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Northamptonshire County Council.

Annual Report

OF THE

Medical Officer of Health,

FOR THE YEAR 1920,

INCLUDING BRIEF

ABSTRACTS FROM THE ANNUAL REPORTS OF THE
DISTRICT MEDICAL OFFICERS OF HEALTH

BY

CHARLES E. PAGET,

County Medical Officer of Health,

TOGETHER WITH

SUPPLEMENTARY REPORTS BY THE CHIEF
TUBERCULOSIS OFFICER,

O. A. J. N. MURISSET, M.B.,

AND THE

LADY MEDICAL OFFICER,

LILA S. GREIG, M.B., D.P.H.

KETTERING :

T. BEATY HART, BRIDWELL PRINTING WORKS, GREEN LANE.
1921.

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NORTHAMPTONSHIRE COUNTY COUNCIL

ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE YEAR 1920.

I HAVE the honour herewith to present the Twenty-fourth Annual Report of the Medical Officer of Health to the County Council of Northamptonshire, including brief abstracts from the Annual Reports of Medical Officers of Health for the several Boroughs and Districts within the Administrative County. The plan of the report is on practically similar lines to those that have preceded it. Supplementary Reports are appended on Tuberculosis and Maternity and Child Welfare by Dr. Muriset and Dr. Lila S. Greig respectively; that by the last-named is inclusive, however, of the section relating to the supervision of midwives.

I have to record that there were five **Local Inquiries** held during the year by Officers of the Ministry of Health, as follows:—

<i>Date.</i>	<i>District.</i>	<i>Subject.</i>	<i>Result.</i>
2nd March ...	Wellingborough Urban	Loan of £3,450 for purchase of land adjoining Sewage Farm	£3,442 Sanctioned
28th May ...	Brackley Rural	Loan for purchase of Waterworks situate in parish of Whitfield £330	Sanctioned
13th July ...	Thrapston Rural	Loan of £650 for purchase of existing Waterworks at Sudborough	Sanctioned
1st Sept. ...	Kettering Rural	Loan of £3,300 for Works of Sewage Disposal in parish of Burton Latimer	*Referred back for amendment of scheme.
9th Nov. ...	Crick Rural ...	Loan of £500 for purchase of land for sewage disposal scheme.	£450 Sanctioned

* Loan of £3,850 sanctioned, June 1921:

In my last Annual Report reference was made to the existence of certain points of controversy in relation to the Council's scheme under the **Maternity and Child Welfare Act, 1918**, and that these were under discussion by a conference of equal representation from the Maternity and Child Welfare Committee and the Northamptonshire District Nursing Association. The first outcome of such discussion was a recommendation that the scheme should be modified, with the approval of the Ministry of Health, and this was adopted in the following terms, namely : (1) That the inspection of the work of the District Nurses be under the Lady Medical Officer, who shall be also an official of the Northamptonshire District Nursing Association, and (2) That the Superintendent of Nurses under the Northamptonshire District Nursing Association be Assistant Inspector of Midwives, and act under the direction of the Lady Medical Officer in (a) Assistance in inspection of Midwives, when required, (b) the supervision of the work in Infant Welfare Centres, and all other work under the Maternity and Child Welfare Act. It was anticipated that, by this re-arrangement of control over Maternity and Child Welfare operations within the County, means would be thus provided to avoid the risk of duplication of supervision and the overlapping of duties in those employed to carry out the detailed work under the scheme. The second outcome of further discussion by the Conference, on the question of "what variations, if any, in the functions and position of Health Visitors in Rural areas are desirable," was the proposal set out in the following terms, namely :—"That one of the present Health Visitor Districts be set apart experimentally for a period of two years, wherein the Health Visiting shall be carried out by the District Nurses employed by the Northamptonshire District Nursing Association, provided that the cost of such work shall not exceed the present cost of Health Visiting in the District assigned for the purpose, and that the work shall continue to be carried on under the direction of the County Medical Officer of Health and the Lady Medical Officer." It was, at the same time, emphasised by the Lady Medical Officer that the staff of

County Health Visitors was too small to cope with the work devolving on them. On consideration of these views, it was decided ultimately at the Council's meeting held the 20th October, 1920, not only to adopt the proposal of the Conference but also to sanction the appointment of two additional County Health Visitors. By these means it has been made possible to reduce the areas worked by individual Health Visitors, and to enable their operations to be carried on with greater efficiency and less liability to breakdown.

There have been considerable changes during the year in respect of the scheme for the treatment of **Venereal Diseases** at the Special Clinic of the Northampton General Hospital. On the institution of the original scheme, and in the absence of local facilities, all the pathological work in connection with the diagnosis and treatment of venereal diseases in the County was arranged to be done under agreement by the London Lock Hospital, and this work was carried out in a most satisfactory manner. During the year 1919, however, a benefactor of the Northampton General Hospital undertook the generous charge of erecting and furnishing a complete pathological laboratory at this hospital, and, in due course, a skilled whole-time pathologist was appointed—E. H. Shaw, M.B. In consequence of this provision of local pathological facilities, and in view of the greater convenience thereby afforded, it was decided to determine the agreement with the London Lock Hospital, and to enter into a fresh agreement with the Northampton General Hospital whereby they undertook the supply of Salvarsan substitutes, as well as the examination of pathological specimens, at agreed charges, in addition to their original provision of clinical facilities for the treatment of patients, as from the 1st April, 1920. This new arrangement has proved so far to be a satisfactory one.

The original parties to the agreement with the Northampton General Hospital were the County Council and the Borough Council of Northampton; but, it having been brought to the notice of the Buckinghamshire County Council that a certain proportion of cases treated at the Hospital came from their area of administration, they expressed their willingness

to make arrangements with the Hospital for grants to it, based on the use of the clinic by Buckinghamshire patients. Thereon, the Buckinghamshire County Council were invited to become a party to the new agreement with reference to the facilities provided for the free treatment of venereal diseases at the Northampton General Hospital, and to this procedure they subsequently notified their willingness.

In connection with the clinical aspect of the scheme, it had been gradually becoming apparent that the attendance of patients for treatment was outstripping the available facilities in existence at the Hospital, and it is satisfactory to be able to report that this difficulty has been met now by the provision of entirely new premises for the purposes of the reception and treatment of patients. During the first year, ending the 31st March, 1918, the total number of persons from the County presenting themselves for treatment at the special clinic was 65 ; in the succeeding year, the number of new cases was 74 ; in the year following, there were 244 new cases ; and for the nine months ending 31st December, 1920, the total number of new cases amounted to 131. These are sufficiently eloquent figures in support of the necessity for increased and improved provision for the treatment of persons suffering from venereal diseases, and it is hoped that such provision will prove to be adequate for the purpose. It may be added that, though there has not seemed to be any call for increasing the days for consultations at the clinic, additional facilities for treatment have been established, and have been productive of improved results. It may be added that there are five medical practitioners in the County, other than the Medical Officers of the clinic, who are qualified to receive free supplies of Salvarsan substitutes, and that 48 pathological tests have been made for practitioners outside the General Hospital Staff.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

The following table shows the dates on, and the form in which the respective Annual Reports were received :—

<i>Name of District.</i>	<i>Date of Receipt.</i>	<i>Form.</i>
Brixworth Rural	... 11th April, 1921 ...	Printed.
Crick Rural ...	... 14th " " ...	Typed.
Rothwell Urban ...	... 21st " " ...	Printed.
Gretton Rural ...	... 21st " " ...	Typed.
Potterspury Rural...	... 21st " " ...	Printed.
Oxendon Rural ...	... 22nd " " ...	"
Daventry Borough	... 25th " " ...	"
Daventry Rural ...	... 25th " " ...	"
Brackley Borough	... 26th " " ...	"
Brackley Rural ...	... 26th " " ...	"
Finedon Urban ...	... 30th " " ...	"
Kettering Rural ...	... 6th May, " ...	"
Irthlingborough Urban	... 9th " " ...	"
Hardingstone Rural	... 9th " " ...	"
Northampton Rural	... 9th " " ...	"
Raunds Urban ...	... 10th " " ...	"
Easton-on-the-Hill Rural	10th " " ...	Typed.
Higham Ferrers Boro'	... 11th " " ...	Printed.
Middleton Cheney Rural	... 12th " " ...	"
Desborough Urban	... 13th " " ...	"
Rushden Urban ...	... 13th " " ...	"
Kettering Urban ...	... 19th " " ...	Typed.
Thrapston Rural	... 19th " " ...	Printed.
Towcester Rural ...	... 23rd " " ...	"
Wellingborough Urban•	... 25th " " ...	"
Oundle Rural ...	... 1st June " ...	"
Wellingborough Rural	... 17th " " ...	"

The reports of the District Medical Officers of Health were generally in conformity with the requisitions of the Ministry of Health, as set out in the official memorandum on the subject of the Annual Report. It is a matter of very considerable inconvenience that any of the reports should be outstanding at the end of the month of May. At the time of passing the proofs of this Report, the following District report had not been received :--Oundle Urban.

AREA AND POPULATION.

AREA.—There was no change in the area of the Administrative County during the year. The twelve Urban Districts have a total area of 40,032 acres, and the sixteen Rural Districts of 541,647 acres, making a total area for the County of **581,679** acres.

POPULATION.—The estimate of population for birth-rate calculation by the Registrar-General is, for the year 1920, 215,968, and for death-rate calculation is 215,777. In the year 1920 demobilization had reached a stage at which it was felt that the distinction between “birth-rate populations” and “death-rate populations,” made during the period when a large part of the male population was under arms, might in general be discontinued. In only a few areas, which contain an appreciable non-civilian population, have two estimates of population, one for calculation of the birth-rate and one for the civilian death-rate, been made, as in the years during the war. The Administrative County of Northampton is one of those areas, though only to a limited extent, owing to the existence of the military station at Weedon in the Daventry Rural District. With the taking of the census during the current year, it will be possible to compare the ascertained total population with that of the year 1911, when it stood at 213,733 persons. I do not think that the population for 1920 has been over-estimated by the Registrar-General.

BIRTHS.

It is gratifying to be able to record a notable increase in the number of births for the year 1920, there being 4,913 as against 3,140 for the year 1919.

The birth-rate for the Administrative County was 22.74 per 1,000 of the population, as against 14.52 for the year 1919, shewing an increased rate for 1920 of 8.22 per 1,000. For the ten years 1910-1919 the average rate was 18.00, or 4.74 per 1,000 below that for 1920. The rate for England and Wales for 1920 was 25.4 as against 18.5 for the year 1919,

shewing an increased rate of 6.9 per 1,000, or less by 1.3 per 1,000 of the improvement shewn for this Administrative County.

The births for the Administrative County during the year 1920 shewed an excess of 219 males, and the total births in the Combined Urban Districts amounted to 2,158 as against 2,755 in the Combined Rural Districts.

The average birth-rate of the whole Administrative County per 1,000 of population, and of the Combined Urban and Rural Districts respectively for the years 1911-1920 is shown in the following table, together with, for purposes of comparison, the corresponding rates for England and Wales :—

Areas.	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
Adminis- trative County ...	20.47	19.90	19.92	19.14	18.54	17.34	15.07	14.34	14.52	22.74
Urban Districts ...	20.69	20.23	20.57	18.84	18.64	17.31	14.83	13.12	14.11	21.50
Rural Districts	20.29	19.63	19.39	19.39	18.45	17.37	15.28	15.41	14.88	23.82
England & Wales ...	24.4	23.8	23.9	23.8	21.8	21.6	17.8	17.7	18.5	25.4

The birth-rates varied in the Urban Districts from 16.8 per 1,000 of the population in the Oundle District to 27.0 per 1,000 in the Finedon District, and in the Rural Districts the variation was from 17.5 per 1,000 in the Crick District to 28.3 per 1,000 in the Easton-on-the-Hill District.

Arranged in the order of their birth-rates the Urban Districts stand thus :—

	<i>Per 1,000 of Population</i>		<i>Per 1,000 of Population</i>
Oundle ...	... 16.8	Kettering ...	... 21.4
Brackley Borough ...	... 18.3	Rothwell ...	... 21.5
Raunds ...	... 19.0	Rushden ...	... 22.7
Desborough ...	... 19.8	Higham Ferrers Boro' ...	23.1
Wellingborough ...	... 20.3	Daventry Borough ...	26.0
Irthlingborough ...	... 20.9	Finedon ...	... 27.0

The position of the Rural Districts in respect of their birth rates is as follows :—

	<i>Per 1,000 of Population</i>	<i>Per 1,000 of Population</i>
Crick	17.5	Middleton Cheney ... 24.0
Gretton	17.6	Kettering 24.9
Brackley	19.7	Oxendon 24.9
Northampton	21.9	Thrapston 25.0
Daventry	22.8	Oundle 25.4
Hardingstone	23.0	Potterspury 26.5
Wellingborough	23.0	Towcester 27.6
Brixworth	23.7	Easton-on-the-Hill ... 28.3

The deaths exceeded the births in only one district of the County, namely, the small Rural District of Gretton, where the deaths amounted to 25 as against 24 births ; but, in so small an area, this fact is without any serious significance and may be regarded as entirely accidental.

DEATHS.

General Mortality.—The general mortality rate for the Administrative County for the year 1920 amounted to 11.09 per 1,000 of the population as against 13.84 for the year 1919, and an average rate of 12.69 for the 10 years 1910-1919. Similarly, the rates for England and Wales for these periods amounted to 12.4, 13.8, and 14.2 per 1,000 of the population respectively. The average death-rate for the Administrative County for the 10 years 1910-1919 was lower, therefore, by 1.6 per 1,000 than that for England and Wales, and for the year 1920 lower by 1.4 per 1,000.

The total deaths for the Administrative County were 2,393, as against 2,873 for the year 1919, or a reduction of 480. The Combined Urban Districts had 1,018 deaths, and the Combined Rural Districts 1,375 deaths, during the year 1920. These figures are notably satisfactory.

The deaths of males exceeded the deaths of females by 46 in the Urban Districts, and in the Rural Districts the deaths of females exceeded the deaths of males by nine, giving a total excess mortality for the Administrative County of 37 males over females.

The following table shows the general mortality rates for the Administrative County, England and Wales, and for the 96 large towns during the years 1911-1920 :—

Areas.	1911	1912	1913*	1914*	1915*	1916	1917	1918	1919	1920
Administrative County ...	12.59	12.09	10.58	10.82	12.88	13.33	14.01	15.25	13.84	11.09
England & Wales ...	14.3	12.9	13.3	13.7	14.8	14.0	14.4	17.6	13.8	12.4
Large Towns in England & Wales ...	16.4	14.6	14.3	15.0	15.9	14.4	14.6	18.2	13.8	12.5

* County death-rates standardized by the factor of the Registrar-General in these years.

The general death-rate varied in the Urban Districts from 6.3 per 1,000 of the population in the Desborough District to 12.0 per 1,000 in Finedon District, and in the Rural Districts the variation was from 8.3 per 1,000 in the Middleton Cheney District to 18.3 per 1,000 in the Gretton District.

Arranged in the order of their general death-rates, the Urban Districts stand thus :—

	<i>Per 1,000 of Population</i>		<i>Per 1,000 of Population</i>
Desborough ...	.. 6.3	Wellingborough ...	10.6
Irthlingborough ...	7.8	Raunds ...	10.7
Brackley Borough ...	8.5	Daventry Borough ...	11.6
Rushden ...	9.2	Higham Ferrers Boro' ...	11.7
Rothwell ..	9.5	Oundle ...	11.7
Kettering ...	10.5	Finedon ...	12.0

The position of the Rural Districts in respect of their general death-rates is as follows :—

	<i>Per 1,000 of Population</i>		<i>Per 1,000 of Population.</i>
Middleton Cheney ..	8.3	Brixworth ...	11.8
Crick ...	9.6	Kettering ...	12.0
Easton-on-the-Hill ...	9.9	Oxendon ...	12.4
Hardingstone ..	10.1	Brackley ...	12.7

	<i>Per 1,000 of Population</i>		<i>Per 1,000 of Population</i>
Northampton	... 10.4	Oundle	... 12.9
Daventry	... 10.7	Towcester	... 15.5
Thrapston	... 10.8	Potterspury	... 15.8
Wellingborough	... 11.1	Gretton	... 18.3

Infantile Mortality.—The Infantile Mortality rate for the year 1920 for the Administrative County, which was 59 per 1,000 births, is by far the lowest ever recorded, the next lowest year being 1916, when the rate was 66. The rate for 1919 was 80, which was also the average rate for the ten years 1910-1919. For England and Wales the rate was 80 for the year 1920, for 1919, 89, and for the previous ten years 1910-1919, 102 per 1,000 births. The reduction for the Administrative County for the year 1920 as compared with the year 1919 was 21 per 1,000 births, and for the ten year period 1910-1919 a like figure, and for England and Wales the reductions were 9, and 22 per 1,000 births respectively.

The average infantile death-rate for the whole Administrative County per 1,000 births, and of the Combined Urban and Rural Districts respectively, for the years 1911-1920, is shown in the following table together with, for purposes of comparison, the corresponding rates for England and Wales, and for the large towns taken from the Registrar-General's returns :—

Areas	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
Adminis- trative County ...	96	79	85	73	95	66	81	74	80	59
Urban Districts ...	105	88	89	81	96	72	81	79	94	63
Rural Districts....	88	72	82	67	94	61	81	71	69	56
England & Wales ...	130	95	109	105	110	91	97	97	89	80
Large Towns in England & Wales ...	140	101	117	114	117	99	104	106	93	85

I am glad to be able to note, from the foregoing figures, the nearer approximation of the rates of mortality for the Urban and Rural Districts which showed so great a disproportion in the year 1919. The testimony of the Lady Medical Officer as to the value of the supply of milk in necessitous cases to infants and nursing and expectant mothers in reducing the mortality, is embodied in her report on the Maternity and Child Welfare work for the year (Appendix II.) It has to be noted also, that in the Kettering Urban District, which is outside the County Council's scheme for Maternity and Child Welfare work, there are now four Health Visitors engaged in such work, and that the Medical Officer of Health speaks highly of the results achieved through their activities.

Arranged in the order of their infantile mortality rates the Urban Districts stand thus :—

	<i>Per 1,000 Births</i>		<i>Per 1,000 Births</i>
Brackley Borough ...	0.0	Finedon ...	59.8
Daventry Borough ...	20.8	Raunds ...	62.5
Irthlingborough ...	36.6	Rushden ...	73.1
Kettering ...	52.3	Wellingborough ...	83.3
Rothwell ...	53.7	Higham Ferrers Boro' ...	130.4
Desborough ...	57.4	Oundle ...	166.6

The position of the Rural Districts in respect of their infantile mortality rates is as follows :—

	<i>Per 1,000 Births</i>		<i>Per 1,000 Births</i>
Hardingstone ...	17.3	Wellingborough ...	58.4
Crick ...	20.4	Oxendon ...	58.8
Middleton Cheney ...	30.3	Oundle ...	62.5
Thrapston ...	35.7	Daventry ...	67.2
Brixworth ...	44.4	Kettering ...	74.2
Northampton ...	54.6	Easton-on-the-Hill ...	75.0
Potterspury ...	55.5	Brackley ...	82.1
Towcester ...	57.9	Gretton ...	166.6

Tuberculosis Mortality.—The total number of cases of Tuberculosis notified in the Administrative County during the year 1920 was 345, as against 409 cases in the year 1919, and 444 cases in the year 1918. Of the cases notified during the year 1920, 208 were in the Combined Urban Districts, and 137 in the Combined Rural Districts.

The total deaths registered from this disease was 204, of which 111 occurred among persons in the Combined Urban Districts and 93 among persons in the Combined Rural Districts. The mortality rate for the Administrative County was 0.94 per 1,000 of the population as against 1.13 for the year 1919, as against an average rate of 0.99 for the 5 years 1910-1914, and as against 1.36 for the 5 years 1915-1919. (For the years 1911-12 only deaths from Pulmonary Tuberculosis are included, other forms of Tuberculosis not being compulsorily notifiable until the year 1913).

The following table shows the number of deaths from Tuberculosis, and the rates per 1,000 of the population for the whole Administrative County in the ten years 1911-1920 :

Area.	Tuberculosis.	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
Administrative County	No. of Deaths.	*	*	250	228	261	302	284	289	235	204
	Rate per 1,000	0.95	0.91	1.15	1.05	1.23	1.49	1.49	1.50	1.13	0.94

* These columns refer to deaths from Pulmonary Tuberculosis only ; later years include all forms of Tuberculosis.

I have furnished the Ministry of Health with a Summary of the notifications under the Public Health (Tuberculosis) Regulations, 1912, for the period 4th January, 1920, to 1st January, 1921, similar to Summaries sent in previous years to the Local Government Board. This Summary is included, therefore, in this report.

It is a matter of much satisfaction that there should have been so considerable a drop in the number of notifications and deaths during the year from this grave disease. Further

statistical information with regard to the work involved in combating this disease is given in the report of the Chief Tuberculosis Officer for the year (Appendix I.).

Arranged in the order of their Tuberculosis death-rates the Urban Districts stand thus :—

	<i>Per 1,000 of Population</i>		<i>Per 1,000 of Population</i>
Desborough ...	0.00	Raunds ...	1.18
Daventry Borough ...	0.27	Rushden ...	1.18
Oundle ...	0.46	Brackley Borough ...	1.27
Finedon ...	0.69	Wellingborough ...	1.27
Rothwell ...	0.69	Kettering ...	1.31
Higham Ferrers Boro' ...	1.00	Irthlingborough ...	1.34

The position of the Rural Districts in respect of their Tuberculosis death-rates is as follows :—

	<i>Per 1,000 of Population</i>		<i>Per 1,000 of Population</i>
Gretton ...	0.00	Oundle ...	0.79
Oxendon ...	0.24	Daventry ...	0.81
Wellingborough ...	0.44	Potterspury ...	0.84
Brackley ...	0.67	Towcester ...	0.85
Northampton ...	0.68	Kettering ...	1.04
Easton-on-the-Hill ...	0.70	Brixworth ...	1.05
Crick ...	0.71	Middleton Cheney ...	1.09
Hardingstone ...	0.79	Thrapston ...	1.09

Respiratory Diseases Mortality.—(Bronchitis and Pneumonia).—The deaths from these diseases amounted to 243, as against 356 for the year 1919, and as against an average of 338 for the ten years 1910-19. The average mortality for the first five of these years was 315, and for the second five years the average mortality was 361. The mortality rate for 1920 was 1.12 per 1,000 of the population as against 1.71 for the year 1919, and as against an average rate of 1.62 for the 10 years 1910-1919. Of the deaths during 1920, 97 occurred in the Combined Urban Districts and 146 in the Combined Rural Districts.

The following table shows the number of deaths from the

respiratory diseases, and the rate per 1,000 of the population for the whole Administrative County, for the ten years 1911-1920 :—

Area.	Respiratory Diseases	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
Administrative County	No. of Deaths	281	339	308	319	464	341	332	315	356	244
	Rate per 1,000	1.31	1.57	1.42	1.47	2.20	1.68	1.74	1.63	1.71	1.11

Arranged in the order of their Respiratory death-rates the Urban Districts stand thus :—

	<i>Per 1,000 of Population</i>		<i>Per 1,000 of Population</i>
Oundle ...	... 0.00	Brackley Borough ...	1.27
Desborough ...	... 0.45	Rothwell ...	1.39
Rushden ...	... 0.48	Raunds ...	1.42
Daventry Borough ...	... 0.54	Irthlingborough ...	1.53
Kettering ...	... 0.89	Higham Ferrers Boro' ...	1.67
Wellingborough ...	... 1.03	Finedon ...	1.85

The position of the Rural Districts in respect of their Respiratory death-rates is as follows :—

	<i>Per 1,000 of Population</i>		<i>Per 1,000 of Population</i>
Easton-on-the-Hill ...	... 0.00	Northampton ...	1.37
Brackley ...	... 0.67	Crick ...	1.43
Middleton Cheney ...	... 0.72	Kettering ...	1.45
Daventry ...	... 0.81	Gretton ...	1.46
Oundle ...	... 0.95	Oxendon ...	1.46
Thrapston ...	... 1.19	Hardingstone ...	1.73
Brixworth ...	... 1.23	Towcester ...	1.81
Wellingborough ...	... 1.27	Potterspury ...	2.10

In this connection, the comments of the Lady Medical Officer (Appendix II.) in respect of the greater incidence of chest illnesses and mortality among the rural than the Urban

population, are specially noteworthy. They have, likewise, considerable bearing on the many problems involved in the question of rural housing.

General Zymotic Mortality.—The total number of deaths from the chief notifiable zymotic diseases for the year 1920, and inclusive of those from Measles, Whooping Cough, and Diarrhœa and Enteritis under 2 years of age, which are not notifiable diseases, but not including Cerebro-Spinal Meningitis, Poliomyelitis, Polio-Encephalitis, Encephalitis Lethargica, Dysentery, Malaria, Pneumonia, Tuberculosis, Ophthalmia Neonatorum, Simple Croup, or Epidemic Influenza amounted to 88, of which 43 deaths occurred in the Combined Urban Districts, and 45 in the Combined Rural Districts. The mortality rate of 0.40 for the year 1920 is 0.06 per 1,000 of the population below the rate for the year 1919, and less by 0.27 than the average rate for the preceding ten years 1910-1919. Of these 88 deaths, 24 were due to Measles, 20 to Whooping Cough, 17 to Diphtheria, and 13 to Diarrhœa and Enteritis.

The mortality rate for the chief notifiable diseases exclusive of Tuberculosis, Cerebro-Spinal Meningitis, Poliomyelitis, Polio-Encephalitis, Encephalitis Lethargica, Dysentery, Malaria, Pneumonia, and Ophthalmia Neonatorum, amounted to 0.14 per 1,000 of the population, as against 0.30 in the year 1919, 0.44 in 1918, 0.33 in 1917, 0.40 in 1916, and 0.49 in 1915. The total number of cases *notified exclusive of those just mentioned was 499, as against 2,472 in the year 1919, 3,587 in 1918, 2,315 in 1917, 2,597 in 1916, and 1,390 in 1915, which is at the rate of 2.31 cases per 1,000 of the population; of these cases, 31 were fatal (as against 63 in the year 1919), of which 17 were due to Diphtheria. These are gratifying falls; but it must not be overlooked that Measles has ceased to be a notifiable disease.

The following table shows the number of deaths from the general zymotic diseases, and the rate per 1,000 of the population for the whole Administrative County, for the ten years 1911-1920 :—

Area.	General Zymotic Diseases	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
Administrative County	No. of Deaths.	252	132	119	127	234	123	97	139	97	88
	Rate per 1,000	1.17	0.61	0.55	0.58	1.10	0.60	0.50	0.72	0.46	0.40

* See note at foot of Table II. at end of Report.

Arranged in the order of their death-rates for zymotic diseases the Urban Districts stand thus :—

	<i>Per 1,000 of Population</i>		<i>Per 1,000 of Population</i>
Brackley Borough	... 0.00	Finedon	... 0.46
Desborough	... 0.00	Kettering	... 0.48
Irthlingborough	... 0.00	Wellingborough	... 0.51
Rothwell	... 0.00	Daventry Borough	... 0.54
Raunds	... 0.23	Rushden	... 0.55
Higham Ferrers Boro'	0.33	Oundle	... 1.40

The position of the Rural Districts in respect of their death-rates for zymotic diseases is as follows :—

	<i>Per 1,000 of Population</i>		<i>Per 1,000 of Population</i>
Easton-on-the-Hill	... 0.00	Middleton Cheney	... 0.36
Gretton	... 0.00	Hardingstone	... 0.39
Brixworth	... 0.17	Potterspury	... 0.42
Northampton	... 0.17	Towcester	... 0.42
Thrapston	... 0.19	Oundle	... 0.47
Oxendon	... 0.24	Kettering	... 0.48
Brackley	... 0.27	Wellingborough	... 0.52
Crick	... 0.35	Daventry	... 0.67

SPECIAL ZYMOTIC DISEASES AND MORTALITY.

The total for all notifiable infectious sickness (excluding Tuberculosis) in the Administrative County for the year 1920, amounted to only 715 cases, which is 213 below that of the year 1919. (As Measles and German Measles were not

included among the notifiable diseases during the year 1920, the figures for these diseases for 1919 were eliminated when making this comparison).

The principal reductions for the year 1920, as compared with the year 1919, were in respect of Diphtheria, Pneumonia, and Malaria, these being less by 40, 168, and 58 cases respectively.

Small Pox.—The County was fortunate in escaping any introduction of this disease during the year. Information as to persons having been in contact with cases of small-pox on ship-board was received on several occasions, and such people were kept under strict local supervision. It is quite certain that, if smallpox is introduced, there are very few localities in the County which will be found sufficiently protected by vaccination against the spread of the disease.

Scarlet Fever.—The number of cases notified during the year 1920, in the Administrative County was 170, as against 122 cases in 1919, 108 cases in 1918, and 231 cases in 1917. Though not so satisfactory as in the two immediately preceding years, the figures for 1920 compare very favourably with the average number of notifications for the 10 years 1910-19, which was 510. Of the cases during 1920, 94 occurred in the Combined Urban Districts, and 76 in the Combined Rural Districts. The total scarlet fever prevalence was equal to a sickness rate of 0.07 per cent. of the population, as against 0.05 per cent. in 1919 and 1918, and 0.12 per cent. in 1917; in the Combined Urban Districts the rate was 0.09 per cent., and in the Combined Rural Districts 0.06 per cent. of their respective populations. As in the year preceding, no death occurred from this disease during the year 1920. No case was notified in any of the six districts below-mentioned viz. : Brackley Borough, Higham Ferrers Borough, Desborough, Raunds and Rothwell Urban, and Easton-on-the-Hill Rural. The greatest prevalence of the disease was in the Kettering Urban District, where 49 cases were recorded.

Diphtheria and Membranous Croup.—There was an appreciable decrease in notifications of these diseases during the year 1920, 245 cases being notified as against 285 cases in 1919, and 398 cases in 1918. The cases for the year 1920 were almost evenly distributed between the Combined Urban Districts (122) and the Combined Rural Districts (123). The case incidence on the Combined Urban population was at the rate of 1.21 per 1,000, as against 1.17 in 1919, and on the Combined Rural population 1.06 per 1,000 as against 1.54 in 1919. Seven deaths occurred in the Urban Districts, and ten in the Rural Districts. The comparative severity of the cases, as indicated by the mortalities, is shewn by the death-rates of 5.73 per cent. of the cases in the Combined Urban Districts as against 14.15 per cent. in 1919, of 8.13 per cent. in the Combined Rural Districts as against 9.88 per cent. in 1919, and of 6.93 per cent. in the whole Administrative County as against 11.57 per cent. in 1919. Only three Districts escaped visitation by these diseases during 1920, viz.:—Oundle Urban, Crick and Potterspury Rural. The largest number of cases (50) occurred in the Kettering Urban District, the Wellingborough Urban District (with 33) having the next largest number; the Rural Districts with the heaviest like records were those adjacent to these two Urban areas. At least two "carrier" cases were discovered in the Kettering Urban District.

Enteric Fever.—Twelve cases were notified—the same number as in the year 1919—the lowest of any year on record, with the exception of the year 1918 when ten cases were notified. Of the cases for 1920, three were in the Combined Urban Districts and nine in the Combined Rural Districts. Only one death occurred, giving a rate of 8.33 per cent. of the cases for the whole Administrative County, as against 16.66 per cent. in the year 1919. Single cases of the disease were notified in the Desborough, Finedon and Rushden Urban Districts, Kettering, Northampton, Oundle, Oxendon, Thrapston and Towcester Rural Districts, and three cases in Wellingborough Rural District.

Puerperal Fever.—Five cases were notified, as against one case in 1919, and as against an average of five cases for the quinquennium 1915-19. Of the notified cases, three ended fatally ; four were in the practice of midwives, of which one was fatal ; and the notified cases occurred in the following Districts :—Kettering Urban (2), Brackley Rural (1), Thrapston Rural (2). In addition to these notified cases, five deaths from puerperal fever were recorded as such by the Registrar-General in Daventry Borough, Finedon Urban and Brixworth, Crick and Kettering Rural Districts. The Finedon case had been originally notified as diphtheria, and puerperal fever developed subsequently.

Erysipelas.—The notifications of this disease—as in recent years—have again shewn a decrease, 67 cases having been notified, as against 75 cases for the year 1919, and as against 80 cases in 1918, 93 cases in 1917, 114 cases in 1916, and 169 cases in 1915. During the year 1920 the Combined Urban Districts had 36 cases with three deaths, and the Combined Rural Districts 31 cases with two deaths.

Measles and German Measles.—These diseases ceased to be compulsorily notifiable as from December 31st, 1919, consequently it is not possible to make comparison by numbers with the years 1916-19, when they were included among the list of notifiable diseases. It may be said, however, that there were prevalences for varying periods in Daventry Borough, Desborough, Finedon, Oundle and Wellingborough Urban Districts, and in certain parishes in Brixworth, Daventry, Hardingstone, Kettering, Middleton Cheney, Oundle, Potterspury, Thrapston, Towcester and Wellingborough Rural Districts. A few cases also are reported as having occurred in Rothwell Urban District and Oxendon Rural District as well as one case each in Rushden Urban District and Crick Rural District. Twenty-four deaths occurred—thirteen in the Combined Urban Districts and eleven in the Combined Rural Districts—as against 26 deaths for the year 1919, and 35 deaths for the year 1918. At Long Buckby in the

Daventry Rural District the services of a Nurse were supplied in accordance with the agreement between the County Council and the Northamptonshire District Nursing Association, and proved most helpful.

Whooping Cough.—There were fewer outbreaks of this disease during the year 1920 than in the year 1919, but some prevalence of it was recorded in certain parishes in Brixworth, Daventry, Hardingstone, Oundle, Towcester and Wellingborough Rural Districts, and there were a few cases in Wellingborough Urban District. The mortality was also lower, there being twenty deaths—twelve in the Combined Urban Districts and eight in the Combined Rural Districts—as against twenty-four in the year 1919, and as against an average of 32 deaths for the five years 1915-19.

Chicken Pox.—Some prevalence of Chicken Pox was recorded in Finedon Urban District and in certain parishes in Oundle, Thrapston, and Wellingborough Rural Districts. A few cases also occurred in Desborough and Wellingborough Urban Districts.

Diarrhœa and Enteritis.—(Under two years of age).—Thirteen deaths occurred during the year 1920 as compared with ten deaths for the year 1919, and as compared with an average of sixteen deaths for the years 1915-19.

Influenza.—No prevalence or outbreak of the disease was noted on any of the weekly returns received from the District Medical Officers of Health, but forty-one deaths—nineteen in the Combined Urban Districts and twenty-two in the Combined Rural Districts—were recorded in the Administrative County during the year 1920. This is a very gratifying decrease as compared with the year 1919, and the previous five years 1915-19, when there were 241 deaths and an average of 185 deaths respectively. Mortalities were recorded in the Boroughs of Daventry and Higham Ferrers, the Urban Districts of Irthlingborough, Kettering, Raunds, Rushden,

Wellingborough, and in the Rural Districts of Brackley, Brixworth, Gretton, Hardingstone, Oundle, Oxendon, Potterspury, Thrapston and Wellingborough.

Pneumonia.—(Acute Primary and Acute Influenzal).—The decrease in notifications of these diseases during the year 1920 was marked, 145 cases being notified—73 in the Combined Urban Districts, and 72 in the Combined Rural Districts—as compared with 313 cases for the *ten months in 1919.

The number of deaths from Pneumonia (all forms) was 111, 48 of which were in the Combined Urban Districts and 63 in the Combined Rural Districts.

Malaria.—Thirty-two cases were notified—20 in the Combined Urban Districts, and 12 in the Combined Rural Districts—as against 90 cases for the *ten months in 1919. It is specifically stated in the report of the Medical Officer of Health that the 12 cases notified in Kettering were all ex-service men, and that the disease had been contracted while on active service abroad.

Dysentery.—One case (Amœbic) was notified, as against two cases for the *ten months in 1919.

Acute Poliomyelitis.—One case was notified—in the Kettering Urban District—as against two cases in 1919, one case in 1918, three in 1917, and eight cases in 1916. In addition, there was one death—in the Crick Rural District—of an unnotified patient.

Acute Encephalitis Lethargica.—Two cases were notified—one case each in Irthlingborough Urban District, and Thrapston Rural District—as against the same number in 1919. The case in the former District terminated fatally.

Cerebro-Spinal Fever.—Eight cases—four each in the Combined Urban Districts and Combined Rural Districts—

*These diseases were not compulsorily notifiable until March 1st, 1919.

were notified, as against six in the year 1919. There were four deaths, the same number as in the previous year. Two of the cases reported were imported.

Ophthalmia Neonatorum.—Twenty-seven cases were notified during the year, as against seventeen in 1919. Eleven of the cases during 1920 were in the practice of midwives, and all of these made a good recovery. Further reference to this disease is made by the Lady Medical Officer in her report on the Inspection of Midwives (Appendix II.).

Mumps.—There were prevalences of mumps for varying periods in Daventry Borough, Raunds and Rothwell Urban Districts, and at Woodford in Daventry Rural District. There were also a few cases in Desborough Urban District and at Stanwick and Woodford in Thrapston Rural District.

VACCINATION.

I regret to have to report no general improvement in the position with regard to Vaccination as protection against Small-pox in this county. The risks of spread of the disease from other parts of the country during the year were not inconsiderable, but there was practically no vaccination or re-vaccination of persons under the Public Health (Small-pox prevention) Regulations, 1917. The situation in the Towcester Union, as thus described by the Medical Officer of Health, is fairly characteristic of the rest of the County:—
 “ Vaccination as a statutory observance is a farce, thanks to
 “ the facilities that are afforded for obtaining exemptions.
 “ There were 40 successful vaccinations, and 206 ‘ conscientious
 “ objectors.’ ”

ISOLATION HOSPITALS AND DISINFECTION.

The situation with regard to permanent isolation hospital accommodation remains practically nearly as it was in pre-war times, and is likely to remain so for some considerable period—at least so long as housing requirements continue to be

ANALYSIS OF VACCINATION OFFICERS' RETURNS, 1893-1919.
PERCENTAGES OF BIRTHS IN RESPECTIVE YEARS.

UNIONS IN THE COUNTY OF NORTHAMPTON.	PERCENTAGES OF BIRTHS IN RESPECTIVE YEARS.																								UNIONS IN THE COUNTY OF NORTHAMPTON.			
	Certificates of "Successful Vaccination." (Col. 1).							Certificates of "Conscientious Objection." (Col. 2).							Not finally accounted for. (Col. 3).						Total Living Unvaccinated. (Col. 2 + Col. 3).							
	1893-97	1898-1902	1903-1907	1908-1912	1913-1917	1918	1919	1898-1902	1903-1907	1908-1912	1913-1917	1918	1919	1893-97	1898-1902	1903-1907	1908-1912	1913-1917	1918	1919	1893-97	1898-1902	1903-1907	1908-1912		1913-1917	1918	1919
BRACKLEY ...	39.1	51.3	68.9	30.0	23.7	13.8	11.1	10.7	13.6	47.4	66.4	57.8	69.7	47.7	30.8	9.2	16.7	11.1	17.6	15.1	49.3	41.6	22.8	64.1	71.5	75.4	84.8	BRACKLEY
BRIXWORTH ...	42.9	50.6	58.6	39.3	28.2	23.3	16.2	14.4	20.9	51.6	62.5	68.2	58.7	44.2	28.0	12.9	5.1	3.7	4.7	20.0	49.2	42.5	32.9	56.7	66.2	72.9	78.7	BRIXWORTH
DAVENTRY ...	51.1	56.9	64.3	35.6	23.6	22.6	40.2	15.0	18.4	48.5	61.8	64.5	51.5	36.3	19.3	10.5	9.8	8.8	8.9	5.2	39.4	34.8	28.9	56.4	70.7	73.4	56.7	DAVENTRY
HARDINGSTONE ...	38.5	48.9	47.2	23.5	15.3	14.3	11.2	34.4	41.0	68.7	76.8	73.8	83.9	42.7	8.2	4.3	2.4	2.3	4.1	1.0	51.1	42.7	45.3	71.0	79.2	77.9	84.9	HARDINGSTONE
KETTERING ...	1.6	17.3	28.5	13.2	6.8	5.7	7.7	21.4	51.9	76.9	83.8	81.0	82.5	84.2	47.7	10.2	2.6	2.7	7.3	3.4	84.2	69.2	62.1	79.6	86.5	88.3	85.9	KETTERING
NORTHAMPTON ...	3.7	16.8	24.8	17.2	11.1	11.3	9.9	31.4	56.4	70.5	77.5	76.0	76.9	74.2	39.8	10.1	5.5	5.2	6.4	6.7	82.3	71.2	66.5	76.0	82.8	83.0	83.6	NORTHAMPTON
OUNDLÉ ...	82.8	85.1	81.4	54.4	32.1	23.6	20.6	3.3	5.2	35.0	54.9	49.9	69.0	9.0	4.8	6.5	5.0	8.2	18.6	13.7	9.2	8.1	11.7	40.0	63.2	68.5	73.7	OUNDLÉ
PETERBOROUGH ...	84.0	76.3	77.6	52.4	37.6	33.4	31.7	2.1	4.4	35.1	52.2	53.7	57.3	7.6	11.1	10.2	6.3	4.7	7.3	4.9	7.6	13.2	14.6	41.4	57.0	61.0	62.2	PETERBOROUGH
POTTERS PURY ...	58.9	57.5	60.4	28.8	20.0	16.4	15.6	27.4	29.7	64.6	74.6	74.8	79.7	29.2	6.1	3.4	1.4	1.2	6.2	1.5	33.0	33.5	33.2	66.1	75.9	81.0	81.2	POTTERS PURY
THRAPSTON ...	10.9	38.7	47.2	18.6	15.3	16.1	12.7	43.8	40.9	70.8	76.7	75.7	83.7	72.0	9.9	4.9	7.1	1.6	3.4	1.3	78.7	53.7	45.8	77.3	78.4	79.1	85.0	THRAPSTON
TOWCESTER ...	38.9	47.9	49.6	25.0	20.1	21.5	29.9	27.4	29.8	65.8	70.5	73.2	62.0	43.9	16.2	12.5	3.8	2.9	2.1	12.4	50.7	43.6	42.1	69.5	73.4	75.4	74.4	TOWCESTER
WELLINGBOROUGH ...	1.1	16.2	40.5	19.5	8.8	8.1	7.3	22.4	45.5	71.0	82.0	82.4	84.5	82.2	50.8	5.6	2.5	3.6	5.5	2.0	86.4	73.2	51.2	73.5	85.8	87.9	86.5	WELLINGBOROUGH
MEANS ...	25.7	35.4	46.1	26.3	17.7	16.6	15.8	21.6	37.0	62.3	72.0	71.2	73.1	58.4	32.2	8.7	4.9	4.4	7.0	5.5	62.8	53.9	45.7	67.3	76.5	78.2	78.6	MEANS

* In the returns for the years 1893-97 the number of Certificates of Conscientious Objection received in respect of the children born in 1897 has not been included in the Percentages "Not finally accounted for," but allowance has been made for these in the "Total Living Unvaccinated."
 † The Sole of Peterborough is a County in itself, and I am therefore much indebted to the Clerk of the Peterborough Union for furnishing me with information for the purposes of this table.
 N.B.—The Rural Districts of Crick, Osendon, Gretton, Easton-on-the-Hill, and Middleton Cheney are included in Unions in the Counties of Warwick, Leicester, Rutland, Lincoln, and Oxford, and do not therefore enter into the above Analysis; on the other hand the Unions of Brackley, Oundle and Thrapston, Potterspurty, and Wellingborough, include a few parishes in Bucks, and Oxon., Hunts., Bucks., and Beds. respectively. The Union of Northampton includes the Borough of Northampton, except the parish of Far Cotton, which is included in the Union of Hardingstone.



unfulfilled, as the cost of building is kept unduly high, and as the burden of local rates will admit of no additions thereto. The hospitals which are in existence have been maintained in good condition, and have well served the purpose for which they were erected. The small Brixworth Hospital was opened during the month of May for the isolation of certain cases of diphtheria, and the Hospital of the Daventry Rural District accommodated nineteen patients from outside that area in addition to the twenty cases belonging to it. The Kettering Joint Isolation Hospital dealt with a total of 96 cases, of which 75 belonged to the Urban District and 21 to the Rural; of the total number, 56 were cases of diphtheria and 40 of scarlet fever. The one increase in hospital accommodation on the pre-war period has been in the provision of a block for 12 beds in 1916, allocated to the treatment of cases of Diphtheria, at the Wellingborough Urban Hospital, where previously the 16 beds then established were reserved for cases of scarlet fever. During the year 1920, 45 cases—12 scarlet fever, and 33 diphtheria—were admitted to the hospital, inclusive of seven cases of the latter disease from the adjoining rural district. It is in and around Wellingborough that the extension of the isolation hospital system is to be next looked for.

SCHOOLS.

The reports of the Medical Officers of Health give evidence of watchfulness over the sanitary condition of the elementary schools situated in their respective districts, and these are generally recorded as being in a satisfactory state. There was a good deal of interruption of school work owing to epidemic illness, principally on account of outbreaks of Measles and Whooping Cough, and in much less degree on account of Scarlet Fever, Diphtheria, Chicken Pox, and Mumps. The number of schools closed for varying periods on these grounds amounted to 88 during the year, as against 66 closures in 1919, 128 in 1918, 66 in 1917, and 92 in 1916. The month in which the largest number of closures were made was July, when they amounted to 21, and the next in order was the month

of March with 15 closures. Other matters in connection with School Hygiene are dealt with in my annual report on the Medical Inspection of Children in Schools.

WATER SUPPLY.

As previously reported, all the Urban Districts of the County have public water supplies, and the reports as to the quality of the water supplied by them are satisfactory. It has to be noted, however, that it appears from the reports of the Medical Officers of Health for the Finedon and Raunds Urban Districts that the need for augmenting the supplies for these towns is growing, and that there is but a small margin over bare sufficiency. Consideration is being given to the matter. Attention is again drawn to the need of a reliable public supply for Corby in the Kettering Rural District, and it is stated that a scheme is being prepared ; it is to be hoped that this will be pushed forward without unnecessary delay. No steps have been taken so far in respect of the provision of a public water supply for Thrapston and the adjoining village of Stanwick, as to which the special need was pointed out in the report of the Medical Officer of Health for the year 1919. It also appears that the supply of water for the Parishes of Paulerspury, Yardley Gobion, and Old Stratford in the Potterspury Rural District is far from satisfactory, and that the scheme which had been prepared in respect of the last-named parish is being held up on account of the expense of carrying it through. Where there is no public supply of water in a rural parish, dependence for water is usually placed on local wells, and it speaks well for the care which these local sources of supply receive that so little illness from contaminated water was recorded for the year ; but it is plain that the element of safety with regard to such sources is often in peril, and that any neglect is liable to be fraught with disaster. I wish much that, as each opportunity for instituting a parochial or combined parochial scheme of water supply arises it will not be allowed to pass by in the future as it has been unfortunately in the past.

1. The first part of the problem is to find the electric field of a uniformly charged sphere of radius R and total charge Q. The electric field is zero inside the sphere (r < R) and is given by E = (1/4πε₀) * (Q/r²) outside the sphere (r > R).

2. The second part of the problem is to find the electric field of a uniformly charged cylinder of radius R and total charge Q. The electric field is zero inside the cylinder (r < R) and is given by E = (1/4πε₀) * (Q/r²) outside the cylinder (r > R).

3. The third part of the problem is to find the electric field of a uniformly charged disk of radius R and total charge Q. The electric field is zero inside the disk (r < R) and is given by E = (1/4πε₀) * (Q/r²) outside the disk (r > R).

4. The fourth part of the problem is to find the electric field of a uniformly charged plane of total charge Q. The electric field is zero inside the plane (r < R) and is given by E = (1/4πε₀) * (Q/r²) outside the plane (r > R).

5. The fifth part of the problem is to find the electric field of a uniformly charged wire of total charge Q. The electric field is zero inside the wire (r < R) and is given by E = (1/4πε₀) * (Q/r²) outside the wire (r > R).



HOUSING, TOWN PLANNING, &c., ACT, 1909.

HOUSES IN RURAL DISTRICTS NOTIFIED UNDER SECTION 69, DURING THE YEAR 1920.

DISTRICT & PARISH.	Representation.	Closing Order.	Demolition Order.	Action Taken.
BRACKLEY	Nil			
BRIXWORTH				
Brixworth... ..	2 16 Jan.	No Owner	...	Partly fallen down. Gables, &c., pulled down to safeguard traffic.
Moulton	3 9 Mar.	...	...	Repaired.
"	2 10 "	...	...	Application by Owner for ejection order refused by Magistrates. House still occupied.
Ravensthorpe	1 20 May	...	...	No action—still occupied.
Holcot	1 20 Feb.	...	...	" " "
Guilsborough	1 17 Sept.	...	...	Under repair. " "
Pitsford	3 " "	...	...	Standing over for new owner to repair.
CRICK	Nil			
DAVENTRY				
Weedon Bec.	1 23 Sept.	23 Sept.	...	Owner has taken proceedings before Justices for an ejection order so as to close premises.
Woodford-cum-Membris	1 24 Aug.	24 Aug.	...	Property put into proper repair and certified fit for occupation.
EASTON-ON-THE-HILL	Nil			
GRETTON	Nil			
HARDINGSTONE...	Nil			
KETTERING	Nil			
MIDDLETON CHENEY	Nil			
NORTHAMPTON				
Weston Favell	2 ...	20 July	...	Closing Orders discharged 11 August and 8th Sept. respectively—houses made fit.
"	1 ...	11 Aug.	...	Works in hand.
OUNDLE	Nil			
OXENDON				
Ashley	3 11 June	6 Aug.	3 Sept.	A block of 3 houses. Partly demolished.
"	1 9 Aug.	*	...	House now unoccupied.
POTTERS PURY.				
Old Stratford	2 19 June, 1919	11 Sept., 1919	26 Feb., 1920	Demolition Order in respect of one of the houses was quashed, on appeal, by the Ministry of Health, 4/6/20.
Alderton	1 6 Nov., 1919	28 Feb., 1920	...	No action taken. Property unoccupied.
Palserspury	10 6 " "	28 " "	...	No action taken in nine—property unoccupied. In one case repaired and occupied.
Yardley Gobion	2 6 " "	28 " "	...	One in course of repair. One no action taken—house unoccupied.
"	1 12 Aug., 1920	7 Oct., 1920	...	Closing Order still in operation.
THRAPSTON	Nil			
TOWCESTER				
Cold Higham	1 25 May	8 June	...	Repaired.
Silverstone	1 16 Aug.	31 Aug.	...	Council to consider making of Demolition Order.
WELLINGBOROUGH				
Bozeat	4 ...	11 Feb.	...	Tenants still in occupation in two of the houses.
"	3 26 May	...	...	Bedrooms unfit through defective roofs.
"	3 23 June	...	...	One, thatched roof in very bad repair—two, with defective roofs.

* Closing Order made 1921.

TABLE SHOWING HOUSING PROGRESS DURING THE YEAR 1920.

DISTRICTS.	By Local Authority under Housing Scheme.			By Private Enterprise.		
	Completed Houses.	Houses in course of erection.	Prospective Houses.	Completed Houses.	Houses in course of erection.	Prospective Houses.
Brackley Borough	...	12	...	...	...	...
Daventry	4	15	not settled	...	1	...
Higham Ferrers	...	20	...	...	...	...
Desborough Urban	4	18	86	...	2	...
Finedon	...	20	73	...	...	...
Irthlingborough	...	51	*500	4	5	...
Kettering	...	171	234	15	8	...
Oundle	...	...	10	...	...	...
Raunds	...	...	40	...	...	...
Rothwell	...	14	34	...	...	1
Rushden	8	*78	114	4	3	2
Wellingborough	...	32	163	2	...	1
Brackley Rural	...	98	6	1	2	...
Brixworth	...	29	109	8	8	1
Crick	8	20	...	...	...	...
Daventry	10	126	94	2	...	...
Easton-on-the-Hill	...	26	60	...	...	...
Gretton	...	...	64	2	...	...
Hardingstone	...	24	6	3	...	...
Kettering	...	6	222	6	1	1
Middleton Cheney	...	20	...	...	...	...
Northampton	...	82	66	1	5	4
Oundle	...	...	28	3	2	...
Oxendon	14	28	28	...	...	...
Potterspury	...	8	8	3	...	...
Thrapston	...	8	44	...	3	2
Towcester	...	24	34	...	5	3
Wellingborough	...	...	56	1	3	1
TOTAL	104	958	2070	55	48	16

* This number will probably eventually be greatly reduced.

* Actually begun, but contracts let for 90 houses.

DWELLING HOUSES AND OVERCROWDING.

It will be seen from the Tables illustrating some phases of this subject that considerable activity has been shown during the year. In regard to the business of increasing the housing accommodation most of the Districts of the County have made substantial progress, in spite of the grossly high rates prevailing in the building trade—rates which will have certainly to be largely reduced if it is expected that similar progress will be maintained. During the year 104 new houses were completed, and 958 more were in actual course of erection or ordered to be erected, by the local authorities under approved Housing Schemes; the balance of houses due under such schemes amounts to over 2,000, but it is likely that this figure will not fully materialise. Similarly, 55 houses were completed by private enterprise during the year, while 48 others were in course of erection, and it was anticipated that 16 other houses might be built at an early date.

In spite of the shortage of housing accommodation, and the relatively slow progress in alleviating that condition, in some of the Rural Districts of the County, representations, closing, and demolition orders were made, and notified to me under Section 69 of the Housing, Town Planning, &c., Act, 1909. The facts as to these is shown in the accompanying Table, and related to 50 dwellings. It is satisfactory to note that 14 of these houses have been made habitable or are now undergoing repair; but the fact remains that 18 others have been demolished or are unoccupied, while further action is pending in the remaining 18 houses.

From the foregoing it is clear that greater advance was made in building operations during the year than appeared to be foreshadowed at the end of the year preceding; but this advance has not been of such extent as to justify any laxity on the part of local authorities in the supervision of existing houses, which can be repaired and made quite good in many instances at a much less cost than new buildings. To this end, it is much to be recommended that each local authority should have an annual survey made of all dwelling houses as

to their habitable condition. If this be done, the tendency towards overcrowding in particular localities will be, moreover, more readily held in check.

SEWERAGE AND SEWAGE DISPOSAL (POLLUTION OF STREAMS.)

Special attention has been given to the question of sewage disposal on the irrigation farms at Burton Latimer and Finedon. In both cases greater provision is needed for tank treatment before the sewage is passed on to the land, and, as already shewn earlier in this report, the necessities of the former are being met by a considerable loan, while the work is being progressively carried out in the latter and paid for out of current rate. The loan, asked for in respect of the parish of Crick, was for the purchase of the existing land used for sewage disposal purposes and one acre adjoining for extension of the same ; it is intended to rearrange the manner of distribution of the sewage on the land. In several of the Rural Districts, schemes for sewage disposal—allowed to stand over during the period of the war—are becoming imperatively necessary. The need for disposal of the sewage at Byfield in the Daventry district is pressing, as is also the case in respect of Long Buckby, and I hope that these cases will receive immediate attention. It is reported that the proposed sewage disposal schemes for Middleton Cheney and Chacombe are in abeyance, but these ought to be put in hand without further delay. Schemes for the drainage of the villages of Moreton Pinkney, Eydon, and Croughton in the Brackley District were approved during the year, and are to be carried out as soon as practicable, while a comprehensive scheme in respect of King's Sutton is under consideration. In the Gretton District, settling tanks are certainly required at Rockingham and Harringworth, and at Gretton itself a scheme involving some land treatment of sewage is necessary.

DAIRY CATTLE.

In addition to the general records of inspection of registered dairies and cowsheds in the various districts of the County,

special reference is made to the system in several of the districts whereby the regular veterinary examination of dairy cattle is provided for. It is to be wished that this scheme were in universal practice, and I trust that attention will be given to it during the year. The largest area in which this inspection is provided for is that under a Joint Committee of the Urban and Rural Districts of Kettering and of the Urban Districts of Desborough and Rothwell, and the Veterinary Inspector's report for the year gives the number of cows inspected as 3,262, and the number of abnormal udders as 29 or 0.89 per cent. Mr. Trevor Spencer, the Inspector, says: "Of these deranged udders, 14 were in a condition calculated to render the milk harmful to persons consuming it in an uncooked state, and three cows were found to be affected with tuberculosis of the udder. The remaining 12 were cases of atrophied quarters or other abnormalities which would not affect the quality of the milk." In the Irthlingborough Urban District it is stated that there were 16 milking cows registered, and that no case of tuberculosis had been reported by the Veterinary Inspector; in the Raunds Urban District, 443 inspections of cows and heifers were made, and one cow being found with an abnormal udder was excluded from milking; while in the Rushden Urban District there was a quarterly average of 180 milch cows and heifers inspected, of which three cows were found with atrophied quarters and one emaciated cow only in the first three months of the year. It is obviously greatly to the advantage of the public that this local veterinary inspection of dairy cattle should be more extensively established, and it would be equally so to the dairyman who has nothing to gain from unsuspected disease in his herd remaining undetected until bacteriological examination of the milk therefrom is made. I am glad to be able to note that a veterinary inspector has now been appointed for the Wellingborough Urban and Rural Districts.

FOOD INSPECTION AND ADULTERATION.

As illustrative of the vigilance given in most of the Districts

in the County to the subject of Food Inspection, the following facts taken from the reports of the Medical Officers of Health for the Districts named will be found of interest. The facts are in each instance in respect of food condemned and destroyed, whether seized on exposure for sale or voluntarily surrendered by the prospective vendor :—

Brackley Borough	...On two occasions, imported mutton and several boxes of raisins.
Daventry Borough	...Pork 578 lbs., Beef 672 lbs., Mutton 55 lbs., Fish 180 lbs.
Irthlingborough Urban	On several occasions tinned fruits, fish, milk and other tinned foods.
Kettering Urban	...7 tons, 13 cwt. 2 qrs. of food, the chief portion of which was meat. The Sanitary Inspector states that "the major part of the meat was condemned during the time of the control. In the following, tuberculosis was the reason for condemnation :— "Beef 13 carcasses, 3 sets of lights, 4 livers, "6 other offals ; Pigs 9 carcasses, 7 heads, "3 plucks."
Raunds Urban ...	...94 lbs. of mutton ; 1 ton 8 cwt. potatoes.
Rushden Urban	...Parts of carcasses—Tuberculous 2 cwts. 2 qrs. 19½ lbs. Non-tuberculous butcher's meat 1 cwt. 2 qrs. 26¼ lbs., other foods (bacon, fruit, vegetables) 2 cwts. 2 qrs. 21 lbs.
Wellingborough Urban...	6 tons 18 cwt. 3 qrs. of meat : 12 whole and 15 part carcasses on account of tuberculosis.
Crick Rural ...	...164 lbs. of frozen beef.
Daventry Rural	...60 lbs. of frozen mutton.
Hardingstone Rural	...990 lbs. of beef and 65 lbs. of pork.
Northampton Rural	...120 lbs. of pork.
Towcester Rural	...One carcase of frozen lamb ; fish 140 lbs.

There is no evidence of habitual intentional attempts to foist food unfit for human consumption on the public, and food found to be unwholesome is generally promptly surrendered to the local officers for destruction. There does not appear to have been necessity for the institution of proceedings against the vendor in any case.

SALE OF FOOD AND DRUGS ACTS, 1875 TO 1907.

The following is the Annual Report of the Public Analyst appointed for the County of Northampton upon the articles analysed by him under the above Acts during the year ended the 31st December, 1920 :—

360 samples taken in the County under the above Acts have been examined by me during the past year.

These samples included 305 milks, 22 skimmed milks, and 21 separated milks. The proportion of adulterated milks was markedly higher than in the previous year, the percentage of adulteration rising from 12, in the year 1919, to 16.7 in the year 1920. Of the 305 samples of milk examined, 40 were deficient in fat—in one case to the extent of 35 per cent., and in twenty instances from 15 to 23 per cent.; 11 samples were deficient in solids—not fat. In one case, at least 29 per cent. of water had been added, and, in another, the milk had been heavily skimmed and then watered. No preservatives were found in any of the samples of milk.

The samples of Butter were genuine, and only one contained boracic preservatives in moderate quantity.

The sample of Baking Powder was satisfactory, and free from arsenical contamination.

(Signed) E. W. VOELCKER,

Public Analyst.

The action which was taken during the year in respect of samples indicated as unsatisfactory may be summarised conveniently as follows:—

<i>Samples.</i>	<i>No.</i>	<i>Results.</i>
Milk : Added Water	8	5 Proceedings : 1 Penalty £5 1 " £2 2 " £1 each 1 " 10/- 3 Explanations satisfactory, and vendors warned.
„ Deficient in Fat	16	Enquiries made, explanations of vendors accepted, warn- ings given, and further samples taken in nearly every case.
„ „ Solids not Fat	2	Ditto.

No sample of Cream was examined for the presence of a preservative, under the Public Health (Milk and Cream) Regulations, 1912 and 1917, and no case was found of a preservative being present in any one of the 305 samples of milk taken for analysis.

CHARLES E. PAGET,

County Medical Officer of Health.

County Hall, Northampton.

May, 1921.

LIST OF MEDICAL OFFICERS OF HEALTH AT COMMENCEMENT OF 1921.

DISTRICT.	MEDICAL OFFICER OF HEALTH.	RESIDENCE.
URBAN :—		
Brackley (Borough)	G. N. Stathers, M.R.C.S., D.P.H.	Brackley
Daventry (Borough)	A. R. Darley, M.D.	... West Haddon,
Higham Ferrers (Borough)	... F. D. Crew, M.B.	... Higham Ferrers Rugby.
Desborough	... H. Gibbons, M.D., J.P.	... Desborough
Finedon	... H. Burland, M.R.C.S.	... Finedon
Irthlingborough	... C. N. Elliott, M.B., J.P.	... Oundle
Kettering	... J. Allison, M.D., D.P.H.	... Kettering
Oundle	... B. R. Turner, M.D.	... Oundle
Raunds	... A. McInnes, M.B.	... Raunds
Rothwell	... J. More, M.R.C.S.	... Rothwell
Rushden	... H. S. Baker, M.R.C.S.	... Rushden
Wellingborough	... J. Arthur, M.D.	... Wellingborough
RURAL :—		
Brackley	... G. N. Stathers, M.R.C.S., D.P.H.	... Brackley
Brixworth	... R. Winterbotham, M.R.C.S.	... Brixworth
Crick	... A. G. L. Smith, M.R.C.S.	... Crick
Daventry	... A. R. Darley, M.D.	... West Haddon, Rugby
Easton-on-the-Hill	T. P. Greenwood, M.R.C.S.	... Stamford
Gretton	... J. E. O'Connor, M.D., D.P.H.	... Kirby Muxloe, Leicester
Hardingstone	... H. F. Percival, M.R.C.S.	... Northampton
Kettering	... L. W. Dryland, M.R.C.S., D.P.H.	... Kettering
Middleton Cheney	J. I. Johnson, L.R.C.P.	... Culworth, Banbury
Northampton	... H. F. Percival, M.R.C.S.	... Northampton
Oundle	... C. N. Elliott, M.B., J.P.	... Oundle
Oxendon	... C. T. Scott, M.B.	... Market Harboro'
Potterspury	... C. Powell, M.B.	... Stony Stratford
Thrapston	... C. N. Elliott, M.B., J.P.	... Oundle
Towcester	... C. Simpson, M.B.	... Towcester
Wellingborough	... J. Arthur, M.D.	... Wellingborough

APPENDIX I.

ANNUAL REPORT OF THE CHIEF TUBERCULOSIS
OFFICER FOR THE YEAR 1920.

During the year 1920 good progress has been made in the work of the conversion of Rushden House, Rushden, into an Institution for the Treatment of Pulmonary Tuberculosis. By the end of the year practically all the constructional work had been completed. It is proposed, in the first instance, to establish 68 beds at Rushden House.

The general scheme of last year's report has been followed again this year.

DISPENSARY WORK.

County Tuberculosis Dispensaries.

- (1) NORTHAMPTON. 18, Guildhall Road, Northampton.
(Administrative Centre)
- (2) KETTERING. Lower Street, Kettering.
- (3) WELLINGBOROUGH. 108, Midland Road, Wellingboro'.

Chief Tuberculosis Officer—O. A. J. N. Muriset, M.B., Ch.B.

Table I. sets forth in detail the general work done at the Dispensaries during the year. 1,499 patients visited the three Dispensaries and made a total of 7,383 visits or an average of 5 visits per patient. Of the 1,499 patients attending, 500 or 33.4 per cent. were insured persons as distinct from ex-service patients, 724 or 48.3 per cent. were non-insured persons and 275 or 18.3 per cent. were ex-service

TABLE I.

DISPENSARIES.	Number of Patients who attended one or more times at the Dispensaries during 1920.										Number of Attendances made by Patients at the Dispensaries.				
	Insured.					Non-Insured.					Total	Male	Female	Ex-Service Patients	Total
	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Ex-Service Patients					
NORTHAMPTON	30	40	70	74	114	188	79	337	310	580	552	1,442			
KETTERING	77	122	199	85	133	218	80	497	653	1,460	592	2,705			
WELLINGBOROUGH	91	140	231	108	210	318	116	665	780	1,612	844	3,236			
TOTALS	198	302	500	267	457	724	275	1,499	1,743	3,652	1,988	7,383			

VISITS MADE BY THE CHIEF TUBERCULOSIS OFFICER TO PATIENTS IN THEIR OWN HOMES.

C.T.O. VISITS	31	26	57	20	39	59	63	179
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patients. The total number of patients attending the Dispensaries during the year was slightly less than in the previous year but the total number of visits made by patients was in excess of last year's figures.

TABLE II.
NEW PATIENTS.

	Insured.			Non-insured.			Ex-Service Patients	TOTAL.
	Male	Female	Both Sexes	Male	Female	Both Sexes		
Pulmonary Tuberculosis ...	32	71	103	16	42	58	92	253
Other Forms of Tuberculosis	2	2	4	9	13	22	6	32
Suspects	7	9	16	12	17	29	15	60
Non-Tuberculous	2	7	9	16	15	31	6	46
TOTAL	43	89	132	53	87	140	119	391

Table II. shows that 391 new patients presented themselves for examination at the Dispensaries for the first time during 1920. Of these, 253 or 64.7 per cent. were found to be suffering from Pulmonary Tuberculosis, 32 or 8.2 per cent. were suffering from other forms of Tuberculosis, 60 or 15.3 per cent. were suspicious cases of Tuberculosis, and in 46 or 11.7 per cent. of the cases no evidence of Tuberculosis could be found.

The Table further shows that, of the 391 new patients, 132 or 33.7 per cent. were Insured persons, 140 or 35.8 per cent. were non-insured, and 119 or 30.4 per cent. were ex-service patients. Comparing the figures for 1920 with those for 1919 it will be seen that, while the total shows a decrease, the figure for those found to be suffering from Tuberculosis has increased; especially is this noticeable when it is compared with the figures for suspicious and non-tubercular cases.

182 applications for Sanatorium Benefit were received during the year, of which 58 were from ex-service patients.

Table III. shows the occupational incidence among the 253 patients found to be suffering from Pulmonary Tuberculosis. 141 were civilians and 92 were ex-service patients. Of the occupied civilians, 39 were employed in the Boot and Shoe Trade. If the number of the unoccupied i.e. housewives, and School children is deducted from the total civilians, it will be found that 42.8 per cent. of the occupied males and females suffering from Pulmonary Tuberculosis were employed in the Boot and Shoe trade. In the case of ex-service patients, 32 or 34.8 per cent. were employed in the Boot and Shoe trade before entering the Army.

Table IV. is self-explanatory.

TABLE V.
CONTACTS.

	Insured.			Non-Insured.			Ex-Service Patients.	TOTAL
	Male	Female	Both Sexes.	Male	Female	Both Sexes		
Pulmonary Tuberculosis	3	9	12	4	16	20	8	40
Other Forms of Tuberculosis	1	...	1	2	3	5	...	6
Suspects	6	13	19	36	45	81	5	105
Non-Tuberculous	11	22	33	56	118	174	5	212
TOTAL	21	44	65	98	182	280	18	363

Table V. shows that 363 contacts were examined in addition to the 391 new patients. Of these. 40 or 11 per cent. were found to be suffering from Pulmonary Tuberculosis; 6 or 1.6 per cent. were found to be suffering from other forms of Tuberculosis; 105 or 26.2 per cent. were suspicious cases of Pulmonary Tuberculosis, and 212 or 54.2 per cent. showed no signs of Tuberculosis. A comparison of the figures for 1920 with those of the previous year shows that the total number of contacts examined has been almost doubled.

A special day is set apart each month at each Dispensary, at a time which will not interfere with work hours, for the

OCCUPATIONAL INCIDENCE OF THE 253 NEW PATIENTS FOUND TO BE SUFFERING FROM PULMONARY TUBERCULOSIS.

INSURED MALES.	INSURED FEMALES.	NON-INSURED MALES.	EX-SERVICE PATIENTS.	EX-SERVICE PATIENTS.	TOTAL
Shoe Operatives—	Female Shoe	Engineer ...	Shoe Operative ...	Shoe Operative ...	
a Clicker ...	Machinist ...	Grocer ...	Baker ...	Baker ...	71
b Laster ...	Box Maker ...	Licensed Victualler ...	Brushmaker ...	Brushmaker ...	2
c Finisher ...	Brush Maker ...	Schoolboy ..	Carrier ...	Carrier ...	2
Blacksmith ...	Clerk ...	Non-insured Males	Chauffeur ...	Chauffeur ...	3
Bricklayer's Labourer	Cook ...	NON-INSURED FEMALES.	Clerk ...	Clerk ...	1
Carrier ...	Corset Hand...	Houseworker ...	Coach Painter	Coach Painter	1
Drover ..	Domestic ...	Nurse ...	Carrier ...	Carrier ...	12
Engine Driver ...	Lace Maker ...	Shoeworker ...	Drayman ...	Drayman ...	
Engineer ...	Laundress ...	Shopkeeper ...	Engineer ...	Engineer ...	
Estate Woodman ...	Matron ...	Shopkeeper ...	Farm Labourer	Farm Labourer	
Farm Labourer ...	Shop Assistant	Shoeworker ...	Engineer ...	Engineer ...	
Furnace Labourer ...	School Teacher	Shopkeeper ...	Farm Labourer	Farm Labourer	
Gardener ...	Tea Packer ...	Schoolgirl ...	Gas Engine Driver ...	Gas Engine Driver ...	
General Carter ...	Tailorress ...	Tailoress ...	General Labourer ...	General Labourer ...	
General Labourer ...	Typist ...	Non-insured Females	Groom ...	Groom ...	
Joiner ...	Ward Maid ...	Non-insured Males & Females	Hotel Porter ...	Hotel Porter ...	
Railway Porter ...	Unascertained	Non-insured Males & Females	Iron Moulder ...	Iron Moulder ...	
Tailor's Presser ...	Insured Females	Non-insured Males & Females	Miner ...	Miner ...	
Traction Engine Drvr.	Insured Females	Non-insured Males & Females	Policeman ...	Policeman ...	
Insured Males	Insured Females	Non-insured Males & Females	Contd. next column	Contd. next column	71
32	71	58	Ex-Service Patients	Ex-Service Patients	253
					92

TABLE IV.

OCCUPATIONAL INCIDENCE OF THE 32 NEW PATIENTS FOUND TO BE SUFFERING FROM OTHER FORMS OF TUBERCULOSIS.

INSURED MALES.	INSURED FEMALES.	NON-INSURED MALES.	NON-INSURED FEMALES.	EX-SERVICE PATIENTS.	TOTAL
Shoe Laster ...	Leather Belt Stitcher	Infant ...	Houseworker ...	Baker ...	1
Shop Assistant ...	Shoe Machinist ...	Schoolboy ...	Infant ...	Coach Cleaner ...	1
		Shoeworker ...	Schoolgirl ...	Shoe Finisher ...	4
			Shoe Machinist ...		
2	2	9	13	6	32

TABLE VI.
OCCUPATIONAL INCIDENCE OF THE 46 CONTACTS FOUND TO BE SUFFERING FROM TUBERCULOSIS.

INSURED MALES.		INSURED FEMALES.		NON-INSURED MALES.		NON-INSURED FEMALES.		EX-SERVICE PATIENTS.		TOTAL
Bricklayer ...	1	Clothing Machinist ...	1	Farmlad ...	1	Houseworker ...	10	Blacksmith ...	1	
Boot Finisher ...	1	Domestic Servant ...	1	Schoolboy ...	3	Schoolgirl ...	5	Bricklayer's Labourer ...	2	
Farm Labourer ...	1	Heel Builder ...	1	*Schoolboy ...	2	Unascertained ...	1	Shoe Clicker ...	4	
*Shoe Clicker...	1	Nurse ...	1			*Schoolgirl ...	3	Millwright ...	1	
		Shoe Machinist ...	5							
Insured Males	4	Insured Females	9	Non-insured Males	6	Non-insured Females	19	Ex-Service Patients	8	46

NOTE.—These patients were suffering from Pulmonary Tuberculosis with the exception of 6 (marked *) who were suffering from other forms of Tuberculosis.

examination of contacts, and for the examination and supervision of cases in which the diagnosis is doubtful. These doubtful cases are kept under observation at the Dispensary until the diagnosis is definitely settled, and they are followed up in their homes by the Tuberculosis Nurses.

Table VI. shows the occupational incidences of Tuberculosis in the contacts.

HOME VISITATIONS BY TUBERCULOSIS NURSES.

During the year the three Tuberculosis Nurses made 5,951 visits to the homes of tuberculous patients. Of these, 4,736 were made to the homes of civilians and 1,215 to the homes of ex-service patients. On the Nurse's first visit a report of the home circumstances is made. In many instances bed-ridden cases are visited daily by the Nurses; during treatment by means of the Brass Preparations, it has been necessary for the Nurses to carry out some part of the treatment in the patients' own homes.

METHODS OF DIAGNOSIS.

During the year 216 sputa have been examined. 72 gave a positive result and 144 a negative, as regards the discovery of the Tubercle Bacillus. Sputa may be sent to the Dispensary by any medical man in the County, and the result of examination is reported to him without charge.

Toward the end of the year, a new method of diagnosis by means of Tuberculin was being tried at the Dispensaries, but the number of patients on which it was used was so small that any opinion as to its value would be premature. In next year's report a statement will be made on this.

During the latter part of the year an X-ray apparatus was purchased, but this had not been installed at the end of the year.

SHELTERS.

The number of Shelters occupied during the year was 22. 20 of these are the property of the County Council; 2 are privately owned but have been lent for the use of County patients. 13 of the Shelters have been moved to different parts of the County during the year.

SURGICAL APPLIANCES.

4 patients who were suffering from Caries of the Spine, and in whom the disease was quiescent, were provided with poroplastic jackets. A celluloid ankle splint was provided for a patient suffering from a tuberculous ankle.

DEATHS.

By arrangement with the District Registrars of Deaths, returns of tuberculosis deaths are sent to the Chief Tuberculosis Officer. During the year 174 deaths from tuberculosis were returned. The following Table sets out in detail the various causes of deaths.

CLASSIFICATION OF TUBERCULOSIS DEATHS OCCURRING IN
THE ADMINISTRATIVE COUNTY DURING THE YEAR 1920.

Taken from Returns of Registrars of Deaths.

	Male.	Female.	TOTAL
Lungs	70	72	142
Meninges	7	9	16
Peritoneum and Intestines	1	4	5
Spinal Column	3	...	3
Generalized	1	6	7
Joints	1	...	1
TOTAL	83	91	174

During the year there has been close co-operation in the most important Urban Districts between the District Medical Officers of Health and the Chief Tuberculosis Officer. In Kettering the largest Urban District in the County, the Medical Officer of Health and the Chief Tuberculosis Officer have been in constant consultation, and, by arrangement, particulars of all Tuberculosis notifications occurring in this District are sent direct to the Dispensary. The Tuberculosis Nurse immediately visits the patient's home, and makes a report on the home circumstances. A copy of this is sent by the Chief Tuberculosis Officer to the Medical Officer of Health. The arrangement has worked very satisfactorily, and is being adopted in other districts so far as this is possible.

The Dispensaries are also in close touch with the General and Cottage Hospitals in the area. On many occasions the Chief Tuberculosis Officer has visited these Institutions at the request of the Hospital Authorities, either for the purpose of giving an opinion on doubtful cases or for the purpose of arranging for sanatorium treatment. The Hospitals, on the other hand, frequently refer cases to the Dispensaries.

Much of the work in connection with the treatment of Surgical cases of Tuberculosis is undertaken at the Northampton General Hospital.

During the course of the work of the Dispensaries, School children discovered to be suffering from, or found to be suspicious cases of Tuberculosis, are reported to the Education Authorities with a statement as to their fitness or otherwise to attend school. On one or two occasions, consultations on school children have taken place at the Dispensaries between the Chief Tuberculosis Officer and the School Medical Officer.

The attitude of the General Practitioners towards the Dispensaries is on the whole most cordial, and there has been no difficulty in procuring reports as to the condition of patients receiving domiciliary treatment. The majority of the new patients attending at the Dispensaries for the first time are sent, by their own medical attendant, for an opinion. In

the few cases where patients have presented themselves at the Dispensaries without the knowledge of their medical attendant they have not been examined without reference to the Doctor connected with the case.

During the year, an average of 31 pints of milk per day has been supplied by the Insurance Committee for insured persons on the recommendation of the Chief Tuberculosis Officer.

A fairly extensive trial of the Brass Preparations has been carried out at the Dispensaries in the treatment of Lupus, enlarged Tubercular Glands, Laryngeal and Pulmonary Tuberculosis. The results of the trial have been so encouraging that further treatment with these preparations will be given during the next year. Beneficial results are particularly evident in Lupus.

INSTITUTIONAL TREATMENT.

Institutions to which County patients are usually sent :—

	Average No. of Beds available for County Patients.
Northamptonshire Sanatorium, Creaton	... 20
Grosvenor Sanatorium, Kennington	... 5
National Sanatorium, Benenden	... 4
Royal National Sanatorium, Bournemouth	... 2
National Children's Home Sanatorium, Harpenden	2

The Northamptonshire Sanatorium, Creaton, is the only Institution which definitely reserves beds for County patients. Beds at other Sanatoria are secured as required.

Table VII. shows that 140 patients received treatment in Residential Institutions during the year. Of this number 62 were insured persons, 23 were non-insured persons, and 55 were ex-service patients. The number of patients receiving this form of treatment shows a slight increase on last year's figures.

TABLE VII.
SANATORIUM TREATMENT.

SANATORIA	Insured.			Non-Insured.			Ex-Service Patients	Total
	Male	Female	Both Sexes	Male	Female	Both Sexes		
Creton	17	17	34	...	5	5	40	79
Grosveñor	1	13	14	...	3	3	...	17
Bournemouth	2	4	6	1	...	1	2	9
Benenden	5	...	5	1	...	1	9	15
Harpenden ... ..	...	...	...	3	8	11	...	11
Margate R.S.B.H.	1	...	1	...	...	...	...	1
Winsley	1	...	1	...	...	...	...	1
Brompton ... ..	...	...	...	...	...	...	1	1
Mount Vernon ... ..	...	1	1	...	...	...	...	1
King Edward VII. ... ..	...	...	...	...	2	2	...	2
Met. Asylums Board Hospital for Advanced Cases )	...	...	...	...	...	...	3	3
TOTAL	27	35	62	5	18	23	55	140

Table VIII. (on page 44) shows in detail the immediate results of Institutional treatment.

The average period of treatment in Residential Institutions was 90 days. The longest period was 325 days and the shortest 16 days.

It will be noticed that there were two deaths in Institutions. These occurred at Hospitals under the direction of the Metropolitan Asylums Board. The patients were advanced bedridden cases.

The period of Sanatorium Treatment granted is, of necessity, still too short to effect a lasting arrest of the disease.

EX-SERVICE PATIENTS.

Tables IX, X, and XI. deal with ex-service patients as distinct from civilian patients and show that special attention has been paid to ex-service patients.

Table IX. (on page 45) shows that 275 ex-service patients attended at the three Dispensaries and made 1,988 attendances, or an average of 7.2 visits per patient. A

TABLE VIII—IMMEDIATE RESULTS OF INSTITUTIONAL TREATMENT.

SANATORIA.	Arrested.		Much Improved.		Improved.		Stationary.		Worse.		Died.		In Sanatoria at end of Year.		TOTAL.
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
CREATON ...	17	6	20	8	7	...	1	...	...	1	...	...	12	7	79
GROSVENOR ...	1	8	...	3	...	...	...	...	...	1	...	...	...	4	17
BOURNEMOUTH ...	1	1	3	2	1	...	...	...	...	...	...	...	...	1	9
BENENDEN ...	5	...	6	...	3	...	...	...	...	...	...	...	1	...	15
HARPENDEN ...	2	5	1	2	...	...	...	...	...	...	...	...	...	1	11
MARGATE ...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
WINSLEY ...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
BROMPTON ...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
MOUNT VERNON ...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
KING EDWARD VII.	...	2	...	...	...	...	...	...	...	...	...	...	...	...	2
MET. ASYLUM'S BOARD HOSPITAL FOR ADVANCED CASES	...	...	...	...	...	...	...	...	...	1	...	2	...	...	3
TOTAL ...	27	23	31	15	12	...	1	...	1	2	2	2	13	13	140

$\frac{50}{140} = 35.7\%$ $\frac{46}{140} = 32.9\%$ $\frac{12}{140} = 8.6\%$ $\frac{1}{140} = .7\%$ $\frac{3}{140} = 2.1\%$ $\frac{2}{140} = 1.4\%$ $\frac{26}{140} = 18.6\%$

considerable number actually received treatment but the majority attended for recommendation as to treatment and for pension purposes. A few attended for observation.

TABLE IX.

EX-SERVICE PATIENTS ATTENDING DISPENSARIES.

DISPENSARIES.	Total No. of Ex-Service Patients who attended one or more times at the Dispensaries.	Total No. of Attendances made by Ex-Service Patients at the Dispensaries.
NORTHAMPTON ...	79	552
KETTERING ...	80	592
WELLINGBOROUGH ...	116	844
TOTAL ...	275	1988

Included in the figures in Table X. are 119 new Ex-service patients who attended at the Dispensaries for the first time. Of these, 92 or 77.3 per cent. were found to be suffering from Pulmonary Tuberculosis, 6 or 5 per cent. were suffering from other forms of Tuberculosis, 15 or 12.6 per cent. were suspicious cases of Tuberculosis, and 6 or 5 per cent. were not suffering from Tuberculosis.

In addition to this number, 18 ex-service contacts were examined of whom 8 were suffering from Pulmonary Tuberculosis, 5 were suspicious cases of Tuberculosis, and 5 were not tuberculous.

The Tuberculosis Nurses made 1,215 visits to the homes of ex-service patients.

TABLE X.
CLASSIFICATION OF EX-SERVICE PATIENTS.

Classification of Ex-Service Patients who attended the Dispensaries for the first time during 1920.	Classification of Ex-Service Contacts who attended the Dispensaries for the first time during 1920.		TOTAL.
Pulmonary Tuberculosis ...	92	Pulmonary Tuberculosis ...	100
Other Forms of Tuberculosis ...	6	Other Forms of Tuberculosis ...	6
Suspects ...	15	Suspects ...	20
Non-Tuberculous ...	6	Non-Tuberculous ...	11
TOTAL ...	119	TOTAL ...	137

55 ex-service patients received treatment in Residential Institutions. The details and immediate results are set out in Table XI., from which it will be seen that 14 or 25.3 per cent., were discharged with the disease arrested, 26 or 47.2 per cent. were much improved, 6 or 10.9 per cent. were improved, 1 was stationary, and 2 died. There were 6 ex-service men in Sanatoria at the end of the year.

TABLE XI.

SANATORIUM TREATMENT OF EX-SERVICE PATIENTS,
SHOWING IMMEDIATE RESULTS.

SANATORIA	Disease Arrested	Much Improved.	Improved.	Stationary.	Worse.	Died	Still in Sanatoria.	Total
CREATON	11	19	3	1	...	...	6	40
BOURNEMOUTH ...	...	1	1	...	...	...	...	2
BENENDEN	3	4	2	...	...	...	...	9
MET. ASYLUMS BOARD HOSPITAL FOR ADVANCED CASES	...	1	...	...	...	2	...	3
BROMPTON ... ..	...	1	...	...	...	...	...	1
TOTAL ...	14	26	6	1	...	2	6	55

OLIVIER A. J. N. MURISSET.

Chief Tuberculosis Officer.

APPENDIX II.

ANNUAL REPORT ON THE MATERNITY AND CHILD
WELFARE WORK FOR THE YEAR 1920.*(a)* INSPECTION OF MIDWIVES.

The Inspection of Midwives has consisted mainly in investigating unusual occurrences of various sorts (Puerperal Fever, Ophthalmia Neonatorum, High Temperature, Artificial Feeding, &c.) it being found impossible to pay routine quarterly visits and investigate special cases also, owing to the large number of births and consequent increase of questionable events. During next year the Northamptonshire District Nursing Association has arranged that their Superintendent shall assist with inspections—a plan which should greatly help in keeping things up-to-date.

The number of inspections made was as follows :—

To Unqualified Persons 3. Routine 171. Special 188.

TOTAL 362.

In only a few instances was an appointment made, as, thanks to the car provided in April, it is possible to follow a Nurse on to another village if necessary and in this way to occasionally see her at a case, and when she is unprepared for inspection. It is satisfactory to be able to report that most of the work stands this treatment very well. On the whole the midwifery is good, the ante-natal and infant care work only moderate. More attention requires to be paid, particularly to ante-natal work. The mothers are not educated to require or even to appreciate it, and it is con-

sequently harder work for the midwife, but proper midwifery had the same fight and fought it successfully. One seldom or never now hears the old complaints that Nurse needs too much washing, demands too much hot water and risks her patient's life by washing her! In time it will be appreciated that it is not idle curiosity but a real wish for her patient's welfare that leads Nurse to ask personal questions.

Of the total births in the County (4913) 49 per cent. (2427) were attended by midwives as against 53.72 per cent., 44.7 per cent. and 43.6 per cent. in the three immediately preceding years. Thirty-three untrained women notified their intention to practise but only 26 practised. 33 per cent. of the midwifery done by midwives was done by these (806 cases), and in one respect they compare favourably with the trained midwives:—they had 2 per cent. babies artificially fed during the puerperium as opposed to 4.5 per cent. among trained women's cases; they attended an average of 31 cases each as against 18 cases each for trained midwives.

TABLE I.

Notified intention to practise	...	139	...	(33 untrained)
In practise at end of 1920	...	104	...	(26 „)
Left the County	...	18		
Died	...	1	...	
Temporary	...	11	...	
Ceased to practise	...	5		

Five of the Midwives who gave notice of their intention to practise in the year 1920 were County Council scholars.

PUERPERAL FEVER.—Five cases were notified—four in midwives' practices.

1 Trained midwife 2 cases (one fatal)

1 Untrained „ 2 „ (both rapidly recovered).

In the one fatal case it was thought that the midwife was insufficiently strict in forbidding the patient's mother, who had discharging ulcers of the neck, to share the bed and attend on patient.

OPHTHALMIA NEONATORUM.—Twenty-seven cases were notified, 11 in midwives' practices. All made a good recovery. In October, Collosol Argentum was provided to those used to employing eye drops and the provision has been gradually extended as opportunity for instruction arose. The seriousness of even mild cases has been repeatedly insisted on and the rule as to sending for medical aid is strictly enforced.

STILLBIRTHS.—There were 65 in number as opposed to 33, 34 and 38 in the three immediately preceding years. The figure looks high, but is a smaller percentage of the births than last year's figure (1.5 per cent. as to 1.9 per cent.). Causes of stillbirths are dealt with under Health Visiting.

ARTIFICIAL FEEDING.—Notification of artificial feeding is compulsory but is frequently forgotten as yet. Of 83 cases returned by midwives at the end of the year as artificially fed during the puerperium, only 28 were notified.

The figures for breast-feeding during the puerperium are

1916	...	...	97.1 per cent.
1917	...	...	94.4 „
1918	...	...	95.2 „
1919	...	...	96.2 „
1920	...	...	96.3 „

The reasons for artificial feeding during the puerperium are as given in 28 forms received :—

Insufficient Milk	...	...	...	...	13
Depressed Nipples	...	...	...	...	3
Scars from old abscess of breast	...	...	...	...	2
Ill-health	...	...	...	...	2
Doctor's advice	...	...	...	...	4
To go to work	...	...	...	...	2
Mother's wish	...	...	...	...	1
Death of mother	...	...	...	...	1

DEATHS OF INFANTS, no medical practitioner being in attendance, 5. All were enquired into. Inquests were held in 3 cases, death in each instance being due to overlaying. Full use has been made of these cases by the Health Visitors as an argument in favour of separate sleeping accommodation for the infant.

DEATH OF MOTHER.—One death of a mother from Post-Partum Hæmorrhage before medical aid could be obtained was investigated and no blame attached to midwife.

Medical aid was summoned in 321 cases, the causes being given as follows :—

TABLE II.

PREGNANCY.

Ante-partum hæmorrhage	...	...	...	...	7
Abortion	...	...	...	...	5
Eclampsia (or threatened Eclampsia)	...	...	...	...	4
Sores of Genitals	...	...	...	...	2
				—	18

LABOUR.

Delayed Labour	...	...	...	...	89
Torn Perinæum	...	...	...	...	55
Retained or adherent placenta	...	...	...	...	23
Unusual presentation	...	...	...	...	17
Post-partum hæmorrhage	...	...	...	...	6
Weakness of patient	...	...	...	...	3
Stillbirth	...	...	...	...	3
Placenta prævia	...	...	...	...	2
				—	198

LYING-IN.

Feebleness of infant	...	...	...	...	40
Discharging eyes (infant)	...	...	...	...	22
Raised temperature	...	...	...	...	21
Death of infant (certification)	...	...	...	...	5
Deformity of infant	...	...	...	...	4
Painful varicose veins	...	...	...	...	4

LAYING-IN—*continued.*

Skin eruptions (Mother 1, Infants 2)	...	...	3
Abdominal pain	...	...	2
Puerperal Fever	...	...	1
Difficulty in suckling	...	...	1
Anæmia (mother)	...	...	1
Bronchitis (mother)	...	...	1
		—	105
			321

Provision for cases outside a midwifery area was asked for from the Northamptonshire District Nursing Association in 8 cases and was supplied in 5.

Three new nursing areas were formed at Apethorpe, Hardingstone and Dingley respectively.

(b) HEALTH VISITING.

The Staff (January to December 6th, 1920) consisted of Lady Medical Officer, Superintendent, and ten Health Visitors. The areas were maintained as in 1918 and were provided for as follows :—

District No. 1.	Miss Drewery	Succeeded by Miss Barker on 13th August, 1920.
„ „ 2.	Miss Ryding.	Succeeded by Miss Panton on 28th June 1920.
„ „ 3.	Miss Sharpe.	
„ „ 4.	Miss Wilkins.	
„ „ 5.	Mrs. Andrews (née Lanyon).	
„ „ 6.	Miss Thompson.	
„ „ 7.	Miss Robinson (Superintendent).	
„ „ 8.	Miss Hinds.	Succeeded by Miss Palmer on 30th July, 1920.

Summarised Statement of the Health Visitors' Work during the Year 1920.

TABLE No. 1.

DISTRICTS.

No. of VISITS PAID TO :	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.	No. 8.	No. 9.	No. 10.	No. 11.	Totals.
Expectant Mothers first time	28	47	39	30	70	45	29	14	11	19	32	364
Expectant Mothers subsequently	42	55	37	16	140	40	36	15	38	47	33	499
TOTALS	70	102	76	46	210	85	65	29	49	66	65	863
INFANTS.												
New Cases, 1st time	243	428	382	469	470	368	128	312	376	376	222	3765
New Cases, subsequently	948	1877	1519	1330	1409	1203	570	1118	1492	847	652	12965
Previous Year cases on Cards (1919) 2377	408	938	1179	1185	963	748	464	728	958	488	1226	9285
Infants over 12 months	916	753	1007	1554	470	1003	800	2034	1227	949	1810	12523
Above Cases by request	29	19	236	88	83	33	143	15	107	6	4	763
Still-birth enquiries	6	13	13	19	9	8	4	5	5	6	5	93
Visits to Infant Welfare Centres	28	48	24	22	84	1	...	...	32	...	...	239
Special Cases	10	27	58	30	92	5	20	40	62	26	4	374
Mentally Defectives	16	37	23	10	5	16	...	2	10	23	3	145
TOTALS	2604	4140	4441	4698	3585	3385	2129	4254	4269	2721	3926	40152
Total Number of Visits	2674	4242	4517	4744	3795	3470	2194	4283	4318	2787	3991	41015

TABLE No. 2.

New cases notified	202	359	349	417	438	336	115	277	369	390	231	3483
New cases unnotified	41	82	34	85	56	51	5	39	22	3	10	428
Transferred new cases (from other County areas)	14	13	12	5	5	14	19	17	6	20	5	130
No. of still-births notified	6	11	11	19	8	8	4	6	3	5	1	82
No. of Infants died before visited... ..	5	11	1	16	14	8	2	6	7	10	3	83
No. of Infants removed before visited... ..	2	2	...	1	7	16	2	3	5	12	12	62
No. of Infants unnecessary to visit ... ..	...	2	1	11	...	1	3	6	4	9	6	43
No. of ineffectual visits	1	...	...	...	...	...	...	...	2	1	2	6
No. of Women attended by :-												
Medical Practitioner	51	332	142	224	267	138	36	100	168	106	71	1635
Medical Practitioner and Midwife	77	15	53	27	46	101	40	74	74	104	41	652
Trained Midwife	103	78	171	22	156	102	52	119	125	113	101	1142
Untrained Midwife (bona fide)	10	3	16	187	...	26	...	19	9	50	9	329
Handy Woman	2	...	...	...	1	1	...	...	...	3	...	7
Illegitimate Births (included in above)	21	17	14	10	33	26	4	14	10	21	4	174
Premature Births (included in above)	7	8	3	17	6	3	5	4	9	2	...	64

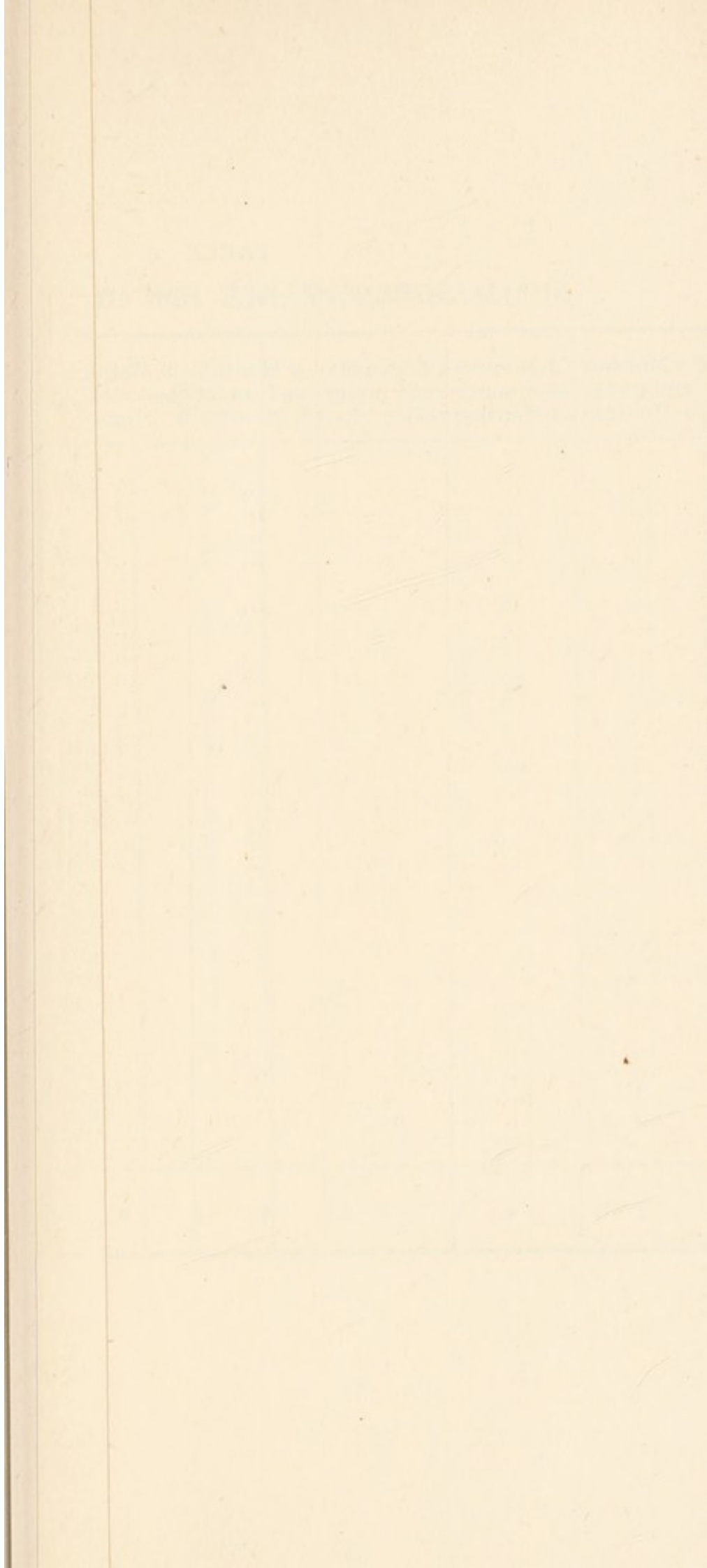
TABLE No. 3.

DISTRICTS.	Health of Mother.				Condition of Infants at Birth.				Method of Feeding.				Hand-Feeding by				
	Good	Fair	Bad	Totals	Good.	Fair.	Weakly	Totals.	Breast.	Partly Breast.	Entirely Hand.	Totals.	Bottle-shaped Bottle.	Long-tubed Bottle.	Medicine Bottle.	Cup and Spoon.	Totals
1. Oundle	202	36	5	243	203	31	9	243	145	55	43	243	64	2	3	29	98
2. Kettering	355	71	2	428	331	81	16	428	325	24	79	428	97	1	1	4	103
3. Thrapston	278	91	13	382	284	72	26	382	311	32	39	382	63	2	2	4	71
4. Rushden	407	49	4	460	368	62	30	460	343	36	81	460	111	5	...	1	117
5. Wellingborough	449	19	2	470	441	26	3	470	302	31	77	470	89	2	17	...	108
6. Hardingstone	273	82	13	368	279	69	20	368	261	33	74	368	94	3	4	6	107
7. Northampton	89	30	3	122	92	28	8	128	85	29	14	128	38	...	3	2	43
8. Brixworth	256	51	5	312	245	46	21	312	235	26	51	312	63	1	8	5	77
9. Daventry	361	14	1	376	360	13	3	376	253	48	75	376	115	4	4	...	123
10. Towcester	252	119	5	376	293	68	15	376	266	48	62	376	97	1	10	2	110
11. Brackley	262	18	2	222	200	16	6	222	183	18	21	222	36	...	2	1	39
TOTALS	3124	586	55	3765	3096	512	157	3765	2769	380	616	3765	867	21	54	54	996

TABLE No. 4.

DISTRICTS	Defects pointed out as to					Cases reported to the		Medical Attendance Advised for Infant.	Medical Attendance Advised for Mother.	Deaths under 1 Year.	Deaths over 1 Year.
	Sleeping.	Food.	Clothing.	Care of Infant.	General Cleanliness.	Local Sanitary Authority.	N.S.P. C.C.				
1. Oundle	82	442	227	158	41	12	2	65	16	6	3
2. Kettering	297	865	483	216	114	2	4	52	26	7	...
3. Thrapston	227	236	216	89	68	13	2	165	...	5	...
4. Rushden	299	122	122	28	28	3	1	66	33	11	5
5. Wellingborough	32	55	51	28	53	9	5	22	14	6	9
6. Hardingstone	104	649	296	424	317	3	2	83	109	4	4
7. Northampton	76	57	30	11	10	6	7	31	22	2	3
8. Brixworth	70	110	150	21	25	...	1	35	34	3	3
9. Daventry	173	214	48	7	6	16	2	13	4	5	3
10. Towcester	86	35	61	15	18	3	1	50	26	8	1
11. Brackley	7	13	12	2	28	...	...	5	1	2	...
TOTALS	1543	2798	1696	999	708	67	27	587	285	59	32







- District No. 9. Miss Mulrean.
 „ „ 10. Miss Whitehouse.
 „ „ 11. Mrs. Bowen.

On December 6th the Northamptonshire District Nursing Association took over District No. 11 and the other areas were re-arranged to include Rothwell, which had from November 8th been in the County scheme. In the tables the areas are throughout counted as above.

The work of the Health Visitors has been rendered unnecessarily difficult owing to non-notification of births, especially in doctors' practices, and consequent struggle against bad habits already formed.

HOME VISITING.—The rule has been that a baby under 12 months should be seen at least once in six weeks : if baby is delicate or mother careless much more frequent visiting is required, even daily at times for short periods : cases in receipt of free milk are visited monthly whatever the age of the child. In the 2nd year, visits are at least quarterly and subsequently (till admission to school register) half-yearly.

When a case is visited for the first time (this is done as soon after the Nurse or Doctor leaves as possible) a card is filled in and sent to the office at the end of the week. These are checked as received and any comments considered necessary made by the Lady Medical Officer. Subsequent visits are entered in a note book and transferred to a card at the office at the end of the month. Fortnightly returns are sent in, by which one can see at a glance where the particular Health Visitor's time has been spent. She also leaves a message at her rooms each day stating where she is working so that when convenient to herself the Lady Medical Officer may follow up the Health Visitor. At irregular intervals the Lady Medical Officer spends a day with a Health Visitor—not giving advice but listening to the advice given by the Health Visitor and criticising this. It is always impressed on the Health Visitor that the number of visits paid is little or no guide to her usefulness and that quality means more than quantity : “ take time to consider the circumstances of the

“ case and give advice suited to those circumstances ” is a most useful rule. Generally the mothers much appreciate the visits and have often said that the “ Baby Nurse ” was their best friend, or that they would never have reared baby if it had not been for her. However successful our Centres may become, home visitation is the really essential part of the work ; advice can there be suited to the individual and correction given less offensively than in a public Centre, also those mothers who cannot or will not attend a Centre can be reached in their homes.

Ante-natal visiting has been carried out in 364 cases where a Doctor or Midwife had not been engaged. The ante-natal advice given is as yet insufficient, but time will show an advance in this work. It was proposed to have routine examination of urine introduced as the thin edge of the wedge, but this project was unfavourably received by the Committee. There is some provision for ante-natal work in Wellingborough but it is not made much use of as yet ; only 16 attendances having been made during the year.

STILLBIRTHS.—Of these, 93 were enquired into by the Health Visitors during the year, and the results of their enquiries are tabulated as follows :—

I. CAUSES.

(A) Intra-natal deaths	...	29	(a) Delayed Labour—	
			Contracted pelvis	... 5
			Abnormally large child	2
			Malformation of child	2
			Malpresentation	... 4
			Unstated cause	... 7
				— 20
			(b) Delay in obtaining assist- ance	... 1
			(c) Induction for pernicious vomiting	... 1
			(d) Prolapse of cord	... 2
			(e) Unknown causes	... 5
				—
				29
				—

1. CAUSES—*continued.*

(B) Other than Intra-natal...	43	Accident or shock	8
		Nephritis or Eclampsia	9
		Ante-partum hæmorrhage	12
		Immoral character	
		(?) Venereal Disease	4
		Tuberculosis	2
		General ill-health	5
		Pernicious vomiting	1
		Excess of liquor amnii	1
		Malformation of child... ..	1
			—
			43
			—
(C) No abnormality ascertainable	21		
TOTAL	93		

II. OCCUPATION.

Housewife	76
Factory hand	13
Washerwoman and land- worker	1
Land-worker	1
Ordnance checker	1
Hotel Maid	1
	—
	93
	—

III. PREVIOUS PREGNANCIES.

Only stillbirths or mis- carriages	15
Live and stillbirths	18
Live births only	30
Primipara	30
	—
	93
	—

INFANT WELFARE CENTRES.—Particulars as to attendance at Centres are given below :—

Name of Centre.	Average No. of Infants attending per Session.	Attendances by Doctor.	Sessions.
Desborough	8	22	30
Daventry	12	4	19
Thrapston	17	21	24
Rothwell	22	3	3
Oundle	8	5	21
Burton Latimer	14	6	22
Long Buckby	26	7	11
Irchester	16	19	19
Wellingborough	24	40	79

One new Centre was opened—that at Rothwell—on November 25th. This Centre has progressed well and was favourably commented on by an Inspector from the Ministry of Health four months after its opening.

FREE MILK.—Free Milk has been given to necessitous cases throughout the year, and Health Visitors and Mothers are unanimous in stating that much of the breast-feeding may be traced to this, and that the low death rate is partly due to this cause. The amounts distributed were as follows:—

URBAN DISTRICTS.		RURAL DISTRICTS.		
	Pints.		Pints.	lbs.
Brackley Borough	1308½	Brackley	... 1159	
Daventry „	... 552	Brixworth	... 3022¼	78
Higham Ferrers	... 690½	Daventry	... 1962	
Borough				
Desborough	... 1103½	Gretton	... 92	
Finedon	... 634½	Hardingstone	... 2190	6
Irthlingborough	... 592½	Kettering	... 3898½	52
Oundle	... 365	Middleton Cheney	... 478	
Raunds	... 1658	Northampton	... 1647½	70
Rushden	... 3794	Oundle	... 4527½	
Wellingborough	... 4975½	Oxendon	... 311	36
	—	Thrapston	... 1119½	
Total	...15674	Towcester	... 115½	
	—	Wellingborough	... 5817½	10
			—	—
		Total	26340¼	252
			—	—

All cases were well within the scale of necessity as fixed. In no case was milk given for more than a month without re-investigation. None was given to children over three years of age, and none to mothers unless nursing or just previous to labour. In all cases it was understood that in the case of a mother if she ceased to suckle she ceased to receive milk, that in the case of an infant the infant for which milk was given must show some corresponding benefit, that where there was no income, Parish Relief, or other income of some sort must be obtained, or free milk could not be granted.

CONVALESCENT HOME.—The Leicestershire County Council notified the Northamptonshire County Council that they were

prepared to admit children between the ages of 3 and 10 to their Home at Charnwood Forest on payment of 25/- per week. Doctors requiring convalescent treatment for suitable cases might make use of this offer for those able to pay this moderate sum.

Foster-Mothers were found and payments from various sources received for 16 cases. In two cases the foster-mothers proved unsatisfactory and new homes were found. Foster-mothers were required for the following reasons :—

I.	Child illegitimate, mother working			
	Payment by mother	...	7	
	" " " and			
	Dr. Barnardo's Society	...	1	
	Payment by father	...	2	
	" " relatives	...	1	
		—		11
II.	Child legitimate, mother working, father invalid			
	Payment by mother.	...	...	1
III.	Cruelty of step-mother			
	Payment by private charity.	...	...	1
IV.	Mother in Asylum	...	...	...
	Payment by father	...	...	2
V.	Mother and Father dead			
	Payment from Soldiers and Sailors			
	Canteen Fund.	...	...	1

Boarded-out children were visited for the Potterspurty Board of Guardians throughout the year, and one foster-mother on the Oundle District was visited at the request of the Relieving Officer.

The number of infants coming under supervision for the first time was 3,765 (2,377 in 1919 and 2,208 in 1918). It is interesting to note that there were 34 fewer deaths among this larger number than among the smaller number in 1919. The extension of building into the County area has brought a considerable number of Borough babies under the care of the County Health Visitors. Chest troubles or such illnesses as

Measles and Whooping Cough with Chest complications account for more than half the total deaths (47 out of 91 deaths). In rural areas 54 per cent. of the deaths are due to chest complaints or complications and in urban areas 48 per cent. The greater loss of life from chest troubles in the country is probably due to the contrast between the greater freshness of the air outside and the greater stuffiness of the air indoors, as compared with the more equable atmosphere of town where the outside air is less fresh and the indoor decidedly less stuffy as a rule.

The long-tubed bottle was still used in 21 cases.

The figures for breast-feeding to the end of the 7th month were 73.5 per cent. This is a slight drop from 1919 (73.7 per cent.) and interferes with the steady annual rise which has been found from 53.6 per cent. in 1910 (with the exception of 1916). This, however, is an improvement on most Counties, the rule being that 1920 is much below standard in this respect. Our free milk saved us from a greater fall.

LILA S. GREIG,

Lady Medical Officer and Inspector of Midwives.

May, 1921.





Cases of Infectious Disease Notified during the Year 1920,

TABLE II.

DISEASES.	URBAN DISTRICTS.													RURAL DISTRICTS.													Totals for Administrative County.				
	Brackley (Borough)	Daventry (Borough)	Higham Ferrers (Boro')	Desborough	Finedon	Irthlingborough	Kettering	Oundle	Raunds	Rothwell	Rushden	Wellingborough	Totals for Combined Urban Districts.	Brackley	Brixworth	Crick	Daventry	Easton-on-the-Hill	Gretton	Hardingstone	Kettering	Middleton Cheney	Northampton	Oundle	Oxendon	Potterspury		Thrapston	Towcester	Wellingborough	Totals for Combined Rural Districts.
Scarlet Fever ... ..	...	4	...	...	3	8	49	10	...	...	6	14	94	7	4	5	11	...	1	6	4	1	2	5	7	1	18	1	3	76	170
Diphtheria (including Membranous Croup)	2	3	3	6	4	2	50	...	1	5	13	33	122	2	13	...	11	2	2	4	20	1	2	1	2	...	23	5	26	123	245
Erysipelas	1	3	...	...	...	8	...	...	...	1	7	16	36	...	4	...	7	...	...	2	3	1	1	...	3	3	1	1	5	31	67
Ophthalmia Neonatorum ... ..	...	...	...	1	4	15	...	...	...	1	1	...	22	1	1	...	1	...	...	1	1	...	...	1	...	...	...	1	1	5	27
Cerebro-Spinal Fever ... ..	...	...	...	1	...	...	1	...	...	...	2	...	4	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	4	8
Acute Poliomyelitis ... ..	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2
Encephalitis Lethargica ... ..	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Enteric Fever ... ..	...	...	...	1	1	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	1	...	1	1	1	...	1	1	3	9	12
Dysentery (Amoebic) ... ..	...	...	...	...	...	...	2	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Puerperal Fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	5
Pulmonary Tuberculosis	3	2	3	6	...	7	72	3	10	3	21	36	166	7	15	4	12	1	1	7	9	4	11	7	4	7	11	8	14	122	288
Other Forms of Tuberculosis ... ..	...	...	...	...	1	16	1	1	3	8	12	...	42	3	4	...	1	1	...	2	1	...	2	...	...	...	1	...	...	15	57
Pneumonia	5	2	1	1	2	34	2	7	1	2	14	...	73	7	...	2	5	...	...	5	1	...	1	2	...	22	6	12	9	72	145
Malaria	4	...	...	...	...	11	1	...	...	...	2	2	20	1	...	...	3	...	...	2	1	...	...	...	...	...	3	2	12	32	
Totals	11	18	7	15	11	25	258	18	20	14	63	127	587	29	41	11	51	4	4	29	50	7	20	17	17	33	64	32	64	473	1,060

NOTE.—The figures given in this Table (with the exception of those referring to Tuberculosis) relate to the 53 weeks—December 28th, 1919, to January 1st, 1921. The figures for Tuberculosis relate to 52 weeks only—January 4th, 1920, to January 1st, 1921.



