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1930.

HERTFORDSHIRE COUNTY COUNCIL.

THIRTY-FIRST ANNUAL REPORT ON THE

PUBLIC HEALTH

OF

HERTFORDSHIRE

BEING THAT FOR THE YEAR



H. HYSLOP THOMSON

M.D., D.P.H.

County Medical Officer of Health.

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To the Chairman and Members of the Public Health and Housing Committee.

LADIES AND GENTLEMEN,

I have the honour of presenting to you the Annual Report on the Public Health of the County during the year 1929, being the thirty-first you have received.

The statistics for the year indicate that while the health of the County during the year has been fairly good it has fallen below the high level of 1929.

This is chiefly due to an epidemic of influenza and to a higher death rate from epidemic disease associated with a period of severe weather during the early months of the year.

I am, Ladies and Gentlemen,

Your obedient servant,

H. HYSLOP THOMSON,

County Medical Officer of Health.

Hertford.

May, 1930.

Members of the Public Health and Housing Committee.

Chairman: Fern, H. E.

Attenborough, Mrs. G. E.
Aronson, A.
Ball, C. F., c.B.E.
Ball, G.
*Blount, Miss M. B.
Bowlby, A. S.
Bradford, Miss E. E. R.
Bromet, A.
Cannon, H.
Cull, J.
Curtis, H. E.
Dockray, W. J. S.
Drake, Major J. H., o.B.E., M.C.
*Fern, H. E. (Chairman)
Ford, Amos
Fordham, Mrs. P.
Franklin, E. J.
Garrett, Mrs. E., M.B.E.

Goulding, A.
Graveson, W.
Grimwood, T. R.
Halsey, C. H.
Harris, L. T.
Haslam, R. H.
Holland Hibbert, The Hon. A. H.
Lawrence, Sir Walter
Phillips, G.
Ransom, T.
Redford, A. W.
Rutherford, D. C.
*Smith, Rev. Roland.
Vialou, A. B.
Wanklyn, J. A.
Wiggs, A. W.
Woodhouse, R. P.

Those marked * are members of the Sub-Committee as to County Medical Officer of Health's Reports

THE HEALTH OF THE COUNTY, 1929.

STATISTICAL SUMMARY.

(For each District see Table at end of Report.)

		URBAN	. 53	y emine)	RURAL.		COUNTY.		
TABLE 1.	1929.	1928.	10 years;	1929. d	1928.	10 years	1929.	1928.	10 years
I. Population	268,700	264,650	212,118	115,400	113,550	109,049	384,100	378,200	331,857
II. Birth-rate	14.8	14'0	18.0	14.0	15.0	18.2	14.8	14.9	18.1
III. Death-rate	11.9	10.5	11.6	11.8	10.3	11.6	11.9	10.5	11.6
IV. Infant Mor- tality	49	46	67	46	43	58	47	45	64
V. Epidemic Death-rate	.53	.19	h-b	'22	.18	1 to	.22	17	0 -
VI. Diarrhœa Death-rate*	.07	.03	DOMESTIC S	.03	.03	roi mer	.06	.03	-
VII. Phthisis Death-rate	.61	5	.8	.46	4	.7	-58	5	.7
VIII. Cancer Death-rate	1.3	1.4	1.5	1.4	1.5	1.5	1.3	1.4	1.3

^{† 1911-1920.}

The above figures give a summary of the vital statistics for the County during 1929. The estimate of the population, as given by the Registrar-General, is 384,100, compared with 378,200 for 1928. There is a rise in the general death-rate, which for 1929 was 11.9, compared with 10.2 for 1928. There is a slight fall in the birth-rate, which for the past year was

14.8, compared with 14.9 for 1928 and 14.6 for 1927.

There is a slight rise in the infant mortality, which was 47 compared with 45 for 1928. The previous lowest infant mortality attained was 42 in 1924. There is a distinct rise in the maternal mortality, which was 4·2 compared with 2·8 last year. There is also a slight rise in the death-rate from pulmonary tuberculosis, namely 0·58, compared with 0·51 for 1928. This latter was the lowest death-rate from pulmonary tuberculosis which had so far been recorded. There is a slight increase in the death-rate, from non-pulmonary tuberculosis, which was 0·14, compared with 0·13 for the previous year. There is a slight decrease in the death-rate from malignant disease, which was 1·3 compared with 1·4 last year. There is an increase in the epidemic death-rate, which was 0·22 compared with 0·17 in 1928.

^{*} Per 1,000 population.

POPULATION AND ACREAGE.

(For each District see fly-leaf at end of Report.)

	Towns II To I and		Por	PULATION.	
TABLE 2.	Acreage (land and water).	Census 1901.	Census 1911.	Census 1921.	Estimate 1929.
Urban Districts Rural Districts	51,632 352,900	155,150	194,263	229,059	268,700
County	404,523	258,423	311,321	333,195	384,100
England & Wales	37,337,630	35,527,843	36,070,492	37,885,242	39,290,000

The 1921 census population for the County was 333,195, and the population estimated by the Registrar-General for 1929 is 384,100, an increase of 5,900 for the year, compared with 14,100 for the previous year, the increase for the urban districts being 4,050, and that for the rural districts 1850.

All the urban districts have increased in population except Royston which curiously has the same population as last year. All the rural districts have increased in population except Ashwell and Buntingford in both of which there is a decrease. In some of the rural districts the increase is small.

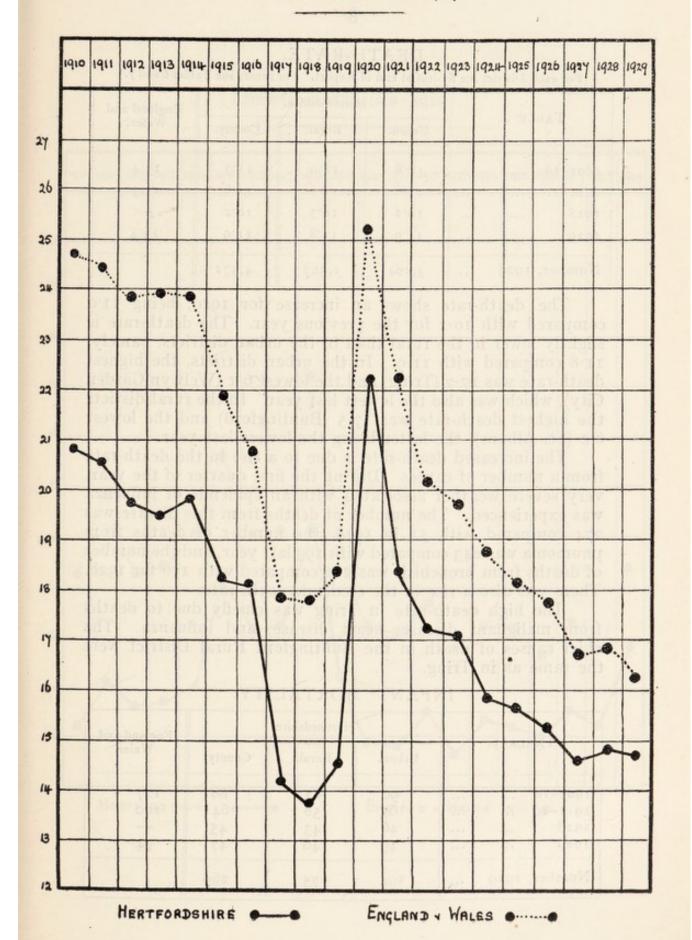
BIRTH-RATE.

(For each District see fly-leaf at end of Report. For number of births, legitimate and illegitimate, in each district, see Table 6.)

T				Hertfordshire.		England and
IAB	LE 3.	lol a	Urban.	Rural.	County.	Wales.
1901-10			23.6	22.6	22.9	27 2
1911-20			18.0	18.3	18.1	21.8
1928			14.0	15.0	14.9	1 1 1
1929			14.8	14.0	14.8	16.3
Number,	1929		3.995	1,625	5,620	Incompany

The birth-rate for 1929 shows a slight decrease from 14.9 to 14.8, the rate for the urban districts being 14.8 and for the rural 14.0. The highest birth-rate in the urban districts was 24.1 (Welwyn Garden City) and the lowest 9.3 (Harpenden), which were the highest and lowest for the last two years. In the rural districts the highest birth-rate was 19.6 (Barnet) and the lowest 10.2 (Buntingford). It will be observed that the fall in the birth-rate is restricted to the rural districts. In seven urban districts and four rural districts the birth-rate for the year has been lower than the death-rate. The number of births during the year was 5,620 compared with 5,666 for the previous year.

BIRTH-RATE 1910-1929.



DEATH-RATE.

(For each District see fly-leaf at end of Report. For causes see Tables 6 and 7.)

m					England and	
TAR	LE 4.		Urban.	Rural.	County.	Wales.
1901-10			11.8	12.0	11.7	15.4
1911-20		***	116	11.6	11.6	14:3
1928			10.5	10.3	10'2	_
1929			11.9	11.8	11.9	13.4
Number,	1929		3,204	1,367	4,571	

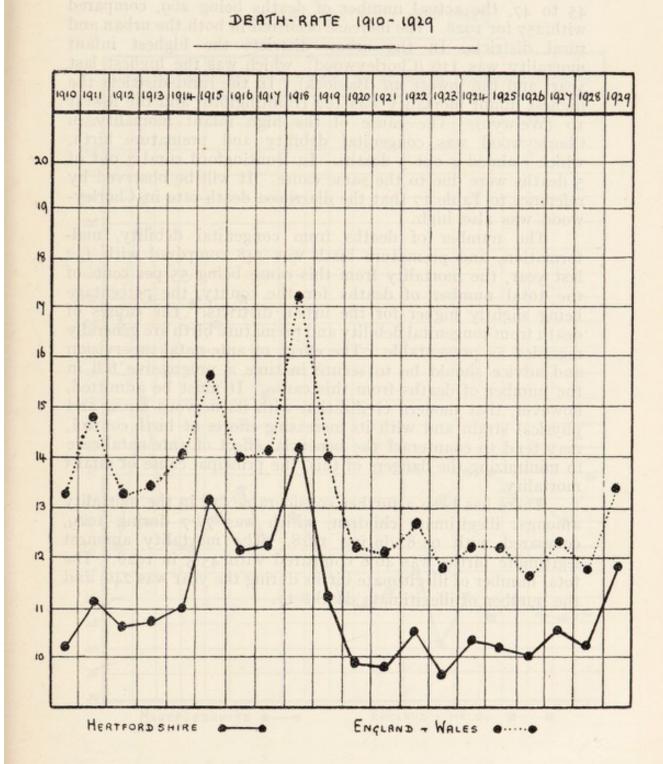
The death-rate shows an increase for 1929, being 11.9 compared with 10.2 for the previous year. The death-rate is slightly lower in the rural than in the urban districts, namely, 11.8 compared with 11.9. In the urban districts, the highest death-rate was 17.7 (Tring) and the lowest 6.1 (Welwyn Garden City), which was also the lowest last year. In the rural disticts the highest death-rate was 17.5 (Buntingford) and the lowest 8.2 (St. Albans), the latter being the lowest last year.

The increased death-rate is due to a rise in the death-rate from a number of causes. During the first quarter of the year, very severe weather associated with an epidemic of influenza was experienced. The number of deaths from this disease was 274 compared with 51 in 1928, the number of deaths from pnumonia was 243 compared with 193 last year, and the number of deaths from bronchitis was 221 compared with 176 for 1928. There was also a rise in the epidemic death-rate.

The high death-rate in Tring was chiefly due to deaths from malignant disease, heart disease, and influenza. The chief causes of death in the Buntingford Rural District were the same as in Tring.

INFANT MORTALITY.

TABLE 5.	br	he milion	England and			
TABLE 3.	E A	Urban.	Rural.	County.	Wales.	
1901-10		90	83	88	127	
1911-20		67	8 3 58	64	100	
1928		46	43	45	_	
1929		49	43 46	47	74	
Number, 1929		194	75	269		



The infant mortality, which is the number of deaths under twelve months per 1,000 births, shows a slight increase from 45 to 47, the actual number of deaths being 269, compared with 257 for 1928. The increase occurred in both the urban and rural districts. In the urban districts the highest infant mortality was 116 (Chorleywood), which was the highest last year, and the lowest nil (Baldock). In the rural districts the highest infant mortality was 102 (Buntingford) and the lowest 16 (Welwyn). The cause of the high infant mortality in Chorleywood was congenital debility and premature birth, which claimed 4 out 5 deaths. In Buntingford rural 3 out of 5 deaths were due to the same cause. It will be observed by reference to Table 17 that the diarrhoea death rate in Chorleywood was also high.

The number of deaths from congenital debility, malformation, and premature birth was 148 compared with 132 last year, the mortality from this cause being 55 per cent. of the total number of deaths for the county, the percentage being slightly higher for the urban districts. The causes of death from congenital debility and premature birth are generally regarded as preventable. The effect of ante-natal supervision and advice should be to secure in time a progressive fall in the number of deaths from this cause. It must be admitted, however, that modern civilization with its nervous stress and physical strain and with its increasing efforts at birth control, may tend to counteract the beneficial effect of ante-natal care

mortality.

There has been a further considerable fall in the mortality amongst illegitimate children, which was 72.7 during 1929, compared with 93.8 during 1928. The mortality amongst legitimate births was 46.8 compared with 45.3 in 1928. The total number of illegitimate births during the year was 240, and the number of illegitimate deaths 17.

in minimizing the dangers of this, the principal cause of infant

INFANT- MORTALITY 1910 - 1929.

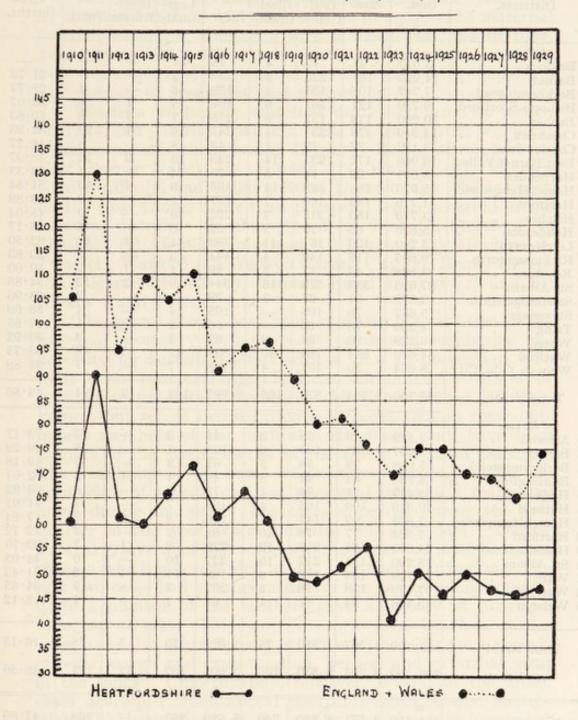


Table 6.
BIRTHS, DEATHS, AND INFANT DEATHS IN 1929.

			Deaths		Births.			ber of i		Infant death
	Districts.	Popula- tion.	at all ages.		Illegi- timate	Total.		Illegi- timate	Total.	rates per 1,000 births.
	Urban.	EN LOSE TO								
	Baldock	3,017	41	42	4	46			-	_
	Barnet	14,220	161	222	8	230	5		5	21.73
	Berkhampstead .	7,747	108	135	4	139	4		4	28.77
	Bishop's Stortford	9,730	121	101	6	107	5 -	1	6	56.07
	Bushey	10,260	113	152	6	158	7_	1	8	50.63
	Cheshunt	14,540	178	237	4	241	19	1	20	82.98
	Chorleywood .	3,192	22	42	1	43	5		5	116.27
	East Barnet Valley	16,060	172	231	14	245	10	2	12	48.97
	Harpenden .	8,001	82	70	5	75	4	-	4	53.33
	Hemel Hempstead	15,070	194	183	11	194	9	1	10	51.54
	Hertford	11,770	146	160	7	167	9	-	9	53.89
	Hitchin	13,710	180	215	7	222	10	-	10	45.04
	Hoddesdon .	5,630	85	77	5	82	6		- 6	73 · 17
	Letchworth .	13,200	120	181	11	192	11	1	12	62.50
	Rickmansworth .	9,686	116	140	4	144	3	-	3	20.83
	Royston	3,828	43	47	3	50	1	1	2	40.00
	St. Albans .	27,610	353	328	16	344	10	2	12	34.88
18	Sawbridgeworth .	2,579	31	27	2	29	2		2	68.96
19	Stevenage	5,657	79	105	-	105	4	-	4	38.09
20	Tring	4,220	75	56		56	1	-	1	17.85
21	Ware	6,229	90	94	3	97	3		3	30.92
		54,670	644	794	40	834	47	2	49	58.75
23	Welwyn Gdn. City	8,074	50	191	4	195	7		7	35.89
	Total Urban .	268,700	3,204	3,830	165	3,995	182	12	194	48.56
	Rural.									
1000	Ashwell	3,529	49	38	3	41	3		3	73 · 17
2	Barnet	5,497	65	100	8	108	5	-	5	46.29
3	Berkhampstead .	5,088	79	58	3	61	3		3	49.18
		4,785	84	44	5	49	4	1	5	102.04
5		5,417	81	74	4	78	6		6	76.92
6	Hatfield	10,310	109	163	4	167	7	-	7	41.91
	Hemel Hempstead	7,965	99	141	5	146	5	2	7	47.94
	Hertford .	7,523	77	78	10	88	2	-	2	22.72
	Hitchin	14,320	195	216	12	228	6	1	7	30.70
The state of	St. Albans .	18,290	151	217	10	227	10	_	10	44.05
	Ware .	11,710	166	162	6	168	11	1	12	71.42
	Watford .	17,470	178	198	4	202	7	-	7	34.65
13	Welwyn	3,496	34	61	1	62	1		1	16.12
	Total Rural .	115,400	1,367	1,550	75	1,625	70	5	75	46.15
	" Urban .	268,700	3,204	3,830	165	3,995	182	12	194	48.56
	Total County .	384,100	4,571	5,380	240	5,620	252	17	269	47.86

Death-rate of Legitimate and Illegitimate Infants per 1,000 Legitimate and Illegitimate Births is:—

			WAT CARE	142 1			
Leg	itimate			Illegi	timat	e.	
Urban Dis	tricts		47.5	Urban D	istric	cts	72.7
Rural			45.1	Rural			66.6
County			46.8	County			70.8

MATERNAL MORTALITY.

NUMBER OF DEATHS OF MOTHERS PER 1,000 BIRTHS.

The number of maternal deaths during the year was 24 compared with 16 last year, and 12 in 1927. The maternal mortality was 4.2, compared with 2.8 last year, 2.2 in 1927, 4.9 in 1926, and 3.2 in 1925. Of the 24 maternal deaths, 10 were due to puerperal sepsis and 14 were due to other accidents

and diseases of pregnancy and parturition.

Nineteen of the 24 maternal deaths occurred in urban districts, and 5 in rural districts. The 10 deaths from puerperal sepsis occurred in the following districts: Bishop's Stortford (1), East Barnet Valley (1), Hitchin (1), Watford (5), Welwyn Garden City (1) and Hitchin Rural District (1). The fourteen deaths from causes other than puerperal sepsis occurred in the following districts: Berkhampstead (2), Bishop's Stortford (1) Cheshunt (1), Hemel Hempstead (1), Hertford (1), Hitchin (1), Tring (1), Watford (1), Welwyn Garden City (1), Hemel Hempstead Rural District (2), Hitchin Rural District (1) and St.

Albans Rural District (1).

The figures given above show considerable variation in the maternal mortality within recent years and emphasize the necessity for sustained effort with a view to prevention. To what extent puerperal sepsis is due to infection from without or results from pre-natal streptococcal infection is not yet definitely known, but recent investigation has shown that in some outbreaks members of the medical and nursing staff have been carriers of the streptococcus in the throat or nasal passages. The possibility of pre-natal infection was emphasized by the occurrence of several cases of puerperal cases in a maternity home during the year. The cases appeared during the first quarter of the year when influenza was prevalent. During February, several of the mothers in the home had some transient pyrexia which was regarded as due to influenza infection. The first two cases had a temperature on the day of admission and quite a number of the mothers gave a history of pre-natal influenza attacks. The symptoms presented by these earlier cases were also characteristic of influenza namely short periods of fever, cough and expectoration, herpes, and catarrhal signs in the lungs. Unfortunately, however, several of the latter cases developed streptococcal puerperal infection and bacteriological examinations of the swabs and the blood revealed the presence of the streptococcus haemolyticus. The history and clinical features of several of these cases certainly suggested

the association between puerperal sepsis and a pre-natal influenzal infection. Whatever the source of infection, the elimination of the risk of infection from without must be secured by the maintenance of a high standard of cleanliness and asepsis during the confinement, by careful ante-natal examination and supervision and also by greater attention to the health of those who are in constant attendance at cases of child-birth.

The special measures which are adopted in the County include the services of an obstetric specialist in complicated cases, nursing services, hospital treatment and other facilities. The provision for the hospital treatment of cases of puerperal sepsis include arrangements with several of the voluntary hospitals in the county. It is hoped that special provision for puerperal sepsis may be made in one of the county institutions before long.

During the year Mr. Ellison saw 33 cases of pyrexia during the puerperium in the County under the County Council and the Watford Public Health Department, paying 14 visits in all.

DIARRHŒA.

DEATH-RATES OF CHILDREN UNDER 2 YEARS PER 1,000 BIRTHS.

(For each District see fly-leaf at end of Report.)

TA	вьк 7.	gma		England and		
ille in			Urban.	Rural.	County.	Wales.
1920	annos.		3.3	4.0	2'5	8.3
1921			7.5	9 4	3.2	15.2
1922			3.4	1.1	2.7	5.2
1923			2.7	2.1	2.2	6.8
1924			3.4	3.2	3.4	6.3
1925	10 V		4'7	7'3	5.8	8.8
1926	10	1	1.6	3.3	2.1	8.7
1927			1.0	3.1	1.6	barrel -
1928			2.2	2.3	2.4	-
1929	***		5.0	2.4	4.5	8.1
Number	, 1929	Hold	20	4	24	omessau en

The death-rate from diarrhoea of children under two years of age per 1,000 births has increased during the year, the rate being 4·2 compared with 2·4 for 1928. The death-rate from this cause was again higher in the urban than in the rural districts, namely, 5 compared with 2·4. The largest number of deaths from diarrhoea in the urban districts was 3 (Cheshunt), and the highest mortality rate was 23·2 (Chorleywood). In the rural districts the highest rate was 25·6 (Hadham). In 9 urban districts and 10 rural districts no deaths from diarrhoea in children under two years occurred.

The increase in the diarrhoea death-rate is due to conditions which favour dust, the life and movement and virulence of infecting organisms, flies and the retention of refuse and the infection of milk. A spell of hot, dry weather provides such conditions.

For the prevention of epidemic diarrhœa in infants and young children efforts must be continued in the following directions:—(I) The encouragement of the breast-feeding of infants, (2) the provision of a clean milk supply, (3) the attaining of a satisfactory standard of domiciliary cleanliness, (4) the abolition of refuse and flies, and (5) the protection of all milk in the home from contamination by dust and flies. The main precaution is cleanliness in regard to food utensils, food, and milk.

CANCER OR MALIGNANT DISEASE.

(Including carcinoma and rodent ulcer. For each District see fly-leaf at end of Report.)

Tay	DT V Q	g sall		England and		
TABLE 8.			Urban.	Rural.	County.	Wales.
1901-10	V10		0.9	0.9	0.0	(1906-10) 0.0
1911-20			1'2	1.2	1.5	1.2
1927			1'2	1.5	1.5	1.3
1928			1.4	1.5	1.4	-
1929			1.3	1'4	1.3	
Number,	1929		353	173	526	

A slight fall in the death-rate during the year has to be recorded; the death rate for the year being 1.3 compared with

1.4 in 1928. It will be observed that this decrease is confined to the urban districts and that there has been an increase in the death-rate in the rural districts. The total number of deaths in the County was 526 compared with 540 in 1928. The highest death-rate for the year in the urban districts was 2.6 (Tring) and the lowest 0.8 (Chorleywood, Stevenage and Welwyn Garden City). In the rural districts the highest death-rate was 2.3 (Berkhampstead) and the lowest 0.4 (Hemel Hempstead).

Of the total number of 526 deaths from malignant disease during the year 251 were males and 275 were females, compared with 240 and 300 respectively last year. From these figures it will be observed that there is an increase in the number of

deaths amongst males and a decrease amongst females.

A study of the age at which death occurs points to the definite relationship which exists between malignant disease especially carcinoma and advancing years. Of the total number of deaths 289 or 55 per cent. occurred in persons over the age of 65 and 113 or 21 per cent. in persons over the age of 75. The largest number of deaths in the urban districts occurred in the age group 45–65 for both males and females whereas in the rural districts the largest number of deaths occurred in the male age group 65–75. There were four deaths under the age of 25, three in the urban districts and one the rural districts. The figures for the year rather suggest that malignant disease may develop somewhat later in life in rural districts than it does in urban districts.

The immediate cause of malignant disease is not yet definitely known, but recent investigations point to the possibility of a filterable virus as the chief agent and it is essential that no effort should be spared to solve the problem of the causation of malignant disease and of its relationship to the resulting effect on the human body of present-day conditions of life. Measures to avoid sources of irritation with early diagnosis and immediate treatment are essential in any efforts to prevent or control the disease. In certain forms of malignant disease, in both sexes, radium has now proved of definite value.

TUBERCULOSIS.

CRUDE DEATH-RATES FROM PULMONARY TUBERCULOSIS.

(For each District see fly-leaf at end of Report.)

	T	able	0	He	England and		
	1;	ibie	9.	Urban.	Rural	County.	Wales.
	1901-10			-8	-7	-8	(1906–10) 1·3
١	1911-20			-8	.7	-7	A RAME AND A
	1928			·8 ·55	.40	-51	_
l	1929			-61	.46	-58	_
ı	Number	19	29 .	173	54	227	

CRUDE DEATH-RATES FROM NON-PULMONARY TUBERCULOSIS.

			He	rtfordshi	re.
			Urban.	Rural.	County
1924			-16	-13	-15
1925			.15	.13	-14
1926			-18	-15	-17
1927			·14	.17	-15
1928			·15	.10	-13
1929			-16	-09	-14
Numbe	er. 192	29 .	 44	11	55

New Cases of Tuberculosis and Mortality during 1929.

Ago		New	Cases.		A	Deaths.							
Age Periods.	Puln	nonary	Non-Pt	ılmonary	Age Periods.	Puln	nonary.	Non-Pulmona					
	Male. Female. Male. Female 0 — 1 6 1 1 9 9 16 12 5 24 22 24 12 10 10 18 16 8 15 35 28 7 5 20 44 49 4 2	Female.		Male.	Female.	Male.	Female.						
0	-	1	6	1	0		41-11	4	1				
1			16	12	1		1	5	5				
					5 15 25	1	3	3	4 2 6 5				
			16	8	15	13	18	10	2				
			7	5	25	57	60	3	6				
20	44	49	4	2	45	34	25	3	5				
25 35	66	92	3	4	65	- 5	9	1	1				
45	47 39	48 30	3	6 3	75		1	1	7				
55	17	10	1	1									
65 &	2	8	1	4 2		THE REAL PROPERTY.	The state of						
Upwards		0	1	-	l World	malin			aiii				
Total	293	315	82	59	Total.	110	117	30	25				

The death-rate from pulmonary tuberculosis shows a slight increase for 1929, being 0.58 compared with 0.51 in 1928. The death-rate from non-pulmonary tuberculosis also shows a slight increase, the rate being 0.14 compared with 0.13 during the previous year.

The comparative death-rates from pulmonary and nonpulmonary tuberculosis during the past nine years are given in

the following table :-

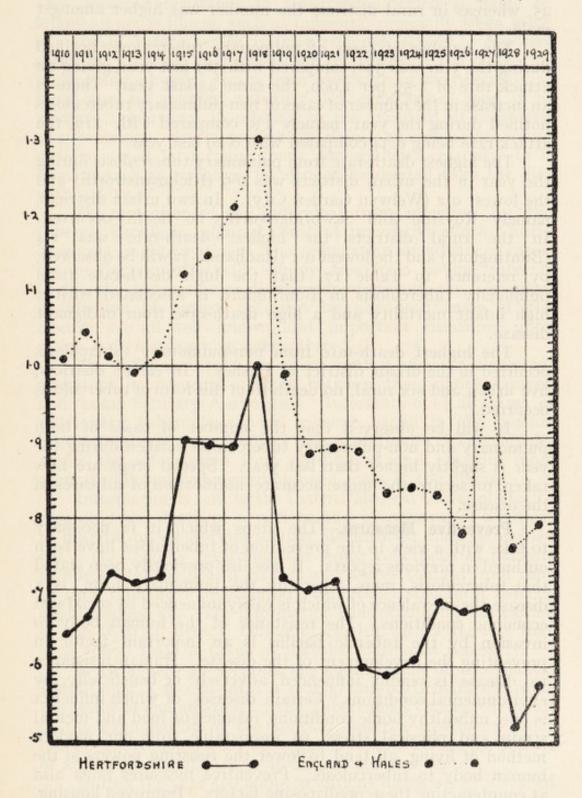
COMPARATIVE DEATH-RATES FROM TUBERCULOSIS.

	1929.	1928.	1927.	1926.	1925.	1924.	1923.	1922.	1921.
Pulmonary Tuberculosis	0.28	0.21	0.67	0.65	0.69	0.61	0.29	0.61	0.41
Non-Pulmonary Tuberculosis	0.14	0.13	0.12	0.12	0.14	0.13	0.14	0.11	0.19

The death-rate from both pulmonary and non-pulmonary tuberculosis during 1929 was higher in the urban than in the rural districts, which was also the case last year. The increase in the death-rate from pulmonary tuberculosis is no doubt chiefly attributable to the epidemic of influenza which occurred during the early months of the year. It would not have been surprising if the death-rate had been higher than it is, having regard to the fact that the number of deaths from influenza during the year was 274, which is the highest figure reached since the serious epidemic of 1918. As regards the age at which death occurred the greatest number of deaths occurred in the age group 25-45. In the urban districts the deaths in this group were equal for both males and females, whereas in the rural districts the female deaths were slightly in excess. Under the age of 25, there were 30 deaths in urban districts, 10 males and 20 females, whereas in the rural districts there were only 6 deaths under the age of 25, of which 4 were males and 2 were females.

As regards non-pulmonary tuberculosis, it will be observed that under the age of 25 the number of deaths is higher among males, whereas above the age of 25 the deaths are higher amongst females.

These figures point to the fact that the pulmonary form of the disease has fallen somewhat heavily on young females in urban districts. In this connection it may be mentioned that DEATH-RATE PULMONARY TUBERCULOSIS 1910 - 1929



the number of deaths from influenza in urban districts was much higher amongst females, although not under the age of 25, whereas in rural districts the number was higher amongst males.

The number of cases of pulmonary tuberculosis notified during the year was 590, compared with 581 last year, giving an attack rate of 1.53 per 1,000, the same as last year. There is an increase in the number of cases of non-pulmonary tuberculosis notified during the year, namely 130 compared with 110, the

attack rate being 0.34 compared with 0.29 last year.

The highest death-rate from pulmonary tuberculosis during the year in the urban districts was 0.9 (Rickmansworth) and the lowest 0.2 (Welwyn Garden City). In two urban districts, namely Royston and Sawbridgeworth, no deaths occurred. In the rural districts the highest death-rate was 1.4 (Buntingford) and the lowest 0.1 (Hadham). It will be observed, by reference to Table 17, that the high death-rate from pulmonary tuberculosis in Buntingford is associated with a high infant mortality and a high death-rate from malignant disease.

The highest death-rate from non-pulmonary tuberculosis occurred in the urban district of Bushey. In eleven districts, five urban and six rural, no death from this form of tuberculosis occurred.

It will be observed that the number of cases of both pulmonary and non-pulmonary tuberculosis notified during the year is slightly higher than last year. Special steps are now taken to secure the more accurate notification of all cases of the disease.

Preventive Measures.—The steps which it is necessary to take with a view to the prevention of tuberculosis have been outlined in previous reports. It has also previously been stated that tuberculosis, more especially the pulmonary form, is a disease the prevalence of which is easily influenced by social and economic conditions. The resistance of the human body to invasion by the tubercle bacillis is an important factor in preventing the development of the disease. Human resistance to disease is readily influenced, adversely or beneficially, by environmental conditions. Certain diseases, of which influenza is one, unhealthy home conditions, insufficient food and mental strain and physical stress, so inseparable from our modern method of living, all tend to lower the resisting powers of the human body to tuberculosis. Preventive measures must aim at counteracting these predisposing factors. Improved housing,

the elimination of overcrowding and the promoting of domestic and personal cleanliness are essential prophylactic measures. The impaired resistance to tuberculosis which is liable to follow an acute illness, such as influenza, especially when work is resumed before health is fully restored, should be counteracted by a period of convalescent treatment. The danger of mental and physical strain from overwork or over-recreation, must also be guarded against. The question of food is of primary importance in relation to the standard of resistance to tuberculosis. In the present age there is a tendency for young girls to avoid fat-forming foods for æsthetic reasons. In a climate such as we have, fat cannot be deleted from the diet with safety.

The protection of the individual from infection by the tubercle bacillicus required constant preventive effort. Early diagnosis, early treatment, the segregation of advanced cases, the production of a milk supply free from bovine tubercle bacilli, the destruction or disinfection of sputum, the periodical disinfection of houses occupied by advanced cases of the disease, are all well known and important measures upon

which it is necessary to concentrate.

The following steps are taken with a view to closer cooperation in preventive effort between the County Council and Local Sanitary Authorities. Information of all cases of pulmonary tuberculosis with tubercle bacilli in the sputum is sent to the District Medical Officer of Health. This supplements the information from notification and provides more accurate information regarding open cases of the disease.

Information is sent to the District Medical Officer of Health regarding the death of a patient and of removal of a patient to hospital or sanatorium so that disinfection may be carried out. The reports regarding the home conditions of patients forwarded by the health visitors and nurses contain from time to time references to insanitary conditions, structural defects, overcrowding, etc. The information thus obtained is forwarded to the District Medical Officer of Health with a request that such action may be taken as may be considered necessary.

With a view to securing the co-operation of the Medical Practitioner a special form is sent giving particulars regarding the result of examination by the Tuberculosis Officer, the result of the examination of the sputum and the treatment which has been recommended. Subsequent reports giving particulars

of any special alteration in treatment are also sent.

During the year 500 home conditions forms were forwarded

by the Health Visitors, from which the following particulars have been obtained.

From the following tables it will be seen that in 23·I per cent. of the patients regarding whose home conditions a report was received there existed a ratio of three or more than three persons per sleeping room. This percentage is less satisfactory than that obtained last year when the percentage was 2I·5. It will be observed however that this figure refers to the uninsured only; and improvement has taken place in the case of insured persons.

HOME CONDITIONS.

	Good.	Indifferent.	Bad.
Insured	73'9	23.7	2'4
Uninsured	70.6	22'4	7.0
Total	71.9	22'9	5.5

NUMBER OF PERSONS PER BEDROOM.

ment where	egg	Two or less.	Three.	Four.	Over Four.
Insured		82'4	14.7	2.9	1000-0
Uninsured		72'9	20.1	4.3	2.2
Total		76'9	17.8	3'7	1.6

Summary of New Work during the Year.—In the following tables particulars are given of the work carried out during the year in connection with tuberculosis, including recommendations for treatment in the case of new patients.

Number of cases examined			1,012
Cases treated in sanatoria			390
Cases treated in hospitals		OU.V.	71
Cases treated at home : .			419
Cases treated at dispensaries:			152
Cases under observation .			208
Contacts examined .		111,000	210
Cases recommended milk		011	49
Shelters issued			23
Specimens of suptum examined	d		1,608
Tubercle bacilli present .			516

Treatment.—There is little new to report in regard to the treatment of the disease. It is necessary to emphasize yet again the importance of early diagnosis. The disease has shown some tendency to acuteness of onset during the year, especially in patients under 25, in such cases early diagnosis is essential if the patient's life is to be saved.

Particulars of the treatment carried out during the year is given in the annual report on Tuberculosis. Reference may be made here to the value of light treatment in cases of cutaneous

tuberculosis.

After Care.—The after care of patients is no doubt an important part of any scheme for dealing with tuberculosis, but a system of after care which is workable and which can yield satisfactory results is extremely difficult to put into practice. It is comparatively easy to prepare an efficient scheme on paper, but to put such a scheme into practice is quite a different problem. The question of after-care is, however, constantly under review and the possibility of new efforts in this direction is at present under consideration.

Further particulars of the work carried out in connection with tuberculosis are given in the Annual Report on Tuberculosis

for 1929.

VENEREAL DISEASES.

The number of patients from Hertfordshire attending the hospitals in London during 1929 was 281, compared with 242 for 1928, 264 for 1927, 193 for 1926, 205 for 1925, 236 for 1924, 213 for 1923, 142 for 1922, 166 for 1921, 215 for 1920, 235 for 1919, 113 for 1918, and 124 for 1917. Of this number 193 were found to be suffering from venereal disease, compared with 160 for 1928, 170 for 1927, 117 for 1926, 140 for 1925, 171 for 1924, 155 for 1923, 142 for 1922, 126 for 1921, 176 for 1920, 180 for 1919, 94 for 1918, and 108 for 1917. The total attendances were 6,271, compared with 4,989 for 1928, 4,546 for 1927, 3,578 for 1926, 3,167 for 1925, 3,455 for 1924, 2,443 for 1923, 1,708 for 1922, 2,436 for 1921, and 464 doses of salvarsan substitutes were given as against 526 last year.

From these figures it will be seen that the number of cases treated and the number of attendances at the clinics in London

have been greater during the year.

The arrangements made for the year 1930-31 are on similar lines to these followed in 1929-30. They are made in connection

with the scheme which was formed and adopted by the London County Council and in which the Councils of the following counties participate: Buckingham, Essex, Hertford, Kent, Middlesex and Surrey.

The scheme makes provision for the diagnosis and treatment of venereal disease in, or in connection with, 17 general hospitals and 6 special hospitals. In addition there are 7 hostels to which special cases can be sent when necessary.

The amount of work carried out during the year is shown in the following table :—

ANNUAL SUMMARY FOR 1929.

independent diver		N	ew P	atient	s.	Total	In-	Salvar
Hospitals.	Syp.	s.c.	Gon.	Not V.D.	Total.	Atten- dances.	patient days.	No. of doses.
Albert Dock						1		
Royal Northern	7		25	13	45	826		
Hospital for Sick Children,			2	16	20		147	52
Gt. Ormond Street.						63	147	
Guy's	5	I	10	4	20	554	65	66
King's College								
London	1		7	1	9	243	6	29
Metropolitan					***	1		I
Middlesex	2		8	4	14	295		
Miller General			I		1	4		
Royal Free	4	***	17	7	28	417	73	92
Royal London Ophthalmic	5				5	83	67	47
St. George's			I	2	3	63		18
St. John's, Lewisham		1			***			
St. Mary's	1		3		4	73		9
St. Paul's			15	16	31	1024	7	7
St. Thomas'	9	1	23	22	55	905	129	94
Seamen's			2		4	43		
S. London for Women			***		***			
University College	4	***	29		33	1237	67	39
West London	300		2		2	149		
Westminster			***		1	18		10
S. Army Mothers' Hospita			3	3	6	273	347	
Children's Medical Home			***					***
Total	43	2	148	88	281	6271	908	464

The total number of pathological examinations made for private practitioners in the County during the year is 134.

The number of pathological examinations carried out for practitioners was 134, compared with 99 for the previous year, while the number of pathological examinations carried out for, or at the centres in, London were 1,063. Of these examinations, 5 were for spirochaetes, 642 for gonococci, 269 for Wassermann reaction and 147 for other reasons.

BLIND PERSONS.

Under "The Blind Persons Act, 1920", the County Council prepared a scheme for promoting the welfare of blind persons ordinarily resident within their area, which came into operation on the 1st April, 1923.

This scheme, which is additional to the provision made by the Education Authority, includes the following arrangements.

Children under School Age.—To consider cases of infants born blind or with sight so defective as to be unable to distinguish common objects. When considered necessary, arrangements to be made for such children to be boarded out or sent to a residential home. Parents to contribute according to means.

Home Workers and Home Teachers.—These services are carried out in cases approved by the County Council by the London Society for Teaching the Blind, Swiss Cottage. The Council pays on a basis of service a sum not exceeding the rate of £5 per head per annum after allowing for the grants receivable by the said Society from the Ministry of Health. Through the Hertfordshire Society for the Blind the County Council now employ two home teachers who visit the homes of the blind for purposes of instruction. A tabulated report of the work undertaken by the home teachers is submitted to each meeting of the Committee. The reports received from the Home Visitors show that valuable instruction is being given to the blind in their homes in such subjects as Braille, moon, raffia, knitting, rug making, rush seating, wool work, etc. The number at present under instruction by the two Home Visitors is 67.

Homes.—Maintenance grants are made to blind persons not destitute, but whom the Council may consider it desirable to send to a home for the blind approved by the Ministry of Health.

Hostels.—Contributions will be made towards the maintenance of blind persons employed in approved workshops and resident in a hostel approved by the Ministry of Health, who from lack of housing or for some other reason may require such provision.

Unemployable Blind.—Arrangements are made, when necessary, for aged, infirm, and unemployable blind persons to be boarded out or to receive weekly or other payments direct when they reside in their own homes or lodgings. Destitute

cases will in future be dealt with by the County Council. A very considerable sum is now paid by the County Council to unemployable blind persons, the amount varying according to the circumstances of the individuals.

Registration.—A system of registration of all blind persons living within the area is carried out by the County Medical Officer of Health.

In carrying out the scheme described above, the County Council have secured the help and co-operation of the County Nursing Association and the Hertfordshire Association for the Blind. The register of blind persons in the County which has been prepared contained:—

			Males.	Females.	Total.
At the	beginning of	1923	143	162	305
,,,	"	1924	147	166	313
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		1925	168	186	354
,,,		1926	188	203	391
,,	,,	1927	191	226	417
,,		1928	211	249	460
,,	"	1929	213	255	468

During 1929 there were added to the register 61 blind persons, compared with 43 last year, 20 males and 41 females. The number removed from the register during the year was 35 of which 12 were males and 23 were females. Eighty cases are at present receiving grants from the County Council, 31 males and 49 females.

During the year 56 persons have been taken off the Register under the new form of registration as they rank as visitors only in Hertfordshire. The greater number of these people are in asylums.

MENTAL DEFICIENCY.

The number of cases reported to the County Medical Officer during the year for examination as to their mental condition was 154, compared with 113 for the previous year. Of this number 102 were found to be mentally defective, four were epileptic, and the remainder either dull and backward or suffering from some form of physical defect associated with backwardness.

The increase in the number of cases investigated and in the number of cases of mental deficiency ascertained is chiefly due to the increased efforts which have been made to secure more accurate information regarding the number of mentally defective persons in the county. There is also evidence that there exists less hesitation on the part of parents who have mentally defective children to have them examined. Indeed, parents themselves occasionally report the fact that they have a

defective child, especially when such a child is of low mental

grade.

During the year 33 cases were sent to certified institutions or placed under guardianship, compared with 20 last year. Of the 33 cases, 20 were feeble-minded, 3 were imbeciles, I was an idiot and I a feeble-minded epileptic. At the present time there are 79 cases under guardianship, of which 32 are Hertfordshire cases and 47 are out-county cases. This number of out-county cases is due to the fact that the Central Association for Mental Welfare has established a Guardian Society in the county. In addition there are 9 county cases under the care of the Guardianship Society, Brighton. There is evidence that considerable care and sympathetic interest are extended to defectives by those under whose guardianship they are placed. Of the 33 cases referred to above, 25 were sent to special residential institutions and 8 were placed under guardianship.

At the end of the year there were 160 mental defectives in certified institutions, compared with 135 last year. At the present time there are about 73 defectives on the waiting list for admission to certified institutions in addition to many others who would be sent to certified institutions if

accommodation were available.

During the year 34 children were admitted to Kingsmead School, and of these 17 were County children and 17 out-county children. The number of children discharged during the year was 27, of which 13 were County cases. At the end of the year there were in residence in the school 113 children under the age of 16 and 10 feeble-minded girls over 16, making

a total of 123 in residence.

The total approved accommodation in institutions in the County now consists of between 70 and 80 beds, the number of beds in the Leavesden Mental Hospital being a varying figure. The accommodation is as follows: Watford Institution, 34 beds, 22 females and 12 males; Bishop's Stortford Institution, 20 beds for females; Kingsmead School, 10 beds for females; and Leavesden Mental Hospital according to beds available. In addition, cases are sent to institutions outside the County. Satisfactory progress has been made during the year with arrangements for commencing the building of the certified colony at Cell Barnes. The necessity for such a colony becomes more pressing with the passing of time. The great advantage of such an institution is that it will provide a home for defectives of all ages and of all grades where they will be well cared for and where they will be segregated so as to prevent them from becoming

a social danger to the community. In addition it will provide a training colony in which those who are able to follow outdoor and indoor occupations will be employed under trained instructors.

In consequence of the absence of adequate accommodation in certified institutions, a number of defectives each year are placed under guardianship or statutory supervision. Increased experience of guardianship has proved that it is of real value as a means of caring for mental defectives. Much depends upon the type of defective selected for guardianship and upon the character of the Guardian. High-grade cases, and preferably cases which have received some training in a special school or institution, are the most suitable type to be placed under Guardianship. Strangers make better guardians than relatives, as they exercise better discipline and more easily secure obedience.

Visits are made by your County Medical Officer to Hertfordshire cases under guardianship in the County. The cases seen during the year appeared on the whole to be well cared for. Each guardian has a special register in which the date of the visit and notes regarding the condition of the home and the defective are recorded. Statutory supervision is carried out by the nurses of the District Nursing Association in the County, of which there are 85. In respect of each defective placed under statutory supervision a certificate is sent with a recommendation as to the number of visits to be made by the nurse.

At the end of each quarter, the report card is returned to the County Medical Officer, giving dates of the nurse's visits and any remarks which she may think it necessary to make regarding the circumstances, home conditions, or health of the defective.

The number of defectives to whom visits were paid by the nurses during 1929 was 315, and the number of visits paid was 1,936; of the 315 defectives, 176 were males and 139 were females. In addition, 137 report forms giving particulars regarding the home conditions and circumstances of the defectives visited were received.

In the following table particulars are given of the position as regards mental defectives in the County at the end of the year. Further particulars are given in the Annual Report to the Committee under "The Mental Deficiency Act, 1913".

SUMMARY OF CASES AT END OF THE YEAR.

Defectives in Institutions		Males.	Females.	Total.
Under Guardianship County cases .		22	10	32
,, Out-County cases		19	28	47
In Place of Safety		17	25	42
Under Statutory Supervision .		176	139	315
Notified by Education Authority .		28	23	51
Otherwise ascertained		111	116	227
Under consideration, as to whom it been decided whether they are su				
be dealt with or not		18	9	27

DEATH-RATES FROM EPIDEMIC DISEASES.

(For each District see fly-leaf at end of Report.)

71	Urba	ın.	Rura	d.	Coun	ty.
TABLE 10.	Average 1914-1920.	1929.	Average 1914-1920.	1929.	Average 1914-1920.	1929.
Smallpox					70-	10/20
Measles	-58	10.	.53	.008	-56	'01
Scarlet-fever	.07	.02	12	'04	.09	.04
Diphtheria and Croup	.10	.04	.11	.07	.11	.07
Enteric and Continued Fever	.01	.003	10.	·00S	.01	.007
Whooping-cough	.11	.11	.10	.06	.10	.13
Meningococcal Menin- gitis	-	*007	- Land	.008	lo-man	.007
Encephalitis Lethargica	-	'02	W-Bill	'02	ioniala	.04
Polioencephalitis	-	-	-	-	_	
Poliomyelitis	-	u b	-	-		-
Total Rates	en angar	.23	201	.22	172 94	.22
Total Numbers	-	62	-	26		88

EPIDEMIC DISEASES.

The death-rate from epidemic disease shows an increase, namely 0.22, compared with 0.17 for the previous year, the number of deaths being 88, compared with 66 last year. The death-rate is slightly higher in the urban than in the rural districts, namely, 0.23, compared with 0.22. The cause of the rise in the death-rate from epidemic disease is a rise in death-rates from scarlet fever, diphtheria, whooping cough, and encephalitis lethargica.

Smallpox.—There were five cases of smallpox notified during the year compared with 34 last year. There were three in East Barnet Valley Urban District, one in Watford Borough, and an imported case in the rural district of Berkhampstead. There were no deaths from smallpox, the cases being all of a mild type. Removal to hospital, the vaccination of contacts, and the disinfection of clothing, etc., arrested the spread of the disease. The present type of smallpox does not appear to be nearly so virulent or so infectious as the type formerly seen in this country although the occasional presence of a more acute and serious case sounds a note of warning as to the possibilities of even the mild form of the disease.

Chickenpox.—This disease is of some importance, as it may present features which may suggest smallpox. For this reason notification has been adopted in several districts for varying periods. Several cases of chickenpox have been seen during the year in which a diagnosis from smallpox had to be made.

Measles and Whooping-cough.—There was a fall in the death-rate from measles which was of compared with of last year. The number of deaths from this disease was 4 compared with 14 last year, 3 in the urban districts and I in the rural districts, the case being that of a woman over 75 years of age. There was a rise in the death-rate from whoopingcough, namely, 0.13 compared with 0.02 last year. The number of deaths from this disease was 37 as against 10 last year, 30 being in the urban districts and 7 in rural districts. Of the 37 deaths from this disease 33 were under the age of 5 years, 24 under the age of 2 years, and 12 under the age of 1 year. There were 16 males and 21 females. These figures indicate the necessity for immediate treatment in the case of young children suffering from this disease. Rest in bed, warmth, and efficient nursing are essential.

Scarlet Fever.—There were 1,239 notifications of scarlet fever and eleven deaths from this disease during the year, compared with 853 notifications and seven deaths last year, the death-rate being 0.04, which is higher than last year. There were six deaths from scarlet fever in the urban districts and five in the rural districts. Of the 11 deaths 7 were males and 4 were females. Four of the deaths were children under the age of 5, and 3 were in persons over the age of 25. The fact that there were only 7 deaths out of 1,239 cases of scarlet

fever notified indicates the extreme mildness of this disease at the present time. Indeed, it is the mildness of the type which renders the problem of control and prevention so difficult, as many children develop the disease without any complaint of illness and it is not until desquamation has set in that the disease is recognized.

Influenza.—This disease was epidemic during the early months of 1929. The number of deaths from influenza during 1929 was 274 compared with 51 for 1928, of which 197 were in urban districts and 77 in rural districts. In urban districts the largest number of deaths was 45 (Watford), 12 (St. Albans and Rickmansworth), and in the rural districts the largest number of deaths was 15 (Hitchin) and 11 (Watford and St. Albans). Of the total number of deaths from influenza 127 were males and 147 were females. Whereas in the urban districts the deaths amongst females exceeded the deaths amongst males the opposite was the case in rural districts. The age group with the largest number of deaths was the 45-65 group in urban districts. Of the total number of deaths 55 per cent. were over the age of 65. During the year 43 cases of influenzal pneumonia were notified compared with 8 last year, 34 in urban districts and 9 in rural districts.

Diphtheria.—There were 510 cases of diphtheria notified during the year, compared with 461 in 1928, 381 in the urban districts and 129 in the rural districts. The highest number of notifications was received from Watford (164), Hemel Hempstead (42), Hemel Hempstead Rural (34), and Barnet (32). There were 20 deaths from this disease compared with 17 last year, 12 in urban district, and 8 in rural districts. The death-rate was 0.07 compared with 0.04 last year. the case mortaility being 3.9 compared with 3.6 for 1928. The 20 deaths from diphtheria were equally divided between males and females. Six were under the age of 5, 12 between the ages of 5 and 15, and 2 were over the age of 25.

The disease, like scarlet fever, has been more prevalent throughout the county during the year. There were only 6 districts, 4 urban and 2 rural, in which no cases occurred. In 14 districts, 9 urban and 5 rural, more than 10 cases were notified during the year. The spread of diphtheria is almost certainly induced by carriers and the control of the disease is rendered difficult owing to the ease with which chronic carriers move about and escape detection. But there is in addition

TABLE II.—CAUSES OF DEATH AT DIFFERENT PERIODS O

Causes of Death.	Sex.				AGG	REGATE O	F URBAN	DISTRIC	CTS.
nernail vis		All Ages.	0-	1—	2	5	15—	25—	45-
All Causes	M. F.	1568	120	20	29	38	67	160	439
I. Enteric Fever	M.		74	19	23	43	49	159	384
2. Smallpox	F.	1		***			1		
2. Smalipox	F.		***	***					
3. Measles	М.	3			2	1			
4. Scarlet Fever	F.	17	***		***				
man during	F.	4 2			2	1		 I	1
W hooping-cough	M.	14	5	5	2	2			1
6. Diphtheria	F.	16	6	2	6	- 2			
en alla	F.	6			3 2	3 4			
7. Influenza	M.	84	2	2	2	1	2	10	31
8. EncephalitisLethargica	F.	113	1	2	2	3		12	32
Section 1	F.	4 4			I	2	1	1	
9. Meningococcal Menin-	M.	1			I				1
gitis 10. Tuberculosis of Respira-	F.	8 ₂			***	1			
tory System	F.	91				1	9	43	24
II. Other Tuberculous	M.	22	3	2	3	3 2	7	43 I	21
Diseases 12. Cancer, Malignant	F.	21	1	4	1	3	I	5	5
Disease	M. F.	161		***	***	1	1	6	72
13. Rheumatic Fever	М.	3			1	***	2	15	72 I
Distance and Allerta	F.	4				1		1	I
14. Diabetes	M. F.	16			***			2	3
15. Cerebral Hæmorrhage,	M.	81		4.4.4	***	***	1	2	5
etc.	F.	90							21
16. Heart Disease	M.	292		***			6	17	80
17. Arterio-sclerosis	F.	305		***		4	3	15	78
- effective	F.	55						1	11
18. Bronchitis	Μ.	71	2	2	2		***	2	II
19. Pneumonia (all forms)	F.	90	4	1				1	6
	F.	69	6	4 8	3	3 3	6	14	34
20. Other Respiratory	M.	18			5			3	17
Diseases LUcer of Stomach or	F.	13	I				1	2	5
Duodenum	F.	22 8	***	***	***		1	7	9
22. Diarrhœa, etc.	M.	17	13	1	I	***	1		2 I
23. Appendicitis and	F.	17	6	***	1	I	2	2	1
Typhlitis	M. F.	15			***	2	3	4	5
4. Cirrhosis of Liver	M.	10					1	3	6
Acute and Charle	F.	8						I	6
5. Acute and Chronic Nephritis	M. F.	47					4	2	15
6. Puerperal Sepsis	M.	45			I		4	4	11
CHARL CONST	F.	9					3	6	***
7. Other Accidents and Diseases of Pregnancy	M. F.		****					172	
and Parturition	F.	10			***		3	7	
8. Congenital Debility and	M.	69	68		1				
Malformation, Pre-	F.	39	35	1	1	I		I	
mature Birth	M.	20						6	
y. Suicide	F.	7					1	6	13
o. Other Deaths from	M.	79			2	3	17	19	20
Violence 1. Other Defined Diseases	F.	35	2			2	5	5	8
Other Denned Diseases	M. F.	275	16	4	4	17	8	17	69
2. Causes ill-defined or	M.	1	11	I	I	13	6	22	7 7
unknown	F.	2	1						I

LIFE IN THE ADMINISTRATIVE COUNTY OF HERTFORD, 1929.

					AGGREGA	TE OF R	URAL DI	STRICTS.			
65—	75-	All Ages.	0-	1-1	2—	5-	15—	25—	45-	65—	75-
337	358	704	42	8	9	16	32	66	168	178	185
346	539	663	33	9	6	11	12	57	133	147	255
		1		***			· · ·	***			
			***				***	***	***	***	***
				***	***	***	***	***	***	***	
	***	1		***	****				***		1
		3 2	1	I		2 I	***	***			***
		2	ī	1							
		5		4	1		***	***			
		4				3		***	1		
		4			1	2		- 1			***
19	15	43	1	1	I	***	3	3	7	14	13
28	33	34	1		I	111	***		2	12	17
		2					***		1		

		I	I					***			
5	***	28		***			4	14	10		
6	I	26			***	***	2	17	4	3	12.5
I	1	8	1			I	3	2	1		***
	1	4			1000	1	I	4	31	1	17
50 62	31	83						5	28	37 27	23
	42										
	1	3		***		2		***	1	11 111	
6	5	6	·			1	I	***	2	I	1
5	3	9	***	***					2	3	4
22	36	36	***	***		***	***	I	7	11	17
30	40	43		***	***	***			8	8	27
89	100	130	***		***	I	1	7 4	30 38	45 38	47 76
95 21	170	157							3	6	12
17	37	23		***					7	4	12
19	33	28	1	1	***			***	4	9	13
20	58	32	***	***			***	***	2	6	24
13	8	47	7	2	2		3	3	12	9	9
	12	31	6	2	2			2	5	6	8
3	3	8		***		100		I	3	1	3
2	2	1 12				***		2	4	4	2
4 3	1 2	4						I	I	1	ī
1		6	3	I				2			
I	3	4						I	1		2
	1	8				I	2	4	I		
I	1	1	***					***	***	***	I
1	***	7				***		***	4		3
I	12	10			1			2	2	2	3
14	12	21				2		4	4	5	6
					100						
		I			222		1		***		140
			***	***	-11					***	
	***	4			***		I	3		***	***
		10	19				1				
		19	18	I			1	1			
								1	2	1	
I		5 2					1		3		
12	6	45	1		2	2	8	13	13	4	2
6	7	20	3		1		I	2	4	5	4
56	84	132	7	I	2	5	7	7	29	31	43
49	112	120	3	2		3	2	2	24	26	48
		5		***	111	***	***	***	1	3	111

TABLE 12.—CAUSES OF DEATHS

1878	Causes of Death.		Baldock.	Rornet	Datinger	Berkhamp-	stead.	Bishop's	Stortford.	Buchev	· Camero	-	Cheshunt.	Chorley-	wood.	E. Barnet	Valley.	Harnen.	den.	Hemel	Hempstead
	Fatalia Fa	М.	F.	м.	F.	м.	F.	м.	F.	м.	F.	м.	F.	м.	F.	м.	F.	м.	F.	м.	F
1	Enteric Fever																				
2	Smallpox															400					
3	Measles	1																			
4	Scarlet-fever					I							I				1				
5	Whooping-cough					3	3	I	1			1	2							1	
6	Diphtheria					I															
7	Influenza	2	3	3	5	1	3	5	3	3	5	2	2	1	1	7	3	2	4	11	19
8	Encephalitis Lethargica							I	1				**								
9	Meningococcal Meningitis	1																			
10	Tuberculosis of Respirat'y Sys'n		I	4	4	2	2	4	4	5	1	7	3	1	1	5	3	4	1	5	7
11	Other Tuberculous Diseases	- 1			3	2		1	3	2	2		2			I		I	2	2	
12	Cancer, Malignant Disease	. 3	2	9	10	6	8	4	5	9	10	9	5		3	13	10	8	3	6	11
13	Rheumatic Fever												3								
14	Diabetes			I	I		2	2	1	2		1	1			1					
15	Cerebral Hæmorrhage, etc	. 2		4	2	1	2	I	2	4	2	2	1			2	3	1	1	7	3
16	Heart Disease	. 5	4	17	25	13	16	12	10	9	14	19	17		3	22	25	8	7	19	20
17	Arterio-sclerosis	. 3	1	2	2	I	2		3	1	3	6	5	1		7	2	3	5	8	
18	Bronchitis		1	2	5	1	5	3	1	1	3	1	5	I		3	3	I	1	2	
19	Pneumonia (all forms)			4	2	5	3	4	5	5	3	4	6			7	3	1	1	3	3
20	Other Respiratory Diseases			3	2	I		3	1				1			1					2
21	Ulcer of Stomach or Duodenun	n	100	I	1	I	1			1				I		1	1	1			
22	Diarrhœa, etc. (under 2 years)			1			I					3		1			1			1	1
23	Appendicitis and Typhlitis											I				1	1				
24	Cirrhosis of Liver			2	2		1	8				3		***	2000	1	2				
25	Acute and Chronic Nephritis	,	100	1				2	5		1	1	2	***	***	6	2	2	3	5	2
26	Puerperal Sepsis		1						I	-						0			3	3	
	Other Accidents and Diseases o	f					2							***		***	1				
28	Pregnancy and Parturition Congenital Debility and Malfor mation, Premature Birth			2	1			2	1	3	2	6		1	3	7	1	2	1	2	1
20	Suicida		1	-						-			1					1			
1 20	Other Deaths from Violence		- 0	133	2					I	1		1	(8)	***			***		2	
100000	011 1-6 1 0		9 5	-		3	1	1	3	1	I	6	4	***	***	2	1	2		4	1
2000	Causes ill-defined or unknown			18					13	10	8	20	18	2	2	13	9	8	9	12	14
32	causes in defined of unknown		1		1	***							I		**			***			
	All causes	26	15	81	80	49	59	57	64	57	56	94	84	9	13	101	71	44	38	90	104
9	Total		11	16	I	10	8	12	1	11	3	17	78		22	17	2	8	2	19	14

BETWEEN SEXES IN URBAN DISTRICTS, 1929.

Hertford	Hertford Borough.		Hitchin.		Hoddes- don.		Letch- worth.		Rickmans- worth.		Royston.	St. Albans City.		Sawbridge- worth.			Stevenage.		Tring.		Ware.	Watford.		Welwyn Garden City.		TOTAL.	Causes of
M.	F.	м.	F.	м.	F.	м.	F.	M.	F.	М.	F.	м.	F.	M.	F.	М.	F.	М.	F.	М.	F.	M.	F.	M.	F.	м. & ғ	
	I					10.1	***																***			I	I
																											2
			***	***		111						1										1				3	3
	***						***	2	***				***			***						I				6	4
1	***		***		***		I			***		****	***		***	2	3					5	5		1	30	5
	1							I			***		***						***		1	3	4	1		12	6
	5	6	6	2	2	1	3	4	12		I	6	6	I		2		3	3		3	21	24	1	***	197	7
	***		***				1			I		***	1	I	***		***				111	1	1		***	8	8
	***		***		***	***		***		***	900	1		***						I			1			2	9
2	7	6	5	I	I	2	4	2	7			8	10		***	I	3	1	2	***	2	20	22	1	1	173	10
2		2	I	***	***			1	3			3	2			2	***	1		I			3	1		43	II
6	15	7	11	1	6	5	12	6	6	I	6	17	16	2	2	2	3	8	3	6	4	31	36	2	5	353	12
		1		1			1	I	***			***	14.	***	***				***		***	***				7	13
			1			1		***			***		7					1		***		6	I	1	I	31	14
5	6	8	9	3	5	3	3	6	4	1		9	10	1	I	5	4	2	3	2	5	12	23		1	171	15
7	14	12	20	3	7	10	12	11	S	2	7	49	52	2	3	6	7	4	II	4	12	47	58	1	4	657	16
4	2	I	1	4	5	I	6	3	1			4	5		I		I	I		***		4	14	1	I	120	17
1	5	3	4	2	2	I	1	4	4			11	7	1	2	3	5	2	3	6	3	20	25	2	***	161	18
5	3	8	7	I	2	3	4	I	I	2	2	11	7	1	I			2	3	3		25	13	I		165	19
	2	1			1					2		2				I		1				3	4			31	20
		2		1				2				2	I				I	1	1	1		6	1	1	1	30	21
2	***			1		I						3	***				1		•••	1			1		1	20	22
	I	2	2			2	1			1	I	4	111			1				***		2		I	I	21	23
									1		***	I	***							3			2			18	24
2	3	1			I	2	7	2	1	I		8	3	I	1		2	2	1	2	4	7	4	1	3	92	25
	1		1												***								5		I	9	26
**	1	141	1	100		-				**		345	***						1				1		1	10	27
4	1	6	1		1	3	3		1		I	3	4	1			1			2		20	12	4		108	28
1	***	1	***	1						. 1		3	1			1						2	1	2	I	27	29
3		4	3	9	3	5	1	5	2	1	1	6	2		2	3	2	3	1	5	2	10	3			114	30
4	10	11	25	11	8	100	1.1		9	4	7	31	37	5	2	12	5	6	5	10		51	82	3	3	581	31
		***				I								1									32			3	32
9	77	82	98	41	44	49	71	46	60	17	26	182	171	16	15	41	38	38	37	47	43	298	346	24	26	3204	
14	146 1		80	85		120		10	6	43		353		31		79		75		90		644		50			

TABLE 13.—CAUSES OF DEATH BETWEEN SEXES

	Causes of Death.		Ashwell.	-	barnet.	Berkhamp-	stead.	Projection of	buntingiora.	U. M.	Hadnam.
		M	. F.	M.	F.	М.	F.	M.	F.	M.	F.
1	Enteric Fever										
2	Smallpox										
3	Measles										
4	Scarlet Fever							1			
5	Whooping-cough						1				1
6	Diphtheria			***		1	1		***		
7	Influenza			3	2	3	3	1	5	3	1
8	Encephalitis Lethargica										
	Meningococcal Meningitis	1									
	Tuberculosis of Respiratory System		ı	4		3		2	5	1	
	Other Tuberculous Diseases			I		I					
	Cancer, Malignant Disease		5	5	3	6	6	5	5	6	
13	Rheumatic Fever						2				
- 10	Diabetes	. 3				2	1		I	I	3
	Cerebral Hæmorrhage, etc		1 1	I	3		2	3	2	3	
	Heart Disease		7 4	7	9	9	11	6	6	4	
17	Arterio-sclerosis				2		1	1		2	
	Bronchitis		1 2	2	2	3	2		1	3	1
19	Pneumonia (all forms)		5 1	4	2	2	3	1	4	3	13
	Other Respiratory Diseases									I	
21	Ulcer of Stomach or Duodenum		ı	1				1			
	Diarrhœa, etc. (under two years)								***	2	
23	Appendicitis and Typhlitis			I		2					
	Cirrhosis of Liver									I	
			II		2		1	I	5	I	1
	Puerperal Sepsis	180							***		
27	Other Accidents and Diseases of Preg nancy and Parturition										
28	Congenital Debility and Malformation Premature Birth	,	1	2			1	2	I	2	
29	Suicide										
30	Other Deaths from Violence		ı	2		2		I	I		1
31	Other defined Diseases		6 10	3	4	6	4	9	14	14	100
32	Cases ill-defined or unknown								1		
	All causes	. 3	0 19	36	29	40	39	33	51	47	3
	Total		49	-	55	7	9	8	4	8	31

IN RURAL DISTRICTS, 1929.

	Hatfield.	11	Hempstead.		Hertford.		Hitchin.		St. Albans.		Ware.		Watford.		Welwyn.	TOTAL.	Causes of Death.
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.&F.	
									1							1	1
							1										2
											1					1	3
				***			1			1		2	1			5	4
	1			I			1	I	1							7	5
		I	1						I	I		1	1			8	6
3	1	3	2	3	1	7	8	6	5	4		6	5	I	1	77	7
	1		1									1				3	8
															1	1	9
I	2	2	3	1	I	2	2	3	6	4	5	4	1		I	54	10
		I	***			1	I	2			I	2	2			12	11
6	II	3	1	2	3	14	12	12	12	9	7	15	17	2	2	173	12
	I															3	13
I	I	I	1			I	2				2					15	14
1	1	6	4	3	3	8	10	I	5	6	3	3	4		2	79	15
14	17	II	15	9	11	12	24	19	15	10	15	17	18	5	5	287	16
	2	2	5	1		2	2	5	3	6	5	2		***		44	17
3	2		I	1	I	3	8	5	4	4	5	3	2			60	18
***	3	5	1	3	2	3	3	4	2	5	4	8	4	4	I	78	19
	***			1		I		I	1	1		3				9	20
2	I					3	1			2		1	2	I		16	21
1					***		***			I				***		4	22
2		***	***	***	***	***		1	I			2	***	***	***	9	23
		1				3		2	***					***		7	24
I	2	I	3		2	3		1	I			I	3		•••	31	25
•••							1									1	26
			2				1		- 1							4	27
2	3	2	5			3	1	1	4	3	5	1	1			40	28
		1				1		***	1			1	1	2		7	29
4	3	3	2	5	I	9	3	3	2	8	3	5	3	2		65	30
9	6	4	5	11	9	18	17	8	10	27	17	17	18	2	2	258	31
I				2		1	2			1						8	32
51	58	47	52	43	34	95	100	75	76	93	73	95	83	19	15	1367	eile
10	9	9	9	7	7	19	95	1	51	1	66	17	8	3-	4		-

some climatic, atmospheric or other condition which appears to exercise an influence in the production of the disease by impairing the resistance of the throat to the diphtheria bacillus. The seasonal incidence of the disease points to this.

Enteric Fever and Paratyphoid Fever.—The total number of cases of enteric fever including typhoid and paratyphoid fever notified during the year was 36, of which number 7 were paratyphoid and 29 were enteric or typhoid fever. Of the total number notified 26 were from urban districts and 10 from rural districts. The largest number of cases of enteric fever notified from urban districts was 5 (Watford) and 4 (Harpenden), and from rural districts 6 (St. Albans).

The death-rate from enteric and continued fever during the year was 0.007 compared with 0.01 in 1928. The notifications and death-rate indicate that the disease was less prevalent and less severe in type, there were indeed only 2 deaths from this disease during the year, both females between the age of 15

and 25.

Puerperal Fever.—There were 19 cases of puerperal fever notified during the year compared with 17 last year, 16 in urban districts and 3 in rural districts. Forty-six cases of puerperal pyrexia were notified, compared with 29 last year, 31 in urban districts and 15 in rural districts. The largest number of cases of puerperal fever notified in urban districts was 6 (Watford) and 3 (Barnet), and the largest number in rural districts was 2 (Hatfield). The largest number of cases of puerperal pyrexia notified in urban districts was 7 (Watford) and 5 (Hertford), and in rural districts 4 (Hitchin) and 2 (Ware).

The number of deaths from puerperal sepsis during the year was 10 compared with 8 in 1928. Of these 9 were in urban districts and one in rural districts. The highest number of deaths in any district was 5 (Watford). Further reference to puerperal fever will be found in the section dealing with maternal

mortality.

Erysipelas.—There were 119 cases of erysipelas notified during the year, 82 in urban districts and 37 in rural districts, compared with 116 for the previous year, but no return has been received regarding the actual number of deaths in the County from this cause. The largest number notified in the urban districts was 18 (St. Albans), 13 (Barnet), and in the rural districts 10 (Watford) and 6 (Hemel Hempstead), and 12 (Watford).

Meningococcal Meningitis and Encephalitis Lethargica.—
There were two notifications of meningococcal meningitis, one in the urban and one in the rural districts. There were 3 deaths from this disease compared with 4 last year, one in Ware, one in Watford, and one in the rural district of Welwyn; they were all young persons, 2 under the age of 5. There were 8 notifications of encephalitis lethargica, the same number as last year, 6 in urban districts and 2 in the rural districts. There were 11 deaths from encephalitis during the year compared with eight last year, 8 in urban districts and 3 in rural districts. Two deaths occurred in Bishop's Stortford and 2 in Watford. As regards sex incidence, 5 were males and 6 were females. All the fatal cases were under 65 years of age, and only two were over the age of 45. The death rate from this disease, 0.04, compared with 0.01 for 1928.

Polioencephalitis and Poliomyelitis.—There were 5 cases of poliomyelitis notified during the year compared with one last year, 4 in urban districts and one in a rural district. There were no deaths reported from this disease. No case of polioencephalitis was notified during the year.

Pneumonia and Broncho-pneumonia.—There were 344 cases of pneumonia notified during the year, including 43 cases of influenzal pneumonia, compared with 215 last year, the number of deaths from this cause being 243, compared with 193 last year. There were 165 deaths in urban districts and 78 in rural districts. In the urban districts the largest number of deaths occurred in Watford (38), St. Albans (18), and Hitchin In the rural districts the largest number of deaths occurred in the Watford Rural District (12) and the Ware Rural District (9). Of the total number of deaths 143 were males and 100 were females, 60 were under the age of 2 and 141 were over the age of 45, and of these 73 were over the age of 65. From these figures it will be seen that the disease was most fatal at the extremes of life. The increase in the number of deaths from pneumonia was chiefly caused by the epidemic of influenza associated with the extremely cold weather in the early months of the year.

Bronchitis.—The number of deaths from bronchitis has also been higher during the year, being 221 compared with 176 last year. The number of deaths in urban districts was 161 and in rural districts 60, compared with 114 and 62 last year. Of the total number of deaths from bronchitis 99 were

males and 122 were females. There were 7 deaths from bronchitis under the age of 12 months, compared with 13 last year, and 82·3 per cent. of the deaths from this disease were in persons above the age of 65. It will be observed that not-withstanding an increase in the number of deaths from bronchitis the number of deaths in children under the age of 12 months is less by almost 50 per cent.

Heart Disease.—There is again a considerable increase in the number of deaths from heart disease, which is 944, compared with 756 for 1928. Of the total number 657 were in urban and 287 in rural districts, and 422 were males and 522 were females. As regards the age incidence the figures indicate that the majority of deaths from heart disease occur in the later years of life. Of the total number of deaths from cardiac disease 660 or 70 per cent. were above the age of 65, and 353 or 37 per cent. were over the age of 75. Under the age of 45 there were 58 deaths from heart disease, 45 in urban districts and 13 in rural districts, and of these 31 were males and 27 females. The preponderance of deaths under this age in urban districts is somewhat striking. A further fact of some interest is that in deaths in the age group 45-65 males predominate in the urban districts while females predominate in the rural districts. The increase in the number of deaths from cardiac disease is no doubt to some extent dependent upon the epidemic of influenza in the first quarter of the year.

Other Diseases.—The number of deaths from acute and chronic Bright's disease was 123, compared with 110 last year. The number of deaths from cerebral haemorrhage was 250 compared with 248, an increase of 2. The number of deaths from cirrhosis of the liver was 25 as compared with 17 last year. The deaths from appendicitis were 30 as compared with 25 last year.

Other Notifiable Diseases.—During the year 6 cases of dysentery were notified compared with 22 last year. The number of cases of ophthalmia neonatorum notified during the year was 5 compared with 14 last year, 4 in urban districts and 1 in a rural district. This is a low figure and is no doubt due to a large extent to the precautionary measures adopted by the midwives with a view to the prevention of infection at birth. Two cases of malaria were notified during the year.

PUBLIC VACCINATION.

The functions relating to vaccination have been taken over by the County Council as from 1st April, 1930, and will in future be discharged by the County Council as functions relating to Public Health.

It has not been recommended that any new development in connection with public vaccination should be considered at the present time and that only such action should be taken as may be necessary to facilitate the carrying over of the functions from one authority to another. The chief points to which reference is now made are contracts, re-arrangement of districts, scale of fees, and the duties of Public Vaccinators and Vaccination Officers.

The Vaccination Order, 1930, has as its aim the consolidation of the provisions of the Vaccination Orders, 1898 to 1929, which it replaces. It states that the rescinding of these Orders shall not affect the validity of any contracts for Public Vaccinators made with them and that the Public Vaccinator shall continue to perform the same duties and receive the same remuneration.

It is necessary to enter into a valid contract with a general practitioner before payment can be made at the cost of the rates in respect of public vaccination. The contracts which have or will be made may be described under the following headings:—

(a) Contracts with Public Vaccinators in a Union wholly within the county; these will be transferred automatically from the Guardians to the County Council.

(b) Contracts with Public Vaccinators of districts in a Union comprised within more than one county. As existing contracts will be terminated by the Guardians, new contracts will have to be made relating to such portions of the districts of the Public Vaccinators as are comprised within the County.

(c) Contracts with Public Vaccinators of Poor Law Institutions; these will come under either (a) or (b) according to the

position of the Union.

The first step which is being taken is to enter into fresh contracts with those Public Vaccinators who receive notice of the

termination of existing contracts on 31st March, 1930.

It is not recommended that there should be any rearrangement of vaccination districts at the present time except where it becomes necessary in those districts which overlap adjoining counties. In the past the vaccination district has coincided with one or more registration districts or sub-districts and the advantages of such an arrangement are obvious. When the time comes, however, to review the question of districts it would

be well to consider the possibility of a closer relationship between vaccination districts and Urban and Rural Sanitary areas. In this connection it is desirable to emphasize the importance of a closer relationship between the Medical Officer of Health and the Public Vaccinator so as to secure intimate co-operation in the event of a threatened outbreak of smallpox. The only districts in which any rearrangement is called for at the present time is in the Barnet and East Barnet areas which are slightly increased in size.

The remuneration of Public Vaccinators is based in all districts upon a scale of fees for successful vaccination and re-vaccination, but the scale varies within considerable limits in different districts. In view of the fact, however, that as from 1st April, 1930, the payment of all vaccination fees will be made by the County Council, it is desirable that a uniform scale of fees should be adopted which will ultimately be applicable to the whole county. Such a scale has been approved by the County Council.

As from 1st April, 1930, all new appointments of Vaccination Officers will be made by the County Council. At the present time there are no Vaccination Officers who are whole-time officials as regards their duties in relation to vaccination; they also carry out duties relating to registration and poor law services.

The duties of Vaccination Officers are laid down in the Vaccination Order, 1930, and the instructions to these officers are given in the Fourth Schedule of the Order. Every Vaccination Officer may be appointed on such terms and conditions of service as the County Council may think proper. The officers are paid according to a scale of fees, but in one district the remuneration consists of an annual salary. The scale of fees varies in different districts, and it is desirable that for future appointments a uniform scale should be appointed. Such a scale has been approved by the County Council.

The following are the steps which have been recommended with a view to facilitating the transference of the functions relating to vaccination from the Guardians to the County Council.

(I) That fresh contracts should be entered into as from the 1st April, 1930, with the Public Vaccinators of districts and the Medical Officers of Institutions regarded as districts who receive notice from the Guardians terminating the existing contracts as from 30th March, 1930.

(2) That such vaccination contracts shall be in the form set out in the first and second schedules of the Vaccination Order,

1930.

- (3) That the fees to Public Vaccinators with whom fresh contracts are made at any time shall be in accordance with the scale submitted in this report, subject to such scale being approved by the Minister of Health.
- (4) That the fees paid to Public Vaccinators whose existing contracts are taken over by the County Council on 1st April, 1930, shall be in accordance with the scale of remuneration paid by the Guardians on 31st March, 1930.
- (5) That a copy of Instructions to Vaccinators under contract as contained in the Third Schedule of the Vaccination Order, 1930, be sent to each Public Vaccinator on or before 1st April, 1930.
- (6) That accounts for the payment of fees shall be forwarded by the Public Vaccinators to the Clerk of the County Council on the 31st March, 30th June, 30th September, and 31st December in each year.
- (7) That the fees paid to Vaccination Officers shall be in accordance with the scale of remuneration paid by the Guardians on the 31st March, 1930.
- (8) That in the case of a fresh appointment of a Vaccination Officer the fees paid shall be in accordance with the scale submitted in this report.

ISOLATION HOSPITALS.

At the present time a survey is being made under Section 63 of the Local Government Act, 1929, of the general isolation hospitals in the County. The aim of this survey is to secure the provision in every district in the County of facilities for the proper isolation and treatment of persons suffering from infectious disease. When the survey has been completed a scheme has to be prepared in consultation with Councils of districts concerned and submitted to the Minister of Health for approval. This scheme may provide (a) for arrangements for the pooling of existing accommodation in isolation hospitals; (b) for the provision of new accommodation for the treatment of infectious disease, and (c) for the co-operation between various authorities for the reception of persons into hospitals.

As the question of the provision of hospital accommodation for cases of infectious disease is at present under consideration it is not proposed to discuss the question of isolation hospitals further in the present report.

SMALLPOX ISOLATION HOSPITAL.

The presence of smallpox in the County in 1928 and to a less extent in 1929 has again raised the question of hospital accommodation for this disease, and has emphasized the fact that the present accommodation in some districts is inadequate and that the existing method of having a number of small hospitals in several districts of the County is costly and inefficient. Thus the position at one time of the outbreak in 1928 was as follows: 20 cases in the County in 4 hospitals, 13 in Cheshunt Hospital, 3 in Langley Hospital, one in St. Albans Hospital, and 3 in the Watford Hospital, instead of all being in one or two institutions.

· At the present time there are six smallpox hospitals in the County providing accommodation for 54 patients, as follows:—Bishop's Stortford: 8 beds—serves Bishop's Stortford Urban, Hadham Rural, and Sawbridgeworth Urban. Cheshunt: 12 beds—serves Cheshunt and the three Barnet districts. Hertford and Ware: six beds-serves Hertford Borough, Ware Urban, Hoddesdon Urban, Ware Rural, and Hertford Rural. Hitchin: eight beds-serves Hitchin Urban, Hitchin Rural, Hatfield Rural, Letchworth Urban, Baldock Urban, and Stevenage Urban. St. Albans: 12 beds-serves St. Albans City, St. Albans Rural, and Harpenden Urban. Watford: eight beds—serves Watford Borough, Watford Rural, Rickmansworth Urban, Bushey Urban, and Chorleywood Urban. The only large district in the County in which no hospital accommodation at present exists is the West Herts No. I Combined Sanitary district, which includes the Borough of Hemel Hempstead, the Rural District of Hemel Hempstead, the Urban and Rural Districts of Berkhampstead, and the Urban District of Tring.

During the outbreak of smallpox which occurred in the early part of 1928 an effort was made to pool the hospital accommodation in the County so as to provide that one hospital was full before another one was opened, but the effort was only partly successful as the authorities of two of the hospitals in the County declined to fall in with the proposed pooling arrangements. The partial pooling arrangements which were made, however, proved successful, as they made unnecessary the opening of one of the hospitals for two cases for which accommodation was available in an institution already in use.

NURSING HOMES.

The Nursing Homes Registration Act, 1927, provides for the registration and inspection of nursing homes and it is an offence under the Act for any person to carry on a nursing home without being duly registered. Application for registration has to be made to the local supervising authority and has to be accompanied by a fee of five shillings. The authority may refuse to register an applicant if they are satisfied (a) that he or any person employed by him is not a fit person to carry on or be employed at a nursing home; (b) that the premises are not fit to be used for a nursing home owing to situation, construction, accommodation, staffing or equipment, or that the premises are used in a way unsuitable or undesirable in the case of a nursing home; and (c) that the conditions laid down in the Act as to the qualifications of those in charge of nursing homes and maternity homes are not being complied with.

A nursing home is defined under the Act as any premises used or intended to be used for the reception of and the providing of nursing for persons suffering from any sickness, injury or infirmity, and includes a maternity home; it does not include (a) any hospital or premises maintained or controlled by a Government department or local authority or any other body of persons constituted by Special Act of Parliament or incorporated by Royal Charter; (b) any institution for lunatics within the meaning of the Lunacy Act, 1890; and (c) any certified institution, certified house or approved home within the meaning of the Mental Deficiency

Act, 1913.

The County Council has made bye-laws under the Act

with respect to nursing homes in the County.

These bye-laws refer to the keeping of a register of patients, the notification in writing to the supervising authority of deaths occurring in the home, and the conclusion of any inquest held in respect of any death in the home. There are at present 33 nursing homes which have been registered in the County. Several of these take maternity cases only, a few take general cases only, and the remainder take general and maternity cases. In nursing homes which take both general and maternity cases special care is urged as to steps to be taken to minimise the risk of infection. The standard of the nursing homes vary considerably. Some are excellent while others cannot be regarded as very satisfactory, but one result of the inspection is undoubtedly to encourage a higher standard of efficiency. The nursing home not infrequently constitutes the whole source of income to the owner. There is

not usually much margin for expenditure for improvements,

more especially as regards the smaller homes.

Two new homes were added to the register during the year; all the homes have been inspected during the year and some improvements in one or two of the homes have been carried out. No action has been taken under the Act.

Provision of Antitoxin.

By the Diphtheria Antitoxin Order, 1910, issued by the Local Government Board in August, 1910, local authorities are empowered to provide, directly or by contract, a temporary supply of antitoxin and of medical assistance for its use, subject to the advice of the Medical Officer of Health. Suitable arrangements for the supply of antitoxin are made in about half of thirty-four districts. Some difficulty no doubt arises in the rural districts, but this could be overcome if the uniform method were adopted of medical practitioners supplying the antitoxin in necessitous cases and having the cost refunded by the Councils. Every facility should be offered for the immediate use of antitoxin even in suspected cases.

BACTERIOLOGICAL EXAMINATIONS.

Arrangements were made during the year with the laboratory at the Hill End Mental Hospital for the bacteriological examination of sputum and other specimens. These arrangements have up to the present worked well. During the year 1608 specimens of sputum were examined. In most urban and rural districts arrangements are made with laboratories in London for bacteriological examinations more especially for the examination of throat swabs for the diphtheria bacillus.

DISINFECTION.

Disinfection aims at destroying the organisms which give rise to disease, and this can best be secured by means of steam. Steam disinfection is carried out either by means of a portable disinfector or by utilizing the large disinfectors at the Isolation Hospitals. In many districts the necessity for a suitable disinfecting apparatus is urgently felt, especially to secure the disinfecting of bedclothes in the case of infectious diseases. With regard to house disinfection, cleanliness, fresh air, and sunlight are valuable natural means of securing the destruction of micro-organisms.

Steps are taken to keep in close touch with the local authorities in connection with the disinfection of premises occupied by open cases of tuberculosis. After the admission of such cases to hospital or sanatorium, or immediately it is known that death of the patient has occurred in his home, a communication is sent to the district Medical Officer of Health requesting

that disinfection should be carried out.

In some of the isolation hospitals the facilities for disinfection are at present inadequate. The provision of efficient means for the disinfection of the clothing of infected persons is an essential step to take in preventive action against infectious diseases. The disinfection of schools is also considered an essential step, provided it is followed by thorough cleaning. In such institutions the disinfection of class-rooms, offices, etc., is best carried out by spraying with an antiseptic solution.

More frequent cleansing and disinfection of schools, and expecially of infected homes, might be carried out with advantage.

MATERNITY AND CHILD WELFARE.

The work carried out under "The Maternity and Child Welfare Act, 1918", and "The Notification of Births Acts, 1907 and 1915", has continued during the year on practically the same lines as last year. There has been a slight rise in the infant mortality, which was 47 compared with 45 last year. During the year the number of maternal deaths from puerperal sepsis and accidents and diseases of pregnancy and parturition was 24 compared with 16 last year. The maternal mortality in the County during the year was 4.2 compared with 2.8 for 1928, 2.2. for 1927, and 4.9 for 1926.

Further reference to the subject of maternal deaths will be

found in the section dealing with maternal mortality.

The scheme of Maternity and Child Welfare in the County includes both official and voluntary effort, and is summarized as follows:—(I) Thirteen County Council Maternity and Child Welfare Centres, at which consultations are held, infants are weighed, and instruction and advice are given to nursing and expectant mothers; in addition, also, a considerable amount of voluntary work is undertaken in various directions by ladies who are interested in the work of the Centres; (2) eight special ante-natal clinics at Barnet, Berkhampstead, East Barnet, Hertford, Hitchin, Letchworth, Tring and Waltham Cross; ante-natal clinics are also held at the remaining five Centres: (3) Twenty-five Voluntary Maternity and Child Welfare Centres; (4) Nine Weighing Centres; (5) Provision of maternity beds in four districts in the County, namely, Hertford, Hitchin, Hemel Hempstead, and Watford; (6) Convalescent Home at St. Leonards; (7) attendance at orthopædic and massage clinics and dental clinics; (8) the provision of hospital treatment in exceptional cases of infantile diarrhœa and ophthalmia neonatorum; (9) health visiting; (10) the granting of milk free or at half cost to necessitous mothers and young children on a medical certificate; and (II) arrangements for the hospital treatment of cases of notifiable

puerperal fever in approved institutions. Additional arrangements have also been made under the Public Health (Notification of Puerperal Fever and Puerperal Pyrexia) Regulations for consultation with an obstetric specialist, for skilled nursing and for necessary bacteriological examinations in cases of puerperal pyrexia.

TABLE GIVING PARTICULARS OF COUNTY COUNCIL CENTRES AND ANTE-NATAL CLINICS.

District.	Description.	Where held.	Days and Times.	Name of Doctor who attends.
BARNET.	Centre.	The Church House.	Monday, 2.30 p.m. Weekly.	Dr. E. Earengey
	Ante-Natal Clinic.	55 Wood Street.	Monday, 10.30 a.m. Fortnightly.	Do.
BERKHAMPSTEAD,	Centre.	Annandale House.	2nd and 4th Friday, 2.30 p.m.	Dr. E. C. Sparrow.
	Ante-Natal Clinic.	Do.	2nd and 4th Thurs- days, 10.30 a.m.	Dr. E. Earengey.
BISHOP'S STORTFORD.	Centre and Ante-Natal Clinic.	Congregational Hall.	1st and 3rd Fridays, 2 p.m.	Dr. H. Swatman.
EAST BARNET.	Centre.	12 St. Wilfred's Road.	1st and 3rd Mondays, 2.30 p.m.	Dr. W. Harvey.
	Ante-Natal Clinic.	Do.	Monday, 10.30 a.m. Fortnightly.	Dr. E. Earengey.
HATFIELD.	Centre and Ante-Natal Clinic.	Northcotts.	2nd and 4th Fridays, 2 p.m.	Dr. H. Swatman.
HEMEL HEMPSTEAD.	Centre and Ante-Natal Clinic.	Marlowes.	Thursday, 2.30 p.m. Weekly.	Dr. E. Earengey.
HERTFORD.	Centre.	St. Nicholas Hall.	Wednesday, 2.30 p.m. Weekly.	Dr. E. Earengey.
	Ante-Natal Clinic.	Do.	Wednesday, 10.30 a.m. Weekly.	Dr. E. Earengey.
HITCHIN.	Centre.	The Maples.	Monday, 2.30 p.m. Weekly.	Dr. H. Swatman.
Egrolamati	Ante-Natal Clinic	Do.	Monday, 10.30 a.m. Weekly.	Dr. H. Swatman.
LETCHWORTH.	Centre.	The Howard Hall.	Thursday, 2.30 p.m. Weekly.	Dr. H. Swatman.
annal ste V	Ante-Natal Clinic,	Do.	1st and 3rd Thurs- days, 10.30 a.m.	Dr. H. Swatman.
ST. ALBANS.	Centre and Ante-Natal Clinic.	Wellington Court.	Wednesday, 2 p.m. Weekly.	Dr. H. Swatman,
STEVENAGE.	Centre and Ante-Natal Clinic.	High Street.	Tuesday, 2.30 p.m. Weekly.	Dr. H. Swatman.
TRING.	Centre.	Akeman Street.	1st and 3rd Fridays, 2 p.m.	Dr. E. C. Sparrow.
-dr.(6)	Ante-Natal Clinic,	Do.	1st and 3rd Thurs- days, 10.30 a.m.	Dr. E. Earengey.
Waltham Cross.	Centre.	Greenfield House.	Friday, 2.30 p.m. Weekly.	Dr. E. Earengey.
Emphasema	Ante-Natal Clinic.	Do.	Friday, 10.30 a.m. Fortnightly.	Dr. E. Earengey.

TABLE GIVING PARTICULARS OF ATTENDANCES AT VOLUNTARY MATERNITY AND CHILD WELFARE CENTRES DURING 1929.

Centres.	No. of times Centre open,	No. of Mothers attending.	No. of Children attending.	Total Children's Attendances.	Average Attendance of Children,	No. of Deaths of Children.	No. of Children who had Orthopædic treatment.	No. of Expectant Mothers attending.	No. of Infant Consultations.	No. of Mothers' Consultations.	No. of Ante-Natal Consultations.	No. of Talks given at Centre.	No. of Doctors' Attendances.
Aldbury	16	21	26		12.4		1	2	70	3	6	2	7
Apsley End	24	80	93	673					269			22	23
Baldock	48	104	111	1297	27	1	1	5	489	8	3		48
Boreham Wood (opened 23.10.29	5	34	97		29.2				22				4
Chipperfield	26	91	144	1324			2	10	293	41	14	12	19
Chorleywood	23	38	58	441	19.2				441			20	23
Harpenden	32	169	194		49.2	4	10	68	427	8	140		30
Hoddesdon	50	119	150		20.3	1	30	32	374		52	27	27
King's Langley	12	50	56	217				11	167	3		1	11
Kimpton	21	40	44	232				15	22	2	30		12
Knebworth	44	54	67		12.1			2	57	12	2	3	10
Langleybury (April-Dec.)	17	12	18	189	11.1			1	189			4	9
London Colney	20	69	88	557	27.9	3		18	26	-:			20
North Mymms	7	42	45		33.3	1			10 54	1		7	7
Potten End	12	35	43	284	23.7	2			54	54			7
(Little Gaddesdon .	11 24	12 65	18 106	109	10 17·9	2	**	100	5	100	**		12
Redbourn	37	63	70	481	13	1	2		98			13	9
Rickmansworth	22	113	117	559	25.4		1	5	123	2 7	5	2	12
Royston	24	40	64	467	19.5		-		260	100	1	1100	12
(Welwyn	46	68	79		31.5			12	503	56	72		36
Codicote	46	78	80	460		i	i	4	110	6	4		11
Welwyn Garden City . (Peartree)	52	202	227	2080			5	28	857	6	12	12	30
Welwyn Garden City (Handside)	55	201	256	1774	32.3		12	16	753	10	12	12	30
Wigginton	12	14	26	214	17.8			4	10	2	2		12
Totals	686	1814	2277	16935	24 · 7	16	65	222	5629	221	354	137	421

Table giving Particulars of Attendances at Voluntary Weighing Centres during 1929.

Centres.	No of Times Centre Open.	No. of Mothers Attending.	No. of Children Attending.	Total Children's Attendances.	Average Attendance of Children.	No. of Deaths of Children.	No. of Children who had Orthopædic Treatment.	No. of Talks given at Centre.
Braughing	11	19	32	173	15.7			3
Bushey	47	106	149	1,579	33.6	2		
Croxley Green	12	57	89	298	24.8			12
Great and Little Amwell	11	12	17	106	9.6			
High Cross	13	43	75	375	28.8			2 2
Kings Walden	31	23	31	613	19.8			2
Standon	10	23	36	106	10.6			
Weston	12	35	50	356	29.7			
Ware	22	107	165	787	35 · 8			
Totals	169	425	644	4393	26	2		19

INFANT LIFE PROTECTION.

Under Section 2 (a) of "The Local Government Act, 1929", it is provided that, as from the 1st April, 1930, the duties under Part I of "The Children Act, 1908", formerly discharged by Poor Law Authorities shall be discharged by the Councils of Counties and County Boroughs as duties under "The Maternity and Child Welfare Act, 1918", except that where the Council of a District have established a Maternity and Child Welfare Committee the said duties shall in that district be discharged by the Council of the district. The interpretation of this sub-section of the Act is that the functions under Part I of "The Children Act, 1908," are to be discharged after the 1st April, 1930, by the County Council for the whole County, except the Borough of Watford, in which Borough the functions shall be discharged by the Corporation of Watford, which is a separate Authority under "The Maternity and Child Welfare Act, 1918".

The main object of Part I of the Act is to secure that any child under seven years of age maintained "for reward" shall be notified to the Local Authority with a view to observation and

supervision.

The chief duties which this Act imposes may be summarized as follows:—

- (1) Written notification to Local Authority within 48 hours of particulars regarding one or more infants under seven years received and maintained "for reward" by any person when such infant is received for more than 48 hours.
- (2) Written notice of any change of address or of death or removal, with necessary particulars, must be given to Local Authority within 48 hours.
- (3) The chief duties of the Local Authority under the Act include the ascertainment of any persons receiving children, regarding whom notice should be given and the appointment of Infant Protection Visitors to visit such children and the premises in which they are kept, to satisfy themselves that the children are properly nursed and maintained, and to give any advice or directions which may be regarded as necessary.

With regard to the above procedure, it is not anticipated that any difficulty will be experienced in carrying out the functions under Part I of "The Children's Act, 1908", as part of the Maternity and Child Welfare Scheme of the County Council. Most of the children under five years are already visited

by the Health Visitors as part of their duties under the scheme, while in several districts the Health Visitors have been acting as Infant Protection Visitors by arrangements between the Boards of Guardians and the District Nursing Associations. The special duties of the Infant Protection Visitors in connection with Part I of the Children Act will include visitation, supervision, the giving of necessary advice, the making of reports, and the keeping of registers. It may be necessary in some districts to give the Health Visitors some appropriate instruction in their new duties under the Act. The number of children in the County under seven years of age for whom notifications have been made under Part I of "The Children Act, 1908", is, so far as is known at the present time, 261, although obviously this must be a variable figure.

The procedure which has been suggested for the administration of Part I of "The Children Act, 1908", to come into force on the 1st April, 1930, is set forth in the following

recommendations :-

(1) That notices under Part I of "The Children Act, 1908", for the County (excluding the Borough of Watford) be sent on and after the 1st April, 1930, to the County Medical Officer of Health.

- (2) That before the 1st April, 1930, and quarterly thereafter, a notice be inserted in the County newspapers, giving the requirements of Part I of the Act, so that all persons liable may be made aware of the obligations under the Act.
- (3) That the whole time Health Visitors and the Health Visitors employed by the District Nursing Associations be appointed to act as Infant Protection Visitors under the supervision of the County Health Visitor, who will act as Chief Infant Protection Visitor.
- (4) That for the services of Health Visitors employed by the District Nursing Associations, payment be made at the rate of 2s. 6d. in respect of the initial report on a child and its home conditions, and 1s. for each subsequent visit, subject to the approval of the subsequent visits by the County Medical Officer of Health.
- (5) That the County Medical Officer be authorized to prepare a short notice of the duties of the Infant Protection Visitors for the use of Health Visitors, and to procure such report cards and registers as may be required.
- (6) That on or soon after the 1st April, 1930, the names and addresses of all persons in their respective areas from whom

notice has been received under Part I of the Act be transferred to the County Council, together with any special reports relating to such persons.

(7) That where a special officer has been employed by the Guardians as a Children's Inspector under the above Act, the services of such official be retained by the County Council, subject to such special officer being approved by the County Medical Officer of Health.

With regard to the written notification to be given by the person who undertakes the nursing and maintenance of the infants in question, Section I of "The Children Act, 1908", provides that a person who undertakes for reward the nursing and maintenance of one or more infants under the age of 7 years apart from their parents, or having no parents, must, when any such infant is received for more than 48 hours, give to the Local Authority, within 48 hours from its reception, written notice stating the name, sex and date and place of birth of the infant, the name of the person receiving the infant, and the dwelling within which the infant is being kept, and the name and address of the person from whom the infant was received.

It would be more satisfactory, however, if the dwelling within which the infant is to be kept could be inspected before the actual admission takes place, and not after the expiration of the 48 hours mentioned above. If this suggestion, however, is to be carried out it will be necessary for the above Act to be amended.

Voluntary Welfare Centres and Weighing Centres.—Special reference requires to be made to the excellent work in connection with the care of mothers and children which is being carried out at the Voluntary Maternity and Child Welfare Centres and the Weighing Centres. These Centres are linked up to your Council scheme, and they are the means of supplementing the work of the County Council Centres. As they are established in the smaller urban and some rural districts, they meet the requirements of a population which would not otherwise have been provided for. The Weighing Centres, at which the Health Visitor attends and where she weighs the infants and gives health talks and advice to the mothers, have been found to serve a very useful purpose, especially in rural districts. They help to centralize the work of the Health Visitor, and by this means lessen the amount of time which would be occupied in getting about in order to carry out the work of health visiting. These centres are linked up to the County scheme through the County Health Visitor, who supervises the work of the health visitors, midwives, and nurses in the County, and who keeps a record of the work carried out at these various voluntary centres during the year. Particulars of this work is given in tables appearing below.

Maternity Beds.—Accommodation for maternity cases is provided at the Guardians' Institution, Watford (10 beds), West Herts Hospital (8 beds), the Maples, Hitchin (4 beds),

and the County Hospital, Hertford (4 beds).

As regards the Maternity Home, Watford, arrangements have now been completed by which the County Council takes over the Nursing Home, and they will proceed at an early date to erect an up-to-date Maternity Home which will provide accommodation for 22 maternity cases. Further maternity accommodation is also likely to be available in the future in the County Hospital, Hertford. In addition, the question of providing maternity beds in St. Albans and Bishop's Stortford by arrangement with the voluntary hospitals is at present under consideration.

In the following report Dr. Swatman gives particulars of the work carried out at the County Council Centres during the year. There are one or two points in this report to which special reference may be made as they indicate the value of the work which has been carried out during the year at the various centres in the County, in connection with Maternity

and Child Welfare.

The number of children on the registers at the end of the year was 3,515, which was 26 less than last year. The number of expectant mothers who attended the ante-natal clinics was in excess of any previous year, which indicates an increased amount of work in ante-natal care and control. The death-rate of children attending the centres was 6.2, compared with 4 per 1,000, the increase being attributed to an outbreak of whooping cough in the Spring. The number of expectant mothers on the register was 560. The work in connection with the antenatal care of expectant mothers has recently been increased, and a second lady doctor has been appointed by the County Council in connexion with Maternity and Child Welfare. The present arrangements in regard to child welfare centres and ante-natal clinics is shown in the table on page 48.

TABLE GIVING PARTICULARS OF EXPECTANT MOTHERS WHO ATTENDED THE ANTE-NATAL CLINICS IN 1929 COMPARED WITH THOSE OF 1928.

Ante-natal Clinic.	No. of the Clir oper	nic was n in	No. expect mothe the b	tant rs on ooks		ations e with M.O.	moth	er of tations ectant ers in
	1929.	1928.	1929.	1928.	1929.	1928.	1929.	1928.
Barnet	19	21	38	32	72	67	4	3
Berkhampstead .	20	22	9	24	11	41	-5	2
Bishop's Stortford	21	23	6	10	11	20	.5	1
East & New Barnet	11	15	76	37	129	54	12	4
Hatfield	21	20	12	25	18	44	1	2
Hemel Hampstead	21	23	10	19	25	33	1	1
Hertford	23	22	74	60	134	134	6	6
Hitchin	20	22	167	135	355	290	18	13
Letchworth .	21	22	28	36	89	80	4.5	4
St. Albans	22	22	15	15	18	26	1	1
Stevenage	18	20	26	22	45	46	3	2
Tring	20	16	14	12	19	14	5	
Waltham Cross .	20	21	58	58	104	121	5.5	6
	257	269	533	475	1030	970	5	4

DR. SWATMAN'S REPORT.

The County Council Maternity and Child Welfare Centres have been held at weekly intervals throughout the year at Barnet, Berkhampstead, Bishop's Stortford, East and New Barnet, Hatfield, Hemel Hempstead, Hertford, Hitchin, Letchworth, St. Albans, Stevenage, Tring, and Waltham Cross. The Centres at Berkhampstead and Tring were attended by Dr. Sparrow as in previous years, and Dr. Harvey has attended East and New Barnet afternoon Centres since March, 1929. Morning ante-natal clinics have been held fortnightly at the Centres at Hitchin, Hertford, Letchworth, and Waltham Cross.

There has been no increase in the number of the Centres, and East Barnet is the only one which has moved into new premises. It now includes the New Barnet district.

The numbers attending the Centres have been well maintained on the whole. There was a slight decrease (26) in the number of children (3,515) on the registers, but the number of expectant mothers who attended the ante-natal clinics was considerably larger than in any previous year.

The number of deaths among the children (22) was at the rate of 6.2 per 1,000, compared with the rate of 4 per 1,000 in 1928. This increase may be attributed to the effects of an epidemic of whooping cough in the Spring.

Two mothers who had attended the ante-natal clinics died in the second week after their confinement—one from influenza and one as the result of ovarian thrombosis. There was an increase generally in the number of defects and ailments of the children (as tabulated), but a decrease in the number of children suffering from rickets.

The actual figures for the Centres as a whole are given

below :-

Number of times the Centres were held, 620.

Number on registers of-

(a) Children under 5 years old, 3,515; (b) expectant mothers, 560.

Number of attendances of children, 33,615.

Number of consultations with the doctor by expectant mothers, 1,030.

Average number of attendances of children each time

the Centres were open, 56.

Number of children referred for orthopædic treatment, 54.

Number of defects and ailments among the children other
than bronchitis, malnutrition, digestive troubles, and those
directly due to wrong-feeding, as tabulated, 919.

Number of deaths of mothers within fourteen days after

their confinement, 2 (ovarian thrombosis, influenza).

Number of deaths among the children who attended during the year, 22 = 6.2 per 1,000).

Number of children who had dental treatment, 172.

Number of nursing mothers who had dental treatment, 28. Number of expectant mothers who had dental treatment, 53.

The causes of death among the children were: Congenital heart disease, malformation and malnutrition, tuberculosis, marasmus, diarrhoea and vomiting (2), bronchitis in a child with harelip and cleft palate, pneumonia, broncho-pneumonia, and whooping cough. The nine deaths at Berkhampstead were all due to the three last causes.

Whenever it is possible mothers who come to the Centres are encouraged to breast-feed their infants at least during the first six months of their existence. In many cases mothers who had feared they would not be able to do this have been enabled to continue partially at least, owing to the advice, etc., which they have received at the Centres. The percentage of feeding of infants up to six months old for the Centres as a whole was as follows:—

- (a) Entirely breast-fed, 64.
- (b) Partly breast-fed, 21.5.(c) Entirely bottle-fed, 14.5.

This shows a decrease (2 per cent.) in the number of entirely breast-fed infants, a slight increase in the number of partly breast-fed infants, and slight lessening in the number of entirely bottle-fed infants. The highest per cent. for entirely breast-fed

was 85 for Tring and the lowest 54 for Hitchin.

The establishment of dental clinics within reach of the various Centres has been a very great help to the work, and has been much appreciated by the mothers who have been very ready to avail themselves of the opportunity for treatment. Out of 177 children who came to the Centres suffering from dental caries 172 were referred to, and subsequently were treated at the dental clinic.

Fifty-three, or nearly one-tenth, of the expectant mothers who attended the ante-natal clinics, were enabled to have dental treatment. Others were advised to wait till later, and then as nursing mothers they were referred to the dental clinic. In all 28 nursing mothers had dental treatment.

The year 1929 started badly for the children with the intensely cold weather in February, which was accompanied by much illness, and bad colds and chills, and was followed by an epidemic of whooping cough which was very widespread and which was responsible for the increase in the number of deaths

at Berkhampstead.

The later part of the year was much more healthy for the children, whose general condition on the whole showed an improvement on that of the previous year. There were fewer cases of rickets, and considerably fewer children had to be referred to the orthopædic clinics. There was also a decrease in the number of children suffering from eczema, impetigo,

blepharitis, and enlarged glands.

The ante-natal work has increased very considerably during the year, the number of expectant mothers (533) being greater by nearly one-sixth than in 1928. The number of consultations of these expectant mothers with the medical officer has also increased considerably regarding the Centres as a whole. At some of the Centres, especially where there has been a change of health visitor or midwife, the numbers show a decrease, but at the others the work continues to grow steadily. Expectant mothers who are suffering from anæmia, dental caries, varicose veins, or malnutrition, derive much benefit from the advice and treatment given at the Centre, and many of the midwives find that it helps them considerably in their work to be able to bring their patients to the ante-natal clinics. The popularity of the beds in the various Maternity Homes has continued to increase, until in some districts the applica tions have exceeded the number of beds available.

TABLE GIVING PARTICULARS OF CHILDREN UNDER 5 YEARS OLD WHO ATTENDED THE CENTRES IN 1929 COMPARED WITH THOSE OF 1928.

Centre.	No. o the was o	No. of times the centre was open in	No childr the bo	No. of children on the books in	No. of att of chile	No. of attendances of children in	Average weekly attendance of children in	Average weekly attendance f children in	No. of o	of deaths children in	No.ofchild who had orthopæd treatment	No.ofchildren No. of defects who had and ailments orthopædic as tabulated treatment in in	No. of and ai as tab	No. of defects and ailments as tabulated in
	1929.	1929. 1928.	1929.	1928.	1929.	1928.	1929.	1928.	1929.	1928.	1929.	1928.	1929.	1928.
Barnet	45	42	239	219	1,997	1,896	45	45	0	2	3	1	41	38
Berkhampstead .	49	49	228	245	2,353	2,063	48	42	6	1	1	1	61	46
Bishop's Stortford.	47	46	154	184	2,290	2,441	47	53	0	0	1	1	55	47
E. and New Barnet	52	45	436	286	2,629	2,373	50	53	-	1	1	1	63	35
Hatfield	42	42	140	178	1,599	1,488	38	35	1	0	00	10	64	54
Hemel Hempstead.	44	47	145	257	2,173	2,566	20	- 22	-	0	1	1	31	33
Hertford	51	51	278	275	2,974	3,597	59	70	-	67	0	9	56	86
Hitchin	47	38	340	317	2,467	2,321	53	61	0	0	14	20	146	107
Letchworth	48	46	362	384	3,353	3,371	20	73	-	-	3	3	99	72
St. Albans	51	51	526	585	4,005	4,271	80	84	8	1	19	37	155	176
Stevenage	45	45	196	149	1,489	1,108	33	24	-	-	-	-	41	53
Tring	49	42	147	136	1,986	1,402	41	33	-	3	1	1	43	44
Waltham Cross .	50	51	324	326	3,300	3,274	99	64	3	1	3	4	117	80
	1	1	1	1	-	1	1	1	1	1	1	1	1	1
	620	595	3,515	3,541	33,615	33,888	55	57	22	13	54	82	919	883

Defects & Ailments other than Bronchitis, Diarrhea and those directly due to Wrong Feeding of the Children who attended the Centres in 1929.

		_					NAI	ME O	F CE	NTRE						
DEFECT.		Barnet.	Berkhamp- stead.	Bishop's Stortford.	East Barnet.	Hatfield.	Hemel Hempstead.	Hertford.	Hitchin.	Letchworth.	St. Albans.	Stevenage.	Tring.	Waltham X.	10000	otals.
Anæmia Adenoids		1	3	2 4	1	2	2	1	7	7	6	2	9	3	44	37
Anthone				1950	1	.:	1		4	.:	3	1		2	16	14
A \$					1	1	1		1	1	1				6	6
Bifid uvula	::		1::	::		i			1		i	*			2 2	5
Burn or Scald						1	i		1		1				4	6
Blepharitis		1						1	2	i	1	::	i	i	8	15
Bowed legs						2			3		3	::		12	8	9
Cleft palate				1		1	1		1		1			i	5	2
Congenital coloboma										1					1	
Conjunctivitis		1	2					1		2		1	3	2	12	12
Cystitis			1												1	1
Cyanosis				1							1				2	5
Cyst		.:							1		1	1	1		4	6
Cephalhæmatoma		1										**			1	
Crushed finger			*:	.:								1			1	3
Dermatitis & Urticaria	a		1	1		2	2	4	1	3	3			3	20	19
Debility		i	5	ic	00	.:	1:	::		::			.:	1	6	5
Dental Caries			8	16	26	5	1	10	29	12	22	6	1	40	177	85
Dysentery Enuresis				i	1								.:		3	2
Eczema and Impetigo			2		6	4	4	7	8		.;	.:	1	::	3	3 78
Furuncles			10000			2.30	0.2	2		6	4	1 1	2	15	59 7	7
Flat-foot	::	::	::	i	::	i		3500	ï	100	1	100		2	4	4
Fits and Convulsions						î	::	::	-		î				2	10
Fractured elbow						1			::	::		::	::		1	
Fractured leg												1		::	1	2
Glands (enlarged)		1	2	3	1	3	2	2		3	3	5		3	28	34
Hernia—umbilical		2	2	2	3	6			15	1	4	2		8	45	36
Hernia—inguinal		4	1		1	1		1	3	1	1				13	14
Harelip				1							1				2	1
Hæmatoma				1											1	
Hæmaturia													1		1	
Hæmophilia					::			1							1	
Hydrocele				.:	1	**	* * *		.:	1:		2.2			1	2
Hydrocephalus Incontinence (nocturna	11			2				.:	1	1	2				6	1
Infantile paralysis			**	000	***	**	1	1		1				.:	3	5
Intoe		i					1	1	.;		2 2			1	5	7
Injured foot	::								1		100				4	3
Injured leg	::	::		::	::				1						1	
Jaundice		::				::	::	2		::	::		**		2	3
-	ab-										1		::	::	1	
sence of		2000	30.50	100.00	1220		1000	5				2.5		1000	-	30.00
Knock-knee		1	1			5		2	7	1	12			3	32	35
Lymphangioma									1						1	
Malformed fingers									1					1	2	
Malformed toes						1					1				2	
Marasums								1	1		1				3	
Mastitis										1					1	1
Carried forwa			-	-						-	-	-	-	_		

10-2-100 (25)	7		70			NAM	E OF	CEN	TRE.	nan Sita					TANK T
Defect.	Barnet.	Berkhamp- stead.	Bishop's Stortford.	East Barnet.	Hatfield.	Hemel Hemps tead.	Hertford.	Hitchin.	Letchworth.	St. Albans.	Stevenage.	Tring.	Waltham X	Tot 1929	als.
Brought forward Mental deficiency Nœvus Nerves Nephritis Onychia Otorrhœa Ophthalmia Neon. Phimosis Polypus Photophobia Prolapsus ani Paralysis of face ", elbow ", hand Rickets Rigidity of spine Seborrhœa Septic sores Stomatitis Syphilis Spinal curvature Strabismus Splay feet Spastic paraplegia Scabies Supernumerary fingers Synovitis Tonsils (enlarged) Tongue-tie Tinea circ. Talipes Torticollis Tuberculosis Undescended testicle Vermes	··· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ··	1	9	1 3 1 3	1 1 2		3 ·· · · · · · · · · · · · · · · · · ·	1 1 4 4 2 15 15 2 1 3 1 4 1 2 1 6	1 2	1 5 4 1 1 3 1 17 · · · · · · · · · · · · · · · · ·	2 1	3	3	5 9 16 1 3 32 2 63 2 1 1 2 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 16 38 4 70 100 16 16 16 16 17 8 2 16 3 5 7 35

On the whole, the work done during the year has been very satisfactory. The number of children dealt with, though slightly less than in 1928, has otherwise been larger than in previous years, and more expectant mothers have attended the clinics than in any year since the Centres were started. In spite of much illness, chiefly of a bronchitic character, the death-rate among the children has not exceeded 6.2 per 1,000,

and the general health, as evidenced by the fewer cases of

rickets, has shown improvement.

The health visitors are very keen on their work, and at some Centres the midwives are also much interested in the ante-natal work. At all the Centres there are voluntary workers, who give much help in many ways. Very many thanks are due to these ladies for their regular and efficient assistance.

HEALTH VISITORS, NURSES, AND MIDWIVES.

The work carried out by the health visitors and midwives during the year has been continued on lines similar to that of previous years, and has been maintained at a satisfactory standard of efficiency. In all 112 health visitors, including four whole-time County Council nurses and one subsidized midwife, have been engaged in the work of care for the welfare of infants and young children. There were 185 midwives practising in the county at the end of the year, of which 31 are in private practice.

The importance of maintaining and increasing the standard of the work of the midwives and health visitors in the County has been receiving special attention during the year. The lectures arranged for the midwives have been continued during the year and have been much appreciated. The midwives have shown a keen anxiety to benefit by the special instruction which is provided and to keep themselves up to date. The result is that the standard of work of the midwives is being

continually maintained and improved.

In the following report Miss Harrington, the County Health Visitor, Inspector of Midwives, and County Superintendent of Nurses, gives full particulars of the work of the health visitors, nurses, and midwives during the year. The report contains much interesting information and reference may be made to one or two special points. Amongst the babies visited by the health visitors the infant mortality was only 15.6, and of the 2,932 maternity cases attended by the midwives four died, giving a maternal mortality of 1.3 per 1,000. Of the infants visited by the health visitors 62.6 per cent. were breast-fed and 80 per cent. were up to standard average weight. Within recent years efforts have been made to increase the ante-natal care and supervision of expectant mothers by midwives. The scope of this work is indicated by the

number of ante-natal visits paid by the midwives during the year, which reached the high figure of 17,484. Taking the total number of maternity cases attended by midwives, including those attended with a doctor engaged, this represents an average of over four visits per case. These figures bear evidence to the value of the work carried out by the health visitors and the midwives.

ANNUAL REPORT OF THE INSPECTOR OF MID-WIVES AND COUNTY HEALTH VISITOR FOR THE YEAR 1929.

During the year 1929 the Health Visiting Work has been carried out by the 112 health visitors, including four whole-time County Council nurses and one subsidized midwife.

3,953 of the 4,824 babies born alive during 1928 (excluding Watford Urban District) have been visited by the health

visitors, a percentage of 81.9 per cent.

Of the babies visited, 62 died before reaching the age of one year, showing a mortality of 15.6 per 1,000: 477 babies left the County before completing their first year. In all cases when the address could be obtained, it was forwarded to the local Health Authority.

From the Health Visitors' returns, it is shown that 2,475 or 62.6 per cent. of the infants were breast-fed, 1,155 or 29.2 per cent. were partly breast-fed, and 320 or 8 per cent. were bottle-fed; 1,073 or 27.1 per cent. used dummies, 1,310 or 33.1 per cent. were vaccinated, 3,190 or 80.6 per cent. were up to the average weight.

The work of the health visitors is shown in Table 15.

STATEMENT OF WORK AS INSPECTOR OF MIDWIVES AND COUNTY HEALTH VISITOR FOR THE YEAR 1929.

			1023
Visits to health visitors, nurses, and doctors			809
Attendance at Committee Meetings			IOI
Attendances at County Council and Voluntary	7 II	nfant	
Welfare Centres and Schools			99
Letters, circulars, etc., under Midwifery A	ct	and	
Notification of Births Act			11,714

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TABLE 14.—MIDWIVES AND THEIR WORK FOR THE YEAR 1929.

	111111111111111111111111111111111111111		TAL		RTHS	INFA	NTS' D	EATHS.	N	OTIFICA	ATIONS	893	THS	del	NUMBE	R OF	Midw	IVES
DISTRICT	POPULATION.		THS.	1	WIVES.	Year.	1,000,	cases r ys.		al Aid.	Stillbi	irths.	AL DEATHS LE COUNTY, WIFE,	Ü	ng ions.	vancil.	ons.	
	Popul	Legi- timate.	Illegi- timate.	Midwife.	With Doctor.	Under one Year.	Rate per 1,000.	Midwives' cases under Ten Days.	Mother.	Child.	With Doctor.	Midwife.	MATERNAL DEA FOR WHOLE COUNTY MIDWIFF.	Private.	Nursing Associations,	County Council.	Institutions.	Total
Urban.												E	-					
I. Baldock	3,017	42	4	28	14	***			5	1						1	***	
2. Barnet	14,220	222	8	54	34	5	21'7	2	18	2	1	2	***	1	***		***	
3. Berkhamsted	7,747	135	4	105	3 r	4	28.7	1	21	9		2	1		4	***	1	
4. Bp's. Stortford	9,730	101	6	57	44	6	56'0	1	6	***	2	2	***		3	-	1	
5. Bushey	10,260	152	6	69	28	8	50'6	2	21	4	1	8		1	1			
6. Cheshunt	14,540	237	4	87	72	20	82'9	3	27	11	2	2	***	2	6		***	
7. Chorleywood	3,192	42	1	6	22	5	116'2		***						1			
8. E. Barnet Valley	16,060	231	14	78	23	12	48.0		8	4	2	3	1	1	3			
9. Harpenden	8,001	70	5	60	14	4	53'3	1	11	3	1		***		4	***		
10. H. Hempstead	15,070	183	11	141	52	10	51'5	4	13	2	2			1	3		4	
11, Hertford	11,770	160	7	125	39	9	53.8	ı	17	6	4	3			4		4	
12. Hitchin	13,710	215	7	108	100	10	45'0		24	7	3	5		2		5	1	
13. Hoddesdon	5,630	1000	5	49	27	6	73'1	1	22	1	2	1 9		1	2	and a		
14. Letchworth		181	11	79	84	12	62'5	1000		5	1	110	THE STATE OF			***		
15. Rickmansworth	13,200				18		20.8	4	9	2000	the state of	1	100	3		***		
	9,686	140	4	93	1000	3		1	6	I	***	3	***	***	3	***	***	
16. Royston	3,828	47	3	27	9	2	40'0		1	1	***	***	***	***	1	***		
17. St. Albans	27,610	328	16	210	63	12	34.8	2	19	4	9	5	***	2	4	***	1	
18. Sawbridgeworth	2,579	27	2	16	10	2	68.9	1	8	6	1	1	***	***	2	***		
19. Stevenage	5,657	105	***	56	20	4	38.0	***	6	***	1				2		***	
20. Tring	4,220	56	***	23	27	1	17.8		5	***	1	***	***	***	***	1	***	
21. Ware	6,229	94	3	72	20	3	30.9		9	3	2	2	***	***	3	911	1	
22. Watford	54,670	794	40	498	218	49	58'7	6	132	21	17	14	1	2	7	***	4	1
23. Welwyn G'n C.	8,074	191	4	65	34	7	35'8	1	9	2	2	1	***	***	4			
Total for U.D	268,700	3,830	165	2,106	1,003	194	48'5	28	397	95	54	54	3	16	57	7	17	9
Rural.	W 102	1	JE STE	LECTION	Y H		11000			1	7 6				9177			
I. Ashwell	3,529	38	3	23	16	3	73*1		12	2	1				3			
2. Barnet	5,497	100	8	35	23	5	46.5		7	1				1	3	***		
3. Berkhampstead	5,088	58	3	34	12	3	49'1	1007	7	1		1	1897		4	***		
4. Buntingford	4.785	- 44	5	21	6	5	105,0		9	6		1		***	2			
5. Hadham	5,417	74	4	47	14	6	76'9				2	2		1	3		***	
6. Hatfield	10,310	163	4	-37	64	7	41'9		6			1	10000		5			
	7,955	1000000	5	78				***	10000	10.1	1		10		6			
7. H. Hempstead 8. Hertford		78	10	1000	47	7	47'9	1	13		2	1		1	6		***	
	7,523	0.00	12	55	30	2	22.7		5	1	3	1		***	8	***	***	
9. Hitchin	14,320	216		145	49	7	30'7	2	22	5	2	1	1	1	100000	***		
10. St. Albans	18,290	217	10	122	52	10	44'0	4	28	2	1	***	***	1	6	7		
11. Ware	11,710	162	6	103	53	12	71.4	1	22	3	4		***	1	9	***		1
12. Watford	17,470	198	4	87	41	7	34.6	2	27	4	2	1	***	1	6	***	***	
13. Welwyn	3,496	61	1	39	6	1	10.1		9						1			
Total for R.D	115,400	1,550	75	826	413	75	46'1	11	132	25	18	9	1	7	62			6
	268,700	3,830	165	2,106	1,003	194	48.5	28	397	96	54	54	3	16	57	7	17	9
	384,100	5,380		-	-	269	47.8				-						17	16

TABLE 15.—TABLE OF HEALTH VISITORS' WORK, carried out under "The Notification of Births Act, 1907-1915"

District and Health Visitor.	Parishes in each District.	Popula- tion covered.	No. of new Homes visited.	No. of Babies under super- vision, Dec. 31, 1929.	Health visits to Mothers and Babies.	Health Visitors' Attend- ances at Mater- nity Centre.	No, of cases as Midwife and Maternity Nurse and Visits.	No. of 1-5 Children under super- vision, Dec. 31, 1929.	Visits to these.
No. 1. Miss Milner	Barnet, Arkeley, Tot- teridge, Cuffley, Little Heath, and Northaw	15,747	183	155	1,378	45		501	1,755
No. 2. Miss Shore	Tring Urban District	4,220	41	46	700	49	37 cases, 1,046 visits.	175	798
No. 3. Miss Wells	Letchworth and Willian	13,200	188	172	2,000	48	-	572	1,370
No. 4. Miss Tutton	Hitchin and Wals- worth	13,710	184	189	1,946	46	-	645	1,664
Midwife Nurse Rogers	Ditto	-	-	E	-	-	57 cases, 738 visits.	-	-
Subsidized Midwife Nurse Thomas	Baldock, Bygrave, Wallington, and Radwell	3,124	43	46	494	43	42 cases, 830 visits.	134	467
Nurses work'g under the CountyNursing Association.	Personal Property of	245,970	3,314	3,226	48,561	2,003	Tauping.	10,494	56,030
		295,971	3,953	3,834	55,079	2,234		12,521	62,084

TABLE 16.

BIRTHS NOTIFIED UNDER "THE NOTIFICATION OF BIRTH ACT, 1907 '
From January 1st to December 31st, 1929.

		Birt	hs.	Ca	ses ided.	Still	born.	-je	Infar Hea	nts visi lth Vi	ited by sitors.	ar for the	Visitors.
Districts.	10.	Notified.	Returned by Registrar.	By Doctor.	By Midwife.	Doctors' Cases.	Midwives' Cases.	Premature.	Visited.	Djed under 1 year.	Death-rate per 1,000 visited.	Death-rate per 1,000 of the infants under 1 year for the County, excluding Watford.	No. of Health Visitors.
Urban.	4514			22	000	,		2	24				
1. Baldock 2. Barnet		254	24	22 211	22 67	7	1	22	133	2	15:0	100.0	1 1
3. Berkhamsted		105	4	19	90		1	2	88	3	34.0	46.5	4
4. Bishop's Stortford		111	2	45	68	3	1	5	89	2	22.4	8.3	3
5. Bushey		153	13	108	58	4	2	13	111	2	18.0	63.6	1
6. Cheshunt		200	3	108	95	4	1	12	186	6	32.5	45.2	5
7. Chorleywood		30	7	34	3	-	-	3	25	-		142.8	1
S. E. Barnet Valley		226	30	163	93	5	_	15	153	2	13-0	50.9	3
 Harpenden Hemel Hempstead 	1	97 210	5 22	39 106	63 126	6	2 2	30	71 186	3	42·2	35.2	3
 Hemel Hempstead Hertford 		152	9	51	110	4	_	11	137	2	14.2	46·5 37·2	4
12. Hitchin		211	_	81	130	6	5	13	170	1	5.8	71.0	1
13. Hoddesdon		80	5	35	50	1	-	6	80	2	25.0	40.5	2
14. Letchworth		191	2	115	78	2	2	6	161	2	12.4	22.5	1
15. Rickmansworth		132	25	85	72	2	1	2	128	1	7.8	33.7	3
16. Royston		67	5	47	25		-	1	59	-			1
17. St. Albans		387	19	203	203	15	5	26	285	2	7.0	34.1	2
18. Sawbridgeworth 19. Stevenage		33 62	7	11	22 35	1	1	4	25 50	2	40.0	105.2	2 2
20. Tring		71	1	40	32	1	_	3	64	2	31.5	61.5	1
21. Ware		115	6	31	90	_	4	10	104			9.1	2
22. Welwyn Garden C	ity	149	26	119	56	3	1	4	140	1	7.1	6.1	2 2
Total for Urban Distr	icts 3	3,080	215	1,707	1,588	80	29	195	2,479	38	15.3	44.6	48
Rural.	1	15	87 B	locs	7	18.6	704					3750	1
1. Ashwell		50	_	14	36	3	-	5	48	1	20.8	57.6	3
2. Barnet		78	36	78	36	5	-	5	91			41.2	3
3. Berkhampstead		90	4	63	31	2	-	6	82	3	36.5	40.5	4
4. Buntingford 5. Hadham		88	1	30 38	31 51	2 3	1	7 6	52 74	3	57.6 13.5	33.8	3
6. Hatfield	177	145	41	128	58	6	1	8	149	4	26.8	40.5	5
7. Hemel Hempstead		161	8	96	73	3	i	7	147	_	200	63.3	E
8. Hertford		108	4	76	36	2	2	6	95	2	21.0	38.4	(
9. Hitchin		244	8	109	143	5	6	26	206	3	14.5	52.8	8
10. St. Albans		217	9	111	115	9	1	12	196	-		62.0	6
11. Ware		151 174	29	57 124	103 79	1	3	8 9	139 152	5	7·1 32·8	17:3	2
13. Welwyn		55	1	29	27	2	-	-	43	1	23.5	37·9 17·8	1
Total for Rural Distri Total for Urban Distr		1,622 3,080		953 1,707	819 1,585		15 29	105 195	1,474 2,479	24 38	16·2 15·3	43.3	64
Total for County		4,702	365	2,660	2 407	123	44	300	3,953	62	15.6	44.1	112

STATISTICS OF MIDWIVES PRACTISING IN THE COUNTY.

There were 185 midwives practising in the County on 1st January, 1930, 184 trained and one untrained. In addition, there were 49 temporary midwives and 32 who have left or retired, making a total of 266 practising in 1929.

Of those in practice on 1st January, 1930, 31 are in private practice, 119 work for Nursing Associations, 7 are employed

by the County Council, and 28 in Institutions.

In 1929 the total number of cases was 5,620, excluding stillbirths. The midwives attended 4,348 cases. Of these 1,416 were with a doctor engaged and included 72 or 5 per cent. stillbirths; 2,932 were attended by the midwives alone and included 63 or 2·1 per cent. stillbirths.

The number of infants who died before the tenth day was 39 in midwives' cases born alive, being a mortality of 13.3 per 1,000. Of the 39 infants who died before the tenth day, 15 were premature. In addition to these cases, the midwives

attended 110 abortions with a doctor.

933 expectant mothers have attended ante-natal clinics. The number of ante-natal visits paid by the midwives was 17,484.

MATERNAL MORTALITY.

In the 2,932 cases attended by the midwives, there were 4 maternal deaths or 1.3 per 1,000.

MEDICAL AID AND ANY OTHER NOTIFICATIONS RECEIVED.

The number of Medical Aid Notices was 700 or 23.8 per cent.

WATER SUPPLY.

The general source of water supply in the various Districts of the County has been described in previous reports. The increasing population in certain parts of the County makes increased demands for water, and during a dry summer there is always some anxiety as to supplies in rural districts. Further, in districts in which the population is rapidly increasing a larger amount of sewage has to be dealt with, and consequently greater care has to be exercised in regard to the purity of water supplies. During the year an important memorandum, dated July, 1929, was issued by the Ministry of Health with regard to water shortage. This memorandum deals with a number of important points relating to water-supplies, the chief of which are referred to below:—

- I. A continuance of the dry weather through the ensuing summer months will involve more of the water authorities either in actual shortage or in the risk of shortage. The statistics available indicate that rainfall during the next few years may continue to fall short of the average.
- 2. It is essential that water authorities should review their position both as to present demands and as to possible difficulty in the future. If precautionary measures are necessary they should be taken well in advance. Consideration should be given to the possibility of co-ordinating supplies.
- Every effort must be made to conserve existing supplies and to prevent waste.
- 4. It is urged that essential domestic needs must come first, and that agreements for the temporary reduction or intermission of discharges of compensation water will often divert large quantities of water to the needs of public supply. The advisability of using non-potable supplies for certain purposes where there is any likelihood of restriction of potable supplies is urged. Intermission of the domestic supply is only advised in cases of actual necessity.
- 5. The risk of pollution during a sustained dry weather period is emphasized and reference is made to the risk of heavy pumping operations during a period of dry weather drawing water from the usual protected zone. In certain districts of the County this possibility is realized, as the population increases, with greater demands for water and an increasing amount of sewage to be dealt with. Chlorination is recommended wherever the purity of a public supply of water is threatened or suspected. The necessity of boiling the water in the case of private supplies from shallow wells and other sources is emphasized.
- 6. Reference is made in the memorandum to the powers of the County Council under Section 57 of the Local Government Act, 1929, to contribute to the expenditure incurred by a local authority in relieving water shortage in their district.

The memorandum referred to above gives much useful information regarding the steps to be taken to conserve water supplies and to meet the difficulties which may arise in the event of an actual shortage of water. The question of the water supply in the County is one which in view of its increasing population and its position in relation to London requires to be given careful and constant attention by the responsible authorities.

RIVERS POLLUTION.

River Lee.—Hertfordshire representative on the Lee

Conservancy Board: Capt. E. T. Morris.

The River Lee rises just north of Dunstable, in Bedfordshire, and flowing through Luton enters the County a mile north of Harpenden, cutting across eastwards north of Hatfield, through Hertford and Ware, to join the Stort Navigation close to Hoddesdon, where it turns south and forms the eastern border of Herts. It receives the Mimram, Beane, Rib, Ash, and Stort, and drains most of the northern third and eastern section of the County.

Pymmes Brook, in East Barnet Valley, on leaving the

County, flows due eastward into the New River.

River Thames. Thames Conservancy Board.—Hertfordshire C.C. Representative: Lieut.-Col. Sir Walter Halsey, Bart., O.B.E.

The new Board exercises authority over the river above Teddington, with its tributaries, including the River Colne. The Colne rises to the west of Hatfield, flows south-west by Colney Heath, London Colney, and across the Midland Railway and the Watling Street at Colney Street. Passing to the south of Rickmansworth between Watford and Bushey Stations, it receives certain streams, notably in Hertfordshire the Ver, the Chess and the Gade. The Chess, from Chesham, in Bucks, passed just east of Chorleywood and Rickmansworth, and joins the Colne near the North-Western railway station of Rickmansworth. The Gade, from Gaddesden and Hemel Hempstead, receives the Bulbourne, from Northchurch and Berkhampstead, below Boxmoor, and flows along the west side of the North-Western Railway by King's Langley through Cassiobury Park west of Watford, to join the Colne just east of Rickmansworth.

DISPOSAL OF HOUSE-REFUSE.

House-refuse.—The question of the dumping of house-refuse in Hertfordshire by authorities outside the County has from time to time come up for consideration by the County Council. The Ministry of Health has suggested certain precautions to be carried out with regard to refuse dumps. The following rules are to be complied with: (1) the deposit to be made in layers; (2) no layer to exceed 6 ft. in depth; (3) each layer to be covered on all surfaces exposed to the air with at least 9 inches of earth, or other suitable substance, except a

portion which may be allowed uncovered during the formation of the layer; (4) no layer to be left uncovered for more than 72 hours from the time of deposit; (5) sufficient screens or other suitable apparatus to be provided where necessary to prevent any paper or other debris from being blown by the wind away

from the place of deposit.

• A special report has recently been issued by the Ministry of Health on Investigation into the Public Cleansing Service in the Administrative County of London. The report states that dumping is used as a means of disposal of 48 per cent. of the refuse and that the dumps generally are insanitary. The writer of the report is of opinion that the Local Authorities in whose areas huge dumps are situate—no Borough dumps crude refuse within its own borders—have strong cause for complaint against the forwarding Boroughs, and this system should not be allowed to continue.

The report further discusses the modern methods of disposing of house refuse by means of disposal plants, namely, (1) by incineration, (2) by separation with final incineration,

and (3) by pulverization.

Various recommendations and suggestions are submitted in the report, the most important of which in relation to the County of Hertford are as follows: (1) There should be a central cleansing organization for London and centralized arrangements should be provided under a special committee on which areas bordering on London should be represented. The Minister of Health has decided to appoint such a committee to consider the question of giving effect to the report. (2) That subject to the right of appeal a Council should be empowered to prevent the dumping in its area of refuse from another district except that this power should not extend to refuse which has been treated or prepared so as reasonably to remove risk of nuisance or to the provision of refuse disposal works. (3) Disposal plants should be on a large scale and as few as possible. Large-scale incineration, separation, or combined disposal plant should be provided. (5) Spacious and suitable sites should be selected. These recommendations are important and they foreshadow a real effort to deal efficiently with a state of things which up to the present has been most unsatisfactory.

A departmental committee before which the Chairman of your Committee has given evidence, has been appointed by the Minister of Health to consider the question of the disposal of London refuse and a report on their findings will no doubt

be issued at an early date.

The House-fly.—In wet seasons the house-fly as a carrier of the germs of disease is a less serious menace than in hot, dry weather. In the home, especially when overcrowding exists, every effort should be made to keep the house-fly in check. Exposed food and uncleanliness attract flies to the house, and attention should therefore be given to cleanliness and the protection of food. Refuse should not be allowed to remain in the vicinity of the house except in proper covered receptacles, and as much of it as possible should be burned; refuse also should be removed from the house in covered vehicles. There are many points relating to public health in which the assistance of the householder is of the greatest possible value, and the suppression of the house-fly is one.

Sanitary Inspection.—In rural districts frequent routine inspection of cottage property from the point of view of structural and sanitary conditions is necessary. House-refuse is liable to be carelessly dealt with in rural districts. Such refuse as cannot be immediately disposed of should be burned so as to prevent it remaining in heaps near the house and become an attraction for rats and flies.

The question of the disposal of house refuse in rural districts is one which calls for attention and action by local sanitary authorities.

Covered Dust-carts.—The removal of refuse should be carried out by means of covered dust-carts, so as to prevent the blowing about of dust and papers. There is much need for a better organized system of removing refuse in many districts. In many rural districts efforts to provide public scavenging should be made. By employing motor dust-carts, the difficulties of scavenging in many of the larger villages could be overcome. In the report recently issued by the Ministry of Health two recommendations bearing on this subject are submitted: (1) that a standardized covered storage receptacle for house refuse should be used and (2) that all vehicles used for the conveyance of house refuse by road or rail should be covered.

HOUSING AND TOWN PLANNING.

The question of housing, more especially in certain rural districts, has come up for consideration at meetings of the Public Health and Housing Committee during the year, and the particulars contained in the accompanying table as to the present

HOUSING.—Return as to Houses erected or proposed to

Name of Local Authority.	Registrar General's Estimated Population. 1927.	Number of houses erected under The Housing Act, 1919.	Number of houses erected or proposed to be erected under the Housing, etc., Act, 1923.	Number of houses erected or proposed to be erected under The Housing (Financial Provisions) Act, 1924.	Total
Corporations.		neim zuoi	discussion a linearies	de manganthio	
Hemel Hempstead .	14,200	56	24	70	15
Hertford	11,070	72	345	Manager - version	41
St. Albans	26,640	100		160	26
Watford	52,580	953	102	246	1,30
	avillation	CONTRACTOR OF THE PARTY OF	and provinces and	mens fictions in	1,00
URBAN DISTRICT COUNCILS.	er beemil	b beliannel		probabilist of for	
Baldock	2,757	Kerk sine	i stilleden ill	16	1
Barnet	12,950	101	250	10	35
	12,300	101	200	The state of the s	00
	DIES TENNIN	STATE DESIGNATION OF THE PERSON OF THE PERSO		CHIEBULI SHEET CO.	
Bishop's Stortford .	8,944	10	meenyl-soules	74	8
Bushey	9,145	66	and the partition	50	110
Cheshunt	14,460	84	140	30	23
Chorleywood			146		
East Barnet Valley .	2,990	36		20	5
	15,030	164	122	Vienta in the last	28
Gt. Berkhampstead .	7,489	50	69		11
Harpenden	6,968	bd of na	M MISSITH VALLE	20*	2
Hitchin	13,200	70	104	202	41
Hoddesdon		78	134	202	
Hoddesdolf	5,472	50	The state of the s	one to this wife	5
Letchworth	12,550	707	48	198*	* 95
Rickmansworth .	9,438	110	130		24
	- 0213797	o January	TO BE IN THE PARTY OF THE PARTY	MALISHOU	
Royston	3,736	48	Despare To Street	48	9
Sawbridgeworth .	2,396	16	10	udangan <u>wa</u> ldaliga	2
Stevenage	5,108	58	antetilo kostara I	127	18
Tring	4,148	12	21	Married Committee of the Committee of th	3
Ware	6,039	48	in the last of the	32	8
	0,000	40		02	
Welwyn Garden City	5,048	50	533	8	59
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	atish busin	Manual State of the last of th		foresternal and testing	
RURAL DISTRICT	a modern	Manual Sint	our literary force free	Shows ariginated	
Councils.	The same	Maria de la companya della companya della companya della companya de la companya della companya		Colorifor Laboration	
Ashwell	3,426	34	The same of the sa	40	7
Barnet	4,958	40	64	61	16
Berkhampstead .	4,827	36	_	8	4
Buntingford	4,725	120	16		13
Hadham	5,217	38	_	_	3
Hatfield	9,406	72	487	Showing - Show I	55
Hemel Hempstead .	7,737	66	123	and the same of th	78
Hertford	7,168	80		48	12
Hitchin	14,150	400	6	100	50
St. Albans	17,480	72	341	150	56
Ware	11,320	142	-	52	19
Watford	16,630	20		78	9
Welwyn	4,708	30	94	-	12
	-,,,,,	-	-		
TOTAL	364,100	4,019	3,065	1,808	8,89

be erected under the Housing Acts, 1919, 1923, 1924, etc.

Number of Applicants on waiting list.	Number of houses to which subsidies have been paid under the Housing Act, 1923.	Number of houses towards which advances have been made under the Housing Act, 1923, and the Small Dwellings Acquisition Act.	Number of houses dealt with under the Housing (Rural Workers) Act, 1926.	Remarks.
			Parlie Hills	In addition to those mentioned
150	148	54	-	the Corporation in 1914 erected
309	58		110000	26 houses under the 1890 Act.
250	288	84	-	In contemplation, 75 under the
850	505	784	1000 -	1924 Act.
		Sur BA SUV SU	III III III III	Harstown State and American and
45	1	4	_	In addition Council have erected
About 300	Council 230			42 tenantpurchase houses, and
	Private 32	140	_	hold a lease on 18 flats from the
		MILLION WATER TO ME	AF ARTEN	War Office. They also have
60)	126	22	DISTRIBUTE THE	52 pre-war houses.
Old list.	anibani na	successful at although	Hito erroff	Cidasinedo tormato
181	395	260	mieros & Av	HOLFIGHTON THEREON
110	106	17	The Diviness	
30	3	14	Service Control	
	3	283	The second second	
59	07		MICOGIN STORY	
39	87	27	vories series	* Construction about to be
New list in course	165	152	Tollogitz all	
of compilation.	o level ligaren	Les doille land	Ha Hillmale	commenced.
90	143	43	January Tell	
100 \	103			
Old list.				
114	57	299	_	* 100 further to be erected.
Local 300)	130	26	1000 X	Further land for housing pur-
Foreign 43	of Helenius	A sarostode no Disa	and the property	poses being acquired.
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-	54	3	Trail District	non-year and the residence of the second
93*	46	18	-	* Including 39 non-residents.
2	10	13	_	Market Statement of the
34	44	5	ply at High	The majority of the houses and loans and subsidies were
500	650	683	1991	erected or granted by Welwyn
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	dyblothorum	rentiprosstaniju	distribute di	this Council in 1927.
10		care that he se-	Titlerine i	om tyberoulosis ai
18	4	01		(In this District the late Lord
50	12	21		Rothschild erected many cot-
33	58	34	1	
	16	_	_	tages just before the war.
2	19		1/2 -	
40	70	12	-	011
142	89	3	_	21 houses have also been erected
21	25	6	1	under the 1890 Act.
170	58	98	1	
431	282	116	_	
160	71	16	-	
160	329	_	-	
12	73	31	_	
4,912	4,503	3,269	2	

position of building schemes in the County were reviewed during the year. The great difficulty which is met with, especially in rural districts, is to provide houses at a rent which is within the means of workers in rural districts. In certain districts reconstruction is carried out by the Local Authorities under the Housing Rural Workers' Act, 1926, which undoubtedly makes for improvement, and powers under this Act might be more extensively utilized than they are at present. House purchase schemes initiated by local Authorities are also in existence which, excellent as they are, do not meet the requirements of those who cannot

afford more than a weekly rent of a few shillings.

During the year a special report was received from the District Medical Officers of Health in the county regarding the present condition of housing in their districts. These reports, which gave much useful information, were summarized and submitted to the Public Health and Housing Committee; the chief points raised are here referred to. The rents of new houses are too high to relieve the needs of the poorer classes, and more houses of a smaller type are required. Improvement, however, is taking place in many districts as a result of housing schemes promoted by the Local Authorities. Notwithstanding these schemes there is always a waiting list of varying dimensions, but there is no doubt that many applicants work outside the district. One medical officer asks to what extent a District Council should provide houses for persons who prefer to live in their district and work elsewhere. It is generally agreed that there is a real need for houses at a lower rent than are at present being erected. In most districts much difficulty is experienced in closing unfit houses when occupied, as steps cannot be taken with a view to demolition until houses are available elsewhere at rents which the occupants can afford to pay. The questions of rent, of closure, of demolition, of undesirable tenants, of repairs and reconditioning of old houses all present difficulties which have to be faced.

TRADE PREMISES UNDER SUPERVISION.

Dairies, Cowsheds, and Milkshops.

Milk Supply.—The passing of the Milk and Dairies (Amendment) Act, 1922, is a step forward towards securing a pure milk supply. In pursuance of this Act the Minister of Health has made an Order, the Milk (Special Designation) Order, 1922, prescribing the conditions subject to which licences may be granted. The authorities responsible for the issuing of licences under the above Order are as follows:—(1) The Minister of Health, licences to producers of Certified and Grade A (tuberculin-tested) milk. Producers holding above licences from the Minister of Health will also be entitled to sell milk produced under such licence as Grade A milk without further licence from Local Authority; (2) County Councils and County Borough Councils, licences issued to producers of Grade A milk; (3) Sanitary Authorities, licences issued to distributors of Certified milk, Grade A milk, including Grade A tuberculin-tested and Grade A Pasteurized milk, and of "Pasteurized" milk. No licence from a Sanitary Authority is necessary in the case of a licensed producer who distributed milk directly to the consumers.

The Milk and Dairies (Consolidation) Act, 1915, came into operation on the 1st September, 1925. Sections 3, 4, and 5 of the Act contain provisions for stopping the supply of milk which is likely to cause tuberculosis. The Tuberculosis Order, 1925, which came into force on the same date, provides for the slaughter of bovine animals affected with certain specified forms of tuberculosis and for the payment of compensation in respect of animals so slaughtered. During 1929, 95 animals were slaughtered under the Order, 75 were found to be in an advanced stage of tuberculosis, 20 were found to be only slightly tuberculous. The Public Health (Prevention of Tuberculosis) Regulations, 1925: under these regulations no person who is aware that he is suffering from tuberculosis of the respiratory tract can enter upon any employment in connection with a dairy which would involve the milking of cows, the treatment of milk, or the handling of vessels used for milk.

The following figure indicate the action which has been taken during the year under the Milk and Dairies (Consolidation) Act, 1915:—Number of animals examined, 25,053; number found to be suffering from tuberculosis, 30; number of samples examined, 118.

Slaughter-houses.—The private slaughter-houses in use throughout Hertfordshire are still far from satisfactory, and there is need of erecting single central abattoirs, wherever possible, especially in view of the danger from tuberculous meat. Urban authorities may themselves provide slaughter-houses. In the larger urban districts inspection on the whole is systematically and efficiently carried out, but this cannot be said of some of the rural districts. The Rural District Councils (Slaughter-Houses) Order, 1924, confers on Rural District Councils the power to provide slaughter-houses and to make by-laws. By the new Order it will be required that every place used as a slaughter-house will have to be registered by the owner or occupier. In the Public Health (Meat) Regulations, 1924, are contained provisions for the regulation of slaughter-houses and slaughtering and for the protection of meat against contamination by dirt, etc. Notice of the day and time of slaughtering has to be given to the Local Authority.

Sale of Foods and Drugs Acts.—The work under the Sale of Foods and Drugs Acts is carried out by the two Inspectors appointed for the purpose, working under the Chief Constable. Analyses of samples taken are made by the County Analyst, Dr. Bernard Dyer, of the Analytical Laboratory, 17 Great Tower Street, London, E.C., to whom I am indebted for the following report regarding the analytical work carried out during the year.

Dr. Dyer's Report.

Annual Summary of Analyses made during 1929.

The number of samples analysed during the year was 474 as here summarized:—

					Total Samples.	Unsatisfactory Samples.
Milk					272	22
Butter					36	-
Cream	III.	0.00	10		27	DINE, THE DER
Lard					16	-Minr ro
Sausages .					15	STON - I'M
Eggs					2	2
Eggs, Preserved					1	1 1 1 1 1 1 1 1 1
Lemon Curd					3	
Other Samples					112	-
is to radium.					Market M.	THE OWNER OF THE PARTY
Total					484	26

Dr. Dyer further reports as follows :-

It will be seen that three samples of eggs were unsatisfactory. Two of these were classed as unsatisfactory because they were sold or offered for sale without being marked, while on examination we found in both cases that the eggs afforded evidence of having been rubbed with acid, presumably for the purpose of removing marks of origin with which the eggs had been stamped originally. In the third case, the egg afforded evidence of having been chemically preserved, which we understand was admitted by the vendor but not properly declared until the intervention of the County Inspector. Eleven samples of milk afforded evidence of added water, the amount varying from 3 to 31 per cent. Eleven other samples of milk were deficient in fat based on the minimum quantity of fat proper to normal milk as indicated in the Sale of Milk Regulations, 1901, of the Ministry of Agriculture.

SUMMARY AND CONCLUSIONS.

The health of the County during 1929 has on the whole been good, but the statistics for the year are less satisfactory than they were last year.

There is a slight fall in the birth-rate, which is 14.8 compared with 14.9 in 1928. The actual number of births

was 5,620 compared with 5,666 in the previous year.

The population of the County was estimated at 384,100,

an increase of 5,900 compared with 14,100 for 1927.

There is a slight rise in the death-rate which is 11.9 compared with 10.2 in 1928 and 13.4 for England and Wales.

There is also a slight rise in the infant mortality, which is 47, compared with 45 last year, and 74 for England and Wales.

There is a slight fall in the death-rate from cancer and other forms of malignant disease, which is 1.3 compared with 1.4 last year. Of the total number of deaths from this cause the percentage over 65 years of age was 56 and that over 75 years was 21.

There is a slight rise in the death-rate from pulmonary tuberculosis, namely, 0.58 compared with 0.51. The death-rate from non-pulmonary tuberculosis has also slightly increased, the rate being 0.14 compared with 0.13 for 1928.

A rise in the death-rate from pulmonary tuberculosis was not unexpected in view of the epidemic of influenza during

the first quarter of the year.

The number of patients from the County attending the Venereal Disease Clinics in London during the year is higher, being 281 compared with 242 for 1928, 264 for 1927, 193 for 1926, 205 for 1925, 236 for 1924, 213 for 1923, 142 for 1922, 166 for 1921, 215 for 1920, 235 for 1919, and 113 for 1918.

There is a slight rise in the death-rate from epidemic disease, which is 0.22 compared with 0.17 in 1928. This is due to a rise in the death-rate from scarlet fever, diphtheria and whooping cough. There is a fall in the death-rate from

measles and enteric fever.

The number of deaths from pneumonia was 243, compared with 193 last year; this includes deaths due to influenzal pneumonia which was more prevalent than during 1928.

The changes which have taken place in the statistics for the County during the year are well illustrated in the charts

and tables in the body of the Report.

Reference to the duties relating to vaccination and infant protection which are taken over by the Public Health Committee and the Maternity and Child Welfare Committee as from

1st April, 1930, will be found in the body of the Report.

Under Section 63 of the Local Government Act, 1929, a survey of the isolation hospital accommodation in the County is being made and a scheme prepared in consultation with the Local Authorities will be submitted in due course to the Minister of Health.

During the year, reports on the housing conditions in the urban and rural districts in the County have been considered. The question of water supplies in the County has also been considered during the year. In view of the position of the County in relation to London, of the increasing population, and of the progressive drain on the chalk supplies of water the matter is one which should receive the closest attention by Local Authorities. Your Council is giving special attention to this question of Conserving the chalk supplies of water in the County.

In conclusion, I desire once more to express my thanks on behalf of the County Council to the ladies who act as voluntary workers at both the County Council and the Voluntary Maternity and Child Welfare Centres for the valuable assistance they give and to the time they devote to this most important work. and the Materially and Child Wellate Committee as from
the April, 1940, will be dound in Gaedacky of the Report.

Survey of the reclaim negated accommodation the County
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Veneral Discuss Chairs in London the County attending the Veneral Discuss Chairs in London things the view is higher being not considered with 242 for 1925, 262 for 1927, 192 for 1926, 275 for 1925, 220 for 1924, with for 1923, 192 for 1922, 192 for 1922

There is a slight rise in the death-rate from enthemic disease, which is o-at compared with 0-27 in 1928. This is the to a rise in the death-rate from scarles fever, distallable and whooping cough. There is a tall in the death-rate from mendes and enterior ever

With number of deaths from promisions was 243 compared with rog last west a line includes deaths due to distinguish promisions which was rouse promision than desire with

The charge what have taken place in the placement down the property of the placement of the

Distriction of the dates a philip to exceptions and infant

TABLE 17.—CHIEF STATISTICS OF URBAN AND RURAL DISTRICTS, 1929.

As compared with those for 1926 and with the overages for ten years 1901-1910 and 1911-1920.

		Popul	ATION.	1	Acreage land and	Number	Rooms		Віктн	RATE.*		i	CRI DEATH	RATE.			INF	ANT		DIARR MORTA		Di	PRT	RATE F	ROM	DE		ATE FR	ом	CT.
Districts.	By estimate, 1929.	By Census, 1921.	By Census, 1911.	By Census, 1901.	inland water), 1911.	Rooms accupied, 1921.	per Person, 1921.	1929.	1928.	years.	10 years.	1929.	1928.	years.	10 years.	1929.	1928.	years.	years.	1929.	1925.	1929.	1928.	years	years †	1929.	1928.	years.	years.	DISTRI
Irban. SUMMARY	268,700	228,546	194,242	155,150	64,462	275,492	1'26	14.8	14.0	1810	23'6	11.0	10.5	11'6	11.8	49	46 .	67	90	5.0	2.2	-6	-5	-8	-8	1'3	1'4	1.5	-9	Urb
		2,475	2,094	2,057	362	3,146	1'31	15'2	13'5	19-9	24'0	13.2	13'8	14.8	15'5	***	100	85	110			'6		.9	1.0	1.6	2'3	1'2	1'2	
Baldock	3,017	11,740	10,440	8,359	3,114	13,946	1'27	16'2	15'4	16'5	23'3	11'3	10'5	1171	11'0	22	65	67	100	4'3	4.6	.2	16	'5	-8	1.3	1.4	1'4	7	ALC:
Barnet	14,220		7,302	6,371	1,208	9.576	1'40	17'9	14'2	16:0	16'5	13.9	11'0	12'6	101	29	46	62	93	7.1	111	.2	15	16	7	1.8	.9	1.1	'5	
Berkhampstead	7-747	7,250 8,840	8,721	7,316	3,371	10,528	1'35	10.0	12'4	16.8	21'6	12'4	10.7	12.7	12'6	56	8	76	91	-	***	-8	.7	-6	-8	19	1.3	1.3	1.1	
4 Bishop's Stortford	9,730	8,020	6,978	4,564	3,081	9.577	1:36	15'3	15.6	15'3	19'3	11.0	9.6	9.6	9.7	51	64	59	80		***	15	'3	-6	'5	1.8	2'0	1.1	.9	
5 Bushey	10,260			12,292	8,479	15,077	1'12	16.2	15:3	20.8	26.6	10.5	11:3	11.6	11'6	83	45	71	91	12'4	4'5	-6	'7	-8	-6	.9	'9	1.0	-8	
6 Cheshunt	14,540	13,640	12,954			150000000000000000000000000000000000000	1:47	13'4	15'4			6.8	9.1			116	142	141		23'2		-6	'3		444	-8	1.2	111	***	
7 Chorleywood	3,192	2,331			1,989	3,440	1'32	15'2	16'2	16-8	22'3	10.2	11.3	9.8	10'2	49	51	48	85	4'0	3'9	'4	15	-6	.6	174	2.1	1.1	7	
8 East Barnet Valley	16,060	13,490	13.381	10,094	2,644	17,390		100000	11.1	14'6	19.1	10'2	9.9	10'2	10'1	53	35	51	81			6	.3	-6	.7	1,3	1.0	1.3	.8	ш
9 Harpenden	8,001	6,670	6,172	4,725	1,633	8,846	1'43	9'3		20'3	24'5	12.8	11.1	12.0	13'2	52	46	60	90	10'3	***	1 .7	-6	1'0	1.0	1.1	1.2	1/1	1.0	
10 Hemel Hempstead	15,070	13,920	12,888	11,264	7,184	16,158	1'24	12.8	14'3		22'9	12'4	11.0	13.8	141	54	37	78	104	1119		.7	8	-9	'9	1.8	1.8	1'7	1'2	
II Hertford	11,770	10,750	10,383	9,322	1,501	12,212	1'24	14'2	14.1	19:1		10000			13'1	45	71	67	102			-8	'3	7	'7	1.3	1'8	1.3	-8	
12 Hitchin	13,710	13,352	11,905	10,072	3,675	16,664	1'29	10.5	14'4	19.7	23'4	13.1	12.5	13.1	12'1	73	40	70	97	12.1		13	-7	10	-9	1.5	2'0	1.6	1'0	П
13 Hoddesdon	5,630	5,400	5,196	4,711	1,576	6,716	1'27	14'5	13.0	18.3	23.5	15'0	11'7			63	22			5'2		14	-6			1.3	19			
14 Letchworth	13,200	10,210		441	3,652	11,433	1.12	14'5	13.0		***	9.0	6.8			1		65	58	1		10	'3	-7	'9	1'2	1:2	-9	-6	
5 Rickmansworth	9,686	7,520	6,288	5,627	2,790	9,058	1'24	14'8	15.8	18'4	2617	10.0	9.6	10.0	11'4	2:	34		76				-7	1.0	-8	1.8	2.6	114	115	ш
16 Royston	3,828	3,780	3.985	3,517	1,003	5,008	1'42	13.0	15'4	15'6	21.1	11.5	12.2	:3.0	12.2	40	1	74	78	8:7	5'2	-6	-5	1.7	70	111	1.8	1'2	1.1	ш
17 St. Albans	27,610	25,620	18,133	16,019	2,703	32,008	1.59	12.4	13.9	17:6	21.2	12.7	10.3	11.6	11.2	35	34	0.5		01	100	1	-3	-6	-8	1.2	1.1	-7	174	ш
18 Sawbridgeworth	2,579	2,285	2,304	2,085	2,678	2,953	1.30	11.5	15-0	17.0	24'1	12.0	11.8	13.2	12'2	69	105	76	91		12.6	1 .7	-	-6	-8	-8	-7	1.1	172	
19 Stevenage	5,657	5,023	4,856	3.957	4,545	6,486	1.31	18.2	13.9	19.1	26.3	13.9	9.0	11.0	12'1	38	89	63	77	9'5	120	1		-7		2.6	1'2	114	111	
20 Tring	4,220	4,278	4,481	4.349	4.407	5,784	1.36	13.5	15'6	18:9	21'0	17.7	11.8	13.5	13.1	18	10	54	85	1		1	-B		1.1	1-6	'4	1:1	10	
21 Ware	6,229	5,950	5,842	5-573	619	6,550	1714	18.5	17'0	19'6	28'0	14'4	10'9	13.3	14'4	31	9	69	107	10.3	111	.3	0	-7	-8	1.2	1.3	1.0	17	
22 Watford	54,670	46,002	40,939	29,430	2,238	52,936	1.18	15'2	15'4	18.0	26'2	11.7	9'3	10.2	10.1	1 59	52	73	88	1.1	3.2	7	3	.9	0	-8	1.1		,	ш
23 Welwyn Gdn. City	8,074			***				24'1	20.8		***	6:1	5'7	***	111	36	6	***		2.1	6.1	1 2	-7		100	1 0		1		1
Rural. SUMMARY	115,400	103,574	117,042	103,273	340,061	123,112	1.30	14'0	15.0	18'2	22.6	1118	10'3	11.6	12'0	46	4.3	58	83	2.4	2.3	14	'4	.7	-7	114	1.3	1'2	.9	
r Ashwell	3,529	3,600	3,948	3.953	22,049	4,962	1.38	1116	13'5	16.4	20'0	13.8	13'0	14'1	14'4	73	58	61	82			'2	12	1'0	'7	1.4	1.2	1'9	1.3	П
2 Barnet	5,497	4,500	4,969		9,216	5.320	1'24	19.6		19.3	25'5	11.8			10.6	46	41	51	82			-7	'3	'5	1.0	174	1.3	.8	1.1	1
3 Berkhampstead	5,088	4,692	4,707	4,154	18,383	5,903	1'26			17:2	25'0				15'4	49	40	69	101			1 '5	.1	15	.9	2.3	2.7	1.3	1.1	1
	4.765	4,890			28,470	6,503		1012			22 1	17'5	13'9		1 2300		34	44	81			124	'4	. '6	9	2.0	2.3	1'4	1.5	
4 Buntingford	100000		5,019	5,020	100000000000000000000000000000000000000			1 1000	31 33 350	17'3	21'2				1	77	24	53	73	25.6		1		-6	7	1.8	1.3	1'4	1.1	п
5 Hadham	5,417	5,480	5,795	5,209	25,468	7,256		16:1			24'0			100000		1	40	54	87	1		1 '3	-3	.8	1'0	1.6	.9	1.1	1.0	
6 Hatfield	10,310		8,592		23,486	8 803		0 1 6520		1000							63	54	95	7.00		1.6	'3	7	'9	14	1.5	1'2	1.0	
7 Hemel Hempstead		6,840	10000		19,994	8,807	(Street	18%									38	81	71			1 2	11	.5	-9	.6	1.6	1/2	1'2	
8 Hertford	7,523	7,138			33,468	9,499			10000							1	53	58	Sa	10000	4'4	12	14	-7	-6	1.8	1.0	1.1	1'0	
9 Hitchin	0.030567				55,174	16,462		2 1020				1000					10000	62	91		3.8		-1	-7	-9	1'3	'5	1'0	1'0	
10 St. Albans .	18,290				37,066	13,666		1000				8.3				1	2 2000	57	70	1 2000	57	1	-6	-7	-9	113	1'9	1.3	1.0	
II Ware	11,710				33-953	13.579												59	So		47	3 1000	-8		-6	1.8	-8	1.0	1'0	
12 Watford	17,470				26,854 6,480	3,386				14'4		1 1 1 1 1 1			23			37	97	1		12			-9	1.1	2.0	1.1	1'0	1
-					1	1		-		1		1		-		1		1 3	i	-	1.	1.	14	1 7	-8	1:3	1'4	1'2	1.0	c
COUNTY SUMMAR	Y 384,100	332,22	311,28	258,423	404,523	398,60	4 1'2	14	8 14'9	18.1	22'9	9 11'9	10:	2 110	11.	47	45	64	88	4'2	2.4	15	.2	1	0	1.3				

^{*} Per 1,000 of population. + 1901-1910. ‡ 1911-1920.

[|] Per 1,000 births. § Of children under two years of age per 1,000 births.

ATTEMPT OF URBAN AND RURAL

				A argintant sp.	
		221,21			
		CERTIFICATION			



