Borough Council, contribute towards the Guild according to the number of treatments their cases receive. The charge for ordinary County cases is 2s. 6d. per attendance, and small additional charges are made for special forms of treatment.

The Clinic is open all the week for massage and other forms of routine treatment. The Staff consists of (a) Mr. Malkin, the Orthopædic Surgeon, who visits the Clinic once a month for general examination of the cases, (b) an Orthopædic Sister who attends once a week, and (c) a Masseuse who is employed full time. In addition Voluntary workers give their services in a general capacity.

(*c*) *Leicester Royal Infirmary.*

The Orthopædic Department of this great Hospital deals with both adults and children, and many County cases attend the out-patient department for electrical treatment, massage, muscle re-education, and other remedial measures. No charge is made for the routine Orthopædic treatment of County cases, but the County Council assumes responsibility for provision of surgical appliances.

(*d*) *The Rugby Orthopædic Clinic.*

Arrangements are in force whereby the County Maternity and Child Welfare Committee sanctions the charge of 2s. 6d. per attendance for Leicestershire children whose treatment is undertaken by the Clinic, provided that

(1) Application is first made to the County Medical Officer to enable the case to be visited by one of the Medical Staff.

(2) Each application is considered by the Committee after an investigation into the financial circumstances.

(3) Monthly progress reports are rendered by the Clinic to the County Medical Officer.

(*e*) *Hinckley Cripples' Guild.*

In the Southern area of the County, Orthopædic treatment is provided at Hinckley Cripples' Guild and Market Harborough Cottage Hospital.

Though excellent work is being done throughout these districts no arrangements for co-operation exist between the County Council and these Voluntary bodies.

It will be observed from this report that the County Orthopædic scheme is carrying out markedly good work, and that its benefits are being extended to a large number of districts. Yet there remains a real need for more systematic organisation and control in order to maintain the all important principle of continuity, and to avoid overlapping of the agencies through which remedial measures are undertaken. I am confident that in the near future this ideal will be attained, and I am very certain that through its attainment the service will most assuredly gain in efficiency.

J. F. DAVIDSON,
Senior Assistant School Medical Officer.

MATERNAL MORTALITY.

This County participates in the investigation of maternal deaths under the scheme of the Ministry of Health who are undertaking the work with a view to collecting all information which may have a bearing upon the solution of this immense and vital problem. In Leicestershire this section of the work is undertaken by Dr. Davidson (vice Dr. Mackintosh) in co-operation with the general Practitioners in the County. All such investigation is strictly private, and the case sheets are forwarded direct to the Minister of Health without a record being filed in the County Public Health Office.

In addition, the County Health Department, through Dr. Davidson and the County Superintendent Health Visitor, investigates and reports upon all cases of Puerperal Pyrexia and Puerperal Fever and Ophthalmia Neonatorum occurring in the County.

MATERNAL MORTALITY in Leicestershire.

I append a report from Dr. Davidson on Leicestershire's experience of Maternal Mortality.

The Maternal Mortality rate for the County—4.8 deaths per 1,000 births—remains practically the same as in 1928, when it was recorded as 4.7 deaths per 1,000 births.

A survey of Leicestershire's experience in Maternal Mortality over a period of ten years (Table below) emphasises the regrettable fact that throughout these years the rate has fluctuated backwards and forwards without any tendency towards a progressive reduction in the mortality figure.

Leicestershire Maternal Mortality per 1,000 Births.

Year.	Births	No. of Puerperal Deaths :— Sepsis.	Other Causes.	Total.	Rates per 1,000 Births Total.
1920	6,333	13	9	22	3.5
1921	5,709	7	19	26	4.5
1922	5,522	3	10	13	2.4
1923	5,319	3	10	13	2.4
1924	5,130	3	11	14	2.7
1925	4,874	8	15	23	4.7
1926	4,868	5	12	17	3.5
1927	4,887	7	10	17	3.5
1928	5,074	12	12	24	4.7
1929	5,013	9	15	24	4.8

This factor of non-progress in our efforts to combat maternal mortality is particularly disappointing when it is contrasted with the steady decline which has taken place in the County and in the country generally in the rate of infant mortality.

For many years it has been taken for granted that though a woman is pregnant all is well with her. From mistaken ideas of modesty and from disinclination for interference the easy path of "no action" has been far too frequently taken in the past. One can hardly conceive of a Surgeon undertaking an operation without first a preliminary examination of his patient. Yet we complacently observe the pregnant woman pass to her labour entirely unhelped and unexamined; the labour may pass normally; yet again, in the middle of labour an unforeseen complication may arise and the woman may die—can we be surprised at the high rate of mortality?

Surely an endeavour must be made by all of us to sweep away this high mortality rate which at the moment remains a monument to the failure of our work in the administration of this problem.

The common-sense step to take in confronting this task is to press for the routine ante-natal examination and re-examination of every pregnant woman from at least the mid-term of her pregnancy. It appears to me that the very serious loss in maternal life will continue until we have an adequate Ante-Natal Service for the examination and treatment of every woman during the period of her pregnancy. Such ante-natal investigations would allow detection of not only gross disproportions and serious complications, but they would tend also to alleviate much of the unnecessary suffering of a normal pregnancy.

To my mind, the problem ahead of us resolves itself into two inter-related sections. Firstly, the stimulation of interest in the general public in this most serious aspect of present-day existence with subsequently the education of all women in the vital importance of obtaining skilled advice early in the course of their pregnancy; and secondly, the organisation of a complete Ante-natal Service for all classes.

In proof of the first of these assertions, I have only to direct attention to the far-reaching results which occurred in the reduction of infant mortality when public opinion had been sufficiently aroused to cause widespread interest in all aspects of environmental and personal hygiene affecting the lives and welfare of young children. Full publicity in propaganda work relating to maternal mortality is an urgent necessity to the success of any scheme purporting to deal with the problem.

With regard to the second of my assertions, I would at once say that a scheme to deal adequately with ante-natal work would be completely beyond the present resources of the Public Health Service, but it seems feasible that, with certain adjustments, the work might be undertaken by the general Medical Practitioners. I go so far as to state that in my opinion all ante-natal work in its more complicated aspects should be vested only in those who have a full medical and surgical qualification, and who have been specially instructed in the work. By this statement I do not wish in the least to minimise the work of the practising midwife, but I do sincerely feel that in the best interests of all concerned the work should be in the hands of fully-trained and qualified Practitioners. The midwife far from being disregarded would be retained to form a link in the chain of Ante-natal Service, and her status would be unaltered except for the fact that she herself would not be solely responsible for the ante-natal care of her cases.

Administrative and financial difficulties in the way of such a scheme would be inevitable; the expenditure for successful accomplishment would be large, but surely any practical scheme capable of dealing with this problem must be assessed not in terms of money but in the very vital terms of the life and health of the pregnant women of our country.

J. F. DAVIDSON,
Medical Officer for Maternal Mortality.

ANTE-NATAL CLINICS.

The Ante-Natal Clinic at Hinckley was continued under Dr. Mary Weston, while a new Clinic was opened in January under Dr. Constance Walters, at Wigston Magna. Both Centres are held in one afternoon session per month, and during the year each Centre totalled 11 meetings.

(*a*) *Hinckley Clinic.*

The Clinic has been conducted on the same general lines as last year.

The sympathetic attitude of the general practitioners is a valuable support to the work, and the interested co-operation of the Midwives practising in Hinckley and the surrounding villages is a most useful adjunct.

The Clinic has been held in the same rooms as before, but these have been considerably improved in comfort and appearance by the Y.M.C.A. Staff whose unfailing readiness to render all possible service is much appreciated by the Department.

New screens have been provided through the donation of an interested worker, and other alterations of æsthetic value are being carried out through the kindness of a member of the Infant Welfare Committee. I have pleasure in acknowledging these kindly efforts on the part of local people, and I appreciate very highly indeed all that has been done by them in the interests of the Clinic.

In 1929 fifty-three mothers attended the Clinic, and made a total number of 80 attendances.

It is worthy of note that there were two very serious cases examined during the year. Both these women had engaged a Midwife only for their confinements.

One case was a woman with a valvular lesion of the heart. She was seen by the Clinic Doctor, who immediately advised that additional precautions were required, and she was finally admitted under her own medical attendant to the local Hospital where she gave birth to a healthy child. Mother and child are still being kept under observation at the Hinckley Maternity and Child Welfare Centre.

The other case was that of a mother living in a village three miles distant, who came to the Clinic at about the seventh month of her pregnancy in a condition of profound toxæmia. The Health Visitor went to the woman's house, and with some difficulty made the husband realise the gravity of the situation. Her own private doctor was then called in to see her, and, with as little delay as possible, the woman was admitted to Hospital. Unfortunately it proved impossible to save her life, and she died after giving birth to a premature still-born child.

(*b*) *Wigston Magna Clinic.*

This Clinic was opened on January 10th, 1929. During the year 39 mothers were examined—of whom 12 were primiparæ and 27 multiparæ. The total attendances for the year numbered 80.

The majority of the cases were uncomplicated pregnancies, but two abnormal presentations were noted. Several cases in addition showed evidence of some complication of pregnancy, and among these were one of Heart Disease, two of Hydramnios, and one of Pleurisy.

Even in the first year of its existence this Clinic has secured the active interest and co-operation both of the local Medical Practitioners and the local Midwives.

Both these Ante-Natal Clinics have accomplished most useful and excellent work during the year. Their help is being sought by the Midwives in increasing numbers, and it is now the rule rather than the exception to find the Midwives of the town and the surrounding villages bringing their cases to the Clinics for examination and consultation. Again the co-operation of the general Medical Practitioners is of the greatest value, and I take this opportunity of recording the Department's satisfaction of this feature in the Ante-natal Services.

In Leicestershire we have made an excellent start in this branch of the Health Service, but much still requires to be done in widening the scope of this vital work.

MIDWIVES.

Employment of or Subsidy to Practising Midwives by the Local Authority.

(a) Midwifery Service.

This service is carried out by the Leicestershire County Nursing Association for the Leicestershire County Council.

Certified Midwives are provided in necessitous cases (a) for women who are unable to obtain the services of a Midwive locally, and (b) for districts where there is no Certified Midwife.

Applications either for the services of a Midwife or for the formation of a district should be made to the Superintendent, County Nursing Association, Highfield Street, Leicester. Telephone No. 59859.

A grant (not exceeding £21 per annum) is made annually to a District Nursing Association where the Nurse does midwifery work in her area, and the position is regarded as necessitous. A grant for initial expenses not exceeding £14 may also be made.

(b) General Arrangements in force in the County.

(1) Inspection of Midwives.

The inspection of Midwives, which was previously carried out by the Health Visitor located in the district of the practising Midwife, is now vested in four members of the County Health Visitors' Staff. Three of these officers are specially appointed County Health Visitors, whilst the fourth is the Superintendent Health Visitor under whose general supervision the work in all districts is undertaken. By this reduction in the number of Inspectors a more uniform standard of ascertainment is possible, and generally the arrangements under this system are more satisfactory than they were in the past. In cases of exceptional difficulty a Senior Assistant County Medical Officer makes a visit and provides the County Medical Officer with a report.

Statistical Particulars.

During the year 209 Midwives notified their intention to practise, and 8 left the County or ceased to practise.

189 of the County Midwives held the certificate of the Central Midwives' Board, and 6 the L.O.S. Certificate, and the remaining 14 belonged to the "bona fide" classification.

The Inspectors made 414 visits during the year. No complaints were received regarding the general practice of midwifery in the County, and no cases occurred in which it was necessary for the Inspectors to report a breach of the rules of the Central Midwives' Board.

The annual returns received from the County Midwives are as follows :—

Medical Help Records	572
Notice of Liability to be a source of Infection	63
Laying Out of the Dead Records	60
Notice of Death of Mother or Child	13
Still-Birth Records	47
Notice *re* Artificial Feeding	35
Notice of Change of Address	20

The Midwives called in medical help in 32 per cent. of cases attended by them.

The chief causes for medical help for the mother were Injuries to Perineum, Prolonged Labour, Malpresentation, High Temperature, Ante-partum Hæmorrhage, and Post-partum Hæmorrhage.

The chief causes of help required for the child were Debility, Discharge from Eyes, Phimosis, and Malformation.

The Records show that 2,689 cases were attended by Midwives during the year, and of this number 1,783 were taken by them alone. In the remaining 906 cases both Doctor and Midwife were in attendance.

(2) Doctors' Fees in Special Cases.

The sum of £2 2s. 0d. was expended in one complicated case where it was necessary for a Doctor to be in attendance, no Midwife being engaged for the case.

(3) Midwives' Fees.

Applications were received from 8 Certified Midwives in respect of their attendance on necessitous cases. In 5 cases the full fee was granted, whilst in the remaining three the grant was restricted to one half of the total fee. Grants under this section amounted to £10 12s. 6d.

(4) Subsidy to Midwives.

Subsidies to 4 Midwives were authorised by the County Council at a cost not exceeding £21 each per annum. The subsidy in each case has been given to the County Nursing Association for distribution.

(5) Placing of Midwives.

A grant of £30 is made by the County Council for the training of Midwives newly appointed either to fill a vacancy or to settle in a new area for which no previous provisions have been made. Eight applications were considered and approved by the Committee, the total expenditure being £240.

(6) Mileage Grants for Midwives.

The sum of £5 was expended in mileage grants to Midwives taking cases outside their usual area of practice. During the year the Committee received four applications, all of which were granted.

(7) Suspension of Midwives.

During the year two Midwives were temporarily suspended from duty through being in contact with Small Pox. The compensation and other costs involved amounted to £11 10s. 0d.

(8) Educational Facilities for Midwives in the Area.

(1) *Midwifery Scholarships.*—The sum of £160 was allocated for this purpose. The selection of candidates and arrangements for training are carried out by the County Nursing Association, and application should be made to the Secretary of that Association. In 1929, seven candidates completed their training, and a further three began the course during the year.

(2) *Post-Certificate Courses.*—The sum of £80 was included in the annual estimates for the purpose of making grants to Midwives who desire to take post-certificate courses in order to keep abreast of modern developments in their work. During the year 7 Midwives took post-certificate courses at the following Centres: Woolwich 3, Camberwell 3, Liverpool 1. In each case a grant of £10 was allotted, £4 towards the charges of the Training Institution, and £6 for travelling expenses and provision of a substitute.

(3) *Lectures to Practising Midwives.*—Dr. E. Lewis Lilley, Obstetric Surgeon to the Leicester and Leicestershire Maternity Hospital, gave a series of lectures to Practising Midwives at Leicester, Loughborough, and Coalville. These lectures were greatly appreciated by the Midwives, and they have been enthusiastic over the help which they have received from them. It may be noted that the attendances in one or two instances seem regrettably small, but it can be easily understood that it is quite impossible from the very nature of the work for a practising Midwife, however interested she may be, to guarantee her presence at these meetings, and Dr. Lilley reports as follows :—

"I beg to report completion of the series of eight lectures which at your request I undertook to deliver to the Practising Midwives of Leicestershire.

"The lectures were held on February 5th (14 attendances), and February 12th (26 attendances) at Leicester; February 6th (11 attendances) at Loughborough; and February 7th (9 attendances) at Coalville.

"On each day the first lecture was on the subject of the Hæmorrhages of Pregnancy. Then followed a short interval, after which three-quarters of an hour was devoted to subjects chosen by the Midwives themselves.

"I think the opportunity of choosing a subject for exposition is appreciated, as 35 requests in all were received. Although many of the requests were duplicates, it was, of course, quite impossible to cover all the ground indicated. Nevertheless the requests certainly enabled me to see the various difficulties which Midwives were encountering, and probably to give them a certain amount of help.

(Signed) E. LEWIS LILLEY.

ADDITIONAL ADMINISTRATIVE ARRANGEMENTS RELATING TO THE SERVICE.

(1) Sparsely Populated Areas.

Arrangements for the service of the six districts known as sparsely populated areas continued during the year without change. Local Associations have now undertaken their administration, and fees received for the service of Midwives are retained by the parent Association. The grants in force during the year were £72 for two of the Associations, and £52 for the other four. Bicycle allowance of £6 per annum was continued in the case of four Associations.

(2) Necessitous Districts.

The County Council in an endeavour to overcome some of the difficulties of Midwifery practice in necessitous districts is prepared to make grants towards expenses. During the year grants amounting to £14 and £13 6s. 4d. respectively were made to two District Nursing Associations towards the initial expenses incurred in serving a necessitous district.

Grants varying from £5 to £21 per annum were made to 21 District Nursing Associations in which the service is already in operation.

Applications for these grants or for the continuation of previous grants are considered by the Maternity and Child Welfare Committee early in each financial year, when the Nursing Association of each district is required to produce a balance sheet of the previous year's account.

Midwives' Act, 1918.

During the year 224 claims were paid under the provisions of this Act. The total amount expended was £299 2s. 0d., and £168 12s. 9d. was recovered from persons responsible for repayment.

Registration of Nursing Homes.

Administration of this section of the work is now carried out under the provisions contained in the Nursing Homes Registration Act, 1927. Inspecton of all registered Homes is carried out routinely by Dr. Davidson and the County Superintendent Health Visitor. The Inspecting Officers have adopted a policy of stringent inquiry into all new applications for registration under the Act, and, before a certificate is granted, the premises, furnishing, equipment, etc., must be of a satisfactory standard.

On January 1st, 1929, 11 Homes were registered by the County Council under the terms of the Act. Of these 8 were Maternity Homes, 2 Nursing Homes, and 1 a combined Maternity and Nursing Home.

During the year 3 additional applications for registration were approved, while 3 certificates of registration were discontinued. At the end of the year, therefore, there remained under registration 11 such Homes.

VENEREAL DISEASES.

The County Council makes provision for the treatment of Venereal Diseases by co-operation with the Authorities of Leicester Royal Infirmary and of Loughborough General Hospital. The Out-patient Clinic at Loughborough is conducted by Dr. J. B. Dalton, of the County Medical Staff, and is wholly under the administration of the County Medical Officer of Health. The Clinics at Leicester Royal Infirmary are administered by the Governing Body of that Institution, but County cases are received and treated under financial arrangements approved by the Ministry of Health. At the Leicester Clinic the treatment of males is carried out by Mr. H. J. Blakesley, F.R.C.S. (Eng.), and Dr. Bessie Symington, M.D., B.S., (Lond.), is in charge of the female section.

Pathological Work.

Pathological examinations are performed through the agency of the County Laboratory. Blood for Wassermann reactions, however, is transmitted to the Pathological Laboratory of the Leicester Royal Infirmary, as it is not economical to do these except when specimens are received in large numbers.

The following are extracts from the Annual Reports of the Medical Officers who conduct the Clinics for Venereal Diseases.

Loughborough Clinic Report.

This Clinic is held at the Loughborough General Hospital on Monday afternoons for females and in the evening for males. The times of this Clinic are :—

Females—4 to 4.45 p.m.
Males—5.15 to 6.15 p.m.

These times are adhered to as far as is practicable consistent with encouraging regular attendance of the patients, many of whom live in outlying districts, and are dependent on rural 'bus services.

Often the Male Clinic is extended beyond the stipulated time. The following figures relate to the work during the year.

New Cases :

	Males.	Females.	Total.
Syphilis	7	6	13
Gonorrhœa	15	1	16
Other conditions	1	2	3
	23	9	32

Renewed Attendances :

	Males.	Females.	Total.
Syphilis	139	224	363
Gonorrhœa	221	11	232
Other conditions	14	2	16
	374	237	611

The number of new cases during 1928 was 30, and the number of attendances was 427.

TREATMENT.

88 injections of arsenobenzol compounds were given during the year to 44 males and 44 females, as against 38 last year. Other forms of treatment, i.e., irrigations and bismuth compounds to the number of 231 were also given.

The Clinic has now been in existence ten years, and the following figures show the amount of work performed during that period :—

	Males.	Females.	Total.
New Cases	229	119	348
Renewed Attendances	3,055	1,830	4,885
Arsenobenzol Compounds	369	234	603
Pathological Examinations ...	—	—	1,358
Bismuth Compounds	—	—	248

During these ten years 169 patients, including Non-Venereal cases have been discharged cured, and 135 have ceased to attend before completing treatment.

Arsenobenzol Compounds Supplied to General Practitioners.

During the year 9 doses of this drug were supplied to one General Practitioner for treatment of a patient at home.

General Remarks.

In my opinion the Clinic adequately meets the requirements of the Loughborough district. The attendances reveal a 50 per cent. increase on last year, and this indicates that the patients themselves are attending more regularly, and for longer periods; a very satisfactory state of affairs. My Staff of one male and one female nurse remains the same, and they have performed all their duties to my entire satisfaction.

J. B. DALTON,
V. D. Medical Officer.

Report on the work of the Male Venereal Diseases Clinic at the Leicester Royal Infirmary for the year 1929.

During this period 652 patients presented themselves for diagnosis and treatment.

By clinical examination 228 were apparently suffering from syphilis and 424 from gonorrhœa. Of these, 12 patients were proved to be suffering from both acute gonorrhœa and syphilis. 158, after repeated clinical and pathological examinations, were found to be non-venereal; 92 having been suspected of suffering from gonorrhœa and 66 from syphilis.

497 were City patients; 155 were County patients.

17,170 attendances were made by patients on the books; of these, 4,408 received treatment for syphilis, 12,281 for gonorrhœa, and 481 were not suffering from Venereal disease. 14,214 were City patients, and 2,956 County patients. 6,383 of these attendances were at times other than when the Clinic was in session, for irrigations and other intermediate treatment. 5,895 attendances were by City patients and 488 by County patients.

In every case treated the blood and discharges were submitted for pathological and bacteriological tests for the purpose of diagnosis, aid to treatment, evidence of progress, and proof of recovery. The cerebro-spinal fluid in some cases of neurosyphilis was submitted to Wassermann or other tests.

To patients suffering from syphilis 2,083 intravenous or intramuscular injections of salvarsan substitutes, and 815 muscular injections of mercurial cream were administered; 2,171 for City patients and 727 for County patients.

To patients suffering from gonorrhœa, 11,589 intra-urethral irrigations, anterior and posterior, were given, and instrumentation, instillation, vaccines, prostatic and urethral massage were practised as necessary treatment in a large percentage of these cases.

In-Patients.

82 patients were admitted to the wards, 60 being City and 22 being County patients; 20 were highly infectious; 13 cases acute epididymitis; 5 on admission and 8 arose in course of treatment; 8 gonorrhœal rheumatism, and 5 acute prostatitis. No case of gonorrhœal ophthalmia arose. 2 cases of chronic syphilis were admitted, suffering from disease of spinal cord and heart. 3 cases of jaundice were admitted, and 1 case of arsenical dermatitis.

(1) 47 operations were performed under anæsthesia.
(2) No death occurred during the year.

Results.

The number of patients who ceased attendance before completing the first course of treatment were :—

Syphilis	25
Gonorrhœa	50

Who ceased attendance after completing one or more courses, before completion of treatment necessary :—

Syphilis	25
Gonorrhœa	32

Who ceased attendance after completion of treatment, but failed to submit themselves to final tests :—

Syphilis	28
Gonorrhœa	59

Transferred to other Clinics :—

Syphilis	19
Gonorrhœa	31

Transferred from other Clinics :—

Syphilis	13
Gonorrhœa	21

Those who completed treatment and submitted themselves to repeated tests, and were clinically and pathologically proved to be cured :

Syphilis	30
Gonorrhœa	176

The patients described as cured are submitted to exhaustive tests, in accord with the rules laid down by the Ministry of Health.

Points of Material Interest.

The new patients presenting themselves for treatment show an increase of 73 over those of last year.

Special Note.—A serious outbreak of virulent syphilis occurred during the year—there being 82 cases in the primary stage, as compared with an average of about 15 for the past three years. This outbreak in most instances was accompanied by a virulent form of actively infective organisms in addition to the spirochœta pallida.

It its highly satisfactory to note that an increase of those suspecting themselves should have come to the Clinic to find that they are free from evidences of either of these diseases.

Every effort has been made to persuade and encourage patients to persist in their attendances for treatment until all symptoms have disappeared and the necessary tests have been made to prove their cure complete.

Dr. Millard, the City Medical Officer of Health, has paid four official visits of inspection during the year. Dr. Fairer one such visit. Colonel Harrison and Dr. Seymour, the Government Inspectors from

the Ministry of Health, conducted an inspection of the Clinic and wards on the 24th April.

The Board of Governors of the Royal Infirmary have afforded me every assistance and facility for the efficient working of the Clinic, and the new In-patient Department for Venereal Diseases is of great assistance in the general treatment of the In-patients and those requiring intermediate attention.

My thanks are due to my Medical and Lay helpers for their zealous and loyal support in the conduct of the Clinic.

(Signed) HENRY J. BLAKESLEY, F.R.C.S., Eng.,
Medical Officer in Charge of Male Venereal Clinic,
Leicester Royal Infirmary.

Report relating to the Female Clinic for Venereal Diseases at the Leicester Royal Infirmary for the year 1929.

The total number of patients seen for the first time was 362. 111 suffering from syphilis, 171 from gonorrhœa, and 80 showing no signs of infection.

Patients from the County numbered 114. 31 suffering from syphilis, 45 from gonorrhœa, and 38 showing no signs of infection.

The total attendances of all patients was 9,697. 7,013 were seen by the Medical Officers at the Clinics, and 2,684 attended at other times for prescribed treatment. Of these, County patients numbered 2,461. 1,469 attendances were made by patients suffering from Syphilis, 935 attendances were made by patients suffering from gonorrhœa, and 57 attendances were made by those retained under observation.

Syphilis.

Treatment is being given to each person by various methods, and the drugs used are those found to be useful to each one. Preparations of four different drugs are chiefly used, viz., Arsenic, Bismuth, Potassium Iodide, and Mercury.

Arsenic is given chiefly by intravenous injection in the form of Neokharsivan and Stabilarsan or by the intra-muscular method in the form of Sulfarsenol.

Bismuth is given by the intra-muscular method, and this drug is used with arsenic when the eyes are affected, or when arsenic is not tolerated.

The number of injections given at all Clinics, male and female, was 4,806. 1,322 of these were given to female patients from the County.

176 County patients have been treated by this method.

Mercury and Potassium Iodide have been given by mouth. Mercury has also been given in certain cases by injection or inunction.

Gonorrhœa.

This year the number of cases has decreased. Treatment has been :—

(1) Local—Disinfection of Vagina, Cervix, and Urethra, by

(a) Dressings, Tampons, Douches, or Pessaries.

(b) Irrigation of the bladder, whenever the Urethra is specially infected.

(c) Instillation of Glycerine into the body of the womb.

(2) General treatment of anæmia caused by the disease is always given. Alkalies are given in acute cases. Vaccines are prescribed in special cases.

In-Patients.

165 cases were admitted to the ward.

Cases treated were :—

21 cases of salpingitis, owing to serious extension of Gonorrhœa.

10 cases of abscess of Bartholini's gland opened under anæsthesia.

4 cases of Gonorrhœal rheumatism of many weeks standing.

5 cases admitted for daily instillation of Glycerine to avert abdominal operation.

8 cases of Vulvo Vaginitis in little girls. These were given long and continuous treatment.

4 cases of dilatation and curettage to complete the cure of Gonorrhœa. All these have done well.

2 cases of intra-spinal injections for chronic neuro syphilis.

22 confinements have taken place, and in no case has the child shown signs of infection.

The total number of in-patient days of treatment is 2,578.

Of these 461 related to those suffering from Syphilis, 1,836 to those suffering from Gonorrhœa, and 281 were not suffering from Venereal disease. These were babies in the Maternity Ward.

846 of these in-patient days of treatment related to County cases.

160 cases have been discharged after completion of treatment.

17 cases were transferred to other Clinics.

An official inspection of the Female Clinic was made in May by Colonel Harrison and Dr. Seymour, and after this Dr. Newton Davies was appointed to assist for 2 hours each Clinic, and she began work in August.

(Signed) BESSIE W. SYMINGTON, M.D., B.S. (Lond.).
Medical Officer of Female Venereal Clinic.

Report on work for Venereal Diseases at St. Mary's Home, Leicester, for Treatment of County Patients.

Cases sent to this department are young unmarried girls who are unsuitable to attend the Royal Infirmary Clinics, or those who require a longer course of treatment as in-patients than can be given in the Infirmary Ward.

In the Hostel are 9 beds with cots for babies when needed.

The Maternity Ward contains 4 beds and is nearly always full.

The Out-patient Clinic is held on Thursday evenings, and the Hostel girls are seen usually on Monday mornings or Thursdays if necessary.

The total number of new cases from all sources treated during the year has been 49 and 9 babies.

In-Patients.

28 cases have been admitted.

9 of these have been Maternity cases.

3 are suffering from Syphilis.

21 ,, ,, ,, Gonorrhœa.

4 ,, ,, ,, Syphilis and Gonorrhœa.

7 Adult cases and one baby were County patients. All were suffering from Gonorrhœa.

The total number of days of residence for County patients has been 445 and 75 for babies.

Out-Patients.

Patients from the County cannot attend as frequently as is desirable owing to the difficulties of travelling.

Only 120 attendances have been made.

The Sister in Charge sees these patients whenever they are able to attend.

The County Health Visitors have been very good in helping to keep in touch with the babies wherever they are placed.

(Signed) BESSIE W. SYMINGTON, M.D., B.S. (Lond.),
Medical Officer of Female Venereal Clinic.

SANITARY CIRCUMSTANCES OF THE COUNTY.

(1). WATER.

The water supply of many districts in the County has been augmented during the year either by the extension of existing water mains or the construction of new wells. The prolonged drought during the Summer of 1929 revealed deficiencies in the supply schemes of several districts, causing considerable discomfort and inconvenience to the inhabitants of the areas concerned. The result has been that many of the water supply systems have been reviewed and improvements have been proposed, and, in some cases, already carried out.

The following improvements have been made *in Urban Districts* :—

Melton Mowbray.

The public water supply has been increased by extending the collecting area, and a beneficial increase of pressure has been obtained in Burton Road district by the installation of a new Booster pump.

Coalville.

A further extension of water mains was made during the year, and it is satisfactory to note that no curtailment of water supply was necessary during the drought.

Hinckley.

A shortage of water was experienced after August, and it was found necessary to place special restrictions on water consumers.

Market Harborough.

The Ministry of Health have sanctioned the construction of a new reservoir of 250,000 gallons capacity and other works at a total estimated cost of £3,000.

Wigston Magna.

Leicester City water has been laid on to supply Aylestone Lane and neighbouring houses.

In the Rural Districts 9 wells have been closed and a public water supply substituted for well water in no fewer than 402 cases. Other improvements in the Rural Districts are as follows :—

Ashby-de-la-Zouch.

New water works at Measham, Oakthorpe, and Donisthorpe were completed in July, 1929, and the average yield is approximately 250,000 gallons in 24 hours.

Barrow-on-Soar.

The Leicester City mains have been extended from Anstey through Newtown Linford. A similar extension has been made at Thurcaston.

Blaby.

The public water supplies have been extended to serve 98 houses in Countesthorpe and Braunstone.

Lutterworth.

New wells have been sunk to augment the water supplies of Lutterworth and Ullesthorpe.

The following table prepared by Mr. W. G. J. Clark, the Surveyor of Wigston Magna Urban District, shows the rainfall month by month during the year.

Month.	Total Depth in inches.	Greatest Rainfall in 24 hours.		No. of days on which	
		Depth	Date.	·01 or more inches	·04 or more fell.
January	1.27	.35	28th	21	8
February	.32	.12	9th	7	3
March	.08	.05	24th	4	1
April	1.47	.36	28th	14	9
May	1.99	.65	5th	13	9
June	1.26	.39	6th	12	8
July	1.62	.66	4th	8	6
August	1.82	.37	31st	17	11
September	1.14	.83	30th	4	2
October	2.94	.89	5th	14	11
November	4.98	.96	11th	19	15
December	4.32	.54	9th	24	20
Total	23.21	—	—	157	103

Average rainfall for the last 29 years = 25.09 inches.

Average wet days per year for 20 years, 191.

This year's rainfall is 7% below the average of the last 20 years.

The month of November was the wettest, and the month of March was the driest since observations were commenced in 1901.

(2). RIVERS AND STREAMS.

Leicestershire, one of the most central Counties of England, stands on the watershed of the country, and its waters ultimately drain into tributaries of the Severn, the Humber, and the Welland respectively. The County does not contain any large waterways, but possesses numerous small rivers, and is fortunate in that its streams are not polluted from sources outside the City or County. This advantage is counterbalanced, however, by the fact that the relatively small volume of river water is insufficient to dilute satisfactorily the sewage effluents and trade wastes of the more populous areas.

In connection with the annual hydrographical survey of the Trent watershed, specimens of water were taken at various points on the River Soar during July and September for the purpose of estimating the Dissolved-Oxygen Content. These estimates form part of the general investigation by the Ministry of Agriculture and Fisheries of the degree of purity of the water of the Trent. As the result of the Surveys the Technical Adviser to the Standing Committee on Rivers Pollution concludes that "the River Soar in 1929 has been in a very polluted condition, a fact to be explained no doubt in part at any rate by the excessive drought causing the river and its tributaries to flow at unduly low levels, thus providing far less than the usual amount of better oxygenated water to dilute the many effluents which discharge into those waterways." It is to be hoped that the completion of improved works for sewerage treatment and disposal will tend in the future to obviate to a great extent the pollution of this river.

(3). DRAINAGE AND SEWERAGE.

Twenty-nine visits to the various sewage farms in the County were made by the Senior Medical Officers during 1929. In addition, the conditions of many of the streams of the County were investigated, and analyses of specimens of water were carried out in the County Laboratory.

When the Laboratory analyses of the sewage effluents or of brook water is found to be unsatisfactory the inspection is repeated shortly afterwards. In this way one eliminates any tendency to error which might arise if by chance the visit of a Medical Officer should coincide with the advent of unusual and exceptional conditions which may have given rise to temporary pollution. When the effluent discharging into a neighbouring stream is considered to be a source of danger to the community the matter is reported to the Public Health Committee, and a summary of the Medical Officer's report is transmitted to the Local Authority who are asked to take steps to remedy the pollution.

The following are particulars of Improvements carried out during the year :—

ASHBY-DE-LA-ZOUCH.

An improved scheme for extending sewers and for the construction of the storm water culvert has been submitted to the Ministry of Health for approval.

It is proposed to construct further settling tanks at the Packington Sewage Farm, and an additional small separate sewage disposal scheme for the Moira Road area. These schemes when completed should materially improve the degree of purification of the sewage of this district.

BARROW-ON-SOAR.

Extensions of sewers have been made to serve this rapidly growing district, which includes Newtown Linford, Rothley, Anstey, Thurcaston, Mountsorrel, Birstall, and Sileby.

New settling and humus tanks and rotary filters are in course of construction at Syston.

BARWELL.

The modern and up-to-date upper farm which was opened in 1928 was found to be working satisfactorily. New works to replace the present inadequate arrangements at the old lower farm are proposed.

BIRSTALL.

At the inspection in 1929 the contemplated new works had not been begun, and the farm was in the same unsatisfactory state as recorded in previous years.

New settling tanks and sludge lagoons are to be completed here in 1930.

BLABY AND WHETSTONE.

The present system is unsatisfactory, and the river receiving the effluent is overgrown with weeds. A scheme for clearing the river is understood to be under consideration, and the work of erection of a filter bed and humus tank is practically completed.

In view of the additional number of houses which will drain into this farm in the near future it is questionable whether the works will be adequate even after the new apparatus is in full working order.

COUNTESTHORPE.

The new sewage scheme is practically completed, and already a certain amount of sewage and chemical waste is receiving partial treatment by land filtration. When the scheme is in full working order the problem of sewage disposal in this locality will doubtless have been solved satisfactorily.

FOXTON.

The new works which have been in operation since 1927 were in good order when inspected in 1929, and the effluent was satisfactory.

GLENFIELD.

Considerable damage has been caused to the new filter bed by the severe frosts early in the year, and the efficiency of the works was impaired in consequence. Repairs, however, were being carried out, and will doubtless render the works as satisfactory as in former years.

HINCKLEY.

Sewer extensions have been made. Sand filters are being constructed at the sewage works to remove the colour caused by the dye waste content.

IBSTOCK.

The walls of the storm water tanks were found to be in a state of disrepair. Otherwise the works were in good working order, and the effluent was satisfactory.

KIRBY MUXLOE.

The lower end of the land filtration area of this farm was formerly water-logged in winter. The land is now in good condition as the result of more efficient drainage, and the whole farm appeared to be working efficiently.

LUBBESTHORPE.

The district served by this sewage farm is growing rapidly, and with the prospect of more houses being erected in the vicinity there is no doubt that the question of extending the work must be considered at an early date. At least one new filter bed and possibly further tank accommodation will probably be necessary in the near future.

MOUNTSORREL.

The condition of this farm was found to be unsatisfactory. Considerable quantities of sewage are apparently allowed to pass through the farm in an untreated state, and complaints have been received with regard to the neighbouring ditches. General re-organisation of the method of working this farm appears to be very necessary.

NARBOROUGH.

A considerable area of land is used for the treatment of sewage, and the farm produces heavy crops. The sewage is pumped to sedimentation tanks situated at the highest level, and then passes by gravity to the land filtration area. The general condition was found to be satisfactory.

OADBY.

Considerable extensions to the existing sewage works have been made necessary by the rapid growth of this district. The whole installation is being doubled, and the estimated cost is £8,000. The new works include two detritus tanks, two sedimentation tanks, two storm water tanks, four filter beds with dosing chambers, and three humus tanks. When the improved sewage farm is in full working order the problem of sewage disposal in this district will doubtless be satisfactorily solved.

SHEPSHED.

Both the old farm and the new sewage works are in operation, and a considerable volume of sewage is being treated efficiently. Sugar beet and potatoes are being grown on the old farm.

SILEBY.

The sewage is pumped for five hours per day to the elevated sedimentation tanks, whence the sewage is passed to the filter beds. These beds are used intermittently, the resting period being sufficient for efficient oxidisation. The whole system works very satisfactorily.

SYSTON.

New works are being erected, and include two Dortmund tanks with a total capacity of 60,000 gallons, four filter beds, two humus tanks, and six sludge lagoons. The estimated total cost is approximately £4,000. When completed these works will no doubt satisfactorily replace the old system on which adverse reports have been made in previous years.

WIGSTON.

Samples of the effluent and of the brook above and below the entry of the effluent were taken. All three were found to be distinctly satisfactory.

Visits to other sewage farms in the County showed these to be satisfactory on the day of inspection.

(4). CLOSET ACCOMMODATION.

The reports of the District Sanitary Inspectors for the year 1929 disclose that in the County 914 privies, pail, or earth closets were converted to the water carriage system during the year; 155 privies were converted to pail or earth closets.

A relatively large number of conversions, viz., 332 have been made in the Hinckley Rural District. The completion within recent years of the Sewage Works at Barwell has made many conversions possible in this village.

The extensive improvements of the Water Supply and Sewage Works in various districts which have been made, or are in course of construction will no doubt lead to a considerable diminution in the number of privies and pail closets still found in large numbers, especially in the Rural Districts.

An ample Water Supply and an efficient Sewage Disposal Plant are not only necessary forerunners to conversions to the Water Carriage System but are a sure means of bringing about this very desirable change.

(5). SCAVENGING.

Destructors as in previous years continue to function at Loughborough, Market Harborough, Melton Mowbray, Quorn, and Blaby.

Five acres of land at Whitwick and two acres at Ellistown have been acquired by the Coalville District Council for rubbish tipping purposes. This forms an extension of the "controlled system" which has already been in operation in this district.

"Controlled tipping" has been established during the year at Loughborough and is working efficiently.

(6). SANITARY INSPECTION.

The following information has been extracted from the reports of the District Sanitary Inspectors :—

	Urban.	Rural.	Total.
Premises Visited	11,807	12,614	24,421
Defects or Nuisances Discovered ...	8,827	3,735	12,562
Complaints Received	465	710	1,175
Inspections for all Purposes	15,873	22,385	38,258
Notices Served :—			
Informal	2,478	2,335	4,813
Formal	277	181	458
Summonses Issued	4	6	10
Convictions Obtained	3	4	7

(7). PREMISES AND OCCUPATIONS WHICH CAN BE CONTROLLED BY BYE-LAWS OR REGULATIONS:—

The question of the condition of tents, vans, and sheds used for human habitation has been considered at some length in previous reports. Most of the District Authorities have continued to deal with the worst of these primitive abodes in which overcrowding, bad sanitation and poor weather protection are most marked. The position in various districts is as follows:—

Barrow-on-Soar Rural District:

Strict supervision has been exercised over a large encampment as to the disposal of refuse, etc.

Billesdon Rural District:

The suggestion has been wisely made that Bye-Laws under Section 43 of the Public Health Act, 1925, should be adopted in this district in view of the fact that neighbouring districts propose to adopt the Section. It is a foregone conclusion that a district which does not protect itself by adopting the appropriate Bye-Laws will eventually become the settling place of the mobile habitations moved on from other districts which have taken advantage of the provisions of the Act.

Blaby Rural District:

Two overcrowded temporary wooden buildings have been closed following the service of statutory notices.

Melton Mowbray Rural District:

In three cases where vans were found to be in an unclean condition, action was taken with satisfactory results.

Ashby-de-la-Zouch Urban District:

Two vans have been removed and proceedings are pending with a view to the removal of two remaining vans.

Coalville Urban District:

"Except in the case of two vans and one shed occupied by the same owner and his family, conditions are satisfactory. In this case conditions were bad and a prosecution followed repeated warnings. The case was dismissed for lack of corroborative evidence. The three places, however, have become disused since the action."

Market Harborough Urban District:

Two van dwellings were removed through contravention of Bye-Laws, and two cases of accumulation of refuse were dealt with satisfactorily.

HOUSING.

(a) Number of New Houses erected during the year:

DISTRICT	With State Assistance under the Housing Acts: By Local Authority	By other Bodies or Persons.	Total including numbers given in columns 2 & 3
(1)	(2)	(3)	(4)
URBAN DISTRICTS:			
Ashby-de-la-Zouch	—	3	18
Ashby Woulds	—	1	1
Coalville	—	34	37
Hinckley	—	133	173
Loughborough	131	100	250
Market Harborough	—	38	44
Melton Mowbray	25	18	43
Oadby	—	6	52
Quorn	—	19	24
Shepshed	—	4	9
Thurmaston	—	24	33
Wigston Magna	78	53	143
Total	234	433	827
RURAL DISTRICTS:			
Ashby-de-la-Zouch	—	30	47
Barrow-on-Soar (1)	76	84	189
,, ,, (2)	20	164	214
Billesdon	—	93	289
Belvoir	—	—	2
Blaby	12	428	440
Castle Donington	6	7	13
Hallaton	—	—	—
Hinckley	26	90	226
Loughborough	—	7	15
Lutterworth	—	12	25
Market Bosworth	—	35	39
Market Harborough	—	5	11
Melton Mowbray	—	7	15
Total	140	962	1525
Total Whole County	374	1395	2352

(b) DEFECTIVE HOUSES.

Number of Dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for habitation	185	
Number of Dwelling-houses (exclusive of those referred to under the preceding heading) found not to be in all respects reasonably fit for human habitation ...	1,868	
Total found defective	——	2,053
Number of Defective Dwelling-houses rendered fit in consequence of :—		
(a) Informal Action	1,435	
(b) Service of Formal Notices	707	
Number of Dwelling-houses in respect of which Closing Orders became operative in pursuance of declarations by Owners of intention to close	18	
Number of Dwelling-houses in respect of which Closing Orders were made	85	
Number of Dwelling-houses in respect of which Closing Orders were determined, the Dwelling-houses having been rendered fit	27	
Number of Dwelling-houses demolished in pursuance of Demolition Orders	13	

HOUSING (RURAL WORKERS') ACT, 1926.

During 1929 applications for grants were made in respect of 18 dwellings. Of these 6 were refused, 2 were withdrawn by the applicants, and 2 are under consideration. Grants amounting to £666 were paid in respect of 8 dwellings.

INSPECTION AND SUPERVISION OF FOOD.

(a) Milk Supply.

Milk and Dairies (Consolidation) Act, 1915.

During 1929, infection of milk by tubercle bacilli was reported in four instances—1 from London County Council, 2 from Leicester City, and 1 from Birmingham Health Authority. Following these reports 134

animals from four farms were examined by the County Council's Veterinary Surgeon, and 20 samples of milk were collected and tested biologically at the Cambridge University Laboratory.

Subsequently the necessary action under the Tuberculosis Order of 1925 was taken by the Council's Veterinary Inspector.

Milk and Dairies Order, 1926 (Part IV.).

Tuberculosis Order, 1925.

Both these Orders are administered by the Diseases of Animals Sub-Committee of the County Agricultural Committee.

GRADED MILKS.

(b) Graded Milk Production in Leicestershire.

During the year three additional Grade "A" licenses were granted, and there are now 20 farms in the County producing Grade "A" milk under the County Council license. In addition the Ministry of Health has licensed two producers for "Certified Milk" and one for "Grade 'A' (T.T.)."

The number of farms licensed by the County Council is a considerable advance on the figures of five years ago, yet even now the total available production of Graded milk is only capable of supplying a small part of the County.

The ideal of a pure milk supply would lead one to hope that the production of graded milk would develop more rapidly than is shown by our returns; but some satisfaction can be felt when comparison is made with the progress of other counties.

This factor of slow development is worthy of investigation, and it seems opportune to consider what is the chief problem with which we are faced in this respect. It appears to me that a summary of the present difficulties in the way of universal production of Graded milk centres round the cost of production as related to the financial return from the sale of the product to the public. It is beyond question, of course, that Graded milk production entails considerable additional upkeep and running expenses, and that of necessity the resulting product must be sold at a higher figure than ordinary ungraded commercial milk. The problem is intensified by and closely inter-related to the lack of demand for Graded milk on the part of the general community.

Potential producers, though fully appreciating its merits, hesitate to risk the undertaking in the presence of these financial hazards.

The initial procedure then appears to be the education of the public in the advantages of a Graded milk supply. Such propaganda work can indeed be approached with every strength in the two-fold knowledge of the main facts relating to milk from a public health point of view. Firstly, that milk is pre-eminently the vital food required in early life, not only for the formation of a sure foundation of a healthy body, but also for the promotion of growth and development along healthy lines, and secondly, that to obtain these objects it is essential to have some guarantee of the purity of the milk supply.

It is our next duty to impart this information in a somewhat more elaborate form to the general public. The public in their own interests and in the interests of the producers, actual and potential. require education along these lines, and I am confident that once this information is widely enough given, the demand for the product will be markedly increased. At the same time, I would prefer that all Graded milk should be obtained from Tuberculin Tested Herds, but financial considerations are the chief difficulty in the way of this ideal being realised.

It is worthy of interest that in certain areas of the County I have been impressed by the fact that Grade "A" milk is chiefly bought by the lower middle class people, particularly those with babies, while the better class people make little effort to obtain it. I have noted this fact from my own observations and from information which I have received from the actual producers with regard to their sales. For some time I was rather at a loss to explain this rather curious anomaly, but in the end I was fully convinced that these mothers of somewhat poorer circumstances than their more fortunate sisters had obtained their knowledge of the benefits of Grade "A" milk through the teaching of Medical Officers and Health Visitors at local Maternity and Child Welfare Centres. This explanation affords a most interesting sidelight on the educational propaganda which I have been discussing, and it gives rise to strong hopes that by such methods we are on the correct lines for the ultimate solution of the problem.

In Leicestershire the administrative arrangements relating to Grade "A" farms have worked smoothly since the inception of the scheme. Between the producers and the Central Health Staff there exists a strong and invaluable feeling of co-operation and mutual respect. All are united in working towards a common end—there is no feeling on our side of rigid red tape inspection, and on the farmers side there exists not the slightest trace of hostility to our inspections. We on the Central Staff realise that much of the practical work in milk production is unknown to us; the farmers on their side feel that administrative and scientific details are best understood by us. Our relationships, therefore, are free from all friction, and our united efforts are directed towards the single attainment of a high standard of milk production.

I gladly take this opportunity of recording my thanks for the courteous way in which the various Grade "A" producers of the County receive not only our visits of inspection but also our recommendations.

Inspection of Grade "A" farms in the County are regularly carried out by the Senior Medical Officers, and samples of milk for bacteriological examination are obtained at frequent intervals. On the average the counts of these samples are excellent, but whenever an adverse count is reported (as may happen occasionally in all types of milk production) both the producer and this Department combine towards seeking the source of the trouble with a view to obviating its recurrence. The general structural arrangements of the buildings used in Grade "A" milk production in this County, although frequently old in type, are satisfactory, while the average standard of cleanliness is excellent.

After some considerable experience of the work of milk inspection I am strongly led to the conclusion that although modern structural requirements and standards with regard to cubic space, lighting, ventilation, drains, flooring, etc., tend to increase the health of the herd, the essential requirement for the successful production of Grade "A" milk is found in adequate personal supervision of the cleanliness of everything having any connection whatsoever with the milk.

Even with excellent sheds and a first class herd results in Grade "A" milk production will go sadly astray if routine cleanliness and care are neglected. The least uncleanliness of herd, sheds, hands, smocks, pails, cooler, bottles, etc., through lack of interest or neglect may have such far-reaching results in this type of work that I confidently declare that the personal element with its power towards the attainment of cleanliness is by far the most important single factor required in the successful production of Grade "A" milk.

During the year 155 samples of Grade "A' milk were examined. Of these 63 were examined in the County Laboratory and 92 were samples of Grade "A" milk from County producers collected and examined by the Health Authority of the City of Leicester. Of this number 145 were within standard and 10 were below standard.

(c) Sale of Food and Drugs Act, etc.

This and kindred Acts are administered by the County Police. 87 samples of milk and 9 samples of cream were analysed. All the cream samples were found to be genuine. 4 samples of milk were found to be deficient in fat, and in 3 of these cases further sampling proved to be satisfactory. A very serious deficiency of milk fat was discovered in the remaining case, and proceedings were instituted, resulting in a conviction and the imposition of a fine.

BACTERIOLOGICAL AND CHEMICAL WORK.

The following is a summary of the work carried out in the County Laboratory during 1929 :—

	Pos.	Neg.	Total.
Throat Swabs for Diphtheria	199	1657	1856
Sputa for Tubercle Bacilli	469	1104	1573
Milk Examinations (Bacteriological) ...	—	—	827
Hair for Ringworm	166	95	261
Milk for Fat Content	—	—	212
Sewage and Water Analyses	—	—	184
Urine Examination (Gen. and Bact.) ...	—	—	129
*Blood for Wassermann Reaction	26	95	121
Films for Gonococci	29	48	77
Urine for Tubercle Bacilli	14	54	68
Widal Reactions for Typhoid Fever ...	3	42	45
Blood Counts	—	—	19
Fæces for B. Typhosus	0	13	13
C. S. Fluid for Meningococci	2	0	2
Films for Spirochœta Pallida	0	2	2
Urine for B. Typhosus	0	1	1
Miscellaneous	—	—	36
			5426

* Collection of Blood only.

The total number of examinations made last year was 4,890, hence there is an increase of 536. An increase has occurred each year, and further particulars will be found at the end of this report in a decennial survey.

Diphtheria.

The 1,856 swabs received during the year were from the following sources :—

Isolation Hospitals	688
Schools	258
Mowsley Sanatorium ...	154
General Practitioners	756

The schools inspected and particulars of the swabs taken from scholars are given below. These swabs were taken to detect "carriers" during epidemic periods.

11/1/29	Markfield Schools	67	swabs.
25/1/29	,, ,, ...	148	,,
24/7/29	Cosby Schools	43	,,

At Markfield Schools two children were found to be "carriers," and a similar number at Cosby were also found. These children were excluded from school until such time as they were found to be free from infection.

Tuberculosis.

The number of specimens of sputa examined for the presence of tubercle bacilli during the year was 1,573, which is the largest number ever examined in one year. Of these 469 were positive. The sputa were received from the following sources:—

Tuberculosis Medical Officers	989
General Practitioners	583
D. C. M. S. Ministry of Pensions	1

In addition to these, 68 specimens of urine were also examined for tubercle bacilli, and 14 were found to be positive.

Milk Examinations.

The total number of milk examinations carried out during the year was 827, being an increase of 71 on last year. They were received from the following sources:—

Urban Districts	314
Rural Districts	415
"Grade A" Production ...	78
Collected under Section 4 of Milk and Dairies Act	20

The samples from the Urban and Rural Districts after examination are classified as "Good," "Fair," "Moderate" and "Bad," according to the bacterial count and B. Coli content, and the results of these 729 samples are as follows:—

URBAN DISTRICTS:

Total.	Good.	Fair.	Mod.	Bad.
314	195	71	2	46
	(62.1%)	(22.6%)	(0.6%)	(14.7%).

RURAL DISTRICTS:

415	257	107	10	41
	(61.9%)	(28.5%)	(2.4%)	(9.9%)

TOTAL URBAN AND RURAL DISTRICTS:

729	452	178	12	87
	(62.0%)	(24.5%)	(1.6%)	(11.9%).

The absence of B. Coli from one hundredth part of a cubic centimetre, and a bacterial count of less than 500,000 micro-organisms per cubic centimetre constitutes a "Good" sample of milk in the standards laid down in this scheme. These standards may be open to some criticism, but they have been adopted only after much consideration and in the absence of better ones.

The results of the examinations have been further analysed with the following results :—

3.9% contained less than 10,000 organisms per cubic centimetre.

49.2% contained between 10,000 and 100,000 organisms per cubic centimetre.

15.5% contained between 100,000 and 200,000 organisms per cubic centimetre.

31.4% contained over 200,000 organisms per cubic centimetre.

These figures show that 68.6% contained less than 200,000 organisms per c.c., which is the limit laid down for "Grade A" milk, in so far as the bacterial count is concerned. To come entirely within these standards the samples should also contain no B. Coli in 1/100th of a c.c.

An analysis of the B. Coli content shows some very interesting figures, which are also very gratifying. Note must be made of the fact that "Grade A" milk is allowed to contain B. Coli in 1/10th of a c.c., but not in smaller quantities.

315 samples (43%) contained no B. Coli in 1/10th of a c.c.

174 samples (24%) contained B. Coli in 1/10th but not in 1/100th of a c.c.

184 samples (25%) contained B. Coli in 1/100th but not in 1/1000th of a c.c.

56 samples (8%) contained B. Coli in 1/1000th of a c.c.

Therefore, in so far as the B. Coli content is concerned, 489, or 67% come within the standard for "Grade A" milk.

The following table shows the varying percentages of samples which were classified as "Good" month by month:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
37	43	69	51	69	63	67	58	61	59	92	60
67%	72%	77%	76%	59%	46%	54%	59%	59%	66%	58%	60%

It will be seen that March was the best month of the year, and June the worst, and that the warmer weather undoubtedly has an adverse effect on the milk supplies.

In view of the satisfactory results of these examinations it is considered advisable to continue them. It is probable that the percentage of "Good" samples would have been even higher if samples had been sent from all producers. However, this year several districts have sent samples only from producers whose reports on previous occasions have been unsatisfactory.

Under Section 4 of the Milk and Dairies Act, 1915, 20 samples of milk were sent to the Institute of Animal Pathology, Cambridge, for biological examination for Tubercle Bacillus. Only one of these was found to be tuberculous. These samples were taken by the County Council's Veterinary Surgeon, Mr. Parr, F.R.C.V.S., and were from four different farms.

Sewage and Water Analysis.

Water supplies, when used by the public at large are examined free of charge, as are also private supplies when a question of public health is involved. Effluents from sewage farms are also examined, and similarly samples of rivers and streams into which such effluents are discharged. The number of samples examined during 1929 was 184. This number includes 28 samples of water from the river Soar at various points, which were tested for dissolved oxygen, in conjunction with the Ministry of Agriculture and Fisheries, in connection with their annual hydrographical survey of the Trent Water-shed.

Hair for Ringworm.

The total number of specimens of hair examined during the year was 220. The majority of the specimens were collected by the School Medical Officers and Nurses, though latterly many children have attended at the laboratory on Saturday mornings.

Cerebro-Spinal Fever.

Only two specimens of cerebro-spinal fluid were examined during the year, and these were both positive. Neither of the cases was visited by me, the fluid being sent in by the General Practitioner concerned.

Typhoid Fever.

Examinations of blood, fæces, and urine are made for the Widal Reaction of the first, and the presence or absence of the Bacillus Typhosus in the second and third. The specimens of blood are mainly sent in by General Practitioners for diagnosis, and the fæces and urine specimens are sent by the Isolation Hospitals to ascertain freedom from infection before the patients are discharged from hospital. The numbers of these examinations made during the past year were : Blood 45, Fæces 13, and Urine 1.

Epidemics of Typhoid Fever are investigated by the laboratory staff, which entails journeys to the affected areas, collection of specimens on the spot and their subsequent examination.

Venereal Diseases.

During the year the numbers of tests in connection with Venereal Diseases are as follows :—

Films for Gonococci	77
Blood for Wassermann Reaction	121
Films for Spirochœta Pallida	2

Eighty-six of the specimens of blood for Wassermann Reaction, 36 of the films for gonococci, and the 2 films for spirochœta pallida, were received from General Practitioners. The remainder of the specimens were taken at the Venereal Diseases Clinic at Loughborough.

General Remarks.

The number of examinations made in the laboratory still continues to increase, which is a sure indication of the usefulness of an efficient laboratory service to a County in aiding the General Practitioner in diagnosis. There follows at the end of this report a decennial survey of the ten years during which the laboratory has been in existence, which shows the steady yearly increase in the various branches of the work. As in previous years the laboratory is open on Sundays and general holidays.

J. A. FAIRER, M.D.,
County M.O.H. and Bacteriologist.

COUNTY LABORATORY.

DECENNIAL SURVEY.

As the laboratory has now been in existence ten years, I am submitting a decennial survey of this period. Up to October, 1919, the County Council paid a London laboratory for the examination of throat swabs sent by General Practitioners from suspected cases of diphtheria. This scheme was in many ways unsatisfactory, and in view of the increasing demand for bacteriological examinations to assist in diagnosis and treatment it was decided to form a county laboratory.

In 1919 the Council had paid for the examination of 96 throat swabs, and with the formation of their own laboratory it was expected that the number would be larger. Subsequent events proved that the laboratory fulfilled a long felt want, as in the first year of its existence (1920), 2,449 examinations were made, of which 961 were throat swabs for diphtheria.

In October, 1919, a laboratory assistant was appointed, and as Senior Assistant County Medical Officer, I took charge of the laboratory, and was officially appointed Bacteriologist. The last three months of the year were spent in transforming three upper rooms into a laboratory, and carrying out such examinations as were required by General Practitioners who had heard unofficially that a laboratory was to be opened.

Towards the end of 1919, a circular letter was sent to all General Practitioners in the County, informing them that the services of a Bacteriological Laboratory were at their disposal. This circular informed them that with the exception of the Wassermann Reaction and Histological examinations, practically any bacteriological examinations could be made free of cost to them.

By the 1st January, 1920, the laboratory was in a position to carry out most of the routine examinations required in general practice. Examinations were made under conditions which were far from ideal, and the absence of electric light and a hot water supply proved a serious handicap. It was not until three or four years afterwards that this was overcome.

With the close of 1929, the laboratory has had a trial of ten years, and statistical returns have been regularly kept.

The following figures show the number of examinations made year by year :—

1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
2449	2397	2531	2774	3170	3561	3600	4510	4890	5426

Total for the ten years, 35,290

Diphtheria.

Total number of swabs examined during each of the ten years :—

1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	Total
971	983	1039	716	997	916	831	1439	1965	1856	11503

As previously mentioned, the swabs from the Isolation Hospitals are sent with a view to ascertaining whether the patients are free from infection before returning to their homes. The Isolalation Hospitals Committee pay two shillings per swab to the laboratory.

The total number of swabs taken from school children during the ten years is 2,189, and of this number, 116, or 5.3% were found to be harbouring the diphtheria bacillus, and although healthy in themselves, it will be easily understood that they could be a danger to others.

The swabbing of children to eliminate "Carriers," the examination of swabs for General Practitioners, and from patients in the Isolation Hospitals (until three negative results have been obtained) show some results which, when taken in conjunction with the number of notifications, and the death rate from this disease, may have some significance. The figures are as follows :

Year	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
Cases Notified	465	404	311	267	315	285	265	331	395	362
Death Rate	0.19	0.11	0.10	0.11	0.06	0.05	0.06	0.06	0.08	0.12

During the ten years 1910 to 1919, the average death rate from diphtheria was 0.14, but during the years 1920 to 1929 it has fallen to .09.

Tuberculosis.

The steady increase of sputa examinations is shown by the following :—

1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
645	611	625	974	1006	1078	1230	1350	1506	1573

Total 10,598

The yearly number of these examinations is now practically two-and-a-half times greater than in 1920, and the Tuberculosis Medical Officers state that there is every indication that this number will increase still more. They assure me that these examinations are of great value to them as regards diagnosis and prognosis. These specimens are received from the Tuberculosis Medical Officers and General Practitioners in about equal numbers.

Milk Examinations.

The examination of milk samples for bacterial content was not begun on a large scale until January, 1925. Up to this time only 375 samples had been examined. Towards the end of 1924 it was decided to commence a scheme to encourage the supply of cleaner milk; by this scheme the various Urban and Rural Districts Authorities could have samples examined from their area at a charge of 2s. 6d. per sample should they so desire. The response to this offer was very gratifying. One of the three rooms was converted into a laboratory specially for the purpose, and another assistant was appointed. During 1925, the first year of the scheme, 695 samples were examined, 730 in 1926, 670 in 1927, 756 in 1928, and 827 in 1929, making a total of 4,053 in the ten years.

Periodical examinations of samples from producers and prospective producers of "Grade A" milk are also made to ensure that they conform to the standards laid down.

The results of the examinations of samples from the Urban and Rural Districts are classified into four groups, "Good," "Fair," "Moderate," and "Bad," according to the bacterial count and the bacillus coli content. Particulars of these standards have already been given in previous reports. The popularity of the scheme may be gauged from the fact that with the exception of four, all the Districts have had samples examined at some time during the five years, most of them each year.

The results of these bacteriological examinations over the *five* years are now available, and are summarised below :—

URBAN DISTRICTS:

Total.	Good.	Fair.	Mod.	Bad
1521	795	336	43	347
Percentage :	52.3	22.1	2.8	22.8

RURAL DISTRICTS:

1655	883	360	51	361
Percentage :	53.4	21.7	3.1	21.8

TOTAL URBAN AND RURAL DISTRICTS :					
	3176	1678	696	94	708
Percentage :		52.8	21.9	3.0	22.3

PER CENT. "GOOD" IN FIVE YEARS.

1925	1926	1927	1928	1929
54·3	46·7	47·1	58·8	62·0

A noteworthy fact is that whilst the percentage of "Good" samples during the first three years was 49.3, it has risen during the last two years to 60.4.

Sewage and Water Analysis.

The total number of samples of water and sewage effluents for the ten years is 1,653. During the past seven years, that is from 1923 onwards, numerous samples of water have been taken from the River Soar at various points for the estimation of the amount of dissolved oxygen. These examinations have been carried out in connection with the annual survey of the Trent Water Shed, in conjunction with the Ministry of Agriculture and Fisheries.

Hair and Ringworm.

In 1920 only 88 specimens of hair were examined for ringworm, but in 1929 the number had risen to 220, and the total for the ten years is 2,306. These specimens are almost all collected by the School Medical Officers and Nurses.

Cerebro-Spinal Fever.

Before the County Laboratory was opened, suspected cases of cerebro-spinal fever were visited by an outside Bacteriologist, whose services were retained and paid for by the County Council, but this system was discontinued with the formation of the Council's own laboratory, and now, when a general practitioner has a suspicious case it is visited by the Bacteriologist and his assistant, if desired. A lumbar puncture is performed and the cerebro-spinal fluid brought back to the laboratory for examination. If a positive result is obtained, throat swabs are taken from all contacts to eliminate "carriers." Where a visit to the case is made, the Local Authority concerned is charged two guineas, but when the General Practitioner sends the fluid to the laboratory a charge of 10s. 6d. only is made.

During the ten years under review 78 specimens of cerebro-spinal fluid have been examined, 23 of which were positive, and the yearly numbers are as follows :—

1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
24	19	10	5	9	7	1	1	0	2

Of the 78 cases from which cerebro-spinal fluid was examined, 42 were actually visited and lumbar punctured by the Bacteriologist.

Typhoid Fever.

The total number of examinations made during the ten years in connection with disease and their nature is as follows :—

Blood.	Fæces.	Urine.
450	213	39

Venereal Diseases.

During the past ten years a Venereal Diseases Clinic has been held at the Loughborough General Hospital. This Clinic was in my charge as Assistant County M.O.H. and Bacteriologist until my appointment as County Medical Officer. It then passed to the care of one of the School Medical Officers. In connection with this Clinic specimens of pathological material are collected and brought back to the laboratory for examination, blood for the Wassermann Reaction being sent to an outside laboratory, as facilities for bio-chemical tests are not available, entailing as it does a vivisection license from the Home Office.

The following figures show the number of examinations actually performed in the laboratory :—

Films for Gonococci.	Other Tests.
1,088	21

The number of samples of blood sent to the Leicester Royal Infirmary for Wassermann Test during the ten years was 1,066.

J. A. FAIRER, M.D.,
County M.O.H. and Bacteriologist.

TUBERCULOSIS.

TUBERCULOSIS MORTALITY.

That the mortality in Pulmonary Tuberculosis is heavy no one can deny, and strikingly so in those instances where the Tubercle Bacillus is found in the sputum.

The Classification laid down by the Ministry of Health for purposes of case records, registers and statistical returns, distinguishes between T.B. minus cases—those in which the Tubercle Bacillus is absent from the sputum—and T.B. plus—those in which the germ is present. I quote this to shew how important this differentiation is. The prospects of the T.B. minus case are infinitely better than the positive type, as all statistics and experience prove; and this fact amply demonstrates the necessity for not waiting to find the germ before diagnosing the complaint and also for insisting on longer periods of treatment for the T.B. plus cases.

It may be interesting, therefore, to investigate briefly some of the causes of this mortality, and I propose to discuss this problem from certain aspects and angles.

(a) Types of Pulmonary Tuberculosis.

Before the War the types of Pulmonary Tuberculosis differed from those we meet now, or perhaps it would be more correct to say, have changed as regards incidence. The Acute Miliary and Acute Broncho-pnuemonic varieties, known familiarly as galloping consumption, were comparatively common, and the extremely rapid course of the illness made treatment of little avail and speedily ended in the demise of the unfortunate individual. This rapid consumption is becoming less and less frequent nowadays, and indeed may be said to be rare.

Again, the type known as fibro-caseous, usually beginning at or near the apex of the lung and spreading slowly by infiltration was extremely prevalent before the War, and is common enough now, but does not predominate as it used to do.

Instead of this class of Pulmonary Tuberculosis we frequently have a very rapid involvement of a part or the whole of a lobe, or even the whole lung by a broncho-pneumonic spread, with high temperature and rapid pulse; but instead of the patient dying, the disease simmers down, the temperature and pulse rate drop, and the sufferer is left, with a lung heavily diseased, which must perforce take a very long time to heal.

I am convinced that if such cases are allowed to get up from bed, as soon as the temperature and pulse rate have fallen, irreparable damage is done to the stricken lung. The difficulty to be overcome is not only to establish immunity and increase the resistance of the patient to the tubercular infection, but also to give the lung a mechanical chance to heal by prolonged rest. If this course is taken, it is wonderful what good results can be obtained, and excellent recoveries made. The point is that the systemic disturbance often yields to rest before the healing process has had time to progress far, and exercise in any form breaks down any healing that has taken place, and prevents any further advance towards cure. Rest is the fulfilling of the law of recovery.

Unfortunately the fall in temperature and pulse rate is too frequently the sign to get the ill-fated person up, and walk him about in the fresh air—(and he is ever pressing and anxious to do so)—and so his one chance of complete recovery is taken from him. Oh, fresh air, what crimes are committed in thy name!

The predominance of this type of Tuberculosis in the County makes the question of treatment difficult, for it is certain that very much longer periods of rest are required.

Good results can be obtained with T.B. minus and early plus cases, but the remainder present a problem both as regards the number of beds required for treatment and the willingness of patients to submit to long spells of inactivity.

(b) Heredity or the Family Predisposition to Tuberculosis.

I believe this has been exaggerated in the past. It is surprising how many isolated cases occur in families, and how comparatively few contacts get the disease. The immunity in connubial phthisis has frequently been commented on, while the Grancher system among children, and the Bang's system among cows, have shewn that where the offspring of Tubercular parents, whether human or bovine, are removed from the infectious surroundings, disease very seldom occurs. Though I believe this immunity to occur among the generality of the population, there are undoubtedly phthisis-ridden families in which every member has died, or in less extreme cases, several members, and in whom the resistance to the disease, once established, is negligible. There are considerable numbers of such persons in the County, and a "black list" has been drawn up, in order that they may receive special attention and care.

(c) Bad Housing and Overcrowding.

Bad housing and overcrowding have long been cited as potent causes of Tuberculosis, and there is no doubt as to the justice of the accusation. One important point, related to this question, has not been stressed enough, although everyone is cognisant of it, and that is lack of ventilation or fresh air. Few people realise the extraordinarily stuffy atmosphere in which so many of the working classes live, not in the workshop only, but more especially in the home. In the Winter the windows are closed, and the fire piled up and a large family are gathered together in a small room, many of them smoking. The air shortly becomes intolerably stuffy, and hours spent in such surroundings spell anæmia, loss of appetite and energy, while debility and ill-health follow in the train. I know what I write to be the truth, for I have come from such rooms feeling sick from lack of oxygen, and from breathing in air, motionless and containing all the deleterous substances found in expired air. No housing schemes will remedy such a condition of affairs, but only public enlightenment as to the value of fresh air and adequate ventilation. I have known people in an old and small house bitterly complain of windows that would not open, and have seen the same people in a Council house with every window tightly closed.

I need hardly say that ill-health and debility lead to other more serious complaints, Tuberculosis being among the chief of them.

(d) Unsuitable Work is a factor both in the causation of disease, and in its prolongation and retention.

Factory life, as I have pointed out before, is unsuitable for many people, but there is little selection in choosing jobs for the young about to embark on a life's career.

Often one kind of employment only is available, and so there is little choice left in the matter. Some places are definitely industrial, as others are agricultural.

The return to factory life is frequently detrimental to the Tubercular patient, and possibly to his co-workers also; but what can a man do who has no other trade at his finger tips, and must set about working to maintain a wife and family? He is driven back to factory life willy nilly.

Can the Colony on the lines of Papworth or Preston Hall solve the problem? It can certainly help, but such Colonies should take cases that can work under ideal conditions only, and not those who in any event could earn a living elsewhere. Such Institutions are said to be self-supporting, and if that is so then nothing but encouragement should be given to their extension and multiplication.

Again, can factory life even under the best conditions be really considered a healthy one? Is it the sort of life, that man as man, and not as an automaton, was really intended for?

If we consider the monotony, the incessant din, the oftimes heated and far from odorous air, the constant attention to the work in hand, the going out into the cold night air in Winter, and the more heated atmosphere in the rooms in Summer, the abolition of the craftsman and the substitution of the one piece worker, the hurrying home to the mid-day meal, etc., one may well doubt even under the very best conditions whether this life is one that is likely to produce strong and healthy citizens.

We know that men and women work in factories and yet remain healthy, but is it because of their work, or in spite of it; or again does it mean that good wages, with their accompanying good food and good conditions of life more than compensate for the drawbacks of the work itself?

These questions are worthy of consideration.

(e) Unemployment.

Unemployment from any cause, and especially as the result of sickness is responsible for numerous families not getting enough to eat. There is abundant evidence that many are half-starved, either actually not getting enough to maintain good health, or else living on a diet sufficient to stave off hunger, but poor in vitamins, and in food calories, an ill-balanced diet, with carbo-hydrates and cheap fats in excess. That future generations will have to pay for this, by an increase in weaklings, does not require great imagination to envisage.

The fact that many families are far too large increases the difficulty. They are not regulated to income or with any regard to the future, but are simply fortuitous and haphazard. It is quality of citizen, not quantity that a nation requires, but the day when the public will recognise this fundamental truth is far distant.

(f) Stock.

We must realise that the stock in this country is gradually becoming weaker and deteriorating in quality. Our present system is to keep the physically unfit alive, and springs from right and proper humanitarian principles. Unfortunately the unfit marry and produce weakly offspring, and presumably they in turn will marry. Nature's way is the survival of the fittest, and under this law the strong survive and the weakly are wiped out. However, in human affairs a compromise can usually be found, and it seems that the day must come when persons seriously ill with advanced phthisis, or mentally deficient, or obviously unfit from one cause or another, will not be allowed to marry and propagate their species.

Unless some check is instituted to stop this promiscuous production of the physically and mentally unfit nothing but disaster can come. The responsibility of marriage in the light of the future of the race should be strongly urged on the rising generation.

(g) Advanced state of disease when first seen.

The most disappointing feature of Tuberculosis work lies in so many patients seeking advice for the first time in such an advanced stage of the disease that no treatment is likely to be of any avail.

There are many reasons for this most unsatisfactory and disastrous delay.

(1) Many patients deliberately hide the fact that they are suffering from cough, loss of weight, night sweats, and so on; and even after seeing blood in the phlegm they say nothing. This silence is largely the result of fearing to know the truth, or wishing to defer the knowledge of what they already greatly suspect, or cherishing the hope that springs eternal that all will yet be well.

Others put off seeking a diagnosis from the definite fear of losing their work and possibly throwing their families on to the rates. It is a thousand pities that this fear of Tuberculosis is so rooted in the minds of the public. I believe it is largely due to the fact that they see the many bad results of treatment which, if they did but realise it, is too often bestowed on cases too advanced to gain benefit, and is really given more for purposes of segregation than anything else.

If only the public would understand that both Cancer and Tuberculosis, and indeed many other complaints, are eminently curable in the early stages, and incurable in the late, they would come more quickly for consultation and advice.

(2) Some people genuinely fail to realise how ill they are, while it is true also that the disease may advance so slowly and insidiously that although large areas of lung are involved, the patient does not feel really ill, and can and does carry on work, until the time comes when he is driven by a hæmorrhage, or by an increase in the severity of his symptoms to seek advice. Then it is found that he is too late for cure and that the outlook is hopeless.

I have known cases that worked up to a fortnight before death overtook them.

(3) Again parents and relatives are often deplorably slow in remarking that some member of the family is ailing. Possibly the gradual change that takes place, and the daily living with the individual accounts for some of this blindness. But in many instances it is nothing short of amazing that the pallor, loss of flesh, lassitude and altered appearance can escape the notice that they merit.

But the failure of even experienced folk to gauge not only degrees of ill-health, but serious illness and even the dying condition, make such failure among the laity less surprising than one might think.

(4) Climate and subsoil have much to do with the incidence of Pulmonary Tuberculosis. Parts of Leicestershire have a clay subsoil, and this may account for cases not only of Tuberculosis, but also of Rheumatism.

The prevailing wind is South Westerly and rain bearing, and investigation has shewn that this is a most important factor in the causation of Tuberculosis. The subsoil and wind taken together must definitely determine an ever-present obstacle to health, which the Public Authorities have to surmount.

(5) Late notification of the disease results in cases reaching an advanced stage before being seen, and only the requisite knowledge and strict examination will avoid these unfortunate occurrences.

That it is no easy matter to diagnose early cases I think everyone will agree. Experience gained among this class of patient, involving constant chest examination, with the aid, in certain cases, of the X-rays, and the invariable investigation of the sputum by a competent Bacteriologist may alone be instrumental in giving the correct diagnosis while a cure is still possible.

N. A. COWARD.

10th March, 1930.

TUBERCULOSIS.

The following is the report of the Senior Tuberculosis Medical Officer :—

Prevalence of Tuberculosis.

The number of notifications of Pulmonary Tuberculosis have increased by 12, and there is an increase of 36 in the number of deaths. The figures for 1929 are : Notifications 362, Deaths 239, Death Rate .81. The average numbers of the last five years are : Notifications 357, Deaths 208, Death Rate .74.

There were 95 Notifications of Non-Pulmonary Tuberculosis as against 117 in 1928. The number of deaths was 55 as against 54, and the Death Rate .19 as compared with .19 in 1928.

The total number of Notifications for 1929 is therefore 457 as against 467 last year, and Deaths 294 as against 257 in 1928, shewing a decrease in notifications and an increase in the number of deaths.

There are several factors to account for the increased mortality.

(a) The abnormally severe Winter, especially the early months, January, February and March of 1929—the coldest and bitterest spell of weather for nearly a hundred years—has led to an abnormal mortality from all forms of pulmonary disease, and from Influenza a predisposing cause of chest troubles.

The number of deaths from all causes has largely increased for this reason, and the following figures shew the marked advance in the mortality from respiratory diseases :—

	1928.	1929.
Deaths from all causes	3059	3629
Bronchitis	143	204
Pneumonia	126	219
Influenza	49	237

The death rates from Pneumonia and Influenza are the highest for 10 years. Whenever the total death rate increases, and especially where that increase is due to more deaths from respiratory complaints, the Tuberculosis death rate is bound to advance in proportion.

(b) A large number of old chronic cases who had lived for many years, succumbed to the intense cold,

(c) Numerous cases of Pulmonary Tuberculosis in an advanced state have come to live in the County, and especially in the new Estates on the out-lying parts of the City.

(d) The sputa of patients is being more and more examined. Thus cases, who in the past were diagnosed as Chronic Bronchitis have been shewn to be Tubercular, and this is borne out by the fact that about a quarter of the Tubercular cases have been over 40 years of age.

(e) Many cases were first seen in so advanced a stage of disease that little hope of recovery could be entertained from the first.

(f) Lastly, the increasing amount of unemployment and the consequent under nourishment is bound to have a marked effect on patients suffering from a chronic and prolonged disease.

DETAILS OF THE SCHEME OF TREATMENT.

(a) Hospital and Sanatorium Accommodation.

The number of beds provided at the different Institutions will be seen on Table T.B. II. The pressure on the available beds has been fully maintained.

It has been found necessary, as in past years, to arrange for the admission of 40—50 cases to Institutions outside the County.

(b) Proposed New Sanatorium (Markfield).

The plans for the proposed new Sanatorium are now complete. Every detail has received the careful consideration of the Engineers of the Ministry of Health, and after extended consultations with the representatives of the Ministry, approval has been obtained to proceed with the work.

Building operations should commence during the Summer of 1930, and it is hoped that the Institution will be available 18 months after this time.

(c) Convalescent Home.

Ten beds were again retained at the Charnwood Forest Convalescent Home. During the year 50 children, between the ages of 5 and 10 years were admitted, and their average length of stay was 57 days. These cases were classified as:—

Pre-Tubercular	49
Surgical Tuberculosis ...	1

The majority were contacts of Tubercular families. A few cases had to be held over until the Home re-opened in 1930.

An extension of this very valuable treatment would do much to improve the health of the weakly and debilitated children in the County.

(d) Hospital Beds for Advanced Cases.

Great difficulty in obtaining accommodation for this type of Tuberculosis is still experienced, and the six-bedded block at the Melton Mowbray Isolation Hospital has been fully utilized. Cases have been sent to Institutions outside the County, but unfortunately it is becoming increasingly difficult to find Hospitals willing and able to accept them. It is regrettable that our accommodation is so limited, and that in consequence the segregation of many of these infectious cases is either delayed or prevented altogether.

(e) Out-Patient Dispensary Work.

For details see Table I.

The number of attendances at the five Dispensaries was 4,005, which is 452 more than in 1928, and 1,012 more than in 1927. It will thus be seen that the great efforts being made to keep in touch with patients are meeting with a measure of success.

214 Contacts were examined, and 37 of these were found to be Tubercular.

The number of attendances of Non-pulmonary cases at Orthopædic Out-patients for treatment or supervision was 196, as against 111 last year and 68 in 1927. 30 X-ray photographs of the chest were taken, which figures do not include those taken in connection with the Residential Dispensaries or Sanatoria.

832 specimens of Sputum were examined in connection with Dispensary work, whilst the total number of examinations was 1,573.

(f) Domiciliary Work.

(i) *Shelters.*—Sixty-five shelters were available for loan to patients and of this number ten were still in temporary use at Mowsley Sanatorium. At the end of the year 51 were being used by patients at their own homes. Routine inspection by the County Nursing Association has again been carried out.

(ii) *Nursing of Advanced Cases.*—The County Nursing Association has carried out this work, and 4,973 nursing visits were made to 82

cases, the cost entailed being £213. In 1928, 4,045 visits were made to 54 patients at a cost of £161. It will be seen that the number of cases in need of nursing has considerably increased.

(iii) *Extra Nourishment.*—Approximately £206 has been expended on 42 patients as against £141 expended on 24 cases in 1928. The usual grant has been 5s. worth of milk and eggs per week. The increased number of those seeking assistance under this head is no doubt due to unemployment and labour difficulties.

(iv) *Additional Help* has been given in the following ways :—Cost of Splint, Crutches, Surgical Boots, etc., for 7 patients, £14.

Dental treatment with the provision of dentures has been granted to 9 patients at a cost of £25 10s. 0d.

Codliver Oil and Malt has been given to a large number of suitable cases at all the Out-patient Dispensaries, and paper handkerchiefs, sputum flasks, and inhalers have also been distributed.

(v) *Domiciliary Visits.*—The Tuberculosis Medical Officers have paid 851 (Dr. Coward 570, Dr. Lane 281) visits to patients' homes, whilst 724 were made in 1928. The Health Visitors paid 4,451 visits.

(g) Surgical Tuberculosis.

Nineteen beds are available—Mowsley Sanatorium 12 and Hinckley Residential Dispensary 7. These have been fully occupied. In addition cases have been treated at Hospital St. Cross, Rugby (6), St. Gerard's Hospital, Coleshill (7), Manfield Orthopædic Hospital, Northampton (5), Heatherwood Hospital, Ascot (3), Royal Sea Bathing Hospital, Margate (1), Leysin, Switzerland (1), St. George's Hospital, London (1).

The following arrangements for Orthopædic cases have been made to secure continuity of treatment :—

Area.	Clinic.	Surgeon.	Orthopædic Hospital.
Southern.	Leicester Royal Infirmary.	Mr. R. S. Lawson.	Manfield, Northamptonshire.
Northern.	Loughborough Cripples' Guild	Mr. A. Malkin.	Harlow Wood, Nottinghamshire.
Western.	Coalville Orthopædic Clinic.	Mr. F. J. Allan.	Coleshill, Warwickshire.

The Hinckley Cripples' Guild affords assistance to local cases.

(h) After-Care Work.

The Rural Community Council has very kindly formed 13 Welfare Committees for After-care Work in 13 villages of the County. The scheme is still in its infancy, and it is hoped that use will be made of these local Committees and additional benefits secured for both Tubercular and Orthopædic cases.

4. PUBLIC HEALTH ACT, 1925, SECTION 62.

No action has been taken under this section, which deals with the compulsory removal to Hospital of advanced cases of Tuberculosis.

The foregoing summary of the Tuberculosis Scheme in the County reveals both the expansion of existing services and considerable additions thereto. In every direction the work has increased, and its scope extended, and with the advent of the new Sanatorium we look with renewed hope to encouraging results in the struggle against this most crippling and destructive disease.

(Signed) N. A. COWARD,
Senior Tuberculosis Officer.

T.B. 1.—Return shewing the work of the Tuberculosis Dispensaries during the year 1929.

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 (excluding contacts):—												
(*a*) Definitely tuberculous	145	122	15	11	10	9	13	12	155	131	28	23
(*b*) Doubtfully tuberculous	37	49	8	5	...	...	1	2	37	49	9	7
(*c*) Non-tuberculous	68	57	56	42	...	...	...	...	68	57	56	42
B.—Contacts examined during the year :—												
(*a*) Definitely tuberculous	8	13	9	4	...	1	2	...	8	14	11	4
(*b*) Doubtfully tuberculous	3	5	3	3	...	...	...	...	3	5	3	3
(*c*) Non-tuberculous	21	35	55	52	...	...	...	...	21	35	55	52
C.—Cases written off the Dispensary Register as												
(*a*) Cured	32	37	13	20	...	3	4	4	32	40	17	24
(*b*) Diagnosis not confirmed or non-tuberculous (including cancellation of cases notified in error)	125	131	117	104	...	...	...	...	125	131	117	104
D.—Number of Persons on Dispensary Register on December 31st :—												
(*a*) Diagnosis completed	607	592	151	135	61	43	86	57	668	635	237	192
(*b*) Diagnosis not completed ...	17	20	6	2	...	...	...	...	17	20	6	2

1, Number of persons on Dispensary Register on January 1st, 1929 ...	1728	9. Number of patients to whom Dental Treatment was given, at or in connection with the Dispensary ...	10
2, Number of patients transferred from other areas and of "lost sight of" cases returned	54	10. Number of consultations with medical practitioners :— (*a*) At Homes of Applicants ... ... (*b*) Otherwise	214 448
3, Number of patients transferred to other areas and cases "lost sight of"	98 (35 N.F.T*)	11. Number of other visits by Tuberculosis Officers to Homes	637
4. Died during the year	193	12. Number of visits by Nurses or Health Visitors to Houses for Dispensary purposes	4451 + (4918 Nursing Visits)
5. Number of observation cases under A (*b*) and B (*b*) above in which period of observation exceeeded 2 months	33	13. Number of (*a*) Specimens of sputum, &c., (*b*) X-Ray examinations made in connection with Dispensary work ...	832 30
6. Number of attendances at the Dispensary (including Contacts) ...	4005	14. Number of Insured Persons on Dispensary Register on the 31st December	923
7. Number of attendances of non-pulmonary cases at Orthopædic Outstations for treatment or supervision	196	15. Number of Insured Persons under Domiciliary Treatment on the 31st December	256
8. Number of attendances, at General Hospitals or other Institutions approved for the purpose, of patients for (*a*) "Light" treatment ... ... (*b*) Other special forms of treatment...	26 —	16. Number of reports received during the year in respect of Insured Persons.— (*a*) Form G.P. 17 ... ... (*b*) Form G.P. 36	61 93

* N.F.T.="No further treatment necessary." The patients in this category have been quite well for a number of years, and will not visit the Tuberculosis Officer to be pronounced "Cured."

T.B. 2. *SANATORIA, HOSPITALS, AND OTHER RESIDENTIAL INSTITUTIONS, FOR THE TREATMENT OF TUBERCULOSIS (including Observation Beds at Dispensaries.)*

Name and Situation of Institution.	Class of Cases Treated.	Number of Beds available for patients sent by the Council	Number of patients sent by the Council who were under treatment on the 31st Dec., 1928.	Number of patients sent by the Council during the year ended December 31st, 1929.	Number of Patients sent by the Council who were discharged or died in the Institution during the year ended 31st December, 1929.	Total number of days during which the Patients referred to in column 5 were resident in the Institution	Average number of days which the Patients referred to in column 5 were resident in the Institution.	Number of Patients sent by the Council who were under treatment on the 31st December, 1929.
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)
Mowsley Sanatorium, Husbands Bosworth, Rugby.	Female Adults P	50	35	92	91	13609	149†	36
	Children P		15	28	35	5090	145‖	9x
	Female Adults S	12	5	6	9	1605	178*	2
	Children S		6	13	10	1943	194x	8x
Coalville Residential Dispensary, Bakewell St., Coalville.	Female Adults P	8	7	76	77	2652	34	6
	Girls P		...	6	5	147	29	1
Hinckley Residential Dispensary, Manor House, Bond St., Hinckley.	Male Adults P	15	12	87	86	4968	57	13
	Boys P		1	6	7	455	65	...
	Children S	7	3	3	3	889	296	3
	Male Adults S		3	6	5	1463	292	4
Creaton Sanatorium, Northampton.	Male Adults P	25—30	26	80	80	10008	125§	26
	Female Adults P		...	2	2	249	124	...
T. B. Block Isolation Hospital, Melton.	Male Adults AP	3	2	15	15	909	61	2
	Female Adl'ts AP	3	2	12	11	911	83	3
Orthopaedic Hospital Manfield	Children S	?	4	1	3	1704	568	2
Hospital of St. Cross, Rugby.	Male Adults S	?	3	4	4	1275	319	3
King Edward VII Sanatorium Midhurst.	Female Adults P	?	...	1	1	119	119	...
Royal National Sanatorium, Bournemouth.	Male Adults P	?	...	1	1	112	112	...
St. George's Hospital, London.	Male Adults S	?	...	1	1	231	231	...
Royal Sea Bathing Hospital, Margate.	Female Adults	?	1	2	2	315	157	1
Heatherwood Hospital, Ascot.	Children S	?	3	...	2	921	460	1
Warwickshire Orthopædic Hospital, Coleshill.	Children S	?	4	3	2	1053	526	5
Holly Lane Hospital Sanatorium, Smethwick.	Male Adults P	?	...	7	6	619	103	1
Leysn, Switzerland.	Male Adults S	?	1	...	...	...	...	1
Totals		Average 144	133	452	458	51247	...	127

† 4 patients stayed less than 6 weeks—Average stay of remainder was 155 days.
‖ 4 „ „ „ „ „ „ „ 163 „
§ 5 „ „ „ „ „ „ „ 131 „
X 1 „ „ „ „ „ „ „ 214 „
* 1 „ „ „ „ „ „ „ 198 „
x 1 Surgical child transferred to Pulmonary group.

P Pulmonary Tuberculosis.
S Surgical Tuberculosis.
AP Advanced Pul. Tuberculosis.

T.B. 3.—Return showing the immediate results of treatment of patients discharged from Residential Institutions during the year 1929.

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	4	4	4	9	16	7	6	13	12	...	...	...	75
		Improved	5	6	2	6	5	5	6	5	2	...	1	...	43
		No material improvement	1	3	3	1	2	1	1	...	...	...	...	...	12
		Died in Institution	1	...	1	...	...	...	1	...	...	...	...	...	3
	Class T.B. plus. Group 1.	Quiescent	...	...	...	4	5	...	...	...	...	...	..	...	9
		Improved	1	1	...	7	3	...	9	3	...	...	...	...	24
		No material improvement	3	1	...	2	1	...	...	...	...	...		...	7
		Died in Institution	1	...	...	1	...	...	...	...	...	...	...	...	2
	Class T.B. plus. Group 2.	Quiescent	...	...	...	1	4	...	1	1	...	...	...	...	7
		Improved	6	2	...	8	8	...	7	7	...	...	...	...	38
		No material improvement	5	5	...	2	4	...	4	1	1	...	...	...	22
		Died in Institution	1	1	1	...	...	...	...	1	...	...	...	...	4
	Class T.B. plus. Group 3.	Quiescent	...	...	...	...	1	...	...	1	...	...	...	...	2
		Improved	1	...	...	1	1	...	...	1	...	1	...	...	5
		No material improvement	2	3	...	2	1	...	...	...	...	...	...	...	8
		Died in Institution	3	1	...	...	1	...	1	...	...	...	...	...	6

In addition 3 cases were admitted for observation purposes, and discharged as not Tubercular.

Non-Pulmonary Tuberculosis.

Bones and Joints :—	Quiescent or Arrested	13
	Improved	8
	No Improvement	3
	Died	2
Abdominal :—	Quiescent or Arrested	4
	Improved	3
Other Organs :—	Quiescent or Arrested	1
	No Improvement	1
Peripheral Glands :—	Quiescent or Arrested	3
	Improved	1
		39

Note.—Cases transferred to other Institutions not counted as discharges.

T.B. 4. TUBERCULOSIS (Pulmonary and Other).

Year.		Number of Notifications.			Number of Deaths.			Death Rate.		
		Urban	Rural	Whole County.	Urban	Rural	Whole County.	Urban	Rural	Whole County.
1924	Lungs	144	159	303	90	130	220	0.79	0.81	0.81
	Other	34	46	80	27	28	55	0.24	0.18	0.20
1925	Lungs	188	203	391	106	111	217	0.93	0.69	0.79
	Other	32	65	97	33	24	57	0.29	0.15	0.21
1926	Lungs	155	193	348	79	117	196	0.68	0.71	0.70
	Other	42	47	89	21	31	52	0.18	0.19	0.19
1927	Lungs	179	216	395	82	123	205	0.69	0.74	0.72
	Other	49	52	101	30	40	70	0.25	0.24	0.25
1928	Lungs	167	183	350	78	125	203	0.65	0.73	0.70
	Other	57	60	117	26	28	54	0.22	0.16	0.19
Average for above 5 years.	Lungs	166	191	357	87	121	208	0.75	0.74	0.74
	Other	43	54	97	27	30	57	0.23	0.18	0.20
1929	Lungs	146	216	362	101	138	239	0.83	0.79	0.81
	Other	40	55	95	17	38	55	0.14	0.22	0.19

T.B. 5. TUBERCULOSIS:—Notifications and Deaths. Shewing Age Periods.

AGE PERIODS.	NEW CASES.				DEATHS. *			
	Pulmonary.		Non-Pulmonary.		Pulmonary.		Non-Pulmonary.	
	Males.	Females.	Males	Females.	Males.	Females.	Males.	Females.
0 to 1	...	...	1 [1]	...	...	...	1	1
1 to 5	1 [2]	1	13 [5]	7 [1]	2	1	12	4
5 to 15	18 [7]	18 [5]	23 [1]	17 [4]	2	1	3	5
15 to 25	46 [10]	57 [18]	12 [1]	13 [2]	24	43	9	2
25 to 45	87 [23]	74 [23]	1 [1]	4 [4]	61	44	9	4
45 to 65	33 [11]	21 [4]	3 [1]	1	34	17	4	...
65 and upwards	3 [3]	3 [1]	...	...	6	4	1	...
Total	188 [56]	174 [51]	53 [10]	42 [11]	129	110	39	16

NOTE.—The figures in small type show additional cases which came to the notice of the County M.O.H. other than by notification.

* 53 of the Deaths were of non-notified cases.

District.	Estimated Population.	NOTIFICATIONS OF TUBERCULOSIS.				DEATHS FROM TUBERCULOSIS.			
		Pulmonary.	Attack Rate	Non-Pulmonary.	Attack Rate.	Pulmonary.	Death Rate.	Non-Pulmonary.	Death Rate.
Ashby-de-la-Zouch	5,214	5	.96	1	.19	5	.96	—	—
Ashby Woulds	3,561	3	.84	1	.28	1	.28	—	—
Coalville	22,790	32	1.41	16	.70	20	.88	4	.18
Hinckley	15,650	27	1.73	2	.13	18	1.15	2	.13
Loughborough	22,260	25	1.12	7	.31	23	1.03	4	.18
Market Harborough	9,143	10	1.09	2	.22	7	.77	1	.11
Melton Mowbray	10,480	11	1.08	4	.38	9	.86	4	.38
Oadby	4,422	4	.90	1	.23	3	.68	1	.23
Quorn	2,630	3	1.14	1	.38	3	1.14	—	—
Shepshed	5,878	9	1.53	1	.17	4	.68	—	—
Thurmaston	3,782	3	.79	—	—	1	.26	—	—
Wigston Magna	11,090	14	1.26	4	.36	7	.63	1	.09
TOTALS.	120,900	146	1.21	40	.33	101	.83	17	.14
Ashby-de-la-Zouch	17,640	22	1.25	10	.57	20	1.13	5	.28
Barrow-on-Soar	29,370	49	1.68	5	.17	27	.92	1	.03
Belvoir	3,202	5	1.56	—	—	2	.62	1	.31
Billesdon	10,460	6	.57	—	—	5	.48	1	.10
Blaby	26,780	37	1.38	4	.15	26	.97	7	.26
Castle Donington	6,534	7	1.07	1	.15	4	.61	3	.46
Hallaton	1,717	—	—	3	1.75	—	—	3	1.75
Hinckley	16,780	18	1.07	10	.60	15	.89	5	.30
Loughborough	4,836	9	1.86	2	.41	7	1.45	2	.41
Lutterworth	10,320	12	1.16	2	.19	5	.48	1	.10
Market Bosworth	24,190	21	.87	7	.29	14	.58	5	.21
Market Harborough	7,501	16	2.13	7	.93	6	.80	2	.27
Melton Mowbray	14,710	14	.95	4	.27	7	.48	2	.14
TOTALS.	174,400	216	1.24	55	.32	138	.79	38	.22

TABLE 1. VITAL STATISTICS.

	Leicestershire County, 1929.						England and Wales
	Urban.		Rural.		Whole County.		
Population	120,900		174,400		295,300		—
	No.	Rates.	No	Rates.	No.	Rates.	Rates.
Births	1997	16·5	3016	17·3	5013	17·0	16·3
Deaths (all causes and all ages)	1441	11·91	2188	12·55	3629	12·29	13·4
,, (under one year) ..	114	*57	172	*57	286	*57	*74
,, (Zymotic)	36	0·30	68	0·39	104	0·35	...
Deaths from—							
Small Pox	0	...	0	...	0	...	...
Measles	1	0·01	8	0·05	9	0·03	0·08
Whooping Cough	15	0·12	21	0·12	36	0·12	0·15
Diphtheria	10	0·08	24	0·14	34	0·12	0·08
Scarlet Fever	0	...	5	0·03	5	0·02	0·02
Enteric Fever	1	0·01	2	0·01	3	0·01	0·01
†Diarrhœa (under 2 years)	9	*4·50	8	*2·66	17	*3·39	*8·1
							Percentage of Total Deaths.
							Urban. / Rural. / Whole County
The seven chief causes of Death were: Heart Disease	231	1·91	373	2·14	604	2·05	16·0 / 17·0 / 16·6
Cancer	152	1·30	254	1·46	406	1·37	10·5 / 11·6 / 11·2
Phthisis	101	0·83	138	0·79	239	0·81	7·0 / 6·3 / 6·6
Influenza	81	0·67	156	0·89	237	0·80	5·6 / 7·1 / 6·5
Cerebral Hæmorrhage	80	0·66	147	0·84	227	0·77	5·6 / 6·7 / 6·3
Pneumonia	73	0·60	146	0·84	219	0·74	5·1 / 6·7 / 5·8
Bronchitis	98	0·81	106	0·60	204	0·69	6·8 / 4·8 / 5·6

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

† The Diarrhœa rates per thousand of the population are :— Urban 0·07. *Rural* 0·05. *Whole County* 0·06.

TABLE 2. Birth-rate, Death-rate, and Analysis of Mortality during the year 1929.

(Provisional Figures. The Rates for England and Wales have been calculated on a population estimated to the middle of 1929, but those for the towns have been calculated on populations estimated to the middle of 1928. The mortality rates refer to the whole population as regards England and Wales, but only to civilians as regards London and the groups of towns.)

—	Rate per 1,000 Total Population		Annual Death-rate per 1,000 Population.									Rate per 1,000 Live Births.		Percentage of Total Deaths			
	Live Births	Still-Births	All Causes.	Enteric Fever.	Small-pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Influenza.	Violence.	Diarrhœa and Enteritis (under Two Years).	Total Deaths under one year.	Certified by Registered Medical Practitioners,	Inquest Cases	Certified by Coroner after P.M. No Inquest.	Uncertified Causes of Death.
England and Wales	16.3	0.68	13.4	0.01	0.00	0.08	0.02	0.15	0.08	0.74	0.55	8.1	74	91.5	6.1	1.5	0.9
107 County Boroughs and Great towns, including London ...	16.6	0.69	13.7	0.01	0.00	0.12	0.02	0.19	0.09	0.76	0.50	10.9	79	91.8	5.8	1.9	0.5
157* Smaller Towns (1921 Adjusted Populations 20,000—50,000) ...	16.0	0.71	12.3	0.01	0.00	0.06	0.02	0.15	0.07	0.71	0.45	5.9	69	92.6	5.4	1.0	1.0
London	15.7	0.53	13.8	0.01	0.00	0.04	0.02	0.26	0.08	0.69	0.56	10.7	70	89.5	6.8	3.7	0.0

* By the extension of Uxbridge U.D. on the 1st April, 1929, the number of Smaller Towns was increased to 157.

TABLE 3. NOTIFIABLE DISEASES.

DISEASE.	Total Cases Notified.	Cases Admitted to Hospital.	Total Deaths.
*Small Pox	230	218	0
*Scarlet Fever	664	428	5
*Diphtheria	362	321	34
*Enteric Fever (including para-typhoid)	7	5	3
*Puerperal Fever	11	5	9
Dysentry	1	0	—
Pneumonia	513	0	219
Other Diseases generally notifiable :—			
Tuberculosis (Lungs)	362	—	239
,, (Other)	95	—	55
*Erysipelas	114	1	—
Ophthalmia Neonatorum	18	5	—
Encephalitis Lethargica	8	0	10
Malaria	2	—	—
*Puerperal Pyrexia	22	7	—
Cerebro-Spinal Fever	4	—	—
Polio-encephalitis	1	—	2
Poliomyelitis	4	0	0
Other Diseases notifiable locally :—			
Chicken Pox	332	—	—
Mumps	—	1	—

* Figures supplied by the Registrar General for 52 weeks ending 28th December, 1929.

TABLE 4.
Causes of Death at Different Periods of Life in the Administrative County of Leicester, 1929

CAUSES OF DEATH.	Sex	AGGREGATE OF URBAN DISTRICTS. All Ages.	0—	1—	2—	5—	15—	25—	45—	65—	75—	AGGREGATE OF RURAL DISTRICTS. All Ages.	0—	1—	2—	5—	15—	25—	45—	65—	75—
ALL CAUSES	M	734	64	20	24	25	24	89	177	146	165	1112	104	33	29	32	47	106	247	209	305
	F	707	50	20	13	22	34	68	159	160	181	1076	68	17	20	42	48	114	207	244	316
1. Enteric Fever	M	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...
	F	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	1	...	...	...	...
2. Small-Pox	M	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	F	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Measles	M	...	...	...	...	...	...	...	...	...	...	7	2	1	2	2	...	...	...	...	...
	F	1	...	1	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...
4. Scarlet Fever	M	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...
	F	...	...	...	...	...	...	...	...	...	...	4	...	...	...	2	2	...	...	...	...
5. Whooping Cough	M	8	1	5	2	...	...	...	...	...	...	7	3	3	...	1	...	...	...	...	...
	F	7	3	3	1	...	...	...	...	...	...	14	6	5	3	...	...	...	...	...	...
6. Diphtheria	M	4	1	...	1	2	...	...	...	...	...	9	...	2	5	2	...	...	...	...	...
	F	6	1	...	1	2	1	1	...	...	...	15	...	1	1	11	...	1	1	...	...
7. Influenza	M	38	...	2	3	2	1	5	12	6	7	65	...	4	2	3	1	4	16	15	20
	F	43	2	2	1	2	2	4	10	8	12	91	3	1	3	2	...	15	15	26	26
8. Encephalitis lethargica	M	3	...	...	...	...	...	2	1	...	...	3	...	1	...	1	...	...	1	...	...
	F	4	...	...	1	...	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...
9. Meningococcal meningitis	M	...	...	...	...	...	...	...	...	...	...	2	1	...	...	1	...	...	...	...	...
	F	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10. Tuberculosis of respiratory system	M	52	...	...	1	...	10	28	11	2	...	77	...	1	...	2	14	33	23	4	...
	F	49	...	...	...	1	18	18	10	1	1	61	...	1	...	...	25	26	7	2	...
11. Other Tuberculous diseases	M	13	...	2	1	1	3	5	1	...	...	26	1	4	5	2	6	4	3	1	...
	F	4	...	1	2	...	1	...	...	...	...	12	1	1	...	5	1	4	...	...	...
12. Cancer, malignant disease	M	73	...	...	...	...	...	2	30	31	10	113	...	2	1	...	1	6	38	37	28
	F	79	...	...	...	...	1	3	34	23	18	141	...	...	...	...	...	11	54	43	33
13. Rheumatic Fever	M	6	...	...	...	5	...	...	1	...	...	3	...	...	...	2	...	...	1	...	...
	F	1	...	...	...	1	...	...	...	...	...	2	...	...	...	...	1	1	...	...	...
14. Diabetes	M	3	...	...	...	...	...	...	...	1	2	11	...	...	...	...	...	2	5	3	1
	F	10	...	...	...	...	...	...	4	6	...	15	...	...	...	...	...	4	5	2	4
15. Cerebral hæmorrhage, &c.	M	40	...	...	...	...	...	2	9	12	17	62	...	...	...	...	...	...	5	17	40
	F	40	...	...	...	...	...	...	8	16	16	85	...	...	...	...	...	2	17	32	34
16. Heart disease	M	122	...	...	...	2	3	8	40	37	32	177	...	...	...	3	...	7	49	39	79
	F	109	...	...	...	1	3	6	30	39	30	196	...	...	...	5	4	7	42	67	71
17. Arterio-sclerosis	M	13	...	...	...	...	...	1	3	5	4	51	...	...	...	...	...	...	9	18	24
	F	19	...	...	...	...	...	...	3	7	9	31	...	...	...	...	...	...	3	9	19
18. Bronchitis	M	48	5	1	1	...	...	1	6	10	24	47	7	1	1	...	1	...	5	8	24
	F	50	2	1	...	...	...	...	7	13	27	59	2	1	...	...	...	2	8	16	30
19. Pneumonia (all forms)	M	40	8	6	6	1	1	4	9	2	3	95	14	10	6	2	7	9	23	12	12
	F	33	5	8	1	1	...	3	5	3	7	51	10	6	4	3	...	3	9	9	7
20. Other respiratory diseases	M	13	...	1	4	...	...	...	4	1	3	13	...	...	...	...	...	3	3	4	3
	F	12	2	...	...	1	1	2	2	3	1	10	1	...	...	...	...	2	3	2	2
21. Ulcer of stomach or duodenum	M	9	...	...	...	...	1	3	4	1	...	11	...	...	...	...	...	2	6	2	1
	F	1	...	...	...	...	...	...	1	...	...	5	...	...	...	...	...	2	3	...	...
22. Diarrhœa, &c.	M	5	4	1	...	...	...	...	...	...	...	8	5	...	1	...	...	1	...	...	1
	F	10	4	...	1	1	...	2	1	1	...	8	3	...	1	1	...	...	1	...	2
23. Appendicitis and typhlitis	M	9	...	...	1	1	1	4	2	...	...	4	...	...	...	...	2	1	1	...	...
	F	2	...	...	...	...	...	...	1	1	...	7	...	...	1	...	1	4	1	...	...
24. Cirrhosis of Liver	M	3	...	...	...	...	...	1	1	1	...	4	...	...	...	...	...	...	...	4	...
	F	2	...	...	...	...	...	1	...	1	...	1	...	...	...	...	...	...	1	...	...
25. Acute and chronic nephritis	M	12	...	...	...	1	...	2	3	2	4	17	...	...	...	...	...	4	1	9	3
	F	19	...	...	...	1	1	3	7	5	2	26	...	...	...	...	1	5	9	6	5
26. Puerperal sepsis	M	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	F	4	...	...	...	...	...	4	...	...	...	5	...	...	...	...	2	3	...	...	...
27. Other accidents and diseases of pregnancy and parturition	M	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	F	6	...	...	...	...	1	5	...	...	...	9	...	...	...	...	...	9	...	...	...
28. Congenital debility and malformation, premature birth	M	32	32	...	...	...	...	...	...	...	...	54	53	...	...	...	...	...	1	...	...
	F	27	25	...	...	1	...	1	...	...	...	34	34	...	...	...	...	...	...	...	...
29. Suicide	M	10	...	...	...	...	...	2	6	2	...	14	...	...	...	...	1	6	6	1	...
	F	4	...	...	...	...	1	1	2	...	...	3	...	...	...	...	1	1	1	...	...
30. Other deaths from violence	M	38	3	...	4	5	3	11	3	2	7	55	1	3	1	5	6	11	19	6	3
	F	9	...	1	1	2	1	...	2	...	2	18	1	...	4	1	3	1	...	3	5
31. Other defined diseases	M	137	10	1	...	5	1	8	30	30	52	170	16	1	4	5	8	12	29	29	66
	F	153	6	3	4	8	3	11	29	33	56	170	7	1	2	12	6	11	27	26	78
32. Causes ill-defined or unknown	M	3	...	1	...	...	...	...	1	1	...	5	1	...	1	...	...	...	3	...	...
	F	2	...	...	...	...	...	1	1	...	...	1	...	...	...	...	...	...	...	1	...

TABLE 5.

1929. CAUSES OF DEATH IN ADMINISTRATIVE AREAS.

Causes of Death.	Loughborough M.B.		Ashby-de-la-Zouch U.D.		Ashby Woulds U.D.		Coalville U.D.		Hinckley U.D.		Market Harborough U.D.		Melton Mowbray U.D.		Quorndon U.D.		Shepshed U.D.		[illegible] U.D.		Wigston Magna U.D.		Oadby U.D.		Ashby-de-la-Zouch R.D.		Barrow-upon-Soar R.D.		Belvoir R.D.		Billesdon R.D.		Blaby R.D.		Castle Donington R.D.		Hallaton R.D.		Hinckley R.D.		Loughborough R.D.		Lutterworth R.D.		Market Bosworth R.D.		Market Harborough R.D.		Melton Mowbray R.D.		Totals. U.D.'s		Totals. R.D.'s		Totals. Whole County
Civilians only.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
All Causes	179	183	26	22	17	16	131	121	204	113	45	56	65	69	22	17	36	34	22	13	38	34	22	21	130	123	231	189	26	27	50	58	149	154	45	36	12	8	96	97	28	32	92	87	145	150	53	32	115	103	734	707	1182	1076	3699
1 Enteric Fever	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2 Small-pox	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3 Measles	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4 Scarlet fever	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5 Whooping cough	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6 Diphtheria	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7 Influenza	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8 Encephalitis lethargica	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9 Meningococcal meningitis	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10 Tuberculosis of respiratory system	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11 Other tuberculous diseases	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12 Cancer, malignant disease	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13 Rheumatic fever	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
14 Diabetes	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15 Cerebral hæmorrhage, &c.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16 Heart Disease	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
17 Arterio-sclerosis	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18 Bronchitis	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19 Pneumonia (all forms)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20 Other respiratory diseases	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21 Ulcer of stomach or duodenum	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
22 Diarrhœa, &c. (under 2 yrs.)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23 Appendicitis and typhlitis	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24 Cirrhosis of liver	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25 Acute and chronic nephritis	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26 Puerperal sepsis	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27 Other accidents of parturition	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28 Congenital debility and malformation, premature birth	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29 Suicide	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30 Other deaths from violence	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31 Other defined diseases	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
32 Causes ill-defined or unknown	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Special Causes (included above):																																																							
Poliomyelitis	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Polioencephalitis	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Deaths of infants under 1 year:																																																							
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Illegitimate	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total Births	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Legitimate	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Illegitimate	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Still Births—Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Legitimate	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Illegitimate	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Population	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]

* Population for Birth Rate:—Wigston Magna U.D. [illegible]. Total Urban [illegible]. Total County [illegible].