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REPORT

BY THE

COUNTY MEDICAL OFFICER OF HEALTH

ON THE

VITAL STATISTICS AND SANITARY CONDITION OF SHROPSHIRE DURING THE YEAR 1909,

INCLUDING A

SUMMARY OF THE ANNUAL REPORTS OF THE DISTRICT MEDICAL OFFICERS OF HEALTH, AND A REPORT ON THE ADMINISTRATION OF THE MIDWIVES ACT.

JAMES WHEATLEY, M.D., D.P.H.

SHREWSBURY,
July, 1910.

TO THE CHAIRMAN AND MEMBERS OF THE PUBLIC HEALTH AND HOUSING COMMITTEE OF THE SHROPSHIRE COUNTY COUNCIL.

GENTLEMEN,

I have the honour to present my Annual Report for 1909.

The general arrangement of previous reports has been continued in the present one. The second part of the report is a condensed summary of the reports for the various districts. In the first part each subject is dealt with as affecting the whole County.

A report is given on the administration of the Midwives Act.

I am, Gentlemen,

Your obedient Servant,

JAMES WHEATLEY.

COUNTY HEALTH DEPARTMENT,

COUNTY BUILDINGS,

July, 1910.

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To Part I.

To Part II. (District Reports).

PART 1.

THE ADMINISTRATIVE COUNTY.

POPULATION.

The population for the whole Administrative County was in 1891, 236,827, and in 1901, 239,783. In 1901 the total population of the urban and rural districts, containing a small part of Staffordshire, was 240,606, and it is estimated to be 243,238 in the middle of 1909. This is the population on which the county rates are calculated.

The populations on which the district rates are calculated are those estimated from local knowledge by the Medical Officers of Health. In some of the districts corrections of the population have been made on account of the public institutions.

The population of the Registration County is estimated at the middle of 1909 to be 263,935. It includes certain small portions of the Administrative Counties of Chester, Flint, Denbigh, Montgomery, Hereford, Worcester, and Stafford. It does not, however, include certain portions of the Administrative County of Salop, which are situated in the Registration Counties of Montgomery, Radnor, Worcester, and Stafford.

The registration county is the area used by the Registrar-General for his mortality statistics relating to this county. It is also the area used by the Local Government Board for vaccination statistics.

The inconvenience caused by the lack of correspondence between registration and administrative districts has been referred to in previous reports. It is principally on account of the fact that registration counties do not correspond with administrative counties, nor registration districts or sub-districts with sanitary districts, that the very valuable information contained in the Registrar-General's Reports is of comparatively little use to those engaged in sanitary administration. *It is extremely desirable that registration districts and sub-districts should be co-terminous with administrative districts.*

It is satisfactory to find that the Registrar-General is making an effort to reduce the objections to the present system to a minimum, as the following quotation from his report for 1908 shows :—

"Proposals have from time to time been put forward that in order to remedy this defect the registration areas should be made partially or completely co-terminous with the administrative areas. The obstacles in the way of such a proceeding are, however, too serious to be overcome except by legislation, going to the length of a new Registration Act. But it does not follow that because, short of such legislation, registration statistics must continue to be collected for registration and not for administrative areas, their publication need necessarily also retain this form. In other words, the area of collection does not necessarily govern that of presentation. Provisional investigation of the question from this point of view has led to the conclusion that it may be possible at a future date to re-distribute the returns (collected as before by registration areas) according to administrative areas, though it will probably be impracticable to publish separate statistics for all the smaller areas."

The difficulties in the way of this reform are very considerable, and they are not confined to the work of the Registrar-General's Department. It is obvious that if the local and general statistics are to be interchangeable and supplementary, they must be compiled not only on the same general principles, but also with absolute agreement as regards the classification of each death. There must also be complete agreement with regard to the allocation of deaths to localities, where persons have died away from the district they belong to. What exactly will be the best arrangement for co-ordinating the local and general statistical work is the problem to be solved, but it is obvious that it will mean a considerable amount of extra clerical and statistical work for those who are responsible for it.

Table 1.

Population, &c., in Urban and Rural Districts.

Urban Districts.	Inhabited houses.			Population.				
	1891	1901	Average No. of persons to each house.	1891	1901			Percentage, Increase or Decrease between 1891 and 1901.
					Males.	Females	Total.	
Bishop's Castle ..	361	354	3.9	1586	666	712	1378	— 13.1
Bridgnorth ..	1215	1300	4.6	5865	2791	3261	6052	+ 3.2
Church Stretton ..	131	147	5.5	770	399	417	816	+ 5.9
Dawley	1523	1633	4.6	6996	3940	3582	7522	+ 7.5
Ellesmere	392	425	4.5	1830	868	1077	1945	+ 6.2
*Ludlow	959	1372	4.6	4460	3065	3308	6373	+ 2.0
Newport	714	720	4.5	3403	1518	1723	3241	— 4.7
Oakengates ..	2117	2187	4.9	10680	5739	5167	10906	+ 2.0
Oswestry	1778	2083	4.6	8496	4507	5072	9579	+ 12.7
Shrewsbury ..	5600	6065	4.6	26967	13423	14972	28395	+ 5.3
‡Wellington ..	1284	1327	4.7	5909	3049	3234	6283	+ 6.3
Wem	406	453	4.7	1878	987	1162	2149	+ 14.4
Wenlock	3447	3568	4.4	15703	7998	7868	15866	+ 1.0
Whitchurch ..	1006	1129	4.6	4930	2476	2745	5221	+ 5.9
All Urban Districts	20933	22763	4.5	99473	51426	54300	105726	+ 4.4
Rural Districts.								
Atcham	4264	4329	4.8	21144	10314	10581	20895	— 1.1
Bridgnorth ..	1934	1886	4.5	9185	4200	4373	8573	— 6.6
Burford	277	263	4.6	1361	600	633	1233	— 9.4
Chirbury	899	812	4.3	4084	1796	1743	3539	— 13.3
Church Stretton ..	1019	1005	4.4	4631	2242	2237	4479	— 3.3
Cleobury Mortimer	1251	1292	5.2	5911	3717	3003	6720	+ 13.6
Clun	1585	1487	4.5	7459	3429	3395	6824	— 8.5
Drayton	2613	2655	4.4	11969	5703	6005	11708	— 2.1
Ellesmere	1649	1658	4.7	8119	3963	3948	7911	— 2.5
*Ludlow	2242	2003	4.7	10863	4904	4681	9585	+ 5.0
Newport	1302	1284	4.7	6327	3071	2962	6033	— 4.6
Oswestry	3213	3220	4.5	15107	7357	7370	14727	— 2.5
†Shifnal	1923	1918	4.6	9120	4335	4509	8844	— 3.0
Teme	388	388	4.7	1870	970	876	1846	— 1.3
‡Wellington ..	2271	2499	4.7	10780	6000	5773	11773	+ 9.2
Wem	1801	1840	4.4	8241	4119	4147	8266	+ 0.3
Whitchurch ..	423	424	4.5	2031	956	968	1924	— 5.2
All Rural Districts	29054	28963	4.6	138202	67676	67204	134880	— 1.08

*The 1901 figures for Ludlow Borough include the additions made in November, 1901, and the same numbers have been deducted from the Ludlow Rural District, viz., 385 inhabited houses, 894 males and 927 females. The percentage increase or decrease has been calculated without these additions and deductions.

†This District (Shifnal) includes 184 inhabited houses, 427 males and 396 females in the Administrative County of Stafford.

‡The population of the added part of Wellington, about 827, has not been transferred in this table from the Rural to the Urban District.

Table 2.

Population in Age Periods at 1901 Census.

Age Period.	Urban Districts. Total.	Urban Districts. Percentage at each age period.	Rural Districts. Total.	Rural Districts. Percentage at each age period.
Under 1	2462	2.4	2965	2.2
1—5	9255	8.9	12171	8.9
5—10	11094	10.7	15176	11.2
10—15	10818	10.4	14275	10.5
15—25	19671	18.9	22940	16.9
25—35	15508	14.9	18610	13.7
35—45	12132	11.7	16007	11.8
45—55	9337	9.0	12743	9.4
55—65	7234	7.0	10719	7.9
65—75	4522	6.1	7033	7.6
75—85	1680		2859	
85—95	189		373	
95 and upwards	3		7	
	103905		135878	

These figures are no doubt getting less accurate as the census year becomes more remote, and it will be most interesting to see whether next year, when the census is taken, the differences in age distribution of the population in urban and rural districts have been accentuated or lessened during the last decade.

There is no doubt that the age distribution of the population has become much modified by the decreasing birth-rate of the last 30 years, and that this change reacts both on birth-rates and death-rates. In comparing the rates of one decade with another these disturbing factors should be eliminated so far as possible.

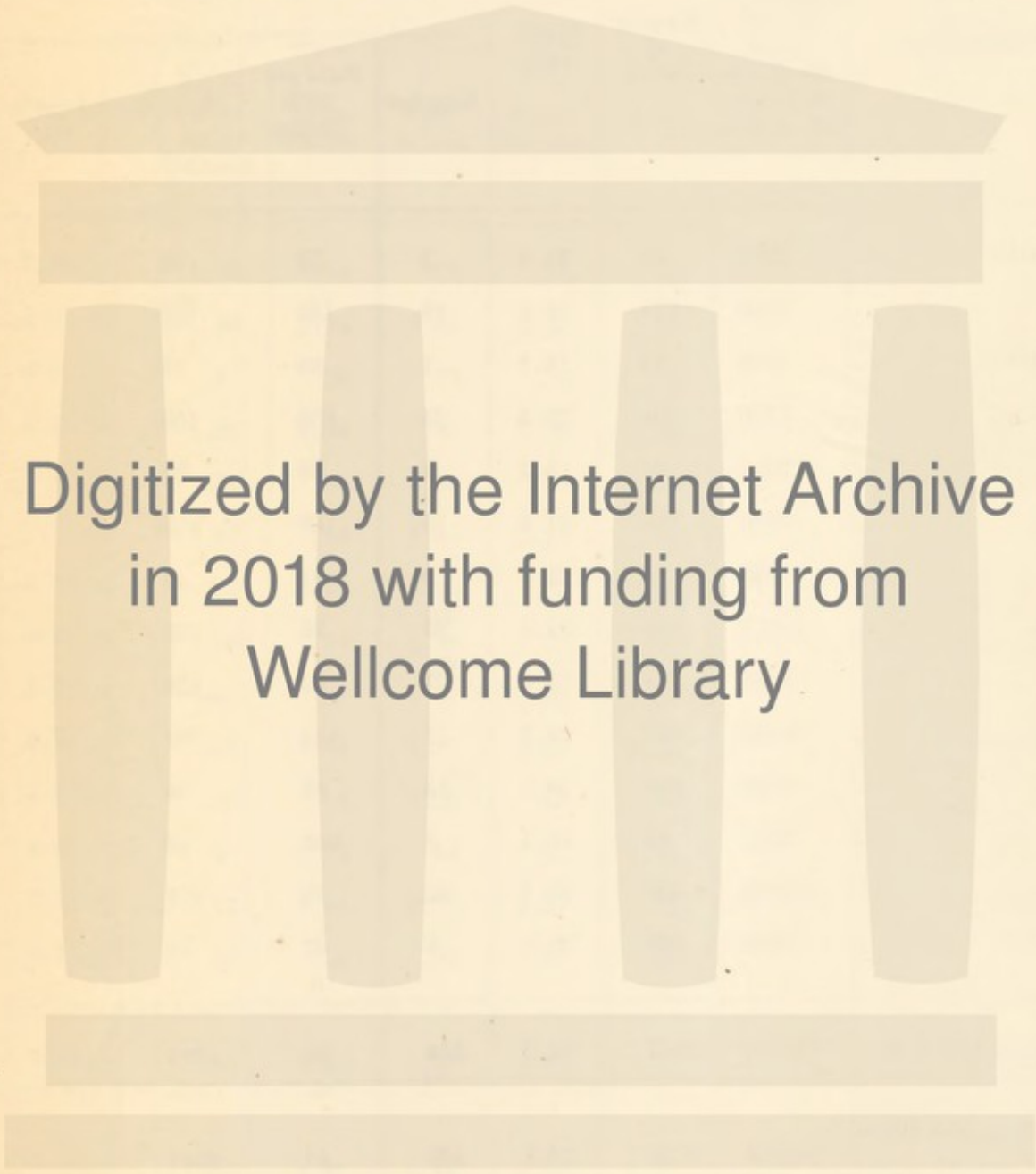
A comparison of the distribution of the population in urban and rural districts is very instructive. The larger percentage under one year in the urban districts indicates a higher birth-rate. In the period 1—5 years, this is equalised by the lower death-rate of the rural districts, and in the periods 5—10 and 10—15 the percentage is slightly higher in the rural than in the urban districts. At 15 the migration from the country to the towns begins, and from that age until 45, the percentage is considerably higher in the urban districts, but above 45 years, *i.e.*, at the periods of high mortality rates, the percentage is distinctly higher in the rural districts.

This difference in the distribution of the population necessarily influences the death-rates apart from any consideration of health conditions. In order to compare one district with another or one district with the whole country, it is necessary to prepare factors of correction which remove the disturbing influence due to unequal distribution of age and sex. The factor for correcting the rates for the Registration County of Salop is .8654, that for the Administrative County is .8918, that for the combined Urban Districts is .9353, and that for the combined Rural Districts is .8622.

These figures have been applied to Table 6 in order to correct the crude death-rates. It will be seen by reference to this table that the corrected rates are very considerably lower, especially in the rural districts, than the crude rates.

I. (URBAN). STATISTICS FOR 1909.

URBAN DISTRICTS.	Estimated Population in 1909 upon which the rates are calculated.	Number of Births.	Birth-rate.	DEATHS UNDER 1 YEAR OF AGE.		DEATHS AT ALL AGES.		Death-rates after correction for deaths of non-residents dying in the District, and of residents dying outside.	DEATH-RATES FROM VARIOUS CAUSES.							
				Number	Rate per 1000 Births.	Number.	Death-rate.		Seven Chief Zymotic Diseases.	Epidemic Influenza	Phthisis.	Other Tubercular Diseases	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.
Bishop's Castle	1280	40	31.2	3	75	26	20.3	17.2	.78	.0	.78	1.56	2.34	.78	.78	1.56
Bridgnorth	6060	133	21.9	18	135	100	16.5	14.3	.99	.33	.99	.66	1.16	1.65	1.32	.66
Church Stretton	1390	26	18.7	1	38	11	7.8	7.2	.72	.0	.0	.0	.72	.72	.0	.72
Dawley	7700	204	26.5	21	103	106	13.7	15.6	.65	.0	.13	.52	2.08	.91	1.69	1.30
Ellesmere	2018	29	14.3	2	69	29	14.3	10.4	.0	.0	.50	.50	.50	1.98	.99	1.98
Ludlow	6570	142	21.6	15	106	116	17.6	17.0	.46	.0	.91	.15	.15	1.07	2.13	1.83
Newport	3030	74	23.9	3	41	48	15.5	13.3	.32	.97	.97	.32	1.29	1.29	.32	2.27
Oakengates..	11077	352	31.8	30	85	133	12.0	13.4	.72	.18	.99	.18	.72	1.44	.72	.63
Oswestry	9950	234	23.5	22	94	125	12.5	14.9	.30	.20	1.41	.40	.70	1.11	1.41	1.01
Shrewsbury	29840	649	21.7	77	119	556	18.6	18.1	1.17	.67	1.11	.47	1.81	1.61	1.88	1.31
Wellington	7500	198	26.4	16	80	94	12.5	10.9	.0	.13	.80	.40	.13	1.20	.93	.93
Wem	2292	49	21.4	5	102	28	12.2	9.1	.0	.0	.87	.0	1.75	.44	.87	1.31
Wenlock	15900	402	25.3	32	79	255	16.0	15.8	.69	.44	1.76	.44	1.64	1.13	1.57	.75
Whitchurch	5390	135	25.0	9	67	64	11.9	12.4	1.11	.19	.37	.37	.19	.19	1.67	.74
Whole of Urban Districts .	110057	2667	24.2	254	95	1691	15.4		.73	.34	1.04	.41	1.22	1.25	1.45	1.11
Whole of Urban and Rural Districts	243238	5796	23.8	528	91	3643	15.0		.78	.37	.93	.39	1.06	1.00	1.72	1.07



I. (RURAL). STATISTICS FOR 1909.

RURAL Districts.	Estimated Population in 1909 upon which the rates are calculated.	Number of Births.	Birth-rate.	Deaths under 1 Year of Age.		Deaths at all Ages.		Death-rate after correction for deaths of non-residents dying in the Districts, and of residents dying outside.	Death-rates from Various Causes.							
				Number	Rate per 1000 Births.	Number	Death-rate.		Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.
Atcham	19800	497	25.1	35	70	396	19.0	13.5	.86	.40	1.21	.20	.86	.45	1.67	.91
Bridgnorth	8600	220	25.5	14	64	119	13.8	15.4	.58	.12	.35	.0	1.05	.70	1.40	1.16
Burford	1233	26	21.0	1	38	9	7.3	6.4	.0	.81	.0	.0	.0	.0	.81	.0
Chirbury	3540	51	14.4	5	98	30	8.5	9.0	.85	.56	1.13	.56	.85	.0	1.41	.0
Church Stretton	4430	105	23.7	4	38	49	11.1	12.2	.45	.23	.68	.23	.23	.68	1.35	.45
Cleobury Mortimer ..	6550	204	31.1	20	98	93	14.2	14.0	1.07	.31	.46	.31	.76	.92	2.44	1.07
Clun	6600	144	21.8	9	62	83	12.6	13.5	.61	.45	.91	.0	1.36	.30	1.97	1.97
Drayton	11510	294	25.5	37	125	195	16.9	17.1	1.65	.35	.96	.61	1.13	.96	3.21	1.13
Ellesmere	7916	165	20.8	15	91	103	13.0	14.6	.63	.13	.88	.13	1.14	1.39	2.02	.88
Ludlow	9858	217	22.0	14	64	113	11.5	12.3	1.01	.61	.71	.20	.71	1.01	1.93	.71
Newport	6020	140	23.2	16	114	88	14.6	15.9	.17	1.16	1.33	1.00	1.50	1.16	2.16	1.33
Oswestry	15000	364	24.2	36	99	234	15.6	14.4	.40	.53	.80	.53	.67	.93	2.13	1.13
Shifnal	8725	176	20.0	15	85	138	15.8	16.1	.46	.11	.69	.34	1.15	1.26	1.26	1.38
Teme	1846	35	18.9	5	143	26	14.1	14.1	.0	.0	.54	.54	1.08	.0	2.17	.0
Wellington	11388	258	22.7	29	112	142	12.5	15.0	1.14	.18	1.05	.70	.61	1.14	2.11	.88
Wem	8265	192	23.2	19	99	120	14.5	16.1	1·69	.60	.48	.48	1.57	.36	1.94	1.69
Whitchurch	1900	41	21.6	0	0	14	7.3	8.4	.0	.0	.0	.53	.53	.0	.53	.53
Whole of Rural Districts ..	133181	3129	23.5	274	88	1952	14.6		.83	.39	.83	.38	.94	.80	1.94	1.04
Whole of Urban and Rural Districts	243238	5796	23.8	528	91	3643	15·0		.78	.37	.93	.39	1.06	1.00	1.72	1.07

In order to have quite comparable figures, factors of correction should be worked out for each disease. Disease rates in this county thus corrected would, as a rule, be lower than the crude rates, especially in the rural districts, and this would be very markedly so, in the case of cancer. On the contrary the phthisis rate in the rural districts would be slightly increased by the correction.

MARRIAGES.

The number of marriages in the Registration County for 1909 was 1,623, compared with 1,695 in 1908, and 1,704 in 1907. The marriage rates were 12.3 in 1909, 12.9 in 1908, 13.5 in 1907, 12.7 in 1906, 13.9 in 1905.

BIRTHS.

The total number of births in the Administrative County was 5,796, giving a birth-rate of 23.8, compared with 24.2 in 1908, 24.1 in 1907, 24.7 in 1906, and 25.8 in 1905. The birth-rate for the year was the lowest on record.

The urban rate was 24.2 and the rural rate 23.8.

Table 3.

BIRTH-RATES, ETC., FOR THE REGISTRATION COUNTY, AND ENGLAND AND WALES FOR THE YEARS 1890—1909.

	Births to 1000 Living.											Illegitimate Births to 1000 Births.									
	Ten Yeors. 1890—1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	Ten years. 1890—1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Shropshire (Registration County)	26·8	25·7	26·2	26·5	26·4	26·2	25·6	24·7	23·8	24·1	23·8	72	62	59	60	64	67	59	65	61	59
England and Wales	30 0	28·7	28·5	28·6	28·4	27·9	27·2	27·1	26·3	26·5	25·6	42	40	40	39	39	40	40	40	39	40

	Males born to 1000 Females Born:									
	Ten years. 1890—1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Shropshire (Registration County)	1034	1032	1004	1021	1029	1033	1045	1053	1023	1008
England and Wales	1036	1033	1039	1039	1035	1037	1036	1041	1039	1036

The birth-rates in the various sanitary distr are given in Table I. Urban and Rural. The birth-rates in the districts of Oakengates, Dawley and Cleobury Mortimer were again in excess of those of other districts, with the exception of the small Borough of Bishop's Castle. These, together with Newport Rural, are the three chief mining districts of the county. The birth-rate of Stottesdon Registration Sub-district, which includes the mining part of Cleobury Mortimer Rural District, was 35.4, whilst that of Cleobury Mortimer Registration Sub-district was only 25.2.

These figures agree with the statement of the Registrar-General "that broadly speaking the fertility rates are high in nearly all the mining counties and low in the agricultural counties."

As explained in previous reports these crude rates are very misleading when used for comparing one district with another, on account of the difference in the age distribution of the population. This is most marked when a typically urban district is compared with a typically rural one, or the combined urban districts with the combined rural districts. The following table, giving the birth-rates for (1) England and Wales, (2) the Administrative County of Shropshire, and (3) the Urban, and (4) the Rural Districts of Shropshire, calculated on the whole population of the district, and also calculated on the number of females between 15 and 45, the active child-bearing period, shows this very clearly.

Birth-rates for 1908 calculated (1) on the whole population, (2) on females between 15 and 45.

	Birth-rates calculated on the whole population.	Birth-rates calculated on the number of females between 15 and 45 years of age.
England & Wales	25.6	102
Shropshire (Administrative County)	23.8	108
Shropshire—Urban Districts	24.2	104
Shropshire—Rural Districts	23.5	112

Calculated in this way, which is undoubtedly the correct one, the Rural Districts of Shropshire have consistently each year a higher birth-rate than the Urban Districts, and also a rate higher than that of England & Wales.

For the following table the same method of calculation has been applied to the sanitary districts of the County :—

Table 4.

BIRTH-RATES FOR 1909 PER 1,000 FEMALES LIVING BETWEEN THE AGES 15 AND 45.

URBAN DISTRICTS.		RURAL DISTRICTS.	
Bishop's Castle	141	Atcham	114
Bridgnorth	85	Bridgnorth	119
*Church Stretton	68	Burford	95
Dawley	144	Chirbury	73
Ellesmere	55	Church Stretton	120
Ludlow	89	Cleobury Mortimer	183
Newport	74	Clun	111
Oakengates	170	Drayton	115
Oswestry	93	Ellesmere	93
Shrewsbury	86	Ludlow	108
Wellington	107	Newport	119
Wem	90	Oswestry	123
Wenlock	120	Shifnal	88
Whitchurch	100	Teme	95
		Wellington	115
		Wem	111
		Whitchurch	96
Combined Urban Districts	104	Combined Rural Districts	113

*Figures not very reliable owing to expansion of District since 1901 Census

The real birth-rates are therefore considerably higher in the rural than in the urban districts, and if the semi-rural districts of Dawley and Oakengates were transferred to the rural districts the difference would be much more marked.

The census returns also show that amongst the married women between 15 and 45 years of age there is a larger proportion at the lower age periods in the urban districts; a factor which should tend to cause a higher birth-rate in the urban districts.

The following quotation from the Report of the Registrar-General for 1908 puts this matter very clearly as it affects the whole country:—

"The figures show that the fertility of married women living in the country districts is about seven per cent. greater than that of women residing in the selected towns. The greater fertility in rural districts would be still more marked if the age constitution of the married women in the two areas were nearly alike. The rural districts labour, however, under a disadvantage in this respect because owing to the migration of young persons from rural to industrial areas the proportion of young married women in the rural districts is considerably below the proportion in the towns or in the country as a whole."

Country districts have therefore not only lower death-rates but also considerably higher fertility rates. These facts are of the utmost importance in considering the probable effect of the continued increase of towns at the expense of the country population. There can be no doubt that even at a great sacrifice it is desirable that a vigorous and numerous country population should be maintained. These considerations should have great weight in dealing with housing and other problems affecting country districts.

DEATHS.

The number of deaths in the county was 3,643, compared with 3,654 in 1908 and 3,567 in 1907, and the death-rate was 15.0 compared with a rate of 15.0 in the previous year. Details with regard to the deaths and death-rates in the various districts are given in Tables I. and II. (urban and rural).

The deaths in the public institutions have been distributed, so far as possible, amongst the districts to which they belong, with the result that fairly correct death-rates have been obtained. The total number of deaths deducted from the various districts was 353, and the number added was 295, the final result being a reduction of the total deaths by 58, of which 22 were out-county patients in the County Asylum. The weak point in this correction is that we do not hear of all the deaths of Shropshire residents occurring in public institutions outside the county. Although these omissions will not be sufficient to appreciably affect the general death-rate they may be sufficient to appreciably affect the death-rate of a disease like cancer, which is treated to such a considerable extent in the hospitals of the large towns.

The highest rates amongst the urban districts were Shrewsbury 18.1, Bishop's Castle 17.9, and Ludlow 17.0; amongst the rural districts Drayton 17.1, Shifnal 16.1, and Wem 16.1.

Table 5.

DEATH RATES IN THE URBAN AND RURAL DISTRICTS AT VARIOUS AGE PERIODS.

Age Periods.	Urban Districts.	Rural Districts.
Under 1 year	103.2	95.0
1—5 years	10.9	9.2
5—15 ,,	2.6	2.4
15—25 ,,	3.3	3.0
25—65 ,,	11.1	8.9
65 and upwards	97.3	88.0

The urban rate exceeded the rural rate at every age period.

In the following table a comparison is made of the rates, both crude and corrected, for sex and age, of Shropshire urban and rural districts with England and Wales urban and rural counties.

The crude rate for Shropshire again slightly exceeded the rate for England and Wales, although the corrected rate for the county was considerably below that for the whole country.

Table 6.

Crude and Corrected Death-rates.

Urban and Rural Districts of Shropshire and England and Wales.

Period.	Shropshire.		England and Wales.	Urban Districts. of Shropshire.		Urban Counties of England and Wales.	Rural Districts of Shropshire.		Rural Counties of England and Wales.
	Crude Rates	† Corrected Rates.		Crude Rates.	† Corrected Rates.	† Corrected Rates.	Crude Rates.	† Corrected Rates.	† Corrected Rates.
1909	15.0	13.4	14.5	15.4	14.4	*	14.6	12.6	*
1908	15.0	13.4	14.7	16.0	14.9	16.1	14.3	12.3	12.6
1907	14.7	13.1	15.0	15.2	14.2	16.4	14.3	12.3	12.8
1906	14.9	13.3	15.4	15.8	14.8	16.8	14.3	12.3	12.9
1905	14.9	13.3	15.2	15.4	14.4	16.5	14.5	12.5	13.2
1904	15.7	14.0	16.2	16.6	15.5	17.9	15.1	13.0	13.5
1903	14.8	13.2	15.4	15.8	14.7	16.9	14.3	12.3	12.8
1902	15.1	13.4	16.3	16.7	15.6	17.8	13.9	11.9	13.7
1901	15.5	13.8	16.9	16.2	15.1	17.7	15.0	12.9	15.3
1900	16.4	14.6	18.2	17.7	16.5	18.9	15.5	13.3	16.6

* These figures are not yet available.

† These are the rates of mortality that would result if the age and sex constitution of the population of the districts were identical with those of the population of England and Wales at the Census, 1901.

INFANTILE MORTALITY.

There were 528 deaths of infants under one year of age, equal to a mortality of 91 for every 1000 births, compared with 100 in 1908, 91 in 1907, 97 in 1906, 93 in 1905, and 115 in 1904.

The rate for England and Wales was 109, and excluding 219 towns, 98.

In Table I. Urban and Rural are given the infant rates for each sanitary district, and in Table V. a detailed analysis is given with regard to causation of death and age at death.

The rate for the combined urban districts was 95, and that of the rural districts 87.

The high infantile rates amongst the urban districts were Bridgnorth 135, and Shrewsbury 119; amongst the rural districts Teme 143, Drayton 125, Newport 114, and Wellington 112.

As previously pointed out these rates for one year are not of much significance. It is, however, of great importance that one should have a reliable guide as to the infantile mortality in the various districts, and for this purpose the following table has been got out giving the average infantile mortality in each district for the last ten years, and the percentage above or below the average for the urban and rural districts.

Table 7.

AVERAGE INFANTILE MORTALITY IN THE URBAN AND RURAL DISTRICTS FOR THE TEN YEARS 1900—1909.

URBAN DISTRICTS.	Average of the Annual Infantile Rates per 1000 births for years 1900—1909	Percentage above or below the average for Urban Districts.	RURAL DISTRICTS.	Average of the Annual Infantile Rates per 1000 births for years 1900—1909	Percentage above or below the average for Rural Districts.
Bishop's Castle ..	83	— 25.2	Atcham	87	— 4.4
Bridgnorth	114	+ 2.7	Bridgnorth	85	— 6.6
Church Stretton ..	92	— 17.1	Burford	61	— 33.0
Dawley	112	+ 0.9	Chirbury	85	— 6.6
Ellesmere	97	— 12.6	Church Stretton ..	89	— 2.2
Ludlow	108	— 2.7	Cleobury Mortimer .	93	+ 2.2
Newport	100	— 9.9	Clun	95	+ 4.4
Oakengates	127	+ 14.4	Drayton	115	+ 26.4
Oswestry	99	— 10.8	Ellesmere	97	+ 6.6
Shrewsbury	129	+ 16.2	Ludlow	84	— 7.7
Wellington	101	— 9.0	Newport	109	+ 19.8
Wem	97	— 12.6	Oswestry	97	+ 6.6
Wenlock	99	— 10.8	Shifnal	91	0.0
Whitchurch	102	— 8.1	Teme	124	+ 36.3
			Wellington	91	0.0
			Wem	67	— 26.4
			Whitchurch	54	— 40.7

Even for this extended period the figures cannot be used for very positive deductions with respect to small districts of one or two thousand inhabitants, but for the average sized districts of eight thousand and upwards, deductions may with some certainty be drawn.

TABLE V. (URBAN).

INFANTILE MORTALITY DURING THE YEAR 1909.

DEATHS FROM STATED CAUSES IN WEEKS AND MONTHS UNDER ONE YEAR OF AGE.

CAUSE OF DEATH.	WEEKS.				Total under 1 month.	MONTHS.											Total under 1 year.
	Under 1	1—2	2—3	3—4		1—2	2—3	3—4	4—5	5—6	6—7	7—8	8—9	9—10	10—11	11—12	
Small-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chicken-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet fever	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	2
Diphtheria	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	2
Whooping Cough	..	..	..	1	1	..	..	1	2	2	1	..	..	1	2	1	11
Diarrhœa, all forms	..	..	..	..	..	3	3	1	5	2	1	..	1	..	..	2	18
Enteritis	..	..	..	..	1	2	4	2	..	..	1	..	..	..	..	..	10
Gastritis, Gastro-intestinal Catarrh	1	..	..	1	2	..	2	1	3	..	..	..	1	..	..	..	9
Premature Birth	..	..	..	46	2	2	1	51	1	..	..	1	..	..	..	..	54
Congenital Defects	..	..	4	1	..	1	6	1	..	1	..	..	..	..	..	..	1	9
Injury at Birth	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Want of Breast Milk	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Atrophy	..	..	..	..	11	6	5	2	24	6	7	..	2	1	4	3	1	..	..	1	49
Tuberculous Meningitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculous Peritonitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Tuberculous Diseases	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	2
Erysipelas	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Syphilis	..	..	..	1	..	1	..	..	..	..	..	..	..	1	..	..	2
Rickets	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
Meningitis (not Tuberculous)	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	2
Convulsions	..	..	..	3	2	2	1	8	5	2	5	..	1	1	2	1	..	1	1	27
Bronchitis	..	..	..	..	1	..	..	1	2	2	..	..	..	1	2	1	..	..	..	9
Laryngitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pneumonia	..	..	..	..	2	..	..	2	3	..	2	2	3	3	3	2	2	2	5	29
Suffocation	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Causes	..	..	..	1	1	4	2	8	..	3	1	2	..	..	2	1	1	..	..	18
TOTALS	..	..	..	66	15	15	9	105	23	24	15	18	10	13	14	10	6	5	11	254

TABLE V. (RURAL).

INFANTILE MORTALITY DURING THE YEAR 1909.

DEATHS FROM STATED CAUSES IN WEEKS AND MONTHS UNDER ONE YEAR OF AGE.

CAUSE OF DEATH.	WEEKS.				Total under 1 month.	MONTHS.											Total under 1 year.
	Under 1	1—2	2—3	3—4		1—2	2—3	3—4	4—5	5—6	6—7	7—8	8—9	9—10	10—11	11—12	
Small-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chicken-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	1	3
Scarlet Fever	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1
Diphtheria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Whooping Cough	..	..	..	..	..	2	2	3	3	1	2	2	3	..	1	2	21
Diarrhœa, all forms	..	..	..	1	1	2	3	2	..	1	..	1	1	..	1	2	14
Enteritis	..	..	1	..	1	..	1	1	2	3	..	1	..	1	..	..	10
Gastritis, Gastro-intestinal Catarrh	..	..	..	..	..	1	2	2	1	..	..	..	..	..	..	..	6
Premature Birth	..	39	3	4	3	49	2	..	1	1	..	..	..	..	..	..	..	53
Congenital Defects	..	8	3	..	1	12	2	..	..	..	..	..	..	..	..	..	..	14
Injury at Birth	..	3	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	3
Want of Breast Milk	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1
Atrophy	..	14	3	7	2	26	5	4	..	3	2	1	1	..	..	..	..	42
Tuberculous Meningitis	..	..	..	..	..	..	..	..	..	..	1	1	1	1	..	..	1	5
Tuberculous Peritonitis	..	..	..	..	..	..	..	..	..	3	..	..	1	1	..	..	1	6
Other Tuberculous Diseases	..		..	..	..	..	2	..	..	..	..	..	1	..	1	1	..	5
Erysipelas	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Syphilis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rickets	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
Meningitis (not Tuberculous)	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
Convulsions	..	6	5	..	..	11	2	2	..	1	1	3	1	2	..	1	..	24
Bronchitis	..	..	..	4	..	4	6	4	3	..	..	1	2	1	1	1	..	23
Laryngitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pneumonia	..	..	..	1	..	1	1	1	..	1	2	1	3	2	4	1	3	20
Suffocation	..	2	..	..	..	2	..	1	..	..	..	..	..	..	..	..	..	3
Other Causes	..	4	1	3	..	8	2	1	2	..	2	..	1	..	1	..	..	17
TOTALS	..	76	15	21	8	120	27	21	14	15	13	10	16	11	10	7	10	274

The only urban rates for the ten years in excess of the average for the urban districts are those of Shrewsbury, Oakengates, and Bridgnorth. The comparatively high rate in Shrewsbury was, in the opinion of Dr. Reynolds, intimately associated with housing conditions.

The rate for Oakengates for 1909 is considerably below the average for urban districts, but the high rate for the 10 years suggests the necessity for special action. I have previously suggested the adoption of the Notification of Births Act.

The rate for the Borough of Bridgnorth was only slightly in excess of the average for the urban districts.

Amongst the rural districts, those with the highest average for the 10 years are Teme, Drayton and Newport.

With regard to Teme, I will quote from my last Annual Report :—
"Teme is a very small district and consequently liable to great variations, but its persistently high rate would suggest the advisability of investigation." The infantile death-rate for the year is again extremely high (143), and it certainly seems desirable that a special report should be made. No comments on this matter are contained in the District Medical Officer's Report.

The high infantile mortality for Drayton has been specially reported upon by the District Medical Officer of Health. During the four years 1905, 1906, 1907, and 1908, the rate was comparatively low. For the last year the rate was again high, and the average for the 10 years is much above the average for the rural districts. One of the most important recommendations for improving the sanitary conditions of Market Drayton, and one which undoubtedly would have considerable effect upon the health of young children, viz., public scavenging, has unfortunately not been adopted.

The rate for the Newport Rural District is distinctly above the average of rural districts, and is probably due to a high rate in the industrial part of the district.

The infantile mortality for the year for most of the districts may be considered on the whole as fairly satisfactory, and no doubt in consequence there is little comment on this subject in the reports. The following extracts contain the more important remarks :—

Dawley Urban District.—"The rate for the year shows a marked improvement upon that of 1908. The figures show no excessive mortality from any of the 'preventable' causes, but taken together some wastage of infant life is evident which might be saved with better training and knowledge on the part of parents in the feeding and care of infants."

Whitchurch Urban District.—"The deaths of infants under one year numbered 9, viz :— Whooping cough 1, diarrhœal disease 3, premature birth 2, convulsions 3. The rate is low and satisfactory, but of the few deaths that occurred it can be said that nearly the whole were due to causes that may be considered preventable."

Oakengates Urban District.—"Inasmuch as the infant mortality is a fairly reliable test of the sanitary condition of any district, and since 1905 this has shown a marked decline except in 1908, when there occurred a slight rise due mostly to respiratory diseases, this year's record of 85.2, the lowest of all, is a matter of congratualtion."

Cleobury Mortimer Rural District.—"This rate (98) is much higher than it should be. In Cleobury Mortimer registration district it is 80, but in Stottesdon, owing to the number of deaths of infants at Highley, it is 114."

Chirbury Rural District.—"Five deaths of children under one year of age took place, giving a death-rate of 63.3 per 1000 births registered. This I think is satisfactory. Two of the deaths occurred from complications of whooping cough, and in my opinion emphasises the need of educating parents to regard whooping cough (and measles) as serious diseases in young children, and seek for medical advice, most deaths from these causes being eminently preventable."

Dealing with the County as a whole it will be seen by reference to Table V. (urban and rural) that many of the deaths were from causes of a preventable nature. In order to form a clear conception of the number of deaths from preventable causes, these have been extracted and classified according to their probable causation. It is not suggested that even with the greatest care the whole of these deaths might have been prevented, but there can be no doubt that with reasonable care and knowledge they would have been lessened by a very large percentage.

(1) Infantile deaths, of which a considerable proportion were no doubt due to errors of feeding.

	Urban Districts.	Rural Districts.	Whole County.
Diarrhœa, all forms	18	14	32
Enteritis (not tuberculous)	10	10	20
Gastritis and Gastro-intestinal Catarrh ..	9	6	15
Atrophy, Debility, Marasmus	49	42	91
Want of Breast Milk	0	1	1
Convulsions	27	24	51
Total	113	97	210

(2) Infantile deaths, a considerable proportion of which were due to improper clothing, exposure to cold, exposure to infection, and general want of attention to the laws of health :—

	Urban Districts.	Rural Districts.	Whole County.
Infectious Diseases	15	26	41
Bronchitis	9	23	32
Pneumonia	29	20	49
Total	53	69	122

(3) Infantile deaths due to a great extent to a want of care on the part of the mother for her own health :—

	Urban Districts.	Rural Districts.	Whole County.
Premature Births	54	53	107

(4) Infantile deaths due to tuberculous infection :—

Urban Districts.	Rural Districts.	Whole County.
2	16	18

The deaths from these causes, which in a large measure may be considered as preventable, numbered 86 per cent. of the whole. It is evident, therefore, that there is much scope for the reduction of the infantile mortality.

On comparing these figures with those of last year the most striking feature is the decrease of deaths due to bronchitis and pneumonia in the urban districts. The figures are 38 compared with 82, and the decrease was probably due to the greatly lessened incidence of measles and whooping cough. The important fact to be borne in mind is that these diseases are responsible for many more deaths than are directly put down to them.

The number of deaths from tuberculous infection was very low in the urban districts compared with the rural, and reference to previous reports shows that for 1907, and 1908, the infantile death-rate from tuberculous disease was three times as great in the rural as in the urban districts. This, however, is no doubt accidental, and not due to different conditions of living, for when the figures are extended over 10 years there is practically no difference in the rates in the two groups of districts.

In previous reports it has been pointed out that in the rural districts the proportion of deaths in the first week and first month is considerably higher than it is in the urban districts. During last year the difference has not been nearly so marked. The figures are, first week, rural districts 27.7 per cent., urban districts 25.9 per cent.; first month, rural districts 43.8 per cent., urban districts 41.3 per cent.

In my report for 1907 I said :—On the face of it, it seems probable that this excess of deaths under one week in rural districts is due to the difficulty of obtaining prompt medical assistance and to the unwillingness of midwives to send any considerable distance for medical help on account of illness of the child, unless the symptoms are very urgent. The result is that medical help is either not obtained at all or it is obtained when too late to be of use.

This matter has come prominently under my notice in the administration of the Midwives Act. The remedy is undoubtedly to strictly enforce the rules relating to sending for medical help, and to make it easy for the midwives to obtain medical help for poor persons.

Leaving aside the general removal of insanitary conditions which must have a great effect upon infantile mortality, particularly in towns, the reduction of the mortality must proceed on the following lines :—

(1) The production of a clean milk supply free from tubercle.
(2) The instruction of mothers in the feeding and care of infants, and similar teaching to the older girls in the elementary schools.
(3) Securing better isolation and general attention to children whilst suffering from epidemic diseases, more particularly measles and whooping cough.
(4) Strict enforcement of those provisions of the Midwives Act that specify when medical help shall be sent for.

The provision of a clean milk supply free from tubercle can only be brought about by efficient inspection of cowsheds, dairies, and dairy cattle. Although there has been some improvement in this respect in certain districts, it is quite certain that no satisfactory action will be taken without fresh legislation.

The adoption of the Notification of Births Act is a means of preventing infantile mortality that should be carefully considered by all urban authorities. There is no doubt a difficulty in small districts in arranging for the necessary visiting, but this can often be undertaken by nurses already engaged in district work, who would for this purpose work under the direct supervision of the Medical Officer of Health.

Under the heading of measles and whooping cough the question of better isolation and general attention to children suffering from these diseases is dealt with. There can be no doubt that the employment of a properly trained nurse to visit and instruct during epidemics of these diseases would save many lives.

The Rules of the Central Midwives Board setting out when medical help shall be sent for by a midwife are now being more strictly enforced, and in the long run this cannot fail to bring about a higher appreciation of the value of infant life and a consequent saving of life.

CHIEF CAUSES OF DEATH.

Table 8.

	Urban Districts. 1909		Rural Districts. 1909		Whole County. 1909		1908		England and Wales 1908
	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.	Death-rates.
Seven Chief Zymotic Diseases ..	80	.73	110	.83	190	.78	165	.68	1.29
Phthisis	114	1.04	111	.83	225	.93	230	.95	1.11
Other forms of tuberculosis ..	45	.41	50	.38	95	.39	105	.43	.47
Bronchitis	134	1.22	125	.94	259	1.06	259	1.07	1.09
Pneumonia	138	1.25	106	.80	244	1.00	219	.90	1.18
Heart Disease	160	1.45	259	1.94	419	1.72	473	1.94	1.42
Cancer	122	1.11	139	1.04	261	1.07	263	1.08	.92

The death-rates from phthisis, other forms of tuberculosis, bronchitis and pneumonia in the rural districts were considerably below those in the urban districts. The death-rates from the various diseases for the county compare favourably with those of England and Wales, except in the case of heart disease and cancer.

Average Annual Death-rates per Million, for certain Diseases, in Groups of Years from 1856—1908.
Registration County of Shropshire.

Table 9.

PERIODS.	Small-pox.	Measles.	Scarlet Fever.	Diph-theria.	Whoop-ing. Cough.	Typhus Fever.	Enteric Fever.	Con-tinued Fever.	Cancer.	Phthisis.
1856—1860	129	206	546	245	339	*	617	*	—	2206
1861—1870	112	277	548	232	298	*	644	*	—	2169
1871—1880	78	186	518	190	271	33	246	75	—	1640
1881—1885	10	147	323	207	244	8	168	17	626	1377
1886—1890	1	213	79	125	319	5	127	5	782	1359
1891—1895	3	163	132	209	240	1	92	.7	847	1144
1896—1900	.7	161	65	210	234	0	82	1	953	1028
1901—1908	.17	164	54	120	232	0	29	0	1034	961

*In these years Typhus, Enteric and Continued Fevers were not differentiated.

This table, the significance of which I pointed out in previous reports, has been brought up to date.

CAUSES OF DEATHS IN AGE PERIODS DURING YEAR 1909 IN THE URBAN DISTRICTS OF SHROPSHIRE.

CAUSE OF DEATH.	Total Deaths in Urban Districts in Age Periods.							Causes of Deaths in the Different Urban Districts.													
	All Ages	Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Bishop's Castle.	Bridg-north.	Church Stretton	Dawley	Elles-mere.	Ludlow.	Newport	Oaken-gates.	Oswestry	Shrews-bury.	Welling-ton.	Wem.	Wenlock	Whit-church.
Small-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever	15	2	3	5	3	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Whooping Cough	20	11	9	..	..	..	..	..	..	..	..	..	..	..	3	..	10	..	..	2	..
Diphtheria and Membranous Croup	16	2	3	8	2	..	1	1	1	..	3	..	1	1	3	..	..	..	..	8	2
Croup	3	..	3	..	..	..	..	..	..	1	1	..	..	..	..	1	12	..	..	..	1
Typhus Fever	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	2	..
Enteric Fever	4	..	..	2	1	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Continued Fever	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	3	..	..	..	..
Epidemic Influenza	38	..	..	..	..	16	22	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera	..	..	..	..	..	..	..	..	2	..	..	..	..	3	2	2	20	1	..	7	1
Plague	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhœa	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteritis	24	18	1	..	..	..	5	..	4	..	1	..	2	..	2	2	9	..	..	1	3
Gastritis	14	10	1	1	..	..	2	1	4	..	1	..	1	..	2	1	2	..	..	1	1
Puerperal Fever	7	4	..	..	..	1	2	..	2	..	..	..	2	..	..	..	..	..	..	1	1
Erysipelas	2	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	2
Other Septic Diseases	2	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	2	..
Phthisis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..
Other Tubercular Diseases	114	..	2	4	19	82	7	1	6	..	1	1	6	3	11	14	33	6	2	28	2
Cancer—Malignant Disease	45	2	8	12	8	12	3	2	4	..	4	1	1	1	2	4	14	3	..	7	2
Bronchitis	122	..	..	1	..	63	58	2	4	1	10	4	12	7	7	10	39	7	3	12	4
Pneumonia	134	9	9	1	..	26	89	3	7	1	16	1	1	4	8	7	54	1	4	26	1
Pleurisy	138	29	28	1	4	35	41	1	10	1	7	4	7	4	16	11	48	9	1	18	1
Other Diseases of Respiratory Organs	6	..	1	..	..	3	2	..	..	..	1	..	..	..	2	1	2	..	..	..	..
Alcoholism—Cirrhosis of Liver	16	..	2	..	1	10	3	..	..	..	..	..	..	..	1	2	9	..	..	3	1
Venereal Diseases	19	..	..	..	..	15	4	..	2	..	..	..	6	1	2	1	3	1	..	1	2
Premature Birth	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diseases and Accidents of Parturition	54	54	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Heart Diseases	5	..	..	..	1	4	..	..	4	1	4	1	3	1	6	2	17	1	2	10	2
Accidents	160	2	..	4	5	67	82	..	1	..	1	..	..	..	..	..	1	1	..	1	..
Suicides	29	1	5	7	6	4	6	1	8	..	13	2	14	1	8	14	56	7	2	25	9
All other Causes	6	..	..	..	1	3	2	..	1	..	6	..	..	..	6	2	7	1	..	5	1
	689	110	28	14	18	174	345	10	25	5	50	7	56	15	67	75	200	41	16	90	32
Totals	1683	254	104	60	69	521	675	22	87	10	120	21	112	41	148	149	542	82	30	252	67

II. (RURAL).

CAUSES OF DEATHS IN AGE PERIODS DURING YEAR 1909, IN THE RURAL DISTRICTS OF SHROPSHIRE.

CAUSE OF DEATH.	Total Deaths in Rural Districts in Age periods.							Causes of Deaths in the different Rural Districts.																
	All Ages.	Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Atcham.	Bridgnorth.	Burford.	Chirbury	Church Stretton	Cleobury Mortimer.	Clun.	Drayton	Ellesmere.	Ludlow.	Newport	Oswestry	Shifnal.	Teme.	Wellington.	Wem.	Whitchurch.
Small-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles	8	3	4	1	..	..	..	..	..	..	..	..	..	..	3	..	5	..	..	..	..	..	..	..
Scarlet Fever	16	1	7	6	2	..	..	5	..	..	..	2	..	3	2	..	..	..	2	..	..	1	1	..
Whooping Cough	43	21	21	1	..	..	..	4	3	..	2	..	4	1	10	..	2	..	1	2	..	6	8	..
Diphtheria and Membranous Croup	21	1	7	12	1	..	..	5	..	..	..	..	1	..	2	4	1	1	2	..	..	1	4	..
Croup	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Typhus Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever	5	..	..	1	1	2	1	..	..	..	1	..	2	..	..	..	2	..	..	..	..	..	..	..
Continued Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Epidemic Influenza	52	7	..	1	..	11	33	8	1	1	2	1	2	3	4	1	6	7	8	1	..	2	5	..
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Plague	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhœa	17	14	2	..	..	..	..	3	2	..	..	..	..	..	2	1	..	..	1	2	..	5	1	..
Enteritis	17	11	3	1	..	1	2	7	..	..	..	1	1	..	2	1	2	2	1	..	..	..	..	..
Gastritis	13	6	1	..	1	3	2	1	..	..	..	..	1	..	2	3	..	..	1	2	1	2	..	..
Puerperal Fever	8	..	..	..	1	7	..	..	..	..	..	..	2	..	..	..	3	1	1	..	..	..	1	..
Erysipelas	4	..	..	..	..	1	3	..	..	..	..	..	..	..	1	2	..	..	..	..	..	1	..	..
Other Septic Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Phthisis	111	..	1	10	24	68	8	24	3	..	4	3	3	6	11	7	7	8	12	6	1	12	4	..
Other Tubercular Diseases	50	15	9	11	7	7	1	4	..	..	2	1	2	..	7	1	2	6	8	3	1	8	4	1
Cancer—Malignant Disease	139	..	..	1	1	63	74	18	10	..	..	2	7	13	13	7	7	8	17	12	..	10	14	1
Bronchitis	125	23	13	2	..	11	76	17	9	..	3	1	5	9	13	9	7	9	10	10	2	7	13	1
Pneumonia	106	18	16	2	8	29	33	9	6	..	..	3	6	2	11	11	10	7	14	11	..	13	3	..
Pleurisy	6	..	..	..	..	5	1	2	..	..	..	..	1	1	1	..	..	..	..	1	..	..	..	..
Other Diseases of Respiratory Organs	14	1	3	1	..	3	6	1	4	..	..	1	..	..	2	1	..	..	1	4	..	..	..	..
Alcoholism, Cirrhosis of Liver	14	..	..	..	..	10	4	1	..	..	..	..	..	..	2	..	..	1	5	2	1	..	2	..
Venereal Diseases	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Premature Birth	53	53	..	..	..	..	..	5	2	1	..	1	5	..	4	6	2	4	10	1	1	9	2	..
Diseases and Accidents of Parturition	9	1	..	..	..	8	..	2	1	..	..	..	..	..	1	..	1	1	2	..	..	1	..	..
Heart Diseases	259	..	..	3	4	84	168	33	12	1	5	6	16	13	37	16	19	13	32	11	4	24	16	1
Accidents	54	6	7	3	5	18	15	4	3	2	1	..	1	2	6	1	6	5	10	2	3	4	1	3
Suicides	8	..	..	..	..	4	4	..	..	..	..	..	1	..	..	..	1	1	4	..	..	1	..	..
All other Causes	757	93	15	12	12	172	453	113	77	3	12	32	32	36	61	45	39	22	75	71	12	64	54	9
Totals	1911	274	110	68	67	508	884	268	133	8	32	54	92	89	197	116	122	96	217	141	26	171	133	16

The striking points are the increase of the death-rate from cancer and the decrease of that from phthisis ; the very extraordinary decrease of the death-rates from scarlet fever and enteric fever ; the very slight decrease in the rates from whooping cough and measles, and the slight decrease in the rate from diphtheria, compared with that from scarlet fever and enteric fever. The result is a complete reversal of the order of importance of the diseases viewed from the number of deaths they cause. Whereas in the early periods scarlet fever and enteric fever were the most fatal of the infectious diseases, now the most fatal of these diseases are whooping cough, measles and diphtheria. The prevention of these diseases, and particularly the lessening of the case mortality is one of the most promising fields of action for the saving of life, and they should undoubtedly receive more careful attention in the future.

INFECTIOUS DISEASES.

The death-rate from the seven common infectious diseases was .78, compared with .68 in 1908, .79 in 1907, .88 in 1906, .64 in 1905, and 1.0 in 1904.

Table 10.

ANALYSIS OF DEATHS AND DEATH-RATES FROM THE COMMON INFECTIOUS DISEASES.

	Seven chief Zymotic Diseases.		Small-pox.		Scarlet Fever.		Typhoid Fever.		Diphtheria.		Measles.		Whooping Cough.		Diarrhœa.	
	Deaths	Death-rates.	Deaths	Death-rates.	Deaths	Death-rates.	Deaths	Death-rates.	Deaths	Death-rates.	Deaths	Death-rates.	Deaths	Death-rates.	Deaths	Death-rates.
rban Districts	80	·73	0	·00	15	·14	4	·04	16	·14	0	·00	20	·18	24	·22
ural Districts	110	·83	0	·00	16	·12	5	·04	21	·16	8	·06	43	·32	17	·13
hole County	190	·78	0	·00	31	·13	9	·04	37	·15	8	·03	63	·26	41	·17
ngland and Wales ..		1·12		·00		·09		·06		·14		·35		·20		·28
ngland and Wales less 219 towns		·80		·00		·06		·06		·14		·21		·16		·17
NOTIFICATIONS			Cases.	Case Mortality per cent.	Cases.	Case Mortality per cent.	Cases.	Case Mortality per cent.	Cases.	Case Mortality per cent.						
rban Districts			0	0	552	2·7	29	13·8	153	10·5						
ural Districts			0	0	514	3·1	16	31.2	159	13·2						
hole County			0	0	1066	2·9	45	20·0	312	11·6						

In the above table the County of Salop should be compared with " England and Wales less 219 towns." It will be seen then that there was a higher rate from scarlet fever, diphtheria and whooping cough, and a lower rate from typhoid fever and measles.

The case mortality from scarlet fever, typhoid fever, and diphtheria was considerably higher in the rural than in the urban districts.

Small-pox.—No case of small-pox was notified during the year. There has now been almost complete freedom from small-pox in the county since 1904. It must be remembered, however, that the performance of vaccination, which reached a high degree of efficiency in the years 1903 and 1904, has been falling off somewhat rapidly during the last two or three years. It is all the more necessary therefore that one should see that the other means of controlling small-pox are kept in an efficient condition.

Scarlet Fever.—The number of cases notified was 1066, compared with 696 in 1908, and 396 in 1907. The urban districts principally affected were Shrewsbury (369), Oakengates (64), Dawley (20), Oswestry (24), and Wenlock (24); the rural districts were Teme (20), Church Stretton (35), Atcham (136), Clun (46), Ellesmere (46), Wem (40), Oswestry (60), and Drayton (45). There were 31 deaths compared with 14 in the previous year The case mortality was 2.9 compared with 2.0 in 1908. The urban case mortality rate was 2.7 and the rural 3.1. Although the disease is reported in many districts as being of a mild type, the case mortality was about 50 per cent. higher than in 1908.

The only districts in which hospital isolation of scarlet fever was practised were :—

Borough of Shrewsbury	where	161	out of	369	were removed to hospital.
,, Bridgnorth	,,	4	,,	4	,, ,,
Urban District of Newport		1	,,	1	,, ,,
Rural District of Drayton		29	,,	45	,, ,,

The spread of the disease was attributed in many districts to mild unrecognised cases. Dr. Hoffman attributes the spread in the Ellesmere Rural District to the absence of any system of disinfection. He says :—" I am convinced unless efficient disinfection is secured we shall have a continuance of these outbreaks for which no cause can be found."

The relation of the spread of scarlet fever to school attendance, and the effect of school closure are most interesting questions. Dr. Gepp has come to very definite conclusions as to the value of school closure in scarlet fever, as the following quotations show :

Atcham Rural District.—" There can be no doubt that the elementary schools are the agents most effective in spreading infection in country districts, and that such spread is due to ' missed ' cases, or to ' carriers ' of infection. It is, however, in many cases extremely difficult to discover the missed cases, especially in scattered country districts."

" School closure in my opinion remains the most effective method of stopping the spread of outbreaks of scarlet fever in country districts, and will remain so until frequent, or even in some cases daily, visits to an affected school by a medical man are made practicable."

Church Stretton Rural District.—" The scarlet fever cases were mostly mild and often obscure, and appeared in some cases to have been taken for German measles. The special points shown by these outbreaks were :—

" (1) The slow spread and persistence of the disease in a scattered country district during the greater part of the year ;

" (2) The apparent sporadic distribution of the cases over an extensive area, yet indicating when looked at as a whole a definite extension, radiating from the Schools ;

" (3) The occurrence of slight cases of indefinite illness, among school children, coincident with one or more known cases of scarlet fever, these obscure cases not being regarded as scarlet fever when medically attended.

" (4) The probability of the known cases being linked by unsuspected ' missed ' cases ;

" (5) The prompt effect of school closure in a scattered country district in limiting or stopping spread of infection when a definite outbreak associated with a school occurs."

III. (URBAN).

CASES OF INFECTIOUS DISEASE NOTIFIED IN 1909 IN URBAN DISTRICTS.

Notifiable Diseases.	Cases in Urban Districts in Age Periods.							Total Cases Notified in each District.												
	Age Periods.							1	2	3	4	5	6	7	8	9	10	11	12	13	14
	All Ages.	Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Bishop's Castle.	Bridgnorth.	Church Stretton.	Dawley.	Ellesmere.	Ludlow.	Newport.	Oakengates.	Oswestry.	Shrewsbury.	Wellington.	Wem.	Wenlock.	Whitchurch.
Small-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria .. .. Membranous Croup	153	5	38	75	23	11	1	1	3	1	5	1	..	1	18	18	69	9	4	6	17
Erysipelas	54	3	1	3	4	37	6	..	..	..	1	..	6	1	3	3	27	9	..	4	..
Scarlet Fever	552	6	111	336	68	31	..	4	4	12	20	3	9	1	64	24	369	10	..	24	8
Typhus Fever	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Enteric Fever	29	..	3	12	6	8	..	1	3	..	..	..	2	1	1	..	12	..	..	9	..
Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Continued Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever	9	..	..	..	2	7	..	..	..	..	..	1	..	..	..	..	4	..	..	4	..
Totals	798	14	154	426	103	94	7	6	10	13	26	5	17	4	86	45	482	28	4	47	25
Measles	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Phthisis (Voluntary Notification).	26	..	..	4	1	20	1	..	..	..	..	..	..	..	..	..	20	6	..	..	..

III. (RURAL).

CASES OF INFECTIOUS DISEASE NOTIFIED IN 1909 IN RURAL DISTRICTS.

Notifiable Diseases.	Cases in Rural Districts in Age Periods.							Total Cases Notified in each District.															
	Age Periods.							1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	All Ages.	Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Atcham.	Bridgnorth.	Burford.	Chirbury.	Church Stretton.	Cleobury Mortimer.	Clun.	Drayton.	Ellesmere.	Ludlow.	Newport.	Oswestry.	Shifnal.	Teme.	Wellington.	Wem.	Whitchurch.
Small-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria and Membranous Croup	159	..	22	103	17	17	..	23	19	4	1	..	6	4	23	13	23	5	15	..	1	17	4	1
Erysipelas	37	..	..	4	4	19	10	7	..	1	..	1	2	2	3	4	4	1	3	3	..	5	..	1
Scarlet Fever	514	8	122	308	37	39	..	136	4	..	6	35	1	46	45	46	19	13	60	13	20	30	40	..
Typhus Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever	16	..	..	3	8	4	1	5	1	..	2	..	2	..	1	1	1	..	1	..	..	..	2	..
Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Continued Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever	17	..	..	..	3	14	..	1	..	..	..	..	3	1	1	..	5	1	1	..	..	2	2	..
Plague	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	743	8	144	418	69	93	11	172	24	5	9	36	14	53	73	64	52	20	80	16	21	54	48	2
Measles	62	3	20	34	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	62	..	..
Phthisis (Voluntary Notification)	6	..	..	..	..	6	..	..	..	..	..	..	..	..	4	..	..	..	..	2	..	..	..	..

In the memorandum issued this year by the Medical Officers to the Local Government Board and Board of Education there is the following paragraph :—

" If there is active co-operation between the school attendance officers and teachers and the Medical Officer of Health, school closure should only exceptionally be needed for scarlet fever. In school this disease usually spreads slowly from child to child, and not in the explosive manner characteristic of measles. Hence diligent search for slight cases and supervision of " contacts " should in most instances render school closure needless."

Although at first sight these conclusions may seem to be at variance this is not necessarily so, for until the organisation of the public health and educational medical services will permit of almost daily search for slight cases and proper supervision of contacts, school closure will have to be resorted to, from time to time. It is interesting to see that Dr.Gepp has found it so efficacious.

The control of scarlet fever in schools depends to a considerable extent on the intelligence and care of the teacher. Whenever a case notified as scarlet fever has attended in the school during the initial symptoms, the possibility of further spread should always be in the teacher's mind ; also when a child who has suffered from scarlet fever returns to school with any discharge from the ear, nose or throat. When scarlet fever is prevalent the teacher should be particularly careful to exclude all cases of sore throat and to recommend medical advice ; and not to admit children after illness without careful inquiry. It is necessary also to bear in mind that occasionally cases of scarlet fever remain infectious for long periods.

When there is evidence pointing to the fact that scarlet fever is spreading in a school, an investigation either by the Medical Officer of Health or by a Medical Officer of the Education Authority becomes necessary. This investigation should consist of (1) an inquiry into the causes of absence of all absentees over a sufficient period ; (2) an inquiry into all cases of sore throat existing or for some time back ; (3) an examination of children with regard to discharge from ears and nose, and peeling of skin, particular attention being paid to those children who have been in contact with recognised or suspected cases of scarlet fever.

The school figures so far as they go appear to show that 11 to 12 per cent. of the children at the elementary schools suffer at one time or another from scarlet fever.

Measles.—There were 8 deaths from measles compared with 42 in 1908, 57 in 1907, 15 in 1906, 32 in 1905, and 54 in 1904. All the deaths occurred in two rural districts, 5 in Ludlow and 3 in Drayton. This low death-rate from measles was not due entirely to the limited number of cases but partly to the mild character of the disease. From September 4th, when the school notification scheme was started, to the end of 1909, 395 cases were notified, and during the whole year 32 schools were closed for varying periods on account of this disease.

It has been pointed out in previous reports that school closure as at present carried out can only be looked upon as a measure of educational convenience and not in any sense as a means of preventing the spread of the disease. There is not sufficient evidence to show what the effect of closure rationally applied would be in country districts. I have suggested that wherever sufficiently exact information is forthcoming, schools might be closed on the following lines :—

(1) That schools be closed after the first case of measles for a period of 7—10 days, the closure to commence about seven days after the onset of the first case.

(This method of closure is fully explained in my report for 1904).

(2) That class closure instead of school closure be practised when it appears advantageous according to local circumstances.

Before taking such a step it would be necessary to confirm the diagnosis of the first case, if this had not been made on the authority of a medical man.

The notifications received by me from the schools are too imperfect so far to permit of any deductions as to the probable effect of such closure, but when notifications similar to those sent to the Medical Officer of Health are sent to me, in accordance with the suggestion of the Medical Officers of the Local Government Board and the Board of Education, it will be possible to arrive at some conclusion as to the effect of closure on these lines.

The following examples of notifications of measles from schools show clearly that closure after the first case could rarely have been put in practice with advantage, and would have put the school to unnecessary disturbance without result in most cases.

Ludlow Undenominational—One case notified during week ending September 11; no further cases notified.
Great Ness—One case week ending September 25th; no further cases.
Prior's Lee Mixed—One case October 2nd; no further cases.
Newport C.E. Infants'—One case October 16th; no further cases.
Bucknell—One case October 30th; no further cases.
Deuxhill—Two cases September 11th; no further cases.
Albrighton—Two cases September 11th; no further cases.
Acton Burnell—Five cases October 16th; no further cases.

In these cases closure was obviously unnecessary.

Grindley Brook—One case week ending October 9th; 1 case October 16th, 2 cases October 23rd, 1 case November 12th; no further cases.
Condover—Three cases week ending October 23rd, 2 cases November 12th; no further cases.
St. George's C.E. Infants'—One case week ending October 30th, 1 case December 3rd, 1 case December 10th; no further case.
Oswestry Castle Fields Infants'—One case week ending November 6th, 1 case December 3rd; no further cases.
Whitchurch C.E. Girls'—One case week ending September 11th; no further case until December 3rd—3 in that week; no further cases.
Prees Lower Heath—Two cases week ending October 30th, 3 cases November 6th, 3 cases November 12th, 3 cases November 19th, 4 cases November 26th; no further cases, school closed for other causes December 3rd.

It is quite obvious that closure in these instances also was quite unnecessary.

In the following instances closure after the first case in accordance with the rule given above might have proved efficacious, but in the absence of precise information with regard to dates of onset no definite opinion can be expressed:—

Ellesmere Boys'—One case week ending October 9th, 14 cases October 16th; school closed October 14th.
Woore—Two cases week ending November 5th, 12 cases November 12th; school closed November 22nd.
Frankton—First case no doubt missed, 11 cases week ending October 9th, 23 week ending 16th; school closed October 21st.
Criftins—One case week ending September 11th, 2 cases September 18th, 1 case September 25th, 20 cases October 2nd; school closed.
Ellesmere Infants'—One case week ending September 18th, 2 cases September 25th, 1 case October 2nd, 22 cases October 9th; school closed.

In these instances one might reasonably hope, by closure after the first case for 7—10 days, to have the schools closed during the commencement of the second crop of cases, and thus in a certain proportion of cases to bring the epidemic to an end. In Ellesmere Boys' School the second crop consisted of 14 cases, in Woore probably of 12 cases, in Frankton of 11 cases, in Criftins and Ellesmere Infants' of 2 or 3 cases.

A study of these notifications leads to one of two conclusions. Either the diagnosis of measles has been very inaccurate, possibly from confounding German measles with measles or the disease does not necessarily spread through a school in the rapid manner that one usually expects.

In this connection it should be stated that information has not been available to enable one to arrive at any conclusion as to the immunity of the children in the schools affected. This, of course, has a most important influence upon the spread of measles in a school.

It is quite clear that school closure or class closure after the first case of measles should only be adopted under certain conditions and with proper precautions—

(1) The diagnosis of the first case should be by a medical man.
(2) There should be evidence that the affected child had attended school whilst presenting symptoms of the disease.
(3) There should be a considerable proportion of the children susceptible to the disease.

Under these conditions there is reason to think that closure after the first case might be a useful procedure.

With the object of limiting the spread of measles, but more particularly in order to lessen the mortality, a procedure has been adopted in the London Schools which might with advantage be adopted in this county. When a case of measles has been reported in a school, a card is sent to the parents of all unprotected children in the classroom in which the patient was attending. On the card it is mentioned that a case of measles has occurred, and the parent is asked to pay particular attention to the child's health during the next three weeks, and on any sign of illness to abstain from sending it to school. On the reverse side of the card the serious character of the disease and the early symptoms are pointed out. If class closure is decided upon a further card of warning is distributed.

This procedure should result in good, but before it can be adopted, a measles record of the children must be kept.

It seemed desirable that, in order to lessen the very considerable death-rate from measles and whooping cough, emergency nurses should be available, to be employed by sanitary authorities when these diseases are prevalent in their districts, for the purpose of visiting infected houses and giving advice as to isolation and general management. The Shropshire Nursing Federation undertook to supply such nurses on certain terms and communicated with the Sanitary Authorities to that effect. The following sanitary authorities notified their willingness to fall in with the scheme :—The urban districts of Church Stretton, Ellesmere, Shrewsbury, Wellington, Wem and Whitchurch, and the rural districts of Clun, Newport, and Drayton. So far as I am aware, however, no further action has been taken. This is a very promising field for saving life, and it is to be hoped that sanitary authorities will avail themselves of the opportunities afforded by the Nursing Federation. It must be remembered that not only are most of the deaths returned as due to measles and whooping cough preventable, but also a considerable number

registered under the headings of bronchitis and pneumonia, for which measles and whooping cough are really responsible. Dr. Woods, in his report to the Chirbury Rural District Council says —" Two of the deaths occurred from complications of whooping cough, and in my opinion emphasises the need of educating parents to regard whooping cough (and measles) as serious diseases in young children and seek for medical advice, most deaths from these causes being eminently preventable."

Whooping Cough. There were 63 deaths from whooping cough compared with 40 in 1908, 27 in 1907, and 90 in 1906. Twenty of the deaths were in the urban and 43 in the rural districts. The districts mostly affected were the rural districts of Drayton (10) and Wem (8).

My remarks with regard to the difficulty of preventing the spread of measles are applicable perhaps even to a greater extent to whooping cough. As reference to Table 9 shows, whooping cough now causes far more deaths than any other of the common infectious diseases. From the nature of the disease, particularly its prolonged infective period, it is under the control of sanitary authorities to a smaller extent even than measles, yet there can be no doubt that by similar measures to those which are suggested for measles, the case mortality could be greatly reduced and a large number of lives saved.

Diphtheria. There were 312 cases of diphtheria and 37 deaths compared with 337 and 36 deaths in 1908. The urban districts principally affected were Shrewsbury (69), Whitchurch (17), Oswestry (18), and Oakengates (18); and the rural districts Ludlow (23), Drayton (23), Bridgnorth (19), Wellington (17), and Atcham (23).

The case mortality was 11.8 per cent., being 13.2 in the rural districts and 10.4 in the urban districts.

It has been clearly proved that the mortality of diphtheria depends almost entirely upon the efficiency of the treatment with antitoxin. If a sufficient dose of antitoxin can be given on the first day of illness the mortality is reduced to an extremely small point. Unfortunately a medical man is frequently not called in until the second or third day, or even later, but it is extremely desirable that when medical help is obtained, antitoxin treatment should be applied in all cases without *any delay whatever.* With this end in view several sanitary authorities have on the recommendation of the Medical Officers of Health decided to pay the fees for this treatment in the case of poor persons. It seems probable that the higher case mortality in rural districts which has been almost constant for some years is due to difficulties in the way of prompt treatment with antitoxin in remote country districts.

In previous reports I have entered into the question of school closure on account of diphtheria, and have shown that with efficient inspection, schools should not be closed except in rare instances for this disease. One may take it as a fact, that when diphtheria is spreading in a school there are one or more infective children attending. These children may remain infective for long periods, and it should be one's object to discover them. If a school is closed it becomes practically impossible to find out the source of infection and so render it harmless, and consequently when the school is re-opened the infection is frequently introduced again. If however, from inability to carry out the method suggested, schools are closed to prevent the spread of diphtheria, special precautions should be taken when they are re-opened. None of the known infected children should be allowed to return to school until their throats have been examined bacteriologically and declared free from infection. The school children should be examined on the day of opening and swabs should be taken from any children to whom any suspicion is attached, and particularly all children from infected houses should be swabbed.

If the following measures are taken there should, in the large majority of instances, be no difficulty in controlling an outbreak of diphtheria without school closure :—

(1) Whenever two or more cases of diphtheria occur in a school within a limited period, to cause an inspection to be made and swabs taken from the throats of all children who appear likely to have been the cause of the outbreak. In some instances it may be necessary to examine all the children in the infected class, but in most instances it will suffice to examine (*a*) all children who have been recently absent from unexplained causes or minor ailments, (*b*) children with discharge from the nose or ears, or suffering from other conditions not infrequently left by diphtheria, (*c*) children who habitually breathe through their mouths, (*d*) children who are known to have been in contact with diphtheria, (*e*) children who have recently had sore throat, however slight. It is necessary also to inquire into the absentees.
(2) To insist as a matter of routine that a person cannot be declared free from infection until the throat has been found free from diphtheria bacilli.
(3) Whenever satisfactory isolation cannot be provided, to protect the rest of the family by small injections of antitoxin.

The County Education Committee have issued an instruction that children who have suffered from diphtheria must not be allowed to return to school until their throats have been declared free from diphtheria bacilli.

The difficulties in the way of carrying out this instruction are considerable, particularly in those cases where the medical attendant has ceased visiting the case some time before it is free from infection.

Since September, 1909, all cases of diphtheria in schools have been notified to the County Medical Officer, and it has been possible to estimate to what extent this rule of the Education Authority has been observed. During these four months 44 cases of diphtheria were notified amongst school children, and 31 were subsequently declared free from diphtheria bacilli by bacteriological examination. There remain 13 children who, apart from cases that have proved fatal, must have returned to school without having been declared free from diphtheria bacilli. There are two further precautions that should be adopted, as soon as the machinery at the disposal of the sanitary authorities or the Education Authority is adequate for carrying them out—

(1) All persons living in a house in which there is diphtheria should have their throats swabbed before the house is disinfected, and children from the infected house should not be admitted to school until certified that they are free from diphtheria bacilli.
(2) During prevalence of diphtheria in a school, all sore throats should be notified to the Medical Officer of Health of the District, and they should not be re-admitted until he is satisfied by bacteriological examination or otherwise that they are not a danger.

The following quotations from the District Medical Officers' Reports deal with outbreaks and the measures adopted or recommended to prevent their spread :—

Atcham Rural District. " In an outlying part of *Westbury* parish 4 cases occurred which appeared to be associated. The first case arose in February, and the child E.M. may have contracted infection out of the district. This was not a severe case, but two children in a neighbouring house who had been with E.M. before the disease was recognised took it and both died. The child E.M. recovered, and a swab taken from the throat was reported negative on April 4th. On May 18th a fourth case was notified in the neighbourhood in a child with whom E.M. had

been in close association for some days. This was a severe case. I visited E.M. and found her apparently well, and free from recent sore throat. As it appeared possible however that she might still be infectious the medical man, at my suggestion, took a swab from her throat. It was reported this time to show diphtheria bacilli. E.M. was then kept at home for some little time and no further case developed."

"Another small outbreak showing much prolonged infection after apparent recovery from diphtheria arose in Acton Burnell parish in March, and formed the subject of a special report presented on April 1st. It is unnecessary to repeat all the facts, the essentials being that a school child, L.S., who had had an attack of diphtheria in December, 1908, on her return to school two months later was the probable source of an outbreak in the school of three cases, with one death. Two of these cases were notified, and upon investigating I found another child whose throat showed diphtheria when examined bacteriologically, and the throat of L.S. also showed the organisms. L.S. was again excluded from school for a long period, at least six months, and no further case developed. The school was closed for four weeks in March as a precaution."

Bridgnorth Rural District. "Five cases of diphtheria occurred at Ruthall Farm, near Ditton Priors, and were occasioned by defective drainage, which has now been put in proper order."

Clun Rural District. "Four cases in two families only came to light. One case in Clunbury parish in August was due to a member of the family who had had diphtheria in another county and came home after recovery. The case shows the necessity for maintaining isolation and medical supervision of a case of diphtheria until the throat has been declared free of infection by bacteriological test."

Dawley Urban District. "The Council on my recommendation sanctioned the use of antitoxin by medical men at the public cost for the prevention of spread of the disease in affected families, by protective injections given to the unaffected children. The Council defrays the cost of the antitoxin used and pays a fee for the injection, of 5/- for the first case and 2/6 for each subsequent case in the same family."

Enteric or Typhoid Fever. There were 45 cases and 9 deaths from typhoid fever, compared with 29 cases and 4 deaths in 1908, 33 cases and 6 deaths in 1907, and 43 cases and 9 deaths in 1906.

Twelve of the cases occurred in the Borough of Shrewsbury, 9 in the Borough of Wenlock, and 9 in the Atcham Rural District.

The decrease of typhoid fever in this county as shown in Table 9 is a matter for much congratulation. What exactly the decrease is due to is not apparent, but the causes are probably many, and may be summed up as improved conditions of living and more careful living. The improvement of water supplies is probably the most important factor, and it must be remembered that this improvement may extend far beyond the area of the supply. The typhoid fever in country districts depends to a great extent on imported cases and the chances of infection from them. In districts supplied from shallow well waters liable to pollution, immunity from typhoid is dependent upon freedom from imported cases. It will readily be understood therefore how decrease of typhoid fever in country districts may be to a great extent due to a decrease in the neighbouring towns. Some part of the decrease too may be due to the more careful supervision of oyster and mussel beds that is now exercised.

Knowledge gained within recent years showing that persons who have suffered from typhoid fever may remain infectious for long periods, makes it very necessary that Medical Officers of Health should have at their disposal means of determining freedom from infection.

Diarrhœa. There were 41 deaths from diarrhœa compared with 29 in 1908. The death-rate from this disease was .17 compared with .28 for England and Wales and .17 for England and Wales less 219 towns.

The death-rate of the urban districts was .22 and that of the rural districts .13.

In order to properly compare the amount of diarrhœa from year to year it is necessary to consider the deaths from diarrhœa in conjunction with those from enteritis.

The following table satisfactorily compares the years 1906, 1907, 1908, and 1909 :—

	1906			1907			1908			1909		
	Under 1 year	Over 1 year	Total	Under 1 year	Over 1 year	Total	Under 1 year	Over 1 year	Total	Under 1 year	Over 1 year	Total
Diarrhœa ..	47	13	60	56	8	64	19	10	29	32	9	41
Enteritis ..	6	18	24	0	25	25	25	28	53	21	10	31
Total ..	53	31	84	56	33	89	44	38	82	53	19	72

The death-rate for the whole county from diarrhœa and enteritis was .30. The highest rate from these diseases was in the Borough of Bridgnorth, 1.31 per thousand.

The measures which will reduce the amount of infantile diarrhœa are the provision of a clean and fresh milk supply, the teaching of correct methods of infant feeding, particularly the necessity for breast feeding, and cleanliness both household and municipal.

Puerperal Fever. Twenty-six cases of puerperal fever (9 in the urban districts and 17 in the rural districts), were notified, with 10 deaths ; compared with 15 cases and 7 deaths in 1908. All cases where a certified midwife had been in attendance were inquired into carefully by myself or my inspector, and further details with regard to these will be found in the chapter on the Midwives Act.

In my last year's report I said :—

There is reason to believe that many cases of puerperal infection still remain unnotified, principally because the name 'puerperal fever' is associated in the minds of a considerable proportion of the medical profession with the graver forms of infection only. The Local Government Board state that they have no power to define the term. To act as a guide and as a working definition, the North-Western Branch of the Society of Medical Officers of Health, with the help of Sir Wm. Sinclair, drew up the following :—

"For the purpose of the Notification Acts, 1889 and 1899, the term 'puerperal fever' shall include all cases in which within seven days after the birth of the child, alive or stillborn, the mother shall have a rise of temperature exceeding 100.4°F. with quick pulse, maintained for a period exceeding 24 hours, without any obvious cause other than the puerperal state.

"It shall also include all cases in which, within seven days after the birth of a child, there has been the occurrence of rigor (with attendant illness) without any obvious cause other than the puerperal state."

This definition has been forwarded to all the Medical Officers of Health in the County, and except on one or two minor points there is almost unanimity. There is reason to believe that notifications of puerperal fever are becoming more complete from year to year.

TUBERCULOSIS.

Table 11.

	Death-rates from Phthisis.										Death-rates from other forms of Tuberculosis.									
	5 years, 1896—1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	5 years, 1896—1900	1901	1902	1903	1904	1905	1906	1907	1908	1909
Urban Districts ..	—	1.28	1.05	1.18	1.4	1.0	1.20	1.15	1.09	1.04	—	.46	.43	.54	.41	.37	.47	.27	.45	.41
Rural Districts ..	—	.75	.70	.86	.87	.92	.91	.83	.83	.83	—	.36	.21	.32	.39	.28	.27	.31	.41	.38
Whole County ..	—	.98	.85	1.0	1.1	.96	1.04	.97	.95	.93	—	.40	.31	.41	.40	.32	.36	.29	.43	.39
England & Wales	1.32	1.26	1.23	1.20	1.2	1.14	1.15	1.14	1·11	*	.58	.59	.50	.54	.54	49	.49	.46	.47	*

*These rates are not yet available.

There was a decrease in the number of deaths from phthisis as compared with 1908, and also from other forms of tuberculosis. The districts with the highest rates from phthisis during the year were :—Wenlock Borough 1.76, Oswestry Borough 1.41, Newport Rural 1.33, Atcham 1.21, and Chirbury 1.13. Chirbury was the only one of these districts that had a high rate in 1908.

In order to eliminate as far as possible accidental variations due to the smallness of the figures dealt with, a table has been drawn up giving the average rates from phthisis for the last ten years, and the percentage variation for each district above or below the average of the urban and rural districts.

Table 12.

Average Phthisis Death-Rate for Ten Years, 1900—1909.

Urban Districts.	Death-rates for years 1900—1909	Percentage above or below the average for Urban Districts.	Rural Districts.	Death-rates for years 1900—1909	Percentage above or below the average for Rural Districts.
Bishop's Castle ..	1.64	+ 46.4	Atcham	1.00	+ 17.7
Bridgnorth	1.24	+ 10.7	Bridgnorth ..	.56	— 34.1
Church Stretton ..	.39	— 65.2	Burford	.98	+ 15.3
Dawley	.84	— 25.0	Chirbury	1.21	+ 42.4
Ellesmere	.96	— 14.3	Church Stretton ..	.83	— 2.4
Ludlow	1.35	+ 20.5	Cleobury Mortimer	.61	— 28.2
Newport	1.28	+ 14.3	Clun	.91	+ 7.1
Oakengates	.77	— 31.2	Drayton	.80	— 5.9
Oswestry	1.10	— 1.8	Ellesmere	.97	+ 14.1
Shrewsbury	1.29	+ 15.2	Ludlow	.59	— 30.6
Wellington	1.11	— .9	Newport	.91	+ 7.1
Wem	.68	— 39.3	Oswestry	.80	— 5.9
Wenlock	1.42	+ 26.8	Shifnal	.76	— 10.6
Whitchurch	.83	— 25.9	Teme	1.19	+ 40.0
			Wellington ..	.94	+ 10.6
			Wem	.88	+ 3.5
			Whitchurch ..	.47	— 44.7

Amongst the urban districts the four boroughs together with the Urban district of Newport had the highest rates for the 10 years. The most probable explanation of this excess is the defective housing accommodation in the older parts of the towns. The persistent high rate in the Borough of Wenlock is a matter that would probably repay further investigation.

Amongst the rural rates those of Chirbury and Teme are the only ones calling for comment. The high rate in the Chirbury district has been attributed by Dr. Woods to work in the mines, but no real investigation has been made. Too much importance must not be attached to the rate for Teme, as the district is a very small one, and even in ten year periods the rates are liable to fluctuate greatly.

The prevention of tuberculosis is prominently before the public at the present time in this County, and the Association which was formed in the early part of 1908 has already done much good work.

The work of the Association, apart from the cure of early cases of consumption in the sanatorium, will be essentially educational.

The work naturally falling to Sanitary Authorities will not be in any way interfered with, nor will the responsibility of these authorities be in any way reduced. The Association, by the provision of sanatorium treatment and by the creation of an intelligent public opinion, will make it possible for sanitary authorities to prosecute their work in this direction with far greater results.

In last year's report the steps that should be taken by a Sanitary Authority for the prevention of consumption were set out in some detail, and these appear to be of such great importance that they are again given with slight modification.

The first step that should be undertaken throughout the county is the establishment of a system of notification of consumption (voluntary notification is the only form available at the present time). So far, voluntary notification in this county has not proved a marked success. If, however, sanitary authorities show themselves in earnest in the work of the prevention of consumption, and give evidence that they are prepared to do all in their power in the way of supervision and education of the patient, disinfection of the infected houses where necessary, the supplying of means (spit bottles, etc.), for the disposal of sputum, and the improvement of the isolation of advanced cases ; and if the Association provides or helps to provide open air treatment for suitable cases, either in an institution or at the homes of the patients, and generally does what is possible to alleviate the distress caused by consumption, then we may be certain that voluntary notification will become a great success.

The first important step is undoubtedly to present the matter in a proper light to the medical profession. In the circular letter to the medical practitioners of a district announcing the adoption of notification and asking for their co-operation, the action that will follow notification and the benefit to the patients and the public at large should be clearly set out. The following extract from a memorandum of the Medical Officer of the Local Government Board (Dr. Newsholme) puts the matter so well as it affects the medical practitioner, that it might with advantage be sent to all practitioners in districts where notification is decided upon :—

" When a diagnosis has been secured, the first and most essential point is for the doctor in attendance, whether he be the poor law medical officer or a private practitioner, to acquaint the patient with the nature of his illness. This is indispensable, if the active co-operation of

the patient in regard to precautions is to be secured. It is equally necessary for the patient's own welfare, which depends in large measure on his intelligent carrying out of instructions. As the vast majority of cases of pulmonary tuberculosis recover when recognised early, and as life in more advanced cases can be prolonged by efficient treatment, there need be no hesitation in following this course.

"The doctor will also consider whether, even though the particular case is not compulsorily notifiable, he will not be acting in the interest of his patient, as well as of the public health, to notify his case to the medical officer of health, under a voluntary system of notification.

"Next must follow the giving of instructions to each patient and the disinfection of bedrooms, &c., when the need for this is indicated. Although the medical attendant may be able to give the personal instructions, it is none the less true that, under the usual conditions of medical practice, and particularly among the poor, supplementary aid is required to prevent infection and to secure the best arrangements for the patient's welfare.

"It should be the aim of the medical officer of health to furnish this supplementary aid in a way that will secure the continued co-operation with him of the patient and of his medical attendant."

The measures that should be taken on receipt of notification may be summarised :—

(1) A preliminary visit should be made by a sanitary official at which—

(*a*) An investigation form should be carefully filled in. This form should give the history of illness of patient, personal history, family history, condition of house with regard to accommodation, structure, and cleanliness, details bearing upon origin of infection, condition under which work is carried on, etc. Much of this information is for the general advancement of knowledge, which is absolutely necessary for the application of preventive measures with the greatest efficiency. It will, however, often throw light upon local problems and show influences favouring the spread of phthisis which otherwise would be unsuspected.

(*b*) The patient should be instructed as to how to live so as not to be a danger to the rest of the household and the rest of the community. Simple rules of living, which are important in the prevention of consumption, should be pointed out to the rest of the household. Printed instructions may with advantage be delivered to every house in the sanitary district.

(*c*) The health of the other occupants of the house should be inquired into carefully, and in cases where there are any signs of incipient phthisis a strong recommendation should be made that medical advice should be obtained.

(2) Attempts should be made to improve the conditions, particularly the sleeping conditions, of the patient. Wherever possible a phthisical person should have a well-ventilated bedroom to himself. In early cases this is necessary for his own cure, and in later cases for the protection of the family against infection.

The satisfactory isolation of advanced cases is only possible in many instances by removal to Workhouse Infirmaries or to special hospitals.

(3) With the consent of the patient, the notification of consumption should be forwarded together with all the salient facts to the Local Committee of the Association, so that all practicable steps for the cure of the case or for alleviation of distress, or for the improvement of isolation at home may be taken.

(4) Arrangements should be made for the disinfection of the house or those parts in which the patient has lived. Broadly speaking, the walls, floors, and furniture should be washed with a disinfectant, all washable clothing should be steeped in the disinfectant, and all other clothing, carpets, curtains, bedding, etc., should be disinfected in a steam disinfector. Chloride of lime (1½ oz. to one gallon of water) is a cheap disinfectant, and has been shown by Prof. Delépine to be very effective.

(5) Periodic visits should be made in order to see that the instructions with regard to the disposal of sputum, cleanliness of the house, and other matters are carried out, and to discover removals. It should be the aim of the inspector to see that complete washing of the floors and skirtings is carried out every week, and cleansing of the walls with dough every three months.

(6) Disinfection of the house should be carried out after removal or death of the patient.

(7) Visits should be paid to the workshop where the patient is employed to see that there is no spitting on the floor and that the place is clean. Great care must in these cases be taken not to disclose the reason for the visit. Similar visits should be made to other places resorted to by the patient, *e.g.*, public houses.

(8) Great attention should be paid to remedying insanitary conditions of houses, etc., associated with phthisical cases.

The work of sanitary authorities with regard to the more advanced cases of phthisis is one of the utmost importance, and one which is likely to be lost sight of, unless insisted upon. It is these cases that give off such a large amount of infectious material and that constitute the real danger. During the early part of this more advanced and incurable stage the patient is in many cases able to go about his work much as usual, and he is able, *if properly instructed and trained*, to so dispose of his sputum and control infection given off by coughing that there is little or no danger. At a still later stage the problem is different. The following quotation from Koch vividly describes the state of things that now exists :—"The last three or four weeks of life are the most deadly in the spread of infection. The man dies at last, but the education in him dies before him ; his every cough, sneeze, or effort of speech sends forth a spray laden with bacilli in virulent form, deadly to the poor wife and children around."

The work of a sanitary authority should be devoted to improving the isolation so as to lessen the risk of infection to the rest of the household. Those persons who are in receipt of Poor Law medical relief might with advantage be removed to special wards in the Workhouse Infirmaries. For other persons there is the alternative of improving isolation at home, so as to provide a separate sleeping room, kept under conditions that will not favour the spread of infection and improving the methods adopted for preventing infection so as to give reasonable safety ; or removal to a cottage or hospital provided specially for this purpose. *So far no provision of this kind has been made in any part of the County, and it is worth considering whether the hospitals provided for small-pox might not be used for this purpose. They would be kept in greater readiness than they are at present, and in the event of an outbreak of small-pox they could be emptied at once.*

One of the most important matters in the prevention of consumption is early recognition of the disease. The County Council helps materially in this matter by the provision of facilities for the examination of sputum, and these facilities might be used to a greater extent with advantage. The medical inspection of school children is bringing to light cases in the earliest stage, many of which would otherwise have been overlooked until too advanced for cure. The notification of consumption will give opportunity for discovering incipient secondary cases in the same household. The provision of a sanatorium will, by making the treatment of phthisis more hopeful, undoubtedly remove some of the obstacles that at present exist to an early and definite diagnosis of the disease. The educational work of the Association will spread a knowledge of the importance of early diagnosis and of the early symptoms of phthisis. All these influences will lead to the more early recognition of the disease, and it remains to be seen whether there is scope in any part of the County for the work of a tuberculosis dispensary.

The prevention of indiscriminate spitting should undoubtedly be one of the main objects to be kept in view in preventing consumption. Of late years there has been a marked improvement in this respect, and part of this improvement may well be due to the advertisement of the County Council by-law prohibiting spitting in public places, and the posting of notices in public houses, workshops, and factories.

Consumption in the human being cannot be satisfactorily dealt with and exterminated unless the transmission from animals to man is prevented. Fortunately the extermination of the disease amongst animals is a comparatively simple matter, being one of expense only. Until this has been accomplished it is essential that there should be a very strict inspection of milk supplies and of dairy cattle for the detection of tubercle. This matter is dealt with under the heading of Milk Supply, and Dairies and Cowsheds Inspection.

CANCER.

Cancer caused 261 deaths during the year compared with 263 in 1908 and 258 in 1907. One hundred and thirty-nine of the deaths were in the rural districts and 122 in the urban districts.

Table 13.

DEATH-RATES FROM CANCER IN THE URBAN AND RURAL DISTRICTS FOR THE TEN YEARS 1900—1909.

Urban Districts.	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	Average for years 1900–1909
Bishop's Castle	.6	.0	2.2	2.2	.0	.76	.00	2.31	1.55	1.56	1.11
Bridgnorth	.6	1.32	1.1	.72	1.1	1.4	1.81	1.48	.99	.66	1.16
Church Stretton	.0	.0	.0	.96	.0	2.2	.00	2.27	.00	.72	.62
Dawley ..	.4	.79	1.3	1.0	1.0	.78	1.17	1.17	.91	1.30	1.00
Ellesmere ..	.5	2.05	1.5	3.0	.0	1.0	.50	.00	1.99	1.98	1.27
Ludlow ..	1.5	.44	1.2	.31	1.7	1.2	1.67	1.67	.91	1.83	1.27
Newport ..	2.64	.92	.95	.63	1.9	1.6	.64	1.93	.32	2.27	1.37
Oakengates ..	.5	1.10	.64	1.2	1.1	.72	.81	1.26	1.08	.63	.92
Oswestry ..	.5	.62	1.4	1.0	.6	.70	1.21	.50	1.31	1.01	.89
Shrewsbury ..	.8	.73	1.07	.89	1.0	1.3	1.05	.94	.97	1.31	1.02
Wellington ..	.7	1.25	1.1	1.4	1.2	1.3	.79	.92	1.19	.93	1.10
Wem ..	.0	1.85	2.3	.9	2.2	.0	.89	.88	1.32	1.31	1.17
Wenlock ..	.9	.94	1.07	.94	1.0	1.3	.75	.94	1.26	.75	.98
Whitchurch	1.6	.57	.57	1.3	1.3	.38	2.06	.56	1.49	.74	1.05
All UrbanDistricts	.8	.88	1.1	1.0	1.1	1.1	1.07	1.05	1.09	1.11	1.01

Rural Districts.	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	Average for years 1900–1909
Atcham ..	1.1	1.19	1.1	.95	1.06	1.4	.91	.96	1.36	.91	1.06
Bridgnorth ..	.6	.81	.93	1.1	.46	.46	.93	1.51	.93	1.16	.91
Burford ..	.0	.81	.82	1.6	1.6	1.6	.00	1.62	2.43	.00	1.06
Chirbury ..	1.2	1.69	.85	.84	1.1	.84	.84	.56	1.13	.00	.93
Church Stretton..	.8	1.11	1.54	1.3	.22	1.3	.67	1.12	1.13	.45	.99
CleoburyMortimer	.6	.74	1.2	.94	.15	.62	.46	.61	.92	1.07	1.11
Clun ..	1.5	1.31	.73	.74	1.8	.59	1.35	.90	.60	1.97	1.16
Drayton ..	.7	.94	1.3	1.0	1.3	.34	.77	1.99	1.21	1.13	1.08
Ellesmere ..	.7	.88	.5	1.2	.63	.63	1.39	.76	.88	.88	.86
Ludlow ..	.9	.78	.52	.84	1.0	.94	.52	1.22	.61	.71	.81
Newport ..	1.6	1.14	.83	1.3	.98	.99	.99	.83	1.49	1.33	1.17
Oswestry ..	.7	1.21	.74	1.2	1.5	1.1	1.54	.67	1.53	1.13	1.14
Shifnal ..	.6	.34	1.2	.67	.68	1.1	1.13	.91	.69	1.38	.88
Teme ..	.5	1.08	.0	.0	1.08	3.2	1.08	2.17	1.08	.00	1.03
Wellington ..	.6	1.01	.6	.52	1.1	1.3	.60	1.05	.97	.88	.87
Wem ..	.7	.72	1.08	.48	.60	.60	.84	1.09	.97	1.69	.88
Whitchurch ..	.0	1.55	.0	1.55	.0	1.5	.52	1.57	.00	.53	.73
All RuralDistricts	.8	.99	.87	.94	.96	.98	.94	1.07	1.07	1.04	.99

The highest rates for the year were in the urban districts of Newport, Ellesmere, and Ludlow, and in the rural district of Clun.

The districts showing the highest average cancer-rate for the last 10 years are:—Newport Urban 1.37, Ludlow Urban 1.27, and Ellesmere Urban 1.27.

The rate for the ten years in the urban districts is higher than in the rural, notwithstanding that the age distribution of the population would favour a higher cancer death-rate in the latter.

As pointed out in previous reports the crude death-rates from cancer in the different districts depend so much upon the age distribution of the population, that it would be far preferable to calculate the rates upon the population over 45 years of age. If this were done throughout the country, cancer rates of some value for comparison would be obtained. This method applied to the sanitary districts of Shropshire for the ten years 1900—1909 gives the following results :—

Table 14.

1900—1909.

CANCER DEATH-RATES CALCULATED UPON THE POPULATION OVER 45 YEARS OF AGE.

URBAN DISTRICTS.				RURAL DISTRICTS.			
Bishop's Castle	3.7	Oakengates	4.6	Atcham	3.9	Ludlow	3.5
Bridgnorth	5.1	Oswestry	4.3	Bridgnorth	3.7	Newport	4.8
Church Stretton	2.9	Shrewsbury	5.0	Burford	4.1	Oswestry	4.6
Dawley	4.6	Wellington	5.3	Chirbury	3.6	Shifnal	3.9
Ellesmere	5.4	Wem	5.2	Church Stretton	3.4	Teme	4.2
Ludlow	5.7	Wenlock	4.1	CleoburyMortimer	3.2	Wellington	3.8
Newport	5.5	Whitchurch	4.9	Clun	4.6	Wem	3.5
				Drayton	4.3	Whitchurch	3.1
				Ellesmere	3.7		
Combined Urban Districts	4.8			Combined Rural Districts	4.1		

Calculated in this manner the urban rate is nearly 20% higher than the rural rate.

As the following figures show the crude death-rates from cancer since 1894 for this county have been much in excess of those of the country generally.

Table 15.

DEATH-RATES FROM CANCER.

YEAR.	REGISTRATION COUNTY OF SHROPSHIRE.	ENGLAND AND WALES.
1894	.705	.713
1895	.989	.755
1896	.923	.764
1897	1.060	.787
1898	1.028	.802
1899	.976	.829
1900	.931	.828
1901	.965	.842
1902	1.059	.844
1903	1.033	.872
1904	1.024	.879
1905	1.044	.885
1906	1.019	.917
1907	1.013	.909
1908	1.082	.909
Average for 15 years 1894—1908	.98	.836

ACCIDENTS AND DISEASES OF PARTURITION.

There were 14 deaths from accidents and diseases of parturition apart from puerperal fever 5 in the urban districts and 9 in the rural. The numbers in previous years were 23 in 1908, 15 in 1907, 14 in 1906, and 25 in 1905.

BACTERIOLOGICAL DIAGNOSIS OF DISEASE.

Quarters of 1909.	For Typhoid Fever. Widal's Reaction.		For Diphtheria.		For Phthisis.	
	Positive.	Negative.	Positive.	Negative.	Positive.	Negative.
First	2	6	40	68	10	34
Second	0	5	26	54	10	35
Third	2	7	53	118	19	47
Fourth	4	10	103	144	4	26
Whole Year	8	28	222	384	43	142
	36		606		185	

The total number of specimens sent was 827, compared with 620 in 1908, 497 in 1907, 393 in 1906, and 299 in 1905. Although the number of specimens sent has greatly increased, more especially with regard to diphtheria, it is by no means the general custom to submit swabs in this disease until a negative one has been received.

With a view to making this practice more general a letter was addressed on the subject last year to all the medical practitioners in the county. The following figures for the four quarters show the extent to which bacteriological examination is used to determine freedom from infection :

Quarters of year 1909.	Number of Positive Cases.	Number of these cases free by bacteriological examination.
1	28	12
2	17	10
3	36	16
4	60	33
	141	71

SCHOOLS AND SCHOOL CLOSURE.

The medical inspection of schools and school children is dealt with in a separate report to the Education Committee.

It will suffice here to state that the inspection is carried out by two medical inspectors and that the work is supervised by the County Medical Officer of Health, who is also the School Medical Officer.

An inspection of all the school premises is being made, and the recommendations for improving the sanitary conditions are sent to the Secretary for Elementary Education. In the case of voluntary schools, these recommendations are forwarded to the managers for their consideration.

A memorandum has been issued during the year by the Medical Officers of the Local Government Board and the Board of Education on "Closure of and Exclusion from School." In order to carry out the memorandum, a more detailed notification of disease from schools and a closer co-operation between the School Medical Officer and the Medical Officers of Health will be necessary.

Under Article 45 (*b*) the School Medical Officer advised the closure or approved of the closure of 27 schools for the following reasons :—10 for measles, 1 for chicken-pox, 9 for whooping cough, 3 for scarlet fever, 2 for influenza, 1 for German measles, and 1 for sickness.

Under the advice of the District Medical Officers of Health 79 schools were closed :—22 for measles, 1 for chicken-pox, 16 for whooping cough, 21 for scarlet fever, 4 for mumps, 9 for influenza, 1 for colds, 1 for sore throat, and 4 for diphtheria.

School closure on "Medical Authority" is no longer allowed.

VACCINATION.

I have been able to compile the vaccination statistics through the courtesy of the vaccination officers, who have kindly supplied me with all particulars.

In my last year's report I said :—A slight falling off in the efficiency with which vaccination in the County was carried out, as shown by the vaccination figures, was noticed as early as 1905. This became more pronounced in 1906, and the figures contained in the present report dealing with the year 1907 and the first half of 1908 show a very rapid decrease in the percentage of children vaccinated. In fact if the somewhat incomplete figures referring to the first six months of 1908 be taken as an index of the present state of vaccination, it is now worse than it was in the very unsatisfactory period of 1893—1897.

The rapid decrease in the number of children vaccinated here indicated has continued during the last 12 months with increased velocity.

The falling off is accounted for to a very great extent by the increase in the number of certificates of conscientious objection granted, and this increase is no doubt due almost entirely to the ease with which the certificates may now be obtained.

Conscientious objection certificates granted in each year expressed as a percentage of the births in that year :—

1903	1904	1905	1906	1907	1908	First half of 1909.
1.3	1.7	1.7	2.4	5.5	14.0	18.2

The percentage of unvaccinated children was :—

3.0	3.4	3.9	5.0	7.4	15.9	21.9

Percentage of children escaping for other reasons than conscientious objection :—

1.7	1.7	1.8	2.6	1.9	1.9

TABLE VI.

SHEWING VACCINATION OF INFANTS BORN IN 1908 AND FIRST HALF OF 1909.

VACCINATION DISTRICTS.	Births.	Successfully Vaccinated.	Insusceptible of Vaccination	Certificates of Conscientious Objection.	Died Unvaccinated	Vaccination Postponed.	Removed out of District.	Unaccounted for.	NUMBERS EXPRESSED AS PERCENTAGES OF BIRTHS REGISTERED.		
									Successfully Vaccinated.	Exempted by "Conscientious Objection" Certificates.	Unvaccinated including (1) Conscientious Objectors. (2) Postponed. (3) Unaccounted for.
					1908.						
ATCHAM	1169	935	1	84	97	11	34	7	80.0	7.2	8.7
BRIDGNORTH	316	214	0	52	26	3	10	11	67.7	16.5	20.9
CHURCH STRETTON ..	112	97	0	4	9	1	1	0	86.6	3.6	4.5
CLEOBURY MORTIMER	246	184	0	40	17	1	1	3	74.8	16.3	17.9
CLUN	171	128	0	27	9	1	3	3	74.9	15.8	18.1
DRAYTON (Shropshire part)	278	222	1	27	20	6	2	0	79.9	9.7	11.9
ELLESMERE	224	192	0	12	13	3	4	0	85.7	5.4	6.7
LUDLOW	374	225	0	104	33	6	5	1	60.2	27.8	29.7
MADELEY	620	456	0	97	49	7	11	0	73.5	15.6	16.8
NEWPORT	214	168	0	23	15	0	7	1	78.5	10.7	11.2
OSWESTRY	721	532	0	95	54	24	13	3	73.8	13.2	16.9
SHIFNAL	303	211	0	37	23	11	21	0	69.6	12.2	15.8
WELLINGTON	749	510	0	158	38	6	33	4	68.1	21.1	22.4
WEM	257	198	2	37	17	0	3	0	77.0	14.4	14.4
WHITCHURCH	193	143	1	36	9	2	2	0	74.1	18.7	19.7
PARISHES OF CHIRBURY AND WORTHEN IN THE FORDEN UNION ..	No Return.										
TOTAL	5947	4415	5	833	429	82	150	33	74.2	14.0	15.9
				First	**Six**	**Months**	**of**	**1909.**			
ATCHAM	632	486	1	59	50	6	22	8	76.9	9.3	11.6
BRIDGNORTH	190	113	0	36	19	1	4	17	59.5	18.9	28.4
CHURCH STRETTON ..	74	62	0	3	4	4	1	0	83.8	4.1	9.5
CLEOBURY MORTIMER .	126	84	0	27	5	3	0	7	66.7	21.4	29.4
CLUN	98	61	0	29	5	1	1	1	62.2	29.6	31.6
DRAYTON (Shropshire part)	151	107	1	13	15	6	8	1	70.9	8.6	13.2
ELLESMERE	98	80	1	7	8	1	1	0	81.6	7.1	8.2
LUDLOW	175	91	1	56	5	15	7	0	52.0	32.0	40.6
MADELEY	331	234	0	59	25	7	6	0	70.7	17.8	19.9
NEWPORT	123	84	0	20	9	3	7	0	68.3	16.3	18.7
OSWESTRY	344	225	0	77	25	13	4	0	65.4	22.4	26.2
SHIFNAL	146	88	0	32	8	7	11	0	60.3	21.9	26.7
WELLINGTON	358	228	0	96	18	0	9	7	63.7	26.8	28.8
WEM	121	89	0	23	8	0	1	0	73.6	19.0	19.0
WHITCHURCH	108	69	0	23	7	5	4	0	63.9	21.3	25.9
PARISHES OF CHIRBURY AND WORTHEN IN THE FORDEN UNION ..	No Return.										
TOTAL	3075	2101	4	560	211	72	86	41	68.3	18.2	21.9

It will be observed that the percentages of children escaping for other reasons than conscientious objection have remained fairly constant and consequently the falling off in vaccination cannot be attributed to any extent to faults of administration.

Table VI. shows that in many districts a very large proportion of the children are escaping vaccination. The figures for the first half of 1909 are probably not quite in their final form, but on the other hand they may safely be taken as a fairly accurate indication. For this period in Ludlow district two-fifths of the children were not vaccinated, in Clun, Cleobury Mortimer, Wellington, Bridgnorth, Shifnal, Oswestry, and Whitchurch, one quarter to one-third of the children were not vaccinated. If this continues we shall have in a few years a large population susceptible to small-pox, and it will only need the introduction of infection to produce a serious epidemic. I have in previous reports expressed my opinion that the measures taken to prevent epidemics in this county in the years 1902, 1903, and 1904, would have been totally inadequate if a large proportion of the population had not been protected by vaccination.

The districts of Clun, Ellesmere, Ludlow, and Madeley, are sub-divided, and each division is worked by a separate vaccination officer. The percentage of unvaccinated children varies considerably in each sub-district.

The percentages of unvaccinated children in the vaccination sub-districts were :—

	1908	First Half 1909		1908	First Half 1909
CLUN.			LUDLOW.		
Bishop's Castle ..	20.0	29.4	Diddlebury	28.6	38.9
Clun	16.2	42.4	Clee Hill	11.0	15.6
Lydbury	27.3	10.5	Ludlow	36.7	45.0
Norbury	13.3	41.7	Munslow	32.4	59.3
ELLESMERE.			MADELEY.		
Baschurch ..	10.3	6.2	Broseley	29.1	40.2
Ellesmere ..	4.8	9.1	Dawley	6.5	5.7
			Madeley	18.0	15.4

Table 17.

PERCENTAGE OF UNVACCINATED CHILDREN IN THE YEARS 1893—1908.

Unions.	1893–1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Atcham	11.9	9.4	6.7	4.4	3.7	4.0	1.9	2.9	2.7	3.9	5.8	8.7
Bridgnorth ..	7.1	8.3	8.6	5.3	6.5	4.2	2.9	2.7	1.7	4.7	5.3	20.9
Church Stretton ..	2.4	3.2	.9	2.8	2.5	1.7	1.4	1.6	.8	3.8	2.1	4.5
Cleobury Mortimer	4.8	5.4	6.4	4.6	6.3	5.5	1.7	4.0	4.6	6.9	12.8	17.9
Clun	34.2	18.8	12.4	11.2	9.0	9.5	4.4	6.8	9.5	4.7	9.7	18.1
Drayton	1.7	3.6	4.2	4.8	2.8	2.2	.3	1.7	1.8	1.3	4.4	11.9
Ellesmere ..	2.9	1.6	3.0	2.9	3.2	1.1	1.9	1.1	1.7	2.7	4.9	6.7
Ludlow	7.5	9.9	6.7	7.0	5.7	4.6	3.8	5.5	5.6	6.0	12.4	29.7
Madeley	5.2	8.2	6.2	2.3	3.2	2.3	3.4	3.3	3.5	3.8	5.5	16.8
Newport	5.3	9.6	5.9	5.6	5.4	3.5	2.6	3.9	.9	4.8	5.9	11.2
Oswestry	3.9	5.8	3.1	4.1	2.7	2.2	2.1	2.2	5.2	7.6	8.3	16.9
Shifnal	15.7	8.5	7.8	2.0	1.8	1.5	2.8	3.0	2.2	3.0	5.4	15.8
Wellington ..	39.7	33.9	23.8	9.6	6.1	7.0	4.9	4.2	3.8	5.2	8.6	22.4
Wem	1.6	7.5	7.9	6.3	5.2	5.1	3.9	5.0	12.9	13.3	12.1	14.4
Whitchurch ..	5.1	13.4	16.7	9.5	5.6	7.4	6.5	5.8	9.6	5.5	9.3	19.7
Total ..	11.0	10.8	8.3	5.4	4.4	4.0	3.0	3.4	3.9	5.0	7.4	15.9

DISINFECTION.

It is important that one should form a clear idea of what can reasonably be expected to result from disinfection properly carried out and what must not be expected. It is an undoubted fact that disease is spread *mostly* from person to person directly and not by means of clothing, room surfaces or other objects. The spread of disease in this way cannot of course be controlled by disinfection. With regard to some of the common infectious diseases, however, there is absolute proof that a certain small proportion of the cases are caused by infected articles. It is to prevent these cases that disinfection should be efficiently carried out during the progress of and at the termination of the disease.

In considering the disinfection of a house and its contents at the termination of a case of infectious disease, there are three essentials, and if any of these are neglected the sanitary authority concerned is not enforcing satisfactory disinfection :—

(1) The disinfection must be carried out by or under the direct supervision of a sanitary official.

(2) A liquid disinfectant of sufficient strength must be brought into contact with all surfaces exposed to infection, except articles disinfected by steam.

(3) All bedding and textile fabrics must be disinfected by steam.

If these conditions be applied it will be found that in the majority of the districts the disinfection is not satisfactory.

The sanitary authorities in the county with steam disinfectors are Bridgnorth, Wellington Urban and Rural, Drayton, Atcham, Wem Urban and Rural, Shrewsbury, Bishop's Castle and Clun. The Atcham and Shrewsbury disinfectors are not used in routine disinfection.

The provision of a steam disinfector is recommended by the Medical Officer of Health in the following districts :—Church Stretton Urban and Rural, Dawley, Ellesmere Urban and Rural, Newport Urban and Rural, Oakengates, Wenlock, and Whitchurch Urban and Rural. Several of these Councils have had the matter under consideration, but so far no action has been taken.

In the reports for the following districts there is no reference whatever as to the way in which disinfection is carried out :—Ludlow and Oswestry Urban Districts ; and Burford, Chirbury, Cleobury Mortimer, Ludlow, Oswestry and Shifnal, and Wellington Rural Districts.

Dr. Hoffman recommends that the Ellesmere Urban and Rural Districts should combine for the purpose of providing a steam disinfector, and that the disinfection should be carried out by the sanitary inspector under his supervision. The disinfection as at present carried out appears to be very unsatisfactory.

HOSPITAL ACCOMMODATION.

The following is a statement of the position of the County with regard to hospital accommodation :—

For Small-pox.

1.—A hospital for 6 beds and a Berthon Hut to be used in an emergency	for Shrewsbury.
2.—A hospital for about 8 beds ..	for Cleobury Mortimer, Burford and Tenbury, and Rock in Worcestershire.
3.—A hospital for about 6 beds ..	for Ludlow Urban and Rural Districts.
4.—A hospital for 6 beds	for Chirbury and the other districts in the Forden Union.
5.—A hospital for 8 beds	for the Districts of Whitchurch Urban and Rural, Wem Urban and Rural, and Drayton Rural.
6.—A hospital for 8 beds	for Shifnal and Dawley.
7.—A hospital for 8 beds	for Wellington Urban and Rural Districts.
8.—A hospital for 8 beds	for the Borough of Wenlock, at Broseley.
9.—An isolated cottage	for Bishop's Castle and Clun.
10.—An isolated cottage	for Teme and Knighton Urban and Rural Districts.
11.—A Berthon Hut and small Tent ..	for Atcham Rural District.

Also the following sites have been secured for putting up buildings or tents in case of emergency :—

1.—One to serve Oswestry Borough.
2.— „ „ Oswestry Rural District.
3.— „ „ Newport Urban and Rural Districts.

The Borough of Bridgnorth makes use of its infectious diseases hospital for small-pox cases when necessary.

Oakengates, Ellesmere (Urban and Rural), and Bridgnorth (Rural), are quite without any hospital accommodation, or any site on which a hospital might be erected in case of emergency.

For other Infectious Diseases.—The accommodation in the county consists of (1) a hospital at Shrewsbury, with 20 beds for scarlet fever ; 4 beds for a second disease, and 2 beds for a third disease ; (2) a small hospital at Bridgnorth, also used for small-pox ; (3) a hospital of 4 beds for the Newport Urban District ; (4) a hospital of 8 beds at Market Drayton for the Drayton and Blore Heath Rural Districts.

Some of the reports contain recommendations with regard to hospital accommodation. The most important of these are given in the following quotations :—

Atcham Rural District.—" In the majority of cases of ordinary infectious disease in the District reasonably good treatment and measures can be secured at the patient's home, but there can be no doubt as to the desirability of the District having some permanent, and readily available, isolation accommodation, for the serious and acute outbreaks which from time to time will arise, and cause difficulty in treatment and prevention, and which can be promptly obviated only by the existence of permanent public accommodation."

Church Stretton Urban District.—" If the site proposed be adopted I would further suggest that the area be laid out and fenced so as to comply with the requirements of the Local Government Board for a hospital into which small-pox cases might be taken, and the co-operation of the Rural District Council, in whose area the site is, be secured if possible."

Church Stretton Rural. " There is no isolation hospital for the use of the District. In the probable event of the Urban District Council providing itself with a hospital I would suggest the desirability of coming to an arrangement of terms by which cases from the Rural District might be treated there when special circumstances render hospital treatment desirable."

Ludlow Urban. " Either the Borough alone or the Borough and District should provide such an institution, and I trust the matter will receive your serious consideration at an early date."

" In this district an initial provision of 2 beds per 1000 would not be too much, as the demand for the benefits of the institution rapidly increases when once the public appreciate its benefit."

Oakengates. " The only solution to the housing and want of isolation for years to come is an isolation hospital."

Oswestry Urban District. " We look forward eagerly to two possible further advances, first and most important, the possession of an infectious fever hospital."

Teme Rural District. " The isolation hospital is not at all satisfactory, and is not fit to remove a serious case to."

In a very considerable proportion of the County there is no provision for isolating ordinary cases of infectious disease, and in a number of districts (mentioned above) there is no means of even isolating small-pox cases.

It is very desirable that an inquiry should be made into the readiness of existing hospitals for any emergency that may arise.

HOUSE ACCOMMODATION.

The reports of many of the rural districts show that old, dilapidated and very small houses are common, but that closure is impracticable in the absence of other accommodation, and the same remarks apply to many of the urban districts.

Under these circumstances effective action by the Medical Officer of Health is extremely difficult, but notwithstanding the difficulties in the way of effecting reform and the fact that closing houses may temporarily at least aggravate the bad conditions of housing, it is his duty under the Housing of the Working Classes Act, 1890, to make a representation to his Council with regard to any house that in his opinion is unfit for habitation. The responsibility is then thrown upon the Sanitary Authority. Where housing accommodation is unsatisfactory, and where private enterprise is not sufficient to provide an adequate supply of new houses, there are only two courses open (1) for the Sanitary Authority to build houses under Part III. of the Housing of the Working Classes Act, 1890 (2) for the Sanitary Authority to cause the existing houses to be maintained in the highest possible state of efficiency. This can only be done by a frequent and thorough house to house inspection, followed up by action wherever necessary. The enormous importance of this inspection as a conservative agency has not been sufficiently realised, and also the fact that without it rate aid for the building of houses will become much more urgent.

TABLE VII.

Record of Sanitary Work done during the Year 1909.

Table showing the work done by the various Sanitary Inspectors; the Returns are made on a uniform plan as far as possible.

SANITARY AUTHORITY.	Number of houses which have been inspected during the year, either in connection with outbreaks of Infectious Disease, or in consequence of complaints, or in course of a Systematic Sanitary Survey.	Total Number of Notices of all kinds served, including both formal and informal Notices.	Number of such Notices complied with.	Particulars of Sanitary Matters referred to in the above Notices.								Number of cases in which proceedings before Magistrates have been taken for failure to comply with any of the above Notices.	Proceedings taken before Magistrates with reference to			Letters Written.
				Houses to be disinfected after Infectious Disease.	Deficient or objectionable Water Supply.	New Drains to be constructed or old Drains to be amended.	New Closets to be provided or old ones to be amended in construction.	Houses damp, dirty, or admitting rain or weather, or otherwise in a bad sanitary condition.	Offensive Accumulations of all kinds.	Animals so kept as to be a Nuisance.	Houses Overcrowded.		Exposure of Bad Meat for Sale.	Public Exposure of Infected Persons or Things.	Offences against By-Laws and Regulations relating either to Lodging Houses, Slaughter Houses, Dairies and Milkshops, &c.	
RURAL DISTRICTS.																
Atcham	823	158	139	31	21	107	71	29	37	11	18	..	..	..	..	347
Bridgnorth	2015	125	123	16	12	40	20	13	36	..	1	..	..	..	..	..
Burford	—	1	1	4	2	2	..	..	..	..	..	..	..	..	..	5
Chirbury	356	193	103	11	11	37	69	15	48	..	..	..	..	..	..	..
Church Stretton	711	22	19	1	2	3	8	1	..	..	1	..	..	..	..	119
Cleobury Mortimer	222	11	..	10	3	4	1	10	..	..	2	..	..	..	..	21
Clun	194	45	38	..	3	5	5	29	1	2	..	..	..	..	..	68
Drayton	686	151	140	58	17	28	27	10	50	11	8	..	..	..	..	..
Ellesmere	500	37	30	26	3	10	8	2	6	3	4	1	..	..	..	164
Ludlow	143	81	64	39	50	27	5	18	20	2	..	..	..	..	..	82
Newport	260	21	19	..	2	2	2	11	3	..	9	..	..	..	..	159
Oswestry	1000	150	90	33	40	6	3	1	70	2	1	..	..	..	..	240
Shifnal	560	148	148	17	7	48	35	9	47	5	..	..	..	..	..	110
Teme	110	5	5	13	..	3	6	2	..	..	..	..	..	..	..	7
Wellington	550	15	10	42	7	2	3	2	..	..	..	..	..	..	..	14
Wem	1587	75	72	25	9	26	5	6	2	..	2	..	..	..	..	197
Whitchurch	109	37	27	6	5	5	10	1	8	..	2	..	..	..	..	65
URBAN DISTRICTS.																
Bishop's Castle	303	10	10	..	..	..	..	4	6	..	..	..	..	..	..	—
Bridgnorth	1000	38	35	16	..	15	9	10	11	12	3	..	..	..	..	25
Church Stretton	354	21	21	..	..	12	..	..	9	..	..	..	..	..	..	103
Dawley	936	229	229	12	..	52	16	19	219	2	3	..	..	..	..	300
Ellesmere	355	19	19	4	..	..	2	..	194	..	..	..	..	..	..	34
Ludlow	211	149	114	9	..	23	101	1	3	..	..	..	..	..	..	..
Newport	52	10	6	3	..	10	13	2	*1282	..	..	..	..	..	..	118
Oakengates	132	144	121	57	several	116	44	12	42	5	9	..	..	..	..	128
Oswestry	1600	99	93	37	..	54	18	14	15	..	..	..	..	..	..	34
Shrewsbury	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wellington	427	227	218	47	..	19	25	17	7	2	2	..	..	..	..	137
Wem	600	27	27	2	..	70	12	3	†579	2	2	..	..	..	..	8
Wenlock	1191	385	285	3	3	74	128	104	159	15	9	..	..	..	..	465
Whitchurch	525	187	180	17	5	36	32	23	33	2	5		..	..	..	74

* Includes supervision of public scavenging. † Loads.

In many of the reports careful systematic house to house inspection, with subsequent action, is recommended as the best means of keeping the houses in a state fit for habitation. Under Sec. 17 of the Housing and Town Planning, etc., Act, a sanitary authority must cause an inspection of their district to be made from time to time to discover houses unfit for habitation, and for this purpose to comply with such regulations and keep such records as may be prescribed by the Local Government Board. To efficiently comply with the section it will be necessary to make a house to house inspection of the poorer class houses periodically.

Dr. Gepp in his report to the Atcham Combined District lays particular stress on this matter. He says :—" I noted in the last Annual Report the provision by all the Councils of special pocket books for systematic inspection, practically sufficient for recording the condition of all houses in the Districts. These, if methodically laid out in parishes for Rural Districts, and in streets for Urban Districts, and appropriately numbered and lettered, would, when the survey is completed, form a permanent and easily-referred-to sanitary census of the district. It would naturally be the aim of a Sanitary Inspector to have a knowledge of the sanitary circumstances of every house within his district ; and the pocket books are designed to give him that information in readily accessible form.

" It is evident that in the rural districts the numbering of all houses would very greatly simplify the work of recording results of systematic inspection with regard both to villages and to scattered houses, and I would suggest to the Rural Councils to assist in this matter by every means in their power. Mr. Ward, the Sanitary Inspector and Surveyor for the Newport Rural District, in describing the method he has adopted for arranging and indexing his pocket books for his District mentions the extremely valuable assistance afforded by the numbering of houses throughout that District."

This suggestion with regard to the numbering of houses in rural districts is undoubtedly a valuable one, for without name or number and with frequent changes of tenants, identification of houses is often difficult.

The following quotations from the Annual Reports for the Districts illustrate the conditions throughout the county and the suggestions made by the Medical Officers of Health :—

Chirbury Rural District. " The house to house inspection is completed or nearing completion. Many cases of dampness have been remedied, and general condition of defective houses improved in so far as the construction of such houses allow of remedy.

" Ventilation of bedrooms is in many cases quite inadequate, the windows not being made to open. I recommend the Council to take steps to remedy this, it being a simple matter."

Church Stretton Rural District. " Speaking generally, the cottages of the district are of considerable age and often undesirably small for family occupation. There are on one or two estates good modern cottages, but with a diminishing population the building of new cottages is altogether exceptional. There are many houses in a practically worn-out condition, and needing periodical inspection to keep them near to a habitable standard. Owing to defective construction the light and ventilation in old cottages is often found to be unsatisfactory, especially as regards the bedrooms."

Dawley Urban District. " The houses are for the most part of old construction. Increased demand for houses has led to a good deal of improvement in recent years, and a much better state of repair is noticeable everywhere than was to be seen ten years ago. Much of this work has been effected by the Surveyor and Sanitary Inspector's direct efforts. The points to which I recommend special and continued attention as of the greatest importance to the health of the occupants of small and old houses, are the removal of all remediable causes of dampness, such as absence of troughing and spouting, and walls imbedded in earth ; and seeing that windows, of bedrooms especially, are of adequate size for lighting the rooms, and made to open freely, for ventilation."

Drayton Rural District. "Housing accommodation is sufficient and satisfactory in the district generally."

Ludlow Rural District. "There has been a steady improvement in the cottages on some estates, but much requires to be done at the Clee Hill and Knowbury parish."

Newport Urban District. "There are a number of worn-out old houses in the town, mainly in the narrow lanes and passages opening off the main street. A number of these have been void for many years. Some that are occupied are barely fit for habitation, and special attention should be given to these and to other poor and old cottage property, of which the town has a considerable proportion. Small, old, and defectively designed and built cottages, if damp, ill lighted and ill ventilated, are causes of ill health and deficient stamina in their occupants. That their rents are low is of no advantage to the district in my opinion, as their presence probably attracts and maintains a class sunk in poverty. These conditions, acting and re-acting, are probably to a considerable extent a cause of the comparatively high death-rate from phthisis of the district. I have often advocated a systematic house to house inspection, as essential to the discovery of the condition as regards defects and possibility of improvement of this old property. I recommend the Council to institute a systematic inspection, with a recording of the details methodically in the inspection pocket books which they have now provided for the use of their Inspector."

Newport Rural District (*industrial part*). "There remains the fact that a number of the houses are radically unsatisfactory in design and structure, and need very careful and thorough treatment to make them wholesome dwellings. The first essentials are to remove all causes of dampness of walls and floors, and to provide through ventilation to every house and adequate lighting space."

Oswestry Rural District. "New houses continue to be erected, and overcrowding is being gradually diminished. A block of insanitary dwellings has been demolished and houses erected in their place at a reasonable rental. All over the district there is still a deficiency of healthy houses at a low rental, this last being an important consideration."

Wellington Urban District. "There is a sufficiency of cottages, but the substitution of better ones for a number of back-to-back houses is desirable. In addition there are a number of 'obstructive' houses which ought to be dealt with."

Housing and Town Planning, etc., Act, 1909. This Act is of such great importance that some reference to those sections that have a very practical bearing upon housing reform seems desirable.

The Act is divided into three parts, the first part dealing with the Housing of the Working Classes, the second with Town Planning, and the third with County Medical Officers and County Public Health and Housing Committees.

For ordinary administrative purposes connected with the improvement of housing of the working classes, sections 14 and 15 are by far the most important. In these sections the principle is laid down that the landlord in letting a house not exceeding a certain rental (in Salop £16 a year) guarantees that it is fit for habitation, and undertakes so to maintain it. If this undertaking is not complied with, the local authority may give 21 days' notice to carry out the necessary works. If within this time, the work has not been done, and if the landlord has not given notice of his intention to close the house, the local authority may carry out the work and recover the expenses.

Under section 17 a local authority must cause an inspection of their district to be made from time to time to ascertain whether any dwelling house is unfit for habitation, and for this purpose they must comply with regulations and keep records prescribed by the Board.

Under this section a local authority can close a house on the representation of the Medical Officer of Health, without proceedings in Court, an appeal being allowed to the Local Government Board.

Under section 18, the demolition of a house that has remained closed for three months *must* be considered. If it has not been made fit for habitation, or if steps are not being taken to make it fit, or if it is a nuisance or dangerous or injurious to health, the local authority *shall* order its demolition. This section is to prevent houses which have been condemned being allowed to remain as obstructive dwellings or as receptacles for filth or rubbish. It does not provide for the alternative, where the building is not obstructive, and it is wished to use it for some other purpose, *e.g.*, a storehouse.

Under section 43 the erection of back-to-back houses is prohibited.

Sections 10 and 11 deal with the powers of the Local Government Board in case of failure of the local authority to carry out their duties under the principal Act.

The County Council may complain under section 10 to the Local Government Board

Under section 12 the County Council on complaint of a parish council, a parish meeting, or four inhabitants, that the Rural District Council is not carrying out its duty under Part III. of the principal Act, may hold a public inquiry and take over the duties of the district Council; or under section 13 the County Council may apply to the Local Government Board for the transference of duties under Part III. from the Rural District Council to the County Council, and the Local Government Board may make an order accordingly.

Amongst other important matters, the compulsory purchase of land for purpose of Part III. of the principal Act has been greatly simplified, and the period for which loans may be granted for the purchase of land has been extended to 80 years.

Part III. of the principal Act dealing with the erection of dwellings for the working classes, is no longer adoptive, but is in force in all districts.

WATER SUPPLIES.

The improvement of the water supplies has made some progress during the year.

SCHEMES THAT HAVE BEEN INITIATED, PARTLY CARRIED OUT OR COMPLETED DURING THE YEAR :—

Upper part of Wellington Rural Parish, including Lawley Bank.—The scheme for supplying this district from the Dawley Urban water supply has been completed during the year.

Dawley.—The scheme for supplying Dawley from Harrington has been completed, and is now in full use.

Donnington Wood.—The supply is now complete—the upper part from Hilton Bank and the lower from a well at Lilleshall.

Clungunford.—The supply is being extended to that part of village previously not supplied.

Brockton (in Clun R.D.)—A supply from a well in Mill Meadow is being carried out.

Barker's Green and Aston are being supplied from the Wem Urban mains.

At Shrewsbury and Bridgnorth high pressure filters have been put down to filter the river water for purposes other than drinking.

Small improvements have been made at *Marshbrook.*

THE FOLLOWING SCHEMES HAVE BEEN PREPARED :—

Marton (in Chirbury R.D.) and *Clunbury* and *Clun* (in Clun R.D.), Schemes have been prepared for supplying these villages by gravitation from springs.

Wellington Urban District.—Plans for increasing the supply and for filtering the water are before the Local Government Board.

Tilstock—relaying of drawpipe on account of faulty coating has been decided on.

SCHEMES FOR NEW WATER SUPPLIES OR FOR THE IMPROVEMENT OF PRESENT SUPPLIES ARE UNDER CONSIDERATION for Worthen and Brockton (Chirbury R.D.), Edgton (Clun R.D.), Bucknell (Teme R.D.), At Wenlock a scheme has been prepared for increasing the water supply.

RECOMMENDATIONS ARE MADE for improving the water supply of the Borough of Ludlow, Church Stretton Urban District (by diverting the water from the small reservoir), Borough of Oswestry (by filtration of the water supply), Meole Brace, Baschurch, Lydham and Norton-in-Hales (by extending the Market Drayton supply). In Church Stretton Rural District many small schemes for the supply of small villages and collections of houses might with advantage be carried out.

NOTHING HAS BEEN DONE to improve the supplies of Ford, Cound Moor, Cross Houses and Picklescott. Recommendations for the improvement of these supplies have been made in previous reports.

No mention is made in the Medical Officer of Health's report for Wem Rural District of the schemes for supplying Whixall and Prees with water. Both these districts are badly in need of a water supply.

REPORTS OF DEFICIENCY OF WATER SUPPLIES.

Ellesmere Rural District. There is a serious deficiency in the water supply of Dudleston Heath.

Ludlow Rural District. There are still several cottages at Aston Munslow without a supply.

It will be seen that some progress is being made with the improvement of the supplies to towns and villages, but little is being done with regard to the improvement of supplies to individual houses or small groups of houses. A considerable proportion of these supplies are very grossly polluted, and many can only be described as imperfectly filtered sewage. The only method of dealing with these supplies is to carry out a careful and systematic house to house inspection, and to insist upon the removal of sources of pollution and the proper construction of wells. In those cases where houses with defective supplies are more or less grouped together the most practical plan will often be for the District Council to provide a public well and pumps properly placed, and to rate the users.

The following paragraph taken from previous reports deals with the improvement of the supply of individual houses, and the duties of District Councils under the Public Health (Water) Act may with advantage be repeated :—

No action appears to have been taken by any of the Councils on the lines suggested by Dr. Gepp for improving well supplies. If, as he suggests, the majority of wells can be made reasonably safe by the expenditure of the amount specified in the Public Health (Water) Act, 1878, it undoubtedly is the duty of the Rural District Council to take action in these cases on its coming to their knowledge that the wells are polluted. It cannot be too much insisted upon that, to quote from sec. 3 of that Act, " It shall be the duty of every Rural Sanitary Authority, regard being had to the provisions in this Act contained, to see that every occupied dwelling-house within their district has within a reasonable distance an available supply of wholesome water, sufficient for the consumption and use for domestic purposes of the inmates of the house." If the authority cannot compel the owner to provide a supply it is their duty to provide it. Nor can this responsibility be moved on to the Parish Council concerned. For the Parish Council merely to reject a scheme on account of cost is not sufficient, they should at least bring forward some alternative suggestion, as the Rural District Council strictly have no option but to provide a supply or see that a supply is provided if the houses have not " within a reasonable distance an available supply of wholesome water." Instances are quite numerous in which the Rural District Councils have drawn up schemes either for water supply or sewerage and sewage disposal, and submitted them to the Parish Councils, who have rejected them on account of cost. The matters have then been allowed to drop. The Parish Council has a right under sec. 16 (3) of the Local Government Act, 1894, to receive notice when plans of sewerage or water supply have been adopted by the District Council, and no doubt they have a right to criticise and state objections, but the decision and responsibility of such decision must remain with the District Council.

EXCREMENT DISPOSAL.

The method of disposal of excrement except in the towns and large villages, where there is a system of sewers, is, generally speaking, by means of privies with underground vaults. The system of disposal in some towns, *e.g.*, Shrewsbury and Oswestry, is entirely by water closets, in others, *e.g.*, Bishop's Castle, it is principally by privies, and in others the disposal is by water closets, pail closets, and privies.

In Ludlow during the last two years a sustained effort has been made, in consequence of a report by Dr. Cranstoun, to get the insanitary privy middens in the town converted to water closets. During the year the privy middens were reduced by 30.3 per cent. It is hoped that the effort will be continued until all privy middens have been abolished.

The conversion of privies to water closets is recommended in the reports for the following districts :—Bishop's Castle, Church Stretton, Dawley (centre of town), Newport, Wellington and Whitchurch Urban Districts, and Drayton Rural District.

In many of the reports for rural districts the conversion of privies to earth closets is recommended.

The aim that sanitary authorities should keep in view with regard to this matter may be very briefly stated :—

1.—In districts with a good system of sewers, sewage disposal, and water supply, to make the water carriage system of excrement disposal universal. The success of this system depends to a great extent on the care and precautions with which it is carried out.

2.—In districts without sewers or water supply, to make a good type of earth closet universal.

To effect these improvements is by no means simple, and they can only be carried out by a large amount of detailed work. Every closet has to be dealt with separately and shown to be "insufficient" within the meaning of the Public Health Act. There are probably, however, very few privies which, either from their defective construction or unsatisfactory position, would not come within this meaning.

Transmission of fæcal matter from the privy to food in the house by means of flies has been so conclusively proved that privies even in very isolated houses must be looked upon as absolutely unsatisfactory. A great effort should be made to get all privies converted to some kind of earth closet or water closet. The conversion to earth closets is a comparatively simple matter, and in new houses it is cheaper to provide an earth closet than a privy. The essential part in the management of an earth closet is that excreta shall be immediately covered by dry earth, garden mould being the most suitable. By this means not only is putrefaction stopped, but flies are prevented from gaining access to the excreta and consequently from carrying it to food.

Although it is necessary that certain simple rules should be observed in the construction of earth closets, it is their management that is so important for success. For this reason I have advocated that the older boys in the elementary schools be instructed and trained in the proper management of earth closets. This instruction should include (1) the preparation of dry earth (2) the immediate covering of excreta with earth, and (3) the proper utilisation of the contents of the closets on land.

SEWERAGE AND DRAINAGE.

The various matters of detail connected with the sewerage and drainage of the districts will be found in Part II. of the Report.

It is extremely important that in every district where there is a system of sewerage, the drains should be submitted to the water test and thoroughly inspected before being covered up. In those districts where a sewerage scheme is being carried out, or is likely soon to be carried out, the District Councils would be well advised to adopt drainage regulations under sec. 21 of the Public Health Act, 1875, and provide means for the water testing of all new drains.

It should be borne in mind that improvements in sewerage and drainage are to a great extent due to efforts made to remove pollutions from rivers. Almost all schemes for purification of sewage include measures for improving and often for completely reforming the sewerage system of the district.

SEWAGE DISPOSAL.

The following Local Government Board Inquiries were held during the year for purposes connected with sewage disposal :

On February 23rd, into a petition by the Shifnal Rural District Council, to the Local Government Board to issue a Provisional Order for the compulsory purchase of certain land required for the purpose of sewage disposal. At the Inquiry the Wolverhampton Corporation opposed on the grounds that they had statutory rights over this watershed, and that no work such as that contemplated could be carried out without their permission, which had not been obtained. This matter is consequently at a standstill. The Local Government Board have proposed a conference between one of their inspectors, the engineers of the scheme, and the Rural District Council.

On April 20th, into an application by the Ellesmere Urban District Council for sanction to borrow £5,000 for purposes of sewerage and sewage disposal. The scheme was not approved.

On April 21st, into an application by the Town Council of Bishop's Castle for sanction to borrow £4,600 for purposes of sewerage and sewage disposal. The scheme provides for re-sewering of the town and for treatment of the sewage. The treatment will be by septic tanks and filtration, and it will be possible to pass the sewage through two series of filters so as to ensure very efficient purification. No separate storm filters are provided for, but the storm sewage will be dealt with on the ordinary filters, special provision being made. In this way all the filters willl be kept in good working condition.

On June 8th, into an application by the Wellington Rural District Council for sanction to borrow £7,000 for purposes of sewerage and sewage disposal of the parish of Hadley. The scheme of sewage disposal consists of settlement in tanks and irrigation over land. The present site is to be retained for the Trench end of Hadley and for the western part, including Leegomery, 15½ acres of land have been obtained. The land is very suitable in character and with good distribution a very satisfactory effluent should be obtained. The sewage of Leegomery has to be pumped. It is not proposed to deal, in the scheme, with the sewage of Horton.

Good progress has been made with the construction of the Bishop's Castle Sewage Works. The Wem sewage works have been completed, and the new works at Oswestry are in course of construction. Schemes are in course of preparation for Much Wenlock, Bridgnorth, Ellesmere, Market Drayton, Weston Rhyn, and Pontesbury.

The worst pollution still undealt with and in some respects one of the most difficult to deal with, is the sewage from Ironbridge, Coalbrookdale, Madeley, Coalport, Jackfield, and Broseley. The absence of a proper system of sewerage has very seriously interfered with the disposal of sewage from the new secondary school at Coalbrookdale. The question of the satisfactory disposal of the sewage of this district should receive the serious consideration of the sanitary authorities concerned.

The following quotations from the District Medical Officers' Reports show the position with regard to this matter :—

Atcham Rural District. "MEOLE BRACE.—To facilitate the treatment of the sewage from the settling tanks at the outfall works, a further area of land has been underdrained."

PONTESBURY.—"Plans and estimate for a scheme of sewerage and sewage disposal for the whole village have been prepared by the Sanitary Surveyor and adopted by the Council. Duplicate plans are now in the hands of the Parish Council, and the sanction of the Local Government Board for borrowing powers will shortly be sought."

Bishop's Castle Urban District. "Good progress is being made with the new work of laying sewers and installing the bacterial filter beds at the outfall. It is hoped that the system may be completed and at work by September of the present year."

Bridgnorth Urban District. "The question of the disposal of sewage, part of which at present is discharged untreated into the River Severn, is receiving careful consideration by the Borough Council. Engineers' reports have been received as to the best methods of dealing with it, and it is to be hoped that during the ensuing year some definite scheme will be adopted."

Bridgnorth Rural District. "At Worfield there is a small system of sewerage, which takes in the school and a few houses, and which empties into the River Worfe, a tributary of the Severn."

Cleobury Mortimer Rural District. "There is no alteration in the condition of things at Cleobury Mortimer, and at Highley the suggested tank has not been introduced to intercept the solid matter."

Clun Rural District. "Clun town is sewered for the most part, but only a small number of the houses there have water closets. The principal sewers of the town discharge into the Clun river. The Council, during 1907, had the disposal of the sewage under consideration, and employed a firm of engineers to report on the subject."

Dawley Urban District. Engineers have been engaged "to make a survey and prepare such plans as will show the proper points for outfalls, the course which will have to be taken by intercepting sewers necessary for the collection of the sewage and conveyance to the selected points of outfall, and the size of such intercepting sewers and of other trunk sewers."

Drayton Rural District. "The revised scheme for the treatment of the sewage of Market Drayton is nearly completed."

Ludlow Urban District. "The reconstructed Sewage Disposal Works continue to act efficiently."

Oakengates Urban District. "Many defects in the working of the sewage farm have been remedied, and you still have the matter under your consideration, particularly the storm overflows of Oakengates itself."

Oswestry Urban District. "New Sewerage Works are now in course of construction, and we hope to see them in full working order before the end of the year."

Shifnal Rural District. "I have visited the Shifnal Sewage Works on many occasions during the year and always found the effluent clear and free from smell, and on chemical analysis it has proved to be very satisfactory."

Wellington Urban District. "The Sewage Disposal Works are now completed; recently the introduction of an automatic valve to get a better and wider distribution on the filter beds, especially at night, and the levelling of the top part of the land has been carried out. Frequent analyses have been made of the final effluent during the year, and the result has proved highly satisfactory. There is a certain amount of smell from the sludge lagoons, but seldom any from the filter bed."

Wellington Rural District. "The Sewerage and Sewage Scheme for the parish of Hadley is now in form to be carried out, and will shortly be an accomplished fact, and many sanitary defects in that parish will be removed."

"The amended Sewerage and Sewage Disposal Scheme for the village of Admaston is now prepared for submission to the Local Government Board for their sanction."

Wenlock Borough. "There are at present no works of sewage treatment, the outfall of most of the main sewers being either directly into the Severn, or into streams which fall into the Severn within the District."

"The Wenlock Sanitary Committee have had the improvement of the sewers of the town and the question of sewage disposal under consideration during the year."

Whitchurch Urban District. "The new grit and septic tanks at Hadley farm were completed early in the year at a cost of about £104; the capacity is 25,000 gallons, equal to about 5 hours' flow of sewage. The tanks are of blue bricks and concrete. The Council now has a man continually employed at Hadley farm to attend to the tanks and the proper distribution of the sewage over the land. The tenant having now taken the Smallbrook farm, through which the outfall sewer passes, the sewage is distributed over a wider area than formerly."

SCAVENGING.

Details of the scavenging of the various districts will be found in Part II. of this report. In many districts there is an indication of steady improvement in this respect.

Dr. Beresford says in his report for the Oswestry Rural District that scavenging of the populous districts is very greatly needed.

The importance of prompt and complete scavenging in urban districts has been greatly emphasised by recent investigations into the spread of infectious disease by means of flies.

House Flies as a cause of the Spread of Disease. Recent investigations into the role of flies in the spread of disease has emphasized greatly the need for efficient disposal of refuse, and has given us a rational explanation of the spread of disease under certain conditions where an explanation was previously most difficult

The evidence with regard to the conveyance of infectious disease by house-flies has been well summarised in a report by Prof. Nuttall and Mr. Jepson, issued by the Local Government Board. The conclusions arrived at are that the spread of typhoid fever and cholera by means of flies is definitely proved, that it is extremely probable that infantile diarrhœa is spread in the same way, and that there is reason for thinking that flies are instrumental in spreading many other infectious diseases.

It is not possible to watch flies crawling over tuberculous sputum and at the same time other flies on the milk and food of the household, without coming to the conclusion that there is a distinct danger of the spread of tuberculosis in this manner.

The readiness with which in many households flies can pass from the privy to the larder suggests an undoubted potential cause of those diseases spread through fæcal matter.

The transmission of disease germs by flies takes place by external contamination of the legs, wings, etc., and by the intestines becoming charged with infective substances. The excrement from such a fly may contain a very large amount of infective material and may very seriously infect food into which it falls.

The chief breeding places of the common house-fly are given by Mr. Robert Newstead, Lecturer in Economic Entomology and Parasitology, at the Liverpool School of Tropical Medicine, as "(1) Stable middens containing fermenting horse manure or a mixture of this and cow dung; (2) Middens containing fermenting spent hops; and (3) Ashpits containing fermenting vegetable matter."

The life history of the fly and particularly the length of the complete cycle, have a very important bearing upon the measures that should be taken to prevent their multiplication. The length of the cycle varies considerably according to the temperature, but for practical purposes the most important point is the minimum time in which a fly can be produced from a newly laid egg.

The number of eggs laid by one fly varies from 120—140.

The larva, or maggot, is produced from an egg in eight hours to three or four days; average 12 hours.

The transformation of larva to papa or crysalis takes 5—8 days under favourable conditions; 6—8 weeks under unfavourable conditions.

The fly emerges from the crysalis in 5—7 days under favourable conditions; in 14 to 28 days under unfavourable conditions.

The whole cycle from egg to fly is therefore under the most favourable conditions about 10 to 14 days. In other words, if refuse receptacles are *thoroughly* emptied once a week they will not act as breeding places for flies.

A very important subject that is receiving attention but has not yet been properly worked out is the distance that flies will travel from their breeding places. Upon a correct solution of this problem depend many important matters particularly with regard to the distance that refuse heaps, etc., should be removed from houses.

The precautions that should be observed to prevent the spread of disease by flies may be grouped under three headings:—

1. Measures directed to prevent the development of flies by removing their breeding places.
2. Measures to prevent flies coming into contact with matter liable to contain disease germs.
3. Measures to prevent flies coming into contact with food.

The measures that are necessary to effect these three objects are more or less obvious.

Stable refuse particularly, but also any decomposing animal or vegetable matter are the breeding materials for flies, and in towns more especially stringent measures should be taken to prevent accumulations of this kind for more than a few days. The measures that should be taken to prevent flies coming into contact with dangerous organic matter are broadly speaking, rapid removal of such matter or destruction by fire or burial. To protect food from flies it should be kept in a well ventilated fly-proof cupboard or store.

This matter may with profit be considered with respect to the specific measures that should be taken by sanitary authorities in town and country districts.

In country districts it should be the endeavour of the Sanitary Authority to see—

(1) That a type of closet is provided in which the excreta is immediately covered with earth, and that all privy middens are abolished.

(2) That all decomposable matter is buried or covered with a layer of earth each day.

(3) That accumulations of manure are kept as far as possible from houses and dairies.

In towns there should be—

(1) An efficient water carriage system.

(2) Systematic and frequent scavenging—at least once a week, and preferably daily.

(3) General use of covered metal receptacles for household refuse.

(4) Careful instruction given with regard to burning decomposable household refuse.

(5) Stable manure should be removed at least once a week, and on each occasion the middenstead should be completely emptied and cleansed. These receptacles should be properly constructed so as to allow of cleansing.

Considering the importance of this matter in its relation to public health, it is to be hoped that the sanitary authorities of those urban districts and small towns where there is no satisfactory scavenging will reconsider their position in this respect. Market Drayton, Cleobury Mortimer, and Ellesmere may be mentioned as examples.

It is also to be hoped that the Sanitary Authorities of other towns will in the light of our present knowledge improve their scavenging on the lines indicated.

Dust Nuisance. It cannot be doubted that the largely increased amount of dust in the neighbourhood of frequented highways due to motor traffic has become a distinct danger to public health. The dangers of dust in any form are well understood by the medical profession, and the harmful conditions are so obvious to the general public that it is unnecessary to enter into any detail. It will suffice to mention that it is impossible in houses adjoining roads with much motor traffic to keep the windows open either night or day during dry weather, and particularly during hot dry weather in the summer when open windows are so desirable ; and that walking on such a road during dry weather instead of being a health giving and pleasurable form of exercise is frequently almost unbearable. This question has received a large amount of attention throughout the country by highway authorities, but the results up to the present so far as this county is concerned are inappreciable. The public health aspect of the problem has not, however, been sufficiently kept in view. It should be generally acknowledged that the prevention of dust is one of the important measures for the preservation of health, and the bodies responsible for the public health should press this matter forward on every opportunity.

MILK SUPPLY AND INSPECTION OF DAIRIES, COWSHEDS, MILKSHOPS, AND DAIRY CATTLE.

The following table, compiled from the District Medical Officers' Reports, shows the amount of inspection in each district :—

URBAN DISTRICTS.	Number of Cow-keepers & Milk-sellers on Register.	Number of Inspec-tions.	Number of Notices Verbal and Written.	Number of Notices Complied with.	RURAL DISTRICTS.	Number of Cow-keepers & Milk-sellers on Register.	Number of Inspec-tions.	Number of Notices Verbal and Written.	Number of Notices Complied with.
Bishop's Castle ..	8	12	3	3	Atcham	174	325	123	114
Bridgnorth ..	—	100	14	14	Bridgnorth ..	22	40	16	16
Church Stretton ..	3	14	2	2	Burford	2	10	3	3
Dawley	24	52	46	46	Chirbury	23	21	16	16
Ellesmere	8	16	—	—	Church Stretton ..	26	104	11	11
Ludlow	15	13	4	3	Cleobury Mortimer	9	18	—	—
Newport	15	30	—	—	Clun	5	15	3	3
Oakengates.. ..	33	96	12	12	Drayton*	80	52	2	2
Oswestry	14	42	5	5	Ellesmere	30	60	20	20
Shrewsbury ..	—	—	—	—	Ludlow	23	46	20	20
Wellington ..	27	62	9	7	Newport	39	117	66	66
Wem	15	12	5	5	Oswestry	60	140	50	50
Wenlock	24	26	9	8	Shifnal	36	148	11	11
Whitchurch ..	27	94	—	—	Teme	2	7	—	—
					Wellington ..	24	24	—	—
					Wem	127	304	15	15
					Whitchurch ..	11	22	20	20

* A systematic inspection of all premises registered is now being made.

Although there has been considerable improvement in recent years with regard to the amount of inspection, it must be acknowledged that both the amount of inspection and the measures subsequently taken are totally inadequate to safeguard the milk supply.

The following quotations from the district reports give an idea of the inspection and how it is carried out :—

Atcham. "The greatly increased supervision of the milk trade in the district during the past three or four years is a most satisfactory feature of the Council's work. Since the end of 1906 the number on the register has been increased from 84 to 174, and in connection with this much good work has been done in obtaining better structural conditions in the cowsheds ; lighting, ventilation, flooring, and drainage being brought up to a better standard."

Bridgnorth Urban. "The dairies and cowsheds have been inspected, and are generally satisfactory."

Church Stretton Rural. "No regulations have been made under the Dairies, Cowsheds and Milkshops Order, 1885. I have recommended adoption of regulations, but the Council, after discussion, decided that they were not necessary."

Drayton. "A systematic inspection of all registered dairies, cowsheds and milkshops in the district is now being proceeded with, and a report upon their condition will shortly be made to your Council in accordance with the request of the Local Government Board."

Ellesmere Urban. "Slaughter houses, Bakehouses, and Dairies also receive attention."

Ellesmere Rural. "Bakehouses, Cowsheds, and Dairies have also been inspected and received attention."

Wenlock. "Steady, if slow, progress has been made in the improvement of the cowsheds in the Borough during the year. Six cowsheds have been paved and drained, six have had additional means of lighting provided, six have had the ventilation improved, and in only three cases has it been necessary to serve notices for limewashing."

It will be well to bear clearly in mind the action that sanitary authorities should take :—

(1) The registration of all cowkeepers and milksellers who come under the Order should be enforced.

(2) Satisfactory regulations should be adopted.

(3) A systematic inspection should be instituted, every cowshed, etc., being visited at least once a quarter, and those where the methods are unsatisfactory being visited more frequently. The inspection should be directed not merely to the structural condition of the buildings, but to their cleanliness, the cleanliness of the cows, milkers, vessels, and the general conditions of collection, cooling, storage, and transmission of milk.

(4) A systematic veterinary inspection of dairy cattle, principally in order to detect tuberculosis of the udder.

The objects to be aimed at are to get—

(1) A well constructed cowshed and dairy.

(2) To educate those engaged in the milk traffic in methods of cleanliness.

(3) To eliminate tuberculous cattle.

With the object of informing the Sanitary Inspectors of the County as to the best principles of cowshed construction, I got Mr. Brittlebank, the Chief Veterinary Inspector for the City of Manchester, to give a lecture on this subject. The lecture was most excellent and practical, and I would suggest that it be printed along with a diagram of a well designed cowshed and distributed amongst the Sanitary Inspectors and others interested.

As a means of educating those engaged in the milk trade, I would suggest that two pamphlets drawn up by the Joint Committee of the West Riding County Council and the County Boroughs of Bradford, Hull, Leeds, Rotherham and Sheffield, for (1) Farmers and Dairymen, (2) Retail Milksellers, be printed and distributed to those concerned.

With regard to the elimination of tuberculous cattle, little can be done until there is fresh legislation. In the meantime I would suggest that the facilities for bacteriological examination which are afforded to District Councils by the County Council, be extended to the examination of milk for tubercle, on the understanding that when tubercle bacilli are found in the milk, all possible action is taken to prevent its further sale.

The example set by the Borough of Ludlow in having a regular veterinary examination of the milk cows is one that should be followed by other district councils.

Not only are the measures at present taken absolutely inadequate to secure either a clean milk supply or milk free from tubercle bacilli, but there seems little hope of real improvement without drastic legislation.

Our efforts to abolish consumption in the human being must fail in the long run unless tuberculosis amongst milk cows is also got rid of. It may be found expedient at first to deal only with cows with tuberculous udders, but the end to be kept in view must be the total abolition of tuberculosis from the cowshed.

MEAT INSPECTION.

In the memorandum as to Annual Reports of Medical Officers of Health issued by the Local Government Board information is asked for with regard to meat inspection, and particularly with regard to the number of carcases condemned for tuberculosis (information on this point to be given even if entirely negative).

In the reports for Atcham, Bishop's Castle, Church Stretton Urban and Rural, Clun, Dawley, Newport Urban and Rural, Teme, Wellington Urban, Wenlock and Whitchurch Urban and Rural, it is stated that the slaughter houses are visited but not at all, or only occasionally, at times of slaughtering, and that no carcases have been condemned for tuberculosis.

In the report for Shifnal it is stated that 12 sheep and one beast have been dealt with as unfit for human consumption, and in the report for Oakengates, that the conditions of the meat market have much improved.

In his report to the Newport Urban Council Dr. Gepp suggests that the new inspector should have veterinary assistance when required.

There is no mention of meat inspection in any of the other reports.

It is quite evident that there is no inspection of meat worthy of the name in the county, and in the absence of skilled veterinary inspection, it is not possible to have satisfactory inspection. An attempt to form a combined district in East Shropshire for this purpose fell through, principally because the rural districts concerned would not support it.

Meat inspection will continue to be little more than a farce until arrangements are made for the inspection of meat at the place of slaughter by skilled persons, and it is essential for such a scheme that large areas shall be formed. It appears probable that legislation will in the near future necessitate a county public health veterinary service for the purpose of safeguarding the milk supplies, and such a service cannot fail, whether directly authorised or not, to be of use in helping to prevent the sale of unsound meat.

INSPECTION.

The work of sanitary inspection in the various districts is summarised on Table VII. The number of inspections given in column 1 include not only the systematic house inspections but inspections of houses for all other purposes. It is evident that in many districts the amount of inspection is very insufficient. Probably the least amount of inspection that can be considered satisfactory in a house-to-house inspection is one third of the houses each year, and in the more insanitary areas more frequent inspection is necessary. Amongst the urban districts only seven per cent. of the houses were inspected in Newport and Oakengates, and 16 per cent. in Ludlow. In the rural districts with the least inspection the percentages were Ludlow 7, Clun 13, Cleobury Mortimer 18, Newport 20, Atcham 20, and Wellington 22.

TABLE VIII.

FACTORY AND WORKSHOP ACT, 1901.

SUMMARY FOR 1909.

Urban Districts.	Number of Workshops on Register.	Number of Inspections of Factories, Workshops, Workplaces and Home-workers' Premises.	Written Notices sent.	Defects from					Other Defects.	Defects remedied.	Failure to fix abstract of Act.	Representations from H.M. Inspector.	Number of Underground Bakehouses.	Lists of Outworkers received.	Number of Outworkers in District approximate.	Remarks
				Want of Cleanliness.	Want of Ventilation.	Overcrowding.	Defective Sanitary Accommodation.	Breach of Sanitary Requirements of Bakehouses.								
BISHOP'S CASTLE ..	35	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
BRIDGNORTH ..	94	600	..	6	..	..	..	..	6	..	..	..	..	..	..	
CHURCH STRETTON ..	28	80	13	12	..	..	1	..	13	..	1	..	..	..		
DAWLEY	34	68	13	8	..	..	1	..	9	..	2	..	2	..		
ELLESMERE ..	36	36	..	1	..	..	..	..	1	..	..	..	..	..		
LUDLOW	59	26	..	..	..	..	..	..	..	..	..	..	..	..		
NEWPORT ..	113	200	..	..	..	..	..	..	..	..	..	1	..	..		
OAKENGATES ..	81	154	16	12	..	..	1	..	2	15	..	1	..	..	..	
OSWESTRY ..	106	72	2	6	..	..	..	..	..	6	..	..	..	..	..	
SHREWSBURY ..	326	326	40	19	9	8	8	..	..	39	..	8	1	32	32	
WELLINGTON ..	81	30	..	7	2	..	..	..	..	9	..	..	..	2	8	
WEM	71	24	..	..	..	..	..	..	..	..	..	..	..	..	..	
WENLOCK ..	126	85	13	8	..	..	..	..	9	17	..	8	1	..	..	
WHITCHURCH ..	79	178	2	..	..	..	2	..	3	5	..	..	..	..	..	

Rural Districts.	Number of Workshops and Workplaces on Register.	Number of Inspections of Factories, Workshops, Workplaces, and Home-workers' Premises.	Written notices sent.	Defects from					Other Defects.	Defects remedied.	Failure to fix Abstract of Act.	Representations from H.M. Inspector.	Number of Underground Bakehouses.	Lists of Outworkers received.	Number of Outworkers in District approximate.	Remarks.
				Want of Cleanliness.	Want of Ventilation.	Overcrowding.	Defective Sanitary Accommodation.	Breach of Sanitary Requirements of Bakehouses.								
ATCHAM ..	91	114	18	9	..	..	..	..	11	20	..	..	..	..	..	
BRIDGNORTH ..	13	14	..	2	..	..	..	..	..	2	..	..	..	..	..	
BURFORD ..	5	6	..	..	..	..	..	..	..	..	..	..	..	..	..	
CHIRBURY ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
CHURCH STRETTON ..	26	72	..	..	..	..	..	..	..	..	..	..	..	..	..	
CLEOBURY MORTIMER ..	24	20	..	..	..	..	..	..	..	..	..	..	..	..	..	
CLUN	75	83	..	3	..	..	..	..	3	..	..	..	..	..	..	
DRAYTON ..	118	151	..	2	..	..	..	2	..	4	..	..	..	..	..	
ELLESMERE ..	51	51	..	..	..	..	..	..	..	..	..	..	..	..	..	
LUDLOW ..	54	44	10	5	5	..	..	..	10	..	..	..	..	..	..	
NEWPORT ..	19	60	..	..	..	..	..	..	..	..	..	..	..	..	..	
OSWESTRY ..	70	177	..	7	..	..	..	..	7	..	..	..	..	..	..	
SHIFNAL ..	60	132	7	7	..	..	..	..	7	..	..	..	..	..	..	
TEME	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
WELLINGTON ..	38	38	..	..	..	..	..	..	..	..	..	..	..	..	..	
WEM	54	76	2	2	..	..	..	..	2	..	..	..	..	..	..	
WHITCHURCH	8	30	..	..	..	..	..	..	..	..	..	..	..	..	..	

FACTORIES AND WORKSHOPS.

Details of the inspection of factories and workshops are given on Table VIII., and summaries of the remarks of the medical officers will be found in Part II. of the report.

Almost no lists of out-workers have been received outside the Borough of Shrewsbury. The amount of work carried on in workshops throughout the county is small, and this no doubt accounts to a great extent for the comparatively little attention that appears to be given in most of the districts to this matter. One most important and difficult question, viz., the ventilation of workshops does not appear to be dealt with to any considerable extent, for outside the Borough of Shrewsbury only seven cases of defective ventilation were reported.

FOOD AND DRUGS.

Return showing the number, description, and result of analyses of samples taken during the year 1909, and the subsequent action taken.

Nature of Sample.	No. taken.	Result.		Remarks.
		Genuine.	Adulterated.	
Brandy	2	2	..	
Gin	6	6	..	
Rum	2	2	..	
Whisky	19	17	2	No action taken.
Arrowroot	8	8	..	
Butter	56	41	15	Boric Acid. No action taken.
Cayenne	2	2	..	
Coffee	8	8	..	
Cheese	7	7	..	
Flour	1	1	..	
Ginger	7	7	..	
Lard	11	11	..	
Milk	57	53	4	1 Convicted ; 2 dismissed, and 1 no action taken.
Mustard	3	3	..	
Oatmeal	6	6	..	
Pepper	13	13	..	
Sugar	2	2	..	
Sausage	19	16	3	Boric Acid. No action taken.
Cream	3	3	..	
Tea	5	5	..	
Vinegar	1	1	..	
Jam	2	2	..	
	240	216	24	

Considerable attention is being paid to the question of preservatives, but in no instance has any preservative been found in sufficient quantity to justify proceedings.

It is satisfactory to observe that no preservative whatever has been found in any sample of milk.

The addition of preservatives to food is a matter that needs constant watchfulness, in order to keep it within the limits. The limits suggested by the Departmental Committee, viz.: —salicylic acid, one grain per pint in liquid food and one grain per pound in solid food; boric acid, .25% in cream and .5% in butter or margarine were taken as a guide to the advisability of prosecution. This limit was not exceeded in any of the samples of cream or butter examined. In a sample of sausage the amount of boric acid was .53 per cent. In this case although the preservative exceeded in amount the limit suggested for butter and margarine, it was decided, after careful consideration, not to take proceedings. This conclusion was arrived at on account of the small excess of preservative and the nature of the article.

In some of the samples examined the percentage of preservative came so near the limit that it appears almost as if the suggestion of a limit has had the undesirable effect of encouraging the use of preservatives up to that point. This fact has been noted in previous years.

The smallness of the result of the action under the Food and Drugs Acts may be to some extent due to the difficulty the Police encounter in getting true samples. The employment of women as deputies for purchasing articles in suitable cases has been under consideration, and an instruction has been issued that women are to be employed where it is thought desirable. To what extent this has been done I have no information at present. Apart from this matter, the Police are undoubtedly at a great disadvantage compared with Inspectors specially trained for this work, and the need for such specially trained inspectors increases from year to year as adulteration becomes more scientific.

MIDWIVES ACT.

Experience gained during the year has pointed on the one hand to the fact that the Act is resulting in great good, and on the other that it is not possible to relax in any way the inspection as time goes on.

To effect much improvement in the practice of some of the older midwives except with regard to the important matter of cleanliness, is often impossible, but gradually they are being replaced by properly trained persons who will not only be able to undertake efficiently the duties of a midwife, but who will also be able, under proper direction, to teach mothers the elementary facts with regard to feeding of infants.

As pointed out in previous reports, the number of midwives who have become certified has greatly exceeded the estimate formed. The estimate of the amount of time, that the inspection of midwives in the County would take up, was based upon the idea that about 200 midwives would become certified, whereas there are at the present time 321 on the register. It has consequently not been possible to give the amount of attention to each midwife that one had hoped for, and it has not been possible to inquire systematically into notifications of medical help, deaths, and still-births.

The following statement shows the number of midwives, the visits paid and the notifications received in each year since 1905 :—

Year	Number of Midwives practising in the County in June of each year.	Number of Visits paid.	Notifications of having sent for medical help.	Notifications of still-births		Notifications of death of mother or child with no medical man in attendance.
				By Midwives	By Parish Clerks.	
1905	231	642	83	38	—	5
1906	345	829	325	105	—	13
1907	328	837	385	95	227	16
1908	310	868	504	91	220	13
1909	309	885	533	111	195	9

The number of visits were again slightly in excess of that of the previous year. On an average the midwives were visited 2.86 times in the year, or once every 4.2 months. Apart from special investigations a visit every three months should prove effective, but there are midwives that need more frequent supervision.

Miss Frith reports that the midwives have improved considerably with regard to personal cleanliness and cleanliness of their houses, and that on the whole there is little now to complain of in this respect. The facilities in the homes for baths are very faulty, and yet baths at least once a week are becoming the rule rather than the exception. All the midwives have now got washable dresses and aprons, and their improvement whilst attending confinements, both with regard to personal cleanliness and cleanliness of their clothes, is becoming quite noticeable. There is, however, reason to think that washable dresses are not always worn whilst on nursing duty, and for this and other reasons more frequent inspection of midwives at their work is desirable. The condition of the bags or baskets and appliances shows much improvement, and those of the illiterate women often compare favourably with those belonging to the trained midwives, as regards cleanliness and general tidiness. The way in which registers are kept has very greatly improved, and with the exception of a few careless midwives, there is now little to complain of. The rules with regard to notification of sending for medical help, of deaths and of still-births, are now observed much more carefully.

In seventeen instances in which the practice of midwives was observed in the homes of the patients, it was found to be quite satisfactory in 15, and not altogether satisfactory in two.

At the visits of the Inspector of Midwives instruction is given in taking of temperatures, and although it is hopeless to expect most of the untrained midwives to take a temperature accurately, it is satisfactory to observe that the majority can recognise when the temperature exceeds the danger mark placed at 100.4°F.

A pamphlet issued by the Chairman of the Central Midwives Board dealing with the prevention of Ophthalmia Neonatorum is being distributed and explained to each midwife by the Inspector. It is most desirable that this disease should be made notifiable, and that thorough measures should be taken in every case notified.

The inspection of midwives is already an important means of spreading knowledge of the principles that apply to the feeding and care of infants. This is made a subject of personal instruction by the inspector on her visits, and leaflets specially drawn up for the purpose are given to the midwife for her to leave with and explain to the mothers. There is evidence, that both the midwives and the mothers they attend, are interested in this teaching, and are deriving benefit but in the majority of cases the methods of hand feeding employed are still radically wrong. It is encouraging however to know that the experience of the inspector points to the fact that in the country districts the majority of children are fed on the breast for a longer or shorter period. In my report to the Education Committee I have emphasized the extreme importance of correct methods of feeding of infants and young children in encouraging correct habits of mastication and bringing about proper development of the teeth and jaws. This is a matter in which Educational and Sanitary Authorities should join forces.

Notifications of sending for Medical Help.—Reference to the preceding table shows that the number of notifications received is steadily increasing. This increase no doubt indicates a greater conformity to the rule enforcing notification to the Local Supervising Authority, and also what is of much greater importance it indicates that midwives are realising the necessity for sending for medical help when there is any abnormality. This is the only true basis upon which the practice of midwifery by nurse midwives can be founded, for if midwives are allowed to attend cases in which there is abnormality or disease, an inferior order of medical practitioners is sanctioned with great detriment to the public. On the other hand nothing but good can result from having a sufficient supply of women trained in the best methods of managing a normal labour and able to detect sufficiently early, deviations from normal requiring medical assistance.

It is obvious that one of the most important duties imposed upon Local Supervising Authorities is to see that medical help is sent for in accordance with the rules, and for this purpose it is necessary that all the formalities should be strictly adhered to. The Local Supervising Authority is now taking a much more serious view of non-compliance with the rules in this respect. It is very probable that many failures to send for medical help never come under our notice, and the only remedy that one can suggest is the provision for more frequent inspection and for more special investigations.

It is very satisfactory to be able to record that in most districts the difficulties in the way of obtaining medical help for poor women in emergencies have been considerably lessened by the action of the Boards of Guardians.

Notifications of Still-births. The rule making it compulsory for a midwife to notify any still-birth she may attend is an important one, and although it has not been possible so far as a routine practice, to make inquiries into these cases, the possibility of inquiry is a considerable safeguard. In order to obtain an independent return of still-births as a check, the parish clerks and the cemetery authorities have been asked to supply me with particulars of still-born children who are in future buried in their burial grounds. All the cemetery authorities, with two exceptions, and practically all the parish clerks or the clergy acting for them, have very kindly undertaken to supply me with this information, and my thanks are due to them. The notifications thus received have been a considerable help in carrying out the Act.

In previous reports I have stated that a systematic inquiry into all still-births occurring in the practice of midwives would throw light upon many matters, and amongst others it would enable one to estimate the frequency of the various causes of still-birth. The causes of still-births may be grouped for our purposes into two classes, (1) those operating before labour commences, (2) those operating during the birth of the child. It is particularly in the latter class of cases that lives may be saved by skilled attention.

By careful inquiry into all cases of still-births, it would be possible at least to some extent .—

(1) To estimate the amount of child life lost at present by the absence of skilled attention.

(2) To lessen the amount of this loss by insisting upon midwives getting medical help sufficiently early. This will no doubt be greatly helped forward by educating the midwives in the signs of abnormalities.

(3) To prevent the return of children as still-born who have lived.

The time at the disposal of the inspector has not allowed of such an inquiry being made, but owing to the more complete manner in which the notifications are now filled in, certain information is available.

Two hundred and thirty-four notifications of still-births have been received from midwives and Parish Clerks and Clerks to Burial Boards.

69 of the cases were attended by medical men, no midwife being in attendance.
105 ,, ,, ,, by certified midwives without medical assistance.
6 ,, ,, ,, by uncertified midwives.
53 ,, ,, ,, by both medical men and midwives.
1 ,, ,, ,, no information obtained.

Sixty-nine or 29 per cent. of the cases occurred in the practice of medical men, and for 53 or 23 per cent., medical help was obtained. In 52 per cent. of the cases, therefore, a medical man was in attendance.

The returns sent in by the certified midwives, although incomplete, show that they attended 4,076 births in 1909 out of a total of 5796, leaving less than 1720 or 30 per cent., to be attended by medical men and uncertified midwives.

It is obvious, therefore, from these figures, that still-births occurred more particularly in the practice of medical men, and this is explained by the fact that still-births are frequently due to some complication or abnormality which may necessitate the engagement of a medical man beforehand, or make it imperative to call in medical help during labour.

Analysis of the notifications of still-births sent in by the midwives shows that 59 of the children were at full time and 52 were premature. As regards the condition of the child no statement was made in 65 ; in 8 the evidence pointed to death during labour ; in 38 there was evidence of death some days at least previous to labour. The presentations were :—head 90, breech 1, footling 8, not mentioned 11, face 1. The sex of the children was as follows :—65 males, 44 females, and 2 not mentioned.

These figures, although incomplete, are of some value in showing the number of children that might possibly have been saved if skillful attendance had been available at the time of confinement. It is particularly in breech presentation (including footlings) that skilful and rapid completion of delivery is likely to save life. It seems a pity that the rules of the Central Midwives Board allow a midwife to attend all uncomplicated breech presentations except in primipara, because when complications arise it is frequently too late to send for medical help.

Notifications of deaths of mother or child with no medical man in attendance. The notifications that the police have kindly sent me have been of the greatest use in bringing to light cases that the midwives should have reported, and in enabling me to attend inquests where these were held. The smaller number of deaths without medical attendance appears to indicate that midwives are becoming more careful in calling in medical help.

Puerperal Fever. Twenty seven cases of puerperal fever were reported during the year. In 19 of these, certified midwives were in attendance at the time of confinement, the remaining eight being attended by uncertified midwives or medical men. In 6 out of the 19 cases attended by certified midwives a medical man was also present at the confinement. In one instance there was a distinct possibility of infection having been conveyed from a previous case. In another instance a second case occurred in the practice of a midwife but, there being an interval of eight months, it was extremely improbable that there was any connection between the two. In the remainder there was no suspicion of transmission of infection from any previous case. Investigation of the 19 cases of puerperal fever attended by certified midwives, showed that in 14 of these the midwives had, as far one could judge, properly discharged their duties, but in the remaining 5, they had failed to observe the rules in certain particulars. These cases were reported to the Local Supervising Authority and dealt with.

Facilities afforded to Midwives for obtaining prompt Medical Assistance. It has been felt since the Midwives Act came into operation that there should be some provision made by which a midwife could obtain prompt medical assistance in case of emergency, and that the medical fee in the case of persons too poor to pay, should be guaranteed by some public authority. In the Midwives Bill, 1910, satisfactory provision is made for such cases, so that if the Bill becomes law, this matter, which has caused much trouble and has considerably interfered with the working of the Act, will be finally settled.

Arrangements have already been made in this County by practically all the Boards of Guardians to pay medical fees in necessitous cases where the case is one of emergency, and the Poor-law Medical Officer can not be sent for. In practice, however, in many Unions the arrangement has not worked altogether satisfactorily.

Suspensions. Six midwives were formally suspended by the Local Supervising Authority for contravening the rules laid down for the purpose of preventing the spread of infection. All midwives in attendance on infectious cases were suspended informally until they had carried out disinfection satisfactorily.

Midwives reported to the Local Supervising Authority during the year 1909 :—

Offence.	Action taken by the Local Supervising Authority.
1. Breaches of the Rules with regard to the wearing of washable clothing, the washing of the patient, and the keeping of the register.	The midwife attended and was cautioned.
2. Does not keep a register, and has no appliances.	The midwife did not attend, and it was resolved that she be reported to the Central Midwives Board as guilty of negligence under section 8, sub-section 2, of the Midwives Act. The midwife subsequently wrote to ask for her name to be removed from the roll, it was decided to allow the name to be removed voluntarily instead of taking action under section 8, of the Midwives Act.
3. Not sending for medical help.	The midwife was not able to be present on account of ill health, but wrote stating that she wished to give up practice as a midwife. The case was postponed and, in the meantime, it was resolved that it be referred to the Central Midwives Board for their advice as to the method of procedure. The midwife has since resigned and forwarded her certificate to the Central Midwives Board.
4. Did not send for medical help sufficiently early.	The midwife attended and was censured.
5. That, being in attendance on a case of confinement with a temperature of 104° and a rash, she attended another case of confinement without proper precautions.	The midwife attended and was very severely censured.
6. (1) Did not wash patient before delivery; (2) did not send for medical help on a written form.	Cautioned.
7. Attended a child only eight days instead of ten. The child afterwards died.	Cautioned.
8. No disinfectant or thermometer after repeated warnings.	Was summoned but did not attend. Resolved that she be reported to the Central Midwives Board. Cautioned by the Board and advised to retire. She has not accepted this advice, and has been suspended by the L.S.A.

	Offence.	Action taken by the Local Supervising Authority.
9.	Not sending for medical help for a weakly child, and not reporting death.	Cautioned.
10.	Not sending for medical help sufficiently early.	Case adjourned until inquest over. The midwife was reported to the Central Midwives Board, and the depositions taken at the inquest forwarded. The Board severely censured her.
11.	Practised without notifying, in accordance with section 10 of the Midwives Act, although she had been repeatedly warned.	Proceedings to be taken in Court. Proceedings taken and fined 10/- and costs.
12.	Not notifying that she had sent for medical help.	Cautioned.
13.	Register not kept up to date.	Cautioned.
14.	No thermometer or satisfactory disinfectant.	The midwife attended and was cautioned.
15.	No register, bag, or appliances.	In consideration of her age (84), the authority refrained from censuring her, but informed her that she was not to practice without conforming to the rules. She was also advised to send in her resignation and certificate, and this she has done.
16.	Register not kept up to date.	Cautioned.
17.	Attended a confinement whilst in attendance in a house where scarfet fever had broken out.	The Midwife attended. She was cautioned and suspended until the County Medical Officer of Health considered it safe for her to resume her duties.
18.	Midwifery scissors in bag in a filthy condition, being covered with dry blood.	Cautioned.

	Offence.	Action taken by the Local Supervising Authority.
19.	Practised without notifying, in accordance with section 10 of the Midwives Act; pleaded ignorance.	Censured.
20.	(a) Not notifying that she had sent for medical help. (b) Not notifying the death of the child, no medical man being in attendance.	Censured and cautioned as to her future action.
21.	(a) Not sending for medical help sufficiently early. (b) Not using a disinfectant for washing her hands and the patient.	Wrote saying she was giving up practice. Resignation to be forwarded to the Central Midwives Board. Board could not accept resignation as certificate not forthcoming; suspension to be continued.
22.	Not notifying that she had sent for medical help on four occasions.	Censured and cautioned as to her future action
23.	Not sending for medical help. Only attended for 5 days instead of 10. Left off attending whilst the patient was vomiting after food.	Cautioned.
24.	Has no washable dresses; no satisfactory basket or appliances, or a satisfactory disinfectant; no register or records for sending for medical help.	Consideration postponed; midwife to be summoned to attend next meeting. The midwife has left the County and address not known.

Proceedings have been taken against a woman for representing herself to be a certified midwife, in contravention of section 1 of the Act. She was fined 30/- (costs included).

Present Supply of Midwives. On June 1st, 1910, there were 321 midwives registered as practising in the County, or 12 more than at a corresponding period last year.

As previously pointed out one can only estimate the real supply by considering the age, training, and general capabilities and distribution of the midwives. The figures given last year showing that 155 of the midwives were over 50 years of age, and 71 over 60 years of age, may still be taken as fairly accurate. Of the 321 registered midwives, 93 are properly trained, and the remaining 228 are on the roll because they were in practice 12 months before the passing of the Act. These figures are identical with those of last year, except that there are 12 more trained midwives now practising in the County.

MIDWIVES GROUPED ACCORDING TO NUMBER OF CONFINEMENTS THEY ATTENDED IN 1909.

(*a*) TRAINED MIDWIVES.

Number who have not sent in returns of confinements	5
,, ,, ,, attended no confinements	13
,, ,, ,, ,, less than 10 confinements	34
,, ,, ,, ,, between 10 and 20 confinements	26
,, ,, ,, ,, ,, 20 and 30 ,, ...	4
,, ,, ,, ,, ,, 30 and 40 ,, ...	3
,, ,, ,, ,, ,, 40 and 50 ,, ...	3
,, ,, ,, ,, ,, 50 and 60 ,, ...	3
,, ,, ,, ,, ,, 60 and 70 ,, ...	0
,, ,, ,, ,, ,, 70 and 100 ,, ...	0
,, ,, ,, ,, ,, over 100 ,, ...	2

(*b*) UNTRAINED MIDWIVES.

Number of Midwives who have not sent in returns of confinements	9
,, ,, ,, ,, attended no confinements	23
,, ,, ,, ,, ,, less than 10 confinements	111
,, ,, ,, ,, ,, between 10 and 20 confinements ..	46
,, ,, ,, ,, ,, ,, 20 and 30 ,, ...	19
,, ,, ,, ,, ,, ,, 30 and 50 ,, ...	8
,, ,, ,, ,, ,, ,, 50 and 70 ,, ...	6
,, ,, ,, ,, ,, ,, 70 and 100 ,, ...	4
,, ,, ,, ,, ,, ,, over 100 ,, ...	2

This analysis shows clearly that only a comparatively small number of midwives are making a living by this work. Unless a midwife is attending at least 50 cases a year she must have some other source of income, and applying this test it will be seen that only 17 or 5.5 per cent. can rely upon midwifery alone.

This statement with regard to the number of midwives, their ages, qualifications, etc., gives one a very imperfect notion of the sufficiency of the supply of midwives throughout the County. The most important matter is to ascertain how each district is supplied, and with this end in view the Parishes have been classified in four groups. This classification was adopted two years ago, and has been corrected and altered from time to time as either more correct knowledge was obtained or as the distribution of the midwives changed. It can only be regarded as approximate but it has certainly been of considerable use in gauging the necessity for special effort in various parts of the County.

Union.	Parishes fairly well supplied with trained Midwives.	Parishes well supplied with untrained Midwives (many of these are becoming less active and capable of doing the work each year).	Parishes poorly supplied either on account of distance from a Midwife or other cause.	Parishes with practically no supply.
	I.	II.	III.	IV.
Atcham.	Pontesbury.	Church Pulverbatch.	Battlefield.	Albrighton.
,,	Berrington.	Great Hanwood.	Church Preen.	Eaton Constantine.
,,	Atcham.	Melverley.	Kenley.	Habberley.
,,	Withington.	Meole Brace.		Hughley.
,,	Upton Magna.	Montford.		Uppington.
,,	Langley.	Shrawardine.		Wollaston.
,,	Yockleton.	Uffington.		Wroxeter.
,,	Acton Burnell.	Minsterley.		Harley.
,,	Alberbury.			Leighton.
,,	Astley.			Shineton.
,,	Bicton.			
,,	Condover.			
,,	Cound.			
,,	Cressage.			
,,	Fitz.			
,,	Ford.			
,,	Frodesley.			
,,	Pitchford.			
,,	Preston Gubballs.			
,,	Stapleton.			
,,	Sutton.			
,,	Westbury.			
,,	Shrewsbury.			
,,	Ruckley.			
Bridgnorth.	Worfield.	Chelmarsh.	Eardington.	Acton Round.
,,	Linley.	Claverley.	Middleton Scriven.	Alveley.
,,	Burwarton.			Ashley Abbotts.
,,	Neenton.	Oldbury	Willey	Aston Eyre.
,,	Cleobury North.			Billingsley.
,,	Ditton Priors.			Cbetton.
,,	Bridgnorth.			Deuxhill.
,,				Glazeley.
,,				Monkhopton.
,,				Morville.
,,				Quatt Malvern.
,,				Romsley.
,,				Sidbury.
,,				Stanton Long.
,,				Tasley.
,,				Upton Cressett.
Church Stretton.	Acton Scott.	All Stretton.	Smethcott.	Easthope.
,,	Little Stretton.	Cardington.	Woolstaston.	Shipton.
,,	Longnor.	Church Stretton.	Hope Bowdler.	
,,	Wistanstow.	Eaton-under-Heywood		
,,		Leebotwood.		
,,		Rushbury.		
,,		Sibdon.		
Cleobury Mortimer.	Stottesden.	Aston Botterell.	Highley.	
,,	Cleobury Mortimer.	Farlow.	Woodhouse.	
,,	Coreley.	Loughton.	Hopton Wafers.	
,,	Kinlet.	Silvington.		
,,	Milsom.			
,,	Neen Savage.			
,,	Neen Sollars.			
,,	Wheathill.			

Union.	Parishes fairly well supplied with trained Midwives.	Parishes well supplied with untrained Midwives (many of these are becoming less active and capable of doing the work each year).	Parishes poorly supplied either on account of distance from a Midwife or other cause.	Parishes with practically no supply.
	I.	II.	III.	IV.
Clun.	Clunbury.	Edgton.	Clun.	Clungunford.
,,	Bishop's Castle Urban.	Hopesay.	Lydbury North.	Hopton Castle.
,,	Bishop's Castle Rural.	Lydham.	Myndtown.	Mainstone.
,,		More.		Ratlinghope.
,,		Norbury.		
,,		Shelve.		
,,		Wentnor.		
Drayton.	Hodnet.	Hinstock.		Cheswardine.
,,	Drayton-in-Hales.			
,,	Ercall Parva or Child's Ercall.	Norton-in-Hales.	Woore.	
,,	Moreton Say.			
,,	Adderley.			
,,	Titterley.			
,,	Stoke-upon-Tern.			
Ellesmere.	Baschurch.	Ellesmere Rural.		
,,	Ellesmere Urban.	Great Ness.		
,,	Hadnall.	Little Ness.		
,,	Hordley.			
,,	Myddle.			
,,	Cockshutt.			
,,	Welshampton.			
Forden.	Worthen (part of)	Brompton & Rhiston.	Worthen (part of)	
,,		Chirbury.		
Knighton.		Bettws.		Bedstone.
,,		Llanfair Waterdine.		Bucknell.
,,				Stowe.
Ludlow.	Tugford.	Abdon.	Cold Weston.	Hopton Cangeford.
,,	Ashford Bowdler.	Halford & Dinchop.	Clee St. Margaret.	Bitterley.
,,	Ashford Carbonel.	Heath.		
,,	Bromfield.	Onibury.		
,,	Cainham.	Hope Bagot.		
,,	Culmington.			
,,	Diddlebury.			
	East Hamlet.			
,,	Holdgate.			
,,	Ludford.			
,,	Munslow.			
,,	Stanton Lacy.			
,,	Stokesay.			
,,	Ludlow.			
,,	Stoke St. Milborough.			
Madeley.	Dawley Magna.	Buildwas.	Barrow.	Little Wenlock.
,,	Much Wenlock.	Stirchley.	Much Wenlock (part of).	Madeley.
,,		Benthall.		
,,		Broseley.		
,,		Madeley (part of) Posenhall.		
,,				

Union.	Parishes fairly well supplied with trained Midwives.	Parishes well supplied with untrained Midwives (many of these are becoming less active and capable of doing the work each year).	Parishes poorly supplied either on account of distance from a Midwife or other cause.	Parishes with practically no supply.
	I.	II.	III.	IV.
Newport.	Cherrington.	St. George's.		
,,	Chetwynd.	Woodcote.		
,,	Chetwynd Aston.			
,,	Church Aston.			
,,	Edgmond.			
,,	Lilleshall.			
,,	Longford.			
,,	Newport.			
,,	Tibberton.			
Oswestry Incorporation.	Ruyton-of-the-Eleven Towns.	Kinnerley.		
		Knockin (including Heath Farm).		
,,	Saint Martin's.	Llanyblodwell.		
,,	Selattyn.	Llanymynech.		
,,	Weston Rhyn.	Oswestry Rural.		
,,	Oswestry Urban.	Sychtyn.		
,,	West Felton.	Whittington(including Halston).		
Seisdon.		Rudge.		
Shifnal.	Shifnal.	Kemberton.	Boscobel.	Albrighton.
,,	Stockton.	Prior's Lee.	Ryton.	Boningale.
,,	Sutton Maddock.	Tong.	Beckbury.	Donington.
			Badger.	Sheriffhales.
Tenbury.	Boraston & Whatmore.			
,,	Burford.			
,,	Greet.			
,,	Nash,Tilsop & Weston			
,,	Whitton.			
Wellington.	Bolas Magna.	Ercall Magna or High Ercall.	Longden-upon-Tern.	
,,	Eyton-upon-the Wildmoors.	Hadley.	Preston-upon-the Wildmoors.	
,,	Waters Upton.	Rodington.		
,,	Wellington Urban.	Wellington Rural.		
,,	Wrockwardine.	Wombridge.		
,,	Kinnersley.			
,,	Wrockwardine Wood.			
Wem.	Broughton.	Lee Brockhurst.		
,,	Clive.	Prees.		
,,	Grinshill.	Whixall.		
,,	Loppington.			
,,	Moreton Corbet.			
,,	Shawbury.			
,,	Stanton-upon-Hine Heath.			
,,	Wem Rural.			
,,	Wem Urban.			
,,	Weston.			
Whitchurch.	Ightfield.			
,,	Whitchurch Urban.			
,,	Whitchurch Rural.			

In some of the Parishes in Col. IV. it is said that there is no necessity for a midwife, as medical men attend all cases of confinement.

Miss Frith reports that she has knowledge of uncertified midwives practising in the following localities :—Stiperstones, Mainstone, Clun Forest, Lydbury North, Kempton, Walcot, Stow, Hopton Heath, Hopton Castle, Cold Weston, Clee St. Margaret, Abdon, Netchwood, Monkhopton, Aston Ayres, Morville, Tasley, Chetton, Easthope, Presthope, Church Preen, Hughley, Bourton, Alveley, Doddington, and Hopton Wafers, Uppington, Eaton Constantine, Leighton, Wroxeter, Home, Shineton, Donnington and Albrighton, Hordley and Westbury.

In the majority of these districts there is probably a distinct scarcity of midwives now that the uncertified women have to cease practising.

Future Supply of Midwives. In my report for 1908 I said :—The approach of 1910, when uncertified women will no longer be allowed to practise for gain is being looked forward to in many parts of the country with considerable apprehension. Fortunately in this county, on account of the large amount of trouble that was taken at the time, the great majority of the practising midwives became certified, so that although the exact number of confinements now attended by uncertified women is not known, it is not anticipated that the regulation which comes into force in 1910 will cause any general difficulty throughout the county. There are, however, undoubtedly districts in which there will be very serious difficulties, and these districts have already been indicated so far as our knowledge allows.

The time for action in providing midwives for those districts, that will be without a supply in 1910, is rapidly passing by, and little is being done.

The position is now somewhat altered by a rule recently made by the Central Midwives Board and approved by the Privy Council. The rule is to the following effect :—

> RULE B. 2. A candidate who has failed to claim to be certified under the Midwives Act within the time limited by Section 2 of the Act, and who satisfies the Central Midwives Board that, but for her failure so to claim, she would have been entitled to be certified under the Act, may be admitted by the Central Midwives Board to the Roll of Midwives upon such conditions as the Central Midwives Board shall think fit, and shall receive a certificate in the form set out in the schedule and her name shall be entered by the Secretary in the Roll of Midwives. (Schedule, Form II. B). Provided always that no such candidate shall be admitted to the Roll of Midwives after September 30th, 1910.

The Board has resolved to limit the exercise of the discretion given to it by the Rule to those women who, since July, 1901, have been practising as midwives in England or Wales, and desire to continue to practise.

The Forms of application are similar to those previous to March 31st, 1905, and the fee payable is one guinea.

The Local Supervising Authority will be consulted before any application is considered by the Board.

This rule has been passed as a matter of expediency. Its injustice to those midwives who have for the last six years submitted to the discipline of the Midwives Act in order to be on the register, is obvious. It cannot be maintained that any midwife has *a right* to be admitted to the roll under this rule, and before admission two conditions should be necessary—(1) the midwife should be a reasonably satisfactory woman, and (2) there should be a distinct need for a midwife in the district in which she proposes to practise.

It is desirable that the rule should be made known throughout the county so that women who fulfil these conditions shall have an opportunity of becoming certified.

The position of the County Council with regard to the provision of midwives is frequently misunderstood, and may for the sake of clearness be stated. The County Council as the Education Authority have power to train nurses and actually do train a number every year. The County Council as the Local Supervising Authority is entrusted with the supervision of all the midwives and has the duty of enforcing the provisions of the Midwives Act and rules in the County, but has no power either to train or to support midwives. The Local Supervising Authority has done all in its power to impress upon the localities concerned the necessity for looking forward and making provision beforehand.

Provision can be made by the formation of Local Nursing Associations, to which Boards of Guardians can contribute, in so far as the Association nurses attend pauper patients or patients who would otherwise be in receipt of poor-law medical relief. The formation of such associations, particularly in thinly populated districts, would be helped forward considerably if the nurse engaged could undertake any school nursing required.

Many parishes are much too small to support a nurse, and in these cases the difficulty can only be overcome by the proper grouping of parishes.

In those districts, where there is no certified midwife, all confinements will have to be attended by medical men, and the uncertified women who so far have been allowed to attend as midwives, will in future only be allowed to attend with a doctor, *i.e.*, as monthly nurses. There can be no doubt that this will considerably increase the number of cases in receipt of poor-law medical treatment.

After consideration of these facts the Local Supervising Authority directed that the following letter should be sent to every Board of Guardians in the County :—

"I am desired by the Salop Local Supervising Authority to ask your Board to take into consideration the question of the scarcity of midwives that will be bound to arise in many districts of the County next year, and the consequences that are likely to ensue both with regard to the lack of proper attendance for women in their confinements and the increase of poor-law medical relief. Such increased demand for the services of the Poor Law Medical Officers must necessarily result from the scarcity of midwives.

"With a view to overcoming this anticipated difficulty, I am to suggest that your Board can help in forming local Nursing Associations by encouraging the grouping of parishes for this purpose, and by making a grant-in-aid, such grant to be in consideration of the attendance on pauper cases."

This letter was sent on September 8th, 1909.

The following summary shows the action taken in this matter by the various Boards up to the present time :—

Atcham—have arranged with the Associations in the Union to attend pauper cases on the order of the Relieving Officer at 10/- per case.

Church Stretton—have decided to pay a fee of 10/- for each case in which a qualified midwife is called in to a pauper confinement.

Newport—have arranged for one year to pay to the District Nursing Associations in the Union in necessitous cases at the rate of 10/- a case.

Wem—have already taken active steps in the formation of Nursing Associations, and intend to contribute annually. They hope to see the whole of the Union covered by these Associations.

Forden—will favourably consider an application to subscribe to any local Nursing Association that may be formed.

Cleobury Mortimer, Tenbury, and Clun—will help in the formation of Local Associations.

Oswestry—a special committee has been appointed to consider the matter. The following resolution has been adopted. :—

> " That each Parish Council be asked to consider the question and to take such steps as they think necessary to meet the requirements of their respective parishes and to inform the Board of their views and of what action they take."

Whitchurch—the matter is now under the consideration of the Parish Council with the object of formulating a scheme to provide for the rural townships.

Ellesmere—have appointed a committee to consider the matter.

Knighton—the matter is at present under consideration.

Drayton—will bear the matter in mind.

Bridgnorth—have not yet made any arrangements.

Madeley—that no action is necessary.

Shifnal—that the number of midwives is sufficient.

Ludlow—the population of the Parishes in which there is no supply of midwives is so small that there seems to be no necessity to make any provision at present.

This statement shows that eight of the Unions have either made definite arrangements or have signified their willingness to help associations when formed. Four of the Unions have the matter under consideration ; replies from two Unions indicate that no action is contemplated at present, and three of the Unions state definitely that no action is necessary.

Details of the efforts made by the County Council to get the Parishes to make satisfactory provision, have been set out in previous reports. Only a very small number of replies have been received to the communications sent out, and these indicate that little or nothing is being done.

It is an acknowledged fact that except in thickly populated districts a woman cannot make a living by midwifery. If therefore, for any reason an association cannot be started in any given district, the only alternative is to train a woman in the locality who has some other means of subsistence.

Training of Midwives. Under a new arrangement the County Council now repay to the Shropshire Nursing Federation three-fourths of the actual cost of the training and equipment of any maternity nurses, who have been recommended by the Federation, and approved by the County Medical Officer of Health. Nine nurses were sent for training by the Nursing Association during the year 1909, and three were trained apart from the Federation, making 12 in all. In my report for 1908 I said :—It is somewhat difficult to estimate the number of nurses that will be required in the near future, but probably at least 12 should be trained each year.

Lectures to Midwives in Practice. These are being continued and are much appreciated by those who attend. Courses of Lectures were given at Wellington, and Craven Arms during the year.

The Midwives Bill now before Parliament provides for :—

(1) More extended representation on the Central Midwives Board.

(2) For the apportionment of expenses amongst counties and county boroughs in proportion to the population and not as at present in proportion to the number of midwives registered.

(3) Further powers of suspension by the Central Midwives Board and the Local Supervising Authority, particularly whilst proceedings are pending.

(4) The prohibition of women whose names have been removed from the roll attending confinements in any other capacity.

(5) The training of midwives by Local Supervising Authorities.

(6) For the inspection of lying-in homes in which midwives are employed or practise.

(7) For the recovery of fees from Boards of Guardians where a medical man is called in by a certified midwife in an emergency ; the fee may be treated as a loan by the Guardians and recovered accordingly.

It is provided that all forms and books which certified midwives are required to fill up or use will have to be supplied by the Local Supervising Authority, and forms to be sent by post have to be stamped.

These alterations would undoubtedly make the working of the Act smoother and more efficient, but they will add very considerably to the clerical work of the administration of the Act by Local Supervising Authorities

RAINFALL.

The following figures are taken from a table compiled by the Rev. W. M. D. La Touche.

STATIONS.	Rain Gauge.	Depth of Rain.	
	Height above sea level.	1908	1909
	feet.	inches.	inches.
Burwarton, The Hall	900	30.57	29.83
Woolstaston	800	31.13	31.19
Bishop's Castle	720	27.39	27.81
Westbury, Wallop Hall	700	34.23	34.07
Preen Manor	700	27.96	28.79
Lydbury North, Totterton Hall	700	28.48	26.70
Oswestry, Mount Reservoir	698	40.59	34.09
Lydbury North, Walcot	662	28.74	27.89
Worthen, Hampton Hall	630	28.00	25.61
More Rectory	600	28.22	26.53
Bishop's Castle Vicarage	596	30.66	31.12
Church Stretton	582	32.55	31.79
Broseley, Willey Park	502	28.46	26.97
Onibury, Stokesay Court	432	29.27	28.35
Stokesay Vicarage	371	29.47	28.16
Shifnal, Haughton Hall	355	28.95	28.27
Knighton (Shropshire)	351	29.51	30.56
Ellesmere, The Grange	340	33.18	29.20
Ashford House, Ludlow	315	32.14	31.00
Bromfield	320	30.10	28.78
Bromfield, Oakley Park	310	29.56	27.81
Bridgnorth, Cantreyn	290	27.40	27.03
Albrighton	280	29.51	29.50
Newport, Aston Hall	280	30.81	28.13
Market Drayton	276	29.37	30.71
Bridgnorth	273	27.31	27.25
Edgmond	261	24.84	27.61
Shifnal, Hatton Grange	261	—	26.66
Fitz Manor	253	27.16	23.49
Shrewsbury	250	24.36	24.24
Fitz Rectory	238	27.74	23.70
Newport, Harper Adams College	220	24.84	25.43
Shrewsbury, Ordnance Survey	191	—	22.92
Shrewsbury, Abbey House	171	22.51	22.09

I would take the opportunity of suggesting that it is very desirable that there should be a meteorological station in the county, where daily records would be made of rainfall, wind velocity, sunshine, air temperature, temperature in the sunshine, earth temperature, earth radiation, and humidity of the air. Such observations are not only matters of general interest but have a distinct bearing upon problems of public health.

PART II.

Abstracts, etc., of Annual Reports of the Medical Officers of Health for the Various Districts.

For the third time the reports for the districts forming the Atcham Combined District have (with the exception of Church Stretton Urban District) been issued as one report. The districts comprised in the reports are Atcham, Church Stretton, Clun, Newport and Whitchurch Rural Districts; Dawley, Newport, and Whitchurch Urban Districts, and the Boroughs of Bishop's Castle and Wenlock.

The reports on individual districts are preceded by remarks which are generally applicable. These deal with the Housing and Town Planning, etc., Act, 1909, Inspection of Districts, Inspection of Meat and of Dairy Cattle, and Phthisis.

Under Inspection of districts Dr. Gepp says :—" I noted in the last Annual Report the provision by all the Councils of special pocket books for systematic inspection, practically sufficient for recording the condition of all houses in the Districts. These, if methodically laid out in parishes for Rural Districts, and in streets for Urban Districts, and appropriately numbered and lettered, would, when the survey is completed, form a permanent and easily-referred-to sanitary census of the district. It would naturally be the aim of a Sanitary Inspector to have a knowledge of the sanitary circumstances of every house within his district; and the pocket books are designed to give him that information in readily accessible form.

It is evident that in Rural Districts the numbering of all houses would very greatly simplify the work of recording results of systematic inspection with regard both to villages and to scattered houses, and I would suggest to the Rural Councils to assist in this matter by every means in their power. Mr. Ward, the Sanitary Inspector and Surveyor for Newport Rural District, in describing the method he has adopted for arranging and indexing his pocket books for his district mentions the extremely valuable assistance afforded by the numbering of houses throughout that district."

Under meat inspection and inspection of dairy cattle he says :—" None of the Councils has so far taken action for the veterinary examination of dairy cows . . . ."

" Systematic veterinary inspection of dairy cattle is essential to the detection of tuberculous cows, their elimination from milking herds, and the removal of a serious public danger from tuberculous milk."

Dr. Gepp also suggests that each Council should instruct the Registrars of Births and Deaths to send a special return of every death registered from " phthisis," " tubercular phthisis," " pulmonary tuberculosis," or " laryngeal phthisis," so that proper steps may be taken.

The report for Shrewsbury, except the statistical tables, which have been incorporated in this report has not been received. It will necessarily be of more or less formal character. The principal features of the year's progress are the provision of hospital for infectious diseases and the passing of plans for public slaughter houses.

ATCHAM (Rural).

Medical Officer of Health .. .. M. GEPP, L.R.C.P.E., D.P.H.

Area in Acres		125,207
Population	*at* 1901 *Census*	20,895
Number of inhabited houses	,, ...	4,329
Number of persons per house	,, ...	4.8

Physical Features and General Character of the District.

"The District is a very large one, some 22 miles in length by some 14 in extreme breadth, its area being "125,207 acres. The river Severn runs through it from north-west to south-east, dividing it into two parts, "of which the Northern and smaller part is continuous with the Midland plain, on the new Red Sandstone. "The general elevation of this part is from 200 to 300 feet O.D. The Southern and larger part is more elevated, "rising gradually from the river, southward and westward, from 200 to some 600 feet O.D., with considerably "greater elevations on the hillsides, which form the western and southern borders. The geological formation "of this part is broken and diverse. The hills are the outliers of the Cambrian and Silurian ranges "of Wales and Shropshire, and these formations project into the District. There are also detached but con- "siderable exposures of the coal measures and of the Permian Red Sandstone. There is in both parts a variable "but generally considerable, thickness of drift overlying the strata. The drainage is, on both sides, to the "Severn, by numerous small tributary streams. The Borough and County town of Shrewsbury lies nearly "in the centre of the District.

"The District is entirely rural in character, for the most part fertile and highly cultivated, supporting a "comparatively large agricultural population, distributed in numerous villages, in smaller hamlets, and largely "also in scattered isolated dwelling-houses. The density of population is equal to about 108 persons to the "square mile. A few coal mines are worked around Hanwood, but many parts of the small coal-fields are "abandoned. Extensive quarries of Quartzite Stone, for road metal, are worked at Pontesbury."

Statistics.

The natural increase of population during the year was 101. The population is estimated at the middle of 1909 to be 20,770, and corrected for public institutions, 19,800.

Period	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis	Other Tubercular Diseases.	Bron-chitis.	Pneu-monia.	Heart Diseases	Cancer.		
1909	13·5	·86	·40	1·21	·20	·86	·45	1·67	·91	70	25·1
Average for years 1899—1908	14·7	..	..	..	..	..	..	..	..	90	24·4

The zymotic death-rate was due to 5 deaths from scarlet fever, 4 from whooping cough 5 from diphtheria, and 3 from diarrhœa.

There were 24 deaths from *phthisis* and 4 from other *tuberculous diseases.*

The Westbury Registration District had a death-rate considerably above the other two districts.

Infectious Disease.—One hundred and thirty-six cases of scarlet fever, 23 of diphtheria, 7 of erysipelas, 5 of enteric fever, and 1 of puerperal fever were notified. The scarlet fever was no doubt chiefly due to extension of infection from the Borough of Shrewsbury, the areas principally affected being Meole and Bayston Hill, and Hanwood, Cruckmeole and Pontesbury. Bayston Hill, Cruckmeole, Pontesbury, Hanwood, and Lea Cross Schools were closed. The schools were only closed when other precautions failed. "There can be no doubt that the Elementary Schools are the agents most effective in spreading infection in Country Districts, and that such spread is due to 'missed' cases, or to 'carriers' of infection. It is, however, in many cases extremely difficult to discover the missed cases, especially in scattered country districts."

"School closure in my opinion remains the most effective method of stopping the spread of outbreaks of scarlet fever in country districts, and will remain so until frequent, or even in some cases daily, visits to an affected school by a medical man are made practicable."

Four of the cases of diphtheria occurred in Westbury parish, and, no doubt, originated from an imported case. A child was apparently infected from this case after the throat had been declared free from diphtheria bacilli, but on further examination, piphtheria bacilli were found. An outbreak at Acton Burnell demonstrated the necessity for bacteriological examination of throats after diphtheria before children return to school.

Three of the cases of enteric fever occurred at the County Asylum, and the other two cases were probably imported.

Buildwas, Pontesbury, Cressage, and Minsterley Schools were closed on account of whooping cough; Astley, Eaton Constantine, Cressage, Atcham, Condover, and Meole Brace on account of measles.

Five cases of consumption were notified voluntarily and four under the Tuberculosis Regulations. Visits were paid to the houses, inquiry forms filled in, handbills supplied to the patient and household, and disinfection offered.

Hospital Isolation.—There is no hospital for the use of the District. The Council has a Berthon hut and a small tent, and pay a fee for the prompt despatch of a tent hospital. "In the majority of cases of ordinary infectious disease in the District, reasonably good treatment and measures can be secured at the patient's home, but there can be no doubt as to the desirability of the District having some permanent, and readily available, isolation accommodation, for the serious and acute outbreaks which from time to time will arise, and cause difficulty in treatment and prevention, and which can be promptly obviated only by the existence of permanent public accommodation."

Disinfection.—Infected rooms and schools are sprayed by the Council's Officers in nearly all cases with formalin or Cyllin. The routine use of the steam disinfector is recommended.

Water Supply.—There are public systems of supply at Meole Brace, Pontesbury village, and Bayston Hill. "Private systems of supply, laid on from springs, exist in the villages of Acton Burnell, Albrighton, Buildwas, Condover, Cound, Cressage, Eaton Constantine, Frodesley, Harley, Harnage, Pitchford, Ruckley, Rushton, Shrawardine, Uppington and Upton Magna. The water in these cases is as a rule laid on to standpipes open to all the villagers, but in some cases is laid on to the houses."

Elsewhere the supply is from pumps and wells, of which the Council maintains a considerable number.

Meole Brace is supplied from Moat Hall Colliery, supplemented from a spring at Welbatch. Increased storage was provided in 1908, and improvements made in the discharge of the drainage water from the workings. Other improvements that were in hand were delayed on account of a complaint by the Parish Council to the County Council. The liability to pollution is much less than formerly but "improvements are still necessary to prevent to the fullest extent possible the mixing of any of the sump water with the water pumped for the public supply." "Arrangements for this should be effected, and if properly supervised, and the other improvements mentioned carried out, the risk of any dangerous contamination would be effectively obviated in my opinion."

No steps have been taken with regard to the recommendation to prepare a scheme of supply for *Ford* village, nor has a supply been provided for scattered houses at *Cound Moor*. Nothing has been done with regard to the supply of *Cross Houses*.

Three public wells and 13 private wells have been re-constructed or improved.

A good supply to *Church Preen School* has been provided, and a full investigation into the water supply of *Ryton* is being made.

Sewerage, Drainage and Excrement Disposal. Meole, Pontesbury, Minsterley, Dorrington, Asterley, and *Bayston Hill* are sewered. In other villages there are a few lengths of sewers, but otherwise the drainage is by individual drains into ditches or on to fields, etc. The only outfall works is at *Meole*. Plans and estimates have been got out for the sewerage and sewage disposal of the village of *Pontesbury*.

The general system of excrement disposal is by earth closets and privies. The Conversion of privies to pail closets is being steadily advanced, 68 being converted during the year.

Housing Accommodation—speaking generally, is adequate in amount, and as a whole in fair condition, but there is a large number of very old houses needing frequent inspection.

The Sanitary Inspector in making a house to house inspection at Pontesbury Hill has found many defects—overcrowding, bad drainage, privies, etc.—and also general dilapidation.

Permissive Powers. Sections 29, 30, and 31 of the Public Health Acts (Amendment) Act, 1890, applying to slaughter-houses, have been adopted. The Infectious Diseases (Prevention) Act, 1890, is not adopted

By-laws are in force relating to private scavenging and slaughter-houses, and in certain contributory places, with regard to nuisances, and new streets and buildings.

Slaughter-houses—seventeen on register ; regularly inspected, but no special visits are made at times of slaughtering. No tuberculous carcases were found.

Bakehouses—twenty-three on register ; inspected regularly.

Dairies, Cowsheds and Milkshops. The Model Regulations are in force. One hundred and seventy-four cowkeepers and milksellers are on the register. Much attention is being given to their inspection. There is no veterinary inspection of dairy cows.

BISHOP'S CASTLE (Urban).

Medical Officer of Health	M. GEPP, L.R.C.P.E., D.P.H.	
Area in Acres		1,867
Population	*at* 1901 *Census*	1,378
Number of inhabited houses	,, ...	354
Number of persons per house	,, ...	3·9

Physical Features and General Character.

"The Borough forms an area some three miles in length by a mean breadth of about one mile, lying within "the south-west border of Shropshire, touching the Montgomeryshire border at one end, but otherwise sur- "rounded by the Clun Rural District. It has the small town of Bishop's Castle about the centre. The elevation "varies from about 500 feet O.D. in the valley at the south-east end to 1000 feet or more in the hill country "forming the north-west end. The town lies on a hillside rising out of the valley, the main street rising steeply "from about 600 feet to 700 feet O.D., and the houses are placed on either side of the street and about the "crest of the hill above it. The subsoil is the Wenlock and Ludlow beds of upper Silurian age. The natural "drainage is from north and west to south and east by small streams, the district lying upon the drainage "system of the river Teme. In the town some small streamlets have been culverted about the foot of the hill, "and are practically sewers. The town is a market town and Borough of great age, and the area outside is "very sparsely populated."

Statistics.

The natural increase of population during the year was 14. The population is estimated at the middle of 1909 to be 1300, and corrected for public institutions, 1280.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1909	17.2	.78	.0	.78	1.56	2.34	.78	.78	1.56	75	31.2
Averages for years 1899—1908	19.0	..	..	..	..	..	..	..	..	68	25.3

The zymotic death-rate was due to 1 death from whooping cough.

Infectious Disease. Four cases of scarlet fever, 1 of diphtheria, and 1 of enteric fever were notified. The case of enteric fever was at the Workhouse, the Master being the patient. It may have been due to an 'ambulant' or 'carrier' case passing through the 'tramp' wards.

There was 1 death from *phthisis*. Voluntary notification is in force and one notification was received. No case was notified under the Tuberculosis Regulations.

Isolation Accommodation. There is no Isolation Hospital for the district, but an unoccupied cottage is secured in case of small-pox. It should be kept in repair and ready for occupation.

Disinfection. The Sanitary Inspector has been provided with a spraying apparatus. It is recommended that premises be disinfected in cases of phthisis when notified or after death. An emergency steam disinfector has been provided in conjunction with the Clun Rural District, and is kept at the Workhouse.

Water Supply. The water supply is from an uncultivated moorland away from possibilities of contamination. The supply has run short in dry seasons owing to leakages in the reservoir. A report has been received from Engineers on this matter, but no action has so far been taken the daily yield of the streams having been sufficient during the past three years. The supply could be augmented if necessary by pumping from a stream below the reservoir.

Sewerage and Drainage. Good progress has been made in carrying out the scheme of sewerage and sewage disposal, and it is hoped that it will be completed in September of this year.

Excrement Disposal. There are 190 water closets, 11 earth or pail closets, and 144 privies. When the sewerage system is completed the Council should take steps to abolish the old privies in the town, and for this purpose should adopt the Public Health Acts Amendment Act, 1907.

Scavenging is left to householders, a tip for refuse being provided.

Housing. A good deal of improvement is noticeable in the cottage property in recent years. There are many cottages of old and poor construction which need repeated attention and inspection.

Permissive Powers. The Infectious Disease (Prevention) Act, 1890, and the Public Health Acts (Amendment) Act, 1890, Part III., are adopted ; also Part IV. of the Public Health Acts Amendment Act, 1907. *By-laws* are in force with regard to Nuisances, Cleansing of Footways, removal of house refuse, cleansing of earth closets, privies and ashpits, Slaughter Houses, Common Lodging Houses, and New Streets and Buildings.

Slaughter Houses—four on the register ; inspected regularly and occasionally at times of slaughtering. No tuberculous carcases were found.

Dairies, Cowsheds, and Milkshops. Regulations are in force. There are 8 cowkeepers, etc., on the register. There is no veterinary inspection of dairy cattle.

BRIDGNORTH (Urban).

Medical Officer of Health .. .. J. C. PADWICK, M.R.C.S., L.R.C.P.

Area in Acres		3,018
Population	*at* 1901 *Census*	6,052
Number of inhabited houses	,, ...	1,300
Number of persons per house	,, ...	4.6

General Description of the Borough.

"The Bridgnorth Urban District is situated on the river Severn, and is divided by that river. It consists "of four parishes:—St. Leonard, St. Mary Magdalene, Quatford, and Quatt Jarvis, of a total acreage of 2,987. "The two former parishes form the town of Bridgnorth, whilst the two latter are rural. The population is "approximately 6,060. Geographically Bridgnorth is divided into a High Town and a Low Town. The High "Town is so called from being situated on a sandstone rock at an elevation of 250 feet above sea level, and "is on the west bank of the river, whilst the greater part of the Low Town is on the east bank, about 130 "feet above sea level.

"Bridgnorth is the centre for a large agricultural district, and a weekly market for farm produce takes "place in the High Street on Saturdays. There is also a fortnightly Stock Market at the local Smithfield.

"Its principal factories are a carpet factory, employing about 400 hands, a spinning mill, a silk printing "mill, and a tanyard."

Statistics.

The natural increase of population during the year was 33. The population is estimated at the middle of 1909 to be 6060.

Period.	Death-rates per 1,000 population from									Infant Death-rate per 1000 Births.	Birth-rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tuber-cular Diseases	Bron-chitis.	Pneu-monia.	Heart Diseases.	Cancer.		
1909	14·3	·99	·33	·99	·66	1·16	1·65	1·32	·66	135	21·9
Average for years 1899-1908	16.2	..	..	..	..	..	..	..	..	112	22·7

The zymotic death-rate was due to 1 death from whooping cough, 1 from enteric fever, and 4 from diarrhœa.

There were 6 deaths from *phthisis.*

Infectious Disease. Four cases of scarlet fever, 3 of diphtheria, 3 of enteric fever and 6 of phthisis were notified. All the cases of scarlet fever and diphtheria were removed to the Isolation Hospital. The origin of the cases of enteric fever was not traced.

House Accommodation. Houses on the whole, satisfactory ; many are very old and some are built against sandstone rock and consequently without through ventilation. Three cases of overcrowding have been under consideration and two dealt with.

Water Supply. There is a dual system of supply, the drinking water being laid on to standpipes from a spring, and the river water laid on to the houses for other purposes. Four "Candy's" filters have been installed.

Drainage. The question of the disposal of sewage is receiving consideration, and Engineer's reports have been received.

Disposal of House Refuse—weekly collection. There are a number of refuse pits still used, and their abolition is recommended.

Common Lodging Houses—four—have been regularly inspected and are satisfactory.

Slaughter Houses—ten in number—in a satisfactory condition with one or two exceptions. The erection of a public slaughter house is recommended for consideration.

Piggeries—considerably reduced in recent years, but still some should be abolished.

Food Supply. No food unfit for human consumption has been dealt with.

Dairies and Cowsheds have been inspected and were generally satisfactory.

Factories and Workshops have been inspected and are in good order.

BRIDGNORTH (Rural).

Medical Officer of Health .. .. J. C. PADWICK, M.R.C.S., L.R.C.P.

Area in Acres	.. ..	70,521
Population	*at* 1901 *Census*	8,573
Number of inhabited houses	,, ...	1,886
Number of persons per house	,, ...	4·5

General Character of the District.

"Bridgnorth Rural District is a purely agricultural area, surrounding the Bridgnorth Urban District, "and divided by the river severn. It contains 27 parishes, six of which are on the east side of the river, with "a total area of 70,521 acres, and a population of 8,600. The principal parishes with regard to population "are those of Worfield, Claverley, and Alveley, with a population respectively of 1,448, 1,358, and 940. The "inhabitants of Alveley are mostly miners, employed in the Highley and Kinlet pits, which are situated just "outside the District."

Statistics.

The natural increase of population during the year was 101. The population is estimated at the middle of 1909 to be 8600.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth-rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bron-chitis.	Pneu-monia.	Heart Diseases	Cancer.		
1909	15.4	·58	·12	·35	·0	1·05	·70	1·40	1·16	64	25·5
Average for years 1899-1908.	13·8	..	..	..	..	..	..	..	..	92	25·3

The zymotic death-rate was due to 3 deaths from whooping cough and 2 from diarrhœa.

Infectious Disease. Four cases of scarlet fever, 19 of diphtheria and 1 of enteric fever were notified. Five of the cases of diphtheria occurred at a farm and were occasioned by defective drainage which has now been put in order. An outbreak of diphtheria at Astley Abbotts was attributed to polluted drinking water.

Disinfection. Disinfectants are supplied free and the houses disinfected with formalin on the termination of a case.

House Accommodation is as a rule sufficient, only one case of overcrowding was dealt with.

Water Supply is from wells with the exception of Alveley, which has a supply laid on from a spring. "Water throughout the whole district is good and plentiful."

Sewage and Excrement Disposal. At Worfield there is a small system of sewerage which takes in the school and a few houses and empties into the river Worfe. "The open drain of Claverley mentioned in my last report remains an unabated nuisance." Pail closets are almost universal.

Removal and Disposal of House Refuse. There is no public scavenging.

Schools. "These have been regularly inspected and are good as regards both sanitary condition and ventilation."

Dairies and Cowsheds—have been regularly inspected and are as a rule satisfactory. There are 22 persons on the register.

Factories, Workshops, etc. There are 4 workshops, 9 bakehouses and 1 factory on the register. They have been inspected regularly and are satisfactory.

BURFORD (Rural).

Medical Officer of Health .. .. A. E. WHITE, M.B., D.P.H.

Area in Acres		7,798
Population	*at* 1901 *Census*	1,233
Number of inhabited houses	,, ...	263
Number of persons per house	,, ...	4·7

General Character of the District.

"It lies on the southern slopes of the Clee Hill and for the most part at an elevation of from 200 to 800 "feet above sea level. It covers 7,798 acres, and is the smallest rural district both as regards area and population "in the County. I have estimated the population 1,233, and this varies very little. It is entirely rural and "agricultural, and is composed of five parishes with a small collection of houses near the centre of each. The "density of population is one person to six acres, and the average number of persons per house is 4.6.

"There is a Cottage Hospital on the southern border, which is chiefly used and supported by Tenbury.

"The Workhouse is in Tenbury."

Statistics.

The natural increase of population during the year was 17. The population is estimated at the middle of 1909 to be 1233.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bron-chitis.	Pneu-monia.	Heart Diseases	Cancer.		
1909	6·4	·0	·81	·0	·0	·0	·0	·81	·0	38	21·0
	..	..	..	..	..	..	..	..	..	..	..

There were no deaths from the common infectious diseases.

Infectious Disease. Four cases of diphtheria and one of erysipelas were notified during the year. Three of the cases of diphtheria were at a block of houses with pumps drawing water from a polluted stream. The pumps have been closed and a new well sunk. The other case was at a house with drainage defects. Burford School was closed in March on account of German measles, and Nash School in August on account of whooping cough.

House Accommodation—sufficient and on the whole in good condition.

Drainage and Scavenage. In six cases drainage defects have been found and most of these have been made good. The scavenage has been done satisfactorily.

Water Supply. A sufficient supply has been found for Burford Mill Cottages. A number of cottages are satisfactorily supplied from the Tenbury main.

Trades and Workshops. The workshops are chiefly carpenters' and blacksmiths'. There are two bakehouses—duly inspected.

Dairies. There are two dairies on the register. Three notices have been issued and complied with.

CHIRBURY (Rural).

Medical Officer of Health .. .. J. R. WOODS, B.A., M.R.C.S., L.R.C.P.

Area in Acres		27,045
Population	*at* 1901 *Census*	3,539
Number of inhabited houses	,, ...	812
Number of persons per house	,, ...	4·3

Statistics.

The natural increase of population during the year was 21. The population is estimated at the middle of 1909 to be 3540.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1909	9·0	·85	·56	1·13	·56	·85	·0	1·41	·0	98	14·4
Averages for years 1906-1908	12·2	..	..	..	..	..	..	..	..	75	20·4

The zymotic death-rate was due to 1 death from typhoid fever and 2 from whooping cough.

There were 4 deaths from phthisis.

Infectious Disease. One case of diphtheria, 2 of typhoid fever, and 6 of scarlet fever were notified. The typhoid infection was imported. Dr. Woods emphasises the need of educating the parent to regard whooping cough and measles as serious diseases in young children, and to seek for medical advice, most of the deaths from these causes being preventable. Dr. Woods also recommends the provision of a district nurse, and points out that she would go far towards lessening the mortality from these infantile complaints.

Housing Accommodation. The house to house inspection is completed or nearing completion. Many cases of dampness have been remedied and defective houses improved. Ventilation of bedrooms is in many cases quite inadequate, and the Council is recommended to take steps to remedy this.

Excrement Disposal. Pan closets are gradually being substituted for the privy pit system.

Water Supply. Outlying farms and cottages have their own wells and are in most cases satisfactory. *Snailbeach and Wotherton* have a plentiful and pure supply. *Marton.* A scheme has been prepared for supplying this village. *Worthen and Brockton.* "Again I emphasize the absolute necessity of a supply brought to these villages from a distance from a source free from sewage contamination, there being no drainage system, and the wells being all shallow they are of necessity contaminated, and no alteration of such wells will in my opinion improve matters. I have good reason to believe that every well in use in these villages is more or less seriously contaminated."

Workshops and Slaughter Houses—in a satisfactory condition.

Milkshops, Dairies, and Cowsheds. There are no milk shops. There are 27 cowkeepers on the register. Forty-one inspections have been made and all notices have been complied with.

Recommendations. "I recommend the Council to give their attention :—

(1) To securing better ventilation of houses, especially of bedrooms ;

(2) Towards the education of parents in regarding measles and whooping cough as *serious* diseases ;

(3) To providing Worthen and Brockton with a water supply."

CHURCH STRETTON (Urban).

Medical Officer of Health	M. GEPP, L.R.C.P.E., D.P.H.	
Area in Acres	.. .. ..	982
Population	*at* 1901 *Census*	816
Number of inhabited houses	,, ...	147
Number of persons per house	,, ...	5·5

Physical Features and General Character of the District.

"The district comprises the small ancient town of Church Stretton, lying in an open valley running "nearly North and South 600 feet above sea level, together with the lower slopes of the bold hills which form "the sides of this valley, and which rise to some 1,600 feet O.D. The area is 982 acres. The subsoil of the "valley is glacial drift, generally of dry and well drained gravel, the hillsides to the West being of hard Long-"myndian rock strata, of Pre-Cambrian age, those to the East being also of hard rock, of Ordovician age.-"The town lies on a Watershed, the natural drainage of the valley being on the North towards the Severn, "and on the South towards the Teme, the fall being gentle in either direction. The situation is one of great "natural beauty and healthfulness, and in consequence the number of residents and visitors has for some years "been increasing. The Urban District was constituted in 1899.

"The area of development and of new building has been rapidly extending, and the character of the place "has been changed into that of a modern residential district, and a health and holiday resort of high class, "for which its open elevated situation and beauty of surroundings well fit it.

"Climate, soil, aspect, and natural drainage are favourable to a high standard of health and such it "certainly enjoys. The Council has since its formation been active in promoting and encouraging the progress "of the district on sound Sanitary lines. The Urban District has a plentiful supply of soft and excellent upland "water, laid on to every house, and an admirable and extensive scheme of sewerage has been carried out, with "the result that the town is thoroughly well drained.

"The development of building and laying out of new streets has been well regulated under a very com-"plete and carefully considered series of By-laws. A public system of removal of house refuse has been adopted, "and the Council is prepared through its Surveyor to test the Drainage of any house and to issue to the house-"holder a certificate of sanitary efficiency where the drains pass the test.

"This is designed to encourage householders to keep their drains and sanitary arrangements up to a high "standard, and as an assurance to Visitors to houses in the District, where the Certificate is obtained and "exhibited."

Statistics.

The natural increase of population during the year was 15. The population is estimated at the middle of 1909 to be 1420, and corrected for public institutions, 1390.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bron-chitis.	Pneu-monia.	Heart Diseases	Cancer.		
1909	7·2	·72	·0	·0	·0	·72	·72	·0	.72	38	18·7
Averages for years 1900-1908	13·4	..	..	..	..	..	..	..	..	105	18·8

The zymotic death-rate was due to 1 death from diphtheria.

Infectious Disease. Twelve cases of scarlet fever and 1 of diphtheria were notified. Two cases of scarlet fever probably imported occurred in January, and the remainder between October 13th and November 1st. The spread of infection was due to very slight and indefinite cases acting as 'carriers' in the school. A large number of absentees were visited by the Medical Officer of Health and one of the School Medical Inspectors. The school was closed from October 26th until November 23rd, and the closure was effective in stopping the outbreak.

Isolation Accommodation. The site for the hospital previously mentioned has been abandoned. "The Council has the offer of another site in meadow land adjoining the main road between Hope Bowdler and East Wall." The only objection to this site is its distance, 2½ miles, from the town. "If the site proposed be adopted I would further suggest that the area be laid out and fenced so as to comply with the requirements of the Local Government Board for a hospital into which small-pox cases might be taken, and that the co-operation of the Rural District Council, in whose area the site is, be secured if possible."

Disinfection—by the Sanitary Inspector with a spraying apparatus. The provision of a steam disinfector is again recommended and a combination for this purpose with the Rural Council is suggested.

Water Supply. The district has an ample and constant supply of soft upland water. The main reservoir is situated at a height of 1000 feet and holds 12,000,000 gallons. There is also a small reservoir at a lower level. The water comes off the hard slates and shales of the Longmynd strata, and there is no chance of pollution from houses, the only risk being from the use of footpaths along the main feeding streams. "The water is not filtered. The great storage capacity of the big reservoir is very largely a safeguard, but as regards the Town Brook Valley water the storage area of the reservoir is small and would be no safeguard in the event of specific typhoid contamination reaching the stream. Experience has shown that a person may have

typhoid fever so slightly as to be able to go about throughout the illness, while his liquid and solid excreta are highly infectious and capable of multiplying indefinitely for some time if washed into a stream. It is now further known from some recent outbreaks that a person who has had typhoid may remain in an infectious condition for months or even years after an attack, passing excreta loaded with typhoid organisms. There must therefore be the risk that at some time a chance visitor may infect the streams. This risk is very greatly safeguarded where the storage capacity is so large as in the main reservoir. The organisms lose vitality in a pure water after a period of two or three weeks and settle to the bottom. Without ample storage the organisms may pass into the mains while still vigorous and multiplying. In my opinion it is of the first importance to obviate all possible risk in the matter of water supply. The solution in this case appears to be very simple, namely to divert the stream from the small reservoir and to supply it entirely from the main reservoir.

" Under the Water Company's Act the time appointed for the Council to exercise its powers of purchase will shortly be reached. The Council has appointed a Special Committee to consider the question of ways and means. It is unnecessary to state the many advantages of the water supply of a district being in the hands of its Sanitary Authority, and I trust that every possible effort within the Council's power will be made to take the opportunity now offered."

Sewerage and Drainage. The sewerage scheme was completed in 1906 and has provided satisfactory drainage for the district The sewers are practically self-cleansing, and there are three automatic flushing tanks at the dead ends. They are ventilated by eleven tall shaft ventilators and by manhole gratings in the more open places. The disposal of the sewage is by septic tank, contact beds, storm water filters and land filtration. The land has been levelled and under-drained. Examination of the contact beds showed that the clinker had largely broken down. One bed has been renewed with Clee Hill Stone, and the others will be dealt with. It is proposed to construct two separator tanks of Dortmund type. Efforts have been made without success to exclude subsoil water from the sewers.

Excrement Disposal—houses with water-closets, 250, earth or pail closets 8, privies 38. There are still a few privies in the town that might be converted. Three were converted to water-closets during the year.

House Refuse. There is a weekly collection of refuse which is carted to a tip outside the town.

House Accommodation—mostly new. There are a few old and worn out cottages in the centre of the town. There were no cases of overcrowding. Air space about houses is sufficient.

Permissive Powers. By-laws are in force with respect to Slaughter Houses, and New Streets and Buildings, also regulations for Dairies, Cowsheds and Milkshops. The adoption of the Infectious Disease (Prevention) Act, and of the Public Health (Amendment) Acts of 1890 and 1907, together with by-laws as to Nuisances, are under consideration.

Slaughter Houses—two registered. They are inspected periodically, but no steps are taken with regard to meat inspection. No tuberculous carcases were found.

Dairies and Cowsheds. Three cowkeepers and milksellers are on the register. Outside purveyors should be put on the register. There is no veterinary inspection of dairy cattle.

Bakehouses—five in number—been inspected and found generally satisfactory.

CHURCH STRETTON (Rural).

Medical Officer of Health .. .. M. GEPP, L.R.C.P.E., D.P.H.

Area in Acres		45,103
Population	*at 1901 Census*	4,479
Number of inhabited houses	,, ...	1,005
Number of persons per house	,, ...	4·4

Physical Features and General Character.

"The District is one of hills and dales, highest across the centre from west to east, forming the watershed "between the Severn and Teme river systems, and sloping gently to north and south. The natural drainage "is by various small streams rising in the uplands, and affording good natural drainage towards the Severn "on the north, or the Teme on the south side of the watershed. Three parallel ranges of hills run through "the District from south-west to north-east, the "Longmynd" range, of Archæan age, along the western side; "the steep escarpment of "Wenlock Edge" of Silurian age, along the eastern border; while between lies "a tract of Ordovician age, through which the Caradoc and Hope Bowdler range of hills rise. The elevation "varies from 1,700 feet at the summit of the Longmynd moorland, to some 400 feet at the northern and southern "limits of the District. The hillsides are largely cultivated, but in the higher parts are uninhabited moorland. "Between the ranges are fertile valleys with several villages and many isolated farms and cottages.

"The District is entirely rural and agricultural. In the centre lies the small Urban District of Church "Stretton. There is an unimportant exposure of coal measures at the north end of the District. These "measures are not now worked."

Statistics.

The natural increase of population during the year was 56. The population is estimated at the middle of 1909 to be 4,400, and corrected for public institutions, 4,430.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1909	12·2	.45	·23	·68	·23	·23	·68	1·35	·45	38	23·7
Averages for years 1899-1908	15·5	..	..	..	..	..	..	..	..	91	22 9

The zymotic death-rate was due to 2 deaths from scarlet fever.

There were 3 deaths from phthisis.

Infectious Disease. Thirty-five cases of scarlet fever and 1 of erysipelas were notified. The scarlet fever cases were mostly mild and often obscure, and appeared in some cases to have been taken for German measles. The special points shown by these outbreaks were :—

"(1) The slow spread and persistence of the disease in a scattered country district during the greater part of the year ;

"(2) The apparent sporadic distribution of the cases over an extensive area, yet indicating when looked at as a whole a definite extension, radiating from the Schools ;

"(3) The occurrence of slight cases of indefinite illness, among School children, coincident with one or more known cases of scarlet fever, these obscure cases not being regarded as scarlet fever when medically attended.

"(4) The probability of the known cases being linked by unsuspected 'missed' cases ;

"(5) The prompt effect of school closure in a scattered country district in limiting or stopping spread of infection when a definite outbreak associated with a school occurs."

Voluntary notification of *phthisis* is in force, but no cases were notified either voluntarily or under the poor-law.

Hospital Isolation. The desirability of arranging terms with the Urban District Council, if that Council should provide a hospital, is suggested.

Disinfection. The Sanitary Inspector sprays infected rooms. An arrangement with the Urban District Council for the purchase of a portable disinfector is advised.

Water Supply. There is no public system of water supply in the district. There are combined supplies from upland springs at Leebotwood, Plaish, Shipton, part of Wistanstow, Woolstaston and Woolstone. Little Stretton is supplied by the Church Stretton Water Company, and All Stretton by a local Company.

Picklescott. A scheme for the supplying of this village has been entirely abandoned owing to difficulty in getting the property owners to contribute.

"Various small schemes for the supply of small villages or collections of houses might with advantage be proceeded with, and continued attention should certainly be given to the individual wells supplying single houses or groups of two or three . . . ."

Cardington. The Parish Council is about to protect one of the public wells at present imperfectly protected, and it is suggested that the pump should be placed in a more convenient position. "The School at Cardington has no water supply, and adequate arrangements for storage of the roof water would be the most practicable method of improving it."

Drainage and Excrement Disposal. "No complaint of nuisance due to defective sewerage came under my notice during the year. There is no change to report as regards the question of the disposal of sewage at All Stretton, upon which I have reported previously."

The majority of the cottages have privies of old type and construction.

Housing. Speaking generally, the cottages are of considerable age and often undesirably small for family occupation. They need periodical inspection to keep them near to a habitable standard.

Permissive Powers. The Infectious Disease (Prevention) Act, 1890, and the Public Health Acts (Amendment) Act, 1890, have not been adopted.

By-laws are in force with regard to common lodging houses.

Common Lodging Houses—two on register, at All Stretton. Both are old houses. They are inspected periodically.

Dairies, Cowsheds, and Milkshops Regulations have been recommended but the Council have decided that they are not necessary. Twenty-six cowkeepers and milksellers are on the register ; 104 inspections have been made, and several cowsheds are reported as very poor structurally and hardly fit for the purpose. There is no veterinary inspection of dairy cattle.

CLEOBURY MORTIMER (Rural).

Medical Officer of Health .. .. A. E. WHITE, M.B., D.P.H.

Area in Acres	.. ..	44,338
Population	*at* 1901 *Census*	6,720
Number of inhabited houses	,, ...	1,292
Number of persons per house	,, ...	5.2

General Character of the District.

" The population is thinly scattered over the District, only the small town of Cleobury Mortimer really " approaching Urban character, though the mining village of Highley in the north is progressing towards that " condition.

" The District is strictly rural and almost entirely agricultural, there are a few coal pits and quarries. The " Workhouse is at Cleobury.

" The Infectious Diseases (Prevention) Act and parts of the 1890 Amendment Public Health Act are in " force, together with by-laws relating to new buildings, slaughter-houses and nuisances."

Statistics.

The natural increase of the population during the year was 111. The population is estimated at the middle of 1909 to be 6,550.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth-rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bron-chitis	Pneu-monia.	Heart Diseases	Cancer.		
1909	14·0	1·07	·31	·46	·31	·76	·92	2·44	1·07	98	31·1
Averages for years 1903—1908.	13·5	..	..	..	..	..	..	..	..	87	29·5

The zymotic death-rate was due to 4 deaths from whooping cough, 1 from diphtheria and 2 from enteric fever.

The deaths from phthisis were only 3 compared with 14 in the previous year.

Infectious Disease. One case of scarlet fever, 6 of diphtheria, 2 of enteric fever, 3 of puerperal fever, and 2 of erysipelas were notified. The 2 cases of enteric fever were in one house and the infection was imported. Two of the cases of puerperal fever were fatal. One of the cases was attended by a midwife who had recently attended another case of puerperal fever in a neighbouring district. Highley Infants' School was closed in February on account of whooping cough, Hopton Wafers was closed on account of influenza, Stottesdon for measles, Button Oak for mumps, and Highley Infants' Department in September for measles.

House Accommodation. Two hundred and twenty houses have been inspected and 11 notices sent. There still remains a good deal of work to be done in order to get cottages in certain parts of the district into proper condition. Two cases of overcrowding were dealt with.

Drainage and Scavenage. "There is no alteration in the condition of things at Cleobury Mortimer, and at Highley the suggested tank has not been introduced to intercept the solid matter." Public scavenging is recommended for the town of Cleobury. Scavenging at Highley is now done more frequently.

Water Supply. At Cleobury all the houses within a reasonable distance should be compelled to take the public supply. Much remains to be done with regard to the water supply of the district.

Factories and Workshops. The places which come under this Act are duly visited.

Dairies and Milkshops—nine milksellers on the register. The premises have been improved.

Slaughter Houses—one—in good condition.

CLUN (Rural).

Medical Officer of Health .. .. M. GEPP, L.R.C.P.E., D.P.H.

Area in Acres		82,206
Population	*at* 1901 *Census*	6,824
Number of inhabited Houses	,, ...	1,487
Number of persons per house	,, ...	4.6

Physical Features and General Character.

"The Rural District is essentially a hill country, lying in the south-west of the County, and on the borders "of Wales. Much of the District lies at an elevation of 1000 feet and upwards, especially in the northern and "western parts. The centre and south-eastern part consists of open valleys, at an elevation above Ordnance "Datum of 400 to 600 feet, and broken and divided by small groups of hills. The main structure is that of an "old elevated table-land much dissected, weathered down, and glaciated.

" The geological formation is much broken, the upper and lower Silurian, and Ordovician measures being " exposed in considerable areas, with less extensive exposures of the old Red Sandstone, and of Cambrian and " Pre-Cambrian measures. The natural drainage is by various streams rising in the hill country to north and " west, and forming the small rivers Onny and Clun, which leave the District through the valleys of the south " and east to join the Teme river.

" The District contains 16 parishes, and is sparsely populated, and agricultural in character, much of the " hill country being cultivated or grazed. A small area in the north was in the past worked for lead, barytes " and other minerals, but these industries have much declined in recent years. The District contains the " small market town of Clun in the south, and has several villages of small size which are principally placed in " the valleys, and some smaller hamlets, and many isolated farmsteads scattered about the valleys and hillsides. " The Borough of Bishop's Castle is within, and near the centre of, the District.

Statistics.

The natural increase of population during the year was 61. The population is estimated at the middle of 1909 to be 6,580, and corrected for public institutions, 6600.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bron-chitis.	Pneu-monia.	Heart Diseases.	Cancer.		
1909	13.5	.61	·45	.91	.0	1.36	.30	1.97	1.97	62	21.8
Average for years 1899-1908.	15.1	..	..	..	..	..	..	..	..	94	24.7

The zymotic death-rate was due to 3 deaths from scarlet fever and 1 from whooping cough.

There were 6 deaths from *phthisis.*

Infectious Disease. Forty-six cases of scarlet fever, 4 of diphtheria, 1 of puerperal fever, and 2 of erysipelas were notified. Thirty of the cases of *scarlet fever* were in the parish of Lydbury North, and 22 of these in connection with the School, a sharp outbreak in the school in July being due to an unrecognised case. The closure of the school brought the outbreak to an end. There was a limited outbreak of 7 cases in Edgton in July necessitating the closure of the school. One case of *diphtheria* in Clunbury parish was due to a member of the family who had had diphtheria in another county and had come home apparently without the throat being declared free from diphtheria bacilli. Wentnor, Stiperstones, and More Schools were closed on account of *whooping cough.* The Council has decided to employ a nurse from the Shropshire Nursing Federation, in the case of a serious outbreak of measles or whooping cough, to visit houses and give advice.

Two cases of *phthisis* were voluntarily notified and 4 were notified under the poor-law; visits were paid, handbills left, and disinfection carried out.

Hospital Isolation. There is no isolation hospital, but there is an arrangement for the use of an unoccupied cottage retained by the Borough of Bishop's Castle for small-pox.

Disinfection—by spraying. The Council, along with the Borough of Bishop's Castle, have a steam disinfector. It was used to disinfect the school books after the outbreak at Lydbury North.

Water Supply.—There are public systems of supply at Clun town and Newcastle. The water is excellent and the supply constant. There are public pumps at Chapel Lawn and Cefn Einion. There are private combined supplies at Lydbury North, Acton, Lydbury Down, Linley (for the school and a few houses), Norbury, and Little Brampton.

Clungunford. A supply by meter by the principal property owner has been arranged and mains are being laid.

Clunbury and Clunton. Schemes are being prepared and loans will presently be applied for. Gaugings have proved the supplies to be adequate.

Brockton. A supply from a well in Mill Meadow is being carried out.

Edgton. A supply has been recommended and is under consideration.

Lydham. The need of an improved supply is pointed out.

Sewerage, Drainage, and Excrement Disposal. The town of Clun is for the most part sewered, and the sewage discharges into the river Clun. The disposal of the sewage was under consideration in the year 1907 and a report obtained from engineers. Elsewhere there are no public sewers, and excrement disposal is mostly by privies with underground vaults. The Sanitary Inspector advises the substitution of earth closets for privies.

"There are instances in Clun and Clungunford of privies discharging direct into running streams. I have often advised the abolition of these as unnecessary and dangerous pollutions."

There is no system of public scavenging. A public tip is provided at Clun.

Housing. "Speaking generally, the housing conditions in the district are very fair, though there are many old houses requiring periodic inspection and attention to keep them in habitable condition." Dampness caused by houses being embedded in earth or defective eaves-troughing and spouting, requires special attention, also the improvement of the lighting and ventilation of bedrooms. The number of houses inspected in the house to house inspection during the year was 92.

Permissive Powers. The Public Health Acts (Amendment), Act 1890, and the Infectious Disease (Prevention) Act, 1890, have not been adopted, and there are no *by-laws* in force.

Slaughter Houses—three; no register kept and no by-laws are in force. They are inspected periodically, but not at times of slaughtering. No tuberculous carcases were found.

Dairies, Cowsheds, and Milkshops. There are five cowkeepers and milksellers on the register. No regulations are in force. The places are inspected periodically. The sale of milk as a business in the district is very small. There is no inspection of dairy cattle.

Bakehouses. There are seven; inspected regularly and found in good condition.

DAWLEY (Urban).

Medical Officer of Health .. .. M. GEPP, L.R.C.P.E., D.P.H.

Area in Acres		2,790
Population	*at* 1901 *Census*	7,522
Number of inhabited houses	,, ...	1,633
Number of persons per house	,, ...	4.6

Physical Features and General Character of the District.

"The District lies at a considerable elevation upon the Shropshire Coalfield and table-land, of which it "forms one of the higher parts. Its surface falls irregularly from North and North-west to South and South-east, "and from 670 feet O.D. to some 400 feet O.D. roughly. The surface drainage is good owing to the steep fall "of this part of the Northern Watershed of the Severn. The Geological formation is the Carboniferous, the "District being for the most part upon the Coal-Measures, but with small exposures of the Millstone Grit in "the South-Western part.

"As regards its general character, it may be described as a Coal and Iron Mining and Iron-working district "largely worked out. Coal Mines long out of work and dismantled Ironworks are common features. At the "present time it is chiefly the place of residence of an industrial community, many of whose members work "in one or two large modern Engineering or Pottery works within the District, while large numbers work in "Mines, Ironworks, and Brick and Tile works outside the district.

"For an Urban community it is very scattered in character. There is a compact business centre, with "some continuous lengths of houses radiating for some distance from it along the main roads. The rest of the "District is practically Rural in character, with houses isolated or in groups of more or less number.

"The District is naturally very healthy, being high, dry, and windswept, and surface drainage being good."

Statistics.

The natural increase of population during the year was 98. The population is estimated at the middle of 1909 to be 7670, and corrected for public institutions, 7700.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1909	15·6	·65	·0	·13	·52	2·08	·91	1·69	1·30	103	26·5
Averages for years 1899—1908	15·5	..	..	..	..	..	..	..	..	110	31·6

The zymotic death-rate was due to three deaths from whooping cough, 1 from diphtheria, and 1 from diarrhœa.

Infectious Disease. Twenty cases of scarlet fever, 5 of diphtheria and 1 of erysipelas were notified. The majority of the cases of scarlet fever arose in the last three months of the year. The Council have undertaken to pay for the use of antitoxin for the prevention of the spread of diphtheria in affected families, the cost of antitoxin being paid and a fee of 5/- for the first case and 2/6 for every subsequent case in the same family. Malins Lee school was closed on account of whooping cough.

Phthisis. There was 1 death from phthisis. Voluntary notification has not been adopted. There were two notifications of poor-law cases. Steps with regard to inquiry, advice and disinfection were carried out.

Isolation Accommodation. There is a small-pox hospital in common with the Shifnal Rural District. There is no hospital for any other disease. Dr. Gepp suggests that in the absence of small-pox this hospital might be used for advanced cases of phthisis.

Disinfection. The Sanitary Inspector sprays infected premises in notified cases and disinfectants are supplied. A small portable steam disinfector has been recommended, but no action so far taken.

Water Supply. The public supply has now come into full use. It is from the Madeley reservoir, being pumped to two reservoirs in the district, the larger holding 175,000 gallons and the smaller, at a higher level, 25,000 gallons. The water is supplied at 6d. per thousand gallons up to 50,000 gallons a day, and 5d. per thousand up to 100,000, which is the limit of supply. Two hundred and twenty houses have been connected to the mains, and there are 118 standpipes. The present consumption is 20,000 to 25,000 gallons a day, or three gallons per head. Eight private wells have been examined and found unfit for drinking.

Sewerage and Drainage. The sewers of the district are being improved by the Council from year to year. Engineers have been engaged "to make a survey and prepare such plans as will show the proper points for outfalls, the course which will have to be taken by intercepting sewers necessary for the collection of the sewage and conveyance to the selected points of outfall, and the size of such intercepting sewers and of other trunk sewers."

"There can be no question as to the wisdom of the Council in taking this course, nor as to its true economy. Furnished with a complete plan, every new work of the Council in draining and sewering will be certain to find its proper and permanent place in any eventual complete sewerage scheme."

"*Dark Lane.*—The overflow from the septic tank has been cut off from the brook and a storm water overflow substituted. The sewage is pumped periodically from the tank and carted on to land in the district."

Old untrapped surface water drains have been re-placed in many cases by trapped gullies. Attention should be paid to the proper ventilation of the sewers by shafts.

Excrement Disposal and Scavenging. The number of water closets is 35, earth or pail closets 13, and privies 1,257. During the year six privies were converted to water closets and 2 to pail closets. The conversion of privies to water closets is recommended in the centre of the town and to pail closets where houses have sufficient land. *Scavenging.* Facilities for the removal of refuse are provided at cost price, by the Council. The system has not shown any extension during the year.

Housing. The majority of the houses are small and for the most part of old construction. There has been much improvement in recent years. Special attention should be paid to remediable causes of dampness, and the lighting and ventilation of bedrooms.

Permissive Powers. Part III. of the Public Health Acts (Amendment) Act, 1890, is in force. The Infectious Disease (Prevention) Act, 1890, is not in force. There are *By-laws* with respect to Nuisances, New Buildings, Slaughter Houses, and Common Lodging Houses.

Slaughter Houses—eleven on the register; inspected regularly and occasionally at times of slaughtering. There is no routine system of meat inspection. No tuberculous carcases were found.

Dairies, Cowsheds, and Milkshops. Regulations are in force. There are 24 dairies on the register; inspected periodically. There is no veterinary inspection of dairy cattle.

Bakehouses—eleven on the register, in a fair condition.

DRAYTON (Rural).

Medical Officer of Health	..	..	A. MACQUEEN, M.D.
Area in Acres	.. .. ..	.. ..	51,384
Population	*at* 1901 *Census*	.. ..	11,708
Number of inhabited houses	,,	.. ..	2,655
Number of persons per house	,,	.. ..	4·4

Physical Features and General Characteristics.

"The Rural Sanitary District of Drayton comprises an area of upwards of 51,000 acres, situated in the great "central plain of England. The general elevation of the District is about 300 feet. The District extends from "the parishes of Adderley and Norton-in-Hales on the North, to the parish of Woore on the North-east, where "the three counties, Cheshire, Staffordshire, and Shropshire, join; to the South, as far as and including the "parishes of Hinstock and Child's Ercall, and the villages of Eaton and Little Bolas in Stoke parish. On the "East it is bounded by the river Tern and the parish of Cheswardine. On the West it extends to and includes "the village of Stoke-upon-Tern, the parish and village of Hodnet, and the hamlet of Marchamley. Near the "centre of the district is the town of Market Drayton with the township of Little Drayton adjoining, and the "parish of Moreton Say. The formation throughout is the new red sandstone, which attains its greatest ele-"vation in England, in the Hawkstone Hills, near the Western limit of the District. The river Tern in its "winding course to the Severn drains the greater portion of the District. The land in general contour is level, "well watered, highly cultivated, and there are some finely timbered estates. The population is chiefly "employed in agricultural pursuits."

Statistics.

The natural increase of population during the year was 99. The population is estimated at the middle of 1909 to be 11,510.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth-rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bron-chitis.	Pneu-monia.	Heart Diseases	Cancer		
1909	17·1	1·65	·35	·96	·61	1·13	·96	3·21	1·13	125	25·5
Averages for years 1899—1908		..	..	..	..	..	..	..	..	113	24·8

The zymotic death-rate was due to 3 deaths from measles, 2 from scarlet fever, 10 from whooping cough, 2 from diarrhœa and 2 from diphtheria.

There were 11 deaths from phthisis and 7 deaths from other tuberculous diseases.

Infectious Disease. Forty-five cases of scarlet fever, 23 of diphtheria and membranous croup, 3 of erysipelas, 1 of enteric fever, 1 of puerperal fever, and 4 of pulmonary tuberculosis were notified. Pulmonary tuberculosis has been notifiable since 1900. Little Drayton, Market Drayton, and Woore schools were closed on account of measles, and Child's Ercall on account of influenza.

Disinfection is carried out under the direction of the Sanitary Inspector. At the Isolation Hospital the steam disinfector is used for clothing, etc., before the patient is allowed to leave.

House Accommodation is sufficient and satisfactory.

Lodging Houses, Bakehouses and Slaughter Houses are regularly inspected by the Sanitary Inspector.

Cowsheds, Dairies, and Milkshops—an inspection is now being proceeded with and a report will shortly be made in accordance with the request of the Local Government Board.

Removal and Disposal of House Refuse is done by householders and is regulated by by-laws.

Excrement Disposal—partly by water-closets and partly by privies. "Owing to the abundant water supply, the water carriage system of disposal ought to be exclusively adopted."

Sewerage and Drainage. The revised scheme for the treatment of the sewage of Market Drayton is nearly completed, and when approved of should be begun at the earliest possible moment.

Water Supply. Market Drayton and Little Drayton are well supplied with excellent water from the Market Drayton Water Company's mains. This supply has been extended to Betton and Ridgwardine. Extension to Norton-in-Hales, where the supply is unsatisfactory is advocated.

ELLESMERE (Urban).

Medical Officer of Health	A. H. HOFFMAN, M.D.	
Area in Acres	.. .. ..	1,204
Population	*at* 1901 *Census*	1,945
Number of inhabited houses	,, ...	425
Number of persons per house	,, ...	4·5

General Character of the District.

"The houses are mostly well built and in good condition, and the side walks are paved.
"There are no manufactories of any size, the trade of the town being chiefly agricultural.
"The town has an excellent and plentiful water supply derived from the Liverpool main as it passes the "town.

Statistics.

The number of births and deaths was the same. The population is estimated at the middle of 1909 to be 2018.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth-rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bron-chitis.	Pneu-monia.	Heart Diseases	Cancer.		
1909	10.4	·0	.0	.50	.50	.50	1.98	.99	1.98	69	14.3
Averages for years 1902-1908	15·0	..	..	..	..	..	..	..	..	100	23·5

There were no deaths from the common infectious diseases.

There was only 1 death from phthisis and 1 from other tuberculous diseases.

Infectious Disease. Three cases of scarlet fever, 1 of diphtheria and 1 of puerperal fever were notified. There was an epidemic of measles necessitating the closure of the schools.

Disinfection. "I sincerely hope that your Council may carry through the scheme of combining with the Rural District Council, for the purchase of a steam disinfector, as the efficient disinfecting of clothing, bedding, etc., is at present impossible, although it is a most important factor in checking the spread of disease.

"I also hope my suggestion, that the disinfection of all houses should be carried out by the Inspector under my directions, may be accepted."

House Accommodation. The majority of the houses are well built, and the minor housing defects are dealt with in the course of the routine inspection.

Drainage and Scavenage. The town is well sewered, but there is a technical breach of the Rivers Pollution Prevention Act. The scavenage of the town is satisfactory.

Water Supply—from the Liverpool mains and laid on to most of the houses.

Workshops. A register is kept and the places are regularly inspected.

Slaughter Houses, Bakehouses and Dairies also receive attention.

ELLESMERE (Rural).

Medical Officer of Health .. .. A. H. HOFFMAN, M.D.

Area in Acres		51,117
Population	*at 1901 Census*	7,911
Number of inhabited houses	,, ...	1,658
Number of persons per house	,, ...	4·7

General Character of the District.

"The District is purely agricultural and the houses are more or less widely distributed.
"There are a few small villages, Baschurch being the largest. Some portions of the District are flat, but "most of it is undulating and cultivated.
"The subsoil is gravel with some clay and drift.
"The rateable value is about £84,000; there are no outstanding loans for sanitary purposes.
"The Workhouse is outside the District, and there are no factories or large public institutions.
"The duties of Sanitary Inspector and Surveyor are combined, and in a wide district like yours this seems "the best way of obtaining efficient sanitary inspection."

Statistics.

The natural increase of population during the year was 62. The population is estimated at the middle of 1909 to be 7916.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.-
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bron-chitis.	Pneu-monia.	Heart Diseases	Cancer.		
1909	14.6	.63	.13	·88	·13	1.14	1.39	2.02	.88	91	20.8
Averages for years 1902-1908	13.8	..	..	..	..	..	..	..	..	90	23.4

The zymotic death-rate was due to 4 deaths from diphtheria and 1 from diarrhœa.

There were 7 deaths from phthisis and 1 from other tuberculous diseases.

Infectious Disease. Forty-six cases of scarlet fever, 13 of diphtheria, 1 of enteric fever and 4 of erysipelas were notified. The case of enteric fever was an imported one. "Four of the cases ended fatally, all from diphtheria. In most of the cases of scarlet fever no source of infection could be traced, so I earnestly hope the scheme for joining with the Urban Council in the purchase of a steam disinfecting apparatus may be carried out. Also my suggestion that the disinfection of all houses, bedding, clothing, etc., may be done by the Sanitary Inspector, may meet with your approval. I am convinced unless efficient disinfection is secured we shall have a continuance of these outbreaks for which no cause can be found.

"As matters stand at present, no clothing or bedding can be properly disinfected; and the house disinfection is carried out practically without any control or means of knowing whether it is efficient or no."

House Accommodation is fairly satisfactory.

Drainage and Scavenage. There is mostly sufficient land about the houses for the disposal of slop water and privy contents.

Water Supply is mostly from wells. "Cockshutt has a good supply, and though many houses at Dudleston are supplied by Lord Trevor's Main, there is still a serious deficiency in the water supply in this district, but as the matter is under the Council's consideration, I hope this condition may be soon remedied. I also hope that the steps which are being taken to improve the water supply at Baschurch may be successful, as this matter has been a source of trouble for some years now."

Workshops. There are 56 places on the register. They have all been inspected and dealt with.

Bakehouses, Cowsheds and Dairies have also been inspected.

LUDLOW (Urban).

Medical Officer of Health .. .. .. C. B. CRANSTOUN, M.B.

Area in Acres	.. ..	418
Population	*at* 1901 *Census*	6,373
Number of inhabited houses	,, ...	1,372
Number of persons per house	,, ...	4.6

Character of the District.

"Ludlow is a small agricultural town on the southern border of Shropshire, rising in some parts to upwards "of 400 feet above sea level. It is situated on a large spur of limestone rock, which rises at the lower end of "the Corve Valley. On the north, west, and south sides, it is separated from the surrounding hills by the rivers "Corve and Teme. On the east side the ground gradually rises till it becomes continuous with the Clee Hill "Range."

Statistics.

The natural increase of population during the year was 26. The population is estimated at the middle of 1909 to be 6,570.

Period	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis	Other Tubercular Diseases.	Bron-chitis.	Pneu-monia.	Heart Diseases	Cancer.		
1909	17·0	.46	·0	·91	·15	·15	1·07	2·13	1·83	106	21·6
Averages for years 1899—1908	18·3	..	..	..	..	..	..	..	..	117	26·3

The zymotic death-rate was due to 1 death from whooping cough and 2 from diarrhœa. There were 6 deaths from phthisis during the year.

Infectious Disease. Nine cases of scarlet fever, 2 of enteric fever, and 6 of erysipelas were notified. "There have been several cases of acute diarrhœa in adults, some of which ended fatally during the past year."

Hospital Isolation. Either the Borough alone or the Borough and surrounding district should provide hospital accommodation. Two beds per thousand of population is suggested.

Water Supply. "There has been an abundant and continuous supply of water during the past year. Towards the close of 1909, however, several cases of illness of an unusual type occurred in the Borough, and, though the chemical analysis of the water proved to be satisfactory, it was thought advisable to have a bacteriological examination made, as circumstances seemed to point to a tainted source of supply."

Bacteriological analyses of the water taken from various points are given showing that pollution with excremental matter was gaining access to the water supply.

"In consequence of these reports, a handbill was at once issued drawing attention to the suspicion of the supply, and urging the inhabitants to boil the water before consumption as a precautionary measure.

"Careful investigation and consideration at this stage caused suspicion of contamination to be directed to the field near Batty's Farm, at Burway, and to that portion of the line of main on the West side of the New Bridge, near the Clive Almshouses.

"To remedy any possibility of such pollution in future the line of iron mains which exist under Dinham Bridge should be extended to Swan's Nest, and this work should be taken in hand at the earliest possible time, as though there is at present a plentiful supply from the Fountains and Swan's Nest sources it is very questionable if these would suffice in summer."

Figures are given to show that there is a waste of 60,000 to 80,000 gallons of water per day, and a thorough examination of the mains is suggested. "During these investigations enquiry was made from the Birmingham Corporation as to the cost of a supply for the Borough from their aqueduct. The Corporation offered to afford a supply at fivepence per thousand gallons, with a minimum payment of £190 2s. 1d. per quarter of a year. As this would involve a minimum outlay of £760 8s. 4d. per annum, it would necessitate the levying of a water-rate of upwards of tenpence in the pound. It was pointed out that when a third pipe is laid on the aqueduct a material reduction will be made in the charge, and the Birmingham Corporation expressed itself as willing to make a re-arrangement of prices when that time arrived."

Sewage System. The re-constructed sewage disposal works continue to act efficiently. Considerable progress has been made with the conversion of privies to water closets, a reduction of 30.3 per cent. in the number of houses with unsuitable closets having been made during the year.

Refuse Disposal. The refuse is now conveyed to Portman Meadow, which seems a satisfactory solution.

Dairies, Milkshops, and Cowsheds. The number of persons on the register is 15. Thirteen inspections have been made and four notices served, three having been complied with. All dairy cattle have been examined by a Veterinary Surgeon.

Recommendations. The following recommendations are made :—

(1) The completion of the water-carriage system as soon as possible in place of middens and privies.

(*b*) The continued enforcement of the laws dealing with the dwellings of the poor and the improvement of all such residences wherever needed.

(*c*) The provision of a General Isolation Hospital for the Borough and neighbourhood.

(*d*) The paving and improvement of the sanitary condition of back courts, yards, and alleys.

(*e*) An improvement in the system of collecting house refuse so that covered refuse-holders only are used, thus preventing the dissemination of refuse-dust by winds and stray animals.

LUDLOW (Rural).

Medical Officer of Health .. .. .. A. E. WHITE, M.B., D.P.H.

Area in Acres	.. ..	66,350
Population	*at* 1901 *Census*	9,585
Number of inhabited houses	.. ,, ...	2,003
Number of persons per house	.. ,, ...	4·7

General Character of the District.

"The District lies partly on the Western slopes of the Clee Hills, and the greater portion of it is hilly in "character. The population is thinly scattered except at two points, viz. :—Clee Hill, where a number of quarry-"men working at the different Granite Works live, and at Craven Arms, a railway centre of some importance. "Except at these two places the District is entirely an agricultural one.

"Bye-laws have been adopted in regard to Slaughter-houses, Dairies, Cowsheds and Milkshops, New "Streets and Buildings, Cleansing of Ashpits, Earth Closets, Privies and Cesspools, and also for Nuisances."

Statistics.

The natural increase of population during the year was 104. The population is estimated at the middle of 1909 to be 9858.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1909	12·3	1·01	·61	·71	·20	·71	1·01	1·93	·71	64	22·0
Averages for years 1905—1908	11·4	..	..	..	..	..	..	..	..	81	23·9

The zymotic death-rate was due to 5 deaths from measles, 2 from whooping cough, 1 from diphtheria, and 2 from enteric fever.

There were 7 deaths from phthisis and 2 from other tuberculous diseases.

Infectious Disease. Nineteen cases of scarlet fever, 23 of diphtheria, 4 of erysipelas, 1 of enteric fever, and 5 of puerperal fever were notified. Nine of the cases of diphtheria were at Knowbury and neighbourhood, and were associated with defects of drainage and water supply, many of which have been remedied, but much remains to be done in this direction. There was a small outbreak of 12 cases of scarlet fever at Bromfield and Stanton Lacy in October. Westhope, Diddlebury, Stoke St. Milburgh, Culmington and Cleeton St. Mary's schools were closed on account of whooping cough; Richard's Castle and Knowbury on account of influenza, and Knowbury on account of measles.

House Accommodation. "There has been a steady improvement in the cottages on some estates, but much requires to be done at the Clee Hill and Knowbury parish. Houses damp, dirty or admitting rain or otherwise in a bad sanitary condition were dealt with in eighteen cases."

Drainage and Scavenage. There is constant work being carried on to remedy defective drainage of the poorer cottages in the district. The scavenging is done by the individual householders, and requires constant watchfulness.

Water Supply. At *Aston Munslow* improvements have been carried out but there are still several cottages with no supply.

Workshops are receiving attention.

Bakehouses are fairly satisfactory.

Dairies, Cowsheds, and Milkshops—twenty-three in number; several of the older ones need improvement.

Slaughter-houses—nine in number—are kept clean and satisfactory.

Nuisances are very numerous.

NEWPORT (Urban).

Medical Officer of Health .. .. M. GEPP, L.R.C.P.E., D.P.H.

Area in Acres		768
Population	*at 1901 Census*	3,241
Number of inhabited houses	,, ...	720
Number of persons per house	,, ...	4·5

Physical Features and General Character of the District.

"The Urban District is of small area, of rather more than a square mile, lying on the eastern border "of the County. It is level in contour, the general elevation being some 250 feet above Ordnance Datum. "The natural drainage is to the west, but there is no stream of any importance. The subsoil is the Bunter "beds of the New Red Sandstone. The District includes the town of Newport, consisting chiefly of one long "and wide street about one mile in length, running north and south, with several narrow lanes and passages "and courts running from it at right angles. This part of the town is old and compact and there is about the "centre some crowding of houses upon area. To east and west is open country with extensions of more modern "villa residences and artisan cottages along the roads converging on the town, and some outlying collections "of houses. Newport is a market and residential town. There is a brewery and a tanyard."

Statistics.

The natural increase of population during the year was 26. The population is estimated at the middle of 1909 to be 3,159, and corrected for public institutions, 3,090.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth-rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis	Other Tubercular Diseases.	Bron-chitis.	Pneu-monia.	Heart Diseases	Cancer.		
1909	13·3	·32	·97	.97	·32	1·29	1·29	·32	2·27	41	23·9
Average for years 1899—1908	16.3	..	..	..	..	..	..	..	..	106	25·1

The zymotic death-rate was due to 1 death from whooping cough.

Infectious Disease. One case of each of the infectious diseases, diphtheria, scarlet fever, erysipelas and enteric fever were notified. The cases of scarlet fever and diphtheria were removed to hospital. The case of typhoid was associated with defective drainage and a defective privy. The Council is recommended to accept the offer of the Shropshire Nursing Federation for the supply of a nurse at times of epidemic of measles or whooping cough.

Phthisis. There were 3 deaths due to phthisis. The average death-rate for some years has been high, and the Council is recommended to take special measures with regard to this disease. Amongst other things, arrangements should be made with the Registrar of Births and Deaths to send an immediate return on the registration of a death from phthisis so that the premises may be disinfected and cleansed as quickly as possible. Voluntary notification is advised. Nine cases were notified under the Tuberculosis Regulations. The houses were visited and disinfection was carried out after death in two fatal cases, and in two cases during life.

Isolation Accommodation. There is a small hospital with two wards each holding two patients. "The small accommodation was severely strained from time to time, and plans were considered for erecting an extension. Owing to the sudden abatement of the outbreak the work was not carried out." For small-pox there is an arrangement for providing a tent in an emergency, a site being secured.

Disinfection. The Sanitary Inspector is provided with a spraying apparatus. A steam disinfector is recommended to be kept at the hospital.

Water Supply. The district has a public supply from three wells in the Bunter Beds, the water being artesian. Five hundred and thirty houses are connected to the mains, and 241 houses are supplied from standpipes. Thirteen houses have been connected during the year.

"With reference to the recommendation I have made in former reports for the lining in impervious brickwork of the upper part of Baddeley's Well, the Council has decided to defer action for the present."

Sewerage and Drainage. The town is well sewered. The sewers have manholes for flushing and surface openings for ventilation. The outfall works consist of grit chamber, open septic tank, single contact filter, and treatment on land. The land is underdrained at a depth of six feet. New drains and re-laid drains are submitted to the water test.

Excrement Disposal. There are 432 water closets, 16 earth or pail closets, and 329 privies. The privies are old and defective; nine were converted to water closets during the year and 4 to pail closets. The Council is desirous of pushing on with the conversion.

Scavenging. The scavenging is undertaken by the Council. Several old ashpits have been demolished and a large number of ashbins have been provided. The weekly collection of house refuse is now almost complete.

Housing. "There are a number of worn out old houses in the town, mainly in the narrow lanes and passages opening off the main street. A number of these have been void for many years. Some that are occupied are barely fit for habitation, and special attention should be given to these and to other poor and old cottage property, of which the town has a considerable proportion. Small, old, and defectively designed and built cottages, if damp, ill lighted and ill ventilated, are causes of ill health and deficient stamina in their occupants. That their rents are low is of no advantage to the District in my opinion, as their presence probably attracts and maintains a class sunk in poverty. These conditions, acting and re-acting, are probably to a considerable extent a cause of the comparatively high death-rate from phthisis of the District. I have often advocated a systematic house to house inspection, as essential to the discovery of the condition as regards defects and possibility of improvement of this old property. I recommend the Council to institute a systematic inspection, with a recording of the details methodically in the inspection pocket books which they have now provided for the use of their Inspector."

One house was certified as unfit for habitation. Of 29 houses referred to in previous reports, only one now remains occupied.

Permissive Powers. The Public Health Acts (Amendment) Act, 1890, Part III., and the Infectious Disease (Prevention) Act, 1890, have been adopted, and it has been decided to adopt parts 2, 3, 4, 5 and 6 of the Public Health Acts Amendment Act, 1907. *By-laws* are in force with respect to Nuisances, New Streets and Buildings, Slaughter Houses, and Common Lodging Houses.

Slaughter Houses—eleven on the register, regularly inspected, but no routine visits at time of slaughtering have been made. Dr. Gepp points out that fresh legislation will probably put this matter in the hands of the County Council, or districts will be grouped. In the meantime the new Inspector should have veterinary assistance when required.

Common Lodging Houses—three, regularly inspected.

Dairies, Cowsheds, and Milkshops. Regulations are in force. The number of dairies, etc., on register is 15. They are visited half-yearly. There is no veterinary inspection of dairy cattle.

NEWPORT (Rural).

Medical Officer of Health .. .. M. GEPP, L.R.C.P.E., D.P.H.

Area in Acres		22,807
Population	*at* 1901 *Census*	6,033
Number of inhabited Houses	,, ...	1,284
Number of persons per house	,, ...	4·7

Physical Features and General Character.

"The District is in part agricultural and part industrial, and lies within the eastern border of the County. "The northern and larger part is on the Shropshire Plain, here formed of the Bunter beds of the New Red "Sandstone, and is entirely agricultural. The elevation of this part varies from 150 to 300 feet above Ordnance "Datum. The southern and much smaller part rises rather rapidly from the plain, reaching some 500 feet "elevation at the extreme border on the south, and comprises the apex of the extensive triangular coal-field, "which has its base some miles to the south. This part lies upon the coal measures, with a small intrusive "outcrop of much broken older strata, forming Lilleshall Hill. The natural drainage is by various small "streams from the south and east flowing towards the west, and falling into the Tern river outside the District.

"There are nine parishes in the District, all agricultural, except the large parish of Lilleshall, which is in "part agricultural, but also contains the industrial area of Donnington Wood, several collieries and some "engineering and other ironworks, employing the majority of the workers in this area."

Statistics.

The natural increase of population during the year was 52. The population is estimated at the middle of 1909 to be 5996, and corrected for public institutions, 6020.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth-rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bron-chitis.	Pneu-monia.	Heart Diseases	Cancer.		
1909	15·9	·17	1·16	1·33	1·00	1·50	1·16	2·16	1·33	114	23·2
Averages for years 1899-1908	15·2	..	..	..	..	..	..	..	..	116	25·4

The zymotic death-rate was due to 1 death from diphtheria.

Infectious Disease. Thirteen cases of scarlet fever, 5 of diphtheria, 1 of puerperal fever and 1 of erysipelas were notified. The scarlet fever cases were mostly scattered. One was apparently a 'return' case arising from a case discharged from a fever hospital in a large town. The cases of diphtheria were obscure and unconnected.

The Council has agreed to accept the offer of the Shropshire Nursing Federation for the supply of a nurse in times of epidemics of measles and whooping cough.

There were 8 deaths from *phthisis*. Voluntary notification has not been adopted. Two poor-law cases were notified, and measures of inquiry, advice and disinfection carried out. "In one of the above cases, the patient was the mother of a family. After her death, on February 27th, the family moved to another part of the district. The youngest child, aged 11 months, died of tuberculous meningitis on April 11th, having no doubt contracted the infection from the mother."

Hospital Isolation. There is no isolation hospital, but there is an arrangement for providing a tent hospital in an emergency, for small-pox.

Disinfection. The Sanitary Inspector disinfects rooms, in nearly all notified cases, with a spraying apparatus. The purchase of a steam disinfector has been advised, but no steps taken.

Water Supply. A public system of supply is laid on to Church Aston and Chetwynd Aston villages, from the Urban Council's mains. Lilleshall village is supplied from a well in the Bunter measures, the water being pumped by wind power to a reservoir on Lilleshall Hill. Muxton village and the greater part of Donnington village are served from this supply. The new supply to Donnington Wood is now complete, the higher level from Hilton Bank and the lower level from the Lilleshall scheme. Tibberton village is supplied by standpipes from a well outside the village. Edgmond village has a private supply from a well in the sandstone to several houses and to a fountain for public use. Both these latter supplies are raised by wind engines.

The district is now well supplied as regards the main centres. There remain the supplies to individual houses and groups of houses to be dealt with. In the house to house inspection, the Sanitary Inspector is giving attention to this matter. "The re-construction or diversion of defective drains, proper disposal of drainage, conversion of defective privies into earth closets, and improvement of pigstyes and other sources of manurial pollution, will often be found necessary for the removal of sources of contamination of wells. The re-construction of the well should be aimed at so as to render the upper part impervious to access of surface or subsoil water."

Sewerage, Drainage, and Excrement Disposal. In *Edgmond* most of the houses are connected to one or other of four sewers with separate outfalls on land. Improvement to the outfall at the south-west end of the village has been made during the year. The drainage of Donnington Wood was greatly improved in the year 1905 by a system of combined drainage carried out by the principal property owner. Thirty-four houses have been connected to the main sewer during the year. In other villages the houses are often connected to road water drains, and the slop drains from individual houses discharge on gardens or on to fields or into ditches without offence. The number of houses with water closets is approximately 36, pail closets 27, and privies 1106. There is room for conversion of defective privies to pail closets. This is advised particularly in Donnington Wood, and the provision of one closet for every house.

Housing. In the agricultural area the conditions are on the whole fair. In the industrial area, the Lilleshall Company have done much good work in recent years. "There remains the fact that a number of the houses are radically unsatisfactory in design and structure, and need very careful and thorough treatment to make them wholesome dwellings. The first essentials are to remove all causes of dampness of walls and floors, and to provide through ventilation to every house and adequate lighting space."

A careful inspection of Church Barracks (10 houses) has been made and details of the requirements forwarded to the owner. They are having consideration.

Two hundred and thirty-five houses have been systematically inspected. The numbering of the houses has been of very great use.

Permissive Powers. The Public Health Acts (Amendment) Act, 1890, and 1907 and the Infectious Disease (Prevention) Act, 1890, are not adopted. There are no *by-laws.*

Slaughter Houses—two; inspected from time to time. There is no inspection of meat at the time of slaughtering. No tuberculous carcases were found.

Dairies, Cowsheds, and Milkshops. The Model Regulations are in force. There are 39 cowkeepers, etc., on the register, and 117 visits were paid. There is no inspection of dairy cattle.

OAKENGATES.

Medical Officer of Health	JOHN A. ROSE, M.A., M.B., D.P.H.	
Area in Acres		2,327
Population	*at* 1901 *Census*	10,906
Number of inhabited houses	,, ...	2,187
Number of persons per house	,, ...	5.0

General Character of District.

"The District was formed in 1898, and included parts of three Rural Districts, viz.:—Wellington, Newport, "and Shifnal.

"It contains about 3,600 acres, and including thickly populated areas, with open country studded with "scattered cottage property, which are fast becoming much more Urban in character through extensive building "operations that have been going on; for example, in the Trench, Furnace Lane, and the outlying parts of "St. George's. Throughout the area different portions of the District vary much in altitude.

"The District is the centre of important Coal, Mining, and Iron Industries; is full of cottages that were "built a number of years ago, and, as is common in such districts, without the slightest attention to sanitation. "This has added to the difficulty of reaching the Comprehensive Sanitary Improvements which you as a Council "have attained. There has been a number of alterations to old property. There is however much to be "done in the way of erection of suitable cottages and dwellings for the working class.

"The rateable value of the District is low, and the assessable value is still lower."

Statistics.

The natural increase of population during the year was 219. The population is estimated at the middle of 1909 to be 11,077.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1909	13·4	·72	·18	·99	·18	·72	1·44	·72	·63	85	31·8
		..	..	..	..	..	..	..	..		

The zymotic death-rate was due to 3 deaths from scarlet fever, 3 from whooping cough and 2 from diarrhœa.

There were 11 deaths from phthisis and 2 from other tuberculous diseases.

The infantile mortality was the lowest recorded.

Infectious Disease. Sixty-four cases of scarlet fever, 18 of diphtheria, 1 of enteric fever and 3 of erysipelas were notified. There was a special prevalence of scarlet fever and diphtheria in the St. George's District. The majority of cases of both these diseases occurred in the winter months. The causes of the prevalence more particularly in St. George's is attributed to :—

"1. St. George's is more densely populated.
"2. Dissemination through Schools.
"3. Mildness of sore throats, being unobserved and freely moving amongst the healthy.
"4. Exhalation from old sewers.
"5. Housing. No isolation whatever is possible in some houses, *e.g.*, in one instance 6 children, healthy and unhealthy, were herded together in the common living room, while the father who worked nights, slept during the day in the only other room available.
"6. Disinfection is not complete without a disinfector."

The continued prevalence of infectious disease in St. George's District suggests the necessity for further consideration of the sewage system of that part of the area. "The only solution to the housing and want of isolation for years to come is an Isolation Hospital." "I have issued circulars *re* 'chimneys' to improve the possibility of isolation at present."

The closet pail system complained of in the New Buildings, St. George's, has not yet been done away with, and the incidence of infectious disease is the same there.

House Accommodation. There has been a steadily increasing number of improvements done to old cottage property, especially by the Lilleshall Company. There is still, however, much to be done.

Drainage and Scavenage. A very large number of houses have been connected to the new drainage system. There are still however a number unconnected. Further extensions of the drainage system are in contemplation, and it is advised that they be carefully thought out. *Scavenage.* The substitution of bins for many ash-pits together with the systematic removal of the refuse have greatly altered the sanitary condition of the district. The erection of a destructor is recommended.

Water Supply is from a deeply bored well about three miles from the district. The water is excellent in quality. One thousand, four hundred and ninety-eight houses are supplied from the Council's mains, 336 not yet having been connected. The remaining 635 houses are being supplied by the Lilleshall Company.

Dairies, Cowsheds, and Milkshops. Some of the cowsheds and conditions of obtaining and disposing of milk are still unsatisfactory.

The condition of the *Meat Market* has much improved.

OSWESTRY (Urban).

Medical Officer of Health .. .. R. DE LA P. BERESFORD, B.A., M.D.

Area in Acres		1,887
Population	*at* 1901 *Census*	9,579
Number of inhabited houses	,, ...	2,083
Number of persons per house	,, ...	4.6

Statistics.

The natural increase of population during the year was 109. The population is estimated at the middle of 1909 to be 9,950.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth-rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bron-chitis.	Pneu-monia.	Heart Diseases	Cancer.		
1909	14·9	·30	·20	1·41	·40	.70	1·11	1·41	1·01	94	23·5
Averages for years 1899-1908	15·9	..	..	..	..	..	..	.	..	101	26·3

The zymotic death-rate was due to 1 death from diphtheria and 2 from diarrhœa.

Infectious Disease. Twenty-four cases of scarlet fever, 18 of diphtheria and 3 of erysipelas were notified. Many of the cases of diphtheria and scarlet fever were so mild that they were difficult of recognition, and consequently were the cause of further spread.

The adoption of the Notification of Births Act is recommended.

Scavenage. House refuse is removed every day by the Town Authorities, and the effect on the health of the town must be very good.

Water Supply during the year was excellent in quality and abundant in quantity.

The Elementary Schools are all very clean and in good order.

Sewage Disposal. New works are now in course of construction.

House Accommodation. Ventilation and air space is good except in a few blocks of back-to-back houses and in some of the alleys leading off the main streets. The only serious defects in the house accommodation not due to tenants are absence of through ventilation and imperfect paving of the surrounding ground.

Dairies, Cowsheds, and Milkshops. Considered as a whole the town dairies and cowsheds were satisfactory. Attention is drawn to the desirability of obtaining power of inspection over the cowsheds and dairies outside the Borough.

Slaughter Houses were inspected and found fairly satisfactory.

A public abattoir is recommended as cleaner and giving better opportunity for meat inspection.

Recommendations are made (1) as to the provision of an infectious hospital, (2) the filtration of the water, and (3) voluntary notification of consumption

OSWESTRY (Rural).

Medical Officer of Health .. .. R. DE LA P. BERESFORD, B.A., M.D.

Area in Acres		60,366
Population	*at* 1901 *Census*	14,727
Number of inhabited houses	,, ...	3,220
Number of persons per house	,, ...	4.6

Statistics.

The natural increase of population during the year was 130. The population is estimated at the middle of 1909 to be 15,000.

Period.	All Causes.	Death-rates per 1000 population from									Birth-rate.
		Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.	Infant Death-rate per 1000 Births.	
1909	14·4	·40	·53	·80	·53	·67	·93	2·13	1·13	99	24·2
Averages for years 1899-1908	15·2	..	..	..	..	..	..	..	..	98	26

The zymotic death-rate was due to 2 deaths from scarlet fever, 1 from whooping cough, 2 from diphtheria, and 1 from diarrhœa.

Infectious Disease. Sixty cases of scarlet fever, 15 of diphtheria, 3 of erysipelas, 1 of enteric fever, and one of puerperal fever were notified. All the cases of scarlet fever were in St. Martin's parish. "Notifiable diseases show a large increase on former years; this increase is mainly owing to an epidemic of scarlet fever and diphtheria at Ifton Heath and St. Martin's." The outbreak of scarlet fever in St. Martin's seems to have been due to a visitor who had a sore throat and who had been nursing a child suffering from scarlet fever in Manchester. The outbreak was prolonged by mild overlooked cases, the Sanitary Inspector on more than one occasion finding children attending school whilst suffering from mild scarlet fever. The schools were closed and thoroughly disinfected.

House Accommodation. All over the district there is a deficiency of healthy houses at a low rental. A block of insanitary dwellings has been demolished and houses erected in its place. Overcrowding is being gradually diminished.

Scavenging. The scavenging of the populous districts is very greatly needed, and the necessity is increasing with the adoption of pail closets.

Dairies and Cowsheds are slowly improving.

Factories, Bakehouses and Workshops are in fairly good order.

"*The Elementary Schools* have room for improvement as regards cleansing, sanitary arrangements, ventilation, etc."

SHIFNAL (Rural).

Medical Officer of Health .. .. A. E. WHITE, M.B., D.P.H.

Area in Acres		45,380
Population	*at 1901 Census*	8,844
Number of inhabited houses	,, ...	1,918
Number of persons per house	,, ...	4.6

General Character of the District.

"In extent it has an area of 45,380 acres; two parishes and part of a third situated in the County of "Stafford are included in the District for sanitary purposes.

"The population is small, and for the most part thinly scattered, with an average density of one person "to five acres.

"There are sixteen parishes in the District, all of them excluding portions of Shifnal and Albrighton being "strictly rural and agricultural. It overlies a succession of new Red Sandstone series with coal measures "on the extreme western boundary. Shifnal is the chief market town of the District, and has many attractions "as a residential place.

"The Infectious Disease Act and parts of the 1890 Amendment Act are in force.

"There are bye-laws for Cowsheds, Dairies and Milkshops, and also for new buildings and nuisances.

"The Public Institutions in the District include the Workhouse, a Cottage Hospital at Shifnal and Joint "Isolation Hospital for Smallpox."

Statistics.

The natural increase of population during the year was 38. The population is estimated at the middle of 1909 to be 8,725.

Period.	Death-rates per 1,000 population from									Infant Death-rate per 1000 Births.	Birth-rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1909	16·1	·46	·11	·69	·34	1·15	1·26	1·26	1·38	85	20·0
	..	..	..	..	..	..	..	..	..	..	..

The zymotic death-rate was due to 2 deaths from whooping cough and 2 from diarrhœa.

There were 6 deaths from phthisis and 3 from other tuberculous diseases.

Infectious Disease. Thirteen cases of scarlet fever, 3 of erysipelas, and 2 of phthisis were notified. Seven of the cases of scarlet fever occurred at Tong, but it was not necessary to close the school. In the two cases of phthisis, the houses were carefully examined, printed instructions and disinfectants were left and the rooms disinfected after death.

The Council is urged to support the new County Sanatorium.

Sutton Maddock and Shifnal schools were closed for whooping cough, *Weston and Norton* schools for measles, and *Blymhill* for influenza.

House Accommodation. On the whole, the district is well supplied with good houses in a satisfactory state of repair. Nine houses in a bad sanitary condition were dealt with.

Drainage and Scavenage. "I have visited the Shifnal Sewage Works on many occasions during the year and always found the effluent clear and free from smell, and on chemical analysis it has proved to be very satisfactory."

"It is much to be regretted that the proposed works for dealing with the Albrighton sewage failed to receive the sanction of the Local Government Board owing to the opposition of the Wolverhampton Corporation. The Albrighton brook received the untreated sewage of the village when the Corporation acquired the water rights over it, as it does to-day, and the proposal of the Council to prevent the sewage going into the brook except as a purified effluent after the most up-to-date treatment seems to me in no way to injure their rights. They have never used the water of this stream for drinking purposes, and at present they turn the washings of their mechanical filters into it at their water works."

The *Scavenage* of Shifnal is by contract, and is done with reasonable regularity and despatch.

Water Supply. Samples of water from Tong water supply were examined and found to be slightly polluted. They are receiving attention.

Workshops and Factories. The workshops are inspected periodically.

Bakehouses are generally in a clean condition, though in many cases the premises are not suitable.

Cowsheds and Dairies—Thirty-six in number. One hundred and forty-eight visits have been made. Defective ventilation, lighting and cleansing were the chief defects found.

Meat Inspection. Twelve sheep and 1 beast have been condemned as unfit for human consumption.

Nuisances. "There are several pigstyes in Shifnal which are totally unsuited for their purpose, being without drainage and with loosely laid floors and situated too near the houses; these are continually requiring notices. The demolition of these places is the only effectual remedy."

SHREWSBURY (Urban).

Medical Officer of Health .. THOMAS ORR, M.D., B.SC.

Area in Acres	.. ..	3,525
Population	*at* 1901 *Census*	28,395
Number of inhabited houses	,, ...	6,065
Number of persons per house	,, ...	4·68

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1909	18·1	1·17	·67	1·11	·47	1·81	1·61	1·88	1·31	119	21·7
Averages for years 1899—1908	16·4	..	..	..	..	..	..	..	..	129	25·1

The report has not been received.

TEME (Rural).

Medical Officer of Health .. .. JOHN H. K. GRIFFITHS, M.B.

Area in Acres		23,091
Population	*at* 1901 *Census*	1,846
Number of inhabited houses	,, ...	388
Number of persons per house	,, ...	4·7

Statistics.

The natural increase of population during the year was 9. The population is estimated at the middle of 1909 to be 1,846.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bron-chitis.	Pneu-monia.	Heart Diseases	Cancer.		
1909	14·1	·0	·0	·54	.54	1·08	·0	2·17	·0	143	18·9
	..	..	..	..	..	..	..	..	..	..	

The birth-rate was lower than in any of the preceding ten years, and this is attributed to the migration of the younger people to the colliery districts of South Wales.

There were no deaths from the common infectious diseases.

There was 1 death from phthisis and 1 from other tuberculous diseases.

Infectious Disease. Twenty cases of scarlet fever and 1 of diphtheria were notified. Nineteen of the cases of scarlet fever were at Bucknell, and the school was closed for three weeks. Eleven of the cases were removed to the Isolation Hospital.

Hospital Isolation. The Isolation Hospital is not at all satisfactory, and is not fit to remove a serious case to.

Disinfection is carried out by the Sanitary Inspector.

Water Supply. The majority of the houses are supplied from their own wells or springs. It is probable that three wells will be sunk at Bucknell during the year.

Sewage Disposal—on land; there is very little pollution of streams.

Excrement Disposal—mostly by means of privies.

Removal of House Refuse. No organised system of removal is required.

The Public Elementary Schools are in good condition with the exception of Bucknell, which is receiving attention.

Dairies, Cowsheds and Milkshops. There are two small dairies—both kept clean and satisfactory. There is no veterinary inspection of dairy cows.

Slaughter Houses. There is one slaughter house—kept clean and sanitary. It is not inspected at the time of slaughtering. No carcases were condemned for tuberculosis.

There are no *Lodging Houses*, *Factories*, or *Workshops* in the district.

WELLINGTON (Urban).

Medical Officer of Health ..	..A. E. WHITE, M.B., D.P.H.	
Area in Acres	.. .. ..	381
Population	*at* 1901 *Census*	6,283
Number of inhabited houses	,, ...	1,327
Number of persons per house	,, ...	4.7

General Character of the District.

"Wellington is the centre of a large agricultural district, and serves as the market town for it and the "neighbouring mining and manufacturing districts.

"Six lines of rails converge on the town, and make it easy of access from all parts of the country, so that "visitors come in considerable numbers all through the summer to spend a day on the Wrekin.

"The area of the District covers 684 acres. The surface levels vary a good deal, and for the most part "drainage gradients are satisfactory. The subsoil is clay and gravel drift overlaying the lower layers of new "red sandstone.

"The water supply is under the control of the Council, who have water rights over a good deal of the "surrounding area.

"The sewers of the town are modern, and the outfall is beyond the borders of the District.

"The roads are under the management of the Local Authority, and during the year have been much "improved.

"There is a good Market Hall. Slaughtering is done on private premises. The Workhouse is in the town, "but in calculating the death-rate for the town persons from outside the District have been excluded.

"There are no other large Institutions which affect the statistics.

"The principal industries are brewing, malting, the manufacture of furniture and all kinds of woodwork, "and agricultural implements.

"There are several large and well equipped Boarding Schools in the town."

Statistics.

The natural increase of population during the year was 104. The population is estimated at the middle of 1909 to be 7,500.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bron-chitis.	Pneu-monia.	Heart Diseases	Cancer.		
1909	10·9	·0	·13	·80	·40	·13	1·20	·93	·93	80	26·4
Averages for years 1899-1908	15·3	..	..	..	..	..	..	..	..	105	26·6

There were no deaths from any of the common zymotic diseases.

There were 6 deaths from phthisis and 3 from other tuberculous diseases.

The *Notification of Births Act* has not been adopted. An attempt was made to form a voluntary health visiting society. "If the Act is adopted by the Council, a paid worker of experience would be the most satisfactory."

Infectious Disease. Ten cases of scarlet fever, 9 of diphtheria, 9 of erysipelas and 6 of phthisis were notified. Three of the cases of diphtheria occurred in connection with the Wrekin Road Council School, and certain drainage defects were found and remedied. Of the 6 cases of phthisis, four were voluntarily notified and two notified under the Tuberculosis Regulations. Of the 5 deaths from phthisis, 2 only had been previously notified.

House Accommodation. "There is a sufficiency of cottages, but the substitution of better ones for a number of back-to-back houses is desirable. In addition there are a number of 'obstructive' houses which ought to be dealt with."

Excrement Disposal. There are a number of privies in unsuitable positions, causing a nuisance in summer weather. No conversions of privies to water closets have been made during the year. At present there are 296 privies in the town, 15 slop water closets, and approximately 700 clean water closets. It is very desirable that there should be a settled policy to get privies abolished in every case where possible.

Sewage Disposal. The works are now completed, and frequent analyses have shown the effluent to be highly satisfactory. There is some smell from the sludge lagoons.

Water Supply. "The completion of the works set out on the plans at present before the Local Government Board for filtration and additional supply is highly desirable." The consumption of water during the year, apart from trade purposes, has been 14.9 gallons per head per diem.

Factories and Workshops. There are 15 bakehouses on the register, and attempts at their improvement have been made during the year.

Slaughter Houses are clean and free from nuisance. They are visited regularly both during killing and at other times. No regular meat inspection is undertaken and no meat was seized during the year. A combination of districts for meat inspection is suggested.

Dairies and Cowsheds are well looked after. There are two which are unfit for the purpose and which will not be registered at the end of the year. There is no examination of milk cows for tubercle.

Disinfection of rooms—by spraying with formalin, and fumigation with the formalin lamp. The clothing, bedding, etc. of scarlet fever patients is disinfected by steam.

WELLINGTON (Rural).

Medical Officer of Health .. .. W. T. HAWTHORN, M.R.C.S.

Area in Acres		33,791
Population	*at* 1901 *Census*	11,773
Number of inhabited houses	,, ...	2,499
Number of persons per house	,, ...	4·7

Statistics.

The natural increase of population during the year was 116. The population is estimated at the middle of 1909 to be 11388.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1909	15·0	1·14	·18	1·05	·70	·61	1·14	2·11	·88	112	22·7
..	..	..	..	..	..	..	..	..	..	..	..

The zymotic death-rate was due to 1 death from scarlet fever, 6 from whooping cough, 1 from diphtheria and 5 from diarrhœa.

There were 12 deaths from phthisis and 8 from other tuberculous diseases.

Infectious Disease. Thirty cases of scarlet fever, 17 of diphtheria, 5 of erysipelas, 2 of puerperal fever, and 62 of measles were notified. The epidemic of measles in 1908 continued up to the middle of the present year. High Ercall school was closed in consequence.

Water Supply. There is now a good supply of water to Lawley Bank through the Dawley Urban Council's main. The Urban District Council of Oakengates have been approached with a view to their supplying the lower portion of the Wellington Rural Parish with water, and there is every hope that this will shortly be effected.

Sewerage and Drainage. The scheme for the Parish of Hadley is now ready to be carried out and will remove many sanitary defects. A scheme for the sewerage and sewage disposal of the village of Admaston has been prepared. There have been no complaints with regard to the Wellington Urban District Sewage Works. Nothing has been done with regard to the sanitary condition of Ketley. This matter should not be lost sight of.

Cowsheds and Slaughter Houses. There are 24 cowkeepers and milksellers in the district. The premises have been inspected and generally found satisfactory. *Slaughter Houses*—sixteen in number; 85 visits have been paid.

WEM (Urban).

Medical Officer of Health .. .. JOHN DALLEWY, L.R.C.P., M.R.C.S.

Area in Acres		450
Population	*at* 1901 *Census*	2,149
Number of inhabited houses	,,	453
Number of persons per house	,,	4·7

Statistics.

The natural increase of population during the year was 21. The population is estimated at the middle of 1909 to be 2,292.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth-rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1909	9.1	.0	.0	.87	.0	1.75	·44	.87	1.31	102	21.4
Averages for years 1900-1908	14	..	..	..	..	..	..	..	..	97	25·0

There were no deaths from the common infectious diseases.

There were 2 deaths from *phthisis.*

Infectious Disease. Four cases of diphtheria were notified. Instructions were given as to isolation and disinfection, disinfectants were supplied, and at the end of a case the Sanitary Inspector disinfected the rooms. The clothing was treated in the steam disinfector.

Hospital Accommodation. There is no isolation hospital. Both *Schools* were closed for a period of one month on account of measles.

House Accommodation is very good. *By-laws* are in force with regard to New Streets and Buildings.

Water Supply is very good. The amount used was equal to 17·2 gallons per head per day.

Drainage and Scavenage. A scheme of sewage disposal is being carried out. There is a public system of *scavenging.*

Slaughter Houses, Workshops, Dairies, Cowsheds and Milkshops have been regularly inspected and found satisfactory.

Lodging Houses—two, regularly inspected and found satisfactory.

Schools. The two schools are satisfactory as regards sanitary arrangements and water supply.

WEM (Rural).

Medical Officer of Health .. .. JOHN DALLEWY, L.R.C.P., M.R.C.S.

Area in Acres		52,001
Population	*at* 1901 *Census*	8,266
Number of inhabited houses	,, ...	1,840
Number of persons per house	,, ...	4·5

Statistics.

The natural increase of population during the year was 72. The population is estimated at the middle of 1909 to be 8,265.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1909	16.1	1.69	.60	.48	.48	1.57	.36	1.94	1.69	99	23.2
Averages for years 1899-1908		..	..	..	..	..	..	..	..	68	24

The zymotic death-rate was due to 1 death from scarlet fever, 8 from whooping cough, 4 from diphtheria, and 1 from diarrhœa. There were 4 deaths from *phthisis* and 4 from other *tuberculous* diseases.

Infectious Disease. Four cases of diphtheria, 40 of scarlet fever, and 2 of enteric fever were notified. The cases of scarlet fever were of a mild type. Instructions were given with regard to isolation and disinfection, and at the end of the period of infection, the houses were disinfected and the bedding and clothing disinfected by the steam disinfector.

House Accommodation is good, and insanitary conditions are remedied when found.

Water Supply on the whole is good. A scheme for supplying Barker's Green and Aston from the Wem Urban mains is being carried out.

Sewerage and Drainage is for individual houses or small groups of houses, and on the whole is satisfactory.

Workshops and Factories—in a good and satisfactory condition.

Cowsheds and Dairies—on the whole satisfactory.

WENLOCK (Urban).

Medical Officer of Health	M. GEPP, L.R.C.P.E., D.P.H.	
Area in Acres		22,657
Population	*at* 1901 *Census*	15,866
Number of inhabited houses	,, ...	3,568
Number of persons per house	,, ...	4.4

General Character of the District.

"The District comprises 22,522 acres, exclusive of water, being the largest Borough in area in the Country. "This area is of very irregular outline, but is, roughly, some ten miles in greatest length, from north to south-"west, and has a mean breadth of some four miles, being narrowest where the Severn, traversing the district "from west to east, makes a natural division, the part lying to the south of the river having three or four times "the area of the northern part, though with less than half the population.

"The district is for the most part a table-land lying at an elevation of from 400 to 600 feet or more; the "Severn forming a deep cutting through this elevated land, its banks rising very steeply on either side from "about 150 feet O.D. at the water level to the general height of about 500 feet O.D. The central and eastern "part, nearly half the area, lies upon the coal measures. To the west the formation is the Wenlock and Ludlow "beds of Silurian age, forming a considerable part of the southern division, and extending also to a limited "extent across the river in the northern division. Much of this ground lies in ridges with intervening valleys at "a height of from 600 to 800 feet. At the southern extremity the old red sandstone occurs. The natural "drainage is to the Severn, by small streams falling as a rule steeply into the river within the district, but the "southern part of the southern area drains to the south by small streams which meet the Severn some distance "outside the district.

"The district is in large part industrial, the chief industries being coal and iron mining, iron manufactures, "and brick and tile works. There is also a large china factory. These industries are confined to the northern "area together with a small part of the southern area near the river. The greater part of the southern area "is entirely rural and agricultural, and thinly populated. For purposes of local administration the Borough "is divided into four wards, each having a separate Sanitary Committee acting as the Sanitary Authority. "These wards, with their area, population, and general character are as follows:—

Ward.	Area in Acres.	Census Population 1901	Situation.	General Character.	A Penny Rate produces
Madeley	2797	8442	North of Severn .	Urban and Industrial Coal and Iron	£109
Broseley	1962	3916	South of Severn .	Urban and Industrial Brick and Tile	£54
Much Wenlock ..	8751	2210	South of Severn .	Agricultural	£46
Barrow	9012	1298	Both sides of Severn.	Agricultural	£31

"MADELEY WARD.—This area consists of Madeley Parish, and lies upon the coalfield north of the Severn. "It has relatively the densest population and comprises the township of Ironbridge, irregularly disposed upon "the steep bank of the Severn, with the township of Madeley on the tableland about a mile distant to the "north-east, and the more scattered district of Coalbrookdale adjoining on the west. It includes also the "village of Coalport on the riverside east of Ironbridge.

"BROSELEY WARD.—This area consists of Broseley Parish, and lies upon the coalfield south of the river, "and comprises the township of Broseley on the high tableland above the river bank, and the village of Jackfield "along the river side.

"MUCH WENLOCK WARD.—This consists of Much Wenlock Parish, and is a large area of agricultural land "with one or two considerable lime burning works, and includes the small market town of Much Wenlock "lying in a large shallow basin on the limestone at an elevation of some 500 feet.

"BARROW WARD.—This comprises a large area of thinly populated agricultural country, comprising the "parishes of Little Wenlock on the north of the Severn, and the parishes of Benthall, Posenhall, Barrow, "Willey, and Linley, on the southern side. The population is very scattered and there is no considerable "collection of houses."

Statistics.

The natural increase of population during the year was 147. The population is estimated at the middle of 1909 to be 15894, and corrected for public institutions, 15900.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1909	15·8	·69	·44	1·76	·44	1.64	1·13	1·57	·75	79	25·3
Averages for years 1899-1908	16·6	..	..	..	..	..	..	..	..	105	26·9

The infantile mortality and also the zymotic death-rate were considerably higher in Barrow than in any of the other wards.

The zymotic death-rate was due to 2 deaths from scarlet fever, 8 from whooping cough, and 1 from diarrhœa.

Infectious Disease. Twenty-four cases of scarlet fever, 6 of diphtheria, 4 of erysipelas, 9 of enteric fever, and 4 of puerperal fever were notified. The scarlet fever cases were mostly scattered and little or no connection could be discovered. The Madeley Wood Wesleyan school was closed as a precaution. Seven of the nine cases of enteric fever occurred in one house at Ironbridge, in which twelve persons lived. Six of the children became ill within seven days, showing a common source of infection. The sources of infection that suggested themselves were the use of river water or a recrudescence of infection in connection with the closet, there having been an outbreak of typhoid fever in this block in 1904. The first six cases were removed to the isolation ward of the Workhouse, and the last case was nursed at home. The privy has since been converted into a water closet. A case at Jackfield may have been due to infection from this house. *Puerperal Fever.* Two of the four puerperal fever cases were fatal. In one of these cases an inquest was held and the midwife subsequently reported to the Central Midwives Board and severely censured. *Whooping Cough.* The schools serving Broseley and Jackfield were closed.

Dr. Gepp advises that the offer of the Shropshire Nursing Federation for the supply of a nurse during epidemics of measles and whooping cough should be adopted.

There were 28 deaths from phthisis. This high rate is probably to some extent raised by occupations which favour tuberculosis and to some extent by bad housing conditions. Voluntary notification of phthisis is advised. Four notifications were received under the Tuberculosis Regulations. Visits were paid, handbills of advice given, disinfectants supplied and rooms disinfected in two cases after death and in another after the removal of the patient to the Workhouse. Disinfection was also carried out in three other cases after death.

Isolation Accommodation. There is a hospital for small-pox at Broseley, with accommodation for four persons of each sex suffering from the same disease. Its use as a joint fever hospital is under consideration by a committee, but Dr. Gepp considers that it could be more profitably used for advanced cases of phthisis. In any case, more administrative accommodation would be necessary.

Disinfection. The Sanitary Inspector sprays or fumigates infected rooms and supplies disinfectants in most notified cases. The provision of a steam disinfector is recommended.

Water Supply. Broseley and Madeley Joint Scheme. This supply is from a deep well and boring in the Bunter Beds near Harrington. The water is very pure and of 16 degrees of hardness. The Harrington system now supplies the Urban District of Dawley and the town of Shifnal. *Much Wenlock* is supplied by a pumping scheme from a deep well in the Tannery Field. The water is artesian and is derived from the Shale measures of the Wenlock limestone. It is laid on to most of the houses. The supply was short in the dry months of the year, and water was turned off from 10 p.m. to 6 a.m. from August 18th to December 10th. A systematic inspection of all fittings, etc., has been made and many defects made good. The Engineers who were consulted recommend the sinking of another well and bore hole near the existing well. *The village of Bourton* has a supply from a spring raised by a ram to a reservoir. In the remaining portion of the district the supply is by means of pumps and springs.

Sewerage and Drainage. The sewers are mostly drains laid originally to take surface water, or culverted water courses. There are no works of sewage treatment, and the outfalls are into the Severn or into streams which fall into the Severn. With the increase of water carriage, attention to untrapped road grids and to special ventilation and improvement of sewers will become increasingly desirable. The improvement of the sewers of the town of Wenlock, and the disposal of the sewage is under consideration, and has been reported on by Engineers.

Excrement Disposal and Scavenging. Excrement disposal is principally by privies of the old type with underground vaults. No general conversion is possible with the present sewerage systems. The Madeley Committee has for some years undertaken public scavenging, and the Broseley Committee provides a liquid manure cart for privy soil and maintains several ashpits for public use. Continued attention will be necessary so long as these old and defective closets are allowed to exist.

Housing. The Borough has a high proportion of small houses. The majority of the houses are old and many of them very old, and taken as a whole the standard of housing is low. A systematic inspection of all cottage property is recommended as the best means of keeping them in a habitable condition. No house was certified as unfit for habitation during the year.

Permissive Powers. The Infectious Disease (Prevention) Act, 1890, the Public Health Acts (Amendment) Act, 1890 (except Part IV.), and parts 2, 3, 4, and 5 of the Public Health Acts Amendment Act, 1907, have been adopted. *By-laws* with regard to Common Lodging Houses and Slaughter Houses are in force.

Slaughter Houses. There are 18 in the Borough, not registered, but inspected periodically. There is no system of meat inspection, and no tuberculous carcases were found during the year.

Common Lodging Houses—two on register, frequently inspected.

Dairies, Cowsheds, and Milkshops—24 on register. Much attention has been given to the improvement of these places during the past three years. There is no veterinary inspection of dairy cattle.

Food and Drugs. Twenty samples were taken, of which seven were returned as adulterated, six of them being on account of the addition of boric acid.

WHITCHURCH (Urban).

Medical Officer of Health	M. GEPP, L.R.C.P.E., D.P.H.		
Area in Acres	.. .. ..		4,784
Population	*at* 1901 *Census*	.. .. ..	5,221
Number of inhabited houses ..	,,	.. .. ..	1,129
Number of persons per house	,,	.. .. ..	4.6

Physical Features and General Character.

"The Urban District lies within the northern border of the County, and comprises a considerable area "of agricultural land surrounding the town of Whitchurch. The general elevation varies from about 270 feet "to 350 feet above Ordnance Datum. The subsoil is the red marl of the new red sandstone. The town occupies "the centre and higher part of the district, the fall of the ground being from south and east to west and north-"west, and the natural drainage by small brooks leaving the district towards the north-west, as tributaries "of the Dee. The centre of the town is old and compact, considerable extensions of more recent buildings "existing along some of the main roads radiating from the town. The surrounding parts of the district are "entirely rural and agricultural, extending some two or three miles to the north-east and south-west of the "town and to about a mile to north-west and south-east. Whitchurch is a market and residential town, and "the land around is extensively employed for grazing and dairy farming. It is the centre and market of a "large cheese-making industry. There is a brewery, maltings, engineering works, a steam laundry and a "creamery."

Statistics.

The natural increase of population during the year was 71. The population is estimated at the middle of 1909 to be 5444, and corrected for public institutions, 5390.

Period.	All Causes.	Death-rates per 1000 population from								Infant Death-rate per 1000 Births.	Birth rate.
		Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases	Bron-chitis.	Pneu-monia.	Heart Diseases	Cancer.		
1909	12·4	1·11	·19	·37	·37	·19	·19	1·67	·74	67	25·0
Averages for years 1899—190	15·2	..	..	..	..	..	..	..	..	101	26·2

The zymotic death-rate was due to 2 deaths from whooping cough, 1 from diphtheria, and 3 from diarrhœa.

Infectious Disease. Eight cases of scarlet fever and 17 of diphtheria were notified. Twelve out of the 17 cases of diphtheria occurred in December, and 8 of these occurred in six houses at Grindley Brook. After investigation had been made and directions had been given at the school a further case occurred and the school was closed in consequence. This was clearly a school outbreak caused by overlooked or ' carrier ' cases.

" It is satisfactory to record that in accordance with an instruction by the Local Education Authority to school teachers no child who has had diphtheria is to be received back into school until the throat is declared free by bacteriological examination. It is also satisfactory to note that the medical men of the town are now generally making use of this means of examination before declaring a case free from infection. In this way one danger of the spread of diphtheria will be avoided, and cases of prolonged infection will be kept under supervision until the throat is certified free from infection."

The Council has adopted the suggestion to employ a nurse from the Shropshire Nursing Federation in epidemics of measles or whooping cough.

Phthisis. There were 2 deaths in the year. Voluntary notification is not adopted and no cases were notified under the poor-law. It is recommended that the Inspector should take the usual precautions with regard to infectious disease in any case of phthisis that may be notified.

Isolation Accommodation. There is no hospital for the ordinary infectious diseases. There is a joint hospital for small-pox with eight beds at Prees Heath.

Disinfection is carried out by the Sanitary Inspector or an assistant by spraying. The provision of a steam disinfector has been under consideration by the Urban and Rural District Councils, but appears to have been lost sight of.

The Water Supply was originally derived from shallow wells in grass land near the pumping station. Some years ago, three bore holes were sunk into beds of sand about half a mile away from the station and syphoned to it. Recently eleven bore holes and six 3-inch copper tubes were put down to a depth of from 43 to 51 feet in the collecting area near the pumping station. The result has been the additional yield of over 3,000 gallons per hour. The water is softened to seven degrees of hardness.

Sewerage and Drainage. The town is well sewered on modern lines. The sewers are ventilated by 24 shaft ventilators and surface grids. There are five storm overflows and ve flushing tanks and also means to flush the sewers from the canal. The outfall works consist of a septic tank constructed last year, two smaller tanks and 70 acres of pasture land for irrigation. There is a man now continually employed at Hadley farm by the Council.

Excrement Disposal. Water closets 949, earth or pail closets 15, privies 261. Within the limits of the water supply four-fifths or more of the houses have water closets. A recommendation is made that every vault privy in the town proper be converted.

Removal of House Refuse. The system of a weekly collection by the Council has been extended to 15 additional streets, and now includes all the cottage property in the town area, 470 houses in all. This weekly collection has resulted in a marked improvement of the sanitary condition.

Housing. In the centre of the town there is some crowding of old cottage property, and many of the houses are very old and worn out.

Permissive Powers. Part III. of the Public Health Acts (Amendment) Act, 1890, and the Infectious Disease (Prevention) Act, 1890, are in force, with the exception of sections 5, 6, 15, and 17. The Public Health Acts Amendment Act, 1907 (parts 2—8) has now been adopted.

By-laws are in force with respect to Nuisances, New Streets and Buildings, Slaughter Houses, Common Lodging Houses, and Tents, Vans, etc., used as habitations.

Slaughter Houses—eight on the register, inspected regularly but not at times of slaughtering. No tuberculous carcases were found.

Dairies, Cowsheds, and Milkshops. Regulations have been in force since 1898, and new ones are under consideration. There are 27 cowkeepers, etc., on the register, 94 inspections were made. There is no veterinary inspection of dairy cattle.

Common Lodging Houses—four on the register, kept clean and under regular inspection.

WHITCHURCH (Rural).

Medical Officer of Health .. .. M. GEPP, L.R.C.P.E., D.P.H.

Area in Acres		11,701
Population	*at* 1901 *Census*	1,924
Number of inhabited houses	,, ...	424
Number of persons per house	,, ...	4·5

Physical Features and General Character.

"The District lies within the northern border of the County, adjacent, along its northern boundary, to "the Whitchurch Urban District. The general elevation is from 300 to 400 feet O.D., the contour being gently "undulating. The subsoil is the red marl of the new red sandstone, with the exception of a small area in the "south-east, where an outlier of the Lias occurs at Ightfield. There is generally a considerable thickness of "morainal drift covering the strata. The natural drainage is by small streams to north and south, the water "partings between the Weaver, Dee, and Severn river systems crossing the District. The District is entirely "rural in character, and the population scattered, the small villages of Tilstock, Ash, Broughall (all in the large "parish of Whitchurch Rural), and Ightfield, comprising the main collection of houses. The land is largely "employed for grazing and dairy farming. The District is naturally very healthy, the average death-rates "for preceding years being low."

Statistics.

The natural increase of population during the year was 27. The population is estimated at the middle of 1909 to be 1,882, and corrected for public institutions, 1,900.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth-rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1909	8·4	·0	·0	·0	·53	·53	·0	·53	·53	·0	21·6
Averages for years 1899-1908	12·8	..	..	..	..	..	..	..	..	66	22·7

There was no death from any of the chief zymotic diseases.

Infectious Disease. One case of diphtheria and 1 of erysipelas were notified. Ightfield school was closed on account of measles.

There was no death from phthisis during the year and no notification under the Public Health (Tuberculosis) Regulations.

Hospital Isolation. There is a joint hospital on Prees Heath for small-pox. There is no hospital for other infectious diseases.

Disinfection. The Sanitary Inspector disinfects rooms in nearly all notified cases, a spraying apparatus and formalin lamp being provided. A steam disinfector has been recommended but no action taken.

Water Supply. As explained in previous reports, the Council has done much to improve village supplies.

Tilstock. It has been decided on the recommendation of the Medical Officer of Health to take up the present suction pipe in connection with the pump, which imparts a disagreeable taste to the water, and to lay 'Mannesman' steel pipes, properly coated.

Ash. An extension of the public supply to six houses on the Vicarage Road is recommended. Attempts to obtain joint action has so far been without success.

Ightfield. The re-construction of a dip well and the erection of a pump on the roadside is recommended.

Elsewhere houses and groups of houses depend upon shallow wells or springs. Analyses and inspection have shown many of these liable to contamination.

Drainage and Excrement Disposal. At Tilstock there is a combined drainage by three drains, two discharge into the brook and the third on to land. At Broughall several cottages, two farms, the school and schoolhouse are drained by a length of sewer into a small stream.

Water closets are practically confined to a few private residences. Apart from these and a few pail closets, the *excrement disposal* is by privies with underground vaults.

Housing. The condition of the houses is fair on the whole, although there are many requiring regular inspection to keep them in a habitable condition.

Permissive Powers. The Public Health Acts (Amendment) Acts, 1890 and 1907 are not adopted. The Infectious Disease (Prevention) Act, 1890, is adopted with the exception of sections 5, 6, 15, and 17.

By-laws have been made with respect to Scavenging, Common Lodging Houses, Nuisances, and New Streets and Buildings.

Slaughter Houses. There is one slaughter house; inspected periodically and occasionally at times of slaughtering. No tuberculous carcases have been found.

Dairies, Cowsheds, and Milkshops. Regulations are in force. There are 11 cowkeepers, etc., on the register. There is no veterinary inspection of dairy cattle.