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REPORT

BY THE

COUNTY MEDICAL OFFICER OF HEALTH

ON THE

VITAL STATISTICS AND SANITARY CONDITION OF SHROPSHIRE

DURING THE YEAR 1902,

INCLUDING A

SUMMARY OF THE ANNUAL REPORTS OF THE DISTRICT MEDICAL OFFICERS OF HEALTH.

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

SHREWSBURY,

September 26th, 1903.

TO THE CHAIRMAN AND MEMBERS OF THE SANITARY COMMITTEE OF THE SHROPSHIRE COUNTY COUNCIL.

GENTLEMEN,

I have the honour to present my Annual Report for 1902.

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.

I am, Gentlemen,

Your obedient Servant,

JAMES WHEATLEY.

COUNTY HEALTH OFFICE,

Talbot Chambers,

September 26th, 1903.

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To Part II. (District Reports.)

PART 1.

THE ADMINISTRATIVE COUNTY.

POPULATION, Etc.

The detailed census for the County of Salop having been published for the year, I have thought it desirable to include in this report such extracts as are likely to be of use to those interested in Public Health Administration. The census particulars referring to housing conditions in the various districts will be found under the heading of house accommodation; and those referring to trades under the heading of factories and workshops. Some of the figures will be found to differ slightly from those contained in previous reports.

TABLE 1.

COUNTY OF SALOP.	Area in Acres.	Census Years.	Houses.			Population.		
			Inhabited	Uninhabited	Building.	Persons.	Males.	Females.
Ancient or Geographical County.	859516	1891	49681	4105	126	236339	116736	119603
		1901	**51430**	**3347**	**145**	**239324**	**118452**	**120872**
		Percentage Increase or decrease	+ 3·5	− 18.4	+ 15·0	+ 1·26	+ 1·47	+ 1·06
Administrative County...	861802	1891	49801	4112	126	236827	116991	119836
		1901	**51542**	**3356**	**146**	**239783**	**118675**	**121108**
		Percentage Increase or decrease	+ 3·5	− 18·3	+ 15·8	+ 1·24	+ 1·43	+ 1·06
Registration County ...	958667	1891	53886	4349	122	256044	126610	129434
		1901	**55737**	**3581**	**164**	**259088**	**128313**	**130775**
		Percentage Increase or decrease.	+ 3·4	− 17·6	+ 34·4	+ 1·18	+ 1·34	+ 1.03

The most interesting facts shown by this table are the considerable increase of inhabited houses and the greater increase of males than females in the county.

DIFFERENCES BETWEEN THE ANCIENT ADMINISTRATIVE AND REGISTRATION COUNTIES.

The Ancient County is almost co-terminous with the Administrative County. There are, however, small portions of it in the Administrative Counties of Hereford, Stafford, and Worcester; and small portions of the Administrative Counties of Chester, Hereford, and Stafford in the Ancient County of Salop. The Ancient County is of little interest from a public health point of view. The population during the 19th century increased from 169,248 to 239,324, or 41·4 %, the highest population being reached in 1871—248,111.

The Registration County includes part of the Administrative Counties of Chester, Flint, Denbigh, Montgomery, Hereford, Worcester, and Stafford. Parts of the Administrative County of Salop are in the Registration Counties of Montgomery, Radnor, Worcester, and Stafford. The Registration County is unfortunately of great importance with regard to mortality statistics. This area is used by the Registrar-General for all his detailed statistics. The sub-division of the Registration County are the Registration Districts, which are again divided into sub-districts. It is a very rare occurrence for either a district or a sub-district to correspond to a sanitary area, and consequently the mortality statistics of the Registrar-General are for local purposes of comparatively little use. It would be a great gain in many ways if the Administrative County and the Registration County were made to correspond in area, and the Registration Districts to bear some relation to the Sanitary Districts. In this report figures are occasionally quoted referring to the Registration County because similar figures cannot be obtained for the Administrative County. The Administrative County comprises the combined area of the Rural and Urban Sanitary Authorities, with the exception that Shifnal Rural District Council administers the civil parishes of Blymhill and Weston-under-Lizard in the administrative County of Stafford. These parishes have a population of 823, and 184 inhabited houses.

TABLE 2.

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 & 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.	Inhabited Houses.			Population.				
	1891	1901	Average No. of persons to each house.	1891	1901			Percentage, Increase or Decrease between 1891 & 1901.
					Males.	Females.	Total.	
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	3945	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	29063	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.

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

Table 3.

Population in Age Periods.

Age period.	Urban Districts.			Rural Districts.		
	Males.	Females.	Total.	Males.	Females.	Total.
Under 1	1242	1220	2462	1496	1469	2965
1 — 5	4609	4646	9255	6096	6075	12171
5—10	5601	5493	11094	7512	7664	15176
10—15	5426	5392	10818	7249	7026	14275
15—25	9818	9853	19671	11984	10956	22940
25—35	7425	8083	15508	9082	9528	18610
35—45	5818	6314	12132	8121	7886	16007
45—55	4486	4851	9337	6297	6446	12743
55—65	3307	3927	7234	5326	5393	10719
65—75	2036	2486	4522	3467	3566	7033
75—85	693	987	1680	1376	1483	2859
85—95	70	119	189	134	239	373
95 & upwards	1	2	3	3	4	7
	50532	53373	103905	68143	67735	135878

The Urban figures do not include those for the recently-added part of Ludlow, and the Rural figures do not include those for the part of the Rural District of Shifnal in the County of Staffordshire.

It is interesting to observe that the excess of females over males is principally in the Urban districts. Evidently the exodus from the country districts has affected women more than men. The excess of males over females is very marked in the mining districts of Oakengates, Dawley, and Wellington Rural. A similar excess in Cleobury Mortimer and Ludlow Rural is due to a great extent to the temporary population that was engaged at the time of the census on the Birmingham Water Works main.

The populations are distributed somewhat differently in age periods in the Urban and Rural Districts, *e.g.*, in the Rural Districts the number of persons over 55 is 15·4 °/₀ of the whole, whereas in the Urban districts it is only 13·1 °/₀. This shows that for purposes of comparison the crude death rates should be corrected for age and sex distribution. The factor for correction for the Registration County of Salop is ·8654. In other words, all death rates for the county should be multiplied by this figure to make them comparable with those of the whole country.

The Registrar-General calls attention in his summary of the Census Results to the fact that the Registration County of Salop has suffered a loss by migration of 23,010 during the ten years 1891—1901, and the registration districts of Clun, Newport, Shifnal, and Bridgnorth were those most affected. I pointed out in the report for 1901 what a serious drain this must be on the county, as a large proportion of the emigrants are young adults, who have been brought up and educated at the expense of the county. This certainly is a strong argument in favour of education being provided for to a great extent out of national funds.

MARRIAGES.

The number of persons married in the Registration County during the year was 1,850, making a marriage rate of 14·2, compared with a rate of 14·7 in 1901 and 13·6 in 1900. The rate for England and Wales in 1902 was 15·8.

BIRTHS.

Table 4.

	Births to 1000 Living.				Illegitimate Births to 1000 Births.			Males Born to 1000 Females Born.		
	Ten Years 1890-1899	1900	1901	1902	Ten Years 1890-1899	1900	1901	Ten Years 1890-1899	1900	1901
Shropshire .. .. . (Registration County)	26·8	25·7	26·2	26·5	72	62	59	1034	1032	1004
England and Wales ..	30·0	28·7	28·5	28·6	42	40	40	1036	1033	1039

The birth-rate of the county still shows a slight upward tendency, but is considerably below that of the country generally.

The birth-rates for the Urban and Rural districts are given on Table I.

The rates in Dawley and Oakengates were again high, being 33·4 and 35·2 respectively.

DEATHS.

The total number of deaths in the county was 3,654, compared with 3,745 in 1901 and 3,963 in 1900.

Table 5.

PERIOD.			Urban Districts.		Rural Districts.	
	Shropshire.	England and Wales.	Shropshire.	England and Wales.	Shropshire.	England and Wales.
1902	15·1	16·3	16·7	*	13·9	*
1901	15·5	16 9	16·2	17·7	15	15.3
1900	16·4	18 2	17·7	18 9	15·5	16·6

* For corresponding districts these are not yet available.

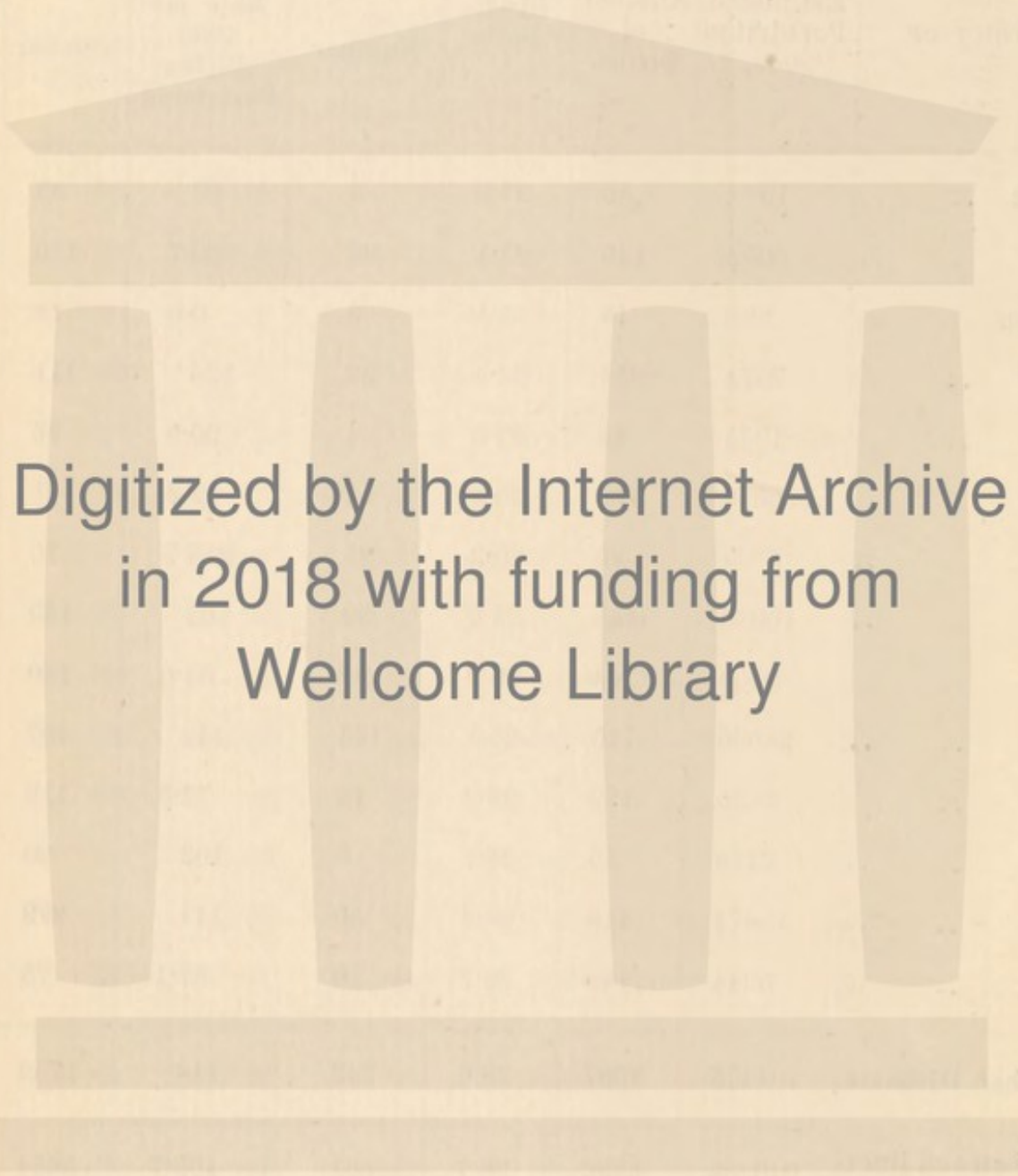
In 1902 the death rate for 76 great towns was .. .. 17·4
,, ,, ,, 103 smaller towns was .. 15·3
,, ,, ,, England and Wales less 179 towns 15·3

In calculating the death-rates for the various Urban and Rural Districts, corrections have been made by most of the Medical Officers of Health, on account of deaths of non-residents. This, however, has not been done with any degree of uniformity. In the Rural Districts of Bridgnorth, Wellington, and Wem no corrections have been made. Taking all the districts, 342 deaths have been deducted and only 168 added. The difference is accounted for, to a great extent, by the deaths at the County Asylum and the Salop Infirmary, which have not been distributed to all the districts throughout the county, although Dr. Gepp has added those belonging to his districts. The medical officers of the districts would have some difficulty in obtaining these deaths, and the distribution might well be undertaken by the County Council.

These two institutions do not account for the whole of the discrepancy, for in two or three instances deaths have been rightly deducted from the district in which the Workhouse is situated, but have not been added to the district to which they belong.

One or two selected instances will show the importance of this correction. Wellington Rural death-rate is stated to be 12·1, but if the deaths belonging to this district which took place in the Workhouse and County Asylum be added, the rate is 14·2; Chirbury rate of 15·5, when corrected in a similar manner, is 16·9, and Bridgnorth Rural rate of 12·0 becomes 12·9. In Drayton Rural District corrections have been made for local institutions, but when made also for the County Asylum and the Salop Infirmary, instead of being 16·1, it is 17·0.

There were 31 deaths in the Workhouse and County Asylum belonging to other counties, and four deaths in Forden Workhouse belonging to Shropshire. These deaths may be balanced by unknown deaths of Shropshire persons in institutions outside the county. The death-rates of the combined Urban and combined Rural Districts are not much affected by the corrections.



Rural District of	* Estimat Populati 1902.	from Various Causes. Other ubercular Diseases.	Bronchitis and Pneumonia.	Heart Diseases.	Cancer.
Atcham	2088(	·15	1·9	1·7	1·1
Bridgnorth	857	·35	1·16	1·28	·93
Burford	122	·0	·0	·0	·82
Chirbury	354	·28	2·0	1·7	·85
Church Stretton	446	·44	2·2	1·3	1·54
Cleobury Mortimer ..	635	·31	1·8	1·7	1·2
Clun	678	·14	2·3	1·0	·73
Drayton	1167	·43	2·0	2·2	1·3
Ellesmere	789	·12	2·0	1·3	·5
Ludlow	953	.1	1·6	1·6	·52
Newport	609	·16	3·4	·98	·83
Oswestry	148(	·34	1·4	1·2	·74
Shifnal	88	·11	2·0	·9	1·2
Teme	18	·54	3·2	2·8	·0
Wellington	117	·0	1·8	1·9	·6
Wem	82	·24	·96	·48	1·08
Whitchurch	19	·51	2·0	1·0	0·0
†Whole of Rural Districts	1365	·21	1·8	1·4	·87
†Whole of Urban and Rural Districts ..	2409	·31	2·3	1·4	·98

The populations of the distr

† These populations are calcu

INFANTILE MORTALITY.

The Infantile mortality for the whole County was 102·7, being 114 for the Urban Districts and 92·7 for the Rural Districts. The mortality in 1900 was 109 and in 1901, 104. The mortality for England and Wales was 133, and excluding 179 towns it was 119, so that the County compares favourably.

There were as usual large differences in the mortalities of the different districts, due to a great extent to the smallness of the populations dealt with. Amongst the Urban districts, Newport (218), Bridgnorth (150) and Shrewsbury (142) had the highest rates. Amongst the Rural districts, Teme with a rate of 159, and Drayton with a rate of 145 were the highest. The three Urban districts mentioned above had comparatively low rates in 1901. Teme, however, had a very high infantile death-rate in 1901, and Drayton had a rate considerably above the average. In 1900 these two districts, but particularly Drayton had rates very much above the average. Figures which for one year have little significance assume more importance if consistently high for two or three years.

Dr. Macqueen, in commenting on the infantile mortality of Drayton, says "The average rate for the last 7 years was 131.....The rate of infantile mortality is high in comparison with that of Rural England and Wales, and the rate for 1902 is nearly the highest recorded in the Drayton Rural district. The mortality, however, is not so serious as it appears, because of the 46 infants, 8 were born prematurely, 6 lived only a few hours and 15 lived only a few days, showing that these deaths were due to some form of debility at birth, and not to acquired disease." Further light might be thrown on this somewhat high death-rate if the mortalities were stated for the various parishes in the district, and a comparison made between the rates of Market Drayton and the purely country districts surrounding. The high infantile mortality in Teme Rural District is not commented on. The numbers are of course very small.

Dr. Gepp attributes the high infantile mortality of Newport, to a great extent, to the prevalence of measles and whooping cough.

Table 6.

CHIEF CAUSES OF DEATH.

1902.

	Urban Districts. 1902.		Rural Districts. 1902.		Whole County. 1902.		1901.		England and Wales. 1901.
	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.	Death-rates.
Chief Zymotic Diseases	85	·81	71	·52	156	·64	253	1·05	2·08
Phthisis	111	1·05	95	·70	206	·85	236	·98	1·26
Bronchitis	152	1·4	135	·98	287	1·19	261	1·08	1·36
Pneumonia	167	1·6	116	·85	283	1·17	269	1·11	1·14
Heart Diseases ...	156	1·4	197	1·4	353	1·4	447	1·85	1·47
Cancer	118	1·1	120	·87	238	·98	228	·94	·84

Table 7.

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

1902.

	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.
Urban Districts ..	85	·81	0	0	6	·05	4	·03	4	·03	14	·13	38	·36	19	·18
Rural Districts ..	71	·52	0	0	6	·04	1	·007	9	·06	19	·14	6	·04	30	·21
Whole County ..	156	·64	0	0	12	·05	5	·02	13	·05	33	·13	44	·18	49	·20
England & Wales	..	1·64	..	·08	..	·15	..	·13	..	·23	..	·38	..	·29	..	·38
Notifications			Cases.	Case Mortality per cent.	Cases.	Case Mortality per cent.	Cases.	Case Mortality per cent.	Cases.	Case Mortality per cent.						
Urban Districts ..	..	..	3	0	306	2	27	14·8	42	9·5	..	..	..	..	..	..
Rural Districts ..	..	..	1	0	429	1·4	15	6·6	63	14·3	..	..	..	..	..	..
Whole County ..	..	..	4	0	735	1·6	42	12·0	105	12·3	..	..	..	..	..	..

SCARLET FEVER.—Reference to Table 7 shows that the Rural Districts suffered slightly more as regards notified cases, than the Urban, and that the disease was on the whole even of a milder character than in 1901. The Rural Districts principally affected were Clun (67), Bridgnorth (54), and Drayton (67); and Whitchurch (61), and Wenlock (62), of the Urban Districts. Schools were closed on account of scarlet fever at Berrington, Condover, Alveley, Morville, Monkhopton, Neenton, Cardington, Clun, Lydbury North, Jackfield, Kinnerley, and in Whitchurch Urban and Ludlow Rural District. Dr. Beresford says that at Kinnerley the outbreak was checked by school closure The cases at Drayton were principally part of an epidemic reported on in 1901. Out of 25 cases in the Wem Rural District, there were seven in one house and five in two others. This indicates a complete failure of the isolation that was attempted at home. Dr. Whitaker says that the need for isolation was much felt in Baschurch. The only cases that are mentioned as having been removed to an Isolation Hospital are nine cases out of ten in the Borough of Bridgnorth, and nine out of twenty-three in the Newport Urban District.

SMALLPOX.—Considering the amount of smallpox in the surrounding counties, Shropshire remained remarkably free during the year 1902. There were only four cases, all of which probably came from outside the County.

The First Case was reported on June 11th, at Shrewsbury, and promptly removed to the Isolation Hospital. The origin of this case was obscure.

The Second Case was reported on December 23rd, at Atcham Workhouse, where it was kept isolated. This case was imported from Staffordshire.

The Third Case was reported on December 25th, at Bridgnorth Workhouse, and afterwards removed to the Borough Isolation Hospital—probably imported from Birmingham.

The Fourth Case was reported on December 27th, at the Shrewsbury Prison, and isolated in a cell in the Prison Hospital. This case was imported probably from Nottingham or Derby.

N Districts.

	stry	Shrews-bury.	Welling-ton.	Wem.	Wenlock	Whit-church.
Small-pox		..	..	..	..	..
Measles		..	1	..	..	..
Scarlet F		1	..	..	2	2
Whooping		6	6	..	8	..
Diphtheri		..	..	..	3	..
Croup		..	..	..	..	1
Typhus F		..	..	..	..	..
Enteric F		..	..	..	2	..
Continued		..	..	..	..	..
Epidemic	2	13	1	..	13	2
Cholera		..	..	..	..	..
Plague		..	..	..	..	..
Diarrhœa		3	3	..	3	1
Enteritis	3	8	1	..	4	2
Puerperal		1	..	..	..	..
Erysipela	2	2	..	..	..	..
Other Se	1	6	..	..	..	1
Phthisis	9	39	4	2	22	..
Other Tu	5	16	1	..	2	1
Cancer—	4	31	7	5	17	3
Bronchiti	5	48	2	2	27	1
Pneumon	3	48	8	3	27	8
Pleurisy		2	..	..	..	..
Other Dis		1	..	..	..	..
Alcoholis	3	13	1	..	4	1
Venereal		2	..	..	1	..
Premature	1	17	3	..	4	..
Diseases		1	1	..	..	..
Heart Di	0	39	9	1	40	18
Accidents	5	14	3	..	6	1
Suicides		1	..	..	1	1
All Other	0	150	45	14	105	26
To	6	462	96	27	291	69

IN RURAL LOCALITIES AT ALL AGES.

Drayton.	Elles-mere.	Ludlow.	Newport.	Oswestry	Shifnal.	Teme.	Welling-ton.	Wem.	Whit-church.
..	..	..	..	..	..	..	..	..	..
1	2	3	..	7	..	..	5	..	..
3	..	..	..	..	..	..	..	..	..
..	..	1	..	2	..	..	..	..	..
2	..	1	..	..	..	..	1	..	..
1	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	.	..	..	..
..	..	..	..	..	..	..	..	..	..
..	.	..	..	..	..	..	..	..	..
..	1	3	3	6	..	1	5	4	..
..	.	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..
1	2	1	4	1	..	..	11	1	..
6	1	1	3	4	1	..	.	1	..
..	..	..	1	1	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..
..	..	1	..	.	..	..	..	1	..
6	5	3	6	8	9	1	2	10	1
5	1	1	1	5	1	1	..	2	1
15	4	5	5	11	11	..	7	9	..
14	9	6	15	8	9	3	7	8	1
10	7	9	6	13	9	3	14	4	3
..	1	..	..	..	..	..	8	..	..
9	..	1	1	1	..	..	..		..
4	..	4	..	4	2	..	2	2	..
..	..	..	..	..	..	..	..	..	..
8	1	7	2	4	2	1	3	2	2
1	1	..	2	1	1	..	..	..	..
26	11	15	6	18	8	5	22	9	2
7	1	7	1	7	6	1	4	2	2
1	1	1	1	1	..	..	..	1	..
68	39	50	29	96	48	7	52	44	5
188	87	120	86	198	107	23	143	100	17

It was fortunate in some ways that most of these cases occurred at institutions where some degree of isolation could be carried out. The want of proper isolation, however, in the prison seems to have been the cause of a somewhat serious outbreak in the year 1903. Otherwise no further cases arose.

The subject of hospital isolation for smallpox is dealt with under another heading. It is sufficient here to say that to rely upon the Workhouse for the isolation of smallpox is certainly wrong. It is often a danger to the institution, and an injury to the patient.

MEASLES.—The total number of deaths from measles in the county was only 33, compared with 50 in 1901. The districts most affected were Oakengates (5), Oswestry Rural (7), Wellington Rural (5). Many schools were closed in different parts of the county for this disease, including six in Oswestry Rural District, three in Dawley, three in Wellington Rural and two in Newport Rural. There are no expressions in the reports as to the efficiency of school closure. In my report last year I mentioned the following points as pretty well established with regard to the spread of measles and school closure:—

1.—That measles, with our present system of elementary education, spreads principally through schools.

2.—That spread from house to house is relatively of a very much slower character.

3.—That in order to be of any use, the closure should take place early, probably before 7—8% of the children are affected.

4.—That school closure is much more likely to check an epidemic in a country than in a town district.

5.—That closure for less than one month is useless.

Of these No. 3 is the most important. The exact time at which it is desirable to close a school no doubt varies to some extent with the character of the epidemic and particularly its rapidity of onset. It is advocated by some that school closure should take place when the number affected approaches 10% of the scholars. I have no figures bearing upon this point in Shropshire, but it seems not unlikely that closure in many cases is applied too late to be of any use. If the period is passed when closure can have any influence in checking the disease then it is better to keep the school open. In order, however, to apply closure in the manner indicated above it is necessary that the Medical Officer of Health shall be supplied promptly with information of all cases that occur in schools. This is a matter that is worthy of the most careful consideration of the Education Authority.

The question of notification of measles by medical men received the consideration of the Ellesmere Rural Council. For various reasons Dr. Whitaker did not recommend its adoption. Measles is notified in Wellington Rural District, where 300 cases were notified, and in Chirbury, where 29 were notified in the year.

DIPHTHERIA.—Both the death-rate and the number of cases notified are much smaller than in 1901; only 105 cases and 13 deaths, compared with 174 and 29 deaths in 1901. The rural rate was again double that of the urban rate, the cases being more numerous and the case mortality higher. Possibly the delay in medical attendance, which is necessarily greater in country districts was one cause of the higher mortality. At Atcham 13 cases occurred from March to October; it is suggested that the origin was prolonged infection in a child returning to school. A small but fatal outbreak occurred at Madeley. It was associated with several cases of sore throat in a school which was consequently closed. Four cases occurred at an insanitary farm-house with two deaths.

School attendance is undoubtedly the principal means by which diphtheria is spread from person to person. It is, therefore, the duty of sanitary authorities and school authorities to do every thing in their power to lessen this danger. The agreement with Birmingham University, with regard to the bacteriological examination for diphtheria, has been extended so as to include the examination to determine freedom from infection. It is very desirable that children, who have suffered from diphtheria, should not be allowed to return to school until their throats have been examined and declared free from diphtheria bacilli. With the present machinery it might be impossible to carry out this plan in every case. This difficulty could be met, although somewhat imperfectly, by imposing a prolonged absence in those cases not examined.

Typhoid Fever.—There were only 42 cases notified during the year, and five deaths, Twenty-seven of the cases and four of the deaths were in the Urban Districts. Ten of these occurred in Shrewsbury and six in Wenlock.

In Ludlow Rural District three cases were attributed to drinking the water of a polluted brook. In two cases at Shrewsbury there was a probability that river water had been drunk. The origin of most of the cases seems to have been obscure, and in no instance does it appear to have been attributed to the milk supply or to shell-fish.

Whooping Cough caused 44 deaths, compared with 70 in 1901. Thirty-eight of the deaths were in the Urban Districts. The rate in the county was ·18 compared with ·29 in England and Wales. All the deaths were under five years of age.

Diarrhœa caused 49 deaths, 19 in the Urban Districts and 30 in the Rural Districts, giving a mortality for the whole county of ·20, compared with ·38 for England and Wales, and ·22 for England and Wales less the 179 towns. The value of these figures, however, is much interfered with by the large number of deaths returned as 'enteritis.' In the Urban Districts the number of deaths entered under the heading of enteritis was almost double the number of those entered as diarrhœa. The highest rates were in Wellington Rural District ·93, and in Cleobury Mortimer ·78.

Puerperal Fever.—There were only seven cases and three deaths, compared with 14 cases and six deaths in 1901,

Erysipelas.—One hundred and sixteen cases were notified, of which eight ended fatally.

Influenza.—The deaths from influenza numbered 97 (47 in the Urban and 50 in the Rural districts) compared with 42 in 1901 and 211 in 1900. The highest rate was in Clun Rural District, where a school was closed on account of influenza and infectious sore throat.

LUNG DISEASES.

Bronchitis and Pneumonia.—The rates for these two diseases are given in Table 6, and are here compared with those of England and Wales, with which they correspond fairly closely. The difference in the Urban and Rural death-rates from pneumonia is again very striking. In 1901 the Urban rate exceeded the Rural by 73 °/₀; in 1902 the Urban rate exceeded the Rural rate by 88 °/₀. This excess of pneumonia in the more crowded districts seems to point to the fact that the infective element in the causation of pneumonia is an important one. The highest rates for bronchitis and pneumonia were in Bishop's Castle (5·1), Newport U. (4·1), Dawley (3·5), Oakengates, Wenlock, and Newport R. (3·4), and Shrewsbury (3·3).

DISTRICTS.

NOTIFIED IN EACH LOCALITY.

.	8 Oakengates.	9 Oswestry.	10 Shrewsbury.	11 Wellington.	12 Wem.	13 Wenlock.	14 Whitchurch.
	..	..	1	..	..	..	..
	..	..	..	..	..	..	..
	2	4	24	..	1	7	2
	..	..	..	..	1	..	..
	7	5	22	1	..	11	..
	17	34	39	17	2	62	61
	..	..	..	..	..	..	..
	1	2	10	..	1	6	1
	..	..	..	..	..	..	..
	..	..	..	..	..	..	..
	..	..	1	..	..	2	..
	..	..	..	..	..	..	..
	27	45	97	18	5	88	64
	..	..	..	..	..	..	..
	..	..	..	..	..	..	..
	..	..	..	..	..	..	..

EACH LOCALITY.

10 Ludlow.	11 Newport.	12 Oswestry.	13 Shifnal.	14 Teme.	15 Wellington.	16 Wem.	17 Whitchurch.
..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..
5	..	..	3	..	8	1	3
..	..	..	..	..	..	..	..
5	7	4	1	2	..	2	1
17	6	29	27	10	17	25	12
..	..	.	..	..	..	..	..
4	1	2	2	..	..	1	..
.	..	..	..	..	1	..	..
..	..	..	..	..	..	..	..
..	1	..	..	..	..	..	..
..	..	..	..	..	..	..	..
31	15	35	33	12	26	29	16
..	..	..	..	..	300	..	..
..	..	..	..	..	..	..	..
30	..	..	..	..	..	..	..

TUBERCULOSIS.

The total number of deaths from phthisis and other forms of tuberculosis (Table 8) was considerably less than in either of the two preceding years.

Table 8.

	Phthisis.						Other Forms of Tuberculosis.					
	1900		1901		1902		1900		1901		1902	
	Deaths.	Death-rate.	Deaths.	Death-rates.	Deaths.	Death-rates	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.
Urban Districts ..	113	1·1	133	1·28	111	1·05	44	·42	48	·46	45	·43
Rural Districts ..	125	·9	103	·75	95	·70	46	·33	50	·36	30	·21
Whole County ..	238	·98	236	·98	206	·85	90	·37	98	·40	75	·31

	Death-rates		Average for 5 years	Death-rate.		Average for 5 years
	1900	1901	1896-1900	1900	1901	1896-1900
England and Wales	1·33	1·26	1·32	·56	·59	·58

The rates for the various districts are given on Table I.

In three Rural districts the rate from phthisis was above 1 per 1000—Atcham, Shifnal and Wem. The highest rates in the Urban districts were Bishop's Castle 2·2, Newport 1·6, Bridgnorth 1·49, Wenlock 1·38, and Shrewsbury 1·35. Of these Urban districts, Bridgnorth and Wenlock had high rates in 1901.

There are no figures available for comparing the mortality in the two sexes, nor any for satisfactorily comparing the mortalities at the various age periods. In the Registration County in 1901 the mortality amongst males from phthisis was 1·26, and that of females only ·795, a difference of nearly 40 per cent. Probably this difference may be accounted for to some extent by increased exposure to infection of men, and also by the larger amount of alcohol drunk. Dr. Tatham points out in the Registrar Generals Report that during the 20 years 1878—1898 the phthisical death-rate of England and Wales has been reduced amongst males by 28 per cent and amongst females by 42 per cent.

In my report of 1901, I entered somewhat fully into the different steps that should be taken for the prevention of tuberculosis. The main object and almost the sole object of all these measures is to obtain prompt destruction of tuberculous sputum. It cannot be too strongly borne in mind that, apart from tuberculous milk and meat, sputum is almost the only means by which phthisis is spread. With this object, I recommended amongst other steps, that a bye-law preventing spitting in public places should be adopted. Unfortunately, to my mind, it was considered that this bye-law was in the present state of public opinion impracticable. The value of a bye-law of this description depends not simply upon its prevention of spitting in public places, but upon the fact that it shows the whole community that the responsible Authorities consider indiscriminate spitting a very dangerous habit, so dangerous that it should under certain conditions be prevented by a fine. The educational effect amongst the poorer classes of such a bye-law would propably be much greater than could be attained by years of posting of notices and issuing of pamphlets. Dr. Gepp in his report on Shrewsbury and Dr. Whitaker in his report on Oakengates recommend a bye-law of this description.

Notification of phthisis voluntarily by medical men has been adopted during the year in Chirbury Rural District and previously in Drayton, but the number of cases notified in these districts was not large. It is very desirable that this form of notification should be adopted wherever it is likely to be followed by preventive measures. As pointed out in my last report a proper notification of phthisis is necessary, if efficient measures are to be taken for the prevention of this disease. Hitherto, all attempts to obtain compulsory notification of phthisis have failed, but this year the City of Sheffield has obtained this power in a private Act, together with power to insist upon disinfection where necessary for the prevention of phthisis. The working of compulsory notification of "Tuberculosis of the Lung" in Sheffield will be watched with the greatest interest. The Act contains no provision for punishing those phthisical persons who will not take reasonable precautions for preventing the spread of the disease.

One of the resolutions passed at the British Congress on Tuberculosis was "That the provision of sanatoria is an indispensable part of the measures necessary for the diminution of Tuberculosis."

The following paragraphs dealing with this matter are taken from my report for 1901—

Primarily, the use of a sanatorium for consumptives is to cure the patients sent there, and to relieve those that it is impossible to cure, but there are other advantages to be gained by this treatment. Whilst a consumptive patient is in a sanatorium, all danger of his spreading infection is removed. Not only is this so, but he is trained and educated, so that when he leaves the institution he will probably behave in such a way as not to be a danger to the community. He has also received a most valuable practical lesson, that will help him greatly in putting himself under the best conditions possible at home to prevent a recurrence of the disease. There is no doubt that this educational influence of sanitoria is very valuable indeed.

The evidence in favour of sanatoria is perhaps the strongest in Germany. In that country in the year 1895, there were only two small consumption sanatoria for the poorer classes, but the provision of sanatoria for this purpose has gone on so rapidly of late years that at the present time there are at least thirty. One of the chief causes of this rapid increase was an Act passed in 1899 rendering insurance against sickness, and old age compulsory for persons whose whole annual income was below £150 per annum. This Act allows an Insurance Society to devote part of its funds to the treatment of the sick in lieu of sick pay. It speaks very strongly in favour of the economic aspect of sanatoria for consumptives, that Insurance Societies have availed themselves of this privilege to such a large extent. Dr. Walter says :—"it has been estimated that half the applications for sick pay between the ages of 20 and 29 among the insuring classes of Germany are because of tuberculosis, so that it is not surprising to learn that in 1897, out of 37 different Sickness Insurance and Friendly Societies, 33 had spent more or less of their funds on the hygienic treatment of consumptives."

It is very desirable therefore that the County Council should consider this matter carefully. Whether a sanatorium of this description should be erected by the County Council or by voluntary effort, or by a combination of the two is a matter for future consideration. There were as previously pointed out no less than 236 deaths from phthisis last year in the county. Of these 236 deaths no fewer than 212 were of persons between the ages of 15 and 65. The greater number of them would probably be wage earners and many of them the principal support of families. From an economic point of view alone the expenditure of money on a consumptive sanatorium would probably be justified.

It is important that the position of sanatoria in the prevention of phthisis be thoroughly understood.

The arguments in favour of sanatoria from a curative point of view are no doubt strong, but the exact value of sanatoria in this respect has not yet been satisfactorily worked out. From the point of view of prevention they practically resolve themselves into—

(*a*) the education of the patient;

(*b*) the inducement to arrive at an early diagnosis which a possibility of cure holds out.

The diagnosis of phthisis in its early stages is of the very utmost importance in preventing its spread.

(*c*) The isolation for a short period during which the patient is prevented from being a source of danger;

(*d*) the cure of a certain proportion of cases who are then no longer a danger to the community.

It is evident then, that although the provision of sanatoria for consumptives is a matter of great importance, it is secondary from a preventive point of view to—

(1) notification, followed by measures for disinfection, instruction, supervision, etc.;

(2) legislation to prevent indiscriminate spitting;

(3) general education by posters in workshops, factories, public-houses, and other public buildings, by pamphlets, lectures, and by teaching in schools.

CANCER.

TABLE 9.

DEATH-RATES FROM CANCER IN THE URBAN AND RURAL DISTRICTS FOR 1900, 1901, and 1902.

	Urban Districts.			Average for 3 years.		Rural Districts.			Average for 3 years.
	1900	1901	1902			1900	1901	1902	
Bishop's Castle ...	·6	·0	2·2	1·0	Atcham	1·1	1·19	1·1	1·13
Bridgnorth ...	·6	1·32	1·1	1·04	Bridgnorth ...	·6	·81	·93	·81
Church Stretton...	—	·0	·0	·0	Burford	—	·81	·82	·54
Dawley	·4	·79	1·3	·84	Chirbury ...	1·2	1·69	·85	1·31
Ellesmere ...	·5	2·05	1·5	1·37	Church Stretton ..	·8	1·11	1·54	1·19
Ludlow	1·5	·44	1·2	1·04	Cleobury Mortimer	·6	·74	1·2	·84
Newport	2·64	·92	·95	1·54	Clun	1·5	1·31	·73	1·22
Oakengates ...	·5	1·10	·64	·77	Drayton	·7	·94	1·3	·99
Oswestry ...	·5	·62	1·4	·86	Ellesmere ...	·7	·88	·5	·71
Shrewsbury ...	·8	·73	1·07	·88	Ludlow	·9	·78	·52	·73
Wellington ...	·7	1·25	1·1	1·06	Newport	1·6	1·14	·83	1·25
Wem	—	1·85	2·3	1·39	Oswestry ...	·7	1·21	·74	·89
Wenlock	·9	·94	1·07	·98	Shifnal	·6	·34	1·2	·75
Whitchurch ...	1·6	·57	·57	·89	Teme	·5	1·08	·0	·54
					Wellington ...	·6	1·01	·6	·73
					Wem	·7	·72	1·08	·84
					Whitchurch ...	—	1·55	·0	·52
All Urban Districts	·8	·88	1·1	·95	All Rural Districts.	·8	·99	·87	·91

By averaging three years one gets over, to some extent, the uncertainty due to small numbers. The highest Cancer mortality for the three years was in Newport U. (1·54), followed by Wem U. (1·39), Ellesmere U. (1·37), Chirbury R., 1·31), Newport R. (1·25), and Clun, 1·22.

Table 10.

DEATH RATES FROM CANCER

Year.	Registration County of Shropshire.	England.
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
Average of 8 years 1894—1901.	·947	·790
Average of 10 years 1881—1890.	·704	·589

Table 11.

CANCER IN AGE PERIODS 1881—1890.

AGE PERIODS.	Deaths from Cancer in age periods expressed as a percentage of total deaths from Cancer.		Death-rates from Cancer per 1,000.	
	Shropshire Registration County.	England and Wales.	Shropshire Registration County.	England and Wales.
35—45	8%	11%	·5	·6
45—55	19%	22%	1·4	1·5
55—65	26%	28%	2·5	2·8
65 and upwards.	42%	33%	4·4	4·2

This table shows how misleading the crude death-rates on Table 10 are. Although the total death-rate from cancer in Shropshire is about 20% higher than in England and Wales, yet this death-rate in three of the age periods out of four is actually lower in Shropshire than in the country generally.

Extensive investigations are being made with respect to cancer. Those dealing with the incidence of the disease and its relation to conditions of life can only be satisfactorily carried on by the various Medical Officers of Health throughout the country.

In some towns every cancer death is now carefully and personally investigated by the Medical Officer of Health. The investigations are directed to the occupation, habits, duration and character of disease, family history, history of association with other cases, previous cases in same house, detailed account of sanitary condition of dwelling, nature of sub-soil (dampness and pollution), and diseases of domestic animals.

In this county it is difficult to see how, with the machinery at hand, a similar investigation is to be carried on except by means of the cordial co-operation of the medical profession.

Dr. Alfred Wolff, who has conducted an extensive statistical inquiry into this subject, thinks that excessive consumption of beer is a predisposing cause of cancer (the possibility of arsenic being the cause is discussed); also that districts of high cancer mortality are forest or at least well-wooded districts. He points out the low mortality in many coal-mining districts.

BACTERIOLOGICAL DIAGNOSIS OF DISEASE.

Quarters of 1902.	For Typhoid Fever. Widal's Reaction.			For Diphtheria.			For Phthisis.	
	Positive.	Doubtful.	Negative.	Positive.	Doubtful.	Negative.	Positive.	Negative.
First ...	4	0	7	4	0	15	10	17
Second ...	0	0	5	1	0	6	8	8
Third ...	0	0	4	5	0	7	9	13
Fourth ...	1	0	3	8	2	13	3	12
Whole year	5	0	19	18	2	41	30	50
	24			61			80	

The arrangement with Birmingham University continues to work satisfactorily.

SCHOOLS AND SCHOOL ATTENDANCE.

With the creation of a new Education Authority, which in the case of County Boroughs is the Sanitary Authority and in Counties is closely associated with the Sanitary Authorities, an opportunity is opened for bringing into greater prominence the enormous importance of attending to the physical condition of school children.

It is hardly necessary to say that attendance at school, being compulsory, every care should be taken that the childrens' health should not suffer from such attendance. It cannot be said that sufficient care has usually been exercised in the past. The collection together in a comparatively small space of a large number of children, most of whom are susceptible to the various infectious diseases, must of necessity be a very active agent in the spread of disease and must require great vigilance if bad effects are not to result.

It is, however, being brought home to us clearly that it is not sufficient to see that the childrens' health shall not suffer by school attendance but that the improvement of their physical condition should be one of the main objects of our educational system.

The measures that are desirable for protecting and improving the health of the children fall under the following heads:—

I.—Improvement of the sanitary condition and management of schools as regards air space, ventilation and heating, cleanliness, the general condition of the school with regard to the harbouring and spread of infection, the cloak room accommodation, the water supply, drainage, lavatory and closet accommodation.

II.—Measures for preventing infectious diseases spreading amongst the children:—

(1) The issue of instructions and information to teachers as to how to deal with infectious diseases, including *(a)* the recognition of infectious disease in its early stages; *(b)* the exclusion of scholars for various periods on account of infectious disease; *(c)* precautions to be observed on the return of absentees.

(2) The prompt notification to the Sanitary Authority by teachers of all cases of infectious disease occurring in their schools, so that school closure can, when necessary, be applied with promptness and efficiency.

III.—Physical training of the children.

IV.—Teaching of domestic hygiene in schools.

V.—Systematic medical inspection of school children. The value of such inspection would undoubtedly be very great, and although in counties of large area there are considerable difficulties to be overcome, it is a matter worthy of very careful consideration.

HOUSE ACCOMMODATION.

Very important figures have recently been published by the Registrar General relating to the housing accommodation of the county and it is desirable that the best use should be made of them. It is possible to get some general idea from them as to the amount of overcrowding of houses in the county and it is possible to compare the existing state with that of ten years ago. It is possible also to compare more or less accurately the different districts with one another.

Table A. shows the housing conditions in 1901 compared with those of 1891. It will be observed that the number of 1, 2 and 3-roomed tenements have considerably decreased during the ten years; one-roomed tenements by nearly 55%, two-roomed tenements by 25%, and three-roomed tenements by 8%. Not only has the number of these tenements decreased, but the average number of persons per tenement, which is a rough indication as to the probable amount of overcrowding, has decreased in one-roomed tenements by 22%, in two-roomed tenements by nearly 10%, and in

three-roomed tenements by nearly 3%. The standard of overcrowding adopted in these tables is two persons per room, and any greater density of population is considered to indicate overcrowding. This is graphically represented in a manner used by Dr. Gepp in his report on Shrewsbury. All tenements to the right of the black line are, according to this standard, in an overcrowded condition. Of the tenements of less than 5 rooms, 2,312 or 8.9%, were on this basis overcrowded in 1901, and 3,311 or 11.9% in 1891. This is a decrease of overcrowding in the ten years of 30.2%. The persons thus affected in 1901 were 17,800 or 17.2% of the inhabitants of the tenements of less than 5 rooms, and in 1891, 24,636 or 21.8%.

This improvement appears to have been effected partly by the building of new houses and partly by the re-occupation of houses previously uninhabited. There has been an increase of inhabited houses by 1741, and a decrease of uninhabited houses by 746. There has at the same time been a decrease of small houses of three rooms or less by 2,384. It is somewhat difficult to believe that this number of houses has fallen out of occupation and yet that the total number of unoccupied houses has decreased. If, however, the Census figures of the two periods are comparable there must have been between 3,300 and 3,400 new houses built during the 10 years, all having more than three rooms per house.

The number of uninhabited houses in the county is 3,356 (one-third are in occupation as shops), or 6.1% of the total, compared with 7.6% in 1891 and 7.1% for the whole of England and Wales in 1901. Considering the large number of old worn out houses that exist, particularly in the rural districts, this number of unoccupied houses is very small.

Table B. shows that there is rather more overcrowding in the small tenements and less in the larger tenements in the Rural Districts than in the Urban Districts.

In Table C. the conditions of housing in the different districts are to some extent shown at a glance. For the purpose of this table two assumptions have been made, neither of which are strictly accurate, but both of which are sufficiently correct to enable one to compare districts with one another (1) that a house should contain at least four rooms; (2) that houses are overcrowded that contain more than two occupants per room. The figures are only available for houses of less than five rooms and it has been assumed that larger houses are not overcrowded. Amongst the Urban Districts Dawley and Oakengates have far the largest percentage of small houses and also the largest percentage of houses that are overcrowded. Amongst the Rural Districts Newport Rural has the largest percentage of small houses, and along with Wellington Rural also the greatest percentage of overcrowding, with the exception of Teme Rural District.

Dealing with the individual cases the most gross single instance of overcrowding seems to have been at Bishops' Castle, where one house of two rooms was occupied by twelve or more persons. Of the three two roomed houses occupied by eleven persons, one was in Dawley, one in Ludlow and one in Shrewsbury. There were ten two-roomed houses in the county each occupied by ten persons, and of these 3 were in Dawley, 1 in Oakengates, 1 in Cleobury Mortimer (R. D.), 1 in Clun (R. D.), 3 in Oswestry (R. D.), 1 in Wellington (R.D.); and of two-roomed houses occupied by nine persons there were 4 in Oakengates, 2 in Newport (R. D.), 2 in Wem (R. D.), and 1 in Drayton (R. D.). There were 11 three-roomed houses in the county with 12 or more persons in each, and of these, 3 were in Dawley and 4 in Oakengates. There were 24 three-roomed houses with 11 persons in each, and of these, 9 were in Oakengates, 3 in Wenlock, 2 in Ludlow, 2 in Atcham (R. D.), and 2 in Oswestry (R. D.).

These figures are of very considerable value because they are a general indication of the amount of overcrowding in any particular district. They show too how necessary a careful systematic house-to-house inspection is, even if it is only for the purpose of investigating cases of overcrowding. In districts where there is no such inspection, gross cases of overcrowding offending against the laws of health and morality may exist for years without being discovered.

The Medical Officer of Health for Chirbury reports that many of the houses, particularly on the hills, present grave sanitary defects, but that efficient action is impossible owing to lack of accommodation for families displaced. The same difficulty is mentioned as having interfered with action for the closure of houses or the remedying of overcrowding in the districts of Oakengates, Oswestry Rural, Ludlow Urban and Rural. In Ludlow the congestion is spoken of as temporary. To what extent the closure of insanitary houses should wait upon the provision of further accommodation is a difficult matter to decide, but the responsibility should not be thrown upon the Medical Officer of Health. A considerable improvement in the condition of houses seems to have resulted from systematic house-to-house inspections. Such inspection is in progress in Atcham, Clun, Shrewsbury, Wenlock, and in the Urban Districts of Whitchurch, Ellesmere and Oakengates; and is recommended for Bishop's Castle, Dawley, Newport Urban and Rural and Whitchurch Rural District. In Atcham Dr. Gepp mentions Pontesbury Hill as the part of the district most needing better housing conditions. Attention is again drawn to the housing accommodation in Donnington Wood, where there is still much room for action. Dr. Gepp says that in the older parts of Shrewsbury houses are in places densely packed, interfering with both light and circulation of air, and that a considerable proportion of these houses are back to back and without through ventilation.

A.

ADMINISTRATIVE COUNTY OF SALOP.

Tenements of less than Five Rooms distinguishing those occupied by various numbers of Persons.														Calculations from these Census Figures.	
		Persons per Tenement.													
Number of Rooms in Tenements.	Tenements of less than Five Rooms.	1	2	3	4	5	6	7	8	9	10	11	12 or more.	Total number of Persons occupying these Tenements.	Average number of Persons per Tenement.
1901.															
1	198	146	40	11	1	..	..	..	..	..	..	..	..	263	1·33
2	4101	998	1075	826	541	306	201	87	42	11	10	3	1	11715	2·85
3	8266	542	1491	1683	1412	1095	929	542	309	162	66	24	11	34050	4·11
4	13188	583	2238	2462	2339	1924	1503	1014	600	390	149	44	32	57395	4·35
1891.															
1	434	275	88	31	23	10	3	2	1	..	..	1	..	737	1·7
2	5483	1134	1397	1012	713	534	328	208	101	47	6	2	1	17235	3·14
3	9032	554	1629	1737	1462	1226	999	656	424	213	85	35	12	38275	4·23
4	12792	542	2125	2416	2216	1781	1458	994	672	350	144	67	27	56542	4·42

Percentage of Tenements of less than 5 rooms — 1901 .. 49·1; 1891 .. 54·2

B.

1901.

URBAN DISTRICTS.

Number of Rooms in Tenements.	Tenements of less than Five Rooms,	Persons per Tenement.												Calculations from Census Figures.	
		1	2	3	4	5	6	7	8	9	10	11	12 or more	Total Number of Persons occupying these Tenements.	Average Number of Persons per Tenement.
1	101	84	14	2	1	..	..	..	..	..	..	..	..	122	1·20
2	1991	525	529	396	247	143	82	35	22	4	4	3	1	5508	2·76
3	3876	231	644	767	636	542	466	258	174	99	36	16	7	16579	4·27
4	5689	225	917	1067	1024	873	651	419	264	148	63	22	16	25068	4·40

RURAL DISTRICTS.

1	97	62	26	9	.	..	..	..	.	..	..	..	..	141	1·45
2	2110	473	546	430	294	163	119	52	20	7	6	..	..	6207	2·94
3	4390	311	847	916	776	553	463	284	135	63	30	8	4	17471	3·97
4	7499	358	1321	1395	1315	1051	852	595	336	152	86	22	16	32327	4·31

Percentage of Tenements of less than 5 Rooms { Urban Districts .. 50·9 / Rural Districts .. 47·7

C.

URBAN DISTRICTS.			RURAL DISTRICTS.		
DISTRICTS.	Percentage of Houses of Three Rooms or less.	Houses of less than Five Rooms percentage overcrowded*	DISTRICTS.	Percentage of Houses of Three Rooms or less.	Houses of less than Five Rooms percentage overcrowded*
Bishop's Castle ..	17·7	4·6	Atcham	24·0	8·6
Bridgnorth	25·1	4·8	Bridgnorth	21·1	5·2
Church Stretton ...	18·3	11·9	Burford	23·0	6·0
Dawley	46·2	14·9	Chirbury	17·6	3·4
Ellesmere	9·7	2·3	Church Stretton ...	22·9	7·7
Ludlow	36·8	13·6	Cleobury Mortimer...	25·1	9·6
Newport	20·0	8·1	Clun	16·2	6·3
Oakengates	44·3	17·8	Drayton	18·4	6·1
Oswestry .. .	11·0	4·8	Ellesmere	17·5	5·9
Shrewsbury	18·0	6·9	Ludlow	14·7	6·9
Wellington	22·6	5·4	Newport	32·2	11·1
Wem	5·9	3·7	Oswestry	21·8	10·1
Wenlock	36·5	9·4	Shifnal	29·6	9·9
Whitchurch	16·5	7·9	Teme	17·3	11·5
			Wellington	27·7	11·1
			Wem	23·8	7·6
			Whitchurch ...	24·7	6·5
All Urban Districts.	26·0	9·7	All Rural Districts.	22·3	8·3

* Calculated upon the assumption that all houses are overcrowded, in which there are more than two persons per room (see text).

HOSPITAL ACCOMMODATION.

The question of hospital accommodation for small-pox occupied the attention of the Sanitary Committee of the County Council for a considerable part of the year.

Inquiries were sent out in March by the Clerk to the County Council to the various District Councils and the answers showed that there was practically no accommodation for small-pox in the county with the exception of an arrangement made by certain districts for the erection of tents in case of emergency. A Conference was held on March 22nd to consider "The Small-pox Hospital Accommodation in the County." No definite resolutions were come to at this meeting. On my report, made on June 14th, the County Council ordered an Inquiry to be made under the Isolation Hospitals Act into the necessity for establishing small-pox hospitals in the county. The Inquiry was held on October 25th and was adjourned in order to inquire into the question of sites. The Sanitary Committee decided that the necessity for hospitals existed. The adjourned Inquiry was held on January 24th. In the meantime, the erection of certain hospitals, and the improvement of others had rendered the original scheme submitted somewhat impracticable. The idea of the first scheme suggested, was to provide a certain number of hospitals, probably five, so placed as to serve the whole county. These hospitals would have been managed by one committee and there would have been no necessity to partition the county into districts. The economy in buildings and in management of this scheme is obvious. There was nothing left but to deal with the districts in combination. No order on these lines has yet been made, but the districts have to a great extent provided for themselves by voluntary combination. What has been done can be most clearly put by stating the hospital provision for small-pox at the time of the March circular and at the present time.

Apart from the small hospitals at Shrewsbury, Bridgnorth and Newport, and the cottage at Much Wenlock, which are primarily used for other diseases, and also the hospital at Wrockwardine Wood, which was dilapidated and objectionable, there were at the time of the circular in March, 1902, no hospitals for small-pox in the county. The only accommodation at that time was an arrangement for the provision of tents made by 9 districts, 4 of which had not obtained sites.

The following is a statement of the hospital provision at the present time:—

1.—*A hospital for about 8 beds ...	for Cleobury Mortimer, Burford and Tenbury and Rock in Worcestershire.
2.—*A hospital for about 6 beds ...	for Ludlow Urban and Rural Districts.
3.—A hospital for 6 beds	for Chirbury and the other districts in the Forden Union.
4.—†A hospital for 8 beds	for Drayton and Blore Heath.
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 District.
8.—A hospital for 8 beds	for Wenlock, at Broseley.
Isolated Cottages.	
9.—An isolated cottage	for Bishop's Castle and Clun.
10.—An isolated cottage	for Teme and Knighton Urban and Rural Districts.

Sites.

Besides the above-mentioned hospitals and cottages, there are 3 sites on which buildings can be erected in an emergency:—

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

* These have been adapted from workmen's dwellings.
† To be used for diseases other than small-pox.

The Oswestry sites are good hospital sites whether intended for small-pox or other diseases.

The Wellington Rural District is applying to be allowed to use the Urban District hospital. Oakengates has applied unsuccessfully to Shifnal. These combinations should be encouraged and it is to be hoped that the hospitals will eventually serve a larger area than they have been built for.

It is evident from the above statement that there has been considerable activity in the provision of hospitals, and although there are still districts unprovided for, more hospitals have been built than were originally proposed for the whole county.

The larger question as to the provision of isolation for other infectious diseases has not been considered, nor have any petitions been received by the County Council.

VACCINATION.

Primary Vaccination appears to be well carried out in the County. Where figures are given the numbers of children escaping vaccination is small. In the Atcham Union in 1901 there were five conscientious objectors and in Drayton in 1902 only one.

The following figures taken from the Local Government Board Report shew the position of the County with regard to Vaccination up to 1900:—

Years.	Number Unvaccinated expressed as a percentage of total children born.	Conscientious Objectors.
1873-1877	2·7	...
1878-1882	3·9	...
1883-1887	3·3	...
1888-1892	4·7	...
1893-1897	11·0	...
1898	10·8	1·4
1899	8·3	1·4
1900	5·4	1·9

Between 1893 and 1897 the Act was evidently very imperfectly administered. Since the last Vaccination Act came into force progressive improvement has taken place, particularly in those districts where previously the carrying out of the law was so lax. This is well illustrated in the following table :—

Unions.	Years. 1893-1897	1898	1899	1900
Atcham	11·9	9·4	6·7	4·4
Bridgnorth	7·1	8·3	8 6	5·3
Church Stretton ...	2·4	3·2	·9	2·8
Cleobury Mortimer . .	4·8	5·4	6·4	4·6
Clun	34·2	18·8	12·4	11·2
Drayton	1·7	3·6	4·2	4·8
Ellesmere	2·9	1·6	3·0	2·9
Ludlow	7·5	9·9	6·7	7·0
Madeley	5·2	8·2	6·2	2·3
Newport	5·3	9·6	5·9	5·6
Oswestry	3·9	5·8	3·1	4·1
Shifnal	15·7	8·5	7·8	2·0
Wellington	39·7	33·9	23 8	9·6
Wem...	1·6	7·5	7·9	6·3
Whitchurch	5·1	13·4	16·7	9·5
Total	11·0	10·8	8·3	5·4

The returns for 1901 and 1902 are not yet published, bnt probably are more satisfactory. With regard to re-vaccination, there is much less definite information. In Shrewsbury 921 persons were re-vaccinated by the public vaccinator. In those districts where there have been outbreaks of small pox a large number of persons have been re-vaccinated. In all probability, however, the number of persons in the county who have been vaccinated more than once is not a large fraction of the whole. Under these circumstances vaccination alone cannot be relied upon for preventing smallpox.

In order to make Vaccination a real preventative of small pox it is necessary that compulsory re-vaccination at school age should be adopted and that a satisfactory standard of vaccination should be enforced.

Several of the Authorities have issued notices advising re-vaccination.

DISINFECTION.

With the exception of the disinfector at Bridgnorth Fever Hospital and a small portable one at Wellington there is not, so far as I am aware, a steam disinfector belonging to any of the Sanitary Authorities of the County.

The destruction of infection is at the very root of the measures that should be taken for the prevention of the spread of disease. Persons are kept isolated so that the infective material may be destroyed or rendered innocuous before it comes in contact with susceptible persons. If means for disinfection are not provided the precautions for preventing the spread of infectious disease fail in a most essential particular. There is no method of satisfactorily disinfecting clothing, bedding, curtains, carpets, etc., things which are very liable to retain infection, except by steam properly applied. It follows then that every sanitary authority and every public institution of any size should have a steam disinfector. There is no necessity, where the work to be done is not likely to be large, for a large and costly apparatus. All that is required is a chamber into which steam can be turned rapidly, so that the steam enters and leaves the chamber in large quantities. A little contrivance is required to prevent the articles being unduly wetted and to dry them after disinfection. It ought to be possible to provide a disinfector of this description capable of serving the smaller districts for £20 or less. Such an apparatus would probably be more convenient if made readily portable.

Dr. Gepp in his report for Shrewsbury very ably advocates the establishment of a public disinfecting station. He points out the greater necessity for an efficient disinfecting station in a town like Shrewsbury where there is no hospital isolation, and consequently where the clothing, bedding, etc., at home must get thoroughly infected. His report recommending a public disinfecting station has, however, been referred back by the Council. Such a decision appears to me to be extremely unfortunate. Dr. Whitaker in several instances refers to cases which have in his opinion been spread by infected clothing. He says in his report for Shifnal that in his opinion the large majority of cases of scarlet fever arise from imperfectly disinfected clothes.

WATER SUPPLIES.

In most of the reports is contained some description of the water supply of the districts, and a brief summary of these is given in Part II.

Considerable work has been done in different parts of the County in the improvement of the water supplies. Far the most important is the completion of the scheme deriving its supply from Harrington Well. An abridgment of Dr. Gepp's description of this scheme will be found on page 73.

Water is supplied to Broseley, Madeley, Ironbridge, Coalbrookdale, the town of Shifnal, the village of Kemberton and the Apley estate. This scheme must prove to be of incalculable benefit to the districts supplied.

A scheme prepared by the County Council for the districts of Oakengates, Dawley, Donnington Wood, Hadley and part of Wellington Rural District is now being considered by the various authorities concerned. The absence of a proper water supply to these districts is perhaps the greatest sanitary defect in the county. It is absolutely essential that in one way or another a good water supply should be provided.

The new reservoir in New Pool Hollow, Church Stretton, was opened during the year. A supply of good water has been laid on to the small hamlets of Acton and The Leasty in Clun R.D.; new wells have been provided at Tilstock and Broughall in Whitchurch R.D. The works at Pant in Oswestry R.D. have been pushed forward and a scheme has been formulated for Gobowen. At Edgmond a supply has been laid on to 8 houses and a public fountain. Plans for the supply of Meole Brace and Bayston Hill have been prepared. The supplies of Stoke St. Milborough, Aston Munslow, Stanton Lacy and Bromfield in Ludlow R.D. have been improved.

The following are under consideration:—a supply to the Clee Hill District, a supply to Clunbury, the water supply of Bucknell, and a report of Dr. Macqueen on the water supplies of the Rural District of Drayton.

Recommendations are made for the improvement of the water supplies of Habberley, Hanwood Bank and Pontesbury in Atcham R.D., of Brockton in Chirbury R.D., and for the improvement by filtration of the water supplies of All Stretton, Little Stretton, the Borough of Oswestry, and Wellington Urban District.

Attention is again drawn to the distance that clean water has to be carried at Longnor and to the unsatisfactory condition of the water supply of Kinsley.

Bucknell may obtain a supply upon very advantageous terms from the Birmingham main and it certainly seems very desirable that villages situated near either of the large mains (Liverpool or Birmingham) should, when a supply is needed, obtain their water in this way.

Dr. Gepp says that he thinks the problem of the best solution of the vexed question of Shrewsbury's water supply is in a fair way to be settled. It is a matter in which from every point of view there should be no unavoidable delay.

In the latter half of the year I made two reports on the water supplies of districts in the county. The first included the Parishes of Hadley and Wellington Rural. The second included the remainder of the Parishes in the Rural District of Wellington. The attention of the District Council has been called to the various matters in the reports requiring action at their hands.

SEWAGE DISPOSAL AND POLLUTION OF RIVERS.

This is one of the most important matters which is under the direct control of the County Council. Not much action has hitherto been taken, but during the year two important pollutions were reported on by me—one due to the sewage of the town of Ellesmere and the other to the effluent from the Wellington Urban District sewage works. The attention of these authorities has been drawn to my reports and the Council is now awaiting their decisions.

As a preliminary to a complete investigation of the pollution of rivers of the county, I have obtained, by the kindness of the Clerks and Surveyors of the District Councils, a more or less complete description of the various public sewage works in the county. These particulars have been embodied in the accompanying Table. They not only refer to existing schemes, but to schemes which have been submitted to the Local Government Board for approval, *e.g.*, Church Stretton, Hadley and Oakengates. They show a very considerable variety in the methods adopted for the treatment of sewage. Only in one case—Oswestry—have I received any definite data as to the efficacy of the treatment carried out. That will necessarily be one of the first matters to which my attention will be devoted.

The following districts have no public sewage works nor any proposed sewage schemes for any part of their districts:—The Rural Districts of Bridgnorth, Burford, Chirbury, Church Stretton, Cleobury Mortimer, Clun, Ellesmere, Newport, Teme, Wem and Whitchurch; and the Urban Districts of Bishop's Castle, Dawley, Ellesmere and Wenlock.

Sewerage schemes for Church Stretton Urban District, Oakengates and Hadley have been submitted to the Local Government Board for approval. A scheme for treating the sewage of Bishop's Castle is being considered. The schemes for Newport Urban District and Shifnal Town have been brought near completion.

The following condensed extracts from the District Medical Officers' Reports indicate some of the matters under this heading which will need attention:—

The better sewerage and sewage disposal of Pontesbury village might with advantage be considered.

The sewage of Dawley finds its way through watercourses to the Severn; the same remark applying to most of the sewage of the Borough of Wenlock.

At Ludlow the filter beds are not satisfactory.

At Shrewsbury the river has greatly improved but there are individual houses to be dealt with.

At Wem the outfall is distinctly unsatisfactory.

At Cleobury the question of sewage disposal is not reported on, but presumably the report of 1901 holds good.

The Medical Officer of Health for the Rural District of Wellington says that the want of a proper scheme of sewage disposal for Hadley may become a source of danger; also that the effluent from the Wellington Urban sewage works is still far from satisfactory.

The disposal of the sewage of Market Drayton should now be dealt with.

The second Report of the Royal Commission on Sewage Disposal was published during the year. The report is of considerable local interest as one of the sections deals with the "Pollution of the River Severn in the Shrewsbury District." I had no personal knowledge of the condition of the river at the time these investigations were made, but the following quotations show the opinion of those who made the investigations: "The banks of the river immediately above the water works, and also lower down as the river winds through the town are composed of dust-bin rubbish, which gives to an otherwise pretty river a most dirty appearance and must be a source of considerable contamination," and again "Whilst the river passes through the town it receives, in addition to the sewage, all kinds of garbage thrown into it by those living on the banks." "The sewage of Ironbridge and Coalbrookdale together make the river exceedingly dirty. The condition of the banks is even worse than at Shrewsbury.". No doubt since these observations were made, great improve-

unty of Salop.

Name of S	Borough of Oswestry.	Oswestry Rural District — Oswestry Workhouse.	Wellington Urban District.	Wellington Rural District. — Hadley Proposed Scheme.	Wem Urban District.	Whitchurch Urban District.
Name of D						

ment has taken place, but even a casual inspection of the banks of the river will show that much has yet to be done. Perhaps the most important matter is to educate the people to understand that the purity of the river should be regarded as of the greatest importance. Although great improvements have taken place at Shrewsbury, the river at Ironbridge appears to be in much the same condition as when the Commissioners reported.

SEWERAGE AND DRAINAGE.

Some description of the sewerage and drainage of most of the districts will be found in Part II. of the Report.

During the year the sewerage of Shifnal has been completed and that of Newport advanced towards completion. The sewerage of Edgmond has been improved and extended. At Much Wenlock a sewer about half a mile in length has been laid. The sewerage of Little Drayton has been completed and now it is recommended that the sewerage of Market Drayton be dealt with.

A scheme for the sewerage of Cressage has been given up owing to opposition of the Parish Council, and the scheme for the sewerage of Ruyton has not yet been adopted.

The sewerage of Bishop's Castle and also that of Albrighton in the Rural District of Shifnal are being considered.

The better sewerage of Pontesbury is recommended for consideration. At Wenlock the Medical Officer of Health says: "The question of water supply having now been settled the Committees will no doubt be better able to take the needed improvements in their sewerage systems into consideration. With an abundant water supply in all the towns, good sewerage will be found increasingly necessary."

The sewerage and drainage of Chirbury are described as being in a very unsatisfactory condition.

Drainage regulations have been made under sec. 21 of the Public Health Act, 1875, at Shrewsbury, Newport and Whitchurch Urban Districts.

The importance of the adoption of good regulations, particularly before any new sewerage scheme is carried out, cannot be too strongly insisted upon.

SCAVENGING AND EXCREMENT DISPOSAL.

There is a daily removal of refuse at Oswestry. In this matter Oswestry is to be greatly congratulated as being one of the few towns in the country where there is daily removal of house refuse. Its influence upon the health of the town must be very beneficial.

There is a weekly removal of refuse at Shrewsbury, Wellington and Bridgnorth (partial), and a weekly removal has been arranged for at Church Stretton.

In the Rural Districts the scavenging is done by the occupiers, with the exception of Shifnal Town, where the scavenging is done by a contractor under the direction of the Sanitary Inspector. There are parts of other rural districts where the scavenging undoubtedly requires careful supervision. Dr. Whitaker says the inadequacy of the scavenging of Cleobury is becoming more and more marked; at Highley there has been some improvement, though, being done by a company and not by the Local Authority, it is not so complete or general as desirable. At Market Drayton a system of public scavenging is under consideration. In Oswestry Rural District the Inspector has proposed a scheme for the scavenging of the larger villages which the Medical Officer of Health thinks should be adopted. Dr. Gepp reported that a public system of scavenging was desirable for Meole Brace but the scheme has not been proceeded with.

Dr. Padwick again draws attention to the unsatisfactory removal of ashes, due to the fact that the box system is not generally adopted. Dr. Gepp calls attention to his previous reports on the defects following upon a want of system of scavenging in Dawley. The need of a better system in Wem is again referred to.

At Wenlock (except Madeley Ward), Bishop's Castle and Dawley the scavenging is done by the occupiers. At Ludlow the mass of refuse in the Smithfield is reported as a public nuisance and a danger to the health of the town. The refuse in Shrewsbury is tipped on the low-lying ground in the borough and gives rise to complaints in warm weather. Dr. Gepp advises that great care should be taken to keep the refuse well covered with soil. The Council has from time to time considered the question of erecting a refuse destructor, but no decision has been arrived at. There can be no doubt that a destructor is the only satisfactory solution of the difficulty, unless a site well removed from houses can be found and the refuse is well mixed and covered with soil. The latter method, if carried out satisfactorily, would be, as a rule, more expensive than disposal by means of a destructor.

The general adoption of the water-carriage system is recommended for Market Drayton. In several of the Urban Districts conversions of old privies to water-closets are taking place.

INSPECTION OF COWSHEDS, DAIRIES, ETC., AND DAIRY CATTLE.

With regard to the inspection of dairy cattle for tuberculous disease of the udder, nothing is being done in the county with the exception of occasional visits of Inspectors from Manchester or Liverpool on account of tuberculous milk which has been sent into those towns. It is perhaps useless to expect any action in this direction until the Royal Commission appointed to inquire into the transmission of bovine tuberculosis to man has reported.

The very important matter of the inspection of cowsheds and dairies does not I am afraid receive the attention it should have in the County. In 1900 no less than 9 Rural Districts, viz. :—Burford, Clun, Ellesmere, Drayton, Newport, Oswestry, Teme, Wellington and Wem, and 7 Urban Districts had not adopted regulations. So far as I am aware only one of these Church Stretton Urban District has since made regulations. But the making of regulations is an initial step of little consequence if they are not enforced. There is little evidence to show in the reports of the Medical Officers of Health that efficient inspection is being carried out. The question of the supply of clean fresh milk from healthy cows is of great national importance. No other food can satisfactorily take its place, and yet there is no other food, in which may lurk so many dangers. Not only may it convey scarlet fever, typhoid fever, diphtheria, infantile diarrhœa, and tuberculosis, but in a sour and dirty condition it is undoubtedly responsible for many of the minor ailments that children often suffer from. There can be little doubt that the amount of milk consumed is seriously lessened by the feeling that it may convey disease. The consumption of milk would probably increase greatly, if the public were assured that it was clean, fresh, and obtained from healthy cattle. This increased consumption would be greatly to the benefit both of the public and the farmers, and inspection would once more prove itself, as it has frequently done in other trades, to be a distinct benefit to the trade inspected.

In the report of the Medical Officer of Health for the City of Manchester are paragraphs referring to several Shropshire cowsheds, and condemning their sanitary condition and their absolute want of cleanliness. This report deserves the most careful consideration of those sanitary authorities whose districts are referred to. In my reports on water supplies I have pointed out the enormous manurial waste that takes place at most of the farms and the consequent pollution of water supplies, streams, soil and also the surface pollution of yards.

Of equal importance with the sanitary condition of the farms is cleanliness in the manipulation of the milk. This can only be attained by frequent inspection, instructions printed and otherwise being given. The absolute enforcement of the recommendation of the Departmental Committee on Food Preservatives, that no preservatives whatever should be allowed in milk would do something to induce cleanliness in its collection.

The proper supervision of our milk supply is a matter which probably can only be satisfactorily undertaken by some more central authority.

FACTORIES AND WORKSHOPS ACT, 1901.

SUMMARY FOR 1902.

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Sale of Food and Drugs Acts.

The Chief Constable has kindly furnished me with particulars of samples taken during the year 1902 by the County Police. These samples do not include those taken in the Boroughs of Shrewsbury or Wenlock. The legal proceedings include those taken in the Borough of Wenlock.

Nature of Sample.	Number of Samples taken for Analysis.	Results.			Remarks.
		Genuine.	Adulterated.	Percentage Adulterated.	
Whiskey	24	19	5	21%	4 Convictions; fines £1, £1, 10/-, £5 and costs averaging £1 6s. 6d. a case.
Brandy	9	6	3	33%	4 Convictions; fines £3, £1, £1, £2 and costs.
Rum...	12	8	4	33%	3 Convictions; fines £3, £2, 5/2 and costs averaging £1 4s. 7d.
Gin	16	11	5	31%	4 Convictions; fines £2, £1, 5/2, £2 and costs.
Butter	30	28	2	7%	2 Convictions; fines £3, £3 and costs averaging £2 8s. 0d.
Lard	15	14	1	6%	1 Conviction; fined £2 and costs.
Ginger	20	20	...	...	
Pepper	22	22	...	...	
Coffee	14	12	2	14%	2 Convictions; fines £2, £2 and costs
Milk	40	33	7	17%	5 Convictions; fines 8/6, £1, £10, £1, £1 and costs, averaging £1 0s. 7d.; one case withdrawn and one case dismissed.
Mustard	3	2	1	33%	Case dismissed.
Oatmeal	17	17	...	...	
Arrowroot	5	5	...	...	
Total	227	197	30	13%	

The number of samples taken and the number of convictions obtained are considerably in excess of either of the two previous years. The percentage of adulteration is very considerable, but as this percentage depends to a great extent upon the skill with which the samples are chosen, one must be careful in drawing conclusions Seven adulterated samples of milk out of 40 is certainly a large number, and indicates the necessity for very careful supervision of the milk supply. No legislation has yet followed on the report of the Departmental Committee on Food Preservatives. Probably on this account no samples have been taken for examination for preservatives. It is very desirable, however, that samples should be taken from time to time for this purpose, and that proceedings be instituted in those cases where preservatives are used so as to contravene the law as it at present stands.

In the Borough of Shrewsbury 50 samples were taken under this Act, and 6 were found to be adulterated. Proceedings in 4 cases were either dismissed or withdrawn. In the remaining two cases (butter adulterated with 90 per cent of foreign fat) fines of £10 were imposed.

FACTORIES AND WORKSHOPS.

I pointed out in my last Annual Report very briefly the duties that are imposed upon the Sanitary Authorities and their Officers by the Factories and Workshops Act, 1901.

The Medical Officer of Health is now required, in his Annual Report, to report on the administration of the Act with regard to workshops and work-places, and to forward a copy of the report to the Secretary of State. The report should deal with (1) sanitation of workshops and work-places; (2) bakehouses; (3) home work and other matters that have received attention.

The duties of the District Council are briefly:—

(1) To keep a register and take steps to make it complete.

(2) To receive lists of home workers in certain classes of workshops and see that the provisions relating to home workers are carried out.

(3) With regard to workshops the District Council is responsible for:—

(1) The sanitary condition, including *(a)* cleanliness, *(b)* ventilation, *(c)* air space, *(d)* drainage of floors, *(e)* sanitary accommodation*; (2) provision of means of escape from fire (also for factories); (3) special sanitary regulations for retail bakehouses; (4) home work. With the exception of fire escapes these are sanitary matters which should come under the direct cognizance of the Medical Officer of Health.

There are two important provisions relating to underground bakehouses (1) that no underground bakehouse shall be used unless so used at the passing of this Act; (2) that after January 1st, 1904, no underground bakehouse shall be used unless certified by the District Council as suitable.

The Act in some of the districts has not received much attention. The fact that it has only been in operation for one year and that in many districts it has little application probably accounts for this to a great extent. It is very improbable, however, that there are any districts in which there are no workshops or work-places within the meaning of the Act.

In the reports of the Medical Officers of Health for the following districts there is no mention of the Act:—Oswestry Urban and Rural, and the Rural Districts of Bridgnorth, Burford, Teme and Wellington. There is no mention of a register being kept by the Rural District Councils of Bridgnorth and Chirbury. It is specificially mentioned that no register has been kept of the workshops in the Urban Districts of Church Stretton, Newport and Wellington. In Ludlow Rural District a report on workshops and bakehouses is to be laid before the Council.

It is hardly to be expected that in such a short time the Act would be efficiently administered, but the most important matter in the initial stages is to get a full, accurate and descriptive register. Most of the matters under the heading of sanitation of workshops can be dealt with on lines which have been laid down and therefore present no special difficulty. It is not so, however, with regard to ventilation. The Home Office has given no indication as to what they consider satisfactory ventilation as applied to workshops. A standard of ventilation judged by the amount of carbonic acid in the air of the workshop has been recommended by a Departmental Committee, but this recommendation has not hitherto been followed by legislation. It therefore devolves upon each Medical Officer of Health to fix a standard for himself.

Details of the inspection of workshops will be found in the accompanying table.

The notices were practically all complied with and no legal proceedings were taken. Only one list of out-workers has been received according to sec. 107. Occupiers of factories and workshops appear to have neglected their duties under this section and no doubt the attention of those concerned will be drawn to this omission. In only one instance was a notice received from H.M. Inspector of Factories and in six instances notices were sent to him by the Local Authority (Dawley).

* The District Council is also responsible for the Sanitary Accommodation of Factories where sec. 22 of the Public Health Acts Amendment Act, 1890, is in force.

Record of

Table shows the work done by the

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.
RURAL DISTRICTS.		
Atcham	831	131
Bridgnorth	2000	185
Burford	..	..
Chirbury	486	79
Church Stretton	587	29
Cleobury Mortimer ..	246	32
Clun	325	81
Drayton	730	162
Ellesmere	400	20
Ludlow	154	40
Newport	250	26
Oswestry	270	101
Shifnal	706	63
Teme	..	..
Wellington	85	15
Wem	36	9
Whitchurch	150	31
URBAN DISTRICTS.		
Bishop's Castle	213	19
Bridgnorth	1000	16
Church Stretton	313	9
Dawley	869	325
Ellesmere	940	32
Ludlow	250	100
Newport	200	277
Oakengates	..	25
Oswestry	1700	147
Shrewsbury	2120	879
Wellington	..	..
Wem	706	18
Wenlock	1030	504
Whitchurch	205	69

The following figures, taken from the Census Returns, gives the number of persons engaged in trades which are commonly carried on in workshops. These form the bulk of the persons who are affected by the Factories and Workshops Act as administered by the Sanitary Authorities:—

	Urban Districts.		Rural Districts.	
	Male.	Female.	Male.	Female.
Blacksmiths and Strikers	665	5	861	8
Cabinet Makers and Carpenters and Joiners...	1151	26	1045	4
Tailors	504	100	263	34
Milliners, Dressmakers and Seamstresses ...	—	1673	—	1090
Boot and Shoemakers	434	21	434	11

In the whole County:—

	Male.	Female.
Bakers	547	4
Wheelwrights	481	—

Some of the above, however, may be engaged in factories and thus not come under the Sanitary Authorities.

INSPECTION.

On Table IV is a summary of the sanitary work carried out in the various districts.

No returns have been received for Burford, Teme, and Wellington (Urban District).

The number of houses inspected was considerably greater than in 1901. No doubt this result was due to the adoption of a house-to-house inspection in many districts.

In the Rural District of Wellington, with 2,500 inhabited houses, only 85 were inspected; and in the Rural District of Wem, with 1,800 inhabited houses, only 36 were inspected.

Dr. Whitaker reports a much more comprehensive inspection of the Ellesmere Rural District. He also refers in his report on Oakengates to the desirability of appointing a veterinary surgeon or a responsible retired butcher to safeguard the meat supply.

Assistance is recommended for the Sanitary Inspector of Whitchurch Urban District.

MIDWIVES ACT, 1902.

This Act came into force on April 1st, 1903. I have already given a short epitome of the Act, and it is only necessary here to point out briefly the duties of the Local Supervising Authority which in Counties is primarily the County Council.

(1) The first duty is to give due notice of the effect of the Act to persons using the title of midwife. In order to do this efficiently, I have obtained a fairly complete list of the midwives in the County, who will be communicated with when the rules are issued. This list has been obtained by the help of the Medical Practitioners of the County, whom I wish to take this opportunity of thanking.

(2) To keep a register up to date of all midwives practising in the County, to notify all changes to the Central Midwives Board and to report to that Board all midwives convicted of an offence.

(3) To receive and act upon all notifications by midwives laid down in the rules. These notifications are of

- (1) Deaths occurring before the arrival of a medical practitioner.
- (2) Still-births.
- (3) Puerperal fever, and other infectious diseases.
- (4) Copy of record of sending for medical help.

(4) To exercise a general supervision over midwives and to cause inspections to be made with regard to matters laid down in the rules.

(5) To investigate all charges of malpractice and report.

(6) To suspend midwives when it is necessary to prevent the spread of infection.

RAINFALL.

I have extracted from the "British Rainfall," 1901 and 1902, a summary of the rainfall at 40 Shropshire stations.

STATIONS.	Rain Gauge.			Depth of Rain.		Days on which ·01 or more fell in 1902.
	Diameter	Height above Ground.	Height above Sea Level.	1901.	1902.	
SHROPSHIRE.		ft. in.	feet.	inches.	inches.	
Ludlow (Ashford) Rev. J. Selwood Tanner ...	5	1 2	265	22·52	24·60	178
,, (Ashford House)	5	0 5	315	25·86	28·99	202
,, (The Sheet)	5	1 0	370	23·49	28·67	177
Bromfield (Priors Halton)	5	1 0	300	26·63	30·31	171
,, (Oakley Park)	5	1 0	300	24·60	28·33	211
,, Vicarage	5	1 0	300	24·83	27·71	174
Clunbury Vicarage	5	1 0	497	27·89	29·33	143
Craven Arms (Stokesay Vicarage)	5	1 0	371	28·33	29·25	176
Bishop's Castle (Totterton)	5	0 7	700	29·47	29·27	...
,, ,, (Castle Street)	5	2 0	720	30·71	29·60	185
,, ,, (Cabin)	5	0 9	810	30·61	30·65	...
,, ,, (Lydham Manor)	...	10 6	740	...	31·33	...
Bridgnorth (Coton Hall)	5	1 0	460	23·37	26·16	172
Church Stretton, Rev. R. P. Dansey	5	1 0	645	32·86	34·05	200
Bridgnorth (Hookfield House)	5	0 11	...	23·38	26·01	199
,, (Cantreyn Bank)	6	3 9	320	24·95	28·07	149
,, (Aldenham Park)	5	3 9	430	24·35	26·85	151
Church Stretton (Preen Manor)	5	1 0	700	26·41	25·70	175
,, ,, (Woolstaston)	5	1 0	800	29·63	30·51	196
Much Wenlock (Willey Park)	5	1 0	502	25 87	27·69	191
Pontesbury (Somerville)	5	1 6	355	24·69	23·64	147
Minsterley (Hampton Hall)	...	1 0	630	30·04	27·85	...
,, (Wallop)	8	1 3	700	36·21	33·19	191
Shifnal (Hatton Grange)	5	4 4	261	24·78	26·33	204
,, (Neachley)	5	1 6	280	26·05	26·39	201
,, (Haughton Hall)	5	3 0	355	24·22	27·02	149
Shrewsbury (The Abbey House)	8	1 3	171	21·11	20·66	162
,, W. Chapple Eddowes, Esq. ...	8	1 3	174	25·34	23·26	...
,, (Highfield)	5	4 6	250	23·18	23·03	146
,, (Roden)	...	...	208	23·53	22·28	165
,, (Fitz Rectory)	5	1 2	238	...	23·72	218
,, (Fitz Manor)	5	1 4	253	24·99	23·46	213
Newport (Aston Hall)	5	0 9	280	24·39	25·54	186
,, (Edgmond)	8	1 0	261	25·67	24·75	202
Wem (The Clive Vicarage)	5	1 0	299	26·11	22·00	238
,, (The Rectory)	5	1 0	270	27·65	24·97	245
Cheswardine (Knighton Res.)	8	0 3	351	30·63	25·84	189
Oswestry (The Mount Reservoirs)	5	1 0	698	34·66	37·50	169
Market Drayton (Buntingsdale)	8	3 0	276	29·22	24·63	...
Ellesmere (The Grange)	5	0 10	...	...	26·29	...

TABLE V.

The following table gives particulars of the Rainfall during 1902, based on reliable observations in two parts of the County.

	WOOLSTASTON RECTORY, SALOP.				THE CORPORATION GAUGE, SHREWSBURY.				
	Rain Gauge: Diameter of Funnel, 5 inches. Height of Top: Above Ground, 1 ft. Above Sea Level, 800 ft.				Rain Gauge: Diameter of Funnel, 8 inches. Height of Top: Above Ground, 1ft. 3in. Above Sea Level, 173 ft.				
Month.	Total Depth.	Greatest Fall in 24 Hours.		Number of days on which ·01 or more fell.	Total Depth.	Greatest Fall in 24 hours.		Number of days on which ·01 or more Rain fell.	Corresponding Total Depth, 1901.
	Inches.	Depth.	Date.		Inches.	Depth.	Date.		
January .	1·51	·29	27	14	·78	·25	26	4	1·73
February .	·93	·34	26	13	·99	·20	26	8	1·30
March ..	1·52	·72	14	11	1·23	·67	14	6	2·43
April .	2·74	·70	23	12	2·09	·87	23	5	1·99
May .	3·37	·63	17	22	2·68	·50	31	11	·79
June ..	2·94	·83	16	17	2·26	·81	29	11	2·70
July .	1·51	·37	25	15	·98	·38	25	8	4·79
August .	6·13	1·66	7	24	4·55	1·03	17	13	1·49
September ..	1·93	·46	10	17	1·51	·48	10	9	·87
October .	3·27	1·25	9	20	2·54	·95	9	11	1·97
November .	2·49	·59	8	16	1·87	·48	8	9	1·32
December ..	2·14	·49	14	15	1·78	·47	30	9	3·96
Total ..	30·51			196	23·26			104	25·34

Part II.

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

ATCHAM (Rural).

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

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

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 forming 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 considerable exposures of the Coalmeasures, 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 District is entirely rural in character, for the most part fertile and highly cultivated, and "supporting a comparatively large agricultural population, distributed in numerous important 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 Coalmines are worked around Hanwood, but "many parts of the small Coalfields are abandoned."

Statistics.

The population in the middle of 1902 is estimated at 20,880, and after correction for institutions at 19,910. The natural increase during the year was 52 (excluding the deaths in institutions belonging to other districts, the increase is 207.)

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 and Pneumonia.	Heart Diseases.	Cancer.		
1902	13·7	·30	·60	1·35	·15	1·9	1·7	1·1	70	24·1
1895 to 1901	15·3	..	..	..	..	..	..	..	90	24·8

The birth-rate was below the rate for Rural England. The Zymotic death-rate was due to 1 death from scarlet fever, 1 from whooping cough, 3 from diphtheria, and 1 from diarrhœa.

The rate from influenza was raised by 5 deaths in the County Asylum, where the disease was very prevalent during the year.

Infectious Disease.—One case of small-pox, 36 of scarlet fever, 25 of diphtheria, 1 of enteric fever, and 12 of erysipelas were notified.

The case of small-pox arose at a farmhouse in June, removed to Shrewsbury, and was dealt with there. The house was disinfected, and the contacts mostly revaccinated. *Scarlet Fever.* There was no serious epidemic prevalence during the year. At Berrington and Condover there were small outbreaks necessitating closure of the schools. *Diphtheria.* Thirteen of the 25 cases occurred from March to October at Atcham. The source of infection was obscure, but pointed to prolonged infection in a child returning to school, and the infection was probably principally spread by mild, unsuspected cases An extraordinary outbreak occurred in a farmhouse at Alberbury. Four persons were attacked, one of whom had had two previous attacks in the same year, another two attacks in the previous year, and a third, one previous attack in the same year. Fourteen elementary schools were closed during the year, on account of infectious disease.

Hospital Isolation.—There is no isolation hospital. An arrangement for a tent for small-pox was made but a site was not secured. For general isolation purposes combined action with the help of the County Council is desirable.

Disinfection.—A steam disinfector would be part of the equipment of a well-organized hospital. The Sanitary Inspector is empowered to employ an assistant to disinfect houses where it cannot be left to the householder Disinfection is by spraying.

Vaccination is carried out efficiently.

House Accommodation generally adequate in amount. Many are too small for occupants and are often badly lighted, ventilated and damp. There are not sufficient new houses built to replace these. A house to house inspection is in progress. Pontesbury Hill, on which Dr. Gepp has reported before, is the part of the district in which better housing conditions are most generally needed.

Overcrowding.—The Shropshire Census Tables show a somewhat higher proportion of small houses than in the rural districts of the County generally. The figures reveal the necessity for investigation and subsequent action.

New Buildings.—Bye-laws are in force in certain parts of the district.

Sewerage and Drainage. - Meole Brace by piped sewers, with manholes for flushing and shaft ventilators, on to land ; Dorrington by piped sewers, ventilated by two shafts, on to meadow land ; Pontesbury village by three lengths of main sewers, part on to land and part into the brook ; Minsterley by sewers mostly pipes, on to grass land. A scheme for sewering Cressage has been given up owing to opposition of the Parish Council on the score of cost. A blocked sewer recently opened was found to be quite unfit for the conveyance of sewage. The better sewerage of Pontesbury village and the better disposal of the sewage might with advantage be considered.

Excrement Disposal.—In Meole Brace there are a considerable number of water closets. Elsewhere except for larger houses there are mostly privies with underground vaults A number of these are being dealt with each year but there is still much to be done.

Removal of House Refuse is done by the householders. The Medical Officer of Health reported that a public system was desirable for Meole Brace. The scheme was not proceeded with on account of the cost

Water Supply.—A considerable amount of work has been done by the Council and large property owners in improving the water supplies of the district. The construction and situation of private wells yielding subsoil water is here as elsewhere radically objectionable. Good subsoil water is for the most part readily obtainable. Repairs and improvements have been made to a considerable number of wells and pumps during the year.

In connection with the outbreak of diphtheria at Atcham, Dr. Gepp analysed samples of water from the five principal wells. Three of them were found to be unsafe for drinking purposes, one of a doubtful quality and one probably safe unless liable to flooding from the river All the waters except one showed fairly good soil filtration. Means for improving the waters were pointed out. The recommendations made in the last Annual Report concerning the water supplies of Habberley, Hanwood Bank and Pontesbury Hill, still stand open for action. Plans for the supply of Meole Brace and Bayston Hill have been completed.

Staughter Houses, Cowsheds and Dairies.—These are looked after by the Sanitary Inspector, under the bye-laws and regulations. Bye-laws relating to Slaughter-houses are in force in certain parts of the district

Factory and Workshop Act, 1901.—There are 57 workshops on the register and on inspection they were found to be in good or fair condition. There are 6 Bakehouses. An inspection is now being made by direction of the District Council.

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 Census 1901		1,378
Number of inhabited houses ,, ...		354
Number of persons per house ,, ...		3·9

Physical Features and General Character of the District.

"The Borough comprises 1,867 acres of agricultural land, and forms an area some three miles in length, "by a mean breadth of about 1 mile, having 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 slope 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 sub-soil 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 "watershed of the Teme. In the town some small streamlets have been culverted about the foot of the hill, "and are practically sewers. Outside the town proper, the area is very sparsely populated. The town is a "market town."

Statistics.

The natural increase of population during the year was 17. The population, estimated to the middle of the year and corrected for institutions, was 1,350. This is the population on which the statistics are based.

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 and Pneumonia.	Heart Diseases.	Cancer.		
1902	21·4	·0	·0	2·2	1·5	5·2	2·2	2·2	60	37·0
1897 to 1901	19·0	..	..	..	..	..	..	..	108	23·8

The statistics illustrate the fact that large variations in the death-rates of small populations may take place from year to year without having any special significance. The rates from phthisis, other tuberculous diseases, bronchitis and pneumonia, and cancer were abnormally high.

There were no deaths from any of the common zymotic diseases.

Infectious Disease.—Four cases of scarlet fever, one of diphtheria, one of enteric fever and one of erysipelas were notified. One of the cases of scarlet fever was probably imported, and the others probably arose from unrecognised cases. The origin of the diphtheria and enteric fever was obscure.

Hospital Isolation.—An isolated cottage has been obtained. It has been repaired and cleaned but not furnished.

Disinfection is done by the occupier, the disinfectants being provided by the Council.

House Accommodation.—Adequate in amount, the proportion of population to houses being low. Statistics are quoted from the Shropshire Census Tables showing that with one or two notable exceptions there is little overcrowding. The houses are old and many poorly built and damp.

The space about houses is adequate and the surroundings fairly clean. There is much room for improvement in the paving and draining of the yards. House-to-house inspection is recommended as the best means of bringing to light these defects.

Sewerage and Drainage.—The centre of the town is properly sewered. On the crest of the hill are stone road-drains acting as sewers and discharging on land at various points. At the bottom of the main street are three or four stone sewers, formed by culverting small streams. Their outfall is at two or three points on almost level ground at the bottom of the town and the sewage is disposed of by irrigation. On inspection last summer Dr. Gepp had evidence of a nuisance where the sewers emerge and for some distance below the town. A scheme is being considered for the collection of the sewage and its treatment at one outfall. The carrying out of such a scheme and the replacing of stone culverts by pipe drains will allow of the extension of the water carriage system and of improved drainage of the houses.

Excrement Disposal.—Mostly privies with underground vaults, but a number of water-closets. Many of the privies are very objectionable from their situation and construction. Three privies were converted to water-closets during the year. Scavenging of privies and household refuse is done by the occupiers.

Water Supply.—The town supply is surface water from uncultivated land in hills 5 to 6 miles west of the town. There is a storage and a service reservoir. The water is filtered through sand and gravel filters in duplicate. This supply has been laid on to 5 houses and the railway station during the year. There are still a few houses unsupplied.

Bye-laws are in force relating to slaughter-houses, common lodging-houses, prevention of nuisances, cleansing of privies, and also regulations relating to dairies and cowsheds. There are 4 slaughter-houses and one common lodging-house.

Factories and Workshops.—There are 35 workshops on the register. Their condition was found to be generally satisfactory.

Bakehouses, 5 on the register; old premises and in some cases rough and ill lighted—kept fairly clean. There are no underground bakehouses.

BRIDGNORTH (Urban).

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

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

Statistics.

The natural increase of the population during the year was 26.

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 and Pneumonia.	Heart Diseases.	Cancer.		
1902.	18·5	1·6	·49	1·49	·33	3·0	·82	1·1	150·7	24·1
1892-1901.	16·3	..	..	..	..	..	..	..	133·7	25·6

The zymotic death-rate was due to 1 death from measles, 5 from whooping cough, 1 from enteric fever and 3 from diarrhœa. The infantile mortality was considerably above the average.

Infectious Diseases.—One case of small-pox, 6 of erysipelas, 10 of scarlet fever and 2 of enteric fever were notified. The case of small-pox was probably introduced from Birmingham Workhouse; he was admitted to the Workhouse and afterwards removed to the Isolation Hospital.

Disinfection of houses is carried out by formalin, the floors and walls being afterwards scrubbed with carbolic acid.

Dr. Padwick advises that phthisis be made notifiable.

Sewage.—The septic tank system at Cantern has been working for a year satisfactorily.

Removal of ashes is unsatisfactory—the box system should be in more general use.

Water supply has been plentiful.

The factories, workshops, lodging-houses, slaughter-houses, dairies and cowsheds have been visited and found satisfactory.

BRIDGNORTH (Rural).

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

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

Statistics.

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 and Pneumonia.	Heart Diseases.	Cancer.		
1902	12·01	·47	·23	·35	·35	1·16	1·28	·93	88·3	25·07
1898 to 1901.	12·8	..	..	..	..	..	..	..	106·5	26·2

The natural increase during the year was 112. The zymotic death-rate comprised 2 deaths from whooping cough, 1 from enteric fever, and 1 from diarrhœa.

Infectious Diseases.—54 cases of scarlet fever, 1 diphtheria, 1 enteric fever, 1 puerperal fever and 2 erysipelas were notified. Scarlet fever principally affected the parishes of Alveley, Morville, Monkhopton and Neenton, and necessitated the closing of these schools. Brockton school was closed for six weeks on account of whooping cough.

Small-pox Isolation.—An emergency committee was appointed and it was decided to isolate any cases that might occur, in their own homes or in tents or other buildings to be supplied by the committee.

The *water supply* has been good and plentiful throughout the district. Most of the *schools* have been visited and found to be in a satisfactory sanitary condition.

The dairies and cowhouses have been visited and found in good condition.

BURFORD (Rural.)

Medical Officer of Health ... E. T. WHITAKER, M.B., B.SC., D.P.H.

Area in acres		7,789
Population at Census 1901		1,233
Number of inhabited houses ,, ...		263
Number of persons per house ,, ...		5.2

General Character of the District.

The district is the smallest of the Rural districts in the County. The Workhouse is in Tenbury, and there is a small Cottage Hospital. There are, with the exception of two bakehouses, practically no places that come under the Factories and Workshops Act. One farmer is registered under the Dairies Order.

Vital Statistics.

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 and Pneumonia.	Heart Diseases.	Cancer.		
1902	11·4	·0	·82	·82	·0	·0	·0	·82	88·2	27·8
1897 to 1901	12·3	.	..	..	..	..	..	..	90	26·1

The population is estimated at 1,220. The natural increase during the year was 17.

There were no deaths from the common infectious diseases.

Infectious Disease.—Seven cases of scarlet fever, 2 of erysipelas and 1 of membranous croup were notified. Five of the cases of scarlet fever occurred in one house, into which the disease was probably introduced by a workman. Lack of means of disinfection of garments was greatly felt. For the isolation of small-pox the Council is advised to join with Tenbury and Cleobury. Reference is made to the 1901 Annual Report with regard to isolation and disinfection.

General Sanitary Condition.—Housing accommodation is fairly good. Drainage is an individual matter and has not given rise to any conditions requiring special action.

Water Supply.—No analyses have been made of the wells indicated as calling for inquiry. There have been no complaints of shortage.

CHIRBURY (Rural).

Medical Officer of Health ... J. RAYNOR-HATFIELD, L.R.C.P.

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

Statistics.

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 and Pneumonia.	Heart Diseases.	Cancer.		
1902	15·2	·28	·0	·56	·28	2 0	1·7	·85	119	23·7
Average for years 1898—1901	13·4	..	..	..	..	..	..	..	98·3	22·6

The natural increase during the year was 30.

The zymotic death-rate was due to one death from measles. Three deaths due to accidents included one from tetanus.

Infantile Death-rate.—This rate was above the average, but much lower than that of 1900. Of the ten deaths, six occurred within 8 days of birth.

Infectious Diseases.—Measles and phthisis have been included in the list of notifiable diseases and the temporary inclusion of chicken-pox is recommended.

Four cases of scarlet fever, 1 of diphtheria, 1 of erysipelas, 29 of measles and 3 of phthisis were notified. No schools were closed. There were a few cases of whooping cough, mumps and influenza.

Houses.—" Many of the houses, especially on the hills, present grave sanitary defects." Efficient action is impossible owing to lack of accommodation for families displaced. Two cases of overcrowding were reported.

Drainage.—The Council is advised to take active steps where water supplies are endangered by defective drains.

Excrement Disposal.—Many closets are in a very bad state of repair, too close to houses and not emptied sufficiently often. Remedial measures are recommended.

Workshops and work-places have been found satisfactory.

Water Supplies.—Chirbury (common supply), Worthen and Wotherton have good supplies of water. Snailbeach has a sufficiently pure supply from a private source. The water of Brockton has been again analysed. The Council is advised to seek a purer source of supply.

Goitre.—Fresh cases of goitre continue to occur, especially in the hilly district around Bromlow.

Sanatorium for Consumptives.—The Council is recommended to subscribe to some open-air sanatorium.

Small-pox.—A hospital of 6 beds is to be erected. Disinfecting apparatus for clothes is recommended to be established in connection with it.

Vaccination.—Infantile vaccination is efficient. The Guardians are advised to issue a notice advising re-vaccination.

CHURCH STRETTON (Urban).

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

Population at Census	*1901*	982
Number of inhabited houses	,, ...	816
Number of persons per house	,, ...	147
Number of persons per house	... ...	5·5

"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. The area is some 1600 acres.* The subsoil of the valley is glacial drift "generally of dry and well drained gravel, the hillsides to the west being of hard Longmyndian rock strata, "of Pre-Cambrian age, those to the east being also of hard rock, of Ordovician age. The town lies on the crest "of 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 district was constituted in "1899." "The climate, soil, and surface drainage are favourable to a high standard of health."

Statistics.

The natural increase during the year was 1. The population in the middle of 1902 is estimated at 860, and when corrected for institutions at 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.	Bronchitis and Pneumonia.	Heart Diseases.	Cancer.		
1902	15	·0	1·2	·0	·0	2·5	1·2	·0	·0	15·1
1900-1901	16·6	..	..	..	..	..	..	..	·0	23·2

The birth-rate was very low. There were no deaths from the common zymotic diseases and no deaths under one year.

Infectious Disease.—One case of scarlet fever only was notified. Its source was not traced.

Hospital Isolation.—As a "health resort" the necessity for some provision is evident. For small-pox a retaining fee was paid for a tent. A site has not been definitely secured. The Council approved of the County scheme.

Disinfection of rooms and clothing is by fumigation and cleansing under the supervision of the Inspector. A spraying apparatus for the use of the Inspector is recommended.

Re-vaccination.—Recommendations for general re-vaccination have been issued.

House Accommodation.—No house came under notice necessitating closure, nor did any case of overcrowding come to light. There are a number of defective cottages incapable of being made satisfactory.

Space around houses is satisfactory, but there is room for improvement in the paving and draining of yards and the prevention of accumulations of refuse.

* The recent census tables gives the area as 982 acres.

Erection of New Houses.—Bye-laws awaiting sanction.

Sewerage and Drainage.—The old town is efficiently sewered, and a scheme for sewage treatment has been the subject of an inquiry. The site of the outfall works had to be reconsidered. The work should be pushed on as the need for the new system is becoming urgent.

The enforcement of Sec. 25 of the Public Health Act ,1875, as affecting the drainage of new houses, is advised; also the framing of regulations, under Sec. 21 of the same Act, for old property which may be undrained (previously recommended). The flushing of the sewers at least once a week, and the ventilation, by means of shafts at the two main dead ends, are recommended.

Dr. Gepp recommends the provision of a proper equipment for the testing of drains.

Excrement Disposal.—Mostly water-closets, but some defective and offensive privies. Some of the worst of these are being abolished.

Removal of House Refuse.—A weekly removal has been arranged for.

Water Supply.—The new reservoir in New Pool Hollow was opened during the year. It holds 12,000,000 gallons. It receives also water from the Light Spout Valley by a main. The old resevoir in Town Brook is used for the old town and lower parts of the district. The gathering grounds are uninhabited and the water is unfiltered.

Adoptive Acts.—The adoption of the Public Health Amendment Act, 1890, and the Infectious Disease (Prevention) Act, 1890, are again recommended. Bye-laws for slaughter-houses and regulations for dairies, &c., have been adopted.

Dr. Gepp is of opinion that the adoption of bye-laws for the prevention of nuisances would be of advantage to the district.

Factories and Workshops.—The Sanitary Inspector is not provided with a register and has received no instructions. Bakehouses three in number; one dilapidated and dirty.

CHURCH STRETTON (Rural).

Medical Officer of Health	...	M. GEPP, L.R.C.P.E., D.P.H.
Area in acres		45,103
Population at Census 1901		4,479
Number of inhabited houses ,, ...		1,005
Number of persons per house ,, ...		4.4

Physical Features and General Character of the District.

"The district is one of hills and dales, highest across the centre from West to East, and sloping to the "North and South. The northern part lies on the southern watershed of the Severn, the southern part on "the northern watershed of the Teme, the various small streams arising on its uplands and running off "through the valleys to north or south affording good natural drainage. The elevation varies from 1700 feet "at the summit of the Longmynd to some 400 feet at the northern and southern limits of the District. "Three ranges of hills run through it from S.W. to N.E. the Longmynd range along the western side, the "Caradoc in the middle and the escarpment of Wenlock Edge runs through its eastern border. Between "these ranges are fertile valleys with several villages and many isolated farms and cottages. The hillsides are "largely cultivated, but are in part uninhabited moorlands. The sub-soil is that of some of the oldest "Geological formations, Archæan on the west, Ordovician largely in the centre, and Silurian on the east, "with a small and unimportant exposure of Coal Measures at the Northern end. These measures are not "worked. The district is entirely rural and agricultural, with a sparse and scattered population."

Statistics.

The population is estimated, in the middle of of 1902, at 4,462, and after correction for public institutions, at 4,520. The natural increase during the year was 43.

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 and Pneumonia.	Heart Diseases	Cancer.		
1902	16·1	·22	·22	·88	·44	2·2	1·3	1·54	122	23·4
1892 to 1901	16·4	..	..	..	..	..	..	..	89	22·2

The zymotic death-rate was due to one death from diarrhœa.

There were 7 deaths from cancer, giving a high rate of 1.54. The infantile mortality was high for the district, 3 of the 13 deaths being of children prematurely born.

Infectious Disease.—Sixteen cases of scarlet fever and one of each the diseases—diphtheria, erysipelas and enteric fever—were notified. Most of the cases occurred in Cardington and the school was closed in July. There were 4 cases towards the end of the year at Easthope, apparently contracted outside the district. The origin of the case of diphtheria was obscure. The water supply was analysed and condemned. The case of enteric fever originated outside the district. Cardington School was closed in May on account of whooping cough.

Hospital Isolation and Disinfection.—There is no isolation hospital and no means for public disinfection. An arrangement was made along with the Urban Council for a tent for small-pox if required. The Council expressed its approval of a County scheme.

House Accommodation.—No cases of overcrowding came under notice warranting proceedings, although houses are often found undesirably small for the families occupying them. The figures quoted from the Shropshire Census returns show that there are individual cases of overcrowding that need investigation. The figures approximate to the average of rural districts. Most of the houses have sufficient garden space for the disposal of the refuse.

Sewerage and Drainage.—Houses mostly drain separately on to land or into ditches. Piped sewers are laid at Picklescott and Wall-under-Haywood.

Excrement Disposal.—Principally privies wiith underground vaults. Frequent inspection is advised.

Removal of Refuse.—By householders.

Water Supply.—As regards isolated houses and several of the villages the supply is from private pumps or from land drains or springs. The water supply of individual houses is frequently unsatisfactory, but the remedy is generally difficult or impossible to secure. In a few villages much improvement has been made in recent years. Leebotwood has a supply laid on by gravitation from upland springs.

Wistanstow is in part supplied by gravitation and in part by a new pump and well.

Longnor.—Clean water has to be carried a considerable distance.

Brockton.—The Council built in and protected, some years ago, the public well.

All Stretton and Little Stretton are supplied by small upland surface schemes. Both would be benefited by filtration.

Cardington is supplied in part from private wells, but mostly from two public wells—St. James' and Job's. Dr. Gepp reports very favourably of both, although the latter is not efficiently protected from surface water.

Factories and Workshops.—There are 25 workshops on the register and their condition is reported as satisfactory. There are 2 bakehouses—sanitary condition reported as good—and no underground bakehouses.

CLEOBURY MORTIMER (Rural).

Medical Officer of Health ... E. T. WHITAKER, M.B., B.SC., D.P.H.

Area in acres	...	44,338
Population at Census	*1901* ...	6,720
Number of inhabited houses	,, ...	1,292
Number of persons per house	,, ...	5·2

General Character of the District.

The population of the district is estimated, after allowing for the temporary population engaged on the Birmingham Waterworks, at 6,350. "The district comprises 15 parishes, and has a rateable value of "£40,137. The only outstanding loans for sanitary purposes are those on Cleobury Parish, which amount to "£4,860, the assessable value of the parish being £4,288. With the exception of Highley and Cleobury, no "part of the district presents urban characters. Agriculture is the chief employment, though there is a small "mining community at Highley."

Statistics.

The natural increase during the year was 120.

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 and Pneumonia.	Heart Diseases.	Cancer.		
1902.	12·7	·94	·31	·31	·31	1·8	1·7	1·2	98	32·1
1895 to 1901.	15.0	..	..	..	..	..	..	..	98	28·4

The birth-rate is the highest since 1894. At least one-third of the infantile deaths were due to preventable causes. The zymotic death-rate was due to one death from scarlet fever and five from diarrhœa.

Infectious Disease.—Sixteen cases of scarlet fever, 7 of erysipelas, 1 of diphtheria, and 1 of typhoid fever were notified. Half of the persons attacked with scarlet fever were infected through failure to isolate the first cases. The origin of the cases of diphtheria and that of typhoid fever were obscure. For small-pox two wooden buildings have been purchased and erected on a good site. The larger consists of two wards capable of receiving 8 patients, and the smaller contains accommodation for nurses. The hospital was provided in conjunction with Tenbury and Rock. The wisdom of making provision was shown in the early part of this year.

House Accommodation is fairly good. A number of the houses are getting towards the limit of their existence.

Drainage and Scavenage.—"As regards Cleobury town the inadequacy of both drainage and scavenage is becoming more and more marked." Dr. Whitaker points out that the sewers are in a bad condition and that it is useless under these conditions to insist upon better drainage of houses. He again calls attention to the necessity for public scavenging. A main sewer has been provided at Highley. There has been some improvement in the scavenging of Highley, which is done by the company and not by the Local Authority, and which is consequently not so complete and general as is desirable.

Water Supply.—Cleobury has a public water supply, but it is not used so generally as it should be. Stottesdon supply remains as it was. At Highley a complete filtration installation has been provided for dealing with Severn water, but up to the end of the year it had not been satisfactorily tested.

Trades.—The Factories Act, 1901, has not much application. The few places coming under its provisions are visited.

CLUN (Rural).

Medical Officer of Health ...	M. GEPP, L.R.C.P.E., D.P.H.	
Area in acres		82,206
Population at Census 1901		6,824
Number of inhabited houses ,, ...		1,487
Number of persons per house ,, ...		4·5

Physical Features and General Character of the District.

"The District comprises 82,206 acres, lying in the south west of the County, and on the borders "of Wales. It is essentially a hill country, much of the District lying at an elevation of 1,000 feet and "upwards, especially on the northern and western parts. The centre and south eastern part consists of "open valleys from about 400 to over 600 feet in elevation, and broken and divided by small groups of "hills. The main structure is, I imagine, that of an old elevated table land much dissected and "weathered down."

"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 on the east and south-east to join the Teme.

"The District is sparsely populated, and agricultural in character, much of the hill country being "cultivated or grazed.

"A small area in the north has in the past been worked for lead and other minerals, but these industries "have much declined in recent years. The District contains the small town of Clun, and several "villages of small size which are principally placed in the valleys, and some smaller hamlets and many "isolated houses scattered about the hill country."

Statistics.

The population, in the middle of 1902, is estimated at 6,780, and when corrected for institutions, is estimated at 6,800. The natural increase during the year was 83.

Period.	Death-rates per 1000 population from								Infant Death-rate per 1000 Births.	Birth-rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phth isis	Other Tubercular Diseases.	Bronchitis and Pneumonia.	Heart Diseases.	Cancer.		
1902.	13·2	·59	1·32	·73	·14	2·3	1·0	·73	139	24·3
1897 to 1902	16·3	..	..	..	..	..	..	..	96	24·8

The zymotic death-rate was due to one death from scarlet fever, two from diphtheria and one from diarrhœa. The high infantile mortality is partly accounted for by nine deaths of children prematurely born.

Infectious Disease.—Sixty-seven cases of scarlet fever, 6 of diphtheria and 2 of erysipelas were reported. *Scarlet Fever* chiefly centred round two schools, Clun and Lydbury North. The former was closed from May 21st to June 23rd, and from July 11th to September 1st; and the latter from March 7th to April 1st. *Diphtheria.*—Most of the cases occurred at Beckjay. Four cases occurred in one insanitary farm-house and two of the patients died. Another child had died in this house a few days previously and the death was not certified. Probably this death was also due to diphtheria. Plowden school was closed in March on account of influenza and infectious sore throat.

Hospital Isolation.—For small-pox arrangements have been made with Bishop's Castle for the use of their cottage. Dr. Gepp advises that another cottage should be obtained for the southern part of the district.

House Accommodation.—Adequate in amount; some are undesirably small for their occupants and many are badly lighted and ventilated, damp and more or less dilapidated. Shropshire Census returns show that the district compares favourably with the rural districts of the County. The figures show a few instances of overcrowding.

The Sanitary Inspectors are carrying out a house-to-house inspection. Special attention should be directed to removing all remediable causes of dampness. Some of the small farms are particularly insanitary and to this cause is attributed the very virulent character of several cases of diphtheria occurring at one farm, and a case of scarlet fever at another.

Sewerage and Drainage.—The sewerage of the town of Clun has been improved by the provision of a flush tank and ventilating shaft at the head of one main sewer, and by relaying of the outfall of this sewer into the river.

Excrement Disposal.—Mostly by privies with underground vaults, scavenged by the occupiers.

Water Supply.—Considerable improvement has been effected of recent years. There are still some villages that would benefit by schemes of water suuply.

Clun.—An excellent public supply from upland springs to all houses except two. An extension to seven houses at Clun Green is contemplated.

Newcastle is supplied from upland springs at the foot of Vron Hill, by gravitation, to houses and standpipes.

Chapel Lawn.—The Council sunk a well, but the water, on analysis, not being altogether satisfactory, it was recommended that the well be opened, cleaned out and made good.

Lydbury North.—A private gravitation supply of good upland spring water is laid on to about one-third of the houses. Lydbury Down is similarly supplied, and a supply of good water has been laid on during the year to the small hamlets of Acton and The Leasty.

Linley.—A small supply of upland surface water was laid on during the year to 3 or 4 houses and the school.

Clunbury.—Dr. Gepp has previously recommended the laying on a supply from the spring in Clunbury Hill. The matter is under consideration.

Dairies and Cowsheds.—These are registered and looked after by the Sanitary Inspectors.

Factories and Workshops.—There are 73 workshops on the register; all found satisfactory on inspection. There are 7 bakehouses, none of which are underground.

DAWLEY (Urban).

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

Area in acres		2,790
Population at Census	*1901*	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 lands, 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 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 iron works 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, iron-works, and brick and tile works outside the District. The population fell "off by upwards of 2,000 persons between 1881 and 1891, but increased again by upwards of 500 during "the ten years 1891—1901. 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."

Statistics.

The natural increase of the population was 43.

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 and Pneumonia.	Heart Diseases.	Cancer.		
1902	15·9	1·18	·52	·52	·0	3·5	·78	1·3	111	33·4
1897—1901	15·7	..	..	..	..	..	..	..	101	31·3

The birth-rate was again high.

The zymotic death-rate was due to two deaths from measles, 5 from whooping cough, 1 from membranous croup and 1 from diarrhœa.

The death-rate from tuberculosis was low, and that from cancer high. The rate for bronchitis and pneumonia amongst children was much higher than in previous years—probably due to whooping cough and measles.

Infectious Disease.—Thirteen cases of scarlet fever, 1 of diphtheria 2 of enteric fever and 1 of erysipelas were notified. Each case was investigated and instructions given for isolation, fumigation of rooms and clothing, and cleansing, etc., of rooms.

The origin of the cases of enteric fever was obscure. Measles was prevalent in the summer and lead to the closure of three schools.

Hospital Isolation and Disinfection.—No hospital and no provision for public disinfection. Hospital accommodation for small-pox is being considered by the County Council. For general infectious diseases no steps have been taken. The Inspector has supervised or carried out fumigation of infected rooms; a spraying apparatus is recommended as more efficient.

House Accommodation.—The majority of the houses are small and old and exhibit many unsatisfactory features. Much improvement has taken place of recent years in consequence of increased prosperity and greater demand. Dr. Gepp gives abstracts from the Census Tables showing that the number per house, 4.6, is similar to the average of other urban districts in the County, but further analysis shows a considerable number of cases of gross overcrowding. He recommends searching investigation and stringent steps to remedy these conditions.

Cleanliness of Surroundings leaves much to be desired. The remedy is frequent and systematic inspection from house to house, followed by the necessary measures to remove the nuisances.

Sewerage and Drainage.—In the central parts the houses are connected to sewers or road water drains, partly piped, partly culverted and partly open. Owing to the good natural fall they carry the sewage fairly efficiently, but the Medical Officer of Health would hesitate to describe them as satisfactory without further knowledge. There is no means of flushing except rainfall and no ventilation except untrapped gullies. These are at time offensive. Scattered houses discharge into ditches or on to gardens. House drains are very roughly constructed. The sewage finds its way through watercourses to the Severn.

Excrement Disposal.—A few water-closets—the majority of houses have privies with underground vaults. *Dr. Gepp refers to his previous reports on the defects following upon a want of system in scavenging.*

Water Supply.—Partly from private wells, but mostly from a dozen or more public wells, situated often at great distances from the houses. Negotiations for a supply from Harrington have fallen through. An unsuccessful boring nearly 200 feet into the Millstone Grit was made. Investigations have been made at the Spout Spring. Fifteen days' pumping in October reduced the yield from 46,000 to 28,000 gallons per day, and at the end of the test, water rose again to the overflow level in 24 hours. Analysis shows the water to be pure. Hinksay Well and Woolleys Well have been protected. The Medical Officer of Health has examined and condemned the water of Barnfield Public Pump.

Bye-laws.—A Committee has been appointed to consider bye-laws for slaughter-houses, new buildings, cleansing of privies, cowsheds and dairies.

Factories and Workshops.—Number of workshops on the register, 29—their general condition was found to be satisfactory. Number of bakehouses, 9—none underground; inspected by the Medical Officer of Health and found clean and structure fairly good.

DRAYTON (Rural).

Medical Officer of Health ... ... A. MACQUEEN, M.D.

Area in acres	51,384
Population at Census 1901	11,708
Number of inhabited houses ,, ...	2,655
Number of persons per house ,, ...	4·4

Physical Features.

The Rural Sanitary District of Drayton is situated in the great central plain of England at a general elevation of about 300 feet. The formation throughout is the new red sandstone, which attains its greatest elevation in England in the Hawkstone Hills near the western limit of the district. The land in general contour is level, well watered, and highly cultivated, and is mostly drained by the River Tern.

Statistics.

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 and Pneumonia.	Heart Diseases.	Cancer.		
1902.	16·1	·59	·0	·51	·43	2·0	2·2	1·3	145	27·0
1895—1901.	16·7	..	..	..	..	..	..	..	131	25·6

The population is estimated at 11,676. The natural increase during the year was 125.

The zymotic rate was due to one death from measles, 3 from scarlet fever, 2 from diphtheria and 1 from diarrhœa.

The infantile mortality was somewhat high, but a considerable proportion of these deaths took place within a few days of birth.

More than half the total deaths were at the extremes of life, *i.e.*, under one and over 70.

Infectious Diseases.—Fifty-nine cases of scarlet fever, 7 of diphtheria, 9 of erysipelas and 2 of pulmonary tuberculosis were notified. The epidemic of scarlet fever reported on in 1901 continued until May, 1902. Since then there have been three separate outbreaks, one being due to an introduced case. In each case the disease was prevented from spreading beyond the house.

In cases of infectious disease printed precautions are sent to the occupiers and the houses are disinfected with formalin vapour and cleansed under the supervision of the Inspector. The children from infected houses are excluded from school. An isolation hospital is in course of erection. Four schools were closed on account of measles.

Vaccination.—Out of 316 children born, 251 were successfully vaccinated, 41 died unvaccinated, 4 removed out of district, 13 were not of age at end of year, 6 were postponed, and one unvaccinated on account of conscientious objection.

House Accommodation.—Adequate in amount, but room for improvement as regards fitness.

Sewerage and Drainage.—The sewerage of Little Drayton is completed and the treatment works almost ready. The sewerage and sewage disposal of Market Drayton should next be dealt with.

Excrement Disposal.—The general adoption of the water-carriage system is recommended.

Scavenging.—A public system is under consideration.

Water Supply.—In Market Drayton 900 houses are supplied by the Market Drayton Company with good water. A report by Dr. Macqueen on the water supplies of the villages is under consideration. Lodging-houses, slaughter-houses and bakehouses are inspected regularly. The inspection of dairies and cowsheds is under consideration.

Factories and Workshops.—A register is kept and the Sanitary Inspector inspects the workshops and work-places, of which there are 100 on the register. They are clean, free from effluvia, efficiently ventilated and with sufficient air space; closet accommodation generally good and improving. Bakehouses on register number 13—one underground. The Medical Officer of Health has inspected these during the year and found them in a good condition. Lists of outworkers have not been received by the Council.

ELLESMERE (Urban).

Medical Officer of Health ... E. T. WHITAKER, M.B., B.SC., D.P.H.

Area in acres		1,204
Population at Census 1901		1,945
Number of inhabited houses ,, ...		425
Number of persons per house ,, ...		4·5

General Characters.

The houses are generally good, and there is little overcrowding. There is an excellent water supply. The town is sewered, and the footways are mostly paved and the streets kept clean.

Vital Statistics.

The population is estimated at 1,955. The natural increase during the year was 6.

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 and Pneumonia.	Heart Diseases.	Cancer.		
1902	13·2	·0	·0	1·02	·0	1·5	·5	1·5	90·9	22·5
1899 to 1901.	15·9	..	..	..	..	..	..	..	94	28·0

A large proportion of the deaths were from old age.

There were no deaths from the common infectious diseases.

Infectious Disease.—3 cases of scarlet fever only were notified.

There is no means of isolating infectious disease or of disinfecting beds and clothing. Regret is expressed that the County Council Scheme for the provision of small-pox hospitals has fallen through.

House Accommodation.—During the year a complete house-to-house survey has been made.

Drainage and Scavenage.—The sewers appear to work satisfactorily. There is a large proportion of hand flushed closets, but little nuisance eems to result from want of flushing cisterns. Attention is called to the remarks on public scavenging in the report for 1901.

Water Supply.—Good—laid from the Liverpool main to the majority of the houses. Other houses are supplied by standpipes.

Factories and Workshops.—A register of workshops is kept. There are 41 on the register, all of which have been systematically inspected and with few exceptions found satisfactory.

Dairies are also fairly satisfactory.

Nuisances.—Mostly of a minor character. One smoke nuisance of a serious character was dealt with during the year. A careful and systematic inspection is now being performed.

ELLESMERE (Rural).

Medical Officer of Health ... E. T. WHITAKER, M.B., B.SC., D.P.H.

Area in acres		51,117
Population at Census	1901	7,911
Number of inhabited houses	,, ...	1,658
Number of persons per house	,, ...	4·7

General Characters of the District.

The district is strictly agricultural and contains a number of small villages of which Baschurch is the largest. Parts of the district are very flat but it is mostly undulating and cultivated. The subsoil is gravel with some clay and drift. The rateable value is £84,000 and there are no outstanding loans for sanitary purposes.

Vital Statistics.

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 and Pneumonia.	Heart Diseases.	Cancer.		
1902.	11·2	·5	·12	·63	·12	2·0	1·3	·5	75·5	21·8
1899—1901.	15·4	..	..	..	..	..	..	..	128	27·0

The population, for 1902, is estimated at 7,890. The natural increase during the year was 91.

Both the general death-rate and the infantile mortality were low compared with previous years and the country generally.

The zymotic death-rate was due to two deaths from measles and two from diarrhœa. There were five deaths from phthisis. The importance of clean, well ventilated and dry dwellings and the prevention of indiscriminate spitting is pointed out in this connection. There were an exceptionally large number of deaths from heart disease.

Infectious Disease.—Twenty-seven cases of scarlet fever and one of each of the diseases, diphtheria, erysipelas, enteric fever and puerpera fever, were notified. The scarlet fever occurred principally in Baschurch in June and July, and was spread mostly through schools. The need for isolation was much felt here. Outbreaks of measles occurred at Baschurch, Harmer Hill, Dudleston and Nesscliff. The question of notification of measles was considered but not adopted for various reasons, the Medical Officer of Health receiving his information from the schools. Primary vaccination is efficiently performed, but in the absence of general re-vaccination there is no security without some provision for the isolation of small-pox.

House Accommodation, on the whole, fairly satisfactory. More careful inspection is now being made.

Drainage and Scavenage.—A Committee was appointed to consider the question of improving the draining of Baschurch, but apparently considered that no action was necessary.

Water Supply.—Dr. Whitaker still thinks that the provision of a public water supply for Baschurch should be carefully considered.

Workshops and Places, etc.—A register of workshops has been prepared. There are 50 on the register; all have been inspected and for the most part found satisfactory. There is a good deal of milk sold wholesale by farmers, but there are no special regulations in force.

Nuisances.—Dr. Whitaker reports a much more comprehensive inspection of the district and consequently a more complete attention to nuisances.

LUDLOW (Urban).

Medical Officer of Health	C. B. CRANSTOUN, M.B.
Area in acres	418
Population at Census 1901 (extended area)	6,373
Number of inhabited houses ,, ...	1,372
Number of persons per house ,, ...	4.6

Topographical Features and Geological Formation of the district.

"Ludlow is a small agricultural town on the southern border of Shropshire, about 360 feet above sea "level. It is situated on a large spur of limestock 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."

"Taking a line from the Castle through the Bull Ring to the Sandpits the following strata will be "encountered. The Castle itself stands upon a mass of Upper Ludlow Rock, before reaching the Town Hall "the Downton Sandstone crops up. This is overlain by Gravel, increasing in thickness as we proceed through "High Street towards the Bull Ring, where is found a deep bed of coarse Gravel and Clay with large Boulder "Stones. This is followed in Upper Galdeford by a thick bed of Red Marl overlying Olive Shales and old "Red Sandstone. Taking a second line at right angles to the first, that is to say, from the bottom of Old "Street, through the Bull Ring, to the bottom of Corve Street, we find for some distance up Old Street, Gravel "upon Blue Clay overlying the old Red Sandstone, but at about one third up the street the Downton "Sandstone comes to the surface, and continues to within a short distance of the top, where a mass of hard "'Blue Rock' extends to the Bull Ring. Upon descending Corve Street, after passing through the thick bed "of coarse Gravel before mentioned, we come upon beds of 'yellow' and 'red' Clay overlying old Red "Sandstone. From this point to the bottom of the street are continuous beds of deep Gravel."

Statistics.

The natural increase of population during the year was 75.

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 and Pneumonia.	Heart Diseases.	Cancer.		
1902.	16·1	·95	·79	·79	·47	2·8	1·7	1·2	91·4	29·4
1892—1901.	18·27	..	..	..	.	..	..	..	124·9	27·0

The zymotic death-rate was due to 3 from whooping cough and one from each of the diseases, measles, typhoid fever and diarrhœa. The infantile mortality was considerably less than in 1901.

Typhoid Fever.—Under this heading Dr. Cranstoun advises strongly the abolition of all privy middens, and he also points out the great sanitary advantages of painting instead of papering the walls of cottages.

Hospital Accommodation.—Small-pox.—A small hospital for this purpose has been erected. *For other diseases* a hospital with two beds for every thousand inhabitants is recommended.

Water Supply has been good in quality and quantity, although slightly coloured during heavy rain.

Sewage System.—The new system is now complete, but it is to be regretted that the filter beds are not as efficient as they should be.

House Drainage.—The disconnection of all rain-water pipes is recommended, and the application of the water test to all new drains.

House Accommodation.—On account of temporary congestion closure of houses has only been advocated when absolutely necessary.

Disposal of Excrement and Refuse.—The mass of refuse in the Smithfield has become a public nuisance and a danger to the health of the town. A destructor is recommended as the only solution.

Dairies, Milkshops and Cowsheds have been inspected. The cowsheds and their surroundings are capable of improvement.

Inspection of Workshops.—Registered—7 retail bakehouses, 59 workshops and 10 work-places—no underground bakehouses. General condition satisfactory.

Dr. Cranstoun says: "I desire to draw your attention to the following matters, which press for your early and careful consideration:—"

(a) The abolition of the ever increasing and highly dangerous accumulation of refuse in the Smithfield, and the provision of some efficient means of refuse disposal.

(b) The extension of the water-carriage system wherever possible, instead of the present middens and privies.

(c) The strict enforcement of the laws dealing with the dwellings of the poor, and the improvement of all such dwellings where necessary.

(d) The provision of a General Isolation Hospital for the Borough and surrounding neighbourhood

(e) The paving and improvement of the sanitary condition of back courts, yards, and alleys.

(f) The control of the numerous vagrant dogs which roam our streets and often defile our pavements in a most filthy and disgusting fashion.

(g) The completion of the main sewers in the newly added area.

LUDLOW (Rural).

Medical Officer of Health ... ... G. A. SHACKEL, L.R.C.P.

Area in acres		66,350
Population at Census	*1901 (of reduced area)*	9,585
Number of inhabited houses	,, ...	2,003
Number of persons per house	,, ...	4·7

A portion of East Hamlet and Ludford Parishes were incorporated with Ludlow in November, 1901. This portion contained 385 inhabited houses and a population of 1,821. There is a little uncertainty about the exact population owing to the migratory population employed on the Birmingham waterworks being included in the Census returns.

Statistics.

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 and Pneumonia.	Heart Diseases.	Cancer.		
1902.	12·6	·63	·31	·31	·1	1·6	1·6	·52	87·5	25·2
Middle of 1897 to end of 1901.	14·8	..	..	..	..	..	..	..	105	26·3

The natural increase during the year was 106.

The zymotic death-rate comprised 3 deaths from measles, 1 from whooping cough, 1 from diphtheria and 1 from diarrhœa. The infantile mortality was well below the average of the last 5 years.

Infectious Disease.—Sixty-one cases of infectious disease were notified, of which 30 were chicken-pox, 17 scarlet fever, 5 diphtheria and 4 enteric fever. Scarlet fever was attributed in one small outbreak to school infection and in another to infection through books. A case occurring at a post office, which was also a schoolmaster's house, necessitated the closure of the school and the removal of the post office. Three out of the four cases of enteric fever were attributed to drinking from a polluted brook. A pure supply has been promised. The cases of chicken-pox were mostly in the Munslow district.

Small-pox Isolation Hospital.—A small galvanized iron hospital, lined with match-boarding, has been provided. It contains two wards and will accommodate six patients.

House Accommodation is not satisfactory, especially in the Clee Hill district. Several cases of overcrowding have been dealt with, but efficient action is difficult owing to lack of accommodation.

Water Supply.—Clee Hill.—The proposed public supply is still under consideration. Some improvements to the supplies of Stoke St. Milborough, Aston Munslow, Stanton Lacy and Bromfield have been made.

Excrement Disposal.—Many of the privies are in a very bad state of repair and are not emptied sufficiently often.

Registered Cowsheds have been inspected and found fairly satisfactory.

Factory and Workshop Act, 1901.—The register is not yet completed. A report on workshops and bakehouses is to be laid before the Council.

Recommendations.

(1) That the bye-laws be made applicable to the whole district and be strictly enforced.

(2) That measures be taken to compel owners to remedy defective privies and that water-closets be substituted where there is a system of sewerage.

(3) That every means be taken to remedy the want of a water supply in the Clee Hill District.

NEWPORT (Urban).

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

Area in acres	768
Population at Census 1901	3,241
Number of inhabited houses ,, ...	720
Number of persons per house ,, ...	4·5

Physical Features and General Character of the District.

"The District comprises 759 acres, lying on the Eastern border of the County, very level in contour, the "general elevation being some 250 feet. 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 a mile in length, running North and South, "with several narrow lanes and passages and courts running at right angles from it. This part of the Town "is compact and old and there is about the centre some crowding of houses upon area. To East and West "is open country with extensions of more modern building along the roads converging on the town, and some "outlying collections of houses. Newport is a Market and residential town."

Statistics.

The population, estimated to the middle of 1902, is 3,229, and when corrected for institutions to allow of the calculation of corrected death-rates, it is 3,160. The natural increase during the year was 26.

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 and Pneumonia.	Heart Diseases.	Cancer.		
1902	19·9	2·84	·0	1·6	1·9	4·1	1·2	·93	218·7	30·3
1898—1901	15·4	..	..	..	..	..	..	..	86	24·6

As shown by this table the rates for zymotic diseases, phthisis, other tubercular diseases, and bronchitis and pneumonia, and the infantile mortality are very high. On account of the smallness of the population the importance of such high mortalities for single years must not be overrated.

The zymotic death-rate was due to 3 deaths from measles, 4 from whooping cough, 1 from scarlet fever and 1 from diarrhœa.

Infantile Mortality.—Out of the 21 deaths under one, Dr. Gepp attributes 10 directly or indirectly to measles or whooping cough. Tubercular diseases caused four deaths.

Infectious Disease.—Twenty-three cases of scarlet fever were notified. Ten of the cases occurred in February and the remainder scattered throughout the year. Nine of the cases which could not be properly isolated at home were treated in the isolation hospital.

Measles and whooping cough were very prevalent during the summer months. Two schools were closed on account of measles.

Hospital Isolation.—There is an isolation hospital consisting of a cottage and 2 wards, each capable of holding two beds.

Small-pox.—An arrangement has been made for erecting tents, if necessary, and a site has been secured. Dr. Gepp is of opinion that a large hospital district and a permanent building such as the County Council proposed is the best scheme.

Disinfection.—A steam disinfector has been previously recommended. A spraying apparatus for infected rooms is recommended.

House Accommodation is "adequate in amount and for the most part fit for habitation." A good many houses are poor and worn out and some are very small and do not reach a satisfactory standard. There is often insufficient space about the houses, and lighting and ventilation are deficient. Many of the worst are empty.

Figures quoted from the Shropshire Census returns seem to show little overcrowding, although they show some cause for investigation.

Cleanliness of Surroundings of houses is improving, on account of the Council's scavenging system. House-to-house inspection is strongly recommended as the old cottage property requires constant attention.

New Buildings are supervised under Bye-laws.

Sewerage and Drainage.—The sewerage is being pushed on to completion. The treatment of the sewage will be by filter beds and land filtration.

Regulations have been adopted under Sec. 21 of the Public Health Act, 1875. Where old drains are connected to the new sewers Dr. Gepp advises that they should be investigated, put in good order and an intercepting trap placed on them.

Excrement Disposal.—About one-fifth of the houses have water-closets. The remainder have privies with underground vaults. The conversion of the offensive ones to water-closets is advised.

Scavenging is done by the Council.

Water Supply.—A good water supply from three artesian wells sunk and bored in the New Red Sandstone to the south of the district. Dr. Gepp analysed samples of water from these wells during the year and found them practically identical, of good quality and having 16°—17° of hardness.

Common lodging-houses, slaughter-houses, and dairies, cowsheds and milkshops are under regular supervision by the Sanitary Inspector.

Adoptive Acts.—Infectious Disease (Prevention) Act, 1890, and the Public Health Amendment Act, 1890, Part III., have now been adopted.

Factories and Workshops.—There is no register kept. The Sanitary Inspector has visited about 94 premises, of which about 54 are workshops which should be on the register and be systematically inspected.

There are 8 bakehouses, of which one is underground. The Medical Officer of Health has inspected these. Several are old structures and in some the lighting and ventilation are scarcely efficient.

NEWPORT (Rural).

Medical Officer of Health ...	M. GEPP, L.R.C.P.E., D.P.H.	
Area in acres		22,807
Population at Census 1901		6,033
Number of inhabited houses ,, ...		1,284
Number of persons per house ,, ...		4·7

Physical and General Characteristics.

"The District comprises 22,945 acres lying upon the Eastern border of the County. The Northern and "larger part is on the Shropshire plain, varying in elevation from 150 to 300 feet, and lying on the Bunter "Beds of the New Red Sandstone. This part is entirely agricultural and contains the villages of Edgmond "and Tibberton with some smaller ones. The Southern and much smaller part rises rather rapidly, reaching "some 500 feet elevation at the extreme border on the South and comprising the apex of the extensive "triangular Coalfield which has its base some miles to the South. This part lies upon the Coal Measures, "with a small intrusive outcrop of much broken and older strata forming Lilleshall Hill, on and around "which is the village of Lilleshall. The natural drainage is by various small streams from the South and "East flowing towards the West, and falling into the River Tern outside the District. There are several "collieries and some engineering and other ironworks in the Southern part, and the population there is "relatively denser, but much scattered in groups of dwellings, and for the most part industrial."

Statistics.

The natural increase of the population during the year was 84. The population, estimated to the middle of 1902, is 6096, and when corrected for institutions, 6,120.

Period.	Death-rate 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 and Pneumonia.	Heart Diseases.	Cancer.		
1902.	14·0	·65	·49	·98	·16	3·4	·98	·83	118	26·3
1897—1901.	16·6	..	..	..	..	..	..	..	136	27·0

Zymotic death-rate was due to 4 deaths from diarrhœa.

Infectious Disease.—Six cases of scarlet fever, 1 of enteric fever, 7 of erysipelas and 1 of puerperal fever were notified. The origin of the case of enteric fever was obscure. Four of the cases of erysipelas occurred near Edgmond. Measles was prevalent in Chetwynd, Edgmond and Tibberton in the summer months, necessitating the closure of the schools.

Hospital Accommodation.—There is no isolation hospital for the use of the district. For small-pox, arrangements have been made to secure a tent at a short notice and a site has been obtained. No steps have been taken to provide a hospital for other infectious diseases.

Disinfection.—Disinfectants are provided in serious cases. Disinfection is left to the house-holder.

Antitoxin in Diphtheria.—The Council is prepared to bear the cost of preventive inoculation in case of a serious outbreak.

House Accommodation.—In the agricultural parts the houses are, on the whole, adequate in amount and fit for habitation. In the Donnington Wood district the accommodation is less satisfactory. Long rows of one-storied houses, thinly built, often damp, unceiled, with defective lighting and ventilation are common. Something has been done to remedy the defects, but there is still much room for action.

Dr. Gepp gives extracts from Shropshire Census Tables showing that there is a higher percentage of small houses than in the average of other rural districts. These tables show many cases of overcrowding that require investigation.

Cleanliness of Surroundings.—Little serious fault to be found. A systematic house-to-house inspection is recommended.

There are no bye-laws for new buildings.

Sewerage and Drainage.—The sewerage of Edgmond is being improved and extended.

Excrement Disposal.—Mostly outside privies with underground vaults. Attention should be given to keeping the privies in proper repair and well covered. Several houses in Edgmond and elsewhere have water-closets.

Disposal of House Refuse is effected by the occupiers.

Water Supply.—Church Aston and Chetwynd Aston are supplied from the Urban Council works. Application was made by the owner for the mains to be extended to a group of 9 houses at Blackberry Bank in Chetwynd Aston Parish. The Medical Officer of Health could not report that the houses were without a sufficient supply of wholesome water.

Tibberton.—A supply has been laid to standpipes in the village. The water, previously used for two or three farms, is pumped from a well to a reservoir by a wind engine.

Lilleshall.—Dr. Gepp has previously recommended that a supply should be laid on to this village. A scheme for supplying the parish, got out in 1901, is still under consideration. The County Council has brought forward a scheme for supplying part of the parish along with other districts. Inspection showed that the water of three of the public pumps in the village contained suspended matter and are objectionable. In one case the amount was considerable and inspection showed the likelihood of pollution by household sewage.

Donnington Wood.—A supply from the Granville Colliery is laid on to about 300 houses. The water is at times muddy.

In the rest of the district the supply is from pumps and wells. At Edgmond a supply has been laid on to eight houses and to a public fountain.

Factories and Workshops.—There are 18 workshops on the register in a satisfactory condition; 2 bakehouses, also satisfactory, and no underground bakehouses.

OAKENGATES (Urban.)

Medical Officer of Health ... E. T. WHITAKER, M.B., B.SC., D.P.H.

Area in acres		2,327
Population at Census	*1901*	10,906
Number of inhabited houses	,, ...	2,187
Number of persons per house	,, ...	4.98

General Characters.

"The Urban district covers some 3,600* acres of ground, the surface of which varies very "greatly in altitude, gradients being often very steep and in all directions. The houses are "scattered over the area in a very irregular manner, being in some parts fairly thickly grouped, and in others "very isolated. It is the centre of an important coal and iron producing locality. The houses, for the most "part are small cottages of low rateable value, and the district generally, though a good deal of money is "turned over, is a poor one as regards income from rates. Practical sanitation has been extremely neglected "in the past, and consequently the difficulties of administration are now considerable. Up to the p resent "there is no proper water supply, and only a very partial attempt at Sewerage. House drainage is conse-"quently very imperfect, privy middens predominate, and large ash pits serving a great many houses are "numerous. Much improvement has resulted since the formation of the district in 1898, but the Sanitary "work still remaining to be done will be a very heavy burden on the finances of the district. The Public "Health Amendment Act is in force in the district, as are also certain bye-laws which will be referred to "later on."

Vital Statistics.

The population, for 1902, is estimated at 10,930. The natural increase during the year was 226.

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 and Pneumonia.	Heart Diseases.	Cancer.		
1902	15·1	·82	·27	·64	.64	3·4	·73	·64	101	35·2
1899 to 1901.	16·5	..	..	..	..	..	..	..	141	32·6

The general death-rate and the infant mortality compare favourably with previous years and with the country generally.

The zymotic mortality was due to 5 deaths from measles, one from whooping cough, and 3 from diarrhœa. A large proportion of the deaths were due to bronchitis and pneumonia—many being due to the long cold spring. Ten of the deaths amongst infants were due to premature birth. Phthisis caused 7 deaths and other tubercular diseases seven more. Dr. Whitaker calls attention to the fact that these are preventable. He suggests that the County Council be invited to pass a bye-law to prevent careless spitting in public places.

Infectious Disease.—Scarlet Fever—17 cases occurred in 14 houses, mostly single outbreaks, scattered throughout the year. Of the other notifiable diseases there were 2 cases of diphtheria, one of typhoid fever and 7 of erysipelas.

* The area is stated in 1901 Census returns to be 2,327 acres.

Dr. Whitaker refers to his previous reports on the subject of hospital accommodation and steam disinfector.

House Accommodation.—There are a good many houses that are approaching their limit of usefulness as dwellings. Many other houses present grave defects. There is need also for more dwellings, and this want has prevented any applications for closure being made. House-to-house survey is now on a better footing. Bye-laws for new buildings are in force and should be strictly adhered to.

Drainage and Scavenage.—An application for a loan of £18,520 for sewerage and sewage disposal has been granted. Dr. Whitaker will be glad to see the pan closets abolished for water-closets; also the ancient "fold yard" for refuse done away with, and boxes, periodically emptied, substituted.

Water Supply.—A scheme has been prepared for supplying Oakengates and adjacent areas with water.

Trades.—A register has been prepared and 74 workshops entered in it. A number of these have been inspected.

"There are a number of dairies and cowkeepers registered and over which some amount of regular inspection is desirable.

The appointment of a veterinary surgeon or responsible retired butcher would do much to safeguard the quality of meat. The possibility of the County Council appointing such an official is mooted.

OSWESTRY (Urban).

Medical Officer of Health ... R. DE LA P. BERESFORD, B.A., M.D.

Area in acres		1,887
Population at Census	*1901*	9,579
Number of inhabited houses	,, ...	2,083
Number of persons per house	,, ...	4.6

General Description.

The town is situated at an elevation of 420 feet above sea level, on ground sloping south by east. The Geolcgical formation is sandstone overlying the Coal measures. The subsoil is silt gravel, sand, and clay; patches of clay lying in depressions under and around the town. Water is found in many places under and around the town, and although polluted, the wells are now regaining some of their original purity. A recreation ground is being laid out.

Statistics.

The natural increase of population during the year was 133.

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 and Pneumonia.	Heart Diseases.	Cancer.		
1902.	14·9	·10	·20	·92	·51	1·9	1·02	1·4	83·6	26·9
1892 to 1901	17·3	..	..	..	..	..	..	..	137·2	26·9

The zymotic death-rate was due to one death from measles.

Infectious Disease.—Thirty-four cases of scarlet fever, 4 of diphtheria, 5 of erysipelas and 2 of enteric fever were notified.

House Accommodation.—The working classes are well provided, but houses for the poorest are scarce and dear.

Refuse Removal.—There is a daily collection of all house refuse.

Sewerage and Sewage Disposal.—The sewage is treated on bacteria beds which, up to the present time, have worked well. The sewers are flushed by self-acting flushing chambers and are ventilated. The sewage of one district has to be pumped.

Water Supply.—Upland surface water from Pen-y-Gwely, with a storage reservoir of 25,000,000 gallons 1,090 feet above the sea level. The gathering ground, which is in part peat, is free from the possiblity of pollution. There is a connection also with the Liverpool supply. The water is not filtered and filtration is recommended.

The lodging-houses, bakehouses and slaughter-houses have been well looked after and are in a good condition.

OSWESTRY (Rural).

Medical Officer of Health ... R. DE LA P. BERESFORD, B.A., M.D.

Area in acres	... ...	60,366
Population at Census 1901 ...	... ...	14,727
Number of inhabited houses ,, ...	... ...	3,220
Number of persons per house ,, ...	... ...	4.6

Statistics.

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 and Pneumonia.	Heart Diseases.	Cancer.		
1902.	13·3	·67	·40	·54	·34	1·4	1·2	·74	73·7	26·5
1896—1901	15·6	..	..	..	..	..	..	..	104·3	27·5

The population is estimated at 14,800. The natural increase during the year was 176.

The zymotic death-rate was due to 7 deaths from measles, 2 from whooping cough and one from diarrhœa.

Infectious Disease.—Seventy-nine cases of scarlet fever, 4 of erysipelas and 2 of enteric fever were notified. An outbreak of scarlet fever at Kinnerley was checked by school closure and other precautions. Measles was prevalent throughout the district necessitating the closure of six schools.

Water Supply.—The water works at Pant are being pushed forward and a scheme has been formulated for supplying Gobowen.

Drainage and Sewerage.—The proposed scheme for the drainage of Ruyton has not up to the present been adopted.

Scavenging.—The Inspector has proposed a scheme for the scavenging of the larger villages. The Medical Officer of Health thinks it very desirable that this should be adopted.

House Accommodation.—The scarcity of new houses makes it extremely difficult to deal efficiently with old and overcrowded houses.

SHIFNAL (Rural.)

Medical Officer of Health ... E. T. WHITAKER, M.B., B.SC., D.P.H.

Area in acres		45,380
Population at Census	*1901*	8,844
Number of inhabited houses	,,	1,918
Number of persons per house	,,	4.6

General Character of the District.

"The Rural District of Shifnal is a fairly large one, extending over 45,380 acres. Two of the parishes "are in Staffordshire. The population is comparatively small, being, according to the Census blue "book, 8,844, which gives a density of only one person to each five acres. There are 16 parishes, all "of them, excepting portions of Shifnal and Albrighton, being of a strictly rural nature with the dwellings "thinly scattered through them. The land for the most part is of an undulating character, overlying a "succession of New Red Sandstone series, the coal measures cropping up at the extreme western boundary. "The town of Shifnal is the most Urban part of the district, and for various purposes has been made a "contributary area. It is a pleasant little agricultural market town, and has been vastly improved recently "by the provision of a complete sewerage system and a good supply of excellent water. It offers many "attractions as a residential locality. The Infectious Diseases Prevention Act and parts of the 1890 "Amendment Act are in force. Model Regulations for Cowsheds and Dairies, and Bye-laws relating to "Nuisances and New Buildings, have been adopted. The only public institutions are the Workhouse and a "good Cottage Hospital."

Vital Statistics.

There was a decrease in the population between 1891 and 1901 of 276. The population for 1902 is estimated at 8,816. The natural increase during the year was 119.

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 and Pneumonia.	Heart Diseases.	Cancer.		
1902	12·1	·0	·0	1·02	·11	2·0	·9	1·2	73·9	26·0
1898 to 1901.	15·0	..	..	..	..	..	..	..	106	23·3

The death-rate was far below the average for the last 4 years and that of the country generally.

The infantile mortality was low and few of the deaths were due to preventable causes. There were no deaths from the common infectious diseases. There was an increased number of deaths from consumption. There were eleven deaths from cancer.

Infectious Diseases.—Scarlet Fever 27 cases—scattered and of a mild character—a few cases being imported. The age incidence was high. Dr. Whitaker is convinced that the large majority of cases of scarlet fever arise from imperfectly disinfected clothes. *Diphtheria.*—3 cases in the Blymhill district, apparently associated with a similar outbreak in an adjoining district. *Typhoid Fever.*—2 cases on the same premises with three months between the attacks. The second case probably arose from a defect in the closet drainage. The infection may have been introduced through visitors. *Erysipelas.*—one case.

For small-pox isolation it is advised that a cottage be obtained or built not far from Shifnal. Reference is made to the last report with regard to general hospital isolation and disinfection. Primary vaccination is carried out satisfactorily.

House Accommodation.—On the the whole fairly good. With regard to a small number it will soon be a question whether they can be any longer kept in a decent state of repair. Bye-laws relating to new streets and buildings have been adopted and should be properly enforced.

Drainage and Scavenage.—The sewerage of Shifnal was completed during the year. The sewerage of Albrighton is under consideration. The scavenage of Shifnal is done by a contractor under the direction of the Sanitary Inspector. Dr. Whitaker hopes that the number of privies will be reduced.

Water Supply.—Shifnal has now an excellent supply from Harrington Well, partly laid on to houses and partly to stand-pipes. There are still a number of houses to be supplied if water from their own wells should not prove sufficiently pure. Samples are being analysed in batches. The water supply of other localities is being improved.

Lodging-houses, Slaughter-houses, Dairies and Bakehouses have been inspected and found reasonably satisfactory. New bye-laws relating to slaughter-houses and lodging-houses have been adopted.

Factories and Workshops.—A register has been kept and the various places inspected.

Nuisances, etc.—Bye-laws relating to nuisances have been adopted. The new sewerage system and water supply will tend to reduce the number of nuisances, and a better scavenage system and the reduction of privies would still further lessen them.

SHREWSBURY (Urban).

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

Area in acres		3,525
Population at Census	*1901*	28,395
Number of inhabited houses	,, ...	6,065
Number of persons per house	,, ...	4.6

Physical Features of the District.

"The Borough comprises 3,525 acres, forming an area nearly equal in length and breadth, and roughly "quadrangular. This area lies in the Valley of the Severn, which is here wide and open, having a gradual "fall to the river and varying in elevation from 150 feet to 260 feet above sea level. The geological "formation is varied, the Permian Red Sandstone across the centre, with the Bunter beds of the New Red "Sandstone to the North, and the Coal measures on the South. The actual subsoil is, however, mainly "river drift of varying and generally considerable thickness, in places stiff clay, but generally sandy and "dry in the upper part, with clay underlying at greater or less depth. The contour offers good natural "drainage to the Severn, which owing to its devious course flows over a length of some eight miles either "through, or along the borders of the District. The actual length of its flow through the District is about "three miles."

"The climate of Shrewsbury is mild and healthy. Though not bracing and having the characteristics "of a valley climate, yet the open nature of the valley and the varied contours of the town, together with the "course and movement of the Severn through and around the town prevent stagnation of air, and the "prevailing South-West wind has free course, keeping the air clear and fresh, and river fogs are neither "common nor dense * * * *

"The old town of Shrewsbury stands on two hills, of generally moderate ascent, but steep in parts, and "nearly surrounded by the river, which here forms a horseshoe curve some two miles round with a width "across the neck of some 400 yards. This enclosed part is for the most part densely built upon. Of the "various suburbs across the river, Frankwell forms an old settlement on the North-West with modern "extensions chiefly of villa residences, along the main roads radiating from it. Kingsland is a modern "residential suburb to the South-West, Coleham an old settlement to the South-East with Belle Vue, a "modern extension, adjoining; and Abbey Foregate, old near the river and modern and residential further "out, lies to the east. To the North-East, on the low lying ground outside the neck of the peninsula, "is the considerable district of Castle Fields, built over for the most part some forty to fifty years ago, "and forming an artisan residential quarter."

Statistics.

The population, at the middle of 1902, is estimated at 28,590, and after correction for public institutions, at 28,850. The natural increase during the year was 257.

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 and Pneumonia.	Heart Diseases	Cancer.		
1902.	16·0	·34	·45	1·35	·55	3·3	1·07	1·3	142	25·1
1892 to 1901.	18·3	..	..	..	..	..	..	..	142	26·1

The zymotic death-rate was due to one death from scarlet fever, 6 from whooping cough and 3 from diarrhœa. This low rate and absence of deaths from typhoid fever are very satisfactory. The infantile mortality was considerably higher than last year.

Infectious Disease.—One case of small-pox, 30 of scarlet fever, 19 of diphtheria and 10 of enteric fever were notified.

Small-pox.—One case occurred in June and was specially reported on at the time. The case was imported, it was removed to the isolation hospital and there was no spread.

Typhoid Fever.—The continued decrease of typhoid fever is very satisfactory. The origin of the cases was obscure, but in two there was a probability that river water had been drunk.

Whooping Cough was somewhat prevalent and one school was closed on account of mumps.

The death-rate from summer diarrhœa was very low compared with the country generally.

Phthisis.—Dr. Gepp draws attention to the following measures for lessening consumption (1) voluntary notification; (2) handbills for guidance of patients and others; (3) disinfection of rooms and clothing; (4) bye-laws to prevent spitting in public places.

Hospital Isolation.—There is an emergency hospital of six beds for small-pox or cholera. In the intervals it is used for scarlet fever, but as the cost, which is heavy for a single patient, has to be borne by the patient's friends little use is made of it. Dr. Gepp says there is a minimum provision really necessary for those cases of scarlet fever and diphtheria which cannot be isolated at home.

Public Disinfection.—The Medical Officer of Health has advocated a public disinfecting station for several years and has this year submitted a report and estimate. This report has been referred back to the Sanitary Committee by the Council. Dr. Gepp shows clearly how a disinfector is absolutely necessary if the proper benefit is to be derived from the Infectious Disease Notification and Prevention Acts.

Vaccination.—Returns for the Atcham Union shows that few children escape vaccination. In 1901, there were only 5 conscientious objectors. In January, 1902, handbills were issued advising re-vaccination, and during the year 921 were re-vaccinated by the public vaccinators.

Diphtheria Antitoxin.—The Council undertakes to bear the cost of preventive inoculation to prevent the spread of diphtheria through a household.

House Accommodation is adequate in amount and it is exceptional to find a house requiring closure. There are many old defective houses requiring frequent inspection and constant attention. Although sometimes large families are found in small houses there are no instances of houses occupied by several families. Figures quoted from the Salop Census Returns shows that Shrewsbury compares favourably in this respect with the Shropshire Urban Districts, but the figures also show that there are many cases of overcrowding that require investigation.

Air space around houses is, as a whole, fairly good. In the older parts houses are in places densely packed, interfering with both lighting and circulation of air. A considerable proportion of these houses are back to back or without through ventilation. On the whole the surroundings of the houses are fairly good, some of the courts and yards are, however, unpaved and others roughly cobbled.

New Buildings are supervised under bye-laws.

House-to-house Inspection is now being carried on more thoroughly.

Sewerage and Drainage.—All sewers recently laid are good piped sewers with cement joints and manholes for flushing. All the sewers not recently laid are clay jointed, and those exposed have been quite open at the joints, allowing free escape when there is the slightest pressure. In the older parts of the town are many brick culverts which allow leakage into the subsoil and deposit of solid matter in them. It is recommended that the defective old sewers be steadily and systematically remedied, and that a full and detailed report be now obtained of the old sewers so far as is possible. For this purpose the information obtained in carrying out the present scheme will be of great value.

The trapping of house drains and the ventilation of sewers by shafts is recommended. The flushing of sewers is regularly and periodically attended to. Drainage regulations under Sec. 21 of the Public Health Act, 1875, have been adopted to regulate the connection of house drains to the sewers. Although good work is being done each year to remedy defects, there is much still to be done.

Sewage Disposal.—The sewage is pumped to the sewage farm at Monkmoor and is run into tanks and on to the farm. The river has greatly improved, but there are individual houses to be dealt with.

Excrement Disposal.—The water-carriage system is practically universal.

Refuse Removal.—House refuse is removed weekly, and the refuse is tipped on low-lying ground in the borough. This gives rise to complaints in warm weather. The erection of a destructor has been considered.

Water Supply.—Unfiltered river water is laid on to the houses and spring water to the hydrants. The Council has before it three schemes for an upland supply. An engineer is now reporting on these schemes. Some extensions have been made in the conduit supply. The water has been examined from time to time and found to be of excellent quality.

Slaughter-houses.—There are 23 on the register, fairly well kept on the whole. Nuisances have arisen, principally in connection with pig-keeping. The Medical Officer of Health has recommended the provision of a public slaughter-house, and the matter is under consideration.

Dairies, Cowsheds and Milkshops.—112 persons are registered under the regulations. The premises are inspected. Dr. Gepp thinks that some general system of veterinary inspection is required to ensure the sale of milk from cows free from disease.

Common Lodging-houses.—The adoption of the model bye-laws is recommended.

Factory and Workshops Act, 1901.—There are 198 workshops on the register and the sanitary condition of those visited was found to be fairly good. There are 41 bakehouses, two of which are underground and are not yet certified. No lists of outworkers have yet been received as specified under Sec. 107.

Food and Drugs.—Fifty samples have been taken and analysed and of these forty-four were found to be genuine. Prosecutions were instituted in six cases, but dismissed or withdrawn in four; in the remaining two, fines of £10 were imposed—butter having been adulterated with 90% of foreign fat.

TEME (Rural).

Medical Officer of Health ... ARTHUR H. HOFFMAN, M.D.

Area in acres	23,091
Population at Census 1901	1,846
Number of inhabited houses ,, ...	388
Number of persons per house ,, ...	4·7

Statistics.

The natural increase of population during the year was 21.

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 and Pneumonia.	Heart Diseases.	Cancer.		
1902.	12·4	0	·54	·54	·54	3·2	2·8	0	159	23·8
..	..	..	..	..	..	..	..	..	..	..

There were no deaths from the chief zymotic diseases.

The infantile mortality was 159— a high rate for a rural district, but lower than last year. The rate for bronchitis and pneumonia was also high.

Infectious Disease.—Ten cases of scarlet fever and 2 of erysipelas were notified; none of any other disease.

Water Supply.—The water supply of Bucknell is under consideration. Dr. Hoffman draws attention for the fourth time to the unsatisfactory condition of the water supply of Kinsley and he quotes from a report of Dr. Porter's: "At Kinsley some 14 houses are still supplied from shallow wells in dangerous proximity to cesspools receiving sewage from the privies."

Hospital Accommodation.—A temporary hospital for small-pox has been provided in conjunction with Knighton Rural and Urban Councils. A hospital for isolating other infectious diseases is strongly recommended, and also a disinfecting apparatus.

WELLINGTON (Urban).

Medical Officer of Health ... E. T. WHITAKER, M.B., B.SC., D.P.H.

Area in acres		381
Population at Census	1901	6,283
Number of inhabited houses	,, ...	1,327
Number of persons per house	,, ...	4·7

General Character of the District.

"The area has, however, been extended since my last Report, and now covers 684 acres, and having a "rateable value of £32,863 13s. 3d. Outstanding loans for Sanitary purposes amount to £24,851 17s. 11d. "Apart from the increase of population due to the extension of the area, there has continued the growth of "that within the old boundaries, and I estimate the present population at 7,104. The Public Health "Amendment Act is in force, and there are bye-laws relating to new streets and buildings, slaughter-houses, "lodging-houses, and nuisances. The duties of the Sanitary Inspector and Surveyor are performed by the "same official."

Statistics.

The natural increase during the year was 6 The population, at the middle of 1902, was estimated at 6,320.

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 and Pneumonia.	Heart Disease.	Cancer.		
1902.	15·1	1·5	1·5	·63	·15	1·5	1·4	1·1	72·6	28·3
1895 to 1901	17·6	..	..	..	..	..	..	..	125	27·2

The death-rate was 15.1, the lowest since 1895, when the records begin.

The infantile mortality shows a marked improvement and compares very favourably with the country generally. There were no deaths from infantile diarrhœa, and only one in the previous year.

The death-rate from phthisis and other tuberculous diseases was very low. Dr. Whitaker suggests that the means for the prevention of phthisis might with advantage be a subject dealt with in the older classes of the Elementary Schools.

Cancer caused seven deaths. It is intended to make a detailed inquiry into its incidence. There were ten deaths from the common infectious diseases—6 whooping cough, 3 diarrhœa and 1 measles.

Infectious Disease.—Seventeen cases of scarlet fever and one of erysipelas were notified. Three cases occurred at the Workhouse and were associated with an outbreak in the previous year. Thirteen cases occurred at a private boarding school. Five cases occurred within a very short time of one another and the others were secondary. The origin was obscure.

Vaccination was much more efficiently performed.

House Accommodation.—"There are a great many houses which are of a very inferior kind, but in dealing with them we are faced with the difficulty of providing more suitable accommodation." There are too great facilities for "drinking" in the immediate neighbourhood of most of the inferior house property.

Drainage and Scavenage.—Some privies have been replaced by water-closets and improvements made to house drains. House refuse, where not mixed with privy contents, are scavenged weekly.

Water Supply.—Filtration is recommended to improve the water—the storage is somewhat small.

Factories, Workshops, Slaughter-houses, etc.—A register has been provided but no entries made. The bakehouses are small concerns but require more inspection. Slaughter-houses—on the whole satisfactory; lodging-houses are unsatisfactory, one or two being unregistered. A fine was inflicted in one case but it is still being used, although unfit. Milkshops and farms require more attention. Visits to the markets have rarely disclosed any cause for complaint.

Nuisances.—A better system in suppressing nuisances is advised.

General.—It remains to be seen whether under a new regime the multifarious duties of Sanitary Inspector and Surveyor can be satisfactorily carried out by one person.

No summary of work has been received.

WELLINGTON (Rural.)

Medical Officer of Health ... W. T. HAWTHORN, M.R.C.S.

Area in acres		33,791
Population at Census	*1901*	11,773
Number of inhabited houses	,, ...	2,499
Number of persons per house	,, ...	4·7

Statistics.

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 and Pneumonia.	Heart Diseases.	Cancer.		
1902.	12·1	1·5	·42	·17	0	1·8	1·9	·6	86·4	29·4
1894—1901.	16·1	..	..	..	..	..	..	..	98·5	40·4

The natural increase of the population during the year was 204.

The zymotic death-rate was due to 5 deaths from measles, 1 from diphtheria and 11 from diarrhœa.

Infectious Diseases.—Seventeen cases of scarlet fever, 8 of diphtheria, 1 of relapsing fever and 300 of measles were notified. Eyton, Hadley and Ellerdine schools were closed on account of measles.

Sewerage and Sewage Disposal.—Dr. Hawthorn says that the want of a proper scheme of sewage disposal and water supply for Hadley may become a source of danger; also that the effluent from the Wellington Urban sewage works is still very far from satisfactory.

Water Supply.—Supplies to Hadley, Ketley and Lawley Bank are part of a combined scheme now being considered. The water supply at Rodington, although slightly improved, is still very unsatisfactory.

Hospital Accommodation.—Improvements to the Wrockwardine Wood Hospital are contemplated.

WEM (Urban).

Medical Officer of Health ... E. T. WHITAKER, M.B., B.SC., D.P.H.

Area in acres		450
Population at Census	*1901*	2,149
Number of inhabited houses	,, ...	453
Number of persons per house	,, ...	4·7

Statistics.

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 and Pneumonia.	Heart Diseases.	Cancer.		
1902	12·4	·0	·0	·92	·0	2·3	1·46	2·3	103	26·7
1900 & 1901.	10·8	..	..	..	..	..	..	..	94	26·9

The population is estimated, for 1902, at 2,170. The natural increase of the population during the year was 30.

They were no deaths due to infectious diseases. Cancer caused five deaths; accurate observation on the deaths from cancer is recommended. The infantile mortality, though not high, indicates that children are dying from improper feeding and want of care.

Infectious Diseases.—The town has again been very free. Two cases of scarlet fever, one of diphtheria, one of membranous croup and one of typhoid fever were notified, but in none of the cases was there any spread. Reference is made to the last annual report with regard to the questions of hospitals and disinfection.

House Accommodation, on the whole, very good, although in a number of houses various repairs and improvements are required. Building bye-laws have been adopted during the year.

Drainage and Scavenage.—Some of the sewers are old and apt to get filled up. "The outfall is distinctly unsatisfactory. Beyond a little preliminary precipitation and coarse straining there is no real treatment of the sewage, which is discharged into the brook in defiance of the provisions of the Rivers Pollution Act. It appears to be time that this question of sewerage and sewage disposal should be put on a better footing." Improvements have been made in house drainage. The more rapid conversion of privies to water-closets is recommended; also a gradual reduction of the number of pan closets.

The need of a better system for the removal of house refuse mentioned in the 1901 report is again referred to.

Water Supply.—The daily consumption per head for all purposes was 15.8 gallons; for purely domestic purposes 12.1 gallons.

Factories and Workshops.—There are 45 workshops on the register, found on the whole to be fairly satisfactory. One or two of the slaughter-houses are not really fit for the purpose. Bye-laws are in force and the Council should require strict observance of them. There is one common lodging-house—quite unsuited for the purpose.

Nuisances.—Bye-laws have been adopted during the year which will facilitate the removal of nuisances.

WEM (Rural).

Medical Officer of Health ... JOHN DALLEWY, L.R.C.P., M.R.C.S.

Area in acres		52,001
Population at Census 1901		8,266
Number of inhabited houses ,, ...		1,840
Number of persons per house ,, ...		4·5

General Character of the District.

"The district is an agricultural one. The following are its chief physical features and general "characters:—Wem Rural—Soil, various; sub-soil, clay, sand, and gravel. Broughton—Soil is mostly "heavy; sub-soil, stone and rock. Clive—Soil is mostly sandy loam; sub-soil, marl or red sandstone. "Grinshill—Soil, various; sub-soil, stone, of which there are large quarries. Lee Brockhurst—Soil, mixed; "sub-soil, gravel and clay. Loppington—Soil is loam, with a gravel sub-soil. Moreton Corbet—Soil chiefly "sandy loam; sub-soil, sand and marl. Prees—Soil composed of bluish clays and shales, with some thin "beds of limestone. Beneath the lime is red marl and sandstone which form all the surrounding country. "Shawbury—soil, mixed; sub-soil, sand and marl. Stanton-on-Hine-Heath—Soil, sandy loam; sub-soil "sandstone and marl. Wixhill and Weston—Soil, sandy loam; sub-soil, red sandstone. Whixall—Soil, "mixed; sub-soil, sand and clay."

Statistics.

The natural increase of the population during the year was 94.

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 and Pneumonia.	Heart Diseases.	Cancer.		
1902.	12·1	·12	·48	1·2	·24	·98	·48	1·08	61·8	23·5
1892–1901.	14	..	..	..	..	..	..	..	89	26

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

Infectious Diseases.—Of the 29 cases of infectious disease notified, 25 were cases of scarlet fever. In one instance there were 7 cases in one house, and in two others 5 cases.

Hospital Accommodation for Small-pox.—A Joint Committee of the Urban and Rural Districts was formed and a tent was hired from Messrs. Edgington for twelve months.

House Accommodation.—On the whole satisfactory, and shows a tendency towards improvement.

Water Supply.—Mostly from wells—on the whole satisfactory. No new house is certified as fit for habitation until a good water supply has been provided.

There are no lodging-houses.

Slaughter-houses have been inspected and found satisfactory.

Workshops and Work-places.—There are 37 on the register. They have been inspected and found free from nuisance.

Bakehouses.—Twelve on the register.

No list of outworkers has been received.

WENLOCK.

Medical Officer of Health ... ... MAURICE GEPP, D.P.H.

Area in acres		22,657
Population at Census 1901		15,866
Number of inhabited houses ,, ...		3,568
Number of persons per house ,, ...		4·4

Physical Features and General Character of the District.

"The District comprises 22,657 acres, being the largest Borough in area in the Country. This area is of "very irregular outline, but is, roughly, some ten miles long 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 tableland lying at an elevation of from 400 to 600 feet O.D. or more; "the Severn forming a deep cutting through this elevated land, its banks rising very steeply on either side "from about 150 feet at the water level to the general height of about 500 feet. 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 into the Northern division. Much of this ground lies in ridges with intervening "valleys at a height of from 600 to 800 feet O.D. 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.	Population 1902	Situation.	General Character.	Death-rate per 1000, 1902.
Madeley	3025	8415	North of Severn ..	Urban and Industrial, Coal and Iron	16·8
Broseley	2006	3930	South of Severn ..	Urban and Industrial, Brick and Tile	21·1
Much Wenlock	9737	2230	South of Severn ..	Agricultural	19·3
Barrow	89 0	1305	Both sides of Severn .	Agricultural	17·6

"The populations here given are those estimated and corrected by the proportional distribution of the "population of the Madeley Workhouse and by addition of a proportion of the inmates of the County Asylum, "the deaths in these institutions being also distributed in the several wards. Not much significance should "be attached to the death-rate for a single year. The figures will, however, become of value for comparison "as years go by."

Statistics.

The population is estimated, for the middle of 1902, at 15,874, and after correction for public institutions, at 15,880. The natural increase during the year was 169.

Period.	Death-rate 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 and Pneumonia.	Heart Diseases.	Cancer.		
1902	18·3	1·13	·81	1·38	·12	3·4	2·5	1·07	111	28.2
1897 to 1901.	17·7	..	..	..	..	..	..	..	111	28·1

The zymotic death-rate was due to 8 deaths from whooping cough, 2 from scarlet fever, 3 from diphtheria, 2 from enteric fever, 3 from diarrhœa.

Infectious Diseases.—Scarlet Fever.—There was a small epidemic of 18 cases in Jackfield in October and November, necessitating the closure of the school. There were 10 cases in Broseley in January and February, the termination of a previous epidemic, and 23 scattered cases in Madeley Ward.

Diphtheria.—A small but fatal outbreak was the subject of a special report in May. It was associated with several cases of sore throat at the school, which was closed.

Enteric Fever.—There were six obscure cases, unconnected with one another, with two deaths.

Hospital Accommodation.—The Much Wenlock Ward has an isolated cottage.

Disinfection.—There is no disinfecting station. Sulphur for fumigating and disinfectants for cleansing are supplied. Dr. Gepp strongly recommends that the disinfection should be carried out under the supervision of a responsible officer and that a spraying apparatus be provided.

Schools were closed on two occasions on account of scarlet fever, five times for measles, twice for whooping cough and once for diphtheria.

House Accommodation.—On the whole adequate in amount. From the Census Returns it appears that the proportion of small houses is high compared with other Urban Districts of the County. Figures are quoted showing that overcrowding exists and it remains to be seen whether it is unavoidable or not. The great majority of the small houses are old and many are more or less unsatisfactory. It is recommended that systematic inspection should be followed by statutory proceedings where necessary. Space about houses is usually sufficient, except in the lower parts of Ironbridge. As regards cleanliness of surroundings a good deal remains to be done, although much good work is being done by the Sanitary Inspector.

Sewerage and Drainage.—House drains are often untrapped, unventilated, old and probably unsound. Their improvement should be pushed forward. The sewers in the various towns appear to be mostly culverted water courses. With the completion of the water scheme attention can better be given to improving the sewerage systems, and with abundant water such schemes are more necessary. "The outfall of most of the main sewers is either directly into the Severn, or into streams which fall into the Severn within the District." Reference is made to previous reports for a description of the systems of sewerage. A new sewer almost half a mile in length has been laid at Much Wenlock; a sewer has been laid to prevent sewage gaining access to the Coalport Canal; and some short lengths of piped sewer have been laid at Broseley.

Excrement Disposal.—Mostly by outside privies with underground vaults, often offensive from defective construction and neglect of scavenging. Except in Madeley the scavenging is done by the occupiers. There are a number of objectionable drained privies in different parts of the district; some in Broseley were converted to water-closets during the year.

Water Supply.—The Madeley and Broseley Joint Scheme was completed for public use on October 28th. The supply is from the Harrington Well. The well, which is in the Bunter Beds, is 9 feet in diameter, 141 feet deep, connected by a heading 28 feet in length to a borehole carried to a depth of 420 feet. The yield was proved to be 600,000 gallons in 24 hours. The gas engines and pumps are in duplicate and each can deliver to the Madeley reservoir 250,000 gallons in 12 hours. The Madeley reservoir (466,000 gallons) supplies Madeley, Ironbridge and Coalbrookdale. The reservoir for Broseley is at Posenhall and holds 160,000 gallons. The reservoirs are arched over, covered with soil and fenced around. The length of mains is 22 miles, and the total cost, including the supply of the town of Shifnal, the village of Kemberton and the Apley Estate, is £36,000. The water is pure and of moderate hardness. Much Wenlock is supplied by a pumping scheme from a deep well in the Tannery Field. The water is from the shale measures of the Wenlock limestone. The village of Bourton is now supplied with water from a spring; the water being forced to a reservoir by a ram and distributed by gravitation.

Bye-laws.—There are no bye-laws for slaughter-houses, nor regulations for cowsheds and dairies, nor is any register kept.

Factory and Workshops Act, 1901.—There are 97 workshops on the register, and on inspection these were found to be generally in a satisfactory condition. No lists of outworkers have been received. Inspection of the bakehouses has already produced a decided improvement. There are three underground bakehouses. None of these have yet been certified under Sec. 101.

WHITCHURCH (Urban).

Medical Officer of Health	...	M. GEPP, L.R.C.P.E., D.P.H.
Area in acres		4,784
Population at Census 1901		5,221
Number of inhabited houses ,, ...		1,129
Number of persons per house ,, ...		4.6

General Character of District.

"The District comprises 4,496 acres, lying at an elevation of from some 270 to some 350 feet above "sea-level, and upon the eastern extremity of the Dee watershed. The sub-soil is the red marl of the New Red "Sandstone. The fall of the ground is from south and east to west and north-west, and the natural drainage "is by small tributary brooks of the Dee, leaving the District towards the north-west. The town occupies "roughly the centre and higher part of the District, and is compact and old, with extensions of more recent "building along some of the main roads radiating from the town. The surrounding parts of the District are "entirely rural and agricultural, and extend to a distance of between two and three miles north-east and "south-west of the town, but to not more than about a mile to north-west and south-east. The town is a "market and residential town, and the land around is extensively used for grazing and dairy-farming."

Statistics.

The population is estimated, for the middle of 1902, at 5,244, and after correction for public institutions, at 5,190. The natural increase during the year was 80.

Period.	Death-rate 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 and Pneumonia.	Heart Diseases.	Cancer.		
1902.	13·3	·57	·38	·0	·19	1·7	3·4	5·7	67·1	28·7
1897 to 1901.	15·9	..	..	..	..	..	..	..	109	25.8

The zymotic death-rate was due to two deaths from scarlet fever and one from diarrhœa. There were no deaths from phthisis.

Infectious Disease.—Sixty-one cases of scarlet fever, two of diphtheria and one of enteric fever were notified.

Scarlet Fever.—The outbreak commenced in May, and being associated at this time with school attendance, the elementary schools were closed until the end of June. There were six cases in July, six in November, five being in connection with a private school, and six in December, three being connected with another private school. The case of typhoid fever was of obscure origin.

Hospital Isolation.—As regards small-pox the Council expressed its approval of a County scheme. For other diseases some provision is desirable. One case had to be removed from the cottage hospital to a fever hospital at a distance and another case removed from a private school gave scarlet fever to the household to which the case was taken. Joint action, or preferably action by the County Council, is recommended.

Disinfection.—The purchase of a spraying apparatus is recommended.

Infectious Disease Prevention Act, 1890, is in force with the exception of Secs. 5, 6, 15 and 17.

House Accommodation.—No house has come under notice for closure during the year. There are a good many houses of faulty construction, very small, damp and out of repair. The space around is, as a rule, adequate. There is still much to be done in remedying conditions of defective drainage, privies and ashpits. A house-to-house inspection has been begun and will probably be of great benefit.

Supervision over Erection of New Houses is exercised under the bye-laws. Thirty plans were approved.

Sewerage and Drainage.—The town in well sewered and, as a rule, the houses are well drained. It is doubtful what amount of disconnection of house drains there is as intercepting traps are frequently covered up. The disposal of the sewage is satisfactory, by means of irrigation and settling tanks.

Regulations under Sec. 21 of the Public Health Act, 1875, have been adopted. An apparatus for testing new drains is recommended as indispensable.

Excrement Disposal.—Most new cottages have water-closets, and numerous conversions of old privies to water-closets have been made in recent years. The conversion of those which are a nuisance is recommended.

Removal and Disposal of House Refuse.—The Council has arranged by contract for this work to be done at the cost of the householder.

Water Supply.—Good public supply laid on to the houses from wells sunk into the drift at Fenns Bank, 3 miles to the south-west of the town. It is softened and delivered with 6°—7° of hardness. This supply has been increased by sinking a new well, half a mile away, in a different catchment area. The well is sunk and bored 60 feet into beds of sand underlying 21 feet of clay. Instructions have been given for additional storage to be provided.

Slaughter-houses, Common Lodging-houses, Dairies, Cowsheds and Milkshops are inspected regularly.

Slaughter-houses.—There are seven—fairly satisfactory.

The dairies, cowsheds and milkshops are kept in a fairly satisfactory condition.

Common lodging-houses.—Three in number—are kept clean and in fair repair.

Public Health Acts Amendment Act, Part III., was adopted during the year.

Assistance for the Sanitary Inspector, whose work is increased by the Factory and Workshops Act, is recommended.

Factories and Workshops.—74 factories and workshops on the register. They were found satisfactory with the exception of the want of whitewashing in one or two instances. There are 11 bakehouses, none underground, and with no serious defects.

WHITCHURCH (Rural).

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

A[illegible]n acres		11,701
[illegible]t Census	*1901*	1,924
[illegible]ed houses	,, ...	424
[illegible] per house	,, ...	4·5

[illegible]s of agricultural land lying on the northern border of the County. [illegible]feet, the contour being slightly undulating. The subsoil is the red [illegible]ention of a small area in the South-Eastern part, where an [illegible]nage is by small streams to North and South, the [illegible]ssing the District. The District is entirely [illegible]f Tilstock, Ash, and Ightfield comprising [illegible]ing and dairy farming."

Statistics.

The natural increase of the population was 37. The population in the middle of 1902 is estimated at 1917, and after correction for institutions at 1935.

Period.	Death-rate 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 and Pneumonia.	Heart Diseases.	Cancer.		
1902.	8·8	0·0	0·0	·51	·51	2·0	1·0	0·0	55	27·9
1897 to 1901.	14·0	..	..	..	..	..	..	..	94	26·2

The general death-rate was the lowest recorded during the last five years. There were no deaths from the common infectious diseases.

Infectious Diseases.—12 cases of scarlet fever, 3 of diphtheria and 1 of erysipelas were notified. Ten out of the twelve cases of scarlet fever were connected with school attendance. Verbal and printed instructions are given in each case with regard to isolation, disinfection, etc.

Hospital Isolation.—A small hospital for the Urban and Rural authorities is recommended.

Disinfection.—An efficient spraying apparatus has been bought on the recommendation of the Medical Officer of Health.

House Accommodation.—Generally adequate in amount. The Medical Officer of Health is not aware of any occupied house unfit for habitation, although some are too small for the families in them and exhibit some structural defects. Figures are quoted from the Shropshire Census Returns comparing this district with the County. Repeated systematic house-to-house inspection, followed by statutory proceedings, is recommended as the proper course to effect improvement.

Sewerage and Drainage.—There are few, if any public sewers in the district. As rule the houses are drained without any offensive accumulation.

Disposal of Excrement.—Privies with underground vaults, emptied by the occ 's the system in vogue. They should be kept in good repair and the rain excluded

Water Supply by shallow wells. Many are badly constructed and bad illage of Tilstock and the hamlet of Broughall have been provided by a new Dr. Gepp again recommends that Ash Magna be supplied in a similar way

Bye-laws are in force relating to cleansing of footways, nuisances and new streets and buildings.

Dairies and Cowsheds.—These are looked afte model regulations.

Factories and Workshops.—T