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Leicestershire County Council.

# ANNUAL

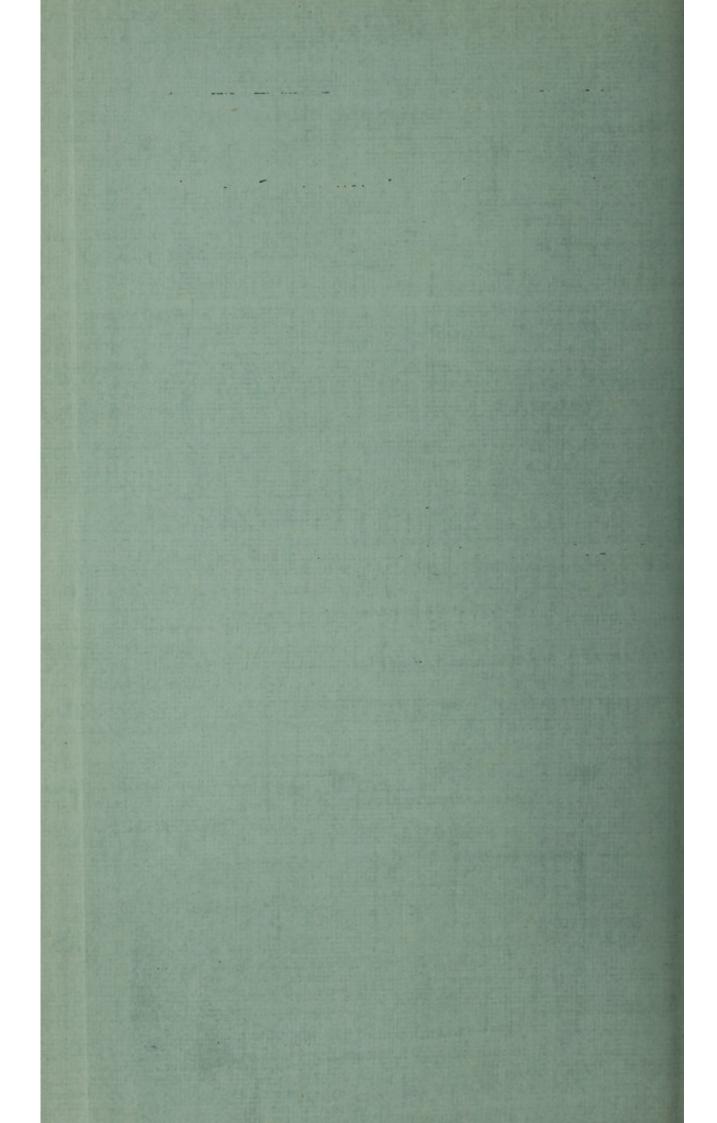
OF THE

Medical Officer of Health

FOR THE YEAR

1930

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



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#### MR. CHAIRMAN AND GENTLEMEN,

I have pleasure in presenting the Annual Report on the Health of the County for 1930.

It has been drawn up in conformity with the latest Ministry of Health's circular, and is in consequence an even more lengthy report than usual.

Each year more and more information is required and new legislation—the Local Government Act of 1929—has considerably increased the work of the Health Department.

The report shows that the general health of the County this year compares favourably with that of 1929, although the epidemic of mild Small Pox which commenced in July of that year has prevailed throughout the whole of 1930.

Particulars are given in the different sections of the advances made in the various services, Tuberculosis, Orthopædics, Maternity and Child Welfare, etc. With reference to the latter it is gratifying to report that there are now 40 Infant Welfare Centres, and that the average attendance at each Centre throughout the County is as high as 37. There are, however, many villages and hamlets scattered throughout Leicestershire where a Welfare Centre is not an economic proposition, and where the nearest Centre is not easy of access. In addition there are well-to-do parents who do not desire to avail themselves of the benefits of a Welfare Centre, and others who are prejudiced through ignorance or indifference. Considering all these conditions it is pleasing to report that over one-third, actually 34 per cent, of the babies born in the County this year have been brought to the Welfare Centres.

A glance at the Tuberculosis section prepared by Dr. Coward, reveals a welcome decrease in the number of notifications, and of deaths from Pulmonary and non-Pulmonary Tuberculosis and also gives particulars of the new Sanatorium at Markfield.

I would like to call attention to the report on the supply of milk to school children, and also to the steady advance made to ensure clean milk production in the County.

The only change in the medical staff has been the appointment of Dr. K. Cowan to replace Dr. C. M. Brown, who left to take up a more lucrative post.

Special reports are given by Dr. Mary Weston on Ante-natal work, and by Dr. Cowan on Sewage Disposal, and my thanks are due to them as also to Dr. J. F. Davidson, Deputy County Medical Officer, for assistance and help in the compilation of this report. Much of its literary labour has had to devolve on Dr. Davidson and its relatively early appearance is due to his energy and zeal.

In conclusion I would like to say how much I appreciate the unfailing help and assistance of my Chairman and the members of the Public Health Committee, and also the loyal and efficient service rendered to me by every member of the staff of the Health Department.

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, 1930.

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

BASTARD, W. PICKERING, C. H.

BRIERS, A. J. POCHIN, V. R. (ex-officio).

BROUGHTON, A. H. RIPPIN, W. H. STUBBS, W. FULLER, B. TANDY, E. W.

GOODACRE, C. TIMMS, R. (Vice-Chairman)

GOODMAN, J. A. WARD, G.

HUBBARD, B. WHITWELL, H. J.

JACQUES, J. T. WILSON, C. LEVERS, G. T. WRIGHT, W. H.

MARTIN, Lt.-Col., R. E., C.M.G. (ex-officio).

#### MATERNITY AND CHILD WELFARE COMMITTEE.

This Committee consists of all 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. B. EVERARD (appointed April, 1930).

MRS. S. M. JOYCE.

MRS. G. SPENCER.

MRS. W. R. TUCKETT (appointed July, 1930).

HON. MRS. MURRAY-SMITH (resigned May, 1930).

MRS. F. T. PILKINGTON (resigned May, 1930).

#### 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.

#### (a) ADMINISTRATIVE STAFF.

J. F. DAVIDSON, M.B., ChB., D.P.H. Deputy County Medical Officer.

Deputy School Medical Officer.

K. COWAN, M.D., D.P.H. (appointed October, 1930). Assistant County Medical Officer.

Senior Assistant School Medical Officer.

C. M. BROWN, M.B., Ch.B., D.P.H. (resigned October, 1930). Assistant County Medical Officer.

Senior Assistant School Medical Officer.

#### (b) CLINICAL STAFF.

- N. A. COWARD, O.B.E., M.D., D.P.H. Chief Tuberculosis Officer.
- S. W. LANE, M.R.C.S., L.R.C.P. Assistant Tuberculosis Officer.
- MARY E. WESTON, M.B., B.S.

  Assistant Infant Welfare Officer.

  Assistant School Medical Officer.
- CONSTANCE WALTERS, B.Sc., M.B., B.Ch.
  Assistant Infant Welfare Officer.
  County Oculist.
- S. E. MURRAY, M.B., B.S.
  Assistant School Medical Officer.
- J. B. DALTON, M.B., Ch.B. Assistant School Medical Officer. Medical Officer for Venereal Diseases.

#### DENTAL STAFF:

P. ASHTON, L.D.S., Chief Dental Surgeon.

A. E. WARD, L.D.S.

C. L. R. McLELLAN, L.D.S.,

D. POCHIN, L.D.S. (Appointed January, 1930).

Assistant Dental Surgeons.

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.

Miss M. A. Dilworth, S.R.N.

Miss E. Y. Feakin, S.R.N.

Miss L. Fox, S.R.N.

Miss T. M. Griffiths, S.R.N.

Miss M. A. Hunt, S.R.N. (Resigned).

Miss B. M. Keeling, S.R.N.

\*Miss K. A. Marsh, S.R.N.

Miss S. H. G. Payne, S.R.N. (temp.)

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, Miss Carryer, Miss Feakin and Miss Payne have the Health Visitors' Certificate of the Ministry of Health, and Miss Cruikshank holds the Health Visitors' Certificate of the Scottish Board of Health.

#### ADDITIONAL OFFICERS.

#### (1) District Medical Officers of Health.

#### URBAN:

DISTRICT	DISTRICT. NAME AND					
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. Blackhar	n 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.			

... Dr. J. E. O'Connor Kirby Muxloe.

#### RURAL :-

Wigston ...

#### DISTRICT. NAME AND ADDRESS.

Ashby-de-la-Zouch	 Dr. T. Forsyth	Hugglescote.
Barrow-on-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.
	(Died November,	1930).

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.

#### (2) District Medical Officers (Poor Law) and Public Vaccinators.

DISTRICT.	NAME AND ADDRESS.
Bottesford	Dr. F. J. H. Martin.
Croxton Kerrial	Dr. R. H. Hudson.
Waltham	Dr. W. Arnold
Long Clawson	Dr. G. C. B. Atkinson
Wymondham	Dr. H. S. Furness.
Asfordby	Dr. G. S. A. Bishop.
Melton Mowbray-North	Dr. R. H. Fagge
Melton Mowbray-South	Dr. R. H. Fagge.
Somerby	Dr. R. J. Mould.
Loughborough	Dr. C. L. Lapper.

DISTRICT. NAME AND ADDRESS.

Shepshed Dr. T. Bell.

Castle Donington
Mountsorrel
Barrow-upon-Soar
Sileby
Syston
Billesdon
Dr. W. H. Dowell.
Dr. J. S. Strachan.
Dr. J. S. Gray.
Dr. J. S. Gray.
Dr. R. W. Taylor.
Dr. E. K. Williams.

Hallaton
Market Harborough
Wigston
Enderby
Lutterworth
Peatling
Hinckley
Dr. P. Drummond.
Dr. E. D. Spackman.
Dr. S. B. Couper.
Dr. W. R. M. Berridge.
Dr. T. W. Crowley.
Dr. C. R. Jones.
Dr. H. Shirlaw.

Market Bosworth Dr. H. N. Keeling.
Ibstock Dr. C. S. Agnew.

Ashby-de-la-Zouch Dr. H. Silley.
Coalville Dr. T. Forsyth.
Measham Dr. J. R. Salmond.

#### OTHER OFFICERS.

#### (3) Vaccination Officers.

DISTRICT. NAME AND ADDRESS. Ashby-de-la-Zouch Mr. J. W. Bowley Ashby-de-la-Zouch. Billesdon ... Mr. T. Warham Bushby. ... ... Mr. A. S. Collis Enderby Narborough. Hinckley... ... Mr. W. H. Pendlebury Hinckley. ... Mr. A. L. Milner Loughborough. Loughborough Mr. H. Webb Lutterworth Lutterworth. Market Harborough ... Mr. W. J. Fordham Market Harborough. ... Mr. E. L. Hunt Market Bosworth Ibstock. ... Mr. W. S. Bacon Measham Measham ... Mr. E. S. Cox Melton (North)... Melton Mowbray.

Melton (South) ... Mr. H. N. Lock Melton Mowbray.

Mountsorrel ... Mr. C. F. F. Scott Mountsorrel.

Syston ... Mr. A. E. Williams Syston.

Wigston ... Mr. W. W. Farrar South Wigston.

#### (4) Veterinary Surgeons.

#### DISTRICT. NAME AND ADDRESS.

Ashby-de-la-Zouch ... Mr. R. Lake Ashby-de-la-Zouch.
Belvoir ... Mr. V. P. Littler Long Clawson.
Hinckley... Mr. J. D. C. Ward Hinckley.

Leicester ... Mr. J. G. Parr Leicester. (Deceased December, 1930).

Long Clawson ... Mr. T. Littler Long Clawson.
Loughborough ... Mr. R. L. Phillips Loughborough.
Lutterworth ... Mr. W. L. Gascoyne Lutterworth.

Market Bosworth and

Coalville ... Mr. H. E. Powell Coalville.

Market Harborough ... Mr. R. MacGregor Market Harborough.
Melton Mowbray ... Mr. J. N. Glass Melton Mowbray.

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.

Area in acres 524,197		4	rban 39,915 Rural 484,282
Population (Census 1921)			260,326
" Estimated middle of June, 1929 (1930 figures not available).			295,300
,, Urban 120,960			
,, Rural 174,340			
Number of Inhabited Houses (1921)			58,849
Number of Families or Separate Occupiers (1921)	)		60,560
Rateable Value			£1,231,320
Sum represented by Penny Rate			£4,795

#### SOCIAL CONDITIONS OF COUNTY.

Although there is no definite line of demarcation of the County into occupational groups it can be said that there are three definite divisions in this respect, (1) the North-Western area forms the mining district, but on account of depressed trade conditions the activities of the resident population are not by any means confined to local work and large numbers of the younger members of the community travel to Leicester daily, where they engage in factory work. (2) Round the City of Leicester, in the Soar Valley, and in the villages of the South-West which surround the town of Hinckley, are found the industrial districts, wherein the conditions of factory life prevail. (3) The remainder of the County chiefly east of the Soar valley is largely devoted to agriculture.

Unemployment and distress with few signs of trade recovery continue to be prominent features in the County in common with the experience of the country generally. It is a matter of interest, however, to note that owing to the extensive social services now available there does not appear to be any marked evidence of real want in the population generally, and furthermore, there has been no outbreak of disease which might be attributed to the prevalence of these conditions.

As referred to in my last year's report the development of housing schemes in all parts of the County boundary adjacent to the City of Leicester has continued. This progressive extension has resulted in increased demands upon the resources of the County Health Department. The additional work is chiefly demonstrated in the Tuberculosis and Maternity and Child Welfare Departments. It has been found necessary to extend the administrative arrangements in these sections to meet the requirements of the districts.

The most noteworthy feature in relation to the occurrence of disease in the County during the year was the continuance of the epidemic of mild Small-Pox. This outbreak originally commenced in 1929, and during that year 230 cases occurred in the Administrative County. In the current year 567 cases were notified. A detailed survey of the outbreak will be found elsewhere in this report.

# EXTRACT FROM THE VITAL STATISTICS OF THE YEAR.

		Total.	Males.	Females.
	Legitimate	 4,848	2,473	2,375
Live Births	Illegitimate	 174	89	85
	Total Births	 5,022	2,562	2,460

Birth Rate per 1,000 of population 17.0.

Still Births. Total 179.

Rate per 1,000 total births 34.4

Deaths Total 3,075. Death Rate 10.41.

Number of women dying in, or in consequence of childbirth:—
Sepsis 7. Other Causes 10.

Deaths of infants under one year of age per 1,000 live births:— Legitimate 54.7. Illegitimate 74.7. Total Rate per 1,000 ... 55.

Deaths	from	Measles (all ages)	 	 6
>>	>>	Whooping Cough (all ages)	 	 16
,,	,,	Diarrhœa (under 2 years)	 	 12

#### INFANT MORTALITY.

The Infant Mortality rate for 1930 is returned as 55. This figure equals the record rate for the County reached in 1928 for the first time, the corresponding rate for 1929 was 57. The rate for England and Wales in 1930—viz. 60—established a new record for the country in relation to the deaths of infants under one year of age per 1,000 births.

The steadily declining rate of infant mortality throughout the County is a matter of great satisfaction and constitutes remarkable evidence of the power and influence of the manifold agencies which to-day deal with the environmental and personal hygiene of young children.

#### INFANT MORTALITY.

	URBAN		RURAL		WHOLE		Rate for	
YEAR.	No.	Rate.	No.	Rate.	No.	Rate.	England and Wales	
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	
1930	108	53	170	57	278	55	60	

#### DEATHS.

The Death Rate of the County (10.41) has fallen concurrently with that of the country as a whole (11.4).

In 1929 the Death Rate was 12.29 and the total number of deaths was 3,629. In 1930 this latter figure has fallen to 3,075.

The seven chief causes of death in 1930 with the corresponding rates were:—

(1).	Heart Disease	 18.2
(2).	Cancer	 13.0
(3).	Cerebral hæmorrhage	 6.4
(4).	Phthisis	 6.0
(5).	Congenital debility	 5.4
(6).	Pneumonia	 4.7
(7).	Violence (other than suicide)	 4.1

As in 1929 the principal cause of death is Heart Disease, and it is worthy of note that the rate has risen from 16.6% in 1929 to 18.2% in 1930. The second position in the table is again occupied by Cancer and here again the rate shows some considerable increase—from 11.2% in 1929 to 13.0% in 1930.

In comparison with 1929 the third, fourth and fifth positions show some alterations, and the third principal cause of death is Cerebral Hæmorrhage—the rate showing a small increase from 6.3 per cent to 6.4 per cent. This is followed in the fourth position by Phthisis (to the exclusion of Influenza) with a rate which has fallen from 6.6 per cent in 1929 to 6.0 per cent in 1930

Congenital Debility occupies the fifth position in the table with an increase in rate from 4.4 per cent in 1929 to 5.4 per cent in 1930.

Pneumonia which was recorded as the sixth principal cause of death in 1929 is returned again as the sixth chief cause of death with a rate of 4.7 per cent in comparison with 5.8 per cent in 1929.

Remarkable evidence of the risks of present day existence is furnished by the fact that the seventh principal cause of death during the year results from violence other than suicide. The rate from this cause is 4.1 per cent.

TABLE OF SEVEN CHIEF CAUSES OF DEATH.

T C C	Urban		RURAL		WHOLE COUNTY		PERCENTAGE OF TOTAL DEATHS		
THE SEVEN CHIEF CAUSES OF DEATH.	No.	Rates	No.	Rates	No.	Rates	URBAN	RURAL	WHOLE COUNTY.
Heart Disease	219	1.81	340	1.95	559	1.89	17.4	18.7	18.2
Cancer	171	1.41	228	1.31	399	1.35	13.6	12.5	13.0
Cerebral Hæmorrhage	74	0.61	123	0.71	197	0.67	5.9	6.8	6.4
Phthisis	81	0.67	102	0.59	183	0.62	6.4	5.6	6.0
Congenital Debility	63	0.52	104	0.80	167	0.57	5.0	5.7	5.4
Pneumonia	55	0.45	90	0.52	145	0.49	4.4	4.9	4.7
Violence (other than suicide)	49	0.40	77	0.44	126	0.43	3.9	4.2	4.1

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, 1926, 1927, 1928, 1929 and 1930:—

DEATHS.

URBAN	URBA	URBAN.		RURAL.		WHOLE COUNTY	
YEAR.	Net No. Registered	Rate	Net No. Registered	Rate	Net No. Registered	Rate	England and Wales.
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
1930	1256	10.38	1819	10.44	3075	10.41	11.4

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.

In 1930, the Zymotic Deaths numbered 58, and this figure shows a marked and welcome decrease on that for 1929 which was returned as 104. There were, therefore, 46 fewer Zymotic deaths than in 1929, and the return of 58 is the lowest experienced in Leicestershire for several years. The corresponding Zymotic Death Rate is 0.20 as against 0.35 in 1929.

YEAR	URI	BAN.	RUI	RAL	WHOLE COUNTY.	
	No.	Rate.	No.	Rate.	No.	Rate.
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
1930	24	0.20	34	0.20	58	0.20

#### BIRTH RATE.

The Birth Rate for 1930 is 17.0 which is the identical figure recorded in 1929. The total number of births was 5,022, being an increase of 9 on last year's figure. Of the births recorded 2,562 were males and 2,460 were females, and the ratio of male to female births was 104.1 to 100.

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

Donulation	Uri	BAN RURAL		RAL	Whole County		ENGLAND AND WALES
Population for Birth Rate	121,150		174,340		295,490		
Dirth Kate	No.	Rate	No.	Rate	No.	Rate	Rate
Births	2025	16.7	2997	17.2	5022	17.0	16.3

#### GENERAL HOSPITAL PROVISION IN THE AREA.

# PROVISION OF HOSPITAL SERVICES FOR (1) INFECTIOUS DISEASES OTHER THAN SMALL POX:

The following Table gives the figures of the total number of beds already provided in the County for infectious diseases other than Small Pox, allowing 144 square feet of floor space per bed:—

Blaby Isolatio	n Ho	spital			17	beds
Hinckley ,,		,,			23	22
Melton Mowb	ray	>>			23	>>
Loughborough	h	,,			9	,,
Ibstock		,,			12	>>
Swannington		,,			4	33
Moira		33		•••	6	>>
			TOTAL		94	beds

It is proposed in the new scheme for Isolation Hospital accommodation in the County that the Blaby, Hinckley and Melton Isolation Hospitals shall continue in use for the reception of infectious diseases other than Small Pox, and that the Loughborough, Ibstock, Swannington and Moira Isolation Hospitals be closed.

In addition the new Isolation Hospital at Markfield will provide 54 beds making a total of 117 beds in the County for the reception of cases of infectious disease other than Small Pox, distributed as follows:—

Blaby Isolation Ho	spital	 	17	beds
Hinckley "	,,	 	23	,,
Melton Mowbray	,,	 	23	,,
Markfield	,,	 	54	,,
	**			-

TOTAL ... 117 beds

It will be observed that under the new scheme an additional 23 beds are provided in the four central hospitals. No decision has yet been made as to what use is to be made of the hospitals to be closed, and which were considered under the new scheme to be unsuitable for this type of case.

It is considered that the additional 23 beds provided in the scheme through the opening of the new Hospital at Markfield will be adequate to meet the demands for accommodation for infectious diseases other than Small Pox in the County, and that the necessity for the provision of any further accommodation by this Authority, or any other Authority, in the County will not arise to meet present demands. Provision has been made at Markfield for future extension if necessary. No arrangements for accommodation for persons resident outside the area are contemplated.

#### (2) SMALL POX

The present accommodation in the County for the reception of cases of Small Pox consists of 38 beds allowing 144 square feet of floor space per bed, viz. Syston Small Pox Hospital 15 beds, Snarestone Small Pox Hospital 23 beds. Both of these hospitals will continue to be used for Small Pox and it is considered that the existing accommodation is adequate to meet the demands in the County and that further accommodation is unnecessary at present.

No arrangements are contemplated for making existing accommodation available for the use of persons resident outside the County area, and no new combinations or changes in the constitutions of existing District Councils will be necessary.

A reciprocal agreement exists between the County Council and the Council of the County Borough of Leicester for the reception of cases of Small Pox residing in the County Borough into hospitals provided by the County Council at a charge of £4 4s. 0d. each per week for the first ten cases and £3 13s. 6d. per week for each case over that number. A charge of £2 12 6d. each per week is made for contacts. This arrangement will continue in force.

#### (3). GENERAL MEDICAL AND GENERAL SURGICAL.

- (a) Leicester Royal Infirmary. The Royal Infirmary with accommodation for over 400 patients receives cases from the County, and is supported by voluntary subscriptions and by donations. Surgical and medical treatment for adults and children is provided.
- (b) North Evington General Hospital. Provision is made for the admission of County cases to this Institution on a pro rata basis. No definite number of beds is reserved but admission of County cases is always possible under normal circumstances.
- (c) Loughborough General Hospital. At this hospital patients are admitted for medical and operative treatment, and 45 beds are available.
- (d) The Faire Hospital. This hospital is a semi-private institution which is available for County cases, and both medical and surgical treatment is available at reasonable cost.
- (e) Cottage Hospitals. There are Cottage Hospitals at Ashby-de-la-Zouch (26 beds), Hinckley (14 beds), Market Harborough (15 beds), Lutterworth (9 beds), Melton Mowbray (26 beds).

Note.—None of the above hospital provisions are subsidised by the County Council.

(4). MATERNITY HOSPITALS.

The following hospitals are subsidised by the County Council for the reception of County cases:—

- (1) Leicester and Leicestershire Maternity Hospital.
- (2) Warwickshire Maternity Home, Rugby.
- (3) Hospital of St. Cross, Rugby.

Provision is made for the reception of unmarried expectant mothers at St. Saviour's Home, Northampton; Ely Diocesan Home, Cambridge, and the Salvation Army Home, Birmingham.

#### (5) VENEREAL DISEASES.

In-patient treatment is provided for County cases under subsidy at the Leicester Royal Infirmary.

#### (6). TUBERCULOSIS:

#### (a) Pulmonary.

Mowsley Sanatorium: Female adults and children (pulmonary) 50 beds.

beus.

Female adults and children (surgical) 12 beds.

Coalville Residential Dispensary.

Female adults and girls (pulmonary) 8 beds.

Hinckley Residential Dispensary:

Male adults and boys (pulmonary) 15 beds. Male adults and boys (surgical) 7 beds.

Creaton Sanatorium, Northamptonshire: Male adults and female adults (pulmonary), 25—30 beds.

Tuberculosis Block, Melton Isolation Hospital:

Male adults, female adults, advanced pulmonary, 3 beds each.

#### (e) Surgical Cases.

Children: Manfield Orthopædic Hospital. Northampton,
Warwickshire Orthopædic Hospital, Coleshill.
Harlow Wood Orthopædic Hospital, Mansfield.

Adults: Hospital of St. Cross, Rugby and Creaton.

#### (c) General.

Beds are obtained in either Sanatoria or Institutions as required. An average total of 144 beds is available for in-patient treatment of Tuberculosis in the County.

#### (7). CHRONIC SICK.

In the various transferred Poor Law Institutions in the County, 406 beds are available. Distribution of these beds is as follows:—

NAME OF INST	Acco	ACCOMMODATION			
Ashby-de-la-Zoue	ch				57
Loughborough					100
Melton Mowbray					45
Mountsorrel					50
Blaby					36
Hinckley					38
Lutterworth					15
Market Bosworth					33
Market Harborou	gh				32

#### (8). MENTAL DISEASES.

In-patient provision is made for these cases at the County Mental Hospital, Narborough, in which 688 beds are available.

#### (9). ORTHOPAEDIC HOSPITALS.

On a pro rata basis beds are available for County Orthopædic cases in the following hospitals:—Warwickshire Orthopædic Hospital, Coleshill; Manfield Orthopædic Hospital, Northampton; Harlow Wood Orthopædic Hospital, Mansfield.

#### (10). HOSPITALS FOR EAR, NOSE AND THROAT.

General provision under this section is made by the Leicester Royal Infirmary, by Loughborough General Hospital and by the various Cottage Hospitals in the County. In addition special arrangements for the treatment of diseases of the Nose and Throat in school children are provided by the County Council at the Leicester City Clinic.

### (11). HOSPITAL TREATMENT FOR PUERPERAL FEVER AND PYREXIA.

Cases of these diseases are received at the Leicester Royal Infirmary, and at the other General Hospitals in the County.

### (12). HOSPITAL TREATMENT FOR OPHTHALMIA NEONATORUM.

Cases of this disease are received by the Leicester Royal Infirmary for in-patient treatment.

#### (13). CONVALESCENT HOME TREATMENT.

In-patient treatment under this heading is provided under subsidy for Nursing Mothers at the Outwoods Home, and for children at the Cooper Memorial Home, Woodhouse Eaves, by the County Council. OUT-PATIENT CLINICS. (1) Minor Ailment Clinics.

Clinics for the treatment of minor ailments, e.g. Ringworm, Scabies, and other chronic skin ailments, minor affections of the eyes and ears have been provided at the following centres:—

#### Leicester:

County Health Department, 17 Friar Lane, Leicester. Every Saturday from 10 a.m. to 12 noon. Cases seen by appointment only.

#### Coalville:

Primitive Methodist Schoolroom, Marlborough Square. Tuesdays and Fridays from 10 a.m. to 12 noon. School Medical Officer attends on Tuesdays.

#### Hinckley:

Mission Room, Druid Street.

Every Tuesday from 10 a.m. to 12 noon.

School Medical Officer attends every session.

#### Melton Mowbray:

Town Hall, Melton Mowbray.

Wednesdays and Fridays from 10 a.m. to 12 noon.
School Medical Officer attends every session.

#### Lubbesthorpe Council School:

Mondays from 10 a.m. to 12 noon. School Medical Officer attends every session.

(2) Orthopaedic Clinics.

The following out-patient clinics are available in the county for the provision of orthopaedic treatment:—

Coalville Orthopaedic Clinic.

Primitive Methodist Schoolroom, Marlborough Square, Coalville. Mondays and Wednesdays 2-30 p.m. to 5-30 p.m.

Leicester Royal Infirmary.
Daily by arrangement.

Loughborough Cripples' Guild.
Packe Street, Loughborough. Daily by arrangement.

Rugby Orthopaedic Clinic.
Rugby. By special arrangement.

#### (3) Dental Clinics.

The School Dentists visit the schools of the county at routine intervals for the purpose of treating the school children between the ages of 5 and 14 years. Special clinics for dental operations under anæsthetics are held at various focal points in the county. A clinic is held at 17 Friar Lane, on Saturday mornings, for school children requiring urgent treatment—by special appointment only.

(4) Ringworm Clinics.

X-Ray treatment for Ringworm of the scalp is available at the Leicester City Clinic by special arrangement through the County Health Department.

(5) Ophthalmic Clinics.

Whitwick.

Glenfield.

Hugglescote.

The County Oculist holds Ophthalmic clinics routinely at the various elementary schools. In addition, a clinic is held in Leicester every Saturday morning, when special cases are seen by appointment.

## (6) Maternity and Child Welfare Clinics. (Provided by the County Council).

Opened once a week.

Ashby-de-la-Zouch. Thursday. Coalville. Tuesday. Tuesday. Hinckley. Monday. Lubbesthorpe. Wednesday. Melton Mowbray Mountsorrel. Tuesday. Tuesday. Sileby. Monday. Syston. Tuesday. Thurmaston.

Monday.

2nd and 4th Tuesday.

2nd and 4th Monday.

Opened twice a month. 2nd and 4th Monday Anstey. Asfordby. 2nd and 4th Thursday. 2nd and 4th Wednesday. Barrow-on-Soar. 2nd and 4th Thursday. Barwell. 2nd and 4th Wednesday. Birstall. 1st and 3rd Tuesday. Blaby. 1st and 3rd Monday. Braunstone. 1st and 3rd Wednesday. Cosby. 1st and 3rd Tuesday. Desford. 1st and 3rd Wednesday. Donisthorpe. 1st and 3rd Wednesday. Enderby. Earl Shilton. 1st and 3rd Thursday.

#### Opened twice a month

Humberstone. 1st and 3rd Wednesday. Ibstock. 2nd and 4th Thursday. Kibworth. 2nd and 4th Wednesday. Lutterworth. 1st and 3rd Thursday. Measham. 2nd and 4th Monday. Narborough. 2nd and 4th Thursday. Oadby. 2nd and 4th Wednesday. Quorn. 1st and 3rd Wednesday. Rearsby. 1st and 3rd Tuesday. Rothley. 1st and 3rd Monday. Shepshed. 1st and 3rd Wednesday. South Wigston. 2nd and 4th Tuesday. Stathern. 1st and 3rd Monday. Wigston Magna. 2nd and 4th Thursday. Whetstone. 2nd and 4th Tuesday.

Opened once a month.

Evington.

1st Thursday.

(7) Ante Natal Clinics.

The following clinics are held under the auspices of the County Health Department:—

#### Hinckley:

Y.M.C.A. Hut, Station Road, Hinckley.

This clinic is held on the first Monday in the month at 2-30 p.m.

#### Wigston Magna:

The Co-operative Hall, Wigston Magna.
This clinic is held on the 2nd Friday in the month at 2-30 p.m.

#### (8) Venereal Diseases Clinics.

Ditto.

Out-patient clinics are held as follows:—
Institution. Medical Officer.
Leicester Royal Dr. H. J. Blakesley.
Infirmary. 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.

Dr. Bessie Symington. Female :-

Mondays 6-30 p.m. Wednesdays (Old Cases) 4-0 p.m. Fridays 3-30 p.m.

Loughborough Dr. J. B. Dalton.

Male: Mondays 5-15 p.m. Female:—

Mondays 4 to 4-45 p.m.

#### (9) Tuberculosis Clinics.

The following out-patient dispensaries are administered by the County Health Department:—

LEICESTER: 17 Friar Lane.

Wednesday 10 a.m. General Dispensary.

Thursday 10 a.m. Special cases by appointment.

LOUGHBOROUGH: John Street Clinic.

Thursday 10 a.m.

HINCKLEY: Residential Dispensary, Manor House, Bond Street.

Monday 10 a.m.

COALVILLE: Residential Dispensary, Bakewell Street.

Friday 10 a.m.

MELTON MOWBRAY: 5a Nottingham Street.

Tuesday 10 a.m.

Note.—Cases unfit to attend Out-patient Dispensaries are visited at their own homes by the Tuberculosis Medical Officers on the request of the general practitioners attending.

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.

#### 10. LABORATORY SERVICES.

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).

Faeces 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 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.

#### AMBULANCE FACILITIES.

#### (1). Infectious Diseases.

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.

#### (2). Small Pox.

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

#### (3). Tuberculosis and General.

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

### ADMINISTRATIVE CHANGES UNDER THE LOCAL GOVERNMENT ACT, 1929.

#### (1). Poor Law Institutions.

The following are the available Poor Law Institutions for the accommodation of House Inmates and Hospital Inmates in the County:—Ashbyde-la-Zouch, Billesdon, Hinckley, Loughborough, Lutterworth, Market Bosworth, Market Harborough, Melton Mowbray, Mountsorrel and Narborough.

The transfer of these institutions to the County Authority under terms of the Local Government Act of 1929, has resulted in the necessity for much administrative consideration so that they might be utilised to the best possible advantage as units of the general health service of the Administrative County.

In several cases, in fact in nearly all, the accommodation and conditions at the time of transfer gave rise to serious apprehension, as the passing of time and the advance of modern standards as they affect institutions had obviously failed to influence in any way the conditions existing in them.

The net result has been that many of these institutions in so far as their suitability for the treatment of sick persons is concerned are obsolete. It is, therefore, apparent that the County is bound to commence its administration under serious handicap, and much thought and consideration has been and will be required to be given to the question before a definite future policy is formulated.

Since 1st April, 1930, many schemes have been considered and rejected with regard to the future of these institutions, but I am confident that during 1931 a scheme will be developed whereby the institutional services of the county will be both efficient and adequate. The attainment of these two factors will most certainly involve considerable additional financial outlays, but it has to be clearly understood that these costs do not represent the result of transfer to new authorities because to anyone with knowledge of the legacy of institutions which has been bequeathed to us under this Act it will be apparent that they are the result of the passing of many years in which little or nothing was done to maintain the buildings and equipment at modern standards.

#### (2). Poor Law Medical Out-Relief.

I submit herewith a Table of the Poor Law Medical Out-Relief Districts as reconstituted since 1st April, 1930, with the name of the Medical Officer, the area in acres, and the population of the individual districts.

#### POOR LAW MEDICAL OUT-RELIEF.

Table of Districts, with Medical Officers, Area and Population.

Name of District.	Name of Medical Officer.	Area (in acres)	Population
Bottesford	Dr. F. J. H. Martin	8,445	1,848
Croxton Kerrial	Dr. R. H. Hudson	6,360	956
Waltham	Dr. W. Arnold	20,146	2,870
Long Clawson	Dr. G. C. B. Atkinson	16,896	3,241
Wymondham	Dr. H. S. Furness	16,394	1,854
Asfordby	Dr. G. S. A. Bishop	18,183	3,629
Melton Mowbray	Dr. R. H. Fagge	22,456	11,129

	Name of	Area	
Name of District	Medical Officer	(in acres)	Population
Somerby	Dr. R. J. Mould	9,831	1,526
Loughborough	Dr. C. L. Lapper	16,398	29,004
Shepshed	Dr. T. Bell	12,348	6,912
Castle Donington	Dr. W. H. Dowell	15,589	6,459
Mountsorrel	Dr. J. S. Strachan	19,416	13,201
Barrow-upon-Soar and			
Sileby	Dr. J. S. Gray	13,299	7,509
Syston	Dr. R. W. Taylor	17,745	9,122
Billesdon	Dr. E. K. Williams	52,482	7,283
Hallaton	Dr. P. Drummond	18,076	2,054
Market Harborough	Dr. E. D. Spackman	32,379	15,778
Wigston	Dr. S. B. Couper	11,203	16,329
Enderby	Dr. W. R. M. Berridge	22,274	12,567
Lutterworth	Dr. T. W. Crowley	31,091	7,736
Peatling	Dr. C. R. Jones	15,610	2,462
Hinckley	Dr. H. Shirlaw	22,581	27,948
Market Bosworth	Dr. H. N. Keeling	42,383	9,597
Ibstock	Dr. C. S. Agnew	18,644	13,599
Ashby-de-la-Zouch	Dr. A. Orchard	8,044	5,621
Coalville	Dr. T. Forsyth	17,064	28,342
Measham	Dr. J. R. Salmond	18,860	11,750

By re-arrangement and combination, the Poor Law Medical Out-Relief Districts have been considerably reduced in number since April 1st, 1930.

It is only fair to state that in its initial stages the new scheme was subjected to a considerable amount of criticism. To meet this criticism a comprehensive survey was made of the entire arrangements and it was proved definitely that the new administration was both adequate and efficient for the requirements of the various districts. It is highly satisfactory that a scheme which met with much opposition in the early stages has now stood the test of time and by general agreement has been found to deal completely with the Poor Law Medical requirementsof the various districts in the County.

#### (3). Vaccination.

In common with other adjustments to the service consequent upon the Local Government Act, the districts of Public Vaccinators and Vaccination Officer were altered and amended in accordance with the other sections of the general administrative scheme.

A transfer of this description would be expected to have attendant upon it many serious administrative and practical difficulties, but I am happy to

state that the patience and forbearance exhibited by all parties concerned have done much to mitigate any serious instances of difficulty.

In brief, the changes under the re-organisation of the vaccination work of the County may be summarised as follows:—

On and after 1st April, 1930, the Districts of the Public Vaccinators were reduced to 29 while the districts of the Vaccination Officers were decreased in number to 14.

I submit the following Tables which demonstrate the state of Vaccination in the Administrative County.

(1). Return showing the Numbers of Persons successfully Vaccinated and re-vaccinated at the cost of the rates by the Medical Officers of the Poor Law Institutions and the Public Vaccinators during the period from 1st April to December 31st, 1930.

prima	ibers of succ ry vaccinati persons.		Number of successful re-vaccinations i.e. suc- cessful vaccinations of persons who had been
Under 1 year of age.	One year and upwards.	Total	successfully vaccinated at some previous time.
161	453	614	166

(2). Summary of Vaccination Officers Returns for the period April 1st to December 31st, 1930.

#### Summary of Vaccination Officers' Returns for the period April 1st to December 31st, 1930

	N. CDI-	En	tered in Vacci	ination Regis	ster	Other
Vaccination Districts	No. of Births entered on Birth Lists	Successful Vaccinations	Insusceptible of Vaccination	Died Un- vaccinated	Statutory Declaration	successful Vaccinations received
Ashby	531	45	-	33	505	-
Billesdon	187	52	. 4	10	164	25
Enderby	289	12	-	9	281	8
Hinckley	415	12	1	6	309	3
Loughborough	532	15	1	17	418	17
Lutterworth	119	17	-	3	99	4
Mkt. Bosworth	248	23*	1	11	211	8
Mkt. Harborough	180	11	-	8	154	5
Measham	144	7	-	6	128	4
Melton North	122	20	-	3	107	1
Melton South	199	39†	-	8	202	-
Mountsorrel	167	5	1	8	139	-
Syston	206	3	-	9	173	2
Wigston	200	14	-	8	200	2
TOTALS	3,539	275	8	139	3,090	79

<sup>\*14</sup> of these related to children successfully vaccinated after the Statutory Declaration had been made.

<sup>† 4</sup> of these related to children successfully vaccinated after the Statutory Declaration had been made,

#### Summary of Vaccination Officers' Returns for the period April 1st to December 31st, 1930 (continued)

the death of the land	Postponement	n at end of yea Removed	Removed-	Cases otherwise outstanding at end of year		
Vaccination Districts	by Medical Certificate	to other Districts	unable to trace	Under 6 months	Over 6 months	
Ashby	-	-	1	67	-	
Billesdon	-	-	-	23	-	
Enderby	_	-	-	55	-	
Hinckley	-	-	-	42	-	
Loughborough	2	-	-	112	-	
Lutterworth	-	-	-	26	-	
Mkt. Bosworth	-	-	-	46	18	
Mkt. Harborough	1	2	6	24	10	
Measham	-		-	13	8	
Melton North	-	-	-	9	6	
Melton South	3	-	-	31	1	
Mountsorrel	_	-	-	28	-	
Syston	-	-	-	31	2	
Wigston	2	2	1	21	-	
TOTAL	8	4	8	528	45	

#### (4). Boarded-out Children.

By mutual agreement the visits of inspection of these children has been undertaken by the County Health Visitors. The work has proceeded smoothly and the general arrangements under the new system are eminently satisfactory.

Routine visits of inspection are made to each case at least once every six weeks, and additional visits are paid to cases in which there may be any special circumstances.

The number of children on the Register on 31st December, 1930, was 52.

During the period 1st April to 31st December, 1930, six unsatisfactory reports (five in relation to overcrowding and one with regard to a child's health) were received from the Inspectors. Appropriate action was taken in each case to remedy the conditions.

#### (5). Inspection of Children under the Children Act.

The control of this work is now delegated to the County Maternity and Child Welfare Committee, and the inspections are carried out by the County Health Visitors.

The following is a summary of the work undertaken during the period 1st April to 31st December, 1930:—

#### CHILDREN ACT, 1908.

1st April to 31st December, 1930.

No. of cases on Register	on Apr	il 1st		53
No. of new cases				18
Returned to parents				10
Adopted				2
Died				1
Attained seven years of a	age			2
Left County				1
Transferred to Poor Lav				2
No. of cases on Register			930	53
No of visits to cases by M		fficers		4
*No. of unsatisfactory cas	es			3

\*As a result of the Medical Officers' visits conditions improved and no further action was necessary.

Each case is visited by the Health Visitor at least every three months, additional visits being made as circumstances require.

# PREVALANCE OF, AND CONTROL OVER INFECTIOUS AND OTHER DISEASES.

With regard to notifiable diseases in general the most prominent feature was the widespread prevalence of minor Small Pox. This disease became epidemic in the Administrative County in 1929, when the total notifications for the year were 230. In the current year this figure was more than doubled and the total notifications recorded were 567. A full survey of the present outbreak is given in a subsequent section of this Report.

The commoner infections of childhood, especially Measles, Scarlet Fever, and Diphtheria, maintained a relatively high incidence although these epidemics did not reach maximum proportions. There was a marked decrease in the number of cases of Primary Pneumonia (302 notifications as compared with 513 last year), although the figure for this disease still remains high.

The Isolation Hospital accommodation proved adequate for all demands and there were no special difficulties associated with the general administration of the service.

#### DIPHTHERIA.

323 cases of Diphtheria were notified during 1930, a decrease of 39 on last year. The total number of cases nevertheless remains high. The disease had a wide distribution but the chief manifestations occurred at Ashby, Coalville, Wigston and Earl Shilton.

It was found necessary to close two schools for an average duration of 16 days on account of outbreaks of this disease. In this respect, routine swabbing has been employed with considerable success in the detection of origin and in the control of epidemics affecting school populations. The School Medical Inspection Department in conjunction with the County Laboratory carry out this work, and a total of 233 swabs was taken during the year. Of this number ten proved positive, and the detection of these "carriers" was undoubtedly of great value in controlling the outbreaks.

Noteworthy features of the cases of Diphtheria encountered during the year were, firstly, that over one-third of the cases occurred in the first quarter of the year, and secondly, that the cases from Rural Districts outnumbered those from Urban Districts by 61.

247 cases were admitted to the Isolation Hospitals of the County (i.e. 76 per cent. of the total notifications).

There were 14 deaths recorded as due to Diphtheria.

#### SCARLET FEVER.

742 cases of Scarlet Fever were notified, an increase of 78 on last year. The chief focus of this disease was in Loughborough from where 253 cases were notified during the year. The epidemic in this area though extensive was of a mild type, and free from heavy mortality, serious complications and sequelae. Coalville, Earl Shilton and Wigston were areas more markedly affected than other parts of the County in which cases for the most part were sporadic in distribution.

It is interesting to note that this year Urban cases exceed Rural cases, which fact is the direct contradiction of the statistical records of last year, when it was found that the Rural Districts were more seriously affected.

It was not found necessary to close any school for the control of this disease and only one low attendance certificate was issued during the year.

534 cases (i.e. 73 per cent. of the total number) were admitted to Isolation Hospitals.

There were 4 fatal cases of Scarlet Fever during the year.

Note:—With reference to Diphtheria and Scarlet Fever the County Health Department have not adopted the practice of the Schick and Dick tests for these diseases respectively, and it has not been considered either practical or expedient to undertake artificial methods of immunisation against these diseases.

#### MEASLES.

The weekly returns received from Elementary Schools showed that Measles was rather more prevalent than last year.

Five schools were closed on account of this infection. The average period of closure in "school days" was twenty-one, while 183 children were directly concerned in these closures. In addition certificates of reduced attendance were granted to 19 schools, affecting 776 children.

#### INFLUENZA.

The records of infectious disease taken from the school weekly returns, show a striking fall in the number of absences due to Influenza. No schools were closed and only one certificate of lowered attendance was issued on this account as compared with 46 last year.

The adult population of the County was also markedly free from epidemics of this disease which has proved to be such a serious menace in past years.

#### PNEUMONIA.

302 cases of Primary Pneumonia were notified as compared with 513 during 1929. Two-thirds of the cases ocurred during the first two quarters of the year, and the Rural Districts were considerably more affected than the Urban, the figures being 186 and 116 respectively. The chief centres from which notifications came were Coalville, Shepshed, and Melton Mowbray.

#### PUERPERAL FEVER AND PUERPERAL PYREXIA.

Nine cases of Puerperal Fever and 19 of Puerperal Pyrexia were notified as against 11 and 22 respectively in 1929. The number of deaths recorded as due to Puerperal Sepsis was 7.

#### ERYSIPELAS.

During the year 95 cases of Erysipelas were notified, a decrease of 19 on the figure for last year. The distribution of the cases was Urban 32, Rural 63 and over one-third of the cases occurred during the first quarter of the year. One case was admitted to hospital.

#### GASTRO-INTESTINAL GROUP OF DISEASES.

18 cases of Enteric Fever were notified during 1930, while there were also eight cases of Paratyphoid Fever notified. These cases were sporadic in type and there was no local concentration of cases which warranted a special investigation. The cases were distributed over the Urban Districts of Ashby and Hinckley, and over the Rural Districts of Ashby, Market Bosworth, Barrow, Blaby, Lutterworth, Market Harborough and Melton Mowbray.

There was one case of Dysentery notified in the Urban District of Loughborough.

#### DISEASES OF THE CENTRAL NERVOUS SYSTEM.

(a) Encephalitis Lethargica.

In 1930 there were notified six cases of Encephalitis Lethargica from the Rural Districts of Ashby, Barrow and Lutterworth. This figure was a decrease of two on that of the previous year.

#### (b) Poliomyelitis.

A total of five cases was notified as compared with four last year. The districts affected were the Urban areas of Hinckley and Melton, and the Rural Districts of Hinckley, Loughborough and Lutterworth.

(c) Cerebro-Spinal Fever.

13 cases were notified as compared with four in the previous year. The disease was most prevalent in the second and third quarters of the year in which nine out of the total cases were recorded. Five of the cases ocurred at Desford, two in Thurmaston and two in Blaby, and the remainder were single cases distributed over the Rural Districts of Ashby, Market Bosworth and Melton, and the Urban District of Wigston.

#### DISEASES LOCALLY NOTIFIABLE.

#### Chicken Pox.

This disease was notifiable in certain areas of the County during the year, and 143 cases were so recorded. The incidence of the disease remained fairly constant during the first three-quarters of the year, but in the last quarter was more than doubled. The two chief locations were the Urban District of Hinckley with 70 cases, and the Rural District of Market Bosworth with 42 cases. With the exception of these two areas the disease did not reach epidemic proportions, and there was no tendency towards the prolongation of the epidemic of the previous year.

It is worthy of note that the cases from Urban Districts outnumbered those from Rural Districts by 83 to 60. The distribution of Small Pox during the same period was on the contrary more marked in Rural Districts than in Urban ones, the figures being 358 to 209.

#### OPHTHALMIA NEONATORUM.

The following is the record for 1930 :-

Notified		ated	Vision Un-	Vision Im-	Total Blind-	Dareka	
	At Home	In Hospital	impaired	paired	ness	Deaths	
17	13	4	17	-	_	_	

There is a reduction of one in the total number of cases this year as compared with the figure for 1929. It is satisfactory to note that in no case has there been any impairment of vision.

#### SMALL POX.

The epidemic of mild Small Pox which originated in July 1929 continued during the year. Unfortunately the decline in the number of cases manifested towards the end of 1929 did not continue, and in the first quarter of 1930 the notifications again showed an upward trend. During the first six months the number steadily increased, reaching a maximum in May. The second half of the year showed a decline, commencing in June and reaching the lowest level in October and November. The total number of cases of mild Small Pox notified during 1930 was 567 of which 209 ocurred in Urban Districts and 358 in Rural Districts.

The incidence of the disease in the Urban District of Shepshed and at Ibstock varied considerably. These two centres bore the brunt of the epidemic in 1929. Only eight cases were notified during the current year at Shepshed, and these during the first quarter since when the district has been entirely free from Small Pox. On the contrary the notifications at Ibstock showed a considerable increase during the first quarter of the year, followed by a decline and during the latter half of the year only two cases occurred. The increase in cases at Wigston towards the end of 1929 continued in the early part of 1930, and further cases were also reported in other County districts adjacent to the City. The spread of the disease in bordering County districts showed no regular course. Twenty-eight cases occurred in Thurmaston, yet in Syston which is practically in continuity with the former village and only a mile further from the City, only five cases were notified during the year. Similar irregularities of spread and incidence were noted in Oadby, Evington and Lubbesthorpe, adjacent County districts bordering on the City; Lubbesthorpe showing a high incidence of cases relative to the other areas.

Extension of the disease occurred into districts of the County which had remained free during 1929. The Urban Districts of Thurmaston and Hinckley had 28 and 32 cases respectively, 10 cases were notified from the Castle Donington Rural District, and the epidemic spread further southwards, 21 cases being notified in the Market Harborough Rural District. The Rural District of Melton Mowbray and the Urban District of Quorn which were affected by the epidemic of 1929 remained free from Small Pox during 1930.

The epidemic seems to have obtained a firm grip in the County and, notwithstanding all efforts at control new cases continue to occur and new areas to become affected. With the large number of cases being notified, and the extensive facilities for travel, opportunities for contact with sufferers from the disease and for spread into new areas are innumerable. Every effort is made by the District Medical Officers of Health to trace contacts, and to carry out vaccination or keep the contacts under observation. Owing to the marked prevalence of the disease this has entailed an immense volume of work.

In the early part of the year it was found necessary to appoint a whole time Medical Officer to assist with the control of the epidemic in the County. This officer, Dr. Doleman, took up work in May, and carried out special duties in connection with Small Pox throughout the summer while the epidemic was at its height. With the decline in notifications it was found possible to discontinue his services and the appointment was terminated in September.

Visits to school departments were made in the affected areas and children inspected. Workers absent from factories owing to illness were visited, and contacts from factories and works were followed up and kept under observation. Systematic visits were made to all contacts in infected houses, and facilities were provided for vaccinations at home and in the factories.

In spite of this careful routine work and of special investigations there is no doubt that cases were missed. The mildness of the type of disease militated against its effective control. Individuals were found to have suffered from a very mild attack and had not consulted a doctor. It was only after much patient investigation that the infection in a new area was traced back to these persons as the original source.

The epidemic reached more reasonable proportions towards the end of the year and it has been possible to exercise greater control over the spread of the disease. Unfortunately Small Pox appears to have become endemic in the County. Several areas have not been free from infection since its commencement in July 1929. It is to be hoped that the decline in cases manifested towards the close of the period under review will continue, but with the large area of the County affected and the susceptibility of the population I fear that a continuance of the disease is to be anticipated.

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:—

	TOTAL AD	MIS	SSIONS.		
Age-Group	os.		Male.	Female.	Total.
0-5			12	13	25
5—10			30	37	67
10-20			107	106	213
20-30			63	58	121
30-40			26	28	54
40-50			13	18	31
50-60			13	15	28
60-70			7	8	15
70—80	***************************************		1	1	2
	TOTAL		272	284	556

Of this total of 556 cases the number vaccinated was 61 (11%). None had been vaccinated since infancy. Cases vaccinated as contacts on which the vaccination was performed too late to avert Small Pox are not included. The following table shows the vaccinated cases divided into age groups and sub-divided according to sex:—

	VACCINATED AD	MISSIC	INS.	
Age Group.		Male.	Female.	Total.
0—10		-	_	
10-20		-	_	-
20-30		1	_	1
30-40		2	1	3
40-50		7	6	13
50-60		11	15	26
60-70	***************************************	7	9	16
70—80		1	1	2
				-
	TOTAL	. 29	32	61
			-	-

The age of the case occurring in age group 20-30 was 29 years.

In my last year's report I recorded the age and sex distribution of the vaccinated cases admitted to Small Pox Hospitals in the County during the year. Fewer Small Pox cases were admitted that year, and the number of vaccinated admissions was correspondingly lower reaching a total of 22.

The figures in the above table confirm the previous experience in Leicestershire that vaccination in infancy protects from the present type of Small Pox for a long period of years. Over a period of two years and with a total number of admissions of 83 vaccinated cases, no case of Small Pox occurred in persons vaccinated within the last 29 years.

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.

The figures do not include cases transferred from one Hospital to another.

Hospital. Snarestone Hospital Syston Hospital Leicester City Hospital	 Period. 1/1/30—2/8/30 14/8/30—31/12/30 Various periods	admitted. 407 119 30
		556

No Leicester City cases were treated at County Small Pox Hospitals during the year.

# MATERNITY AND CHILD WELFARE SERVICE

# (A). Co-ordination of Services.

The influence of a Maternity and Child Welfare Service is not confined to the actual group of the population with which it deals directly, but extends to and links up with the provisions in force under the School Medical Inspection Department. In fact this service forms the basic foundation for all health work and consequently its benefits radiate in a fashion and to an extent which are not appreciated if the service is viewed as a single group. It is, therefore, of vital importance that full co-operation should exist between the Child Welfare Service and the other sections of the Health Department.

In Leicestershire there is complete co-ordination in all divisions of the County Health work, and this factor is particularly evident in the general arrangements in existence for the control of the Child Welfare Service, and of its sister service of School Medical Inspection.

Under existing arrangements a single administrative control is responsible for the direction of all medical services. A uniformity in administrative policy and procedure is, therefore, secured. Furthermore the clinical

services are carried out in definite sequence with resulting concentration of effort so that the entire work is both efficient and economical. By the utilisation of this principle of co-ordination the Leicestershire Health Department is endeavouring to obtain the ideal of complete supervision of every child from earliest infancy to adolescence. It would be false to declare that such provision is complete in the County at the moment but it can be stated with confidence that despite the many serious difficulties peculiar to the administration of a County area, great progress has been made towards its attainment.

The co-ordination between the Maternity and Child Welfare and School Medical Services forms an excellent example of the administrative arrangements in force throughout the County Health Department. The County Medical Officer who is also Chief School Medical Officer, administers both services with the assistance of Dr. Davidson, who acts as deputy in each Department.

The general clinical work of the two services is carried out by the same Officers, with the exception of Dr. Murray and Dr. Dalton whose duties are entirely confined to the School Medical Service. Again the personnel of the nursing staff is common to both Departments.

It will, therefore, be observed that one staff is responsible for both the administrative and clinical work required for the care and supervision of children during pre-school and school life.

From the joint linking of the School Medical Service and the Maternity and Child Welfare Service beneficial results have been observed in various directions. It is now possible to obtain accurate and continued information with regard to the general health of young children (below five years of age) in the County. Through the work of the Health Visitors, a full knowledge of both personal and environmental conditions affecting the children of preschool age can be recorded and, furthermore, a survey may be obtained of all exceptional children under school age, viz., mentally defectives, physically defectives, etc. In this way ophthalmic treatment, orthopædic treatment and similar remedial measures can be given to children at the earliest possible period of life with resulting benefits to the patients, the community, and the authority.

A further example of the inter-relationship of the two services can be found in the carrying forward of the notes on medical record cards of children who have attended Welfare Centres to the schedules of the School Medical Inspection Department. It is thus possible to obtain a complete record of all the particulars of a child's medical history from infancy to the termination of school life.

(B). Statistical facts relating to the Service.

The extension which has taken place in the Maternity and Child Welfare Service in Leicestershire is manifested in striking fashion by the statistical record of the year's work,

A list of the County Welfare Centres is given in another section of this report.

At the end of 1929, 41 Welfare Centres were administered under the direction of the County Health Department.

In March, 1930, it was decided to close Bottesford and Shackerstone Centres on account of poor attendance and lack of interest in the facilities provided for education and treatment.

A new Centre was opened on the Braunstone Estate in September, 1930. Hence the number of Centres under the control of the County Council at the end of this year was 40.

During the year 1,036 meetings were held at the various Centres in the County. The total number of mothers on the register at the end of the year was 3,146, and these women recorded 33,112 attendances. Babies under the age of one year totalled 2,039, and the full number of attendances of this group was 17,746. The number of toddlers on the register was 2,195, and 21,135 attendances were made by these children. The average attendance of children per session at all Centres during the year was 37.5.

It is worthy of note that 1,616 women, 1,345 babies under one year of age, and 580 toddlers attended the Centres for the first time in 1930. It is especially interesting to observe that 34 per cent of the total notified births for the year, attended Welfare Centres in the County. In addition 20 expectant mothers made 96 visits of attendance at the Centres.

A total of 479 visits were made by Medical Officers to Maternity and Child Welfare Centres in 1930.

The detailed particulars are as follows:—Dr. Fairer, 20; Dr. Davidson, 60; Dr. Brown, 70; Dr. Cowan, 45; Dr. Coward, 26; Dr. Weston, 134; Dr. Walters, 124.

The Medical Officers carried out 4,037 routine clinical examinations during the year, and of these 1,472 were primary examinations.

Lectures on General Health subjects given to the mothers by the Medical and Nursing staffs totalled 749.

# (C). General Observations.

The foregoing record demonstrates that an immense amount of useful work has been undertaken and completed by the Medical and Nursing staff of the County Health Department. The results derived from the service are each year more apparent in their influence upon the health and well-being of both mothers and children.

The growth of the Maternity and Child Welfare Service is strikingly demonstrated when it is remembered that ten years ago, in 1920, there were only 18 Centres in the County. and to these the Medical Officers made 133 visits. This year from the statistics provided it will be seen that the number of Centres has been more than doubled, and the visits of Medical Officers have increased nearly four times.

The general work of the Service is maintained under three main groups (a) Clinical, (b) Educational, and (c) Administrative.

In last year's report a full account was given of the activities of the service and, consequently, I intend to confine my remarks this year to a brief summary of the work carried out under these sections.

(a) Clinical.

The medical work is on a sound basis; the Medical Officers attend each Centre at least once a month. In certain instances a double attendance of Medical Officers per month is arranged. At each visit to the Centre the doctor examines and advises upon (1) all new cases, (2) special cases brought for advice by the Health Visitor or mother, and (3) older children at intervals of twelve months.

The number of clinical examinations made by the Medical Officers shows an increase of nearly 1,000 as compared with the corresponding figure for last year.

It must be clearly noted that the clinical service provided does not encroach in any way upon the work of the general medical practitioner, and great care is observed to prevent the Centres assuming the function of outpatient departments.

The principal defects observed at routine visits to Welfare Centres during 1930, were:—Skin conditions, 168; Bronchitis, 161; Phimosis, 150; Umbilical hernia, 107; External eye conditions, 44; Gastric diseases, 44; Naso-pharyngitis, 33; Rickets, 28; Ear disease, 27; Congenital deformities, 25; Thread worms, 19; Glands enlarged, 15; Strabismus, 12; Hernia, 9; Congenital heart disease, 4; Marasmus, 3; Other diseases (not specially classified), 33.

The provision of Ophthalmic treatment to necessitous cases has been continued during 1930. In this year 12 cases were examined by the County Oculist, and appropriate treatment was given. This phase of the service is responsible for much useful preventive work, and forms an excellent adjunct to the general Maternity and Child Welfare provisions of the area.

(b) Educational.

Every effort is made to maintain prominently in the Centre the basic principles of general educational measures directed towards the betterment of personal and environmental hygiene. Talks by doctors and nurses cover a wide field of subjects related to the care of the mother, the baby, and the toddler. In addition, lectures are given on infectious diseases, and many other questions especially incident to local or other prevailing conditions.

Under this section of the work much valuable teaching is given with regard to the need for ante-natal care and supervision, and I am confident that in this way there will come about gradually a considerable improvement in the education of the public in these very vital matters.

(c) Administrative.

The marked development and extensions which have taken place in the County service in recent years demand the re-consideration from time to time of the administrative arrangements in operation.

The chief difficulty with which the Department is faced is the proper and just distribution of the available resources. The demand by newly formed and relatively highly populated districts for the formation of Centres has been so marked that it was obligatory on the Department to examine closely, and in detail, the work which is being carried on in the various Centres of the County. This examination revealed that the results obtained by the various Centres have on the average been most satisfactory.

There is abundant evidence that sustained and active interest has been maintained by the mothers in practically all areas in which Centres are established. I consider that much credit is due to both Medical and Nursing members of the staff for this highly satisfactory position. The Centres opened in 1929, viz. Birstall, Hugglescote and Lubbesthorpe, have already proved the necessity for their existence and the record demonstrates that their establishment is now complete. Lubbesthorpe Centre, which serves a large and densely populated area returns most remarkable figures, viz. average attendance of mothers 80.1, average attendance of babies under one year 50.7, and average attendance of toddlers 58.5.

The opening of a new Centre, at Braunstone, in 1930, has been attended with most excellent results. The figures for this Centre during the four months of its existence are as follows:—Average attendance of mothers 77.7, average attendance of babies under one year 50.7, average attendance of toddlers 56.9.

In the case of Lubbesthorpe a Medical Officer attends twice a month, whilst at Braunstone two Medical Officers attend together for one session per month.

The survey of the services revealed in addition one or two instances in which Centres through lack of interest and endeavour have failed to maintain a reasonable standard of attendance and efficiency.

It must be clearly understood that the Department does not consider the attendance record to be the only criterion of a Centre's activities and progress. It is undoubtedly a fact that much good work is carried out by small Centres in Rural areas, and provided that these Centres demonstrate their interest and enthusiasm the Department and staff give them every help and encouragement. In certain cases, however, as previously mentioned the attendances recorded reached so low a standard that it became imperative to assess their actual benefits to the community as compared with the expenses of their administration. It was found that it was impossible on practical and economic grounds to continue these Centres and, consequently, two, Bottesford and Shackerstone, were closed, while the meetings at three other Centres, Quorn, Donisthorpe and Measham, were altered from weekly to fortnightly intervals. This alteration has had the desired effect in respect to Quorn, but the other two Centres with the addition of Stathern seemed hardly to justify the continuance of their existence.

From the idealistic point of view it might be argued that the indirect results as well as the direct results from the educational aspect were invaluable in these small Centres, but the final assessment must always be made on the question of whether or not these Centres return to the public that benefit and service which are commensurate with the expenditure of public money.

However, in the consideration of this matter the Department have been guided by two factors. Firstly the ascertainment of the benefit accruing to the public from the work of the Centre and, secondly, the demands made on the Department by more populous areas in which no Centres at present exist.

It appears again to be definitely apparent that a department is unjustified in maintaining a poorly attended Centre, purely on educational grounds when other areas of greater population have no similar facilities. With the limited resources of the Department in Medical and Nursing staff, and with the existing economic state of the country it is essential that the policy of the Department should be based on the provision of facilities to those districts where the benefit of the work can reach the greatest numbers.

As the result of the adoption of this policy I have recommended the closure early in 1931 of the Centres previously mentioned, viz. Donisthorpe, Measham and Stathern, and I am confident that the concentration of the efforts of the County Health staff to those areas in which the greatest good can be done, will be for the ultimate good of the service.

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. 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 1930, 918 applications for milk grants were received, and 882 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 £869 16s. 4d., this figure being an increase of £238 15s. 9d. on that of the previous year.

### MATERNAL MORTALITY.

# (a) General Provisions.

Leicestershire participates in the investigation of maternal deaths under the scheme of the Ministry of Health, who are undertaking the survey 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 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's Department without any 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 cases of Puerperal Fever, Puerperal Pyrexia and Ophthalmia Neonatorum occurring in the County.

# (b) Report by Maternal Mortality Officer. (Dr. J. F. Davidson, Deputy County Medical Officer).

The Maternal Mortality rate for the County during the year 1930 is returned as 3.3 deaths per 1,000 births.

This rate shows some definite reduction on the figure for 1929, which was 4.8 deaths per 1,000 births, and, in point of fact, it is the lowest rate recorded in the Administrative County since 1924.

I herewith submit a table which demonstrates the returns of Maternal Mortality in Leicestershire during the ten year period from 1921 to 1930.

# Leicestershire Maternal Mortality per 1,000 Births.

No. of Puerperal Deaths :-

Year. 1921	 Births. 5,709	Sepsis.	Other Causes.	Total.	Rates per 1,000 Births Total. 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
1930	 5,201	7	10	17	3.27

At first sight it might appear that we were about to enter a period of progressive reduction in the rate of maternal mortality, but it would be inopportune at the moment to lay claim to any such happy position, as the low figure of this year may once again prove to be a mere fluctuation in the continued record of experience. In my opinion, it is definite that we have not reached a time in which we can hope for a permanent stabilisation at a low figure of the maternal death rate. Before this state can come about and be maintained, great and extensive reforms will have to be established in the conduct of all stages of midwifery, and we cannot hope to accomplish, as if by magic, that which will require much patient effort and endeavour on the part of all responsible authorities.

During the last two years, in the country generally, investigations have been undertaken with a view to the full and accurate ascertainment of the circumstances surrounding maternal deaths. From the accumulated data, a Departmental Committee of the Ministry of Health has issued a Report whose terms are now so well known that it is unnecessary for me to refer to them beyond stressing the fact, that, in their considered opinion, at least 48 per cent of the total deaths resulting directly from childbirth were preventable.

A statement such as this is matter indeed for profound thought.

The full realisation of preventable death comes only to those who judge the matter on a personal basis. A communal basis is of little use in the formation of true perspective in this matter, because any form of death, viewed from a distance and at an impersonal cost, loses much of its agony and pain. To those who doubt the wisdom of procedures calculated to prevent these preventable deaths (and in my experience there are such people) I would suggest the contemplation of the sorrow and pain which are attendant upon any personal loss by death, and then, to add to this state, the torment of remorse in a conscience which knows that by adequate measures of treatment death might have been prevented.

In my last year's report on this subject, I emphasised two important requirements in any attempt towards the organisation of services for the reduction of Maternal Mortality. These requirements were broadly endorsed in a later report of the Departmental Committee. They can be expressed briefly as follows:— Firstly, the improvement in every stage of the midwifery service, including the provision of adequate and efficient ante-natal services, and, secondly, the education of the general public, and especially women, on the urgent need of ante-natal care and supervision.

With regard to the first of these basic requirements I intend to say little, because future arrangements under this section will be discussed in due course by the appropriate authorities. It is sufficient for me to say that extensions of the present County Ante-natal service will most certainly be made and that facilities for ante-natal care will require to be provided for women for whom an ante-natal clinic is not within reasonable distance of their homes.

The provision of additional beds for maternity cases of all descriptions will become in the near future another factor requiring solution by the County Authorities.

My colleague, Dr. Weston, in an article in this report, calls attention to certain matters whose importance she has noted in her clinical experience in this County, and I would, therefore, refer my reader to these observations with regard to maternity and ante-natal provisions in the Administrative County.

Passing then to the second principle of procedure, I would say that the vital importance of the education of the public in measures of ante-natal care cannot be over-assessed. The whole success of the ante-natal scheme depends upon the co-operation and interest of the women concerned. Unless we bring home to them the great need for this work helping them to realise and to understand its true meaning the entire service is doomed to failure. Let it be said at once that this work of propaganda will not be easy of accomplishment. Firstly, it marks a considerable departure from the custom and traditions of ages of generations and, secondly, its very nature leads to a consciousness easily understandable in the circumstances. Both factors provide heavy obstacles to the progress of the work, but I am confident that by methods of common-sense and tact the realisation of all that the service means to them and theirs will become abundantly evident to all their minds.

I myself have addressed women of all classes in various parts of the County on this matter, and I have also had the privilege of speaking to representatives of local Nursing Associations under the auspices of the County Nursing Association. From my experience I should like to take this opportunity of offering a few suggestions which may be helpful to those to whom the opportunity may come in the future of imparting such propaganda.

It is essential to give the information in as simple a form as possible stressing simply the necessity on all occasions for adopting measures which will safeguard, not only the child, but also the mother. Such measures are to be found in ante-natal supervision. Additional emphasis should be given to these facts:—

- (1). That ante-natal supervision is not a measure of emergency, but a measure of routine.
- (2). That it is required for first pregnancies and for subsequent pregnancies if safety is to be assured.
- (3). That ante-natal advice should be sought early in pregnancy, and that ante-natal attendances should be made regularly until the baby is born.
- (4). That by securing competent advice during the course of her pregnancy the woman is assured of safety for herself and her baby from the more serious issues and complications of pregnancy, and that such care will also relieve her of many of the disabilities of pregnancy which though they may have no serious effects may nevertheless prove very distressing.
- (5). That ante-natal care and supervision allows the woman to approach her confinement in the mental and physical assurance that all is well with her and her child.

I would particularly point out that all work of propaganda directed towards the furtherance of ante-natal care should be scrupulously free from any doctrine of death and destruction. The merest implication of this is a gross and unpardonable error, and yet it is an error which may so easily be made by those who are inexperienced in the work.

The basis of the whole work should be implanted in the commonsense requirement of the woman to insure for her safety and well-being. If this principle is rigidly observed then only good can come of the work.

In conclusion I would point out that all the necessary evidence is now available for the use of the responsible authorities. It is to be hoped that theory will give place to practice and that the final arrangements for the future development of the scheme will be based on the assurance of safety and efficiency rather than on the question of financial envolvement.

### ANTE-NATAL CENTRES.

# (a) Report on Clinics.

# (1) The Hinckley Clinic.

This Centre has been conducted on the same lines as last year, under Dr. Mary Weston as Medical Officer. This Centre continues to make satisfactory progress, and it is gratifying to note the work has consistently developed both as regards numbers and also the area served. During the year 1930, twelve sessions were held and 65 expectant mothers made 114 attendances. The average attendance per session was 9.5.

In a further section of this report Dr. Weston has contributed an article on ante-natal work and its requirements.

# (2) The Wigston Magna Centre.

This Centre, which was opened in January, 1929, continues to consolidate its position and to extend its activities. Eleven sessions were held in 1930, and a total of 71 attendances was made. Thirty new patients of whom ten were primiperæ attended the Centre. The average attendance per session was 6.5. Among the complicated cases of pregnancy examined by Dr. Constance Walters, Medical Officer of the Clinic, were the following:—

Two cases of abnormal presentations, three cases complicated by urinary conditions, one case with associated heart disease and one case with associated Phthisis.

It is a matter of pleasure for me to record the success which has attended these Ante-Natal Centres, and a most pleasing feature of their administration is the interest and help given by the local general medical practitioners and midwives. I am confident that the development of the service along these lines will tend considerably to modify maternal mortality, and to improve the provisions of the general maternity service of the County.

# (b) Instruction for County Midwives in Ante-Natal Treatment.

The County Superintendent of Health Visitors reported that in her opinion it would be most beneficial if the County Midwives could attend a course of practical instruction in Ante-Natal care. The Superintendent stated further that this new instruction would be particularly valuable to midwives in whose training ten or more years ago only a minimum of instruction in Ante-Natal work was given.

Accordingly the matter was reported to the County Maternity and Child Welfare Committee and this Committee decided to approach the Leicester and Leicestershire Maternity Hospital authorities with regard to the matter.

Negotiations were completed successfully, and it was decided that County midwives might attend the Ante-Natal Clinics of the Hospital at a charge of 5/- per session. The charge is paid in full by the County Council, and it was arranged that each midwife should attend the Centre during four sessions for general instruction.

The County Health Department circularised the Committee's decision to the midwives of the County, and 55 midwives accepted the offer of the instruction.

A panel of midwives was thereupon formed and the midwives are attending the Clinic in rotation from this panel.

# (c) Report on Ante-Natal Work. (Dr. Mary Weston, Assistant Medical Officer for Maternity and Child Welfare.)

The obstetric ideal has been so often and so ably expounded of late that no further exposition is called for here. The maternal mortality rate, the high rate of gynæcological defect or partial invalidism attributable, directly or indirectly, to childbirth are now matters of real concern to the medical profession. For the present purpose the scope of the complete obstetrical service may be summed up as continuous care and supervision before, during, and after labour.

The Ante-Natal Clinic is now one of the generally suggested channels through which this supervision may be practically administered, and from which considerable hope of progress is now drawn.

In large towns there is no doubt that such hope is being at least partially fulfilled, and the benefits are already appreciable, but when it comes to formulating a scheme for rural areas, new difficulties arise and a system which looks admirable on paper and even yields satisfactory figures for reports, may yet reveal to the eye of the practical clinician certain weaknesses which so far we have failed to remedy, and complexities which will tax all our administrative ability to straighten out, before the work can be really sound down to its last detail. Indeed it is on our ability to cope with the details of the subject, rather than on the formation of broad schemes that our success or failure, from each individual woman's point of view, ultimately depends.

The following observations, indicating the scope as well as the limitations of our present ante-natal work are recorded not with any desire to raise difficulties—nor merely to record them, but in the hope that clinical experience in the actual working of the scheme may be of practical value in guiding or modifying any extension of this important branch of preventive medicine in the future.

Our first Clinic, opened March 1927, was somewhat in the nature of an experiment. With a view to keeping down expenses until the work had justified its existence, the minimum of equipment was provided, and the session held on the same afternoon as the Infant Welfare Centre with the same Doctor and Health Visitor to attend both. The Ante-Natal Clinic achieved a considerable measure of success as far as numbers were concerned, and the co-operation of local general practitioners and midwives was manifest from the start, but the attempt to hold the two Clinics on the same afternoon and on the same premises with no addition to staff, was foredoomed to failure and one of its unfortunate results was the neglect of the Infant Welfare Centre.

From April, 1929, a separate afternoon was allotted to the Ante-Natal Clinic, the meeting being held monthly as before. This arrangement is still in operation and we are now in a position to review our work and see, more or less clearly, how far we are covering the ground we originally mapped out and to what extent we can overcome the present limitations to really efficient supervision of pregnancy.

With the second and third parts of the scheme, viz. care and supervision during and after labour, I do not propose to deal at all. The question of provision of institutional treatment for complicated cases, ante-natal beds, and the availability of a specialist consultant are all awaiting solution, and the obstacles in the path are largely financial. For the present we have to confine our outlook to the adequate supervision of pregnancy, and see to it that we carry out our work with the accuracy and thoroughness which it demands, and without which I do not hesitate to say the very undertaking of it at all is unjustifiable.

I may interpolate here that the Clinic exists for Midwives' cases, but that when doctors advise their patients to attend (as they not infrequently do) we welcome the opportunity of co-operation and of giving to these women too, the advantage of advice on clothing, patterns and general hygiene which no general practitioner has the time or opportunity to undertake, nor would the expectant mother ask him to do so.

#### SUPERVISION OF PREGNANCY.

## (a) Minor Ailments.

It is in the hands of the doctor in charge of the Clinic to do valuable work in dealing with the so-called minor ailments of pregnancy, many of which, including constipation, heartburn and other gastro-intestinal disturbances, are usually dependent on previous functional derangements, aggravated by the existing pregnancy. On the thoroughness of this part of the work, which is mainly educational, will largely depend not only the woman's comfort and happiness, but her general physical fitness to undergo the ordeal of labour and the exacting work of the care of an infant.

- (b) Intercurrent disease may be discovered in the general examination of the patient and by timely reference to her own doctor, future danger may be lessened or averted. Advanced heart disease, Tuberculosis, and Peripheral Neuritis are amongst examples of this in the cases under review.
- (c) Turning now to abnormalities more definitely linked to the question of maternal mortality rates the outstanding ones are *Disproportion* and *Toxaemias*.

It is here that conscientious and efficient supervision offers real hope for the reduction of maternal mortality as well as of still births and neo-natal deaths; here too, a heavy responsibility lies on the Medical Officer of the Ante-Natal Clinic for the woman who attends, receives a sense of confidence and security which, if not well founded, constitutes nothing less than disaster.

Our care and supervision in every case should begin as near the third month as possible, and be continued on an organised plan until the 36th week at least, if we are to justify the confidence of our patients that their labour will be adequately safeguarded from preventable danger.

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These figures show that only 18 cases came during the first half of pregnancy, and over 50 per cent at seven months or after. What is still more ominous is the fact that 56 came only once. and 82 only once or twice. Two reasons may be adduced to account for this. One is given in the statement above, viz., that most women make their first attendance too late to come even a second or a third time. The other is that when a woman is told that everything is normal at her first visit she tends to carry away the impression that it is not worth while to trouble to come again even if she has been asked to do so.

But whatever the reason or reasons may be, the indisputable fact remains that neither with regard to disproportion nor for the detection of incipient toxæmia have we yet compassed adequate supervision.

There are several difficulties in the way of securing regular and sufficiently frequent attendance, especially in districts where women have to travel some miles to the Centre, and journeys either by bus or on foot are undesirable (and undesired) in the later weeks of pregnancy.

Further it is obvious that if we succeed in overcoming the distance factor and impress on patients the need for more frequent examination, the system of a clinic with monthly sessions at once breaks down on two counts:—
(1) the numbers already are as many as we can possibly cope with in an afternoon; (2) both urine tests in cases of albuminuria, and pelvic estimation in cases of mild and suspected disproportion need to be done, not monthly, but weekly if safety is to be secured.

Yet if we are to refer all patients showing evidence of toxaemia either by the presence of albumen or increased blood pressure, straight to their own doctor and so relieve ourselves of further responsibility we shall be doing no more than the certified midwife is, or should be, doing at present. Moreover many such patients, feeling quite well and unwilling to incur additional expense, will not put themselves under a private practitioner for the necessary observation.

I want to make it quite clear that these are not difficulties which we expect to encounter as the work progresses but that they are some of the most outstanding problems with which we are already face to face. It is in consideration of these practical points as well as the whole question of antenatal beds, care of the abnormal puerperium, and availability of specialist consultation service, that I would suggest no further opening of Ante-Natal Clinics until the work is definitely organised as a Department, and a more detailed scheme devised.

The following suggestions are offered after four years trial under the present organisation:—

- 1. The numbers at each ante-natal session should not exceed 10-12.
- 2. The Ante-Natal Clinic should be held weekly. (A monthly clinic could only deal with about 30 patients per annum at the rate of 10 per session and an average of four attendances per patient).
- 3. Where numbers do not justify weekly sessions (viz. in areas of sparse and scattered population) the monthly session might be supplemented by a weekly report on urine during the last two months from the Certified Midwife in charge of the case.
- 4. When albumen is detected, a diet sheet and simple printed instructions should be given to the patient, and a weekly report from the midwife should be provided.
- 5. Such cases not responding to treatment should be referred direct to a doctor without delay.
- 6. Some scheme for payment of the doctor for necessitous cases so referred to him (as also for cases of disproportion), will have to be considered. Some carefully drawn up form to be filled in by the doctor would have to be provided to secure a uniform standard of supervision and one which would meet the Local Authority's requirements.

#### 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 is 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 1930, three cases were admitted to St. Saviour's Home.

The County Council allows the expenditure of £25 a year for the Convalescent Home treatment of Nursing Mothers, and during 1930, one case received treatment.

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 1930 one emergency case was admitted to the Hospital. After considering the financial circumstances of the patient the Committee decided to grant half cost of the 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 1930 of Dr. Tuckett, Medical Officer of the Home:—

"The Home was open for 45 weeks, and during this period the following cases were admitted:—

	Tuberculosis.	M. & C.	W. Total.
Total No. of children admitted	 59	16	75
Average stay of each child (in days)	 57.0	54.6	56.5
Average gain in weight	 5lbs. 13ozs. 3	lbs. 4ozs.	5lbs. 2½ozs.
(one child gained 14lbs.).			

# State of health on discharge.

Improved	 	 34	10	44
Much improved	 	 25	6	31

# Diseases for which children were admitted.

Pre-Tuberculosis		 52	_	_
Early-closed T.B.		 2	_	-
Convalescent Surgica	1 T.B.	 5	_	-
Debility		 _	15	-
Bronchitis		 _	1	_

Considering the very damp and sunless summer all the children showed great improvement for their stay at the Home, and we had no epidemic of colds, and this I think was due to the Ultra-violet Ray treatment and it has proved very beneficial to the children.

(Signed) W. REGINALD TUCKETT, Medical Officer.

### 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 service 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.

### 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 Midwife 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 Medical Officer makes a visit and provides the County Medical Officer with a report.

#### Statistical Particulars.

During the year 220 Midwives notified their intention to practise, 26 left the County or ceased to practise, and two died.

202 of the County Midwives hold the certificate of the Central Midwives Board, and four the L.O.S. Certificate; the remaining 14 belong to the "bona fide" classification.

The Inspectors made 536 visits during the year. No complaints were received regarding 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			659
Notice of liability to be a source	of infe	ction	65
Laying out of the dead records			69
Notice of death of Mother or Ch	ild		18
(all children).			
Still-birth records			49
Notice re-Artificial Feeding			39
Notice of change of address			11

The Midwives called in medical help in 36 per cent of the cases attended by them.

The chief causes for medical help for the mother were:—Injuries to Perineum, Delayed Labour, Malpresentation, Raised Temperature, Adherent Placenta, Ante-partum Hæmorrhage and Post-partum Hæmorrhage.

The chief causes of help required for the child were :—Discharge from Eye, Feebleness, Prematurity, and Deformity.

The records show that 2,773 cases were attended by Midwives during the year, and of this number 1,813 were taken by them alone. In the remaining 960 cases both Doctor and Midwife were in attendance.

# (2) Doctors' Fees in Special Cases.

The sum of £3 2s. 0d. was expended in two complicated cases 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 six Certified Midwives in respect of their attendance on necessitous cases. In five cases the full fee was granted, whilst in the remaining one the grant was restricted to one half of the total fee. Grants under this section amounted to £7 16s. 6d.

## (4) Subsidy to Midwives.

Subsidies to three 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.

For general emergency duty in the County, four Nurse-Midwives are maintained at the County Nurses' Home, Highfield Street, Leicester.

(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. Eleven applications were considered and approved by the Committee, the total expenditure being £330.

(6) Mileage Grants for Midwives.

The sum of £10 was expended in mileage grants to Midwives taking cases outside their usual area of practice. During the year the Committee received nine applications—seven were granted and two withdrawn.

(7) Suspension of Midwives.

During the year no Midwife was suspended from duty through being in contact with infectious disease.

One Midwife was warned for omitting to send for Medical help in a case of Ophthalmia Neonatorum.

# (8) Educational Facilities.

- (1) Midwifery Scholarships. 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 1930, five candidates completed their training, and a further seven began the course during the year.
- (2) Post Certificate Courses. Arrangements are in force 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 two Midwives took post-certificate courses at the following Centre, Camberwell. In each case a grant of £10 was allotted, £4 towards the charge of the Training Institution, and £6 for travelling expenses and provision of a substitute.
- (3) Lectures to Practising Midwives. Arrangements have again been made for Dr. E. Lewis Lilley, Obstetric Surgeon to the Leicester and Leicestershire Maternity Hospital, to give a further series of lectures to practising midwives. The lectures will be given at the following Centres in February and March, 1931:—Leicester (2), Coalville and Loughborough. Details will appear in my Annual Report for 1931.

# 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 291 claims were paid under the provisions of this Act. The total amount expended was £387 13s. 6d. and £165 1s. 3d. was recovered from persons responsible for payment.

# 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. Inspection 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 reach a satisfactory standard.

On January 1st, 1930, 11 Homes were registered by the County Council under the terms of the Act. Of these eight were Maternity Homes, two were Nursing Homes, and one was a combined Maternity and Nursing Home.

During the year two additional applications for registration were approved. At the end of the year, therefore, there remained under registration 13 such Homes.

Exemptions from registration under the Act were granted in seven instances, viz. five Cottage Hospitals, one General Hospital and one Home of Rest.

# THE COUNTY ORTHOPAEDIC SCHEME. (Dr. J. F. Davidson, Deputy County Medical Officer).

The year 1930 has been noteworthy for the extension and development of the County Orthopædic Scheme, with regard to both in-patient and outpatient treatment facilities.

The institution of this service has been one of the most valuable and interesting features of the work of the County Health Department in recent years.

Several years ago, the provision of an orthopædic service by a Public Authority appeared to be an impracticable suggestion. At that time, the practice of this particular branch of surgery was little appreciated, and the benefits which it conferred were wholly unrealised. A gradual but neverthe less marked change has become noticeable, and to-day, the provision of this treatment occupies its rightful place in the general preventive services controlled by Local Authorities. This type of work is associated with all the highest ideals of preventive medicine, and its proper application obviates practically all the sequelae and disabilities which follow the common crippling diseases.

The administrative and clinical conduct of an orthopædic service necessitates considerable financial outlay. It would be idle to say that the service can be maintained at very small cost, but it is equally true to affirm that the relative costs are by no means high. By the term "relative," I specially mean the assessment of costs in proportion to the results obtained. It has always to be remembered that the value of the service is not confined to the present, but extends and reaches far into the future. For example, in the past children who fell victims to Anterior Poliomyelitis (Infantile Paralysis) only too frequently became permanent cripples with varying degrees of loss of function. In many cases these children were wholly, or partly, unable to benefit from ordinary Elementary Education, and finally they passed to adult life badly equipped educationally and physically to meet the demands of the world at large. They, therefore, proved throughout their careers to be a permanent liability on the resources of the community, and their disabilities acted as a continual hindrance to every phase of their lives.

At any time the endeavour of the cripple to obtain and retain remunerative occupation has been hard; to-day the entry of a semi-helpless cripple into the present era of prevalent trade depression and economic stress is little short of a tragedy.

Under existing arrangements, crippled children of to-day obtain adequate and early treatment, which allows of full preventive measures being provided so that permanent disability is largely prevented. In this way there is a sure safeguard given to the children not only for the period of their school lives but also for the years of adult life that lie ahead of them.

The importance of a work which renders wholly fit, or at least gives useful function, to crippled bodies and limbs cannot be too highly estimated.

In its train come personal benefits of mind and of body, and communal benefits of efficient and useful citizenship.

It can be at once stated that though the financial obligations entailed by the service are high when reckoned in pounds and shillings they are indeed low when assessed in terms of personal and communal efficiency.

During the year under review the arrangements for the service though more extensive in their application have remained similar to those in force in 1929.

In last year's report mention was made of the importance of the principle of continuity in the direction and conduct of an orthopædic scheme. In a County area such as Leicestershire there is only one way in which it is possible to secure the complete adoption of this principle. That way lies in the formation of a Central Orthopædic Hospital, from which parent institution there is organised a series of Out-patient Clinics so situated as to cover the whole area, and to provide reasonably easy access for all patients requiring regular treatment. In this manner, the Clinics are not isolated units, but real out-patient departments of the hospital, served by the Hospital Staff of Surgeons and Nurses. After-care supervision can be undertaken by the personnel of the Clinics and thereby a complete continuity of administrative and clinical procedure is secured.

For many reasons such a scheme is impracticable at the moment in Leicestershire, and although the County Service is carried out through the agencies of several Hospitals with associated Clinics, it can be stated confidently that every endeavour is made to preserve continuity throughout the individual units. It is now possible to exert a central administrative control over the entire service, and the ready co-operation of the various surgeons in charge of the clinical sections of the work has been of immense benefit towards the co-ordination of all treatment facilities.

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 appears in every way desirable to extend and to increase the facilities for diagnosis, treatment, and after-care supervision.

With this object in view, an important addition to the scheme will be made in 1931, when the County Authority will co-operate with the City Authority in the provision of treatment at the Leicester City Clinic which is held under the auspices of the City School Medical Service.

This scheme allows for full consultative and complete out-patient treatment for County cases on a pro rata basis at the City Clinic. In-patients requiring hospital treatment of short duration will also be accommodated in the wards attached to the Clinic. Cases requiring prolonged in-patient treatment will be referred by the Leicester Surgeon direct to the Orthopædic Surgeons at either Coleshill, or Harlow Wood Hospitals. On the discharge of these latter cases from hospital, they will again be treated and kept under supervision for after-care at the Out-patient Department of the City Clinic.

As the result of this development there will be a considerable increase in the scope of the County Orthopædic Scheme, and facilities for treatment will now be available for all cases within a reasonable radius of the City.

Towards the end of the year 1931, it is hoped that the new combined Clinic at Coalville will be completed and ready for service. Orthopædic treatment at this Clinic will then be carried out under ideal circumstances with a full equipment of apparatus, including facilities for all types of plaster work.

In the future it is hoped that further extensions will be made to the scheme by the establishment of clinics at Melton Mowbray and at Hinckley.

The extension of the County scheme will take place along these lines, and it is clearly evident that in its full development there will be instituted a complete organisation for the provision of Orthopædic treatment in the County.

The organisation of treatment facilities for crippling diseases involves the use of the following agencies:—

# (1) Ascertainment of the number of Cripples.

Cases of physically defective children of pre-school age are brought to the notice of the Department through the Doctors, Health Visitors, and Infant Welfare Centres.

It must be admitted that though most of the cases are notified to the Department in this way, there must remain a certain number of whose existence we have little knowledge.

As I said in my report of last year, Local Voluntary Associations, whose members have an intimate knowledge of the conditions and circumstances of the families in their area, would prove an immense help to the Department in the supervision, especially of pre-school age children.

With regard to children of school age, all physically defective cases are recorded in special registers which are constantly revised so that they may form a complete and up-to-date record.

# (2) Orthopaedic Hospitals.

Hospitals available :-

- (1) Coleshill Orthopædic Hospital serving the North-Western area of the County.
- (2) Manfield Orthopædic Hospital, Northamptonshire, serving the Southern area of the County.
- (3) Harlow Wood Hospital, Nottinghamshire, serving the Northern area of the County.

Cases are admitted to these institutions through the Contributory Clinics. In necessitous cases the County Council bear part, or whole, of the expenses involved.

# (3) Out-patient Treatment : Clinic Centres.

# (a) Coalville Clinic.

The Coalville Clinic which is entirely under the administration of the County Health Department, continued during the year under the direction of Mr. Allan and his staff from Coleshill Hospital.

The executive work of this Clinic is carried out by a Local Voluntary Committee but the financial responsibility rests with the County Council.

A fully trained Orthopædic Sister attends each session and provides massage, electrical treatment, radiant heat, and plaster treatment.

In addition, the Voluntary Secretary secures the attendance of a sufficient number of voluntary workers to assist the Nurse at each session. Members of this Committee also engage in valuable after-care supervision of cases which have ceased attendance at the Clinic. The Department gratefully acknowledges the splendid services which these Voluntary Workers render in this area.

The Clinic is open on two afternoons per week, each session lasting for over three hours. The Orthopædic Surgeon attends at monthly intervals when all new cases are examined and the progress of cases in attendance ascertained and reviewed.

The Clinic presents a most satisfactory record of work accomplished during the year, and much credit is due to the whole-hearted enthusiasm of the Orthopædic Sister whose valuable and unselfish service is most praiseworthy.

# (b) Loughborough Cripples Guild.

This Clinic 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.

This 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 once a month for the general examination of cases, (b) an Orthopædic Sister who attends once a week, (c) a Masseuse who is employed full time, and (d) Voluntary workers for general duties.

# (c) Leicester Royal Infirmary.

In the Orthopædic Department of the Leicester Royal Infirmary Outpatient treatment is provided for cases from the central area of the County. No charge is made for the routine treatment, but the County Council in necessitous cases assumes whole or part of the responsibility for the provision of surgical appliances.

# (d) 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. Although excellent work is being carried out in these districts it is regrettable that no arrangements for co-operation exist between the County Council and these Voluntary bodies.

# (4) Provision of Surgical Apparatus.

Complete arrangements are now in force for the provision of Surgical Appliances for County cases.

Applications from the Northern area come direct through Coalville and Loughborough Clinics, and most of the others are received from the Leicester Royal Infirmary.

Inquiry is made into the financial circumstances of the parents and each case is presented for the consideration of the appropriate Committee. The parents are asked to pay the whole or part of the cost according to a scale approved by the Committee.

Necessitous cases are provided for free of charge.

# (5) After-care Supervision.

It is essential that children discharged from Orthopædic Hospitals and Clinics should receive supervision to ensure that they wear with regularity and benefit, any apparatus which has been provided to support weak muscles and to prevent deformity.

It is a futile and wasteful procedure to discharge children from hospitals and clinics with deformities corrected, and then to fail in the provision of that supervision which will consolidate all the care that has been taken in their cure and re-education.

This work is at present largely undertaken by the Department's Medical Officers and Nurses, in conjunction with Voluntary Workers associated with the various Clinics. In a previous section of this report the desirability of obtaining the services of Local Voluntary Associations has been referred to with regard to the early detection of cases of crippling disease. Their formation is equally desirable from the point of view of after-care supervision. The local knowledge of individual families which they possess would be invaluable, and their co-operation in this portion of the work would be of the greatest help to the Department.

I am confident that the adoption of these measures in relation to (a) Prevention, and (b) After-care, would result in material benefit to patient and Local Authority alike.

From the contemplation of the provisions of the County scheme, as described in this report, it will be noted that great progress has been made in the scope and extent of the service in the few years of its existence. It can be expected with confidence that still further progress will be made in the years ahead in the extension and development of this most valuable preventive work.

In conclusion, the Central Health Authority gratefully acknowledges the valuable and generous services of both the professional and voluntary staffs of the various clinics and institutions, which are associated with the Department in the provision of Orthopædic treatment to cases in the Administrative County.

## 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, County cases being 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, which has now been in existence eleven years, is still held at the Loughborough General Hospital, on Mondays at the following times:—

Females—4 to 4-45 p.m.

Males—5-15 to 6-15 p.m.

The following figures relate to the work during the year :-

### New Cases:

Syphilis Gonorrhœa Other conditions	 Males 7 12 0	Females 5 4 0	Total 12 16 0
	-	_	-
	19	9	28
Renewed Attendances:	-	_	
Syphilis	 151	240	391
Gonorrhœa	 146	28	174
Other conditions	 3	0	3
	300	268	568

The new cases during 1929 was 32, and the total number of attendances was 611.

#### TREATMENT.

During the year, 134 injections of arsenobenzol compounds were given, 74 to males and 60 to females, as against 88 in 1929. The preparations in use are Novarsenobillon and Metarsenobillon, and 63 of the former and 61 of the latter were given. Other forms of treatment, irrigations, bismuth compounds and vaccines, to the total of 149 were also given.

# Arsenobenzol Compounds supplied to General Practitioners.

During the year, 111 doses of these compounds were supplied to three general practitioners.

#### General Remarks.

This clinic though not large, in my opinion meets the requirements of the districts which it serves. There is a small decrease in the numbers of new cases and attendances, but the amount of arsenobenzol compounds given, shows that those patients requiring continuous treatment are attending regularly and as long as is necessary.

> 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 1930.

During this period 655 patients presented themselves for diagnosis and treatment.

By clinical examination 207 were apparently suffering from syphilis and 448 from gonorrhœa. Of these, 10 patients were proved to be suffering from both acute gonorrhœa and syphilis. 167, after repeated clinical and pathological examinations, were found to be non-venereal; 129 having been suspected of suffering from gonorrhœa and 38 from syphilis.

483 were City patients; 172 were County patients.

18,268 attendances were made by patients on the books; of these, 5,456 received treatment for syphilis, 12,250 for gonorrhœa.

14,807 were City patients, and 3,461 County patients.

6,189 of these attendances were at times other than when the clinic was in session, for irrigations and other intermediate treatment.

5,746 attendances were by City patients and 443 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 cerebrospinal fluid in some cases of neurosyphilis was submitted to Wassermann and other tests. To patients suffering from syphilis, 3,118 intravenous or intramuscular injections of Salvarsan substitutes and 977 muscular injections of mercurial cream were administered, 3,185 for City patients and 910 for County patients.

To patients suffering from gonorrhœa, 11,600 intraurethral 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.

77 patients were admitted to the wards, 50 being City, and 27 being County patients; 17 were highly infectious; eight cases acute epididymitis; three on admission and five arose in course of treatment; four gonorrhœal Rheumatism and three acute prostatitis. One case of gonorrhœal ophthalmia. Two cases of chronic syphilis were admitted, suffering from disease of spinal cord and heart. No case of jaundice was admitted, but two slight cases of arsenical dermatitis. 50 operations were performed under anæsthesia.

#### Results.

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

Syphilis, 35; Gonorrhæa, 47. Who ceased attendance after completing one or more courses, before completion of treatment necessary:—Syphilis, 33; Gonorrhæa, 23. Who ceased attendance after completion of treatment, but failed to submit themselves to final tests:—Syphilis, 41; Gonorrhæa, 44. Transferred to other Clinics:—Syphilis, 20; Gonorrhæa, 47. Transferred from other Clinics:—Syphilis, 16; Gonorrhæa, 34. Those who completed treatment and submitted themselves to repeated tests, and were clinically and pathologically proved to be cured:—Syphilis, 28; Gonorrhæa, 181. 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 three over those of last year.

Special Note. A serious outbreak of virulent syphilis occurred during 1929. This outbreak, in most instances, was accompanied by a virulent form of actively infective organisms in addition to the spirochoeta pallida. It is satisfactory to note that the number of new infections, viz., 77, has slightly decreased, and the virulence and complications are less severe.

It is 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 symptons have disappeared, and the necessary tests have been made to prove their cure complete.

My official assistant, Dr. Atkinson, and Dr. Dickinson have attended the Clinic regularly, giving valuable help in the treatment of the patients.

The City and County Medical Officers of Health, Dr. Millard and Dr. Fairer, have paid official visits of inspection during the year.

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 on the Female Clinic for Venereal Diseases for the year 1930, for Leicestershire.

The total number of cases seen for the first time has been 378: 115 suffering from Syphilis, 170 suffering from Gonorrhæa, 93 showing no sign of disease (Under the last category are included all cases examined as contacts); (a) Children of infected mothers, (b) Mothers of infected children, (c) Wives of infected husbands, (d) Babies of mothers treated during pregnancy. Patients from the County numbered 62 of whom 32 suffered from Syphilis, 4 suffered from Gonorrhæa, 26 proved to be non-venereal.

# Out-patients.

The total attendances of all patients has been 9,133. 6,956 were seen by the Medical Officers at the Clinics. 2,177 were seen at other times for prescribed treatment. 201 of the above attendances have been made by patients who after observation were found not to be suffering from venereal disease.

# Syphilis.

Intravenous injections combined with oral administration of drugs is the method of treatment whenever it can be followed. This is given to adults and to children whenever the intravenous method can be used. The chief drugs used have been:—Neokharsivan and Stabilarsan given intravenously, Sulfarsenol, Bismuth, and Intramine given intramuscularly, Mercury, Potassium Iodide and Bismuth given by mouth.

The aggregate number of injections given at all Clinics, male and female, City and County has been 6,248 and of these 735 were given to County female patients.

#### Gonorrhæa.

The number of new cases seen and diagnosed has been 170. Treatment has been (1) Local by disinfection of vagina, cervix and urethra, by (a) Dressings, tampons, douches or pessaries, (b) Irrigation of the bladder. This is carried out in all cases when infection of the urethra is found to be present, (c) Instillation of glycerine into the body of the womb daily in suitable cases. (2) General treatment for anæmia is given and alkalies are given in most cases.

## In-patients.

The ward in the Royal Infirmary has been used to a still greater extent this year. On the female side are eight beds and two cots. The single ward is used for special cases and maternity patients. 144 cases were admitted during the year. 61 suffering from Syphilis, 83 suffering from Gonorrhæa. 20 confinements have taken place, all babies were born alive and at present show no sign of disease.

The total number of days of in-patient treatment is 2,925. Of these 746 days were due to patients suffering from Syphilis, 1,919 days were due to patients suffering from Gonorrhæa, 260 days were due to babies which at present show no sign of disease.

Amongst the cases treated were: one case of abdominal operation performed for serious complication of Gonorrhæa, three cases of dilatation and curettage after long local treatment for Gonorrhæa, two cases of abscess of Bartholini's gland were opened under anasthesia. All other cases treated in the Out-patient Clinic. 26 cases of salpingitis for rest and treatment without operation, four cases of acute gonorrhæal rheumatism, 11 cases of infectious early syphilis showing primary sores and secondary rashes, 13 children under the age of nine years, suffering from acute gonorrhæal vulvo vaginitis, three cases of Ophthalmia Noenatorum, two cases of Jaundice, two cases of Arsenical Dermatitis, one case of Nephritis, 39 cases of early Syphilis have been diagnosed this year.

Dr. Millard and Dr. Fairer, Medical Officers of Health for the City and County respectively, have paid two official visits this year.

(Signed) BESSIE W. SYMINGTON, M.D., B.S. (Lond.).

# Report on work for Venereal Diseases at St. Mary's Home, 1 Ashleigh Road, Leicester, for treatment of County patients, 1930.

The cases dealt with in this department are young unmarried girls under 23 years of age. The work is carried out in three parts: (1) Work in the Hostel containing nine beds, four being kept specially for maternity cases, with cots for babies. (2) Work in the Clinic held weekly, (3) Work carried out by the Sister-in-charge as prescribed. The total number of new cases admitted to the Hostel has been 31. 10 of these were maternity cases. From the County 12 cases and six babies were dealt with.

The total number of new cases treated as Out-patients has been 42. Of the 12 County cases admitted, three were suffering from Syphilis and Gonorrhœa, one was suffering from Syphilis only, seven were suffering from Gonorrhœa only, one showed no sign of Venereal Disease. Six were maternity cases, four were primary Syphilis.

Out-patient Clinic.

2,042 attendances have been made. Of these, 1,405 for individual attention by Medical Officer. 627 for treatment as prescribed. Of these about 100 attendances have been made by County cases. The total number of injections given has been 164.

The County Health Visitors have been kept in touch as far as possible with the babies after discharge.

(Signed) BESSIE W. SYMINGTON, M.D., B.S. (Lond.)

# SANITARY CIRCUMSTANCES OF THE COUNTY.

## (A). RAINFALL IN 1930.

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

MONTH.			TOTAL DEPTH		EST FALL HOURS	Number of '01 in. or more.	days with 04 in. or more
January			Inches 2.91	Inches .37	Date 14th	18	15
February			0.59	.27	1st	13	3
March			1.84	.68	15th	11	7
April			2.75	.46	24th	16	13
May			2.69	.92	5th	17	15
June			1.35	.29	18th	15	9
July			4.13	.79	29th	15	11
August			2.41	.62	22nd	21	13
September			3.32	.64	17th	20	12
October			1.55	.39	4th	17	11
November			2.44	.50	29th	17	11
December			1.22	.51	12th	17	9
TOTAL			27.20		-	197	129

I am indebted to Mr. Stacey for the information with reference to the Rainfall in his District.

# (B). GENERAL SURVEY.

#### (1). WATER.

There has been considerable improvement in the water supply of many districts of the County during the year. With the continued development of housing schemes it has been necessary to augment the water supply to several areas by the extension of existing water mains, or by the construction of new wells and of storage reservoirs. Several schemes initiated during 1929 have been completed during 1930, with consequent benefit to the inhabitants of the areas supplied.

The following are the more important improvements carried out in Urban Districts:—

# Ashby-de-la-Zouch.

A new storage reservoir 3,000,000 gallons capacity has been completed during the year by the Ashby and Swadlincote Joint Water Board.

#### Coalville.

The mains in connection with the Ellistown Auxiliary supply have all been laid, and the reinforced concrete water tower at the source of supply is nearing completion.

Two hundred yards of water mains have been laid for the extension of the supply to the Ellistown housing site.

# Loughborough.

Extensions of water mains have been made to Ling Farm Housing Estate and Bottle Acre.

# Market Harborough.

The construction of the new reservoir of 250,000 gallons capacity commenced last year has been completed and is now in use.

# Wigston.

A new six-inch main has been laid for three quarters of a mile along Aylestone Lane.

The mains throughout Wigston Magna have been scraped and the supply considerably augmented.

Improvements in the Rural Districts are as follows :-

# Ashby-de-la-Zouch.

During the year considerable progress was made in supplying house services at Measham, Oakthorpe and Donisthorpe, from Council water mains. Public supply was substituted for well water in 452 houses.

#### Market Bosworth.

During the latter part of the year water mains were being laid through Ibstock and Desford, Ibstock obtaining water from Coalville, and Desford tapping the Nuneaton supply from Thornton Reservoir. The schemes will be completed early in 1931. A water supply for Markfield will be provided by Leicester City. The service mains will be completed in 1931.

# (2). RIVERS AND STREAMS.

Frequent inspections of the rivers and streams of the County are carried out and samples of water taken for laboratory analysis.

The main water course is the River Soar which rises in the neighbourhood of Ullesthorpe and flows in a general direction S.W. to N.N.W. through the County. In its course it passes through the City of Leicester, and finally leaves the County at its confluence with the River Trent, a few miles to the East of Sawley.

The main tributary of the Soar is the River Wreake which flows through Melton Mowbray and joins the Soar at Cossington. All the tributaries receive sewage effluents at some point, and frequent examinations of this water are made to ascertain if pollution is taking place.

During July and September, specimens of water were collected at various points on the River Soar. These were submitted to analysis and the dissolved oxygen content estimated. These investigations were carried out under the auspices of the Ministry of Agriculture and Fisheries, as part of the annual hydrographical survey of the Trent watershed.

## (3). DRAINAGE AND SEWERAGE.

During the year 70 inspections of Sewage Farms in the County were carried out by the Senior Medical Officers. Each sewage farm was inspected, and a laboratory analysis of the effluent carried out. Where the result of the analysis was below standard, or the general condition of the farm was unsatisfactory, a further inspection was made after a short interval.

If the effluent discharging into a neighbouring stream is likely to prove a source of danger to the community a special report is made to the Public Health Committee, and a copy of the Medical Officer's report is transmitted to the Local Authority concerned. This measure is usually sufficient to ensure that the pollution will be remedied.

The following are the more important particulars regarding sewage farms inspected during the year:—

#### ASHBY-DE-LA-ZOUCH.

Sanction was obtained after a Ministry of Health Inquiry for a loan of £17,450 for works of sewerage and sewage disposal.

It has been decided to construct filter beds at the Packington sewage farm, in addition to the settling tanks proposed in the original scheme. This should add considerably to the efficiency of the disposal works which were heavily overloaded.

#### BRAUNSTONE.

Application was made during the year by the Blaby Rural District Council to the Ministry of Health for sanction to borrow £22,000 in respect of sewerage and sewage disposal in the Braunstone district.

At the Inquiry it was proposed to acquire a site of  $3\frac{1}{2}$  acres in the valley west of the Narborough Road, for the erection of a sewage farm to serve the district under enquiry. The whole of the land on the North side of Coalpit Lane, Braunstone Lane and Ratby Lane, has been purchased by the City of Leicester for housing purposes, and on this area the City Authorities have erected some 1,700 houses.

An alternative scheme was considered in which the whole of the sewage of the area would be taken into the City of Leicester sewers.

#### BURBAGE.

Approval has been granted for works of sewerage and sewage disposal for this village. The scheme comprises sewering for 100 new houses (with provision for further extensions), and a new disposal works.

#### BARWELL AND EARL SHILTON.

These farms continue to work very efficiently and samples of effluent submitted to laboratory analysis show satisfactory results.

#### BLABY AND WHETSTONE.

The work of erecting the new filter beds has been completed. It is proposed to extend the sewers in the village towards Countesthorpe to link up a further 100 houses and also to allow for development of an estate where it is proposed to erect 120—180 houses. The new filter beds are so close to the river, and at such a low level that in times of flood they are thrown out of action. With the additional amount of sewage anticipated it is quite evident that the present works will become overloaded.

#### NARBOROUGH.

Owing to the unsatisfactory condition of this farm special representations were made to the District Council, which have resulted in considerable improvement taking place.

#### ENDERBY.

The sewage on this farm is passed through the sedimentation tanks, but only part goes through the new filter bed. The remainder passes through the old filter beds which are served by inadequate sewage channels. It does not seem possible to work this farm satisfactorily by both the old and new methods, and the construction of further filter beds as proposed in the original scheme is necessary.

#### COALVILLE.

A proposed extension of main drainage in the area of the Coalville Urban District Council was the subject of a Ministry of Health Inquiry during the year. The scheme is only concerned with the Southern and older disposal area, and with the outfall sewers discharging thereon, viz., Kelham Bridge Sewage Farm. The new system is intended to deal with the requirements of the district draining to this farm for a future estimated period of 30 years and provides a new 15" middle level outfall sewer.

#### COUNTESTHORPE.

The new disposal system is working very satisfactorily. It consists of detritus tanks, storm water overflow, sedimentation tank, two rotary filter beds and humus tanks. The works are well kept and are sufficient for the present needs of the area.

#### DONISTHORPE.

This farm has been reported upon adversely on more than one occasion.

A new scheme has been prepared and a Ministry of Health Inquiry was held during the year.

It is hoped to be able to report considerable improvement in the future.

#### GREAT EASTON.

With a view to preventing further pollution of the water course passing through Great Easton village, a scheme has been prepared by the Hallaton Urban District Council for new works of sewerage and sewage disposal for the district.

#### GROBY.

A scheme for new works of sewerage and sewage disposal has been approved and their construction is now proceeding.

#### HALLATON.

Sanction has been obtained for new works of sewerage and sewage disposal for the village of Hallaton.

#### HINCKLEY.

Construction of new works of sewerage in the Urban District of Hinckley is now proceeding.

The scheme deals with the laying of new sewers for a distance of 1\(\frac{1}{4}\) miles in an area of the town not previously sewered. It will serve about 1,000 houses and by its adoption the present irrigation field to which the Middlefield Estate drains, will cease to function, and in the Leicester-Ashby Road district the present insanitary cesspools will no longer be required.

#### IBSTOCK.

Arrangements have been made to have the concrete walls of the storm water tanks reconstructed. When this work is completed the farm will be in good condition and the disposal plant satisfactory.

#### MEASHAM.

The condition of this farm was found on inspection to be unsatisfactory.

A scheme is now in course of preparation for the erection of new works, and considerable improvement may be expected in the future.

#### MOUNTSORREL.

This farm still gives cause for considerable dissatisfaction. The whole system is very old, and quantities of sewage pass through the farm practically untreated. Improved methods of disposal are an urgent need.

#### RATBY.

A special report was made to the Market Bosworth Rural District Council regarding the unsatisfactory condition of this farm.

It is understood that application has been made for approval of a scheme for new works, and that an Inquiry will be held in the early part of the new year.

#### TUGBY.

New and satisfactory sewage works have recently been erected in this village. On inspection in August, these works appeared to be most efficient.

#### TUR LANGTON.

Application was made by the Market Harborough Rural District Council for sanction to borrow £650 in respect of new works of sewage disposal for this village.

After an Inquiry the approval of the scheme by the Ministry was withheld.

# (4). CLOSET ACCOMMODATION.

The reports of the District Sanitary Inspectors show that during the year 867 privies, pail or earth closets, were converted to the water carriage system and 146 privies were converted to pail or earth closets.

A comparatively large number of conversions of privies to the water carriage system, totalling 155, have been made in the Coalville Urban District, but a relatively high proportion of privies is still in existence. With the contemplated extension of main drainage in the Urban District, this will be rectified to some extent in the near future.

Conversions to the water carriage system have been facilitated in many districts of the County by the improvement of the water supply. This factor when taken in conjunction with an efficient sewage disposal plant has a very important bearing on the type of closet in use in a particular district.

Each year shows some improvement in the type of closet accommodation in the County, and with further extensions of water supply and new methods of sewage disposal more rapid and extensive improvements are to be anticipated.

# (5). SCAVENGING.

Destructors are in operation at Loughborough, Market Harborough, Blaby, Melton Mowbray and Quorn.

Controlled tipping is carried out in several districts, land having been acquired by the District Authority for this purpose.

Shallow burying of refuse on the sewage farm is still carried on at Hinckley.

# (6). SANITARY INSPECTION.

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

Premises visited		 35,426
Defects or nuisances	discovered	 7,321
Complaints received		 978
Inspections for all po	urposes	 40,440
Notices served :-		
Informal		 4,833
Formal		 514
Summonses issued		 17
Convictions obtained	d	 14

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

# Ashby-de-la-Zouch Urban District.

Eight inspections were made to four vans during the year. Two summonses were issued with regard to the condition of vans in the area. These were withdrawn when the vans were vacated by the occupiers.

#### Coalville Urban District.

21 inspections of nine vans were made during the period under review.

A warning notice was served on the keeper of a common lodging house for overcrowding discovered by the Sanitary Inspector on a midnight visit. Negotiations are in progress with the owners for improvement of sanitary accommodation and amenities of land in the centre of the town, periodically used as a fair ground and on which numbers of vans congregate for a few days at a time.

# Loughborough Urban District.

During the year 69 inspections were made of vans, which have now been removed from the neighbourhood in consequence of notices having been served.

# Market Harborough Urban District.

Ten temporary encampments were inspected frequently, and absence of sanitary accommodation was dealt with in one instance satisfactorily.

# Barrow-on-Soar Rural District.

Seven notices were served in respect of one encampment. As a result the number of inhabited vans was reduced from ten to three. In addition closets were built and a supply of water from public mains was secured.

# Melton Mowbray Rural District.

15 visits of inspection were made to ten vans during the year. One van was found to be in a dirty condition, but a warning to the occupant resulted in a marked improvement.

# SEWAGE DISPOSAL IN A COUNTY AREA. (Dr. K. Cowan, Assistant County Medical Officer).

The responsibilities of a County Health Authority with regard to sewage disposal are mainly concerned with the enforcing of the conditions of the Rivers Pollution Prevention Acts. This involves the supervision of the methods of sewage disposal employed throughout the County area, the examination of sewage, sewage effluents, and of waters from dykes, brooks, streams, and rivers. The actual sewage disposal works in each Urban and Rural District are directly under the control of the local Urban or Rural Authority which is responsible for their construction, staffing and general working.

Three Authorities are interested in each disposal works irrespective of the importance or magnitude of the works, the Ministry of Health, the County Authority, and the Urban or Rural Authority. This fact is of importance when taking into consideration the construction of a new works or the replacement of an unsatisfactory existing one. If a sewage farm is in an unsatisfactory state as judged by the standard of the effluent, if the works are insufficient to meet the needs of the area served, or if they are so out of date as to be useless, before the County Authority can secure improvement a report must be submitted to the Local Authority concerned, pointing out the faults and asking for their rectification. If this rectification is going to involve any financial expenditure, on a new works for example, then an enquiry under the auspices of the Ministry of Health will be necessary.

As the sanction of the Ministry is required for any loan or for the provision of a grant under unemployment schemes, they desire to be informed fully as to the nature of the new scheme and to be satisfied of the necessity for its construction. The County Authority then is interested not only in the results of treatment of sewage in the County, but in the needs of each area and in the method employed.

From the analysis of sewage and of sewage effluents from different sources it is possible to arrive at some idea as to the efficiency of the methods employed. It is also possible to gain a definite knowledge of the amount of pollution of brooks and streams, and of the river, or rivers passing through a particular area by the analysis of samples of water from these sources. All the supervision of methods of working, the examination of samples of effluents, and of waters by the County Authority is directed towards the prevention of pollution of rivers, thus from a County standpoint the good results from a satisfactory disposal plant in one area may be entirely negatived by pollution from an unsatisfactory works discharging into the same stream. On the other hand the discharge of only partially purified sewage from another source may cause very little pollution if the volume of the stream receiving the effluent is much greater. It will be plain then that it is not possible from the view point of pollution of rivers and streams to judge each disposal scheme only as an entity, but to consider it from the broader angle of its effects on the general system of disposal in the whole area.

In a large rural area it will be found that a diversity of method of sewage disposal exists, which might be classified under the following headings:—

- (i) Modern methods.
- (ii) Land treatment methods.
- (iii) Miscellaneous.

Before considering the efficacy of the methods outlined it is necessary to have a standard by which this may be judged.

The Royal Commission on Sewage Disposal, appointed in 1898, concluded that the harm caused by allowing unpumped, or imperfectly pumped sewage to flow into rivers and streams, may be placed under one or more of the following headings: "The de-aeration of the water of the river and consequent injury to fish; the putrefaction of organic matter in the river to such an extent as to cause nuisance; the production of sewage fungus and other objectionable growths; the decomposition of suspended matter and its accumulation on the river bed or behind weirs, which will draw upon the oxygen in the supernatent water; the discharge into the river of substances in solution or suspension, which are poisonous to fish or to live stock drinking from the stream; the discolouration of the river, and the discharge into the river of micro-organisms of intestinal derivation some of which are of a kind liable, under certain circumstances to give rise to disease . . . . the effect of an effluent on a stream does not generally depend on the absolute amount of organic matter contained in it, and the important thing to ascertain in examining an effluent is the extent to which the contained organic matter

has undergone fermentation." In the Eighth Report of the Royal Commission on Sewage Disposal the view is expressed that the nuisance-producing power of an effluent is broadly proportioned to its deoxygenating power on the stream. If 100,000 c.cs. of river water (containing effluent) do not take up more than 0.4 grammes of dissolved oxygen in five days, the river will ordinarily be free from signs of pollution but above this figure it will almost certainly show them. This figure (0.4) is termed the limiting figure, and should be the foundation upon which any scheme or standard should be constructed in order to ascertain the minimum degree of purification which would be sufficient to obviate risk of nuisance.

The following may be taken as a general standard for sewage effluents :-

- (i) The oxygen absorbed in four hours at 60°F, should not exceed 1.5 parts per 100,000.
- (ii) The Saline Ammonia should not exceed 1.5 parts per 100,000.
- (iii) " Chlorides " " " 10.0 " " "
- (iv) " Albuminoid Ammonia " " 0.15 " " "
- (v) There should be no faecal odour.
- (vi) The effluent should not be liable to putrefaction or secondary decomposition.
- (vii) Generally speaking high nitrates is a good feature.

In finding the amount of purification which has taken place it is also necessary to take into account the composition of the sewage.

By adopting these standards the methods of sewage disposal in the County can be classified into Satisfactory, Fairly Satisfactory and Unsatisfactory, allowing some margin for local circumstances. It can also be decided which rivers and streams show sufficient pollution to give rise to possible nuisance.

In the following table those sewage disposal works were classed as :-

- (a) Satisfactory; where the figures of the analysis of the effluent came well within the above standards.
- (b) Fairly Satisfactory; where one or other figure in the analysis did not conform to the standard but where sufficient purification was taking place to make the effiuent fairly satisfactory.
- (c) Unsatisfactory; where the conditions of the effluent was such as to indicate that little or no purification was taking place.

Sewage Farms	No. inspected	Satisfactory	Fairly Satisfactory	Unsatis- factory
Land treatment	12	2	3	7
Tanks, filter beds, etc.	24	19	3	2
Miscellaneous	9	3	2	4
TOTAL	45	24	8	13

It will be observed from the above table that only slightly more than 50 per cent of the sewage disposal works in the County produce definitely satisfactory results, roughly 18 per cent are fairly satisfactory; 29 per cent are unsatisfactory and little or no purification of sewage is taking place.

Of those sewage disposal works where modern methods are employed only eight per cent are unsatisfactory, and 12 per cent fairly satisfactory, but where land treatment and other miscellaneous methods are in operation over 50 per cent are unsatisfactory, and almost 25 per cent only fairly satisfactory.

It is obvious the main causes of pollution are to be found in unsatisfactory methods of disposal. Where a modern plant is in operation it is possible to obtain a satisfactory, or fairly satisfactory, effluent in more than 90 per cent of instances; the unsatisfactory results in this class are mostly due to an error in actual working; filter beds insufficiently rested, insufficient time for sedimentation, etc., and are capable of easy rectification. Where land treatment methods are in operation either the area of land in use is totally inadequate for the volume of sewage run on to it, part of the land is used as an ash tip or the primary function is not purification of the sewage, but the cultivation of crops.

Amongst the miscellaneous methods employed are septic tanks with land treatment of effluent, contact beds, uncut osier beds, and sedimentation tanks with direct flow of effluent into a stream. In the main these farms produce unsatisfactory results, and in several cases no purification whatever is taking place. They require as much attention and greater supervision than those where modern methods are in operation, but notwithstanding the time and energy expended make very little return in the production of good results.

Analysis of samples of water from streams in the County show varying results depending upon the population of the area drained, and on the methods of sewage disposal employed, but on the whole the streams examined are very free from pollution. On the contrary the main river shows some pollution, the rate of flow is slow and the length is not sufficient to allow of self-cleansing to any great extent. There has been considerable improvement in the state of the river in recent years, coincident with improvements in

sewage disposal methods. That the river should be polluted and the streams comparatively free is explained by the fact that the sewage effluents from many of the larger centres of population, and from some unsatisfactory sewage farms, drain directly into the river, as do the trade wastes from most of the manufactories in the County. The latter includes wastes from dyeing, wool scouring, and whey from cheese factories.

In reviewing the methods of sewage disposal employed it is evident that though most areas have a scheme of some nature a great deal of pollution is taking place, but where modern disposal methods are in use satisfactory results are obtained in practically all areas. It is only by the replacement of out of date and inefficient works by modern methods that general improvement can be secured, and though there are many difficulties, financial and otherwise, in the way of attaining this end when the need exists efforts to surmount these difficulties will eventually prove successful. Local district Authorities should be encouraged to combine where circumstances permit in the construction of larger and more up-to-date systems of disposal. It is not uncommon to find at present that two or three centres of population have each a small sewage disposal works within a stone's throw, none of which may be satisfactory or of sufficient size to justify the employment of an efficient manager. In such cases greater efficiency and economy would be secured by the construction of a works for the combined areas; the efforts of one enlightened local Authority would tend to stimulate others towards merging in a combined scheme.

That the waterways of the County show pollution is an indication that the work of sewage disposal in the area as a whole is failing in one of its main objects. It is not sufficient that sewage disposal schemes should worked be only to avoid local nuisance; the ultimate aim of unpolluted waterways should be in addition an ideal to be attained, and it is with this end in view that County Authorities should encourage the local District Councils towards a sense of their importance and an appreciation of their duties in this aspect of the matter.

#### HOUSING CONDITIONS IN LEICESTERSHIRE.

Under the terms of the Housing Act, 1930, considerable obligations in respect of the provision of housing have been placed upon County Authorities. The principal obligation is set out in the following passage:—" It shall be the duty of the Council of every County as respects each Rural District within the County to have constant regard to the housing conditions of persons of the working classes, the extent to which overcrowding, or other unsatisfactory housing conditions exist, and the sufficiency of the steps which the Council of the district have taken or are proposing to take to remedy those conditions and to provide further housing accommodation."

To meet in entirety the requirements of this section it would appear that a full general survey of the present position of housing in the Administrative County should be undertaken. Furthermore it is essential that this survey should not be curtailed as in previous years to a mere numerical record under certain specified titles of the condition of houses in the area. It must be made if the terms and spirit of the Act are to be faithfully observed in a fashion which permits of the adoption and practice of the wide underlying principles which form the vital basis of all such questions. The principles which I have in mind at the moment may be conveniently and briefly summarised under the following heads:—

- (1). The proportion of available houses to the recorded population of any one area.
- (2). The question of overcrowding with special reference to the adequate and decent separation of the sexes.
- (3). The relation to the housing problem in general of those houses whose condition does not merit closure, but whose state demands repair work so that they may be rendered in all respects fit for habitation.

Under present conditions it is manifestly impossible for a County Authority to supply this information directly and at first hand. It is, therefore, clearly apparent that the actual information with regard to the state of housing must be obtained from the Public Health and Sanitary officials of the various local districts comprising the Administrative County. The onus placed upon these latter officials and Authorities is indeed heavy in its responsibilities because to comply with the conditions of the Act in toto it is necessary for these officers to undertake a full and comprehensive survey of each and every house in their district. The extent and gravity of the burden of such a survey can be readily realised by any person who has actual practical experience of this work. It seems inevitable that it will become necessary in the near future to review generally the position arising from the changes in administration of housing matters, especially with regard to the relationship between County and District officials. It is highly probable that no matter what course of action is eventually decided upon there will be increased costs envolved by the new service.

To this expenditure there may be considerable opposition based on economic grounds, but to my mind there can be no work which is more urgent in the interests of general public health than this work of surveying and improving the housing conditions of the people. There can be little doubt that bad housing conditions, viz., disrepair, chronic dampness, lack of sufficient ventilation and lighting, overcrowding and lack of separation of the sexes are the direct causes of both physical and moral troubles in the lives of our general population. To instance only one example of established disease, viz. Tuberculosis is sufficient to prove to the hilt that money expended in the improvement of housing conditions is indeed a basic and most urgent necessity in any real attempt to stay the progress of this scourge of present day civilisation. Money and medical care are to-day being spent on this disease in wide-spread fashion, and much of the result derived from this expenditure financial and therapeutic is nullified by the conditions to which patients return or under which they constantly live in their own homes.

It is, therefore, my opinion that this question of sufficient and efficient housing represents one of the most urgent and impelling requirements of the general population of to-day, and furthermore, it very definitely appears to me that on the successful issue of these schemes for the betterment of the housing conditions of persons of the working-classes largely depends the success or non-success of many of the ideals and ambitions of preventive medicine.

With these considerations in view there would appear to be little difficulty in justifying the additional expense which this new administration will most certainly entail and, secondly, I recommend for earnest consideration those points I have mentioned with regard to this problem of adequate housing, which although it is primarily a sanitary question bears far into the full development of the principles of preventive medicine.

In this early stage of the new administration in housing it was decided that as a preliminary measure, all the local districts in the Administrative County should be circularised with regard to the matter of housing and in addition forms were transmitted to them for completion. The adoption of uniform schedules for recording the general state of housing insured that the information would be returned in more or less standardised form so that comparisons might be more easily and more accurately made of the conditions prevailing in the respective local districts.

To this end the housing conditions of each individual parish of the various Rural Districts were recorded in separate schedules which were prepared under the following title heads:—

- 1. Estimated population 30/9/30.
- 2. Estimated number of separate families on 30/9/30.
- 3. Houses requiring repair:
  - (a). Number requiring repair to put them in a state suitable or fit for human habitation.
  - (b). Number of the above houses in which it is proposed to execute repairs.
  - (c). Number of houses (excluding those in (a) and (b) above, in which repairs are being carried out.)
- 4. Temporary Dwellings.
  - (a). Number occupied.
  - (b). Number of families affected.
  - (c). Number of persons affected.

- (d). New houses required :-
  - (1). Houses for agricultural population.
  - (2). Other houses.
- 5. Overcrowded Houses.
  - (a). Number.
  - (b). Number of families affected.
  - (c). Number of persons affected.
  - (d). Number of new houses required :-
    - (1). Houses for agricultural population.
    - (2). Other Houses.
- 6. Houses requiring demolition, or in part required to be closed :-
  - (a). Number.
  - (b). Number of families affected.
  - (c). Number of persons affected.
  - (d). Number of new houses required :-
    - (1). Houses for agricultural population.
    - (2). Other houses.
- 7. Number of houses:
  - (a). Contemplated to be built or being built to replace families affected under headings 4, 5 and 6.
    - (1). Houses for agricultural population.
    - (2). Other houses.
  - (b). Probable date of completion,

- 8. Number of houses :-
  - (a). Contemplated to be built or being built for increased population (excluding headings 4, 5 and 6).
    - (1). Houses for agricultural population.
    - (2). Other houses.
  - (b). Probable date of completion.
- 9. General remarks.

Through these returns a great mass of statistical information has been recorded and the information now at the disposal of the County Council is sufficient to allow of a commencement being made with the initial policy under the administration of housing affairs. From the surveys received the position of housing in each area has now been summarised and appropriately recorded.

On the initial report being considered it was resolved that a list should be prepared of all parishes in the County where six or more houses were still required to meet the deficiency arising from:—

- (1). Replacements of temporary dwellings.
- (2). Requirements of additional houses for families living in overcrowded conditions, and
- (3). Requirements of additional houses for families from demolition of unfit houses or from houses in part closed.

After consideration of this information it was then decided to communicate with those Rural District Councils in whose areas deficiencies exist requesting their co-operation in the preparation and execution of housing schemes in these parishes.

The Rural Councils have also been asked to inform the County Council when any housing scheme has been approved.

By these co-operative measures it is hoped that the present deficiency of houses in these areas may be successfully circumvented, and that by progression along these lines of endeavour the entire administration of housing in the Administrative County may by gradual stages become adequately established.

At the time of writing this report I am pleased to say that, as evidenced by recent reports, the Rural District Councils are tackling the housing problem seriously. I hope to be able to shew in my report for 1931 that the deficiences under the three headings previously mentioned have been rectified, and that the necessary repairs to existing property have been carried out, thereby ensuring adequate accommodation for the working-classes.

# HOUSING—YEAR ENDING 31st DECEMBER, 1930. (a) STATISTICS.

Nu		new houses erected during the year :— (including numbers given separately under (b)	1 765
			1,765
		h State assistance under the Housing Acts	363
	(1)	By the Local Authority :—	
		(a). For the purpose of Part II of the Act	
		of 1925 100 (b). For the purpose of Part III of the Act of 1925 118	
		(c) For other purposes	
	(ii)	By other bodies or persons 97	
1.	Inspecti	on of dwelling houses during the year :-	
	(1). a.	Total number of dwelling houses inspected	
		for housing defects (under Public Health or Housing Acts)	8,447
	b.	Number of inspections made	11,414
	(2). a.	Number of dwelling houses (included under sub-head 1 above) which were inspected and recorded under the Housing Consoli- dated Regulations, 1925	2,896
		N - 1 - 6:	
	ь.	Number of inspections made	4,113
	(3).	Number of dwelling houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	464
	(4).	Number of dwelling houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation	2,022
2.	Remedy	of Defects during the year without service of I	
		Notices :—	
		Number of defective dwelling houses rend- ered fit in consequence of informal action by the Local Authority or their officers	1,444

Act	ion u	inder Statutory Powers during the year :-	
A.	Proce	reedings under Section III of the Housing Act, 1925.	
		Number of dwelling houses in respect of which notices were served requiring repairs	362
		notices were served requiring repairs	302
	(2).	Number of dwelling houses which were rendered fit after service of formal notices :—	
		(a) By owners 255	
		(b) By Local Authority in default of owners	
	(3).	Number of dwelling houses in respect of which Closing Orders became operative in pursuance of declarations by owners of intention to close	70
B.	Proc	eedings under Public Health Acts :	
	(1).	Number of dwelling houses in respect of which notices were served requiring defects to be remedied	749
	(2).	Number of dwelling houses in which defects were remedied after service of formal notices:—	
		(a) By owners 679	
		(b) By Local Authority in default of owners —	
C.	Proc	ceedings under Sections 11, 14 and 15 of the Housing Act, 1	925 :
		Number of representations made with a view to the making of Closing Orders	116
	(2).		
		Closing Orders were made	123
	(3).	Number of dwelling houses in respect of which Closing Orders were determined, the dwelling houses having been rendered fit	36
	(4).	Number of dwelling houses in respect of which Demolition Orders were made	55
	(5).	Number of dwelling houses demolished in pur- suance of Demolition Orders	38

Number of houses owned by the Local Authority
distinguishing those built in the last two
years and held under:—

(1). Part III of the Housing Act, 1925
(2). Part II of the Housing Act, 1925

(3). Other powers ... ... 1,918

# INSPECTION AND SUPERVISION OF FOOD.

(a). Milk Supply.

Milk and Dairies (Consolidation) Act, 1915. Section 4.

During 1930, infection of milk by tubercle bacilli was reported in 17 instances—four from London County Council, 11 from Leicester City Council and two from Birmingham City Council.

Following these reports 358 animals from 17 herds were examined by the County Council's Veterinary Inspector, and in the case of two of these herds it was found necessary to make a re-inspection. Arising from these examinations 80 samples of milk were taken from suspected cows and dispatched to Cambridge University for biological examination.

The following shows the results of herds examined:-

Tuberculosis found on first inspection ... ... 4

" " " re-inspection ... ... 2

Herds out of which a suspicious cow had been disposed of between date of initial sample and visit of Veterinary Inspector :—

(a) Sold for slaughter ... ... 3

(b) Slaughtered and found tuberculous 2

No trace of tuberculosis ... ... 6

#### Section 8.

During the year one sample was submitted for biological examination which proved to be negative.

Milk and Dairies Order, 1925.

Tuberculosis Order, 1925.

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

### (b). Graded Milk Production in Leicestershire.

At the commencement of the year 1930, there were twenty producers of Grade "A" milk registered under the County Council scheme.

During the year, one licence was transferred on the retirement of the original producer and two additional licences were granted.

In addition the Ministry of Health has licensed two producers for Certified Milk, and one for Grade "A" (T.T.).

Routine inspections of the premises of Grade "A" licence holders are carried out regularly by the County Medical Officer and his Chief Assistants. Samples of milk are collected from time to time both at the farm and in the course of delivery and examined in the County Laboratory.

The result of the examination of 108 samples of Grade "A" milk in the County Laboratory were:—

Within standard ... ... 102
Below standard ... ... 6

Note:—Three of the six unsatisfactory samples were from one producer who was warned with regard to the matter, and who subsequently has given no further cause for complaint.

Whenever an adverse bacteriological count is reported, a Senior Medical Officer visits the farm and in co-operation with the producer investigates the source of the trouble with a view to obviating its occurrence.

It is a pleasurable duty for me to record the courteous way in which the Grade "A" producers receive the inspections of their premises. There exists a strong basis of co-operation between the producers and the County Health Department, and the united efforts of both are directed towards the single attainment of a high standard of milk production.

# (c). Provision of Milk to Elementary School Children.

It is of interest to report the progress made with a scheme for supplying milk to Elementary School Children in the County.

The value of an extra milk supply to the diet of school children which was in itself satisfying, has been amply demonstrated by the results of the investigations carried out by Dr. H. Corry Mann and by the Scottish Board of Health. Dr. Mann's report states that an annual gain in weight of 3.85lbs. per boy was converted into one of 6.98lbs. per boy, and that the average increase in height was from 1.84 inches per boy to 2.83 inches per boy. Coincident with this striking increase in weight and height the boys were obviously more fit than those in the other groups. These results were confirmed by the figures of the investigation by the Scottish Board of Health.

The success of these experimental investigations led to the inauguration of a scheme for supplying milk to children attending the elementary schools in the County.

The scheme was initiated by the Agricultural Department in conjunction with the Head Teacher of Kirby Muxloe Council School. The children at this school were supplied with Grade "A" milk in one-third of a pint bottles. After a short period the scheme proved so popular, and the children showed such improvement generally, that it was decided to extend the scheme to include any school in which the teachers wished the children in attendance to benefit.

The further extension of the scheme was considered at a joint meeting of the Medical Inspection and Agricultural Committees, and the following scheme was drawn up for adoption throughout the County.:—

- 1. Liquid milk only shall be supplied.
- 2. The milk to be supplied shall be clean, fresh, and where possible of Grade "A" standard.
- Arrangements for the supply of milk to schools shall be made by the Agricultural Department in consultation with the Medical Department.
- 4. The milk shall be supplied in bottles, each containing one-third of a pint, and provided with a disc and straw. The price charged shall not exceed one penny per bottle.
- 5. The milk shall be submitted to a regular bacteriological test by the Medical Department, and the Agricultural Department shall be notified of any case in which the milk is not up to standard.
- 6. The Medical Department shall undertake the examination of monthly samples, and should any supply prove unsatisfactory the Medical Department shall communicate with the Agricultural Department. If, after due warning, no improvement is obtained, the School Medical Officer shall recommend that such supply be discontinued and a fresh supply procured.
- 7. The Agricultural Department shall be responsible for the inspection of the farm buildings and dairy equipment of the supplier, except Grade "A" farms which are already inspected regularly by the Medical Department.
- 8. The Head Teachers shall be requested not to make arrangements for the supply of milk to school children without prior instructions from the Agricultural and Medical Departments.

The rapid development of the scheme may be judged from the following figures:—

			Oct.	Dec.	Dec.
			1929.	1929	1930.
Number of	schools receiving milk	 	1	33	111
>> >:	children receiving milk	 	102	3,067	8,681
33 33	bottles supplied weekly	 	510	15,335	43,405
22 22	gallons of milk weekly	 	21	639	1,808

The collection and examination of samples is undertaken by the Medical Department. The milk from each supplier is examined once a month, and if the result is unsatisfactory the Agricultural Department is notified with a view to securing an improvement. If, after warning, no improvement is shown the School Medical Officer recommends that no further milk be obtained from this source, and a new supply is procured.

The organisation of the scheme has entailed a great deal of additional work, and many difficulties have had to be surmounted. It is gratifying to report that the work is now progressing efficiently and smoothly, and that the success of the scheme is assured.

The improved physique of the children in the schools is only one of many benefits accruing from the scheme.

I referred in my last year's report to the fact that production of Graded Milk in the County shows a rather slow development. With the initiation and progress of the provision of a milk supply of Grade "A" standard on such a large scale as quoted both a direct and indirect stimulus has been given to producers of all classes to bring their product up to Grade "A" standard. The increased demand for Grade "A" milk in the schools has been of direct benefit to the producers of the County, and with a certain market for this product there is a much greater incentive to undertake the increased financial responsibility entailed. In those cases where the milk supplied was not obtained from a licensed Grade "A" farm, a high standard of purity was necessary, and several producers have found it expedient to carry out the necessary alterations to their premises and apply for a licence, as very little extra routine work was required to conform to the regulations necessary for holding the licence.

The steady demand in the schools forms a nucleus for the development of a market for Graded Milk in each area. In addition to the knowledge disseminated by Health Visitors and at Maternity and Child Welfare Centres to which I referred last year, the schools of the County have become centres of propaganda.

A large part of the community is now brought into practical contact with graded milk for the first time, and I feel sure that the improvement of the physique of the children will lead to an increased interest on the part of the parents in milk as a food. The knowledge of Grade "A" milk gained in school by the older children will be a potent factor in influencing the quality of milk consumed in the home.

Already the scheme has shown beneficial results in the increased number of producers in the County. With the wider spread of knowledge of the benefit derived from Graded milk potential producers will be influenced in increasing numbers to undertake the financial hazard. I feel that with the success of this scheme a considerable forward step has been taken in the necessary work of educating the community to the value of Graded milk.

# (d). Sale of Food and Drugs Act, etc.

This and kindred Acts are administered by the County Police. The following is the Report of the County Chief Constable, under this Act:—

"During the quarter, 98 samples of Food and Drugs were submitted for analysis, viz., 28 Milk, 10 Potted Meat, 10 Margarine, 10 Self-raising Flour, 10 Brandy, 10 Oatmeal, 10 Cocoa and 10 Non-Alcoholic Wines.

With the exception of two samples of Milk and one of Non-Alcoholic Wine, Dr. Dyer certified all these samples to be genuine. The two samples of milk were taken from one vendor, on complaint, and certified to each contain at least 15 per cent of added water. The vendor was fined in all £11 14s. 6d. The Non-Alcoholic Wine was purchased informally, and no action was taken owing to it being the last bottle of old stock.

Within the year 401 samples of Food and Drugs were submitted for analysis, viz., 342 Foods and 59 Drugs. Of these, 24 were certified to be unsatisfactory, viz., 11 Milk, three Sausages, one Refined Borax, eight Calcined Magnesia, and one Non-Alcoholic Wine."

# BATERIOLOGICAL AND CHEMICAL WORK.

The following is a summary of the work carried out in the County Laboratory during the year, 1930:—

,			Pos.	Neg.	Total
Throat Swabs for Diphtheria		 	225	1390	1615
Sputa for Tubercle Bacilli		 	465	1111	1576
Milk Examinations (Bacteriologic	al)	 	_	_	1023
Sewage and Water Analysis		 	_	_	224
*Blood for Wassermann Tests		 	37	125	162
Hair for Ringworm		 	96	64	160
Urine (General and Bacteriologic	al)	 	_	_	145
Urine for Tubercle Bacilli		 	9	68	77
Films for Gonococci		 	26	28	54
Widal Tests for Typhoid Fever		 	7	42	49
Milk for Fat Content		 	_	_	42
Blood Counts		 	_	-	22
Faeces for Bacillus Typhosus		 	-	13	13
Throat Swabs for Meningococci		 	_	6	6
Urine for Bacillus Typhosus		 	-	2	2
Cerebrospinal Fluid for Meningo	cocci	 	1	_	1
Miscellaneous		 	_	_	39
					5210

<sup>\*</sup> Collection of blood only. The tests are actually carried out at the Leicester Royal Infirmary.

The total number of examinations made during the year 1929, was 5426, so that this year there is a slight decrease in the actual numbers, but as there was an increase of 196 in the number of milk examinations made, the character of the work is different and occupies more time.

# Diphtheria.

The 1,615 throat swabs were received from the following sources:-

Isolation Hospitals ... 693 School Medical Service ... 243 General Practitioners ... 679

Most of the swabs from the Isolation Hospitals were examined with a view to ascertaining whether patients were free from infection before being discharged. Those from schools were taken during epidemic periods for the detection of possible carriers. Particulars of these swabs are given as follows:—

7/1/30	Cosby Schools	64 swabs	, 1	positive.
5/2/30	Kegworth Schools	96 ,,	3	,,
10/2/30	Kegworth Schools	20 ,,	1	,,
27/3/30	Ashby-de-la-Zouch	63 ,,	5	"

#### Tuberculosis.

The number of specimens of sputum examined for Tubercle Bacillus was 1,576, of which 465 were positive. They were received from the following:—

T.B. Medical Officers ... ... 998 General Practitioners ... ... 578

A large proportion of the specimens from the T.B. medical officers were from patients in sanatoria. In addition to the specimens of sputa, 77 samples of urine were also received, and nine of these were found to contain Tubercle Bacillus.

#### Milk Examinations.

The number of bacteriological milk examinations carried out during the year was 942, an increase, as already mentioned, of 196 on last year. They were received from the following sources:—

Urban Districts			 	227
Rural Districts			 	438
Grade "A" pro	ductio	n	 	169
School supplies			 	108
The state of the s				-
				942

In addition 81 samples were collected and forwarded to Cambridge for Biological examination.

As in previous years, the samples from urban and rural districts were, after examination, classified as "Good," "Fair," "Moderate," or "Bad," according to the bacterial count and the bacillus coli content. The results of these examinations are as follows:—

URBAN DIST	TRICTS:			
Total.	Good.	Fair.	Mod.	Bad.
227	148	58	2	19
	(65.2%)	(25.5%)	(0.9%)	(8.4%)
RURAL DIST	TRICTS:	(Collando		
438	262	122	6	48
	(59.8%)	(27.8%)	(1.4%)	(11.0%)
TOTAL URB.				
RURAL DIST	TRICTS:			
665	410	180	8	67
	(61.6%)	(27.1%)	(1.2%)	(10.1%)

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, according to these standards.

These results, when further analysed, show that :-

7% contained less than 10,000 organisms per c.c.

57% contained between 10,000 and 100,000 organisms per c.c.

16% contained between 1000,000 and 2000,000 organisms per c.c.

20% contained over 200,000 organisms per c.c. 42% contained no B. Coli in 1/10th of a c.c.

21% contained B. Coli in 1/10th but not in 1/100th c.c.

29% contained B. Coli in 1/100th but not in 1/1000th c.c.

8% contained B. Coli in 1/1000th c.c.

These figures show that 80% of the samples contained less than 200,000 organisms per c.c., which is the standard for Grade "A" milk in so far as the bacterial count is concerned. (The corresponding figure last year was 68.6%). The figures relating to the B. Coli content show that 63% of the samples reached the standard for Grade "A" milk. (The corresponding figure last year was 67%). The actual number which were of Grade "A" standard in both respects was 365, or 54.7%.

Of the 169 samples which were examined in connection with the production, or contemplated production of Grade "A" milk, 162 were found to come within standard, and seven were below standard.

A scheme has been inaugurated throughout the County by means of which bottles of milk, each containing one-third of a pint, are supplied to the children in the schools. Further particulars of this scheme are given in the School Annual Report for the County.

Surprise samples of these supplies, to the number of 108 were examined with a view to ascertaining the degree of cleanliness. Although the milk

is not sold as Grade "A", an endeavour is made to bring it up to this standard, and the samples received for examination showed that 80% reached this standard on bacterial count, and 71% on the B. Coli content. 64% were up to the full Grade "A" standard on both the bacterial count and B. Coli content.

Under the Milk and Dairies Consolidation Act, 81 samples were taken for biological examination for T.B. These samples were taken by the County Council's Veterinary Inspector, and eight were positive.

# Sewage and Water Analyses.

The number of samples of sewage and water for analysis was 224, as against 184 in 1929. This number included as in previous years, samples taken from the River Soar and its tributaries, in conjunction with the Ministry of Agriculture and Fisheries for their annual hydrographical survey.

# Hair for Ringworm.

Of the 160 specimens of hair received, 94 were positive. These specimens were mostly collected by the County School Nurses.

# Cerebro Spinal Fever.

Only one specimen of cerebro spinal fluid was received, and this was found to be positive. Six throat swabs for meningococci were also examined.

# Typhoid and Paratyphoid Fevers.

The number of examinations of blood by the Widal test was 49, of which seven were positive. The number of specimens of faeces and urine received was 15, 13 of the former and two of the latter. All were negative. These latter specimens were mainly received from the Isolation Hospitals previous to the discharge of patients.

#### Venereal Diseases.

In connection with Venereal Diseases, the following examinations were made:—

Films for gonococci ... 54 Blood for Wassermann test ... 162

The specimens of blood for Wassermann test were sent to the Leicester Royal Infirmary, 25 were from the Venereal Diseases Clinic at Loughborough. Of the films for gonococci, 23 were collected at the Loughborough Clinic, the remainder were sent by general practitioners.

#### General Remarks.

The laboratory has now been in existence 11 years, and the total number of examinations made during the whole period is 40,55. The number made during 1920, the first year, was 2,449, but this has now risen to 5210, in 1930.

The staff remains the same, with two assistants, and myself in charge, though as my own duties as County M.O.H. are becoming more multifarious, I find it necessary to leave a large part of the work and responsibility to my senior assistant. Both of these assistants continue to perform their work to my entire satisfaction.

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

# TUBERCULOSIS.

The following is the report of the Chief Tuberculosis Medical Officer :-

#### Prevalence of Tuberculosis.

The number of notifications of Pulmonary Tuberculosis has decreased by 54, and there is a decrease of 56 in the number of deaths. The figures for 1930 are:—Notification 308, Deaths 183, Death Rate .62. The average numbers of the last five years are:—Notifications 369, Deaths 212, Death Rate .74.

There were 83 Notifications of Non-Pulmonary Tuberculosis as against 95 in 1929. The number of deaths was 39 as against 55, and the Death Rate .13 as compared with .19 in 1929.

The total number of Notifications for 1930 is, therefore, 391 as against 457 last year, and Deaths 222 as against 294 in 1929, shewing a decrease both in notifications and deaths.

The most salient feature in the Tuberculosis Section of the Annual Report, and one of the most satisfactory to all concerned is the great drop, 56, in the number of deaths, from 239 in 1929 to 183 in 1930. The number of deaths from Non-Pulmonary Tuberculosis has also diminished by 16, being 39 as against 55 last year. The total diminution in mortality is thus 72. In addition it is pleasing to note that the notifications have also declined, the Pulmonary cases by 54, being 308 as against 362, and the Non-Pulmonary by 12, being 83 as against 95. This is a very satisfactory state of affairs and although one cannot, of course, guarantee a similar decline year by year owing to the varying and uncertain factors which bear on vital statistics, nevertheless it is very encouraging, and gives one to hope that real progress is being made in this Tuberculosis side of Public Health activity in the County.

The figures are the more assuring when we realise that the Saffron Lane Estate and Braunstone Estate, and the outlying parts of the City in the County area, contain more than their proper proportion of Tuberculosis patients, and that year by year the tendency of Tubercular subjects is to move from the town into the country, which however beneficial from the patient point of view, does not tend to improve the County statistics. One has to remember, however, that 1929 was a peculiarly bad year for the Tubercular and the Pulmonary death figures were abnormal; even so the figure of this year, 183, is 29 below the average of the last five years.

In point of fact this year's Death Rate of .62 is a record for the County, for never before has it been so low, except in 1920 when it was precisely the same figure. The number of notifications is 61 below the figure of the last five years.

It is difficult to account for this condition of things, but the fact remains that during the last quarter of the year there was a very marked drop in the number of notifications, and of deaths as well.

#### 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. 2.

As mentioned above the number of cases requiring treatment during the latter part of the year was considerably reduced, and in consequence, during that period the pressure on the bed accommodation was slight, in fact many beds were unoccupied. It was thus possible to lessen the number of beds required in Institutions outside the County for Pulmonary cases.

### B. New Sanatorium, Markfield.

The plans, being completed and approved by the Council, were submitted to the Ministry of Health and the scheme received their sanction.

Tenders for the work were obtained and the contract placed in the hands of Messrs. H. M. Nowell, & Co., Ltd., of Stockton-on-Tees. Work was begun in August, and the ceremony of turning the first sod was performed by J. W. Black, Esq., the Chairman of the Public Health and Housing Committee, in September. Steady progress has been made despite the unfavourable weather which prevailed during the winter months. The main road through the site was constructed, the main sewage pipe laid and the foundations of most of the buildings were completed.

The plans provide for :-

- (a). Administration Block comprising Offices, Committee Room, Quarters for a Doctor and Matron, Staff Recreation Room and Bedrooms for Sisters, Nurses and Maids.
- (b). A Block embodying Kitchen, Scullery, Store Rooms with Dining Rooms for patients and Staff.

It is proposed to use the Patients Dining Room for Concerts and Cinema entertainments while the flat roof of the one storey block will be a roof-garden for the use of the Staff.

- (c). There are four Pavilions (126 beds) with verandahs.
  - (1). Hospital Block, 36 beds, (18 male, 18 female).
  - (2). Male Block, 26 beds, (with eight single Shelters attached).
  - (3). Female Block with 26 beds (with eight single Shelters attached).
    - (4). Children's Block, 22 beds.

- (d). School (also to be used as Chapel).
- (e). Pathological Block containing X-ray and Ultra Violet Ray apparatus, Laboratory and Dispensary.
  - (f) Laundry Block including Boiler House and Disinfector, Garages and Workshops.
  - (g). Medical Superintendent's Residence, two Lodges and two Cottages.
    - (h). Mortuary.

The main buildings are linked up with the Administration Block by covered ways.

It is hoped that the new Sanatorium will be ready to receive patients by Mid-Summer, 1932, or a little later.

#### C. Convalescent Home.

Ten beds were again retained at the Charnwood Forest Convalescent Home. During the year 59 children, between the ages of five and ten years were admitted, and their average length of stay was 57 days. These cases were classified as:—

Pre-Tubercular ... 52
Surgical Tuberculosis ... 5
Early closed Tuberculosis ... 2

The majority were contacts of Tubercular families. A few cases had to be held over until the Home re-opened in 1931.

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.

Difficulty is still experienced in obtaining accommodation for this type of Tuberculosis. The six bedded block at Melton Isolation Hospital has been full all the year. A few cases have also been sent to hospitals outside the County. In addition we have been able to utilise beds in the County Infirmaries. In some of these Institutions there are beds devoted to these cases, either in a special block as at Melton Mowbray, or in shelters attached to the hospital blocks.

It is hoped in the future, when some degree of prejudice has been removed in certain cases, to extend the scope of this work and be able to make more use of these hospitals.

# E. Out-Patient Dispensary Work.

For details see Table 1.

The amount of work done at the Dispensaries has increased in practically every direction. There is again a great increase in the number of attendances, a thousand more being made than two years ago, and 474 than last year. More contacts were examined, the figure being 256 as against 214 last year. More X-ray photographs were taken and more specimens of sputa examined.

### F. Domiciliary Work.

- (i) Shelters.—Sixty-seven 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 54 were being used by patients at their own homes. Routine inspection by the County Nursing Association has again been carried out. The demand for these shelters is continuous.
- (ii) Nursing of Advanced Cases.—The County Nursing Association has carried out this work, and 5,490 nursing visits were made to 79 cases, the cost entailed being £241. In 1929, 4,973 visits were made to 82 patients at a cost of £213.
- (iii). Extra Nourishment.—Approximately £412 has been expended on 60 patients, as against £206 expended on 42 cases in 1929. The usual grant has been 5s. worth of milk and eggs per week. The number of cases applying for extra nourishment is steadily on the increase. Careful consideration is given to applications and grants only made to patients likely to benefit most and who are in very poor circumstances.
- (iv). Additional Help has been given in the following ways:—Cost of Splint, Crutches, Surgical Boots, etc., for eleven patients, £26.

Dental treatment with the provision of dentures has been granted to 11 patients at a cost of £28 0s. 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 1,158 (Dr. Coward 780, Dr. Lane 378) visits to patients' homes, whilst 851 were made in 1929. The Health Visitors paid 4,585 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 (11), St. Gerard's Hospital, Coleshill (8), Manfield Orthopædic Hospital, Northampton (2), Heatherwood Hospital, Ascot (1), Royal Sea Bathing Hospital, Margate (2), Leysin, Switzerland (1), Harlow Wood Orthopædic Hospital, Mansfield (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. Lodge.	Manfield, rthamptonshire.
Northern.	Loughborough Cripples' Guild.	Mr.S.A.S. Malkin	
Western.	Coalville Orthopædic Clinic.	Mr. F. G. Allan.	Coleshill, Warwickshire.

The Hinckley Cripples' Guild affords assistance to local cases.

The number of cases treated has been almost the same as last year, namely 26. The difficulty in dealing with this type of case is the exceedingly long time required before healing takes place, a period of two or three years being not uncommon. The question of the provision of beds becomes one of vital importance as the years go by. It is hoped that by operative interference the stay in hospital will be materially lessened, for a two or three year period of treatment in an Orthopædic Hospital, with fresh cases steadily presenting themselves, makes a very considerable addition to the expenditure involved in dealing with Surgical Tuberculosis.

#### H. After-Care Work.

The main part of this work is done by the Tuberculosis Medical Officers, Health Visitors, District Nursing Associations, through their nurses, the Rural Community Council who have established Welfare Committees in 13 villages in the County, the Guardians' Committees and by private agency. Many new and more suitable houses have been obtained for patients, employment procured, and help in many directions given, in an endeavour to implement and stabilise treatment already received at an Institution, and to benefit the health not only of the patients themselves, but of their relations as well.

#### 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.

Once again the year has shewn the expansion of existing services, and additions thereto. In every direction the scope of the work has extended, and more and more is being done to leave no loophole in the campaign to combat this most crippling disease.

It is gratifying to know that in this year, at any rate, there has been some tangible return for the outlay expended.

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

# APPENDIX.

# Summary of Institutions provided by the County Council.

# (1). Poor Law Institutions:

Name of Institution.	No. of beds.	Description of Nursing Staff.
ASHBY-DE-LA-ZOUCH	57	Matron, 1 Head Nurse, 4 Assistant Nurses.
BILLESDON	_*	Matron, 1 Assistant Nurse.
BLABY	36	<ol> <li>Head Nurse, 3 Assistant Nurses.</li> </ol>
HINCKLEY	38	Matron, 4 Assistant Nurses.
LOUGHBOROUGH	100	1 Head Nurse, 10 Assistant Nurses.
LUTTERWORTH	15	Matron, 2 Assistant Nurses.
MARKET BOSWORTH	33	Matron, 1 Head Nurse, 1 Assistant Nurse.
MARKET HARBOROUGH	32	1 Head Nurse, 4 Assistant Nurses.
MELTON MOWBRAY	45	1 Head Nurse, 4 Assistant Nurses.
MOUNTSORREL	50	1 Head Nurse, 2 Assistant Nurses.

<sup>\*</sup> Used only for special service.

Note.—The above arrangements are provisional and will be subject to alteration in 1931.

# (2). Tuberculosis Institutions.

Name of Institution.	No. of beds.	Description of Nursing Staff.
MOWSLEY SANATORIUM (Females and Children)	62	Matron, 1 Sister and 2 Staff Nurses, 4 Probationer Nurses.
HINCKLEY RESIDENTIAL DISPENSARY (Males)	22	Matron, 1 Sister 3 Probationer Nurses.
COALVILLE RESIDENTIAL DISPENSARY (Females)	8	Matron, 1 Staff Nurse.

# (3). Infectious Diseases Hospitals (other than Small Pox).

Name of Institution.	No. of Beds.	Description of Nursing Staff.
BLABY HOSPITAL	17	Matron, 2 Staff Nurses, 1 Assistant Nurse, 2 Probationer Nurses.
HINCKLEY HOSPITAL	23	Matron, 3 Nurses, 1 Assist- ant Nurse, 2 Probationer Nurses.
MELTON HOSPITAL	23	Matron, 2 Nurses, 2 Probationer Nurses.
LOUGHBOROUGH HOSPITAL	9	*1 Staff Nurse.
IBSTOCK HOSPITAL	12	*1 Staff Nurse.
SWANNINGTON HOSPITAL	4	*1 Staff Nurse.
MOIRA RESERVE HOSPITAL	6	*Caretakers.

<sup>\*</sup> Additional Nursing Staff engaged as required.

# (4). Small Pox Hospitals.

Name of	No. of	Description of
Institution	Beds.	Nursing Staff.
SNARESTONE HOSPITAL	23	*Matron, 1 Staff Nurse.
SYSTON HOSPITAL	15	*1 Staff Sister.

<sup>\*</sup> Additional staff engaged as required.

.

	lren	F	17 113 52	10 5 62	30	125	191
TOTAL.	Children	M	12 15 20 20	5 4 51	23	118	231
ToT	Adults	F	122 21 101	12 9 53	32	180	649
	Ad	W	111 27 110	111 72 27	30	165	647
٧.	Children	H	= : :	2 ::	∞	:	.: 62
MONAR	Chil	M	12 :::	7 ::	6	:	91
Non-Pulmonary.	Adults	H	15	:::	60	:	54
Z	Ad	M	61 : :	:::	∞	1	99 ::
	Children	F	6 13 52	8 2 2 9	12	125	129
PULMONARY.	Chil	M	7 112 50	4 4 51	14	118	140
PULM	Adults	F	107 21 101	12 9 53	29	180	595
	Ad	M	92 27 110	111 7 27	22	164	582
	Diagnosis.		A.—New Cases examined during the year (excluding contacts) :—  (a) Definitely tuberculous  (b) Doubfully tuberculous  (c) Non-tuberculous	B.—Contacts examined during the year :—  (a) Definitely tuberculous  (b) Doubtfully tuberculous  (c) Non-tuberculous	C.—Cases written off the Dispensary Register as  (a) Cured  (b) Diagnosis not confirmed or non-	tuberculous (including cancell- ation of cases notified in error)	D.—Number of Persons on Dispensary Register on December 31st:— (a) Diagnosis completed (b) Daignosis not completed

1. Number of persons on Dispensary 1. 1777   Treatment was given, at or in other areas and of "lost sight of" of a sees returned	1	1		1	1	+ 4-	1							
Number of patients transferred from case returned	(	2	509	931		4585- (5490 Nurs ing Visits)	1219	99		975		243		75
Number of persons on Dispensary Register on January 1st, 1930  Number of patients transferred from other areas and of "lost sight of"  Number of patients transferred to other areas and cases "lost sight of"  Died during the year  Number of observation cases under A (b) and B (b) above in which period of observation exceeded 2 months  Number of attendances at the Dispensary (including Contacts)  Number of attendances of non-pulmonary cases at Orthopædic Outsianions for treatment or supervision  Number of attendances, at General Hospitals or other Institutions approved for the purpose, of patients for "Light" treatment	Number of patients to whom Der Treatment was given, at or	1 1	or Applicants	11. Number of other visits by culosis Officers to Homes	1	Health Visitors to Homes for Dis- pensary purposes	13. Number of (a) Specimens of sputum, &c., examined (b) X-Row examinations	nection with Dispensary work		pensary Register on the 31st December		December		11
Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	1777	63		155 (64 N.F.T*)	156		25		4479		129			1.1
	Number of persons on Dispensary Register on January 1st, 1930	ž	ž	other areas and cases "lost sight of"	Died during the year		period of observation exceeded 2 months	Number of attendances at the		Number of attendances of non-pul- monary cases at Orthopædic Out-	stations for treatment or super- vision	Number of attendances, at General	Hospitals or other Institutions approved for the purpose, of patients	(a) "Light" treatment (b) Other special forms of treatment
		2.	ا س	-	4.	5.	-	9	1	7.	-	80		

<sup>\*</sup> 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 (1)	Class of Cases Treated.	Number of Beds available for patients sent by the Council. (2)	Number of patients sent by the Council who were under treatment on the 31st Dec., 1929	Number of patients sent by the Council during the year ended December 31st, 1930.	Number of patients sent by the Council who were discharged or died in the Institution during the year ended 31st December, 1930 (5)	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.  (7)	Number of patients sent by the Council who were under treatment on the 31st December, 1930.
Mowsley Sanatorium, Husbands Bosworth, Rugby.	Female Adults P Children P	50	36 9	88 32	103 30	12746 4263	124* 142**	21 11
	Female Adults S Children S	12	2 8	14 3	11 5	1541 525	140 105x	5 6
Coalville Residental Dispensary, Bakewell Street, Coalville.	Female Adults P Girls P	8	6	77 6	77 7	2364 230	31 33	6
Hinckley Residential Dispensary, Manor House, Bond St., Hinckley.	Male Adults P Boys P Boys S Male Adults S	} 15 } 7	13  3 4	80 1 2 9	80 1 4 8	5164 99 844 1361	65 99 211 170	13 .: 1 5
Creaton Sanatorium, Northampton.	Male Adults P Female Adults P	25—30	26 · ·	73 1	84 1	10897 206	130*** 206	15 
T. B. Block Isolation Hospital, Melton.	Male Adults AP F'maleAd'ltsAP	3 3	2 3	16 13	15 13	910 1111	61 86	3 3
Orthopaedic Hospital, Manfield	Children S	?	2		2	1368	684	
Hospital of St. Cross, Rugby.	Male Adults S Female Adults P	3	3	7 1	3 1	265 66	88 66	7
Preston Hall Colony, Kent	Male Adults P	?		1	1	170	170	
Papworth Hall Colony, Cambridge.	Male Adults P	5		2	1	61	61	1
Harlow Wood Orthpaedic Hospital, Notts.	Female Adults S Children S	?	::	1 2	·:	120	60	1
Royal Sea Bathing Hospital, Margate.	Female Adults Male Adults	?	1	i	1 1	56 202	56 202	
Heatherwood Hospital, Ascot.	Children S	?	1					1
Warwickshire Orthopaedic Hospital, Coleshill.	Children S	?	5	3	4	1368	342	4
Holly Lane Hospital Sanatorium, Smethwick.	Male Adults I Female Adults I		1	3 1	4 1	403 54	101 54	::
Leysin, Switzerland.	Male Adults 5	?	1					1
Totals		Average 144	127	437	460	46394		104

P Pulmonary Tuberculosis. S Surgical Tuberculosis. AP Advanced Pul. Tuberculosis. . Commence to the tip Contraction of the contraction o The sale of the sa

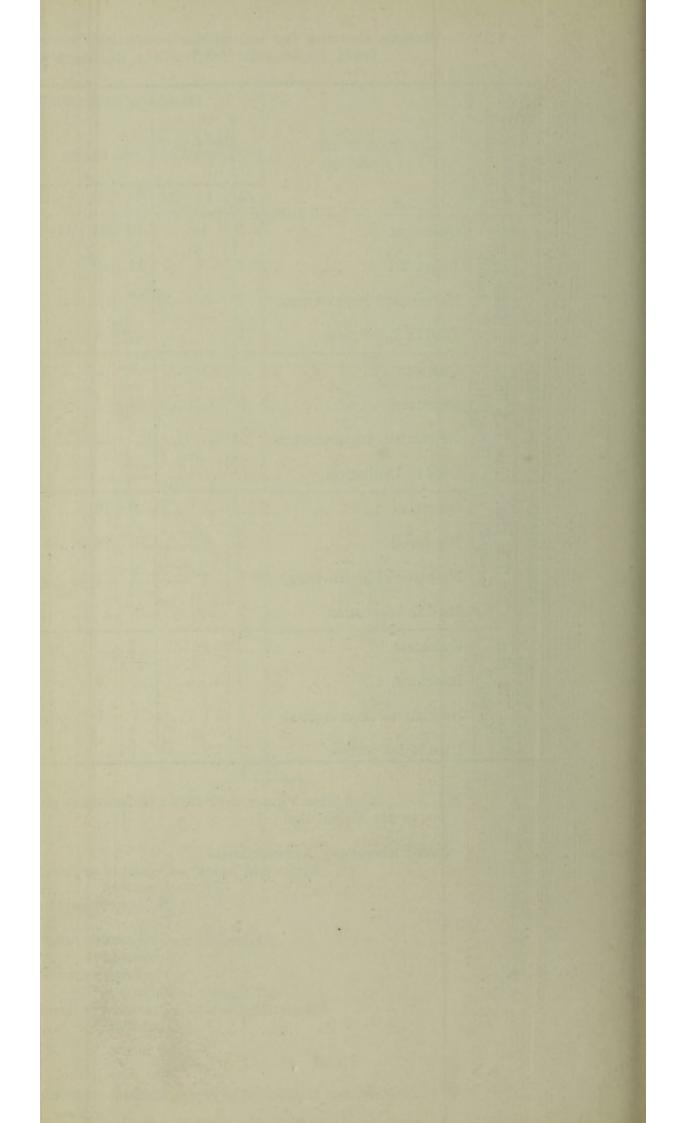
T.B. 3.—Return shewing the immediate results of treatment of patients discharged from Residential Institutions during the year 1930.

ton the	1.			Г	uratio	on of l	Reside	ential	Treat	ment	in the	Insti	itutio	n.	
Classification on	Institution	Condition at time of discharge.			der 3 onths.		6 mor	nths.	6—1	12 mo	nths.	More than 12 months.			Total
Clas	In		M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
		Quiescent	2	1	2	12	25	11	8	5	4			1	71
	ss T. B.	Improved	8	3	2	11	9	5	2	2	1	2			45
	Class T.	No material improvement	2	2	2	2			1						9
	0	Died in Institution	2				1		1	1	1				6
12	IS.	Quiescent		1		6			1						8
OTO	3. Plus. ip 1.	Improved	2			5	1								8
ERCI	Group	No material improvement										1			1
I UBERCULOSIS	Class	Died in Institution													
	plus.	Quiescent		1		2	15		4	1					23
PULMONARY	B. pl	Improved	6	2		16	24		7	4					59
OLM	H 5	No material improvement	4	4		2	3		1						14
7	Class	Died in Institution	3			2									5
	3. plus	Quiescent		1						1					2
	T.B. p	Improved					4		1	1					6
	Group	No material improvement	1	1		1	1		1						5
j	Class	Died in Institution	2	3											5

In addition 9 cases were admitted for observation purposes, and discharged as not Tubercular.

Mon Dad		T. 1		
Non-Pu	lmonary	Lui	percu	IOSIS.

y i doci culosis.		
Bones and Joints :- Quiescent or Arrested		 4
Improved	 	 13
No Improvement	 	 3
Died	 	 1
Abdominal :—Quiescent or Arrested	 	 3
Improved	 	 3
No Improvement	 	 1
Other Organs :- Improved	 	 2
Peripheral Glands :- Quiescent or Arrested	 	 1
Improved	 	 3
		_
		31



Whole 0.70 0.70 0.81 0.62 0.79 0.72 0.74 Death Rate. Rural 0.74 0.69 0.71 0.79 Urban 0.93 0.68 0.69 0.65 0.83 0.76 0.67 T.B. 4. TUBERCULOSIS (Pulmonary and Other). Whole County 196 205 203 239 212 217 39 Number of Deaths. Rural 123 1111 24 125 31 138 123 102 Urban 101 33 79 30 78 89 81 Whole 391 348 362 395 350 369 308 Rural 216 183 216 203 193 202 172 Number of Notifications. Urban 32 155 179 167 46 39 167 Lungs Lungs Lungs Lungs Lungs Lungs Lungs Average for above 5 years Year 1930 1925 1926 1929 1928 1927

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

SUCI BEBIODS		NEW CASES.	ASES.			DEATHS. *	+S. *	
age reactor.	Pulm	Pulmonary	Non-Pulmonary.	nonary.	Pulmonary	onary	Non-Pul	Non-Pulmonary.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
0 to 1	:	:	:	1	:	;	1	2
1 to 5	1	1	9	3 1		1	4	1
5 to 15	15 7	15 °	17 1	13	-	1	3	2
15 to 25	36 ×	11 99	14	° 6	17	39	7	2
25 to 45	60 22	74 17	111	7 3	34	47	3	9
45 to 65	1 9 7	18 3	1 1	1	27	14	2	4
65 and upwards	2	7	1	:	-	1	-	1
Total	132 45	176 37	50 3	33 7	80	103	21	18

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

\* 25 of the deaths were of non-notified diseases.

		105	
LOSIS.	Death Rate.	118888181888	7: 8: 1 9: 1 9: 1 9: 1 9: 1 9: 1 9: 1 9:
TUBERCULOSIS.	Non- Pulmonary.	1   2   1   1   1   1   1   1   1   1	25 3332   6   1 3 1   1 3
DEATHS FROM	Death Rate.	38. 55. 36. 57. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	.68 125 125 125 138 138 138 139 139 139 139 139 139 139 139 139 139
DEA	Pulmonary.	18 18 18 18 18	20 3 4 4 10 10 10 10 10 10 10 10 10 10 10 10 10
TUBERCULOSIS.	Attack Rate	58 326 326 11 23 17 17 13 13 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15	151 100 1007 1007 100 100 100 100 100 100
OF TUBERC	Non- Pulmonary.	39	94   106   1   100   4
NOTIFICATIONS O	Attack Rate	.96 1.84 1.99 1.04 1.02 1.02 1.03 1.03 1.03 1.03 1.03 1.03	.45 1.26 1.56 1.08 1.08 .92 .72 .72 .107 1.20 1.20
NOTIFIG	Pulmonary.	5 6 42 11 11 136	37 5 29 6 6 11 35 172
	Estimated Population.	5,214 3,561 22,790 15,650 22,260 9,143 10,540 4,422 2,630 5,878 3,782 11,090	17,640 29,370 3,202 10,460 26,780 6,534 1,717 16,780 4,836 10,320 24,190 7,501 14,650
	District.	Ashby-de-la-Zouch Ashby Woulds Coalville Hinckley Z Loughborough Market Harborough Melton Mowbray Oadby Quorn Shepshed Thurmaston Wigston Magna TOTALS.	Ashby-de-la-Zouch Barrow-on-Soar Belvoir Billesdon J. Blaby Castle Donington Hallaton Hinckley Loughborough Lutterworth Market Bosworth Market Harborough Melton Mowbray

TABLE 1.

# VITAL STATISTICS.

	L	eicester	RSHIRE		wh Cou		THE PARTY	ENGLAN AND WALES	D
Population	120,	960	174,	340	295,	300		-	
	No.	Rates	No.	Rates	No.	Rates		Rates	
Births	2025	16.7	2997	17.2	5022	17:0		16.3	
ages	1256 108 24	10·38 *53 0·20	1819 170 34	10·44 *56 0·20	3075 278 58	10·41 *55 0·20		11·4 *60	
Deaths from :— Small Pox Measles Whooping Cough Diphtheria Scarlet Fever Enteric Fever **Diarrhœa (under 2 years)	1 2 8 6 3 1	0·01 0·02 0·07 0·05 0·02 0·01 *1·50	1 4 8 8 8 1 3	0·01 0·02 0·05 0·05 0·01 0·02 *3·00	2 6 16 14 4 4 12	0·01 0·02 0·05 0·05 0·01 0·01 *2·39	0· 0· 0· 0·		
The seven chief causes				-			Percer	ntage of Deaths.	
of death were :—		134					Urban	Rural	Whole
Heart Disease Cancer Cerebral Hæmorrhage Phthisis Congenital Debility Pneumonia Violence (other than suicide)	219 171 74 81 63 55	1.81 1.41 0.61 0.67 0.52 0.45	340 228 123 102 104 90	1·95 1·31 0·71 0·59 0·80 0·52	559 399 197 183 167 145	1·89 1·35 0·67 0·62 0·57 0·49	17.4 13.6 5.9 6.4 5.0 4.4	18·7 12·5 6·8 5·6 5·7 4·9	18·2 13·0 6·4 6·0 5·4 4·7

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

\*\*The Diarrhæa rates fer thousand of the population are:—
Urban 0.02, Rural 0.05, Whole County 0.04.

Birth-rate, Death-rate, and Analysis of Mortality during the year 1930.

(Provisional figures. The rates for England and Wales have been calculated on a population estimated to the middle of 1930, but those for the towns have been calculated on populations estimated to the middle of 1929. 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).

-		-			
	p	Uncertific Causes of Death.	1.0	0.5	1.1
TAGE DEATHS.	1	Certified b Coroner after P.M No Inques	1.7	2.3	1:2
PERCENTOTAL	.8	Inquest	6.9	9.9	5.6
OF	p	Certified I Registere Medical Practitione	90.4	9.06	91.8
B PER LIVB THS.	or The	Total Dear under On year.	09	64	55
RATE 1,000 J BIRT	sin	Diarrhoe and Enteri (under Two years	0.9	8.3	4.4
	•	Violence	0.55	0.50	0.43
ATION.		Influenza	0.12	0.11	0.13
POPULATION	.si	Diphtheri	60.0	0.10	0.07
1,000	g.	Whoopin	0.02	0.02	0.05
PER	.19	Scarlet	0.05	0.05	0.01
-RATE		Measles.	0.10	0.15	0.08
<b>DEATH-RATE</b>	·x	od-llem2	00.0	0.00	0.00
W.	.10	Enteric Fev	0.01	0.01	0.00
ANNU		All Causes.	11.4	11.5	10.5
17 J. 000	ž.	Still- births.	69.0	0.71	0.69
RATE PER 1,00 TOTAL POPULA	TION.	Live Births.	16.3	9.91	16.2
	1		England and Wales	Towns, including London	Populations 20,000—50,000).

\* By the creation of Llwch wr U.D. on the 1st April 1930, and the extension of Sale U.D. on the 1st October 1930, the number of Smaller Towns was increased to 159.

TABLE 3.

# NOTIFIABLE DISEASES.

TABLE 3. NOTIFIABLE DISEASES.													
	DISEASE				Total cases notified	Cases admitted to Hospital	Total Deaths						
Notifications retu General :—	urned by	the	Regist	rar									
Small-Pox					567	556	2						
Diptheria					323	247	14						
Erysipelas					95	1							
Scarlet Fever					742	534	4						
Enteric Fever					18		4						
Puerperal Fever					9	5	7						
Puerperal Pyrexia					19	6							
Other Diseases ge Ophthalmia Neon	-	tifial	ble:		17	4							
Tuberculosis—Lu	ings				308		183						
" —Ot	her forms				83		39						
Pneumonia					302		145						
Encephalitis Leth	argica				6		3						
Poliomyelitis					5	2							
Para Typhoid B.					8	9							
Dysentery					1								
Cerebro Spinal M	eningitis				2								
Cerebro Spinal Fe	ever }				11	7							
Diseases notified l Chicken-Pox	1				143								
TOTALS					2,659	1,371	401						

Figures supplied by the Registrar General are for the 53 weeks ending 3rd January, 1931

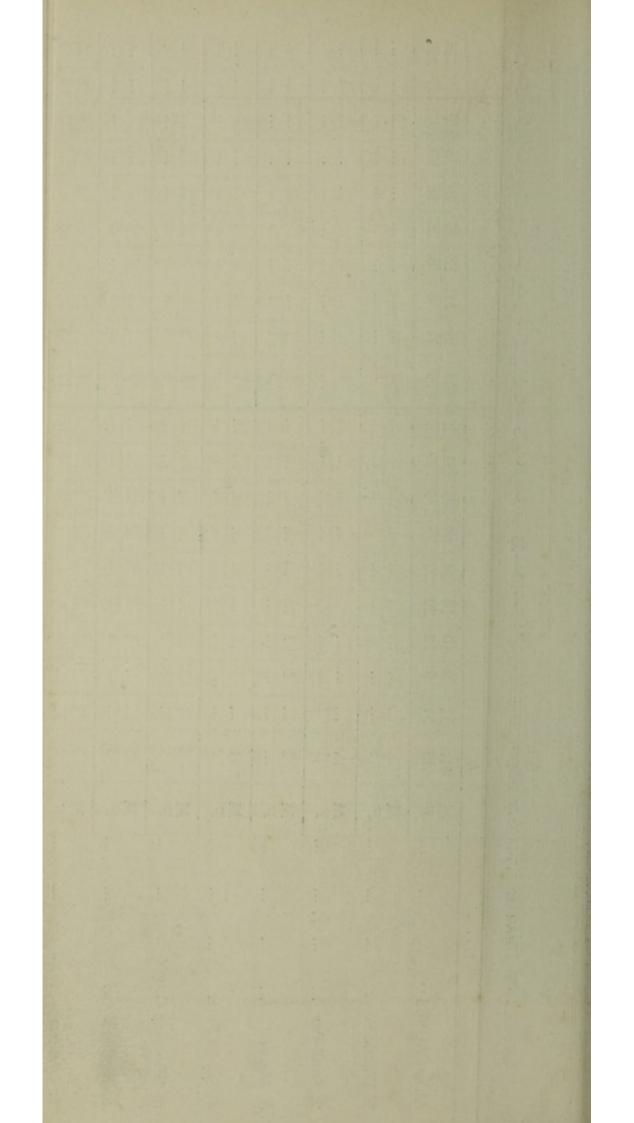


TABLE 5.	1908. CAUSES OF DEATH IN ADMINISTRATIVE AREAS.																																													
Caure of Death.	Long beens M.3	40	Johns-de-la- Zouch U.D.	And Wor	aby ulds D.	Control U.D.	lle	Hindler U.D.	Her	facilies becough U.D.	Me Men U.	lton theay D.	Quorndon U.D.	She	pshed .D.	Thurmanire U.D.	1	Figuron Magna U.D.	Oad U.E	7	Ashley-d Zouch R.D.	u u	Barrew- pon-Sour R.D.	Beb R.	our D.	Billes R.D	doe.	Raby R.D.	D	Cartle lonington R.D.	Halland R.D.	0	Hinckley R.D.	bo	rough- rough L.D.	Lutterwe R.D.	orth	Market Boowerth R.D.	Mar Harbon R.I	rough	Melto Mewbe R.D.	37	Treats. U.D.Ys.	To R.I	cals. D./s.	Totals. Whole County.
Civilian only.	M.	F.	M. F.	M.	F.	M.	F. 1	M. F	. M.	F.	M.	E	M. F.	М.	F.	M. F.	M	F	M	P.	M.	F. 3	6. P.	M.	F.	M	E	M. F	M	F.	M.	F	M. F.	M	P.	М. 1	. M	L E.	M.	P	M. I	. M	4. F.	М.	P.	
Asi Comm.	149	122	24 25	19	15	107 1	113	97 8	3 56	51	61	60	17 10	32	23	16 19	4	4 26	19	18	107 1	05 36	148	16	22	52	50	132 12	4 43	35	17	10	78 71	23	16	66	58 10	111	50	\$1	94	73 6	41 615	945	874	3075
James Freet State of the Control of	Base :	Mai a to asserve i canadification of its in its		The state of the s	1111 1111 1111 11 11 11 11 11 11 11 11	12 12 1 1 20 4 10 5 1 1 1 2 2 2 3 4 1 2 1 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1	2 7	7 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4 3 3 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-	1 1 1 5 6 6 2 4 8 8 8 1 1 1 1 1 1 1 1 1 1 1 1 1	11.	9 9 9	2 2 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	the state of the s	6 999		6 5 12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	The state of the s		Table Transfer Contract Contra	****	2 4 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	CONTRACTOR OF THE PROPERTY OF	3 4 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	***************************************	Comments of the first consequent of the first of the firs	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 1	Commence of the Commence of th		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		122 1	44 11 12 11 11 11 11 11 11 11 11 11 11 11	1 2 8 9 9 10 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 1 1	The same of the sa	11 11 12 4 4 2 3 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	12 14 15 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	18 11 15 11 14 3 3 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 2 2 2 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	2 11 13 5 5 21 11 13 99 13 16 16 16 48 25 25 10 10 8 6 4 11 11 11 11 11 11 11 11 11 11 11 11 1	1 : 5 : 5 : 5 : 5 : 5 : 5 : 5 : 5 : 5 :	4 2 6 6 4 6 144 79 3 9 12 12 12 12 12 12 12 12 12 12 12 12 12
Special Cassess (mediated above) Microsphile Microsphi	-			1		0	44.4				100			1		0 0	T			:				1::	:		::							1:	::	:: :				::		T		::	::	
Desir of lations under 1 year :— Smil Engineer	14	10	1 1	2	1	11	17	5	5	4		6	3 1	5	1	1 2		2 8		1	16	10 2	22 15		1	7	6	15 1	4 4	2	1	::	3 7	2	::	* 1	1 1	5 50	4	1	4	4 5	1 17	90 7	71 4	278 13
Line Burns Total	205 197 8	215 203 12	29 44 28 43 1 1	27 26 1	27 27	214 204 10	196 190 6	152 1 145 1	45 5 46 5	61 61	15 67 8	106 105 3	20 15 20 14	49 47 2	44 43 1	44 25 44 25	0.0	6 113 1 112 5 1	31 36	34 33 1	164 158 6	152 2 142 2 10	99 243 91 237 8 6	15 15	14	92 89 3	77 74 3	311 29 305 28	6 61 7 61 8	42	H	: :	37 135 34 126 3 7	24 24	38 38	98 6 94 5	SI 19 88 19 3	9 193 16 188 5 5	54 50 4	54 1 60 1	123 12 119 11	99 99 9	6 0029 11 997 15 32	1546 1522 64	1431 1328 53	5022 4848 174
Lepinos —Total Lepinos Elepinos	16 16	5	1	1	1	14 14		13	3		1	4	1	2 2	2 2	2		1 :	:		7	7 6 1	9 5		1	2 2	3	9 1	1 1	1 2	::	::	1 1	2 2	2 2	3 3	1 1	8 10 7 10 1	8	1	1	5 5	22 24 22 24	48 45 3	55 52 3	179 173 6
Personal (Mil. 1929)	263	160	5214	,	560	2279	90	15650		9143	10	540	2650		5878	3782		*11090j	44	22	1764	0	29130	32	02	304	60	26790		6534	1717		16780	1 4	836	10320		24190	7501		14650		*120960	1743	40	+295300
				100000		71775										* Population	n for	Birth Rese	:-Wip	oon Ma	gris U.D	11280.	Total	Urben	121150.	Ton	od Cour	ry 295490	,																	

