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County Council of Salop.

REPORT

BY THE

COUNTY MEDICAL OFFICER OF HEALTH

ON THE

VITAL STATISTICS AND SANITARY CONDITION

OF SHROPSHIRE

DURING THE YEAR 1915.

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

NEWSBURY,

December, -1916.



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

GENTLEMEN,

I have the honour to present my Annual Report for 1915.

In accordance with the general directions of the Local Government Board and the policy adopted by the County Council, the report for 1915 has been greatly abridged. Many statements which have been made each year, and which are essential for a complete review of the sanitary condition of the County, are omitted from this report. For these details reference should be made to previous reports.

The war has greatly emphasised the importance of improving the physical condition of the people. It should therefore be clearly recognised that any relaxation of sanitary measures, due to war conditions, should only be temporary and should be followed by still greater efficiency after the war.

The Government have shown the importance they attach to the preservation of infant life and the improvement of the health of the child, by making the Notification of Births Act compulsory and by urging upon authorities to put into operation schemes of infant welfare even during war time.

Some branches of sanitary work have necessarily been curtailed owing to scarcity of labour and the policy of the Local Government Board of discouraging expenditure on new works unless they are of pressing necessity for reasons of public health (L.G.B. letter, March 25th, 1916).

In a circular letter dated August 4th, 1915, the Local Government Board suggest "that, whilst not unduly relaxing the standard of public health administration in their area, local authorities should as far as possible, refrain from requiring the execution of work, the cost of which has to be borne by private individuals, unless the work is urgently necessary for the removal of nuisances or for the protection of health."

Where the responsible sanitary officials have been engaged on military services the work must necessarily have suffered, but in the remaining districts where there are no duties in connection with the military forces, curtailment of the work in one direction has no doubt allowed more time to be devoted to those branches of the work in which the expenditure of large sums of money is not required.

The Medical Officers of Health engaged in military duties are :—

Dr. Fenton, Shrewsbury.
Dr. Padwick, Bridgnorth Rural District.
Dr. Griffiths, Teme Rural District.

And the Sanitary Inspectors :—

Mr. B. P. Chadwick, Bishop's Castle Urban District.
Mr. William George Lane, Ludlow Urban District.
Mr. W. Marsh Gwillim, Ludlow Rural District.
Mr. W. Cotterill, Drayton Rural District.

Other medical officers of health have had part time military duties or being in general practice have had to take over the work of other practitioners called up for medical service.

The military camps at Park Hall and Prees Heath have thrown considerable extra work on the sanitary officials of the Oswestry and Whitchurch Rural Districts.

Those of us who are not engaged in military work can best help the country by making a special effort to maintain a high standard of sanitary work, so far as the limitations above mentioned will permit, and by giving every assistance to the military authorities.

The delay in publication of this report is due to the fact that some of the district reports were not received until the fourth quarter of the year.

I am, Gentlemen,

Your obedient Servant,

JAMES WHEATLEY.

COUNTY HEALTH DEPARTMENT,
COUNTY BUILDINGS,
December, 1916.

PART I. THE ADMINISTRATIVE COUNTY.

POPULATION.

The population of the Administrative County in 1901 was 239,783, and in 1911, 246,307.

In the present report we are concerned with the civil population, as all military deaths are excluded from the statistics.

The Registrar-General has made an estimate of the population for each district, based on the National Register which was compiled in May, 1915. These populations are incorporated in Table I. and have been used for the calculation of all death statistics. The birth-rates are calculated on the whole population, including soldiers from the County who are away, and is estimated to be 249,920 for the middle of 1915.

TABLE I.

DISTRICTS.	FAMILIES OR Separate Occupiers, 1911	POPULATION.		Estimate of Popu- lation made by Registrar General, based on National Register, 1915.
		1901	1911	
<i>Urban.</i>				
Bishop's Castle	360	1378	1409	1250
Bridgnorth	1346	6052	5768	5218
Church Stretton	288	816	1455	1296
Dawley	1678	7522	7701	7021
Ellesmere	454	1945	1946	1824
Ludlow	1372	6373	5926	5504
Market Drayton	—	—	—	4434
Newport	738	3241	3250	2920
Oakengates.. .. .	2466	10906	11744	11063
Oswestry	2320	9579	9991	9955
Shrewsbury	6612	28395	29389	28575
Wellington	1721	7115	7820	7216
Wem	509	2149	2273	2124
Wenlock	3548	15866	15244	13346
Whitchurch	1314	5221	5757	5645
Total Urban	24726	106558	109673	107391

CAUSES.

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Neph-
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Bright's
Disease.

URBAN DISTRICTS.

Bishop's Castle	.80	.80	.0
Bridgnorth ..	.91	.0	.57
Church Stretton	.0	.0	.0
Dawley ..	.71	.14	1.13
Ellesmere ..	.09	.0	.54
Ludlow ..	.72	.0	.72
Market Drayton	.35	.0	.45
Newport ..	.02	.0	.0
Oakengates ..	.72	.54	.90
Oswestry..	.80	.20	1.30
Shrewsbury ..	.98	.30	.52
Wellington ..	.24	.0	.55
Wem ..	.94	.47	1.41
Wenlock ..	.89	.52	.67
Whitchurch ..	.06	1.06	.35

Whole of Urban Districts .. .06 .30 .68

Whole of Urban and Rural Districts .. .13 .29 .57

RURAL DISTRICTS.

Atcham ..	.00	.20	.25
Bridgnorth ..	.57	.11	.46
Burford ..	.87	.0	.0
Chirbury ..	.65	.0	.65
Church Stretton	.77	.0	.0
Cleobury Mortimer	.98	.42	.28
Clun ..	.95	.15	.31
Drayton ..	.42	.0	.56
Ellesmere ..	.25	.12	.62
Ludlow ..	.63	.10	.21
Newport ..	.21	.18	.55
Oswestry..	.13	.13	1.06
Shifnal ..	.34	.48	.0
Teme ..	.63	.0	.0
Wellington ..	.75	.46	1.01
Wem ..	.72	.24	.24
Whitchurch ..	.50	.50	1.01

Whole of Rural Districts .. .20 .20 .47

Whole of Urban and Rural Districts .. .13 .29 .57

DISTRICTS.	FAMILIES OR Separate Occupiers, 1911	POPULATION.		Estimate of Popu- lation made by Registrar General, based on National Register, 1915.
		1901	1911	
<i>Rural.</i>				
Atcham	4591	20895	21770	19916
Bridgnorth	2061	8573	9125	8669
Burford	286	1233	1308	1143
Chirbury	811	3539	3304	3050
Church Stretton	1069	4479	4797	4513
Cleobury Mortimer	1419	6720	6976	7065
Clun	1517	6824	6565	6263
Drayton	2846	11708	12340	7084*
Ellesmere	1752	7911	8365	7955
Ludlow	2059	9585	9438	9170
Newport	1306	6033	6005	5409
Oswestry	3450	14727	15443	14784
Shifnal (including Weston & Blymhill)	2042	8844	8954	8176
Teme	382	1846	1644	1577
Wellington	2433	10941	11091	10805
Wem	1940	8266	8373	8296
Whitchurch	439	1924	1935	1971
Total Rural	30403	134048	137433	125846
Total of Urban and Rural Districts	55129	240606	247106	233237

* This reduction is principally due to the exclusion of Market Drayton Urban District (population 4434).

TABLE 2.
POPULATION IN AGE PERIODS.

Age Period.	1901 Census.	1911 Census.	Increase or Decrease.
Under 1	5427	4985	
1—2	5167	4790	
2—3	5427	5321	
3—4	5285	5058	
4—5	5547	5199	
	— 26853	— 25353	— 1500
5—6		5106	
6—7		5202	
7—8		5271	
8—9		5142	
9—10		5145	
	— 26270	— 25866	— 404
10—11		5141	
11—12		4962	
12—13		5035	
10—13	15022		
13—14	4983	4926	
14—15	5088	5035	
	— 25093	— 25099	+ 6
15—16	4902	4811	
16—17	4798	4733	
17—18	4534	4658	
18—19	4477	4343	
19—20	4216	4139	
	— 22927	— 22684	— 243
20—25	19684	19119	— 565
25—30	18030	— 17902	— 128
30—35	16088	17342	+ 1254
35—40	15023	16667	+ 1644
40—45	13116	14981	+ 1865
45—50	11599	13695	+ 2086
50—55	10481	11379	+ 898
55—60	9326	9696	+ 370
60—65	8627	8077	— 550
65—70	6556	7277	+ 721
70—75	4999	5533	+ 534
75—80	2990	3270	+ 280
80—85	1549	1641	+ 92
85—90	470	577	+ 107
90—95	92	132	+ 40
95—100	6	17	+ 10
100 and upwards ..	4	0	— 4

MARRIAGES.

The number of marriages in the Registration County for 1915 was 2,020.

It is interesting to note that this is the first time in the last 20 years, and probably absolutely the first time that the marriages in this County have reached 2,000 in one year. The average yearly number of marriages for the last 20 years was 1,761, and the years with the largest number of marriages previous to 1915, were the years of the Boer War. In the year 1901 there were 1,923 marriages and in 1902 there were 1,850.

BIRTHS.

The total number of births in the Administrative County was 4,917, giving a birth-rate of 19.67, compared with 20.88 in 1914, 21.1 in 1913, 21.8 in 1912, and 22.6 in 1911. The birth-rate for the year was again the lowest on record.

The urban rate was 19.61 and the rural rate 19.72.

The birth-rates for the various sanitary districts are given in Table 1 Urban and Rural.

This is the first time that the birth-rate has fallen below 20. No doubt the effect of the withdrawal from the civil population of a large number of young men in 1914 and the first 3 months of 1915 has been the cause of this further decline. The effect upon the birth-rate of 1916 should be more marked. The number of births for the four quarters of 1915 in the Registration County were 1416, 1376, 1263, and 1213 respectively.

DEATHS.

The number of deaths registered in the County was ~~3,554~~ ³²³¹. The number of deaths after making corrections for non-residents dying in the County and persons belonging to the County dying outside, was ~~3,522~~ ³²³¹. This is the number employed in the calculation of the death-rates.

The death-rate was ~~15.19~~ ^{14.9} compared with 14.26 in 1914, 12.1 in 1913, 13.1 in 1912, and 13.8 in 1911.

The increase in the death-rate during the last two years was considerable and can only be explained to a very small extent by the withdrawal of a small but healthy section of the community for military purposes.

The death-rate for 1915 is the highest since the year 1904. The death-rate for the year immediately preceding the war, 1913, was the lowest on record. Some of the excess of the rate of 1915 over that of 1913 is due to epidemics of measles and whooping cough. The increase extends however to practically every cause of death, except congenital debility and premature birth. This increase may be one of those variations that are observed in death statistics without any well marked cause, or more probably it is connected to some extent with war conditions—greater stress of living, mental anxiety and probably greater carelessness in modes of living. Observations made in connection with school attendance, appear to show that amongst certain classes of the population there has been a considerable falling away in matters connected with the health and cleanliness of the children. There is no reason to suppose that any part of the increase of the death-rate is due to distress. There appears to have been considerably less poverty than usual.

This increase of the death-rate, during a war period in which there was no privation, shows the necessity for maintaining public health measures at as high a standard as possible, so as to be prepared for conditions of greater stress.

INFANTILE MORTALITY.

As the importance of child welfare has been greatly emphasised by the war, and as the Local Government Board have specially urged increased measures for the prevention of infantile mortality, this question will be dealt with in more detail.

There were 426 deaths of infants under one year of age, equal to a mortality of 86 for every 1,000 births, compared with a rate of 88 in 1914, 74 in 1913, 72 in 1912, 91 in 1911, 82 in 1910, 91 in 1909, 100 in 1908, 91 in 1907, 97 in 1906, 93 in 1905, and an average of 106 for the previous five years.

The rate for England and Wales was 110, and excluding 244 towns, 98. The corresponding figures for England and Wales for 1914 were 105 and 93.

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

It is interesting to note that the war has not had a marked influence upon infantile mortality so far.

The small districts of Bishop's Castle (235) and Church Stretton Urban (150) had again the highest infantile mortalities with one exception. Omitting these very small districts, the highest rates were Wellington Urban (156), Bridgnorth Urban (138), Dawley Urban (122): Wellington Rural (119), Newport Rural (105), Clun Rural (106), Wem Rural (105), and Cleobury Mortimer Rural (102).

The annual figures, for small districts especially, vary greatly. As a more reliable guide the following table has been got out stating the infant mortality in each district for the two periods 1901—1906 and 1907—1914, and for the year 1915:—

TABLE 3.

AVERAGE OF THE ANNUAL INFANTILE MORTALITY FOR THE PERIODS 1901—1906 AND 1907—1914, AND FOR THE YEAR 1915.

URBAN DISTRICTS.	1901—1906	1907—1914	Percentage increase or decrease in second period.	1907—1914 Percentage above or below the average for Urban Districts.	Rates for 1915.	RURAL DISTRICTS.	1901—1906	1907—1914	Percentage increase or decrease in second period.	1907—1914 Percentage above or below the average for Rural Districts.
Bishop's Castle ..	86	100	+ 16.3	+ 4.2	235	Atcham ..	84	77	— 8.3	— 1.3
Bridgnorth ..	106	116	+ 9.4	+ 20.8	138	Bridgnorth ..	87	67	— 23.0	— 14.1
Church Stretton ..	96	99	+ 3.1	+ 3.1	150	Burford ..	59	68	+ 15.2	— 12.8
Dawley ..	112	97	— 13.4	+ 1.0	122	Chirbury ..	77	60	— 22.1	— 23.1
Ellesmere ..	103	65	— 36.8	— 32.3	32	Church Stretton	97	80	— 17.5	+ 2.6
Ludlow ..	113	84	— 25.7	— 12.5	93	Cleobury				
Market Drayton ..	..	..	..	..	80	Mortimer ..	92	74	— 19.6	— 5.1
Newport ..	117	80	— 31.6	— 16.7	101	Clun ..	100	72	— 28.0	— 7.7
Shrewsbury ..	138	104	— 24.6	+ 8.3	91	Drayton ..	115	84	— 26.0	+ 7.7
Oswestry ..	102	101	— 1.0	+ 5.2	91	Ellesmere ..	92	84	— 8.7	+ 7.7
Newbury ..	126	102	— 19.0	+ 6.2	71	Ludlow ..	91	69	— 24.2	— 11.5
Wellington ..	114	78	— 31.6	— 18.7	156	Newport ..	106	96	— 9.4	+ 23.1
Wem ..	93	87	— 6.4	— 9.4	71	Oswestry ..	96	87	— 9.4	+ 11.5
Whitchurch ..	102	85	— 16.7	— 11.5	86	Shifnal ..	94	76	— 19.1	— 2.6
	103	104	+ 1.0	+ 8.3	102	Teme ..	127	102	— 19.7	+ 30.8
						Wellington ..	102	83	— 18.6	+ 6.4
						Wem ..	69	67	— 3.0	— 14.1
						Whitchurch ..	61	58	— 5.0	— 25.6
All Districts ..	112	96	— 14.3		95	All Districts ..	93	78	— 16.1	

TABLE IV. (URBAN).

INFANTILE MORTALITY DURING THE YEAR 1915.

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

CAUSE OF DEATH.	WEEKS.				TOTAL Under 4 weeks.	MONTHS.				Total Deaths Under 1 year.
	Under 1	1—2	2—3	3—4		1—3	3—6	6—9	9—12	
Small-pox	..	..	..	..	..	..	..	..	..	..
Chicken-pox	..	..	..	..	..	..	..	..	..	..
Measles	..	..	..	..	..	1	..	2	2	5
Scarlet Fever	..	..	..	..	..	..	..	..	..	..
Whooping Cough	..	..	..	..	..	2	2	6	2	12
Diphtheria and Croup	..	..	..	..	..	..	..	..	..	..
Erysipelas	..	..	..	..	..	..	..	..	..	..
Tuberculous Meningitis	..	..	..	..	..	..	..	..	..	..
Abdominal Tuberculosis	..	..	..	..	..	..	2	..	1	3
Other Tuberculous Diseases	..	..	..	..	..	..	..	..	2	2
Meningitis (not tuberculous)	..	..	..	..	..	..	..	..	2	2
Convulsions	..	1	1	1	3	4	3	2	3	15
Laryngitis	..	..	..	..	..	..	..	..	..	..
Bronchitis	..	..	3	3	6	8	5	4	6	29
Pneumonia (all forms)	..	..	..	1	1	2	2	7	10	22
Diarrhoea	1	1	1	..	3	5	1	1	1	11
Enteritis	..	1	..	1	2	4	4	3	1	14
Gastritis	..	..	..	..	..	2	1	..	..	3
Syphilis	..	..	..	..	..	..	..	..	..	..
Rickets	..	..	..	..	..	..	..	..	..	..
Suffocation, over-lying	1	..	..	1	2	..	1	..	..	3
Injury at Birth	3	..	..	..	3	..	..	..	..	3
Atelectasis	..	..	..	..	..	..	..	..	..	..
Congenital Malformations	2	2	2	..	6	..	1	1	1	9
Premature Birth	20	4	4	3	31	3	1	..	..	35
Atrophy, Debility and Marasmus	5	2	4	1	12	10	5	2	1	30
Other Causes	3	2	..	2	7	4	2	3	3	19
TOTALS	35	13	15	13	76	45	30	31	35	217

TABLE IV. (RURAL).

INFANTILE MORTALITY DURING THE YEAR 1915.

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

CAUSE OF DEATH.	WEEKS.				TOTAL Under 4 weeks.	MONTHS.				Total Deaths Under 1 year.
	Under 1	1—2	2—3	3—4		1—3	3—6	6—9	9—12	
Small-pox	..	..	..	..	..	..	..	..	..	..
Chicken-pox	..	..	..	..	..	..	..	..	..	..
Measles	..	..	..	..	..	..	..	2	1	3
Scarlet Fever	..	..	..	..	..	..	..	..	..	..
Whooping Cough	..	..	1	..	1	3	2	3	4	13
Diphtheria and Croup	..	..	..	..	..	..	..	..	..	..
Erysipelas	..	..	..	..	..	..	..	..	..	..
Tuberculous Meningitis	..	..	..	..	..	..	..	..	1	1
Abdominal Tuberculosis	..	..	..	..	..	1	..	2	..	3
Other Tuberculous Diseases	..	..	..	..	..	..	..	..	..	..
Meningitis (not tuberculous)	..	..	..	..	..	..	..	2	..	2
Convulsions	3	2	1	2	8	3	4	4	1	20
Laryngitis	..	..	..	..	..	..	..	..	..	..
Bronchitis	..	..	1	1	2	8	2	4	4	20
Pneumonia (all forms)	1	..	1	1	3	7	5	2	6	23
Diarrhoea	..	..	..	1	1	1	3	..	..	5
Enteritis	..	..	..	..	..	2	6	3	2	13
Gastritis	..	..	..	..	..	2	..	2	..	4
Syphilis	..	..	..	..	..	..	..	1	..	1
Rickets	..	..	..	..	..	..	..	..	..	..
Suffocation, over-lying	..	..	..	1	1	..	1	..	..	2
Injury at Birth	1	..	..	..	1	..	..	..	..	1
Atelectasis	2	..	..	..	2	..	..	..	..	2
Congenital Malformations	9	4	1	..	14	3	..	1	..	18
Premature Birth	36	3	2	..	41	1	1	..	..	43
Atrophy, Debility and Marasmus	8	1	1	4	14	2	2	2	1	21
Other Causes	8	1	1	..	10	1	3	..	..	14
TOTALS	68	11	9	10	98	34	29	28	20	209

The districts of Bridgnorth Urban and Newport Rural which had excessive mortalities for the period 1907—1914, had high mortalities for 1915.

The infant mortality has now been analysed for eleven years both as regards cause of death and age of the child at death.

TABLE 4.
COMPARISONS OF INFANTILE DEATHS FOR PERIODS OF YEARS.

	Average Annual numbers for years. 1905—1909.	Average Annual numbers for years 1910—1914.	Percentage decrease of numbers in second period compared with first period.	Numbers for year 1915.	Percentage increase or decrease of numbers in 1915 compared with period 1910—1914.
Births	5955	5427	8.8	4917	— 9.4
Deaths from all causes under one year	561	444	20.8	426	— 4.0
Deaths from—					
Measles and Whooping Cough	34	22	35.3	33	+ 50.0
Other infectious diseases ..	5	1	80.0	0	— 100.0
Tuberculous diseases	19	12	36.8	9	— 25.0
Convulsions and Meningitis (not tuberculous)	60	42	30.0	39	— 7.1
Bronchitis	46	33	28.2	49	+ 48.4
Pneumonia	65	43	33.8	45	+ 4.6
Diarrhoea, Enteritis and Gas- tritis	61	52	14.7	50	— 3.8
Premature birth, congenital de- fects and malformations ..	128	119	7.0	105	— 8.4
Atrophy, Debility and Maras- mus	96	74	22.9	51	— 31.0

The second period shows a decrease of births and a far greater decrease of deaths compared with the first period. There was also a very considerable decrease in all the principal causes of death, except those from premature birth and diarrhoea. In these two causes of death there has been no real decrease. Ante natal work which is being commenced in the county will have for one of its objects the prevention of premature births. It is unsatisfactory that the diarrhoeal diseases should have shown little tendency to diminish.

A comparison of 1915 with the previous five years shows an increase of deaths from infectious disease and bronchitis and a considerable decrease of deaths from premature births and atrophy, debility and marasmus. The increase of deaths from infectious disease and bronchitis has been due to rather extensive outbreaks of whooping cough and measles.

It is a matter of considerable importance that we should know what is the period of the first year of life in which the greatest effect can be produced in the reduction of mortality. Considerable attention has recently been given to this question, and particularly to the effect of measures taken before the birth of the child.

There are three sets of figures that throw light upon this question.

1. *Comparison of mortalities amongst different classes of population, e.g., the well to do or professional classes and the poor or labouring classes.* These figures are not available for this county.

2. *Comparison of districts with high mortalities with those of low mortalities.* For this purpose the combined urban areas may be compared with the combined rural areas. The combined urban areas have considerably higher rates due no doubt to more harmful conditions. The higher rates are seen not only below one year but at all ages. Consequently it may be inferred that the harmful conditions are operative at all ages and affect along with others the pregnant woman.

3. *Comparison of the death-rates in a period of years, with those of a succeeding period in which there has been an improvement.* By this means it can be ascertained in what weeks or months of the infant's life the greatest effect has been produced.

TABLE 5.

A COMPARISON OF URBAN WITH RURAL DISTRICTS AS REGARDS THE INFANT MORTALITY RATES FOR CERTAIN DISEASES, FOR THE YEARS 1905—1914.

DISEASES.	Death-rates in Urban Districts per 1,000 births for 10 years— 1905—1914.	Death-rates in Rural Districts per 1,000 births for 10 years— 1905—1914.	Percentage Excess of Urban Rates over Rural Rates.
Measles and Whooping Cough	5.5	4.2	+ 23.6
Other Infectious Diseases	.6	.5	+ 16.6
Tuberculous Diseases	2.2	3.0	— 36.3
Convulsions and Meningitis (not tuberculous)	10.0	7.9	+ 21.0
Bronchitis	7.6	6.2	+ 18.4
Pneumonia	11.0	8.0	+ 27.2
Diarrhoea, Enteritis and Gastritis ..	12.8	7.4	+ 42.1
Premature Birth, Congenital defects and Malformation	21.6	21.7	— 0.5
Atrophy, Debility and Marasmus	16.9	13.1	+ 22.4

OF SHROP

CAUSES OF THE DIFFERENT

	Newport	Oake gates
Enteric Fever ..	..	..
Small-pox ..	..	..
Measles ..	..	..
Scarlet Fever..	..	4
Whooping Cough ..	..	..
Diphtheria and Croup ..	1	..
Influenza ..	..	1
Erysipelas ..	..	8
Phthisis (Pulmonary) ..	..	1
Tuberculous Meningitis ..	2	11
Other Tuberculous Dis ..	3	1
Cancer, malignant dis ..	..	2
Rheumatic Fever ..	3	13
Meningitis ..	1	..
Organic Heart Disease ..	1	..
Bronchitis ..	5	6
Pneumonia (all forms) ..	1	18
Other Diseases of Res ..	3	8
Diarrhoea and Enterit ..	..	..
Appendicitis and Typh ..	..	6
Cirrhosis of Liver ..	..	1
Alcoholism ..	..	..
Nephritis and Bright's ..	1	..
Puerperal Fever ..	..	10
Other Accidents and D ..	..	..
and Parturition..	..	..
Congenital Debility an ..	..	2
including Prematu ..	4	5
Violent Deaths, exclud ..	2	8
Suicide ..	..	3
Other Defined Disease ..	14	46
Diseases ill-defined or ..	1	5
Found dead in Severn ..	..	..
TOTALS	42	159

THE RURAL DISTRICTS OF SHROPSHIRE

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	Church Stretton	Cleob Mor time
Enteric		
Small-pox	..	..
Measles	..	..
Scarlet Fever	1	2
Whooping Co	..	..
Diphtheria an	..	..
Influenza	1	..
Erysipelas	..	..
Phthisis (Pul	..	..
Tuberculous	2	5
Other Tuberc	..	4
Cancer, malig	..	2
Rheumatic F	8	10
Meningitis	..	..
Organic Hear	..	1
Bronchitis	7	5
Pneumonia (a	6	5
Other Disease	8	14
Diarrhoea an	1	..
Appendicitis	..	3
Cirrhosis of l	..	..
Alcoholism	..	1
Nephritis and	..	..
Puerperal Fe	..	2
Other Acciden	..	..
and Part		
Congenital D	..	..
including		
Violent Deat	1	4
Suicide	2	1
Other Define	..	..
Diseases ill-d	21	29
	4	1
	62	89

TABLE 6.

A COMPARISON OF URBAN WITH RURAL DISTRICTS AS REGARDS THE INFANT MORTALITY RATES IN AGE PERIODS FOR THE YEARS 1905—1914.

ALL DISEASES IN AGE PERIODS.					Death-rates in Urban Districts per 1,000 births for 10 years— 1905—1914.	Death-rates in Rural Districts per 1,000 births for 10 years— 1905—1914.	Percentage Excess of Urban Rates over Rural Rates.
Under 1 week	..	..	..	..	22.8	24.0	— 5.3
Under 1 month	..	..	..	..	38.6	36.4	+ 5.7
Two to 3 months	..	..	..	..	18.5	14.8	+ 20
Three to 6 months	..	..	..	..	17.2	12.3	+ 28
Six to 9 months	..	..	..	..	12.8	9.5	+ 26
Nine to 12 months	..	..	..	..	10.8	7.3	+ 32
Total under 1 year	..	..	..	..	97.8	80.3	+ 17.9

TABLE 7.

A COMPARISON OF THE MORTALITIES OF INFANTS AT VARIOUS AGES FOR THE PERIODS 1905—1909 AND 1910—1914 IN URBAN AND RURAL DISTRICTS.

		URBAN DISTRICTS.			RURAL DISTRICTS.		
		1905—1909	1910—1914	Percentage Increase or Decrease of second period on first period	1905—1909	1910—1914	Percentage Increase or Decrease of second period on first period
Total Births		13724	12258	— 10.6	16050	14856	— 7.4
Total deaths		1423	1118	— 21.4	1380	1104	— 20.0
Deaths per 1,000 births							
Under one week	..	22.0	23.7	+ 8	24.2	23.8	— 2
" " month	..	37.8	39.4	+ 4	37.4	35.3	— 6
Two—3 months	..	20.8	16.0	— 23	16.0	13.5	— 16
Three—6 months	..	19.4	14.8	— 23	13.5	11.0	— 19
Six—9 months	..	14.1	11.3	— 20	10.8	8.0	— 26
Nine—12 months	..	11.7	9.7	— 17	8.2	6.4	— 22
Total		103.7	91.2	— 12.1	86.0	74.3	— 13.6

Table 6 shows that the very considerable excess of infant mortality in the urban districts over the rural districts did not show itself during the first week, but that on the contrary there was a slight excess for this period in the rural districts. The excess in the urban districts for the first month was almost negligible, but after the first month there was a marked excess which was maintained up to the end of the year.

So far as limited figures of this kind go, they appear to show that the harmful effects of an urban district, which show themselves in increased infant and general rates, have no influence upon the health of the newly born child.

Table 7 is also very instructive. There was a very marked decrease in infant mortalities in the second period (1910—1914) compared with the first (1905—1909), both in the urban and rural districts. This decrease however did not show itself during the first month. In the urban districts there was an actual increase during this period. These figures appear to show that the factors which have brought about a general decrease of infantile mortality have had no effect on the mortality of the first month of life.

As previously stated, figures are not available for this county dealing with different classes of the population, but in the Report of the Registrar-General for 1911, Dr. Stevenson states that the excess of infant mortality in the unskilled labouring classes over that in the upper and middle classes is 41 per cent. in the first month, 92 per cent. at one to three months, 142 per cent. at three to six months, 165 per cent. at six to nine months, and 183 per cent. at nine to twelve months.

These figures appear to show that the vitality of the child at birth is not greatly affected by ante-natal conditions and that adverse conditions after birth continue to act with increasing effect throughout the first year of life. Although speaking generally this is probably true, it must not be inferred that ante-natal work has little public health value. It is of the utmost importance for the health of the mother by bringing about a higher standard of health during pregnancy and by removing or alleviating conditions which if left undealt with, may prove a very very grave source of danger at confinement. A higher standard of health in the mother must react upon the health of the child, particularly by making satisfactory breast feeding possible for the proper length of time in a larger proportion of cases. If directed towards the removal of the syphilitic taint in mothers suffering from this disease, ante-natal treatment will be the means of preventing a large number of miscarriages, stillbirths, deaths in the early months and much illness and disease in the survivors. Still the fact remains that the conditions affecting infant life, whether they are the adverse conditions present in our large industrial towns, or the favourable conditions affecting the specially well cared for classes, or the conditions brought about by the special effort of public bodies in their child welfare work, have produced little or no effect on the mortalities of the first week of life, comparatively little result on the mortalities during the first month, but have produced their chief effect in the period from *three to twelve months*.

It is very important that we should have some definite idea as to what amount of reduction of infantile mortality will be ultimately possible. For this purpose I have for some years stated separately those diseases which may be considered preventable. They usually amount to about 80 per cent. of the whole.

A more practical method is to calculate the mortalities in specially favoured classes. Dr. Stephenson in the Registrar-General's report for 1911 states that for that year the mortality in the families of—army officers was 44, naval officers and solicitors 41, medical practitioners 39 and artists 27. He says :—" Even if it cannot be anticipated that the mortality of the working man's infant will ever fall to quite so low a level as that of the professional man's, it may still fall to the level where the latter at present stands, for there is no reason to suppose that the limit of improvement has yet been reached in this matter by any class."

These figures are a complete answer to a Sanitary Authority with a mortality of about 80 who do not consider that there is any necessity for special measures because their mortality is comparatively low.

In the prevention of infantile mortality the importance of "personal hygiene" including as this term does, food, cleanliness, sleep, clothing, etc., is not likely to be lost sight of, but there is a danger that the importance of the conditions under the control of public health authorities such as housing, arrangement of streets, scavenging, and pollution of the air, in the production of infant deaths, may be overlooked. A study of urban and rural mortalities should convince anyone that these latter conditions are of the utmost importance. To rebuild our towns so as to provide houses that will not be overcrowded and will be arranged so as to admit a plentiful supply of fresh air and sunlight, is a slow matter, but to some extent the evils to infants may be lessened by the teaching and supervision of health visitors. Much of the bad effect of an insanitary house is considerably lessened if it is kept scrupulously clean, and the effect upon an infant of living in a house that neither admits direct sunshine nor has any proper circulation of air around it, can be greatly reduced if the child is taken into the open air and sunshine for some hours each day. Along these and other lines there is great scope for the work of health visitors.

Quotations from District Reports :—

LUDLOW URBAN.—"A careful analysis of these infant deaths makes it evident that the majority of these were preventable, and I have no doubt that the appointment of the Health Visitor to work under the Notification of Births Act by the County Council will in time bring about a considerable reduction in this mortality."

LUDLOW RURAL.—"Three deaths were caused by Congenital Debility and Malformation, and three others were assigned to prematurity, in other words, defective health of the mother prior to the confinement was directly responsible for them all."

WELLINGTON URBAN.—Infantile Mortality rate was 156.—"This very considerable increase in the deaths of infants can I believe be largely attributed to the prevalence of Whooping Cough and Measles during the greater part of the year. The recent adoption of the Council of the most important measures to combat this serious mortality in young children, viz. : the establishment of an Infant Welfare Centre and the appointment of a Health Visitor, may be confidently looked to bring about a considerable reduction in this wastage of infant life."

WENLOCK.—"The causes of death were :—measles 1, whooping cough 2, convulsions 2, bronchitis 2, pneumonia 2, diarrhoea 6, congenital debility 8, other causes 1. Six children died of conditions of congenital debility within four weeks of birth, the remaining 18 survived one month and died later. These figures and the majority of the causes of death, indicate that the system of Health Visiting of infants initiated towards the end of the year by the County Council, under the Notification of Births Act, should do much good in the education of mothers in better methods, and in saving infant life now lost from preventable causes."

INFECTIOUS DISEASE.

Small-pox.—No case of small-pox has been reported during the year. The war is undoubtedly increasing the risks of introduction of infection, and the falling off of vaccination during the last 6 or 7 years greatly increases the danger from such introduction. It is important therefore that all Sanitary Authorities should have some hospital accommodation kept in readiness.

Scarlet Fever.—The number of cases notified was 508 compared with 427 in 1914, 568 in 1913, 418 in 1912, 874 in 1911, 729 in 1910, and 1,069 in 1909. There were 5 deaths, compared with 5 in 1914, 4 in 1913, 6 in 1912, 10 in 1911, 13 in 1910, and 31 in 1909.

The case mortality for the last 7 years has been :—1.0 in 1915, 1.1 in 1914, .7 in 1913, 1.4 in 1912, 1.1 in 1911, 1.8 in 1910, and 2.9 in 1909.

The districts with the greatest prevalence were Ludlow Urban and the rural districts of Oswestry, Cleobury Mortimer, Ellesmere and Wem.

The following are the important references in the district reports :—

CLEOBURY MORTIMER.—“ There were twenty-seven cases in Highley during the first three months of the year, the majority of them in the Clee View, a row of houses erected by the Billingsley Company for their workmen. Isolation was not attempted in most of the houses, and in consequence it spread through the household in some instances, five occurring in one house, four in another and three in several. The only means of controlling the disease in such a community would be by removal of the early cases to an isolation hospital promptly.”

LUDLOW URBAN.—“ In a number of the houses isolation was not possible on account of the size of the family and the fewness of the bedrooms.”

“ All the Elementary Schools were closed, and every house was visited by the Officers of the Council, and disinfectants provided.”

A case of scarlet fever occurred at a dairy farm in the Rural District and there were a number of cases in houses supplied from this farm.

“ The conclusions I came to was that there was not clear evidence that the milk supply was responsible for the epidemic, that personal contact both at school and in the streets was obviously the cause of many of them.”

“ A nurse was provided at one house where seven cases occurred, and a few were isolated in the Small-pox Hospital.”

“ The prompt removal to an Isolation Hospital of the earlier cases is, I believe, the only method of checking an epidemic of Scarlet Fever in the smaller class of house, in which the majority of cases occur.”

LUDLOW RURAL.—“ Of the eleven cases, six were definitely traced to the epidemic in Ludlow. They were all attending either elementary or secondary schools, in the Borough.”

NEWPORT RURAL.—“ At Woodcote in November, five cases arose in one house. This outbreak deserves record as a specially striking instance of the need for some hospital isolation provision in every District. The house was a small one with only two bedrooms, and a considerable family. Two cases of scarlet fever arose about the same date, a week later two more inmates developed the disease, and after ten more days a fifth case occurred. Further, a young man resident in an adjoining district, came to the house, and though warned against the risk of infection insisted on entering. He went home, developed the disease and died, after infecting others of his family. Had it been possible to remove the first two cases to hospital it is probable that no other case would have occurred in the house and the further spread and fatality could have been avoided.”

Measles.—There were 48 deaths from measles compared with 33 in 1914, 16 in 1913, 21 in 1912, 23 in 1911, 30 in 1910, 8 in 1909, 42 in 1908, and 57 in 1907.

In the Education County 2,025 cases were notified by the school teachers, and 102 schools were closed on the recommendation of the School Medical Officer.

Fourteen of the deaths occurred in the Borough of Shrewsbury.

In the report for 1914 details were given as to the action taken when an outbreak of measles is notified from the school.

During the year 1916 measles had been made a notifiable disease and the question of health visiting and nursing of measles is now under the consideration of the County Council.

RICTS.		
IFIED IN EACH DISTR		
NOTIFIAB	8	9
	Newport	Oakeng:
Small-pox		
Cholera	..	..
Plague	..	..
Diphtheria,	..	..
Membranou	..	21
Erysipelas	..	
Scarlet Fev	..	5
Typhus Fev	..	8
Enteric Fev	..	..
Relapsing F	..	..
Continued F	..	..
Puerperal F	..	..
Cerebro-Spin	..	..
Poliomyelitis	..	1
Ophthalmia	..	..
Pulmonary	2	..
Other forms	7	16
	1	2
TOTAL	10	53

Although a few cases h
 attributed to the care
 ever are free from inf

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TOTAL CAS

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21

measles

health

As a result of notification Dr. Gepp says :—" with the experience of four months of notification, one present effect of the Order appears to be that in a larger proportion of cases a medical man is called in. If this should prove to continue, one very good result will have been attained. Another point is that in an extensive epidemic Councils will be faced with somewhat heavy accounts for notification fees, an expenditure that will have little value unless good use is made of the information to provide the required nursing assistance in cases of the poorer class."

Diphtheria.—There were 333 cases and 30 deaths, compared with 382 cases and 34 deaths in 1914, 246 cases and 27 deaths in 1913, and 181 cases and 17 deaths in 1912.

The districts principally affected were the Oswestry Urban and Rural Districts, the Borough of Shrewsbury and the Newport Rural District. Eleven of the thirty deaths occurred in the two Oswestry districts, and in both districts the deaths were mostly associated with insanitary home conditions. In numerous schools throughout the County swabs were taken either by the District Medical Officer of Health or by the County Council Medical Officers or by the School Nurses. These swabs were found most useful in discovering overlooked cases and carriers and were an invaluable guide as to action that should be taken.

When there is diphtheria in a school a letter is sent to all homes in which there are cases of sore throat, pointing out the danger and urging them to call in a doctor. If a school is closed on account of diphtheria, a letter is sent to every household pointing out the dangers and the action that should be taken.

DRAYTON RURAL.—" Eight of the cases of diphtheria became infected in connection with an outbreak at a farm house at Shavington—two deaths occurred, and a third fatal case was removed from Lockley Wood."

ELLESMERE RURAL.—There was an outbreak of diphtheria at Harmer Hill School, which was investigated by the County Medical Officer of Health. The source was traced and the epidemic came to an end.

NEWPORT RURAL.—*Diphtheria*.—Absentees were visited and swabs taken in connection with Donnington Wood School.

OAKENGATES.—" Ketley Bank School, was as in the previous year the School most frequently attended by the children, eight of them being scholars there, and three at Hartshill, six other schools having one case."

" The defective water supply at Ketley Bank School, which makes the flushing of the closets a matter of uncertainty is I believe an important factor in the causation of Diphtheria at the School for more than two years past."

SHIFNAL RURAL.—Four of the cases of diphtheria " were in children attending Shifnal School, which was visited on three occasions and swabs were taken of contacts, but the results were always negative."

WHITCHURCH URBAN.—All cases of sore throat were excluded from schools and inquired into and many swabs were taken in doubtful cases.

Enteric Fever.—Only six cases with 3 deaths occurred during the year, compared with 20 cases and 2 deaths in 1914. In addition there were three cases amongst soldiers.

The increase of enteric fever that was predicted on account of the war has not taken place, though a few cases have been traced to military infection. This fortunate result must be attributed to the care that is taken to ascertain that soldiers who have suffered from enteric fever are free from infection before discharge.

1914
①

The six cases occurred in the following districts :—Bridgnorth Urban, Oswestry Urban, Shrewsbury, Wem Urban, Bridgnorth Rural and Cleobury Mortimer. The military cases were in Ellesmere Urban, Whitchurch Urban and the Borough of Shrewsbury. All the cases except one in the Cleobury Mortimer Rural District were examined for Widal's reaction and they were all positive.

These isolated cases of enteric fever are difficult of explanation except by the supposition that there are unknown carriers. Their importance is due to the fact that any one of them may under favourable condition for infection become the cause of an outbreak. It is satisfactory to observe that apparently there was no spread from any of these cases. No details are given in the reports as to the origin of the cases so in all probability no conclusions were arrived at.

The disease is so rare in this County that each case becomes of considerable interest and is worth very careful investigation.

The following are the directions in which investigations are desirable :—

1. In every case an endeavour should be made to get a specimen of blood submitted for Widal's reaction.
2. A close search should be made for overlooked cases ; other persons in the house or intimate contacts who have suffered recently from ill defined illness should be examined for Widal's reaction.
3. If there is suspicion that any person is acting as a carrier, application should be made to the County Council for a bacteriological examination of the faeces.
4. Strangers from outside the district should be looked upon as probable sources of infection and their health carefully inquired into.
5. A careful inquiry into the sanitary surroundings of the case and possibility of food or water infection should be made.

A complete record with dates is essential.

Cerebro-spinal Meningitis.—Only two cases were definitely notified as cerebro-spinal meningitis during the year—one at Shrewsbury and one at Oakengates. Several suspicious cases occurred, *e.g.*, at Clun, where Dr. Gepp says :—" One case of acute meningitis was notified as cerebro-spinal fever in Ratlinghope parish in April. I visited and investigated, and the case appeared to be one of septic meningitis following on influenza and abscess of the ear. The case was fatal. The Council authorised me to take steps in any necessary case of cerebro-spinal fever to provide nursing assistance."

Also a case at Newport Urban and Wellington Rural District where lumbar puncture showed the disease to be tuberculous meningitis.

This disease has been prevalent to a very serious extent amongst the military forces particularly in the south of England. So far as investigation goes, the infection appears to be spread from discharges from the nose, either from persons who have been in contact and become infected without developing the disease or by persons in the early stages of the disease before the serious symptoms develop. It is probable that there is less danger of spread after the patient has become seriously ill and is bedridden.

① In order to prevent infection it is desirable that patients should be removed to an isolation hospital and that contacts should be dealt with by partial quarantine and by treatment of the throat and nose. It has not been found by experiment that the treatment usually prescribed for disinfecting the nose is efficacious in getting rid completely of infection, still there is a probability that it lessens the danger. It has not been possible with the means at the disposal of sanitary authorities to investigate contacts in the manner suggested by the Local Government Board.

The treatment of cerebro-spinal meningitis by early lumbar puncture and injection of serum has proved so successful that it seems essential that such treatment should be made readily available for any patient. As most practitioners have had no experience of this treatment, it is very desirable that sanitary authorities should make provision by which a patient may get serum treatment without delay. The expense would be small, so long as the cases are few and would be very trivial compared with the lives saved and the paralysis prevented. If the cases were considerable in number, the necessity for such provision would be obvious.

Poliomyelitis.—No case of this disease was notified during the year. It is quite probable however that notification of the disease has not yet become complete. During the present year a number of cases have come to light.

The seriousness of this disease is that it very frequently leaves crippling paralysis especially if it is not properly treated, and that it is liable to become epidemic.

We do not know its mode of spread, nor has it so far occurred in this county except in isolated cases. The question of treatment is a matter of some urgency. With skilled treatment the bad effects of the disease can be very greatly prevented. The treatment required is entirely beyond the means of the mass of the population. It must be either institutional treatment, or treatment by a medical practitioner specially experienced acting through a nurse specially trained. The provision of such treatment, it appears to me, comes within the powers of the County Council under its Child Welfare Scheme. At present the majority of the children attacked are allowed to develop serious deformities and paralysis, which last throughout life, or at most an attempt is made later in life to relieve the deformities which might have been prevented. The Baschurch Surgical Home is doing specially good work in these cases.

TUBERCULOSIS.

TABLE 8.

	DEATH-RATES FROM PHTHISIS.											DEATH-RATES FROM OTHER FORMS OF TUBERCULOSIS.										
	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
Urban Districts	1.0	1.20	1.15	1.09	1.04	.93	1.12	1.01	.72	.95	1.08	.37	.47	.27	.45	.41	.29	.31	.25	.22	.25	.27
Rural Districts	.92	.91	.83	.83	.83	.77	.68	.71	.47	.70	.78	.28	.27	.31	.41	.38	.15	.17	.26	.21	.20	.27
County	.96	1.04	.97	.95	.93	.85	.87	.84	.58	.81	.92	.32	.36	.29	.43	.39	.21	.34	.25	.21	.23	.27
Wales	1.14	1.15	1.14	1.11	1.08	1.01	1.08	1.03	1.00	1.04	*	.49	.49	.46	.47	.44	.41	.38	.32	.32	.32	*

* These rates are not yet available.

Phthisis.—The death-rate from pulmonary tuberculosis has again risen and was about equal to the rate for the year 1909. In commenting upon the very low rate for 1913, I said:—"One must recognise that the decrease is principally due to some factor unconnected with the administrative measures taken for its prevention, as the preventive measures except those which tend to the general betterment of the population cannot yet have taken effect. If the curative measures have had any considerable effect in prolonging life and thus lessening the number dying this year, one would expect a corresponding increase of deaths in the one or two succeeding years. This cause has probably however not operated to any considerable extent." The increase of deaths in 1914 and 1915 has taken place, for 1916 remained

gradually at the higher level

The number of primary notifications of pulmonary tuberculosis (phthisis) was ~~332~~ on Form A and ~~1~~ on Form B, or a Total of ~~333~~ *on Form A and B a total of 354 in 1915*

In my report for 1912 I said:—"It is evident that only a fraction of the cases were notified, and as the completeness of notification is an essential factor in the prevention of the disease, it is important to find out what this proportion was. It is important too, that one should adopt some method of estimating the completeness of notification, so that the results year by year can be compared. For this purpose it has been assumed that the average duration of cases of phthisis, in a condition that can be recognised, is 4 years. On this supposition, the number of cases at any one time would be equal to four times the annual number of deaths. The average annual number of deaths for the four years ending 1912 was 212, and the number of cases of phthisis alive on December 31st, 1912, may be consequently assumed to be 848. In order to arrive at the number of cases that should have been notified it is necessary to add to this number, the number of deaths during the year 1912 (208), and to deduct the number notified in 1911 that were alive in 1912 (approximately 35), as these cases did not require re-notification. This gives a total of 1,021. The actual number of cases notified in 1912, eliminating those notified a second time, was 426, or approximately 42 per cent. of the estimated number of cases. This must be deemed satisfactory as the first year's notification, considering the reluctance of patients to call in medical men and the difficulty of diagnosis in the early stages of the disease."

Applying this method of calculation in order to see what proportion of cases have been notified, one finds (a) that the number of deaths for the four years ending December 31st, 1915, was 772, (b) the number of deaths for the year 1915 was 214, (c) the number of cases notified in previous years that were alive and in the County on January 1st, 1915, was 582. $772 + 214 - 582$ gives approximately the number of cases that should have been notified in 1915, viz., 404. The actual number was 382, or 94.5 per cent., compared with 57 per cent. in 1914, 46 per cent. in 1913, and 42 per cent. in 1912.

If these figures could be absolutely relied upon, it would seem to show that we are now getting almost all cases notified. There are several possible sources of error in the calculation, e.g. (1) the average duration of a case of phthisis is assumed to be 4 years; (2) the number of cases that recover are not taken into consideration; (3) movement of cases into and out of the county are ignored; (4) perhaps, however, the principal disturbing element, is that the cases in the Asylum were notified in 1915 for the first time. No less than 28 cases were notified.

for the provided beds of tuberculosis
The position with regard to the scheme is that— as follows

(1) One tuberculosis medical officer has been appointed and has been working in the County since June 9th, 1913.

(2) There are ~~56~~ sanatorium beds at the King Edward Memorial Sanatorium available for patients of the County.

(3) A central dispensary has been established in Shrewsbury, and a branch dispensary at Oswestry.

(4) Six whole-time health visitors have been appointed for tuberculosis and child welfare work. An arrangement is in force in the Borough of Shrewsbury by which a nurse is employed for half her time in tuberculosis work under the County Council.

Two joint hospital Committees have been formed for the purpose of providing isolation hospital accommodation. At these hospitals, when erected, beds for advanced cases of phthisis will be provided for most of the East and South of the County. This scheme is at present in abeyance.

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Age Periods.	Number of Notifications on Form C.	
	Poor Law Institutions.	Sanatoria.
Pulmonary, Males	1	34*
„ Females	..	35*
Non-pulmonary Males ..	..	..
„ Females ..	..	..
Totals ..	1	69*

* Tt 5.

Many attempts have been made to find a site in the neighbourhood of Shrewsbury for a hospital for advanced and acute cases, but so far without success and the matter is standing over until after the war.

So far, no beds have been provided under the scheme for the treatment of forms of tuberculosis other than pulmonary. The cases have mostly been treated in the General Hospitals and Baschurch Home, without any payment from the County Council.

6 A scheme for after-care has been started by the Association for the Prevention of Consumption. A Central Committee has been formed and branch committees covering the whole County. The scheme is working very successfully (see page 20).

Work under the scheme.—All notified cases are visited by the Tuberculosis Medical Officer unless there is some objection on the part of the patient or the medical attendant. In addition all cases discharged from the Sanatorium are visited at an early date, and also school children suspected of consumption.

The Tuberculosis Medical Officer makes a recommendation with respect to insured persons as to the kind of treatment—domiciliary, dispensary, or sanatorium. Non-insured patients are dealt with in a similar manner, with regard to sanatorium and dispensary treatment.

In all cases where application is made for sanatorium benefit, the Tuberculosis Medical Officer examines the patient. In other cases, he examines the patient with the permission or on the request of the medical attendant. Instructions are given in all matters concerning the prevention of infection and the health of the patient. *or for admission to the Sanatorium* ~~Contacts who show any signs of illness are examined or advised to attend the dispensary, if accessible.~~

Reports are received from the medical attendants with regard to the insured patients having domiciliary treatment. *more a partner of the T.O. is supposed to be well with the M.A.* These reports act as a guide to the Tuberculosis Officer.

The following is the number of visits paid by the Tuberculosis Medical Officer in 1915:—

Visits to insured persons	..	..	..	37 612
Visits to non-insured persons	..	..	..	33 342
Visits to school children..	..	..	..	184 228
				94 1182

The cases are followed up by the whole time health visitors, who enter into the details of household arrangements, with the object of improving the living conditions of the patients, and preventing infection. At their first visit they make a full report for the use both of the County Public Health Department and the Local Sanitary Authority. Much of the success of the scheme depends upon the care and fulness with which the health visitor makes her inquiries and reports and the frequency of her subsequent visits. It is her duty to see that nothing is left undone to bring about satisfactory conditions.

The number of visits paid by the health visitors to phthisis houses during the year was 2954.

King Edward Sanatorium (Shirlett).—The number of patients admitted to the Sanatorium in 1915 was 134, and consisted of:—

Insured patients—Males	45
Females	26
Non-insured patients—Males	23
Females	40

The annual report for 1915 gives statistics with regard to the condition of patients on admission and on discharge, alteration in weight, length of stay, etc.

CONDITION OF PATIENTS DISCHARGED IN 1915.

	No. arrested, Tubercle Bacilli absent from Sputum.	Improved.	Stationary.	Worse.	Died.	Total.
Males ..	14	32	12	7	2	67
Females ..	9	28	4	7	..	48
	—	—	—	—	—	—
Total ..	23	60	16	14	2	115
	—	—	—	—	—	—

Presence or absence of tubercle bacilli in patients discharged:—

Men.

Turban* Gernhardt Stadii.	Number of Cases.	Percentage of Total Number	Tubercle Bacilli Present.	Tubercle Bacilli Absent.	No Sputum Present.	Not Examined.
I. ..	25	37.3	1	1	21	2
II. ..	14	20.9	3	2	8	1
III. ..	26	38.9	20	2	4	2
Died ..	2	2.9	..	..	..	..
	—	—	—	—	—	—
Total ..	67	100	24	5	33	5
	—	—	—	—	—	—

Women.

Turban* Gernhardt Stadii.	Number of Cases.	Percentage of Total Number.	Tubercle Bacilli Present.	Tubercle Bacilli Absent.	No Sputum Present.	Not Examined.
I. ..	19	39.6	..	2	14	3
II. ..	8	16.6	1	2	5	..
III. ..	21	43.7	11	4	6	..
	—	—	—	—	—	—
Total ..	48	100	12	8	25	3
	—	—	—	—	—	—

* *Turban Gernhardt Classification.*

Stage I.—Disease of slight severity, limited to small areas on either side, which in the case of infection of both apices does not extend below the spine of the scapula or the clavicle, or in the case of affection of the apex of one lung, does not extend below the second rib in front.

Stage II.—Disease of slight severity, more extensive than Stage I., but affecting at most the whole of one lobe, or severe disease extending at most to the half of one lobe.

Stage III.—All cases of greater severity than Group II., and all these with considerable cavities.

Working capacity of patients discharged :—

	Males.	Females.	Total.
Unimpaired	33	20	53
Impaired	16	18	34
Incapacitated	16	10	26
Total	65	48	113

Increase or decrease of weight whilst in Sanatorium :—

	Males.	Females.	Total.
Weight Increased	54	42	96
„ Stationary	..	..	..
„ Decreased	11	6	17
Total	65	48	113

Length of stay in Sanatorium :—

Cases in which recovery might be expected	141.6 days.
Cases in which considerable improvement might be anticipated	169.5 „
Cases admitted for educational purposes	54.1 „
All patients	121.7 „

The figure of 121.7 compares very favourably with the corresponding figure 74.6 in the administrative counties of England for 1913.

For patients who cannot go to the Sanatorium, for those leaving the Sanatorium who need a continuation of open-air treatment, and for more advanced cases who are a danger to the household, a number of shelters have been provided. ~~For the insured persons, the County Council and the Insurance Committee have provided 60 shelters.~~ Several of the Sanitary Authorities have provided shelters—Shrewsbury 4, Atcham 2, Whitchurch 2, Drayton 2, Chirbury 1. In addition a considerable number of shelters have been provided by private persons or by the branches of the County Association. The Ludlow branch has provided four shelters.

The most valuable use for shelters will undoubtedly be found in providing living and sleeping accommodation for advanced and highly infectious cases. The removal of such a case from a crowded household into a shelter not only removes a most dangerous source of infection but also provides more room for the remainder of the occupants and thus reduces overcrowding. To what extent the use of shelters will do away with the necessity for hospital beds for advanced cases, it is at present impossible to say. There will always remain those cases that cannot be properly looked after at home, including especially those cases where the mother of the family is the person affected, and those in which the surroundings of the home do not permit of the use of a shelter.

Care Scheme.—A Central Care Committee and local Care Committees covering the whole County, have been appointed. Broadly speaking the object of these Committees is to keep in touch with the cases of phthisis throughout the County and by means of advice and help to enable the patients to live as far as possible a "sanatorium life"; and also to report unfavourable conditions that they cannot remedy.

For the. The San. Council

The routine procedure is as follows :—

Reports are sent to the Central Care Committee from the Public Health Department—

- (a) in all cases recommended for treatment under the Insurance Act ;
- (b) in all cases discharged from the sanatorium ;
- (c) in other notified cases where it appears that this can be done without objection.

Reports are also sent by the Medical Superintendent of the Sanatorium on discharge of patients.

These reports are sent to the district committees and they are asked to report periodically. Duplicates of these are sent to the County Medical Officer of Health.

The scheme is now in working order and much excellent work is being done.

The work of a care-committee is partly educational and advisory, and in this direction may be extremely valuable, supplementing and emphasising the advice given by the tuberculosis officer and health visitors. In this category are efforts directed to persuading the patient to sleep in a room to himself or at least in a bed to himself, to keep the windows open, the room free from furniture and clean, to sleep and live entirely in a shelter if one is provided, to obtain a better occupation if one is available, and innumerable other matters of a similar nature.

The work of a care-committee is also to give direct help in certain cases. This may take the form of food either for the patient or for the rest of the family. The supply of food to incurable cases of phthisis can hardly be considered a 'public health' measure. On the other hand to supply food in such cases to other members of the family who are underfed, thus rendering them more likely to resist infection, is sometimes a public health measure of great importance. If the supply of food is undertaken by the care-committee it should be with definite ideas of the ends to be attained, or it may become a committee for poor relief with comparatively little result. Assistance to provide a larger and more suitable house, or a house where a shelter can be used, is a form of assistance that is likely to give excellent value for the money expended. As previously mentioned, this is a form of assistance that might well be undertaken by a Sanitary Authority.

The boarding out of children or the provision of a woman to look after the children may, in certain instances, particularly where the mother of a family is affected, be the only way in which the patient can receive appropriate treatment or the household be preserved from infection.

The question of provision of a more suitable occupation is one of the most difficult that a care-committee has to deal with. Speaking generally there is a great advantage in a person keeping to the occupation he has been trained to. In this occupation he can usually earn more money for himself and family and with less effort than in any other. In many instances, the best course is to keep on with his own occupation under improved conditions. Many occupations are, however, quite unsuitable for a phthisical patient, and in these instances an endeavour should be made to procure a more suitable one. It may be desirable in some cases where funds are available, to supplement the smaller wages of the new occupation so as to provide a sufficient income for the family.

The possibility of continuing sick pay when a phthisical person is engaged in partial work is a subject that is receiving consideration. It is obvious that as graduated work is part of the treatment of a consumptive person and as a large number of patients are discharged from the sanatorium fit for some work, that arrangements of this nature are most desirable.

Disinfection of Houses.—Much correspondence has taken place between the County Council and Local Sanitary Authorities on this matter.

It was suggested by me that phthisis houses should be disinfected on the following occasions :—

1. On notification of the case.
2. During progress of the case, to be determined by the nature of the case and its surroundings. This should only be necessary in exceptional cases.
3. On removal to the Sanatorium or change of address.
4. After death.
5. Disinfection of shelter when it has ceased to be used.

As a result of representations from the County Council most authorities have agreed to carry out this disinfection. The following authorities have not yet signified their willingness to act in accordance with the suggestion, although some of them do disinfect phthisis houses on most of the above occasions :—Bridgnorth, Oswestry and Wenlock Urban Districts, and the Rural Districts of Teme, Wellington and Wem.

Examination of Sputum.—Out of 382 cases notified, the sputum was positive in 113 cases, negative in 46 cases and in 41 cases there was no sputum. No examination appears to have been made in 154 cases. The Asylum cases are not included.

It is recognised as of the utmost importance that sputum, if present, should be examined in every case of phthisis, and that the examination should be repeated as often as may be necessary to determine the progress of the case or its infectiousness. The County Council have for many years provided facilities for examination of sputum, and practitioners are urged to make the fullest use of these facilities in every case.

Early Diagnosis and Notification of Phthisis.—In dealing with phthisis either by attempting to cure the patient, or by the prevention of the spread of infection, the first essential is to get early diagnosis and notification. To help in this direction the following letter was sent in 1915 to every medical practitioner in the County :—

" Dear Sir,

EARLY NOTIFICATION OF CASES OF TUBERCULOSIS.

" The early recognition and notification of the cases is the basis of all direct measures for the prevention of tuberculosis.

" In order to help to bring about early diagnosis the County Council have provided facilities for the examination of sputum and opportunities for consultation with the Tuberculosis Officer in doubtful cases.

" *It is a matter for regret that a considerable proportion of the cases are still not notified until all possibility of cure has disappeared and until the cases have for a prolonged period been a danger to the household.*

" The difficulty of diagnosing cases of phthisis in the early stages and the difficult relation of the medical attendant to the patient in these cases, is fully realised. It will probably be agreed however, that in the majority of cases a frank and early statement with regard to the case either to the patient or his guardians is essential both for the welfare of the patient and the protection of the household.

"In any case of suspicion I would urge that *early and frequent* examination of the sputum should be made. I would also point out that the services of the Tuberculosis Officer are available for consultation in doubtful cases and that medical practitioners are invited to notify this department, whenever such consultations are desired.

"The fear of interference by the Sanitary Authority need not act as a deterrent to notification, as in any such exceptional case the Medical Officer of Health will leave the case to the practitioner if he gives an undertaking that he will see that every precaution is taken. In the same way, the officials of the County Council only act after consulting the medical attendant.

Yours sincerely,

JAMES WHEATLEY,

County Medical Officer of Health."

~~The lack of promptness in notification still leaves much to be desired and~~ The only remedy is for the Medical Officer of Health to make careful inquiries into all cases where undue delay appears to have taken place and to ask for an explanation where necessary. It is as much the duty of the medical attendant to notify promptly a case of phthisis as it is to notify a case of scarlet fever or diphtheria. The disease, however, being a chronic one, there is a tendency to put off arriving at a definite diagnosis and to put off notification until a later period.

Work of Sanitary Authorities in the Prevention of Phthisis.—Dr. Newsholme says in his Annual Report for 1912—13 :—"It will be observed that the Medical Officer of Health is made responsible for the action needed to trace sources of infection, to prevent the spread of infection or to remove conditions favourable to infection. This responsibility rests with him whatever may be the local system of organisation as to tuberculosis. The officers of the tuberculosis dispensary acting independently can only deal with the cases attending the dispensary, including those applying for sanatorium benefit, and cannot undertake the work of cleansing, disinfection, or other sanitary improvements that may be needed."

It must not be forgotten that housing conditions are one of the principal determining factors in the production of tuberculosis. The prevention of tuberculosis by the improvement of housing conditions acts not only in lessening infection but also in perhaps the more important matter of improving the general health and in consequence the resisting power.

Reports on phthisis houses made by the Health Visitors are forwarded to the Medical Officers of Health. *many*

CANCER.

Cancer caused 287 deaths during the year, compared with 306 in 1914, 295 in 1913, 268 in 1912, 265 in 1911, 298 in 1910, and 261 in 1909.

OPHTHALMIA NEONATORUM.

(INFLAMMATION OF THE EYES OF THE NEWLY BORN CHILD).

For the purposes of notification, this disease is defined as "a purulent discharge from the eyes of an infant, commencing within twenty-one days from the date of birth."

Twenty-nine cases were notified during the year and in addition 4 cases were notified with discharge from the eyes which the medical attendant did not consider to be ophthalmia neonatorum.

In every case where a midwife was in attendance, the case was inquired into as in puerperal fever, and the midwife not allowed to attend further cases of confinement until she had disinfected satisfactorily.

The extreme importance of this disease is due to the fact that in a severe case not properly treated, the sight is usually lost. The prevention of such a disaster is worth a great effort.

The first step that a sanitary authority should take is to apply to the Local Government Board for sanction to the provision of medical and nursing assistance under section 133 of the Public Health Act, 1875, and the second is to authorise the medical officer of health to provide a nurse in any case where he considers one necessary.

The County Council has urged the adoption of these measures on all sanitary authorities, but unfortunately some sanitary authorities say they are satisfied with the conditions already existing, whilst others give the infrequency of the disease as a reason for not taking precautionary measures. It is difficult to see how a sanitary authority that refuses to make use of the powers given to it, can be held blameless if a case of blindness results from the lack of treatment.

The Sanitary Authorities that have not replied to the County Council stating that they have made provision are the Urban Districts of Bishop's Castle, Bridgnorth, Ellesmere, Shrewsbury, Wellington and Wenlock, and the Rural Districts of Bridgnorth, Cleobury Mortimer, Teme and Wellington.

In Shrewsbury it is comparatively easy to get a patient into the Eye, Ear and Throat Hospital, Shrewsbury.

A scheme for the provision of health visiting for measles and the possibility of combining with this the nursing of ophthalmia neonatorum is under consideration.

ACCIDENTS AND DISEASES OF PARTURITION.

There were 10 deaths from accidents and diseases of parturition apart from puerperal fever, 5 in the urban districts and 5 in the rural. The numbers in previous years were 16 in 1914, 14 in 1913, 14 in 1912, 17 in 1911, 12 in 1910, 14 in 1909, 23 in 1908, 15 in 1907, 14 in 1906, and 25 in 1905.

PREVENTION OF DENTAL CARIES.

In the reports for 1912 and 1913 a short statement was given showing the extreme prevalence of dental caries, the enormous injury to health of the people, and the direction that preventive effort should take.

Special attention is being given to this matter by the health visitors, and it is hoped, not only that great benefit will result, but that valuable evidence will be obtained bearing upon the causation of this condition.

NOTIFICATION OF BIRTHS.

MATERNITY AND CHILD WELFARE.

The Notification of Births Act although adopted for the whole county in 1914, was only put in practical operation in October of 1915.

A short explanatory extract of the Act was sent to all medical practitioners and practising midwives in the County.

During the period, 1,044 notifications were received referring to 1,012 live births and 32 stillbirths.

Six hundred and forty-five of these notifications were sent in by midwives, 170 by medical men, 3 by both midwives and medical men, 49 by parents, 167 by registrars and 10 by health visitors.

In the Borough of Shrewsbury where the Notification of Births Act has been adopted for some years, 606 notifications were received, of which 532 were sent in by midwives.

Lists of all notifications are sent to the Superintendent Registrars every six weeks, so that they may take steps with regard to any failure to register and they on the other hand supply me with any omissions or corrections.

In every case where there was failure to notify, the midwife or medical practitioner was communicated with.

Arrangements for Child Welfare.—The County Council decided that the first and most important part of the work of child welfare consisted in a good system of health visiting by which infants and mothers are visited in their own homes, advice given, medical treatment suggested where necessary and unhealthy conditions removed where possible. There were already two nurses undertaking tuberculosis inspection and it was decided to appoint four more health visitors, so as to have six whole time health visitors undertaking tuberculosis inspection and child welfare work throughout the County. It was recognised that this was only a commencement and since the end of the year a number of district nurses have also been employed as part time health visitors.

I look upon health visiting as far the most important part of this work, but for its complete development it is necessary that there should be certain additional arrangements, *e.g.* :—

1. Centres at which infants and expectant mothers can attend for inspection and advice. (It is the intention of the Local Government Board that eventually a medical practitioner shall be in attendance at these centres).
2. A certain number of hospital beds for children who cannot be satisfactorily dealt with at home.
3. A number of maternity beds for exceptional cases.
4. Provision of assistance to ensure that necessitous mothers shall have skilled and prompt attendance during confinement. This must include attendance of a midwife and medical attendance where necessary.

Grants are available from the Government for these purposes and regulations governing these grants will shortly be issued. By means of these grants it is hoped that efficient nursing and medical attendance will be available even in the most remote parts, and incidentally that the formation of nursing associations particularly in the thinly populated districts will receive a great impetus.

The next work that should be undertaken is the formation of maternity and child welfare centres in the populous parts of the County.

The scarcity of medical practitioners makes the carrying out of a complete scheme difficult at the present time. A Centre has been formed at Wellington in conjunction with the Wellington Urban and Rural Districts. The County Council Health Visitor is acting as Superintendent and the Medical Officer of Health of the Urban District is exercising medical supervision. The Centre is doing good work.

SCHOOLS AND SCHOOL ATTENDANCE.

The medical inspection of schools and school children of the whole County, with the exception of the Borough of Shrewsbury, is dealt with in a separate report to the Education Committee.

The inspection is carried out by two whole-time medical inspectors, and in the Borough of Wenlock by three practitioners. The work is supervised by the County Medical Officer of Health, who is also the School Medical Officer. Arrangements have been made for school nursing for a little over one-third of the County.

In the Borough of Shrewsbury the Medical Officer of Health is the School Medical Officer, and there is one school nurse.

The total number of nurses undertaking school nursing in the County, including the Borough of Wenlock, is ~~50~~, and the number of school departments attended is ~~100~~. Of these nurses, ~~60~~ are employed by associations affiliated with the Shropshire Nursing Federation, ~~6~~ by other associations, and ~~1~~ by the Borough of Wenlock.

During the year the following cases of infectious disease were notified by the teachers :—

Measles and German Measles	2025	Chicken-pox	..	440	Impetigo	..	319
Whooping Cough	 956	Mumps	 570	Scabies	 61		
Scarlet Fever	 200	Ringworm	 303	Other Diseases	..	1632	
Diphtheria	 84						

Under Article 45 (b) the School Medical Officer (frequently on the report of the District Medical Officers) advised the closure or approved of the closure of 236 schools for the following reasons :—102 for measles, 5 for chicken-pox, 52 for whooping cough, 14 for scarlet fever, 34 for influenza, 6 for diphtheria, 11 for mumps, and 12 for other causes.

Under Article 57, no school was closed by the Sanitary Authority on the advice of the District Medical Officers of Health.

Satisfactory arrangements have been made between the District Medical Officers of Health and the School Medical Officer for closure of schools.

Since the commencement of the war there has been in certain districts an increasing laxity in attendance of children at school, quite apart from the recognised employment of older children in certain kinds of work. In most cases where the children do not attend school or attend very irregularly, the home conditions are very bad.

Recent visits to the homes of absentees, and observation of the conditions under which the children were living, have strongly impressed upon me the idea that regular school attendance is a health measure of the greatest importance. An extract from a memorandum sent to the Secretary for Elementary Education gives my views upon this matter :—

"Attendance at school means at least a partial daily cleansing and some attempt at decency and cleanliness of clothing.

"I am convinced that the greatest influence in promoting personal cleanliness amongst children is regular school attendance and I am inclined to attribute a considerable part of the improvement of public health during the last 30 years to the greater cleanliness brought about by school attendance and the habits thus formed. Consequently I view with considerable apprehension the laxity as regards attendance that exists in some districts at the present time.

"It must be remembered that it is just the children who most need supervision that are kept away when attendance is not enforced and a falling off of 10 per cent. in the attendance may mean that almost all the children of this class are kept away. As a public health measure of great importance, I would urge the desirability of enforcing attendance by every means available."

BACTERIOLOGICAL DIAGNOSIS OF DISEASE.

Quarters of 1915.	For Typhoid Fever. Widal's Reaction.		For Diphtheria.		For Phthisis.	
	Positive.	Negative.	Positive.	Negative.	Positive.	Negative.
First	3	9	138	240	46	138
Second	3	7	85	196	37	146
Third	4	6	109	281	57	152
Fourth	0	7	65	221	46	116
Whole Year	10	29	397	938	186	552
	39		1335		738	

The total number of specimens sent was 2,112, compared with 2,408 in 1914, 1,344 in 1913, 1,118 in 1912, 1,212 in 1911, 1,424 in 1910, 827 in 1909, 620 in 1908, 497 in 1907, and 393 in 1906.

In addition, one sample of faeces was examined for typhoid bacilli with a negative result, three samples of cerebro-spinal fluid, and 133 samples of hairs were examined for ringworm spores.

DISINFECTION.

The disinfection now carried out in the County is as stated in pages 30 and 31 of the report for 1914. The Medical Officer of Health for Shrewsbury says :—" At present disinfection of bedding and clothing is done by spraying. This method is not only uncertain in its results, but inconvenient to the people, who have often to sleep on the bedding within a short space of time after disinfection. Disinfection by steam would not only be much more efficient as far as the destruction of infection is concerned, but would save the people much inconvenience and labour."

" A steam disinfector, combined with the cleansing station, is one of the most important sanitary matters which the Council will have to consider in the future."

The disinfection of phthisis houses is dealt with under phthisis paragraph. It is undoubtedly important that disinfection after phthisis, particularly in old houses with many crevices should be as efficient as possible.

HOSPITAL ACCOMMODATION.

Existing Isolation Accommodation.—(1) *For diseases other than small-pox.*—This consists of (1) a hospital at Shrewsbury, with 20 beds for scarlet fever ; 4 beds for a second disease, and 2 beds for a third disease ; (2) a small hospital at Bridgnorth, also used for small-pox ; (3) a hospital of 4 beds for the Newport Urban District ; (4) a hospital of 8 beds at Market Drayton for the Drayton and Blore Heath Rural Districts.

(2) *For Small-pox.*—A summary of the small-pox hospital accommodation in the County was given in the Report for 1914 and for this accommodation reference can be made to that report.

Although the war has made the necessity for hospital provision more urgent, it has put a stop to the carrying out of any new schemes involving the purchase of sites or the erection of buildings.

This being so, it is all the more necessary that the existing hospital accommodation should be fully utilised and that sanitary authorities with hospitals should extend their facilities to areas without hospitals where this can be done without material disadvantage.

Measures taken for the Provision of Hospital Accommodation.—The hospital accommodation in the County and the need for further provision was the subject of a special report during the year 1911.

In this report it was recommended that three hospital areas be formed—one for the east of the County, one for the north, and one for the south-west, and that one central hospital be established for small-pox.

Hospital Districts have been formed for the East and South-Western Districts, and Committees have been appointed. A site has been obtained for the East Shropshire District, but the further carrying out of the scheme is in abeyance until after the war. No site has been definitely determined on for the South-Western District.

An inquiry was held as to the necessity for a hospital for the Northern Division of the County, but has not been concluded owing to the impossibility of taking any steps during the war.

When hospitals have been provided for these three hospital areas, almost the whole of the County with the exception of Atcham Rural District will be supplied. Provision for Atcham should be made along with Shrewsbury as suggested in my hospital report of 1911. A new hospital for Atcham and Shrewsbury, together with beds for advanced cases of tuberculosis would undoubtedly be the best solution of this problem.

No action has been possible with regard to the provision of a central hospital near Shrewsbury for small-pox.

The Local Government Board in a circular on "the Co-operation between Civil and Military Sanitary Services," says :—"Satisfactory hospital provision for small-pox patients can rarely be improvised. A Sanitary Authority which has not such accommodation, either independently or under an agreement with some other Sanitary Authority, is incurring a heavy responsibility. Smaller Sanitary Authorities can best secure such provision by combined action with other Sanitary Authorities. The modern possibilities of communication by means of motor ambulances render it practicable for a single hospital to serve a large area. In view of the importance of having immediate hospital accommodation available for small-pox patients and of the extreme ease with which the infection of small-pox is spread, it should be arranged that :—

- "1. Hospital accommodation for isolating first cases should at once be available.
- "2. More extended hospital accommodation should be available at short notice."

In my report for the third quarter 1914 this matter is dealt with. "I have reported that a small hospital near Shrewsbury with a motor ambulance would be the best provision for those districts in the County that have no hospital accommodation for small-pox. In the meantime arrangements should be entered into by those sanitary districts without provision, for use in case of emergency of the hospitals already in existence. Such an arrangement would probably take the form of a retaining fee and a charge per week for each patient admitted. The payment would probably enable the owners of the hospitals to put them into greater readiness without further expense to the district. On these lines there should be no special difficulty in providing for the whole County with little additional expense. It should of course be understood that such provision would only be for initial cases and to give time, in case of any considerable outbreak, for further provision."

The Sanitary Authorities concerned were communicated with and this view put before them. The definite suggestions made were that :—

Bridgnorth Urban and Rural should apply for the use of Broseley Hospital.

Ellesmere Urban and Rural and

Oswestry Urban and Rural

Newport Urban and Rural

Oakengates

" " "

" " "

" " "

Whitchurch Hospital.

Wellington Hospital.

Wellington Hospital or Shifnal Hospital.

Atcham

Bishop's Castle

Clun

Church Stretton Urban and Rural

" " "

" " "

" " "

" " "

Shrewsbury Hospital.

Ludlow Hospital.

Ludlow Hospital.

Ludlow Hospital.

HOUSE ACCOMMODATION.

(Housing and Town Planning Act.)

The Local Government Board have issued circulars for the guidance of Local Authorities as to the work that should be carried on during the war, and what should be postponed.

These circulars have been referred to in the introduction to this report.

It is obvious that these restrictions prohibit any scheme for building new houses, and may be used both by Local Authorities and owners of property as a reason for not effecting any extensive improvements to existing houses.

Under these circumstances, the question naturally arises as to whether it is worth while to push on with the inspection. It is desirable to do so, in my opinion, because (1) many insanitary conditions can be remedied without great expense; (2) those that cannot be remedied now, can be held over and dealt with at the earliest opportunity, and (3) by pushing on with inspection, a better knowledge will be available for building schemes at the end of the war.

The amount of inspection of houses has been maintained in several of the districts and in some has been considerably increased, *e.g.* :—Whitchurch Urban, Ellesmere Rural, Market Drayton, Clun, Dawley, and Oakengates.

In the majority of the districts, however, there has been a very considerable falling off of house inspection, resulting in almost no inspection in Cleobury Mortimer, Newport Rural, Newport Urban, and Whitchurch Rural districts. In some of these districts the slowing down of inspection was resolved upon purposely on account of the large amount of arrears of improvements.

The insufficiency of houses noted in previous reports and the overcrowding shown in the Census tables quoted on pages 33, 34 and 35 of the Annual Report for 1914, must have been considerably relieved by the large exodus of men to the armies and of men and women to the munition factories.

Extracts from the Reports of the Medical Officers of Health :—

ATCHAM.—There has been a considerable falling off in the amount of house inspection during the year but it has been pushed on as far and as fast as it has been possible to remedy the defects.

CHURCH STRETTON RURAL.—"No great progress was made with the work of housing inspection. I am of opinion that the rate of inspection should be materially increased, even at the present time. Although it may not be possible to obtain a large amount of radical repair and improvement to old houses now, it is important that inspection should proceed for the discovery of houses showing grave defects of sanitation, and also in order that the housing conditions of the district may be recorded and reviewed within a reasonable time."

CLEOBURY MORTIMER.—"As I have pointed out in previous reports a large number of cottages exist in the district, which are of considerable age, and they require constant supervision to keep them in a sanitary condition."

"The systematic examination of these houses should be undertaken by the Inspector and an endeavour made to remedy their most serious defects. I would suggest that a commencement might be made in Cleobury Mortimer and the Clee Hill."

CLUN RURAL.—"An increased rate of inspection under these Regulations has been initiated and is being maintained."

DAWLEY URBAN.—"Increased progress was made with the housing inspection over that of the two previous years, when arrears of work on property previously inspected were being cleared off."

ELLESMERE RURAL.—Unsatisfactory water supply was the defect most commonly noted.

Tisble.

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.Repairs to Public Pumps and
Wells.

New Public Wells.

Private Wells reconstructed or
improved.Houses connected to Public
Sewerage.

Lengths of New Sewers laid.

Lengths of New Water Mains laid.

Proceedings before Magistrates.

URBAN DISTRICTS.

Bishop's Castle	..	..	41	..	..	..	2	..	..	..
Bridgnorth	..	..	760	..	..	..	5	..	..	..
Church Stretton	..	..	92	..	..	..	3	..	..	..
Dawley	..	..	137	..	..	..	7	637 yds.	..	..
Ellesmere	..	..	121	..	..	..	..	..	..	..
Ludlow	..	..	Not stated.	..	..	..	6	..	..	..
Market Drayton	..	..	891	..	..	..	..	..	..	..
Newport	..	..	180	..	..	..	24	..	..	..
Oakengates	..	..	267	..	..	..	51	247 yds.	..	1
Oswestry	..	..	1200	..	..	..	..	1	..	..
Shrewsbury	..	..	277	..	..	..	37	651 yds.	700 yds.	2
Wellington	..	..	310	..	..	..	3	625 ft.	..	1
Wem	..	..	263	..	..	..	..	..	..	..
Wenlock	..	..	1696	..	..	2	22	..	..	..
Whitchurch	..	..	424	..	..	1	..	..	..	..

RURAL DISTRICTS.

Atcham	..	..	309	5	..	10	16	1260 yds	820 yds.	..
Bridgnorth	..	..	950	1	..	14	..	..	..	..
Burford	..	..	16	..	..	..	..	..	..	..
Chirbury	..	..	237	..	..	..	..	..	..	..
Church Stretton	..	..	191	4	..	4	..	..	..	..
Cleobury Mortimer	..	..	56	..	..	..	..	..	..	..
Clun	..	..	221	..	..	3	3	96 yds.	..	..
Drayton	..	..	453	..	..	31	..	..	..	..
Ellesmere	..	..	147	..	..	1	..	..	..	..
Ludlow	..	..	80	1	..	2	..	..	..	..
Newport	..	..	201	..	..	1	..	..	..	..
Oswestry	..	..	700	3	1	3	..	..	3400 yds.	..
Shifnal	..	..	715	..	..	3	23	..	1 Mile	..
Teme	..	..	64	..	..	..	..	..	..	..
Wellington	..	..	859	..	..	..	..	..	..	..
Wem	..	..	896	2	..	..	..	..	..	..
Whitchurch	..	..	47	1	..	4	2	..	..	..

SANITARY
AUTHORITY.

Number of houses illuminated

URBAN DISTRICTS.

Bishop's Castle	..	..	1
Bridgnorth	..	..	3
Church Stretton	..	..	4
Dawley	..	..	4
Ellesmere	..	..	2
Ludlow	..	..	5
Market Drayton	..	..	9
Newport	..	..	..
Oakengates	..	..	13
Oswestry	..	..	5
Shrewsbury	..	..	19
Wellington	..	..	12
Wem	..	..	N
Wenlock	..	..	20
Whitchurch	..	..	10

RURAL DISTRICTS.

Atcham	..	..	24
Bridgnorth	..	..	13
Burford	..	..	..
Chirbury	..	..	2
Church Stretton	..	..	3
Cleobury Mortimer	..	..	..
Clun	..	..	11
Drayton	..	..	7
Ellesmere	..	..	10
Ludlow	..	..	4
Newport	..	..	1
Oswestry	..	..	N
Shifnal	..	..	2
Teme	..	..	6
Wellington	..	..	10
Wem	..	..	2
Whitchurch	..	..	..

TOTAL 212

LUDLOW RURAL.—“Forty houses were visited and inspected under the Housing and Town Planning Act at Little London, Corfton, Brookhampton, and Bromfield. The reports were presented to the Council and notices sent out, but very little work has been done to them. The defects in the majority of cases were serious and such as to cause injury to the health of the tenant”

“A number of notices for houses sent out last year have not been complied with, and I suggest that the owners are warned that unless the work is carried out the Council will do the work required and recover the expenses as a civil debt in accordance with sections 14 and 15 of the Act.”

NEWPORT URBAN.—“No greater progress than before has been made with housing inspection work, 6 houses being inspected during the year, and their defects of water supply and drainage amended. The number of houses left under consideration at the end of the year was 60, the same number as at the end of 1914. In the majority of these the drainage and water supply have been put right and in some cases privies converted to w.c.'s, the Council deciding to press for this work in the first place before dealing with structural deficiencies in the houses themselves. During the year the cottage property of the town was inspected by an Inspector of the Local Government Board.”

NEWPORT RURAL.—“The number of houses inspected during the year was small. The Inspector consulted me, and in view of the large number of houses still “under consideration” at the end of 1914, and in which a large amount of work still required to be done, I agreed that it was undesirable to schedule any more for inspection during the year.”

“Having the difficulties in view, good work was done by the Lilleshall Company in connection with their large and difficult property.”

“For the satisfactory removal of conditions of overcrowding some building of new houses appears to be required in the Donnington Wood area.”

OAKENGATES.—“Although there are many houses in which the repairs are long overdue, there is no doubt that substantial improvement has been made in cottage property during the year, and when the serious depletion of the workmen in the building trade through the war is taken into consideration the progress made cannot be regarded as unsatisfactory.”

OSWESTRY URBAN.—The Town Planning Act is at present to a considerable extent in abeyance but urgent cases are dealt with.

OSWESTRY RURAL.—In Weston Rhyn a group of 14 back-to-back houses have been demolished and 3 new houses erected on the site. A garden suburb has already been laid out and some of the houses built.

SHIFNAL RURAL.—“The supply of cottages is in most parishes equal to the demand and the great proportion of them may be regarded as healthy and sanitary dwellings.”

“A number of the older ones are damp and without efficient drainage, and these are being gradually dealt with.”

SHREWSBURY.—“The housing of the working and poorest classes in the Borough, though to some extent improved during the last five years, by the repairs carried out to some of the existing houses, the closing and demolition of others found unfit for habitation and the erection of the 63 houses at Wingfield Gardens, remains a difficult problem and unfortunately there appears little hope of a complete solution for many years to come.”

"The shortage of houses has now become so serious that no action can at present be taken in regard to closing a number of houses which are quite unfit for human habitation, many of which cannot be made satisfactory."

"The Council have done their best to meet the difficulty by preparing a second housing scheme to provide 100 new houses on a site in the Castle Fields district, but have unfortunately not been able to secure the necessary sanction of the Local Government Board."

WELLINGTON URBAN.—"In spite of the adverse labour conditions, and the inflated price of materials a gratifying improvement has been made in many cottages and the progress in this department of the work is not unsatisfactory when all the circumstances are taken into consideration."

WENLOCK.—"Greater progress was made with the Housing inspection, 200 houses being inspected as against 147 in 1914, and a total of 190 in the three years 1911-13. Seventy-eight houses had their defects remedied without closing orders. Two houses were closed upon my representation of unfitness. A considerable number (102) of houses reported on remained under consideration at the end of the year. The difficulties experienced in getting more work done, and the nature and extent of improvements secured, are well described by the Inspector whose remarks are as follows:—'As has been pointed out in previous years, the result of the inspection and the service of notices has led to many houses becoming void, very soon to be followed by dilapidation, some 20 houses coming under this category. This is due to the unwillingness of owners to incur the expense of repairs, having regard to the low rentals and the abnormal prices of building materials. Shortage of labour has, in some cases, prevented work being carried out. Of the 200 houses inspected under this Act, sanitary defects were found at 180 houses.'"

WHITCHURCH URBAN.—"The inspector intends to "speed up" the inspection in order to complete the record of the town as quickly as possible. All the older parts of the town, in which serious defects are of course more numerous, have been inspected, and the parts still to be done are the outlying areas of agricultural cottages, and some of the quite modern extensions along the roads radiating from the town. While completing this work, in which the work of following up defects will not be so heavy, the Inspector after consulting with me proposes to make re-inspection of the oldest and worst property in the town. Most very old cottage property requires inspection at short intervals and I strongly approve this course."

WHITCHURCH RURAL.—"Very little housing inspection was done. The Inspector's time was much occupied in organising and supervising the Camp scavenging and excreta disposal. He proposes to largely increase the house inspection this year."

In order to make any real progress it will be necessary in many districts for the Sanitary Authority to proceed to erect houses after the war. In no district is this more necessary than in the Borough of Shrewsbury. The carrying out of the scheme for 100 houses will only provide a small instalment of what is really wanted.

WATER SUPPLIES.

The restrictions imposed by the Local Government Board, have practically prevented any schemes of water supply being brought forward or carried out.

The County Medical Officer made a special report on the water supply of Oakengates with special reference to the higher parts of Ketley Bank. The report has been under the consideration of the District Council, who have obtained a report from their engineers. So far only palliative measures have been taken.

The following are the more important references to water supplies in the district reports :—

ATCHAM.—*Water Supply*.—Repairs to pumps at Bicton Village, Plealey, Bomere Heath, Merrington and Berrington.

Ten private wells re-constructed upon the Sanitary Inspector's representation. A new well provided at Benthall, Ford parish.

Arscott.—The question of the water supply is being kept under notice.

BISHOP'S CASTLE URBAN.—The water supply was constant throughout the year.

CHURCH STRETTON URBAN.—“ The recommendation which I have made in past years, for the supply of the whole District from the main reservoir in New Pool Hollow, has now been carried into effect, alterations having been made last year in the system at the old Town Brook Valley reservoir. All consumers now receive the whole of their supply from the large reservoir.”

“ No samples of water were submitted for analysis during the year. I regard it as important that periodical analysis should be made and, I advise that at least one sample be analysed this year, chemically and bacteriologically.”

CHURCH STRETTON RURAL.—“ *Longnor Village*.—The new system of supply, from springs on Lawley Hill, referred to in my last report, was completed by the property owner last year to the extent of laying the supply main and connecting the principal residence. The connecting of the water supply to the village has been delayed by labour shortage but will be proceeded with when possible. The water is piped a distance of about two miles from the springs.”

PICKLESCOTT.—The Council have decided that further action is not justified at the present time.

CLEOBURY MORTIMER.—“ A group of houses on the border of the district in Coreley parish are compelled to carry their water a quarter of a mile from a Spring, which might easily and at small expense be piped to supply them and a number of houses in the Burford District which are also without.”

CLUN RURAL.—The water supply at Lydham is far from satisfactory and the question of a better supply should not be indefinitely delayed. A new supply should be provided to six houses at Choulton, Lydbury North.

LUDLOW URBAN.—“ Analyses are periodically made by Professor Delepine, of Manchester, and the results on the whole may be said to be satisfactory.”

“ During the summer a connection was made between the old supply taken from below the Burway Farm and the present supply which is taken from beyond the farm. This, in my opinion, is a very unwise proceeding in view of the analyses of the old supply made a few years back. The using of this water for the domestic supply of the Borough is attended with grave risk. The connection should be entirely removed, and the water from the old collecting pipe passed into the river.”

LUDLOW RURAL.—“ The completion of the work on the new bore hole at Craven Arms is still in abeyance, and although a few houses are at times without adequate pressure, it cannot be said that much inconvenience is thereby caused.”

NEWPORT URBAN.—“The Council applied to the Local Government Board for sanction to borrow £300 for the purchase of land adjoining the Waterworks, and a public enquiry was held by an Inspector of the Board, in September. I attended and gave evidence that the purchase of this land was essential, to prevent danger to the purity of the supply from further working of the soil and subsoil in the immediate neighbourhood of the wells, and also generally to enable the Council to control the treatment of the land so as to safeguard the supply. I understand that official sanction to a loan has not been received. Meanwhile the land in question has been acquired by members of the Council acting in their private capacity, but in the public interest.”

NEWPORT RURAL.—A new system of supply to Woodcote village was completed during the year.

OAKENGATES.—“The supply to parts of Ketley Bank has been unsatisfactory throughout the year, there being no water in the mains for days together. It is said to be due to the increased amount used at the Priorslee Works. Many of the owners at Ketley Bank have in recent years been compelled to connect with the Council's main and to put in water-closets and now the Council is unable to provide an adequate and constant supply of water. The Council has thoroughly considered the matter and called in their engineer, who has got out plans for dealing with deficiency.”

“The scheme is so extensive that it will be many months before anything can be done and in the meantime suggestions have been made of a temporary character for improving the supply.”

“Messrs. Berrington, Son & Watney's recommendations are that to ensure an efficient supply in the future at Ketley Bank district :—(1) the general pressure should be increased by duplicating the pumping plant, increasing the reservoir capacity and that the Lilleshall Company should lay a 6-inch main from the reservoir to their existing 6-inch main at Stafford Street, St. George's; (2) that the circulation of water be improved by laying a 4-inch connecting main between the Company's 6-inch main and the Council's 3-inch main.”

OSWESTRY RURAL.—The water supply to Weston Rhyn has been augmented by the provision of another line of pipes and the main has been extended to Hengoed.

“It is proposed to extend Lord Trevor's water supply to Ifton Heath by the construction of a new reservoir, new pumps having been already erected. The present reservoir, in close proximity to a main road, would be better covered up. It would be a great blessing if Lord Trevor's supply could be extended to St. Martins Moors.”

SHIFNAL RURAL.—“The Hatton private supply has been carried to five houses at Evelith, where the wells on analysis were found to be polluted. Seven houses have been connected with the Earl of Bradford's private supply in the village of Weston.”

“I made an inspection of the supplies in the villages of Weston and Blymhill and analysis proved that many of the wells were liable to contamination especially in the latter village.”

“No alteration or improvement has been made in the supply to the Tong Hill cottages.”

WELLINGTON URBAN.—“Some difficulty has been encountered in maintaining an adequate supply to the houses in highest parts of our water area, viz. : Potter's Bank owing it is supposed to the increasing amount drawn off that main for trade and domestic purposes. It is proposed to meet this by filtering the water from the Steeraway Reservoir by means of mechanical filters and supplying Ketley from this source.”

The results of the bacteriological examinations not being satisfactory, it was considered desirable that Prof. Delépine should visit the gathering ground and report. "This report is still under consideration. The main suggestions were:—1. Freeing the gathering ground from all sources of pollution, this can only be accomplished by renting the Willowmoor Farm and restricting the grazing to sheep. 2. Improvement in the feeders, the piping of certain of them, where they pass through the ground upon which the cattle are grazed and the systematic cleansing of the feeders from vegetable matter would no doubt bring about improvement in the quality of the water. 3. Additional storage, this would appear to be too costly at the present time. 4. Prefiltration as by mechanical filters. This I believe is the most practical way of dealing with the problem. They would only have to be used after heavy rain and in the summer months to abstract the vegetable organisms that frequently clog the filters. In the meantime when the water is found to be after filtration below the standard of purity, the rate of filtration is reduced and the borehole supply drawn on."

WENLOCK.—"The Wenlock Sanitary Committee continued work upon the "Stretton Road Spout" water in view of having an additional supply in reserve."

The Wolverhampton Corporation promoted a Bill in Parliament during the year for power to sink a well at Ivetsy, about two miles outside the County boundary. The Bill was opposed by the Salop County Council on account of the danger of depletion of water supplies of the County and in particular on account of danger to the Hilton Bank Well which is the source of supply to Oakengates. The Bill was passed into law with considerable alterations and with the very material safeguard that the amount of water pumped should not exceed 1,500,000 gallons a day.

EXCREMENT DISPOSAL.

Speaking generally the methods of disposal of excreta in the country districts is by means of privies with underground vaults. In towns where there is a system of sewers and a water supply, water-closets are becoming each year more exclusively the method of disposal.

As stated in my previous reports, the aim that sanitary authorities should keep in view are—

- 1.—In districts with a good system of sewers, sewage disposal, and water supply, **to make the water carriage system of excrement disposal universal.** The success of this system depends to a great extent on the care and precautions with which it is carried out.
- 2.—In districts without sewers or water supply, to make a good type of earth closet universal.

The following table published in the last three Annual Reports has been brought up-to-date so far as possible. It shows to what extent the sanitary authorities are endeavouring to make the water-carriage system universal in districts with sewers and water supplies.

<i>Urban Districts.</i>	Water-closets.	Earth-closets.	Privies.	Privies converted to water-closets, or earth closets, or abolished.					
				1915	1914	1913	1912	1911	1910
Bishop's Castle (town proper)	232	6	31	7	6	6	10	6	49
Bridgnorth (town proper) practically all ..	—	3	2	—	—	—	—	—	—
Church Stretton	296	16	14	1	1	3	—	1	3
Dawley	128	71	1110	22	28	—	—	—	—
Ellesmere .. Mostly water-closets ..	—	—	20	—	—	—	—	—	—
Ludlow .. All water-closets except ..	—	—	84	2	7	13	16	—	—
Market Drayton	875	22	386	22	23	31	25	28	14
Newport	630	18	181	14	15	27	24	33	36
Oakengates	386	327	1142	27	29	11	18	22	20
Oswestry	2400	16	24*	—	—	—	—	—	—
Shrewsbury Practically all water-closets ..	—	—	—	—	—	—	—	—	—
Wellington	981	0	233	44	22	15	34	15	10
Wem	234	412	9	—	2	9	15	10	5
Whitchurch	1107	22	214	15	9	9	10	4	0
<i>Towns or Villages in Rural Areas.</i>									
Shifnal	—	—	—	23	27	17	34	38	9
Craven Arms	177	0	16	—	—	—	2	—	—
Hadley	187	4	345	—	—	—	—	—	—
Meole Brace	308	28	8	—	—	—	—	—	—
Wrockwardine	18	6	42	—	—	—	—	—	—

* The privies and pail closets, with one exception, are outside the drainage area.

It must be borne in mind that a certain proportion of the privies are beyond the sewered area and therefore cannot be dealt with. It would add much to the value of this table if the number of privies inside and outside the sewered area were stated.

The conversion of privies to water closets has been hampered by war conditions. Nevertheless in many districts the conversions are well up to the average and it is satisfactory to observe that there has been a distinct speeding up in the Wellington Urban District. In this district the Medical Officer of Health says:—"In forty-four houses the old fashioned privy has been replaced by the water-carriage system, but many which are in the centre of the town and are a great nuisance when they are emptied and a constant source of complaint have still to be dealt with."

SEWERAGE AND DRAINAGE AND SEWAGE DISPOSAL.

New work of this description has been almost entirely stopped by the war.

CLEOBURY MORTIMER.—Owing to difficulties in connection with the working of the Billingsley Colliery, no further progress has been made in improving the outfall works and converting the pan closets into the water-carriage system at Clee View.

DAWLEY URBAN.—Considerable progress was made in the sewerage of the district, sewers being laid at New Town, Station Road, (Horsehay) Heath Hill, New Road, and Dark Lane. Sewers were laid to enable the sewage from Dark Lane to be treated by broad irrigation.

OSWESTRY RURAL.—"A new outfall sewer has been provided on the Chirk Road draining a good many houses, and remedying the insanitary conditions so much complained of formerly."

SHIFNAL RURAL.—“The effluent from the Shifnal outfall works has throughout the year shown a satisfactory standard of purification. At Albrighton the new works are being carefully supervised and good results are being obtained with the increasing amount of sewage that is being brought there.”

WELLINGTON RURAL.—*Sewerage and Drainage*.—“Nothing further has been done with regard to the drainage of Ketley, which in some instances is very insanitary and should receive immediate attention.”

SCAVENGING.

The maintenance of an efficient system of scavenging in all urban districts, or districts of an urban type, is particularly important at the present time.

The Local Government Board in 1915 issued a Return as to scavenging in Urban Districts. In a Circular Letter accompanying the Return the Board state :—“That it is especially desirable at the present time, when so many districts are congested with troops and refugees, and when there are peculiar dangers of the spread of infectious disease, that sanitary authorities should do all that is in their power to prevent the retention of accumulations of refuse in the neighbourhood of dwellings, and generally to maintain an efficient service for dealing with house refuse,” and suggest that the Councils should consider whether all or any of the following steps are necessary in regard to their districts :—

1. To require a sanitary bin to be provided in connection with all new houses and buildings.
2. To encourage owners and occupiers of existing houses to provide covered sanitary bins in place of other refuse receptacles.
3. To undertake with their own staff the scavenging in the populated parts of their district, and to remove all refuse from these parts in properly covered carts at least once a week, especially during the summer.
4. Where no destructor is available, to avoid sending refuse out of the district in such a manner as to cause nuisance and danger to health, and where tips are used, to secure that they are as remote as possible from dwellings and that the refuse is covered with earth and the tip fenced in.

In previous reports I have stated that the essentials for a town are :—

1. Regular and frequent collection by the Sanitary Authorities. Speaking broadly the collection should be at least weekly.
2. The provision of covered movable impervious receptacles.
3. The collection should be carried out in such a way, that little dust escapes into the air. For this purpose, it is most desirable that the receptacles should be emptied directly into covered carts.
4. The disposal of the refuse either by burning or by tips away from buildings. If tips are used, the refuse should be quickly covered with earth.

It is most important that householders should be instructed to burn as far as possible all decomposable refuse.

For country districts where the householder has sufficient land to deal with the house refuse, the problem consists of instructing the householder as to the proper methods of disposal, and seeing that no objectionable accumulations are allowed.

Where there is a weekly collection of refuse the provision of covered, impervious, movable receptacles should be insisted upon. The Board is prepared to approve a bye-law for this purpose.

The Local Government Board state :—" The difficulties which are sometimes associated with the improvement of existing property do not apply to new houses, *and there is no reason why any urban authority should fail to secure that every new house erected in its district should be provided with a galvanised-iron bin with a proper cover.* "

As regards existing property, action should be taken so that all ashpits and unsuitable receptacles are replaced by receptacles of approved type within a reasonably short time. This can also be best carried out by getting sanction to a bye-law. The bye-law is made under the powers contained in sec. 26 of the Public Health Acts Amendment Act, 1890.

Reference must be made to pages 45 and 46 of the report for 1914 for statements as to the scavenging in the districts.

Very little advance has been made during the year.

The following are the principal allusions to scavenging in the district reports :—

LUDLOW RURAL.—" The scavengage of the houses at Craven Arms has been commenced and a considerable number of owners have provided galvanised-iron ash receptacles at the request of the Council to facilitate the work. Further efforts in this direction are needed."

OAKENGATES.—" There are still too many open ashpits on the roadside holding several cart loads of ashes and refuse and serving long rows of houses. They are very insanitary and call for immediate attention."

OSWESTRY RURAL.—" A new tip under proper supervision is now provided for the use of Gobowen and its neighbourhood, thus supplying a convenient and necessary ground for the deposit of rubbish which was becoming a serious nuisance in this village."

WELLINGTON URBAN.—" In forty-eight houses covered galvanised-iron ash bins have been substituted for ash pits, and it is very necessary in the interests of the health of the children that the abolition of ashpits in the town should be systematically carried out."

The question of whether the Council should provide receptacles for refuse is suggested as one worthy of consideration.

The district of Oakengates and parts of the Wellington Rural district (Hadley and Ketley) are greatly in need of improved scavenging.

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

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

	Number of Cowkeepers and Milk-sellers on Register.	Number of Premises.			Number of Inspections.	DEFECTS FOUND.										Number of Notices, verbal or written.	Number of these Notices complied with.	Number of defects found and not yet remedied.
		Cowsheds.	Dairies.	Milkshops.		In Cowsheds.					In surroundings of Cowsheds.	In sanitary condition of drains.	In sanitary condition of Milkshops.	In Water Supply.				
						Floor or Cubic Space.	Ventilation.	Lighting.	Structure of Floor.	Drainage.					Cleanliness.			
URBAN DISTRICTS.																		
Bishop's Castle	9	8	1	..	15	..	..	..	..	1	1	..	..	..	2	2	..	
Bridgnorth	39	21	17	..	120	..	..	..	..	..	2	2	..	..	2	2	..	
Church Stretton	6	2	2	..	8	..	..	..	..	..	..	..	..	..	2	2	..	
Dawley	32	31	31	1	42	1	1	1	..	1	8	..	..	..	9	8	1	
Ellesmere	7	5	3	1	2	..	..	..	..	..	..	..	..	..	..	..	..	
Ludlow	4	4	4	..	11	1	1	1	1	1	1	1	..	..	3	3	..	
Market Drayton	17	17	..	..	28	..	..	..	..	..	4	..	..	..	4	4	..	
Newport	27	10	3	2	80	..	..	1	..	..	6	3	..	..	12	12	..	
Oakengates	31	23	9	..	73	1	1	1	1	2	4	3	3	1	5	3	2	
Oswestry	27	9	..	6	60	..	..	1	..	..	5	..	..	..	6	6	5	
Shrewsbury	64	16	16	21	70	..	..	..	..	..	2	..	2	..	4	4	..	
Wellington	21	10	1	3	41	..	1	1	..	..	5	3	2	2	11	11	..	
Wem	14	11	11	..	66	..	..	..	1	..	3	3	2	..	7	7	..	
Wenlock	42	38	38	4	37	..	3	3	3	1	1	1	1	..	5	4	1	
Whitchurch	26	21	21	5	104	1	2	2	2	2	8	2	3	..	8	8	..	
RURAL DISTRICTS.																		
Atcham	223	223	10	..	340	..	10	10	15	15	41	3	6	1	46	40	9	
Bridgnorth	21	..	..	..	44	..	..	..	..	1	1	2	6	..	6	6	..	
Burford	2	4	2	..	4	..	..	..	..	1	..	..	1	..	1	1	..	
Chirbury	26	26	..	..	57	..	..	..	..	..	..	..	..	..	11	11	..	
Church Stretton	17	21	17	..	62	..	..	..	..	..	..	..	..	..	17	17	..	
Cleobury Mortimer	17	7	10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Cun	16	16	6	..	35	..	2	3	3	3	1	4	3	..	19	14	5	
Drayton	103	..	..	..	103	..	2	2	2	2	11	..	..	..	19	19	..	
Ellesmere	59	59	..	..	94	..	..	2	3	5	4	..	..	..	12	12	..	
Ludlow	23	23	..	..	46	..	..	..	..	..	15	..	..	..	15	15	..	
Newport	37	34	..	..	130	..	..	..	..	..	..	..	..	..	68	68	..	
Oswestry	84	83	..	1	159	..	6	2	..	4	5	21	1	..	10	9	6	
Shifnal	40	40	38	3	225	..	..	1	1	1	3	3	..	..	4	4	..	
Teme	1	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	
Wellington	37	..	..	..	33	..	..	..	..	..	..	..	..	..	..	..	..	
Wem	129	129	..	..	210	..	..	..	..	2	8	2	..	..	12	12	..	
Whitchurch	29	29	29	1	60	..	..	..	..	..	20	2	4	..	20	20	..	

The table shows an amount of inspection about up to the average of previous years.

No considerable further progress will be made until the Milk and Dairies Act is put into operation.

The scheme provided by the County Council for the examination of milk for dirt has not been utilised by the Sanitary Authorities to any considerable extent. Seven samples were submitted. One of these was very dirty, containing 40 parts of dirt per million parts of milk. Two of the samples were very clean.

MEAT AND FOOD INSPECTION.

The following are the chief references to meat and food inspection in the district reports :—

NEWPORT URBAN.—“ There are 9 slaughter-houses, which are regularly visited by the Inspector at times of slaughtering. The number of carcasses, or parts found to be diseased or unsound, and destroyed, was 14.

“ The provision shops are also inspected. The following tinned goods were found to be unsound, and being surrendered were destroyed by the Inspector :—condensed milk 10 tins, salmon 8 tins, tomatoes 5 tins, herrings 1 tin, sardines 3 tins, preserved fruit 4 tins.”

SHIFNAL.—Nine Sheep and 2 were condemned at one slaughter-house.

SHREWSBURY.—Fourteen hundred and one beasts were slaughtered at the Public Slaughter-houses and 10 were found to be affected more or less with tuberculosis. In two of these, the whole beasts were condemned and in the others the diseased parts. Of 8,263 sheep and lambs, 7 were unfit for food. Out of 443 calves, 4 were found unfit for food. Of 3,573 pigs, 48 were found more or less affected with tuberculosis necessitating the destruction of 12 whole carcasses. In the others the diseased parts were destroyed.

Anthrax Order, 1910.—During the year 1915, 260 suspected animals were reported and 12 of these were diagnosed as anthrax ; in 1914 the numbers were 264 and 25, in 1913, 284 and 17, and in 1912, they were 355 and 24.

SANITARY INSPECTION.

The work of sanitary inspection in the various districts is summarised on Table VI. The number of inspections given in Column 1 comprise all houses *inspected*, including those inspected under the Housing and Town Planning Act, but not houses that are visited for another purpose without an inspection of the premises being made. It is impossible to state in tabular form the quality of the inspection, and it is probable that returns made are not quite comparable.

This is probably one of the most important works of a sanitary department in war time. It is so necessary because the more extensive alterations and improvements requiring considerable sums of money are in abeyance and consequently the maintenance of a reasonable standard of housing and surroundings can only be effected by frequent inspection and careful attention to details. It is usually possible to give more attention to this work because the sanitary inspectors' work is curtailed in other directions. As a result of this superficial and frequent inspection, a large number of minor nuisances, often of considerable importance to the public health and mostly under the control of the tenant, may be remedied, *e.g.* : drains may be unstopped, accumulations of refuse removed, organic refuse burnt or buried, premises cleansed and whitewashed. In addition, the visit affords the opportunity of conveying important information to the householder on various matters of personal and domestic hygiene. Although not directly within the province of the Sanitary Inspector he might take the opportunity of conveying information with regard to food and of cautioning the tenants where necessary with regard to waste. All this work is for many reasons more necessary at the present time than in ordinary times.

A few of the districts have increased the number of inspections, *e.g.* : Market Drayton, Wenlock, Clun and Wellington Rural Districts, but in the majority, the amount of inspection was less in 1915 than in 1914.

FOOD AND DRUGS.

RETURN OF THE NUMBER OF SAMPLES TAKEN BY MEMBERS OF THE SHROPSHIRE CONSTABULARY
FOR ANALYSIS UNDER THE FOOD AND DRUGS ACT, DURING 1915.

Nature of Sample.	No. taken.	Result.		Remarks.
		Genuine.	Adulterated.	
Milk	98	84	14	1 fined £2 and Costs £1 1s. ; 1 fined 10s. and Costs 19s. 6d. ; 1 fined 5s. and Costs £1 11s. 6d. ; 1 fined 1s. and Costs 19s. ; 1 to pay Costs £2 3s. 6d. ; 1 fined £1 1s. 6d. ; 1 fined 19s. 6d. ; 1 fined £1 10s. and Costs 10s. 6d. ; 1 fined 15s. 6d. ; 1 fined 15s. ; 2 fined 7s. 6d. ; 1 fined £1 and Costs 10s. 6d. ; 1 fined £1 9s. 6d.
Cream (not preserved)	1	1		
Preserved Cream ..	5	5		
Flour	3	3		
Butter	36	31	5	1 fined £10 and Costs £3 15s. 4d. ; 4 no action taken.
Margarine	16	16		
Cheese	4	4		
Oatmeal	4	4		
Arrowroot	1	1		
Lard	6	6		
Tapioca	1	1		
Ground Rice .. .	1	1		
Sausage	4	4		
Tinned Salmon ..	1	1		
Jam	9	9		
Cream of Tartar ..	1	1		
Ginger	2	2		
Mustard	2	2		
Pepper	4	4		
Coffee	8	8		
Brandy	2	2		
Gin	4	3	1	To pay Costs 4s. 6d.
Rum	2	2		
Whiskey	8	7	1	Fined 10s. and Costs 10s. 6d.
Tincture of Rhubarb	2	2		
Tincture of Quinine ..	2	2		
Castor Oil	6	6		
Camphorated Oil ..	2	2		
Friar's Balsam ..	2	2		
	237	216	21	

The details of analysis of milk samples are of interest and are given separately.

RESULTS OF ANALYSIS OF ALL SAMPLES OF MILK SUBMITTED.

Fat.	Solids not fat.	Preservative.	Remarks.	Fat.	Solids not fat.	Preservative.	Remarks.
Per-centage.	Per-centage.			Per-centage.	Per-centage.		
6.1	8.3			3.28	8.72	Nil.	
3.11	8.69			3.0	8.58	"	
3.96	8.96			4.03	8.99	"	
3.72	8.70			3.73	9.03	"	
2.75	7.97			3.74	8.84	"	
2.65	7.91		Normal milk contains 8.5 per cent. of non-fatty solids, sample 7.91 per cent.	4.11	8.79	"	
3.23	8.77			3.7	8.86	"	
3.76	9.02			3.56	9.04	"	
3.16	8.7			3.51	8.57	"	
3.43	8.53			8.3	9.1	"	
4.12	8.68			3.39	8.81	"	
3.79	8.61			3.42	8.6	"	
3.55	8.69			3.6	8.64	"	
3.6	9.0			3.3	8.93	"	
3.5	8.98			2.92	8.48	"	
3.2	9.0			3.57	8.98	"	
3.2	8.92			2.93	8.75	"	
3.75	8.91			3.1	8.6	"	
3.76	8.52			2.98	8.88	"	
3.01	9.17			3.0	9.92	"	
3.00	9.16			3.1	8.9	"	
3.6	9.0			3.58	8.7	"	
3.78	8.62			3.44	8.8	"	
6.5	8.34			3.33	9.03	"	
3.26	8.62			3.77	8.89	"	
3.11	8.53			3.06	8.8	"	
4.28	8.96			3.64	8.58	"	
3.05	8.71			3.9	8.9	"	
3.16	8.78			3.57	8.27	"	
2.58	8.84		14 per cent. deficient in fat	3.06	8.74	"	
4.46	8.96			3.44	8.86	"	
4.12	8.98			3.22	8.66	"	
3.86	8.82			4.68	8.74	"	
3.77	8.83			3.24	8.8	"	
4.16	8.58			2.25	9.23	"	25 per cent. deficient in fat
4.4	9.06			2.3	9.1	"	23 " " "
4.8	9.08			2.69	8.89	"	12½ " " "
4.06	9.76			2.7	8.84	"	10 " " "
4.24	9.34			3.24	8.34	"	
4.39	8.93			3.14	8.42	"	
3.27	8.35			3.3	8.66	"	
6.9	8.68			3.8	8.84	"	
4.32	9.24			3.47	8.69	"	
3.46	8.64			3.16	8.76	"	
3.41	8.23			3.82	8.72	"	
1.39	9.25	Nil.	53 per cent. deficient in fat	2.93	9.01	"	
2.53	8.97	"	15.5 " " "				
1.17	9.39	"	61 " " "				
3.39	8.05	"					
2.64	7.84	"	12 " " "				

The average amount of fat in all the samples taken was 3.5 or well above the minimum prescribed. No less than 18 per cent. of the samples contained 4 per cent. or more of milk fat. One sample had the extraordinary percentage of 8.3 of fat and three had over 6 per cent. of fat.

REPORT OF ADMINISTRATION IN CONNECTION WITH THE PUBLIC HEALTH (MILK AND CREAM) REGULATIONS, 1912, IN THE COUNTY OF SALOP, FOR THE YEAR ENDED DECEMBER 31ST, 1915.

1.—*Milk: and Cream not sold as Preserved Cream.*

	Number of samples examined for the presence of a preservative	Number in which a preservative was reported to be present.
Milk	51	<i>Nil.</i>
Cream	1	<i>Nil.</i>

2.—*Cream sold as Preserved Cream.*

(a) Instances in which samples have been submitted for analysis to ascertain if the statements on the label as to preservatives were correct.

(i) Correct statements made	5
(ii) Statements incorrect	0
Total	5

(b) Determinations made of milk fat in cream sold as preserved cream.

(i) Above 35 per cent.	5
(ii) Below 35 per cent.	0
Total	5

(c) Instances where (apart from analysis) the requirements as to labelling or declaration of preserved cream in Article V. (1) and the proviso in Article V. (2) of the Regulations have not been observed.

Nil.

3.—*Thickening Substances.* Any evidence of their addition to cream or to preserved cream.
Nil.

MIDWIVES ACT.

When the Midwives Act came into operation a great effort was made in this County to get the majority of women then practising on to the roll in order that they might be kept under supervision and taught so far as it was possible to do so. As a result, considering the population of the County, an unusually large number of midwives were enrolled. The advisability of such a policy was questioned at the time, but there can be little doubt that it has proved correct. Some of the old midwives were capable of little improvement but taken as a whole the improvement that has taken place, under the very patient and careful supervision of the Inspector of Midwives has been very marked.

From the first there has been a scarcity of midwives in some parts of the County and this has been accentuated as the old midwives have ceased working. The provision of trained midwives by the County Council and the Nursing Federation has not kept pace with the decrease of midwives due to old age and other causes.

In the past the County Council has repeatedly called the attention of localities to the awkward predicament they would be placed in, by the absence of midwifery facilities and the Nursing Federation has made great efforts to establish local nursing associations.

A certain amount of success has attended these efforts, but there is still a considerable portion of the County without midwifery provision. With the help of the Local Government Board it is hoped that very great strides will be made in the next year or two towards the provision of a satisfactory midwifery service throughout the County.

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

Year.	Number of Midwives practising in the County in June of each year.	Number of Visits paid.	Notifications of having sent for medical help.	Notifications of still-births.		Notifications of death of mother or child with no medical man in attendance.
				By Midwives	By Parish Clerks.	
1905	231	642	83	38	—	5
1906	345	829	325	105	—	13
1907	328	837	385	95	227	16
1908	310	868	504	91	220	13
1909	309	885	533	111	195	9
1910	321	711	516	90	166	8
1911	293	840	515	81	154	23
1912	284	770	555	86	170	16
1913	275	743	496	94	140	10
1914	260	695	539	100	122	11
1915	260	756	435	86	109	12
1916	252	849	2518	69	93	11

The Inspector at her visits satisfies herself with regard to the condition of the bag, appliances, dresses and aprons, the keeping of the register and records, and she gives instructions to the midwives whenever necessary, on the essential matters concerning their practice.

Very marked progress has been made by the midwives in the manner in which they take and record the temperature and pulse.

The proper feeding of infants is made a matter of personal instruction. This work of midwives is immediately followed up by health visitors provided by the County Council. It is anticipated that consultations between the health visitors and the midwives on infant feeding will have a very good effect.

endeavour is made & will be increased to get the midwives to attend the maternal & child welfare centres both to give in
 Notification of Still-births.—Still-births attended by midwives are notified under the Midwives Act. All still-births that occur after the twenty-eighth week of pregnancy have to be notified by the doctor, midwife or other person, under the Notification of Births Acts. As still-births are not registered, we are not however able to take the same steps as in live births, to make the notification complete. (See chapter on Child Welfare).

Notifications received from the parish clerks and clergy have been a considerable help to me in checking and amplifying the midwives' returns. As the Notification of Births Act was only in force towards the end of the year, the notification of still-births received under this act is no guide at present.

*Formal & keen advice. The
 a close co-operation will be established.*

So far it has not been possible to make a systematic inquiry through the health visitors into still-births.

~~One hundred and ninety five~~ ^{One hundred and two} notifications of still-births referring to 153 cases have been received from midwives and Parish Clerks and Clerks to Burial Boards.

42 of the cases were attended by medical men, no midwife being in attendance.
 69 ~~77~~ " " " by certified midwives without medical assistance.
 0 " " " by uncertified midwives.
 34 " " " by midwives, medical help being obtained.

Forty-two or 27 per cent. of the cases occurred in the practice of medical men, and for 34 or 22 per cent. medical help was obtained. In 49 per cent. of the cases, therefore, a medical man was in attendance.

The returns sent in by the certified midwives, although incomplete, show that they attended ~~3,495~~ ¹⁹¹⁶ births in ~~1915~~ out of a total of ~~1,917~~, leaving less than ~~1,422~~ or 28 per cent. to be attended by medical men and uncertified midwives.

Approximately the incidence of still-births was—

3.1 per cent. of the births attended by midwives including those in which the midwife sent for medical assistance.

2.9 per cent. of the births attended by medical men.

Analysis of the notifications of still-births sent in by the midwives show that—

~~31~~ ³⁶ were at full time; ~~42~~ ³⁶ premature; in ~~2~~ ² no statement.

The condition of the child pointed to:—

Death during labour or shortly before in ~~30~~ ³⁰; death some time before labour in ~~29~~ ³⁴; in ~~5~~ ⁵ there was no indication given.

The presentations were:—head ~~49~~ ⁴⁹, breech ~~13~~ ⁴, footling ~~7~~ ⁷, face ~~1~~ ³, arm ~~1~~ ³. In ~~3~~ ³ cases the presentations were not mentioned, and in ~~2~~ ² cases the child was born before the midwife's arrival.

The sex of the children was as follows:—males ~~39~~ ³⁹, females ~~30~~ ³⁰.

These figures, although incomplete, are of some value in showing the number of children that might possibly have been saved if skilful attendance had been available at the time of confinement.

The prevention of still-births is a part of the general question of the care of women during pregnancy, and will receive attention under the scheme of Maternity and Child Welfare.

As a proportion of cases of miscarriages and still-births are due to venereal diseases and can be prevented by suitable treatment from occurring in subsequent confinements, it is most important that inquiries should be so directed that these cases shall have appropriate treatment.

^{Two} Puerperal Fever.—~~Twelve~~ ^{Two} cases were notified, compared with ~~12~~ ¹² in ~~1915~~ ¹⁹¹⁶. ~~One case was attended by an uncertified midwife, two by untrained certified midwives, three by trained midwives, and one by a medical practitioner alone. Five were attended by medical practitioners and midwives together.~~

Present Supply of Midwives.—In June, ~~1916~~ ¹⁹¹⁷, there were ~~252~~ ²⁵¹ midwives registered as practising in the County, compared with ~~260~~ ²⁵² at a corresponding period in ~~1915~~ ¹⁹¹⁶.

As previously pointed out one can only estimate the real supply by considering the age, training, and general capabilities and distribution of midwives. A fresh estimate, necessarily only approximate, has been made of the number of midwives at the various ages. It is estimated that out of a total of ~~251~~ ²⁵¹ there are ~~178~~ ¹⁷⁸ over 50 years of age. Of this number, about ~~67~~ ⁶² are over 60, and ~~18~~ ¹⁸ over 70 years of age.

Handwritten notes:
 31—~~of these~~ ^{of these} ~~over 70~~ ^{over 70} years of age
 2 are 77, 1 is 79, 2 are 79, 1 is 82
 4 of these over 70 years of age
 one is 77, two are 79, 1 is 82

midwives have been in excess of the trained ones.

Of the ²⁵¹~~25~~ registered midwives, ¹²⁶~~12~~ are properly trained, and the remaining ¹²⁵~~43~~ are on the roll because they were in practice twelve months before the passing of the Act. The number of trained midwives on the roll on June 1st, ¹⁹¹⁷~~1916~~, was ¹²⁶~~one~~ more than in the previous year. The numbers since 1907 are :—June 1st, 1907, 70 ; 1908, 73 ; 1909, 81 ; 1910, 93 ; 1911, 89 ; 1912, 105 ; 1913, 102 ; 1914, 110 ; 1915, ~~105~~ ; 1916, 121. *1917, 126.*

In the same years the untrained midwives have decreased :—1907, 256 ; 1908, 237 ; 1909, 228 ; 1910, 228 ; 1911, 204 ; 1912, 179 ; 1913, 173 ; 1914, 150 ; 1915, 140 ; 1916, 131. *1917, 125.*

There is a gradual diminution of untrained midwives and a still slower increase of trained ones. No individual instances of hardship from the absence of midwives have come under notice during the year, but it is evident that in some districts most of the cases must be attended by medical men or by uncertified midwives. The Notification of Births Act will clear up the matter effectually.

MIDWIVES GROUPED ACCORDING TO NUMBER OF CONFINEMENTS THEY ATTENDED IN ~~1915~~ *1916*

(a) TRAINED MIDWIVES.

Number who have not sent in returns of confinements	13
" " attended no confinements	5
" " " less than 10 confinements	41
" " " between 10 and 20 confinements	37
" " " " 20 and 30	14
" " " " 30 and 40	12
" " " " 40 and 50	2
" " " " 50 and 60	2
" " " " 60 and 70	6
" " " " 70 and 100	3
" " " " over 100	1

(b) UNTRAINED MIDWIVES.

Number of Midwives who have not sent in returns of confinements	20
" " " " attended no confinements	2
" " " " " less than 10 confinements	57
" " " " " between 10 and 20 confinements	33
" " " " " 20 and 30	10
" " " " " 30 and 50	8
" " " " " 50 and 70	5
" " " " " 70 and 100	1
" " " " " over 100	2

It is obvious that only a small number of the midwives can possibly make a living by midwifery alone.

1665 An analysis of the returns sent in by the midwives shows that :—

1666 ~~1,838~~ confinements were attended by untrained certified midwives.

~~1,081~~ " " " trained midwives working under an association or employed by private persons.

618 ~~576~~ confinements were attended by trained midwives working on their own account.

A return is being prepared for the Local Government Board showing the midwifery provision in all rural parishes where there is not a nursing association affiliated to the County Nursing Federation, and consequently the classification of parishes according to the sufficiency of midwives is not published in this report.

has been

stet

Future Supply of Midwives.—With the help of the Local Government Board and the Board of Education it is anticipated that a distinct advance will be made in the supply of midwives during the next few years.

Under the present arrangement the County Council repay to the Shropshire Nursing Federation three-fourths of the actual cost of the training and equipment of any maternity nurses, who have been recommended by the Federation, and approved by the County Medical Officer of Health.

Under this arrangement 12 nurses were trained and 3 nurses trained by the Rural Midwives Association were taken over during the year.

Cases brought before the Local Supervising Authority.—

ALLEGED OFFENCE.	ACTION TAKEN.
1.—Not sending for medical help for a child suffering from ophthalmia neonatorum. (Rules 19 and 20 (5)).	Severely censured.
2.—Did not attend to cleanliness and comfort of a patient after delivery. (Rules 7 and 11).	That the midwife, who is 75 years of age, be written to and given an opportunity of resigning. If this is not accepted, the midwife be summoned to attend the next meeting of the Sub-Committee. The midwife resigned.
3.—Not sending for medical help for a child suffering from ophthalmia neonatorum. (Rules 19 and 20 (5)).	A <i>prima facie</i> case of negligence was found and it was decided to report her to the Central Midwives Board. Her name has since been removed from the Roll.

Annie B. Horsena No. 36119, ^{severely} censured by C.H.B.
for negligence & care of C.N.
Jane Jones No 208 Cautioed by C.H.B.

ALLEGED OFFENCE.	ACTION TAKEN.
4.—Not sending for medical help for a child suffering from ophthalmia neonatorum. (Rules 19 and 20 (5)).	Midwife attended and was cautioned.
5.—Not sending for medical help for a child suffering from ophthalmia neonatorum. (Rules 19 and 20 (5)).	Midwife attended and was cautioned.
6.—(1) Not sending for medical help for a child when she first noticed it was suffering from ophthalmia neonatorum. (Rules 19 and 20 (5)). (2) Not notifying the Local Supervising Authority of sending for medical help on a subsequent date. (Rules 21 (1) (a) and 22 (a)).	Case reported to Central Midwives Board with a strong representation that, as she had always previously been most satisfactory, they would not take the extreme course of removing her name from the Roll. The Board censured her severely for neglecting to observe the Rules.

CO-OPERATION BETWEEN THE CIVIL AND MILITARY SANITARY SERVICES.

In August, 1914, an important circular was issued to all medical officers of health by the Medical Officer of the Local Government Board, setting out the ways in which medical officers of health might co-operate with the military authorities. This was followed in October by a more detailed communication from the Local Government Board.

In the early stages of the war particularly, this co-operation proved to be of great value, both with regard to the military camps and the billeting of soldiers in houses and buildings. The more urgent problems have now been overcome, but there is still danger of unsatisfactory billeting unless the medical officer of health is promptly notified and the premises inspected.

Two objects have been kept in view (1) to safeguard the civil population and (2) to supply the military authorities with all information likely to be of use to them.

That there is considerable risk of the spread of infectious disease from military camps to the civil population is shown by the fact that in Oswestry and Whitchurch Urban and Rural Districts the cases of measles and German measles notified were 111 per thousand as compared with 47 per thousand in the whole County. The cases of diphtheria were 3.4 per thousand for the camp districts and 1.4 per thousand for the whole county, and for scarlet fever were 3.3 for the camp districts and 2.1 for the whole county.

Two large hutment camps—at Park Hall near Oswestry and Prees Heath—were established during the year.

Neither the County Council nor the Sanitary Authorities were consulted with regard to the selection of these sites, but I have taken many opportunities along with the District Medical Officers of Health both during construction and since occupation of conferring with the military authorities and of making suggestions.

The following is an extract from Dr. Gepp's report to the Whitchurch Rural District Council :—

" The most important sanitary feature of the year was the establishment and occupation of a large hutment camp on Whitchurch Heath during the year. The accommodation is for some 15,000 to 20,000 troops, and the average number in occupation has been some 10,000 probably. The sanitation of a camp of this size is naturally of great moment to the District, no adequate public water supply, sewerage, or scavenging facilities being available in so small a District. I was asked to confer with the Camp authorities before its occupation, and then and on many subsequent occasions have paid visits for inspection of the sanitary arrangements, as a rule in company with the County Medical Officer, and we have always received assistance and all necessary information from the Military Authorities. The Camp has its own water-supply from a deep boring and pumping plant, water being laid on to every part of the Camp. A good complete system of drainage was laid for kitchen slop water, washing water, and urinals. The drains from all parts connect to a main effluent carrier, and on account of the flat gradients necessitated by the contour of the ground, collecting chambers with electrically worked automatic ejectors are placed at several points to lift the sewage, and finally to discharge it on the surface of an arable field of some 15 acres, for disposal by trench irrigation. Water carriage of closet soil was not included in the sewerage on account of the long flat gradients, a pail system of latrines being provided. The Council was asked to undertake the scavenging of the latrine pails and kitchen waste and ashes. I reported to the Council my view that the question needed very grave consideration and that they should satisfy themselves as to the extent of the work, and also of their resources to perform it satisfactorily, before undertaking it. In my opinion the resources of the military authorities were much more adequate. The terms offered were liberal and the Council undertook the work, and have carried it on since the occupation of the Camp by means of a contractor who provides all plant and labour for removal of the soil, and does the work under the general supervision of the Council's Surveyor, who has given very much of his time to it. In general, the result has been satisfactory, so far as the health of the Camp and the District is concerned. In dealing with the excreta, a solution of Cresol, of strength $1\frac{1}{2}$ ozs. to a gallon of water is used, one gallon or more of this being placed in each pail daily before use. The pails are emptied daily, and cleaned by the contractor, the dosing with Cresol being the work of the Camp Sanitary squad. This use of Cresol has kept the pails free from offence, and also from flies, through the summer. The pail contents are removed in bins or tanks on lorries to the excreta trenching field, an arable field of 14 acres, where the Council employs sufficient labour to trench and cover the soil daily. The trenching work has been found always efficiently done, on inspection. The trenched field and the sewage disposal field are of light, dry and porous soil, and so far efficiently disposed of the quantity of liquid and solid sewage, and without apparent pollution of the ditches and streams of the area."

Except for one portion which is liable to flooding in wet weather, this site is a dry and healthy one. The principal difficulty is due to the nearness of the subsoil water to the surface, necessitating flat gradients and pumping at short distances. The adoption of the water carriage system was recommended by me, but owing to flatness of the gradients of the drains which were already laid, the suggestion was not adopted. Some difficulty has been experienced from stoppage of the drains but this seems to a great extent to have been got over. The disposal of the sewage by broad irrigation has so far been quite satisfactory, but there are now evidences that the land will not continue indefinitely to completely purify the sewage. The amount of soil pollution at the Camp appears to be small.

The provision at Park Hall by means of huts is roughly for about 15,000 to 20,000 men, but from time to time there have been temporary canvas camps making the total accommodation at times as much as 30,000.

The subsoil of the greater part of the area of the Camp is a stiff clay, and in consequence during the winter months some parts of the Camp are almost impassable owing to the depth and tenacity of the mud. This fatal drawback, together with the great difficulty of disposal of the sewage, more than counterbalances the advantages of a good supply of water from the Liverpool main and the proximity to a railway. These probably were the determining factors in the selection of the site.

The principal difficulties that have arisen apart from the sodden condition of the ground have been those associated with the disposal of sewage. In order to provide for the permanent and complete treatment of the sewage of the Camp a very excellent scheme, such as one would have recommended for a town of about 20,000 inhabitants was carried out. The scheme consists of machinery for pumping from the pump well to the sewage works, and the sewage works consist of :—

(1.) An equalising tank, 60 ft. x 32 ft., capacity 60,000 gallons.	
(2.) Six liquifying tanks	{ four, 66 ft. x 23 ft., 50,000 gallons each .. 200000 gallons.
	{ two, 66 ft. x 12 ft., 25,000 50000 ..
Total capacity	 250000 gallons.

(3.) Six percolating filters { three primary } 108 ft. diameter and 5 ft. in depth.
 { three secondary }

(4.) Three humus tanks, 27 ft. 9 in. x 11 ft. 6 in. each, total capacity 20,800 gallons.

(5.) Five sand filters, 50 ft. x 28 ft. 3 in. each, total area, 625 square yards.

(6.) Nine sludge filters, 50 ft. x 40 ft. each, total area 2,000 square yards.

It is evident that the completion of a scheme of this description could not be carried out in a short time and as a matter of fact it was not brought into operation in any part until May, 1916. For a considerable time after the establishment of the Camp the sewage was run into deep trenches in the gravel. After a time these trenches sludged up, so that no sewage would pass, and after more or less successful efforts had been made by digging new trenches and by cleaning the old ones, it was finally found necessary to pump the sewage on to a field and treat it by broad irrigation. As the land was entirely unsuitable for this purpose, very grave pollution of the stream resulted. So long as the sewage was being treated by soakage through the gravel, no pollution or nuisance was detected and there was apparently no water supply in danger. The question of disposal of sewage so far as the main Camp is concerned may now be considered as satisfactorily solved. It is unfortunate that, with such a complete scheme of sewage disposal, the water carriage system of excrement disposal was not adopted. A strong representation was made by me as to the desirability of this.

The disposal of the sewage in connection with the temporary canvas camp at Drenwydd has been very unsatisfactory. I have suggested that the only satisfactory method is to pump the sewage to the tanks of the permanent works, and I think this course should be adopted if the site is to be used again next summer.

The scavenging of the excreta is undertaken by contract by the Oswestry Rural Council, and the arrangements are somewhat similar to those described above in connection with Prees Heath Camp. On the whole the condition of the latrines and of the scavenging has been satisfactory. Difficulties have been met with in finding suitable land for trenching the excreta and for a time it was simply spread on the surface and ploughed in at a later period. The difficulties do not yet appear to have been completely overcome.

It is satisfactory to observe that there has been practically no outbreak of enteric fever in either Camp, and this must be taken as evidence of satisfactory camp sanitation.

