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STAFFORDSHIRE COUNTY COUNCIL

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*Annual Report*

OF THE

MEDICAL OFFICER OF HEALTH

W. D. CARRUTHERS, M.B., D.P.H.,


**For the Year 1940**

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STAFFORD

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# STAFFORDSHIRE COUNTY COUNCIL

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## Annual Report of the Medical Officer of Health

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### PRELIMINARY NOTE.

The Annual Report for 1940 is again curtailed in view of war conditions, but contains the statistics which have been prepared for so many years in accordance with the requirements of the Ministry of Health.

It will be seen that the birth-rate continues to be higher, and the death-rate lower, than the corresponding rates for England and Wales as a whole. The maternal mortality is the lowest yet recorded for the County. The infant mortality is lower than in the previous year and is the same as that for England and Wales as a whole. During the year no serious epidemic of infectious disease occurred. From a public health point of view, therefore, the year 1940 has been a satisfactory one.

In the Report a full account will be found of the work undertaken under the Midwives Acts and the Health Visiting Scheme, and in spite of war conditions all these activities have been fully maintained.

In July the County generally, and the Bacteriological Laboratory in particular, suffered a heavy loss in the death of Dr. Menton. On referring to the report of the work of the Laboratory it will be noted how extensive it is and how greatly it is utilised by Local Authorities and General Practitioners in the County. To Dr. Menton belongs the credit of organising and building up the work of the Laboratory, and his successor, Dr. Edwards, is fortunate in taking over such a well thought-out and fully developed scheme, which has proved, and continues to prove, of such value in the diagnosis and treatment of disease.

In the report of the work of the Chemical Laboratory there is a full account of its many activities, which have been extensively utilised in an endeavour to safeguard the food supplies.

Owing to war conditions, Local Authorities have been obliged to curtail their activities, particularly in connection with water and sewage disposal schemes, so that this section of the Report is necessarily smaller than in peace-time. I would like to pay a tribute, however, to the efforts that are being made to maintain the valuable plants at sewage works under difficult labour conditions.







## SUMMARY OF STATISTICS.

### 1.—GENERAL STATISTICS.

Area of Administrative County. . . . .	(acres)	685,503
Estimated Civilian Population of Area, 1940 (primarily for calculation of Death-rates or incidence of Notifiable Diseases) . . . . .		762,500
Rateable Value at 1st April, 1940 (General County Purposes) . . . . .	£	3,291,153
Estimated net product of a penny rate 1940-41 (General County Purposes) . . . . .	£	12,558 0s. 3d.

### 2.—EXTRACTS FROM VITAL STATISTICS OF THE YEAR.

		Total	M.	F.	
Live Births for Birth Rates	Legitimate	13,133	6,744	6,389	
	Illegitimate	361	201	160	
		<hr/> 13,494	<hr/> 6,945	<hr/> 6,549	Birth-rate 17·7
Do. for Death Rates	Legitimate	13,208	6,797	6,411	
	Illegitimate	362	202	160	
		<hr/> 13,570	<hr/> 6,999	<hr/> 6,571	
Stillbirths	Death Rates	499	268	231	
	Birth Rates	498	268	230	Rate per 1,000 total births 35·6
Deaths . . . . .		9,145	4,899	4,246	Death-rate 12·0

Deaths from Puerperal Causes :—				Rate per 1,000	
				Deaths	total births
Puerperal and Post-abortive					
sepsis . . . . .				8	0·6
Other Maternal causes . . . . .				28	2·0
				<hr/>	<hr/>
Total . . . . .				36	2·6
				<hr/>	<hr/>



Death Rates of Infants under one year of age :—

All infants per 1,000 live births .. .. .	55
Legitimate infants per 1,000 legitimate live births ..	54
Illegitimate infants per 1,000 illegitimate live births ..	80
Deaths from Cancer (all ages) .. .. .	1,096
Deaths from Measles (all ages) .. .. .	13
Deaths from Whooping Cough (all ages) .. .. .	28
Deaths from Diarrhoea (under two years of age) .. ..	69

### AREA AND POPULATION.

Since 1934 there has been no alteration in the area of the Administrative County.

The estimated populations have been supplied by the Registrar-General and are primarily given for the calculation of death-rates and the incidence of notifiable diseases amongst civilians, non-civilian deaths and notifications having been excluded from the statistics. Estimates of the numbers and distribution of the non-civilian population are not available and the birth-rates can only be based on the civilian populations of 1940 as used for death-rates.

In the Report for 1939 alterations in the allocation of births and deaths were briefly described.

The Areal Comparability Factors for adjusting local death-rates have also been supplied by the Registrar-General, and are calculated for the year 1939. The rate obtained when the crude death-rate is multiplied by this factor is then comparable, from a mortality point of view, with the crude death-rate of the Country as a whole or with the mortality of any other local area, the crude death-rate of which has been similarly modified with its own factor for the purpose.

The rate for each district, adjusted by applying the Areal Comparability Factor, is shown in the tables at the end of the Report.

In the following table the census population of the Administrative County for 1931, and the estimated civilian population for 1940, are set forth :—



	Census, 1931	Estimated Population, 1940
Urban .. ..	490,632	*574,840
Rural .. ..	212,622	*187,660
Totals .. ..	†703,254	762,500

\* The increase in the population of the Urban Districts, and the decrease in that of the Rural Districts, is due to the changes in Sanitary Districts and boundaries which took place on the 1st April, 1934, under the Staffordshire Review Order, 1934.

† The census population of the Administrative County as constituted at the 31st December, 1940, is less than this figure by 2902. The estimated population in the portion of the County, area transferred to the County Borough of Wolverhampton on the 1st April, 1933, was 5,419, but this decrease was partly neutralized by the fact that on the 1st April, 1932, a portion of the County of Warwick, with an estimated population of 2,517, was added to the Administrative County.

#### BIRTHS.

The live births registered in the Administrative County for birth-rate purposes numbered 13,494, compared with 13,290 the previous year, the number in the Urban Districts being 10,524 and in the Rural Districts 2,970.

*Stillbirths.*—There were 498 stillbirths registered during the year, of which 380 were in Urban and 118 in Rural Districts. The stillbirth rate per thousand of the population for the combined Urban and Rural Districts is 0.65. During the same period the rate for England and Wales was 0.55.

DISTRICTS	LIVE BIRTH-RATE PER 1,000 OF POPULATION											1939	1940
	5 yrs 1889- 1893	5 yrs 1894- 1898	5 yrs 1899- 1903	5 yrs 1904- 1908	5 yrs 1909- 1913	5 yrs 1914- 1918	5 yrs 1919- 1923	5 yrs 1924- 1928	5 yrs 1929- 1933	5 yrs 1934- 1938			
Combined Urban and Rural ..	33.6	33.2	32.5	30.3	27.8	24.0	24.1	20.2	17.6	17.1	17.4	17.7	
Urban .. ..	35.5	34.7	33.6	31.5	29.2	25.0	25.0	20.7	18.1	17.5	17.9	18.3	
Rural .. ..	30.2	30.5	30.2	27.0	24.4	21.6	22.0	19.0	16.6	15.7	15.9	15.8	
England and Wales ..	30.8	29.7	28.7	26.9	24.5	20.4	21.3	17.8	15.6	14.9	15.0	14.6	
Large Towns in England	31.5	30.7	29.7	27.8	25.2	*20.9	22.0	18.2	15.8	14.9	14.8	16.0	

\* 4 years.



# DEATHS.

The number of deaths in the Administrative County amounted to 9,145, the number in the Urban Districts being 6,943, and in the Rural Districts 2,202.

DISTRICTS			DEATH-RATE PER 1,000 OF POPULATION										1939	1940
			5 yrs 1889- 1893	5 yrs 1894- 1898	5 yrs 1899- 1903	5 yrs 1904- 1908	5 yrs 1909- 1913	5 yrs 1914- 1918	5 yrs 1919- 1923	5 yrs 1924- 1928	5 yrs 1929- 1933	5 yrs 1934- 1938		
Staffordshire	{	Combined Urban and Rural ..	18.1	16.9	16.1	14.6	14.1	15.0	12.3	11.4	11.6	11.3	11.2	12.0
		Urban .. ..	18.9	17.5	16.6	15.1	14.7	15.5	12.6	11.5	11.8	11.3	11.1	12.1
		Rural .. ..	16.8	15.7	15.1	13.4	12.7	13.8	11.6	11.2	11.2	11.2	11.4	11.7
England and Wales ..			19.1	17.4	16.9	15.3	13.9	15.2	12.5	12.0	12.3	11.9	12.1	14.3
Large Towns .. ..			21.0	19.0	18.2	15.8	14.3	15.5	12.6	12.0	12.3	12.0	12.0	15.8
Smaller Towns ..			17.6	15.9	15.7	14.9	13.6	14.1	11.5	11.0	11.2	11.4	11.2	12.8

In the following table I have shown the *chief* causes of death for the last ten years, the numbers given for 1940 being 70.6 per cent. of the total deaths:—

TABLE SHOWING CHIEF CAUSES OF DEATH.

	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
*Zymotic Diseases ..	281	311	231	223	303	217	241	194	193	178
Influenza .. ..	311	221	424	139	170	121	359	142	166	207
Tuberculosis of Respira- tory System .. ..	497	412	469	438	434	358	412	372	368	348
Tuberculosis, other forms	112	113	87	93	86	74	90	93	75	74
Cancer .. ..	897	915	896	963	981	968	989	1033	1046	1096
†Cerebral Hæmorrhage	477	510	460	443	457	477	505	472	492	—
†Intra-Cranial Vascular Lesions .. ..	—	—	—	—	—	—	—	—	—	808
Heart Disease .. ..	1500	1561	1579	1556	1618	1846	2006	2003	2246	2024
Bronchitis .. ..	485	369	409	311	377	366	329	262	273	797
Pneumonia .. ..	630	570	607	570	562	540	603	633	403	474
Premature Birth .. ..										217
Congenital Malformations Birth Injuries, Infan- tile Diseases .. ..	459 443 413 412 415 472 482 428 466									231

\*Typhoid and Paratyphoid Fevers, Measles, Small-pox, Scarlet Fever, Whooping Cough, Diphtheria and Diarrhoea.

† Change of Classification.



# MORTALITY AT DIFFERENT AGES FROM VARIOUS CAUSES.

The following table gives the mortality from various causes in different age groups in the Administrative County during 1940 :—

Causes of Death	Age at Death						TOTAL
	Under 1	1 and under 5	5 and under 15	15 and under 45	45 and under 65	65 and over	
1. Typhoid and Paratyphoid Fevers .. .. .	—	—	—	2	—	—	2
2. Cerebro-Spinal Fever .. .. .	6	11	9	12	6	1	45
3. Scarlet Fever .. .. .	—	1	1	3	—	—	5
4. Whooping Cough .. .. .	10	18	—	—	—	—	28
5. Diphtheria .. .. .	1	19	33	8	—	—	61
6. Tuberculosis of Respiratory System .. .. .	1	3	3	231	94	16	348
7. Other forms of Tuberculosis .. .. .	4	19	13	22	11	5	74
8. Syphilitic Diseases .. .. .	3	—	—	1	17	2	23
9. Influenza .. .. .	13	11	3	34	65	81	207
10. Measles .. .. .	1	8	4	—	—	—	13
11. Acute Poliomyelitis and Polioencephalitis .. .. .	—	1	—	3	—	—	4
12. Acute Infectious Encephalitis .. .. .	—	1	—	2	4	—	7
13. Cancer of Buccal Cavity and Oesophagus (M) Uterus (F) .. .. .	—	—	—	6	53	82	141
14. Cancer of Stomach and Duodenum .. .. .	—	—	—	11	98	118	227
15. Cancer of Breast .. .. .	—	—	—	17	49	43	109
16. Cancer of all other sites .. .. .	—	2	—	67	225	325	619
17. Diabetes .. .. .	—	—	1	10	39	62	112
18. Intra-Cranial Vascular Lesions .. .. .	—	1	1	25	207	574	808
19. Heart Disease .. .. .	—	2	11	132	516	1363	2024
20. Other Diseases of Circulatory System .. .. .	—	—	—	5	30	143	178
21. Bronchitis .. .. .	31	15	5	44	231	471	797
22. Pneumonia .. .. .	116	85	8	63	93	109	474
23. Other Respiratory Diseases .. .. .	5	4	2	15	55	54	135
24. Ulcer of Stomach or Duodenum .. .. .	—	—	—	11	40	25	76
25. Diarrhoea under 2 years .. .. .	65	4	—	—	—	—	69
26. Appendicitis .. .. .	—	2	8	9	7	4	30
27. Other Digestive Diseases .. .. .	8	10	9	46	65	96	234
28. Nephritis .. .. .	1	—	3	50	86	89	229
29. Puerperal and Post-Abortive Sepsis .. .. .	—	—	—	8	—	—	8
30. Other Maternal Causes .. .. .	—	—	—	27	1	—	28
31. Premature Birth .. .. .	216	1	—	—	—	—	217
32. Congenital Malformations; Birth Injuries; Infantile Diseases .. .. .	214	3	3	7	3	1	231
33. Suicide .. .. .	—	—	—	20	31	11	62
34. Road Traffic Accidents .. .. .	—	11	13	68	27	26	145
35. Other Violent Causes .. .. .	13	20	30	93	71	92	319
36. All other causes .. .. .	40	20	35	117	160	684	1056
Totals .. .. .	748	272	195	1169	2284	4477	9145



The following table has been prepared covering the last 21 years, in which the percentage of deaths under 45 years of age is worked out in relation to the total deaths at all ages, and in the table the sexes are divided. Speaking generally, 26 per cent. of all deaths now occur under the age of 45.

DEATHS UNDER 45 YEARS OF AGE—MALE AND FEMALE—SHEWING  
PERCENTAGE OF TOTAL DEATHS (ALL AGES).

YEAR	MALE			FEMALE		
	Deaths all ages	Deaths under 45	% of Total	Deaths all ages	Deaths under 45	% of Total
1920	4626	2295	49.61	4084	1935	47.38
1921	4545	2120	46.64	3985	1759	44.14
1922	4534	1943	42.58	4191	1793	42.78
1923	4197	1816	43.27	3788	1556	41.08
1924	4332	1795	41.43	3906	1520	38.91
1925	4556	1919	42.12	4161	1724	41.43
1926	4148	1658	39.97	3808	1441	37.84
1927	4458	1766	39.61	4082	1564	38.31
1928	3965	1449	36.54	3563	1180	33.12
1929	4813	1827	37.96	4293	1453	33.84
1930	4100	1473	35.92	3672	1211	32.98
1931	4376	1472	33.64	3933	1272	32.34
1932	4190	1425	34.01	3824	1174	30.70
1933	4213	1415	33.59	3900	1207	30.95
1934	4105	1261	30.72	3655	1054	28.84
1935	4284	1354	31.61	3802	1159	30.48
1936	4203	1266	30.12	4022	1100	27.35
1937	4793	1484	30.96	4075	1041	25.55
1938	4497	1296	28.82	3915	1065	27.20
1939	4498	1223	27.19	4038	973	24.10
1940	4899	1315	26.84	4246	1069	25.18

## GENERAL PROVISION OF HEALTH SERVICES IN THE AREA.

### *Local Government Act, 1929.*

In view of the war, the question of hospital provision remains in abeyance and there has been no further development during 1940.

### *Poor Law Medical Out-Relief.*

There has been no alteration in this scheme.

### *Institutional Provision for the Care of Mental Defectives.*

On the 1st January, 1941, there were 490 certified cases in Institutions chargeable to the County, 422 of whom were at Great Barr Park Colony or on licence therefrom.

There was no alteration in the accommodation for mental defectives during 1940.



## NURSING IN THE HOME.

### (a) *General Nursing.*

At the end of 1940 there were 99 local Associations affiliated to the County Nursing Association undertaking general nursing in the Administrative County. This represents an increase of one, compared with the previous year, the independent Association at Huntington having become affiliated.

There has been no alteration in the number of Associations undertaking midwifery, viz., 92. Ninety-one of these are concerned with the midwifery service established by the County Council under the Midwives Act, 1936, the other, which is at Tipton, being centred in the area of another Local Supervising Authority.

In addition to the Administrative County, the County Nursing Association now have six affiliated Associations working in the City of Stoke-on-Trent, and the County Boroughs of Walsall and Wolverhampton, the Walsall Association having become affiliated during 1940.

There are nine independent Nursing Associations undertaking general nursing, and three, viz., Essington, Stafford and Tutbury, also include midwifery, the two first named forming part of the County Council Scheme.

### (b) *Infectious Diseases.*

During 1940, no application was received for the nursing facilities available in the County Health Visiting Area in the event of an epidemic of measles or diarrhoea.

## MIDWIVES ACT, 1936.

During the year under review, there is nothing outstanding to report on the scheme established under this Act in 1937, and the work continues quite normally.

As stated in a preceding section, at the 31st December 93 local Nursing Associations, 91 of which are affiliated to the County Association, were concerned with the Service. In addition, the work of whole-time midwives in four areas is controlled directly from the County Nursing Association Headquarters.

As regards the nursing personnel, there has been no change in the establishment, but in certain instances the service has been improved by the appointment of fully trained women to fill vacancies caused by the resignation of midwives holding the Certificate of the Central Midwives' Board only. The following is a summary



of the staff placed in districts, *i.e.*, excluding relief nurses, at the end of the year :—

	WHOLE-TIME MIDWIVES			PART-TIME MIDWIVES		
	Queen's	S.R.N., S.C.M.	S.C.M.	Queen's	S.R.N., S.C.M.	S.C.M.
Affiliated Associations ..	6	24	32	24	5	47
Unaffiliated „ ..	3	—	2	—	—	1
County Nursing Association Headquarters ..	—	3	15	—	—	—
Totals ..	9	27	49	24	5	48

S.R.N.—State Registered Nurse. S.C.M.—State Certified Midwife.

As will be seen, there were 162 midwives, 85 whole-time and 77 part-time, in addition to which there was one unfilled vacancy on the whole-time staff.

There was also no change in the relief staff, which, at the close of 1940, numbered 12, viz., 3 Queen's Nurses, 2 State Registered Nurses, and 7 holding the Certificate of the Central Midwives' Board only.

The Parish of Tutbury (Tutbury R.D.) which is the only area not included in the scheme, is served by an entirely independent unaffiliated Nursing Association. In addition, the Military Barracks at Whittington (Lichfield R.D.) have their own Nurse-Midwife, who is employed by the Soldiers', Sailors' and Airmen's Families Nursing Association.

### MIDWIVES ACTS, 1902—1926.

The area for which the County Council is the Local Supervising Authority for the purpose of the Midwives Acts is the whole of the Administrative County with the exception of the Municipal Boroughs of Rowley Regis and Tipton. There are 23 Urban Districts and 10 Rural, with an estimated population of 682,940. In addition to the two districts mentioned, the area in which the County Council is responsible for maternity and child welfare purposes, does not include the Municipal Boroughs of Bilston, Newcastle, Stafford and Wednesbury, and the Urban Districts of Cannock and Coseley, so that the population in this respect is reduced to 454,650.

There are three Supervisors of Midwives, one medical and two non-medical, who, in addition, are responsible for other duties in connection with the Health Visiting Scheme. In 1940, 977 visits and interviews were undertaken for midwifery purposes.

On the 31st December there were 215 domiciliary midwives resident in the County area who were actually practising, 162 district (85 whole-time, 77 part-time) and 12 relief midwives employed by Nursing Associations under the Scheme, one employed by the Whittington Barracks Nursing Association outside the



scheme, and 40 in independent practice. Included in the latter figure are 10 midwives who were also engaged at registered Maternity Homes, and in addition, there were 11 maternity home keepers who do not undertake domiciliary cases. Thirteen out-of-area midwives, including two employed by Nursing Associations whose areas extend into Staffordshire, were in active practice at the end of the year. Eight other midwives, 5 resident within the County and 3 outside, notified their intention to practise but attended no cases. None of the midwives resident within the County is *bona fide*.

In addition to the routine enquiries conducted by the Supervisors of Midwives, two irregularities were specially investigated. As a result, letters of caution were addressed to the midwives concerned.

Since the Act came into operation in 1902, the names of 115 midwives have been removed from the Roll in consequence of action taken by the Local Supervising Authority.

One application was received during the year from an independent midwife for compensation for loss of practice consequent upon suspension from duty, she herself not being in default, after contact with infection. This was dealt with under the Midwives and Maternity Homes Act, 1926, and an amount of £13 7s. 0d. allowed.

As will be seen from the following table, the majority of the midwives resident in the County area are under 45 years of age:—

Salaried :—	21-44	45-64	65 and upwards.
District .. .. .	103	58	1
Relief Staff .. .. .	7	5	—
Independent .. .. .	23	16	2
Maternity Home Keepers only ..	5	6	—
	—	—	—
	138	85	3
	—	—	—

During the year, 10,304 cases, 9,982 live and stillbirths and 322 miscarriages and abortions, were attended by domiciliary midwives, and the following summary indicates the numbers taken by each class of midwife:—

Salaried :—	Cases.
Whole-time .. .. .	6,980
Part-time .. .. .	2,104
Independent resident in County, including Association Midwife .. .. .	1,087
Out-of-Area, including Association midwives ..	133
	—
	10,304
	—



Roughly, the average number of cases taken by each whole-time salaried midwife was 82.

In the table which follows more detailed information of the cases attended is given :—

	Total Births (Live and Still-born)	*As Midwives		†As Maternity Nurses		‡ Births in respect of which no record is available	
		Births	% of total	Births	% of total	No.	% of total
Live and Stillbirths	12,367	8,248	66.7	1,734	14.0	2,385	19.3
Abortions and Miscarriages	—	222	—	100	—	—	—

\* Doctors not having been engaged for the confinements.

† Doctors having been engaged by the patients.

‡ These figures are in respect of births which (i) were attended by doctors, no midwife having been engaged; (ii) took place outside the Administrative County; (iii) took place in Institutions.

Two hundred and seven live and stillbirths occurred at Public Assistance Institutions, and 497 at Maternity Homes, 2 abortions and miscarriages also occurring at the former and 7 at the latter.

The rules of the Central Midwives Board require certain notifications by midwives, and particulars are given in the following table. The last three years only have been included in view of the curtailment of the area in 1937.

Year.	* No. of Births attended by Midwives.	Medical Aid Notices.	Stillbirths.	Death of Mother.	Death of Child.	Contact with Infection.	Laying out the Dead.	Artificial Feeding.
1938	8730	4283	222	9	174	158	44	249
1939	8778	4297	222	5	206	161	38	262
1940	8714	3822	206	8	176	157	31	253

\* Including midwifery cases in Maternity Homes.

The percentage of doctors' calls to the number of births attended by midwives in 1940 was 44. In 1915 the corresponding figure was 10·7 per cent., and the large gradual increase since can be ascribed to the trained type of midwife now practising.

The following figures show the causes which occasioned the sending for medical assistance :—

#### PREGNANCY :

Disproportion .. .. .	59
Query Presentation .. .. .	91
Threatened Abortion .. .. .	61
Puffiness of face and hands .. .. .	23
Varicose Veins .. .. .	10
Fits .. .. .	2
Vaginal Discharge .. .. .	21
Unsatisfactory condition and general health .. .. .	231
Excessive Sickness .. .. .	19
Loss of Blood .. .. .	64
History of previous Stillbirths and Abortions .. .. .	6
Albuminuria .. .. .	189
Blood Pressure .. .. .	25
Cardiac .. .. .	10
Sugar .. .. .	1
Total .. .. .	812

#### LABOUR :

Premature Birth .. .. .	53
Abnormal Presentation .. .. .	135
Delayed or Difficult .. .. .	555
Placenta Prævia .. .. .	6
Hæmorrhage ante-partum .. .. .	84
Ditto post-partum .. .. .	73
Eclampsia .. .. .	5
Prolapse of Cord .. .. .	5
Lacerated Perinæum .. .. .	858
Retained Placenta and Membranes .. .. .	65
Unsatisfactory Condition .. .. .	100
Inertia .. .. .	86
Abortion .. .. .	156
Albuminuria .. .. .	3
Total .. .. .	2,184



LYING-IN :

High Temperature .. ..	111
Inflamed and painful leg .. ..	42
Convulsions .. ..	3
Unsatisfactory Condition .. ..	83
Offensive Lochia .. ..	4
Unusual Swelling of Breasts .. ..	22
Abdominal Swelling and tenderness ..	4
Total .. ..	269

CHILD :

Deformities .. ..	53
Convulsions .. ..	12
Inflamed and discharging eyes ..	162
Feebleness and prematurity .. ..	119
Unsatisfactory Condition .. ..	149
Rash .. ..	9
Pemphigus .. ..	3
Spina Bifida .. ..	14
Hare Lip and Cleft Palate .. ..	9
Jaundice .. ..	15
Hæmorrhage—Bowel .. ..	6
Do. —Navel .. ..	6
Total .. ..	557

Grand Total .. .. 3,822

During the financial year ended March, 1941, 3,944 notifications of sending for medical help were received, and, out of this number, Medical Practitioners claimed their fees from the County Council in 1,959 cases, that is, 49·7 per cent. of the possible claims.

In the last three financial years the fees paid by the County Council were as follows :—

Finan- cial Year	No. of Notifications of sending for Medical Aid	No. of Claims received	Percentage of claims received to Notifications	Total amount paid to Doctors during year	Amounts recovered from Patients during year
				£ s. d.	£ s. d.
1938-39	4402	2424	55	3513 18 9	1593 16 0
1939-40	4256	2319	54	3614 6 6	1576 17 10
1940-41	3944	1959	50	3167 16 0	2026 16 2

Here again, an increase is indicated, for in the financial year 1925-26 the percentage of claims was 35.

No alteration has taken place in the income scale which came into operation on the 1st October, 1934.

#### INFLAMED AND DISCHARGING EYES.

Year	CASES				Vision Un-impaired	Vision Impaired	Total Blind-ness	Deaths
	Notified	TREATED						
		At Home	In Hospital In-pat'nt	Out-pat'nt				
1938	193	166	11	16	191	—	—	2
1939	203	180	20	3	203	—	—	—
1940	162	145	12	5	160	—	—	2

The 162 cases in 1940, 132 of which were not severe, include medical aid calls for all unsatisfactory eye conditions and not notified cases of Ophthalmia Neonatorum only. The County Council are concerned with the notification and treatment of the latter condition in their Health Visiting Area, which is dealt with later in the Report.

#### STILLBIRTHS.

In the area now administered by the County Council under the Midwives Acts, 446 stillbirths were registered during the year.

As already indicated, 206 were reported by midwives, a figure which has varied little during the last 17 years, and the causes were as follows :—

Albuminuria .. .. .	1
Cord round Neck .. .. .	5
Cord Prolapse .. .. .	4
Deformities .. .. .	27
Difficult Labour .. .. .	14
Fall and Shock .. .. .	1
Injury during birth .. .. .	1
Maceration .. .. .	64
Malpresentation .. .. .	2
Premature .. .. .	70
Spina Bifida .. .. .	3
Unsatisfactory Condition of Mother.,	14



## PUERPERAL PYREXIA REGULATIONS.

Puerperal Pyrexia is defined as any febrile condition occurring in women within 21 days after childbirth or miscarriage, in which a temperature of 100·4 or more has been sustained during a period of 24 hours, or has recurred during that period.

The following are particulars of the notifications from the Administrative County during 1940 :—

	In area of County Local Supervising Authority.		In areas of other Authorities.		Total.
Urban Districts ..	63	..	11	..	74
Rural Districts ..	14	..	—	..	14
	—		—		—
	77		11		88
	—		—		—

The case rate for Puerperal Pyrexia per thousand total births (live and still) for Staffordshire is 6·25, as compared with 11·96 for England and Wales.

As will have been observed from a previous table, in the area administered by the County Council as Local Supervising Authority the midwives summoned medical assistance for rises of temperature on 111 occasions. These were specially investigated by the Supervisors, and it was found that in 63 instances the unsatisfactory conditions were due to abnormalities which could be said to arise directly from childbirth.

The facilities provided in the Health Visiting Area are mentioned in the appropriate section of the Report.

## MATERNITY AND NURSING HOMES.

The County Council are responsible for the registration and inspection of these Homes in their area as Local Supervising Authority under the Midwives Acts.

No applications for registration were received during 1940, but the authorities of a Salvation Army Maternity Home, which had been evacuated to the district, were granted exemption. At the end of the year the number of premises registered was 21, 7 only having more than two beds each. In addition, four exemptions were operative. The County Council have not delegated any of their powers under Section 194 of the Public Health Act, 1936, or earlier provisions, nor have any applications been received for such delegation.



## COUNTY COUNCIL MATERNITY UNITS.

Last year I mentioned that in view of the Emergency Hospital Scheme the special maternity unit at the Wordsley Hospital had been suspended for the period of the war, and that the work at the Rosemary Ednam Maternity Home, which is a special block of the Sedgley Public Assistance Institution, had been curtailed. The beds available at Public Assistance Institutions for maternity cases have, however, been increased and are now as follows :—

Cannock	..	..	..	..	..	13
Cheadle	..	..	..	..	..	1
Leek ..	..	..	..	..	..	12
Lichfield	..	..	..	..	..	12
Sedgley : House	..	..	..	..	..	7
	Rosemary	Ednam	Maternity			
	Home	..	..	..	..	8
Stafford	..	..	..	..	..	5

The arrangements made by the County under their Health Visiting Scheme are dealt with in the appropriate section of the Report. In addition, however, arrangements exist at the Mrs. Legge Memorial Home, Wolverhampton, for the reception of prospective unmarried mothers. In 1940, nine cases were admitted.

## MATERNAL MORTALITY.

In the accompanying table the maternal mortality rate for the Administrative County, showing the deaths per thousand (live and still) births in the last ten years is given.

Year	Total (Live and Still) Births	DEATHS FROM		Maternal Mortality per 1,000 (Live and Still) Births	
		Puerperal Sepsis	Other Diseases and Accidents of Parturition	Staffs.	England and Wales
1931	13,338	11	29	3.0	3.9
1932	12,917	21	29	3.9	4.0
1933	11,960	19	18	3.1	4.3
1934	12,497	28	27	4.4	4.4
1935	12,751	20	35	4.3	3.9
1936	12,995	14	33	3.6	3.6
1937	13,485	15	33	3.6	3.1
1938	13,834	12	28	2.9	3.0
1939	13,874	13	28	3.0	2.8
1940	14,069	8	28	2.6	2.2
Mean for 10 years..	13,172	16.1	28.8	3.4	3.5



The maternal mortality rate of 1940 is the lowest recorded in the Administrative County, and it is gratifying to note that the downward tendency which commenced in 1935 has been maintained. As will be seen, again this year the County rate is slightly higher than that for England and Wales as a whole, but in calculating the latter, abortions were excluded which may have affected it to a minor extent. Over the ten years period to which the table relates, however, the two rates are practically similar.

Thirty-one of the maternal deaths occurred in the area of the Local Supervising Authority, and of these eight were reported by midwives in accordance with their rules, *i.e.*, the deaths occurred whilst they were actually in attendance as midwives or maternity nurses.

The services provided by the County Council in connection with the efforts to reduce maternal mortality are detailed in the Health Visiting Section of the Report.

#### **INFANTILE MORTALITY.**

The infant mortality rate for 1940 was 55 per thousand live births, as against 58 in the previous year. The rate in Urban Districts was 56 compared with 57 last year, and in the Rural Districts 52 compared with 60. In England and Wales in 1940 the infant mortality rate was 55 compared with 50 last year. In the table which follows are shown the rates for the last ten years and also those for England and Wales as a whole. Also shown in this table are the various causes of infantile deaths in Staffordshire for the same period.

CAUSES OF DEATH.	TOTAL DEATHS UNDER ONE YEAR OF AGE.									
	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
Measles .. .. .	14	15	11	13	8	7	7	2	6	1
Scarlet Fever .. .. .	—	1	—	—	—	—	—	1	—	—
Whooping Cough .. .. .	25	23	13	21	29	18	19	14	15	10
Diphtheria. .. .. .	1	2	3	—	3	4	2	2	—	1
Influenza .. .. .	16	12	13	3	5	8	13	5	7	13
Cerebro-Spinal Fever .. .. .	1	2	4	—	4	9	6	3	1	6
Tuberculosis of Respiratory System .. .. .	—	2	1	—	2	2	1	1	1	1
Other Forms of Tuberculosis .. .. .	9	14	6	7	12	8	8	15	8	4
Syphilitic Diseases .. .. .	2	4	3	2	2	2	—	4	1	3
Cancer .. .. .	1	—	1	—	4	—	—	1	—	—
Heart Disease .. .. .	1	—	—	—	1	—	1	—	1	—
Other Circulatory Diseases .. .. .	1	—	—	1	—	—	—	—	—	—
Bronchitis .. .. .	41	39	50	27	42	31	29	25	34	31
Pneumonia .. .. .	169	134	126	90	127	121	115	120	103	116
Other Respiratory Diseases .. .. .	3	3	6	1	1	5	2	4	2	5
Diarrhoea .. .. .	74	86	75	55	78	66	52	52	55	65
Appendicitis .. .. .	—	1	—	—	1	—	—	—	—	—
Cirrhosis of Liver .. .. .	—	—	—	—	—	—	1	—	—	—
Other Digestive Diseases .. .. .	12	16	14	10	10	11	6	5	14	8
Nephritis .. .. .	1	2	1	1	—	2	—	1	—	1
Premature Birth .. .. .	446	436	403	401	403	465	474	415	454	216
Congenital Malformations, Birth Injuries, Infantile Diseases .. .. .	—	—	—	—	—	—	—	—	—	214
Violence .. .. .	16	26	17	15	17	20	17	18	14	13
Other Defined Diseases .. .. .	62	41	49	42	58	58	35	63	54	40
Causes Ill-defined or unknown .. .. .	1	—	—	—	1	—	1	—	—	—
TOTALS .. .. .	896	859	796	689	808	837	789	751	770	748
Death Rates per 1,000 Live Births.	70	69	69	57	66	67	61	57	58	55
Staffordshire .. .. .	66	65	64	59	57	59	58	53	50	55
England and Wales .. .. .	—	—	—	—	—	—	—	—	—	—



The preceding table is self-explanatory and it will be seen that each year the largest group of deaths were due to causes described as premature birth, congenital malformation, etc. For 1940 the deaths from premature birth are shown separately for the first time, and represent slightly more than one-half of this particular group, in respect of which the following table has been prepared :—

Year.	Live Births.	Deaths of Children under one year of age from Congenital Debility, Malformations, Premature Birth, &c.	Death-rate per 1,000 Live Births.
1931	12,752	446	35.0
1932	12,335	436	35.3
1933	11,424	403	35.3
1934	11,951	401	33.5
1935	12,174	403	33.1
1936	12,441	465	37.4
1937	12,885	474	36.8
1938	13,252	415	31.3
1939	13,324	454	34.1
1940	13,570	430	31.7

It will be observed that, during the last 10 years, whilst the infantile mortality rate has been reduced from 70 to 55, the rate for this special group has shown no such marked reduction, although that for last year is one of the lowest in the decade.

One hundred and seventy-six deaths were reported by the midwives, having occurred whilst they were in attendance. Ninety-one of these were due to feebleness and prematurity, and 41 to deformity and malformation.

### HOSPITALS.

In my 1930 and subsequent Annual Reports details and developments of the County's Hospital Services were given, and I have already mentioned that in view of the war the question of hospital provision under the Local Government Act, 1929, remains in abeyance. As far as Isolation Hospital provision is concerned the comments I made in my last Report still apply.

The national emergency has also delayed the extensions at the County's Standon Hall Orthopaedic Hospital, and 120 beds are therefore still available for the various Committees. In view of requests from certain outside Authorities, in June, 1940, the Public Health Committee authorised the admission of their cases to Standon Hall provided patients for whom the County Council are responsible are not adversely affected, *i.e.*, provided the waiting lists have been exhausted and surplus beds are available. During 1940, 144 cases were treated for the Joint Board for Tuberculosis,



48 for the Education Committee, 10 for the Public Assistance Committee, 25 under the Health Visiting Scheme, 8 for outside Authorities, and 16 who were decanted in 1939 from the Hartshill Orthopædic Hospital under the Emergency Hospital Scheme.

### **CLINICS AND TREATMENT CENTRES.**

The number of Clinics and Treatment Centres was set out in detail in the 1930 Report, and the changes in each subsequent year have been stated in my Annual Report.

The changes in Infant Welfare Centres which have taken place during 1940 are given in the section of the Report below, dealing with the Health Visiting Scheme.

### **HEALTH VISITING SCHEME.**

As I have already mentioned, the County Health Visiting Area consists of 17 Urban and 10 Rural Districts, which have a total population of 454,650.

This year there is nothing of an exceptional nature to report on the scheme generally, and the following are brief details of the various activities :—

#### **INFANT WELFARE CENTRES.**

At the close of the year there were 35 Combined Centres (*i.e.*, Minor Ailment Clinics and Welfare Centres) and 29 Welfare Centres, as compared with 36 and 31, respectively, at the end of 1939. In addition, there is one Voluntary Welfare Centre.

As stated last year, the Combined Centre at Ashley, which had been established temporarily to deal with evacuees, was closed early in 1940. The small Centres at Shenstone (Welfare only) and Longnor (Combined) had to be dispensed with in October and December, respectively, as the premises were requisitioned and no other accommodation was available. At Fazeley it was possible to return from temporary accommodation to the normal premises in March.

The only extensions were at Kinver, where the Centre became combined in January, and at Wednesfield, where in September an additional half-day session was given each week.

In total, 3,887 Welfare Centre sessions were held in 1940 against 3,621 in the previous year, 66,206 attendances being made by children under one year of age and 49,973 by children between one and five years. The numbers of children in these groups who attended for the first time during the year were 4,856 and 1,996, respectively.



#### ANTE-NATAL CLINICS.

There has been no alteration in this service. Thirty-six of the Welfare Centres are fully equipped for ante-natal work, and at 21 of them special sessions are held for this purpose.

During 1940, 2,719 expectant mothers attended the Clinics, with a total attendance of 8,840.

Where treatment is required, the patient is referred to her own doctor, through the medium of the midwife, if one has been engaged, except for unsatisfactory dental conditions. Treatment of the latter can be given under the County Council Scheme, and the patients are offered the facilities provided.

#### RURAL ANTE-NATAL SCHEME.

Under this scheme, which operates mainly in rural areas where there are no Ante-natal Clinics, 630 expectant mothers were examined by their own doctors, compared with 644 in 1939. As a result, it was found that 480 confinements could safely be conducted by the midwives at the patients' homes, but in 44 instances special advice was necessary. In 118 cases further examinations were considered desirable, the attendance of doctors at the confinements being advised in 26 instances, whilst 3 patients were recommended X-ray examination. Apart from the foregoing, the primary examinations revealed that 14 patients should be delivered in hospital and 18 others were referred to Consulting Obstetricians.

In addition, 34 of the women were offered dental treatment.

#### CONSULTING OBSTETRICIANS.

Under this important service the General Practitioners can, where necessary, obtain the assistance of a Specialist at any time during pregnancy, labour or the puerperium. It is gratifying to note that more advantage is being taken of the facility, for in 1940 Consultants were concerned with 375 cases, as against 316 in the previous year.

#### MATERNITY HOME AND HOSPITAL TREATMENT.

Arrangements exist at many hospitals and maternity homes for the reception of women whose physical condition or environment is such that confinement at home is unsafe or undesirable. During the year, 253 patients were dealt with in this way, and 66 were admitted to the maternity wards of Public Assistance Institutions, compared with 227 and 94, respectively, last year.

In addition, 23 women were admitted to a Maternity Home



but paid their own fees, the County Council merely giving a guarantee against default.

#### MATERNITY OUTFITS.

Since the war began, the diminishing demand for these outfits has been noticeable, and, in 1940, 92 only were disposed of, compared with 247 during the previous year. Eighty-nine were sold at cost price and three free issues were made.

One outfit was sent to the Bacteriological Laboratory for examination and the result was satisfactory.

#### PAYMENT OF MIDWIVES' FEES.

In order to retain the very essential ante-natal co-operation by the independent midwives, a compensation fee of 10s. 0d. is allowed where a case is lost as a result of County Council activities.

During 1940, three such payments were made.

#### PUERPERAL PYREXIA.

In the Health Visiting Area a Consultant and Hospital Service is at the disposal of the General Practitioners. During the period under review, 43 cases were notified, compared with 92 last year. Under the Scheme, Specialists' opinions were obtained in three instances, and 14 patients were sent to hospital. In addition, it was ascertained that 10 women from the area were sent to hospital through other agencies.

#### OPHTHALMIA NEONATORUM.

Forty-three cases were notified from the Health Visiting Area, compared with 64 in 1939, and in 31 instances home nursing was carried out by the Health Visitors. One child attended hospital as an out-patient and 11 were admitted for treatment. In 41 cases the vision was unimpaired, one child died and the other was still under treatment when the year ended. Four children were still under treatment at the end of 1939, and the result was satisfactory in each case.

The County Council provide hospital treatment.

#### OPHTHALMIC TREATMENT.

Ninety-two children under 5 years of age were referred to the County Ophthalmic Surgeon from the Welfare Centres, mainly on account of an actual or suspected squint. Glasses were prescribed for 70 cases: in 9 instances the County Council provided them, and in one other case allowed half the cost. Generally, where there was unilateral squint the sound eye was occluded,



but if this was found to be impracticable, atropine was inserted weekly until it was found possible to have the eye occluded. These children were kept under constant supervision.

In seven of the remaining 22 cases treatment was advised.

Patients seen in previous years were re-examined during 1940, and the total number of attendances at the Clinics, including both old and new cases, was 230.

#### ORTHOPÆDICS.

The County Council have not established any Orthopædic Clinics, but have arrangements with voluntary bodies who have established Clinics at Leek, Stourbridge, Hartshill, Birmingham, Stafford, Lichfield, Tamworth, Walsall and Dudley, where cases are received on payment.

One hundred and four new cases, as against 112 last year were sent to Orthopædic Clinics for out-patient treatment in the first instance, as follows:—

Bow Legs .. .. .	18
Congenital Dislocation of Hip .. .. .	4
Deformities of Feet .. .. .	42
Deformities of Hands .. .. .	4
Knock Knees .. .. .	16
Paralysis .. .. .	6
Rickets .. .. .	1
Torticollis (Wry-neck) .. .. .	5
Miscellaneous .. .. .	6
Examined but treatment not necessary ..	2

It will be noted that only one case of rickets is given in this list, but of course there are many more conditions classified under other headings, of which rickets has probably been the primary cause.

I give below details of the out-patient attendances, etc., during the year:—

Number of children on books at 31.12.39 ..	203
New cases referred during 1940 .. ..	104
	<hr/>
Removals on account of:—	307
Discharged cured .. .. .	27
Left the area .. .. .	12
Attained school age .. .. .	54
Treatment refused .. .. .	19
Died .. .. .	3
No treatment found necessary ..	2
	<hr/>
	117
	<hr/>
Number of cases at end of year .. ..	190
	<hr/>



The total number of attendances at Out-patient Clinics during the year was 2,201.

Twenty-five children received in-patient treatment at Standon Hall Orthopædic Hospital, nineteen of whom were admitted during the year. As mentioned in previous Reports, pending the extension of accommodation at Standon Hall, the Health Visiting Committee have authorised the use of five beds at outside institutions. These are used mostly for short stay cases. In this way ten children under five years of age received in-patient treatment, eight being admitted during 1940. Six patients were treated at the Hartshill Orthopædic Hospital, and four at the Birmingham Cripples' Hospital.

#### ARTIFICIAL LIGHT TREATMENT.

As stated last year, in view of the war, the treatment centre at Lichfield has been temporarily suspended, and the work under the scheme is now mainly confined to the Leek area.

Seventeen children only were treated, 13 being referred for the first time during 1940, with a total attendance of 353, for the following conditions :—

Bronchitis .. .. .	4
Cervical adenitis .. .. .	4
Debility and malnutrition.. .. .	8
Quinsy .. .. .	1

#### DENTAL TREATMENT.

The facilities under this scheme are available for expectant and nursing mothers, and children under 5 years of age, in the County Health Visiting Area. A similar service is undertaken, at an agreed payment, on behalf of the Stafford Corporation Welfare Committee.

During 1940, 1,293 County patients were treated, compared with 1,351 last year, and the following are particulars supplied by Mr. W. H. Jones, the County Dental Officer :—

The new dental centre established at Pheasey has supplied much needed accommodation in that area, and the new combined clinic at Shelfield has proved to be a great advantage.

#### *Expectant and Nursing Mothers—*

A greater proportion of the patients referred were ante-natal cases and the average age was lower.

Of 908 patients recommended dental treatment under the scheme, 710 accepted, but to the latter number must be added 323 women whose treatment was incomplete at the end of 1939,



giving a total of 1,033. The number of attendances made for treatment was 4,180, but no less than 1,133 further appointments were not kept, the latter representing 21 per cent. of the total. On the face of it, this percentage seems rather high, but on taking into consideration the extreme inclement weather during the first quarter of the year, disturbed nights etc., due to war conditions, it cannot really be deemed excessive. In this connection it is noted there is a tendency for patients from rural areas to keep appointments better than those from urban districts. The number of half-day sessions devoted to the treatment of these cases was 831.

Experience in the treatment of this class of patient demonstrates how important it is that the dental nurses should be fully trained women, who can deal with any emergency which may arise.

The following are particulars of the operations completed during the year :—

Extractions .. .. .	5,139
Fillings .. .. .	156
Scalings .. .. .	45
Sundries .. .. .	1,917
New Dentures .. .. .	558
Repairs to Dentures .. .. .	14
	<hr/>
	7,829

The treatment necessitated the use of 4,978 applications of local anæsthetics and of 2,326 dressings.

In 8 instances patients were admitted to Institutions for the administration of general anæsthetics, the dental treatment being given by the County staff.

The artificial dentures, together with repairs, were all completed in the County Dental Laboratory.

#### *" Toddlers "—*

Two hundred and sixty " toddlers " were dealt with during the year, and 35 half-day sessions were devoted to their treatment, the total attendances being 276. On 256 occasions the child was accompanied by a parent.

The treatment comprised :—

Extraction of temporary teeth .. .. .	384
Dressings .. .. .	128
Applications of Silver Nitrate .. .. .	177
Fillings in temporary teeth .. .. .	3
Sundries .. .. .	44
Advice .. .. .	68
	<hr/>
	804



## EXTRA NOURISHMENT.

This scheme, which was described in my Report for 1938, continued throughout 1940, and the numbers of patients who received free extra-nourishment were as follows:—

	<i>Expectant and Nursing Mothers.      Children under 5.</i>	
Dried foods only .. ..	192	789
Dried foods and eggs .. ..	4	5
Dried foods and glucose .. ..	—	1
Dried foods, eggs and emulsion .. ..	—	1
Dried foods and emulsion .. ..	11	142
Emulsion only .. ..	2	41
	<hr/> 209	<hr/> 979

The totals of the free issues were 27,703 lbs. of dried milk; 1,340 eight-ounce bottles of emulsion and 1,117 eggs. In addition, 103,042 lbs. of dried milks were disposed of at cost price at the Welfare Centres.

In the Autumn the National Dried Milk Scheme came into operation, under which one pint of raw milk, or, in selected cases, an equivalent quantity of full-cream dried milk, became available for expectant and nursing mothers, and children under 5 years of age, at the reduced price of 2d. per pint, or free of cost in necessitous cases. Whilst the County Council continued their arrangements, the Medical Officers of the Centres were instructed to encourage the National Scheme, and certain facilities were offered to the local Milk Officers at Centre sessions. It was also decided that where the Government issue of dried milk was insufficient to feed a child and the case was a necessitous one, the additional free supply required would be provided under the County Scheme. As I have said, the new arrangement did not operate fully until towards the end of the year, and, in fact, in 1940 the County Council were concerned only with free supplies of National Milk to 20 children who are included in the foregoing table.

With the commencement of the National Scheme the arrangements which had been made by the Kids Grove and District Social Services Clubs for the supply of milk to these groups of women and children at  $\frac{1}{2}$ d. per third of a pint came to an end. The County Council continued their grant to the Clubs until their activities ceased.

## NOTIFICATION OF BIRTHS.

During 1940, 7,210 live births and 276 stillbirths were notified



in the Health Visiting Area, 7,204 by midwives and 282 by parents and doctors. The births registered during the year, *i.e.*, 7,784 live births, and 288 stillbirths, cannot strictly be compared with those notified because of the period allowed by law for each purpose.

#### INFANT LIFE PROTECTION.

The work carried out by the Health Visitors under this scheme is shown in the following table :—

Number of children on Register at the end of December, 1940 .. .. .	33
Number of reports on visits to children received during the year 1940 .. ..	304
Number of new cases during 1940, for which preliminary reports were sent in by Health Visitors .. .. .	11
Number of foster-parents on Register at end of 1940 .. .. .	32

#### HEALTH VISITORS.

There was no change in the Health Visiting Staff during 1940 and at the end of the year there were 60 whole-time Health Visitors, two of whom are Lecturers on Mothercraft, serving a population of approximately 375,450. The remainder of the Health Visiting Area, mainly in the Rural Districts, is now served by 42 part-time Health Visitors, *i.e.*, District Nurses employed by local Associations, and they are responsible for a population of approximately 79,200.

The visits paid by the Health Visitors during the year were as follows :—

To expectant mothers :—	
(1) First visits .. .. .	1,903
(2) Total visits .. .. .	4,835
To infants under one year :—	
(1) First visits .. .. .	7,285
(2) Total visits .. .. .	67,226
To children—one-five years :—	
Total visits .. .. .	110,125

In 1940 the Health Visitors reported to local Medical Officers of Health 127 instances of insanitary conditions.

#### LECTURES ON MOTHERCRAFT.

The lectures to mothers which were instituted ten years ago, have continued at the Infant Welfare Centres. During the year talks were given by the two Lecturers at 388 sessions of 47 Centres



in various parts of the Health Visiting Area, the total attendance being 10,901.

### DENTAL LABORATORY.

There was no further development of the Dental Laboratory during the year, which continued with its full complement of four mechanics, the output of completed work being as follows:—

New dentures .. .. .	910
Repairs to dentures.. .. .	47
Orthodontic appliances .. .. .	9
Repairs to equipment for dental clinics ..	10
	<hr/>
	976

It is satisfactory to record that the resources of this laboratory are now equal to the demands made upon it, so that no undue delays occur in the provision of dentures for the patients of the various Committees.

### COUNTY BACTERIOLOGICAL LABORATORY.

Dr. J. L. Edwards, the County Bacteriologist and Pathologist, reports that during 1940, 87,336 investigations were conducted at the County Bacteriological and Pathological Laboratory, being a reduction of 31,176 as compared with the previous year. Of these, 65,746 were of a general bacteriological and serological nature, 4,641 in respect of biochemical and pathological investigations, and 16,949 were for the diagnosis and tests for cure of venereal diseases.

The general bacteriological and serological work was for the most part from the Administrative County, but of the milk examinations 842 were undertaken for the City of Stoke-on-Trent, 27 for the County Borough of Dudley, and 1 for the County Borough of Derby.

The tests for venereal diseases were from patients resident in the following areas:—

Administrative County .. .. .	7,882
City of Stoke-on-Trent .. .. .	5,475
County Borough of Dudley .. .. .	616
County of Worcester .. .. .	851
Kesteven Division of Lincolnshire ..	715
County Borough of Walsall .. .. .	539
Other areas outside the Administrative County .. .. .	359

Seventy-eight were from Emergency Hospitals in the Administrative County and 54 from members of His Majesty's Forces. In addition, 380 Laughlin tests in connection with syphilis were carried out.



The bulk of the bacteriological work was in relation to the direct diagnosis and prevention of infectious diseases, the supervision of the milk supply, and the bacteriological examination of drinking waters for the various Sanitary Authorities.

The arrangement for conducting the bacteriological, pathological and biochemical investigations for the London Road Hospital of the City of Stoke-on-Trent still continued, and this Institution has made extensive use of the Laboratory.

The various biochemical and pathological investigations were conducted for the Staffordshire General Infirmary; Standon Hall Orthopædic Hospital; the North Staffordshire Cripples' Aid Society; the Cottage Hospital, Newport, Shropshire; the Victoria Hospital, Lichfield; Tamworth General Infirmary; London Road Hospital, Stoke-on-Trent; the Military Hospital, Lichfield; the Public Assistance Institutions and Emergency Hospitals in the Administrative County.

Supervision of the subsidiary laboratory at Sandfield Hospital, Wordsley, was exercised, and blood counts were done at intervals on the staff of the Institution who were exposed to radium.

In connection with the Blood Transfusion Service, blood grouping of volunteers as donors was carried out at Sandfield Hospital, Wordsley, Sedgley and Lichfield Public Assistance Institutions, and, in addition, on a number of volunteers sent to the Laboratory from the Staffordshire General Infirmary.

The researches into the prevention of Brucella infections in man and animals in the County have been continued this year.

In connection with puerperal sepsis and maternal mortality, the increasing tendency to submit swabs for examination for hæmolytic streptococci has been maintained and the Practitioners, Hospital Authorities, Medical Officers of Health, and the whole-time County Staff, have co-operated in this work.

Experience has shown that in all suspected cases of food poisoning it is of the utmost importance to submit specimens of fæces and vomited material for bacteriological examination as soon as possible after the onset of the symptoms. Samples of blood should also be taken at the appropriate stage of illness, and in every instance the suspected article of diet, when available, should also be forwarded for investigation.

The details of the year's work are as follows:—



# GENERAL BACTERIOLOGY AND PATHOLOGY.

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Totals
Water Examinations .. ..	65	124	128	79	396
Milk Examinations .. ..	4034	4775	5031	5031	18871
Diphtheria .. ..	3883	3817	4149	4551	16400
Tuberculosis .. ..	2016	2053	1665	1411	7145
Cerebro-spinal Fever .. ..	199	165	11	6	381
Streptococcal Infections ..	1635	1393	1388	2208	6624
Ringworm .. ..	16	29	17	20	82
Typhoid and Paratyphoid Fever .. ..	152	496	538	401	1587
Brucella Infections .. ..	176	450	125	80	831
Dysentery (all types) .. ..	222	671	710	858	2461
Food Poisoning .. ..	332	1070	789	452	2643
Veterinary Work (other than Milk, including Research)	646	255	382	3028	4311
Other Examinations .. ..	1078	1104	869	963	4014
TOTALS .. ..	14454	16402	15802	19088	65746

The 7,145 examinations under "Tuberculosis" included 5,588 sputa; 131 specimens of pus; 163 cerebrospinal fluids; 91 other fluids; 450 urines; 24 fæces; 347 biological tests; 9 specimens of human organs and tissues; 327 cultures and 15 swabs.

The 831 investigations under the heading "Brucella Infections" included 176 specimens of blood from human beings, 7 of which gave agglutination reactions varying from 1 in 50 to 1 in 12,500. Seventy-nine samples of blood from cattle were also examined, and, in addition, 556 tests on samples of milk and 4,140 other tests were conducted.

The majority of the serological tests for food poisoning were done for exclusion purposes, and proved negative, but there were 10 positive results.

The 4,014 "Other Examinations" included 590 bacteriological and cytological examinations of various body fluids and exudates; 46 blood cultures; 91 examinations for Vincent's Angina; 494 general examinations of urines; 779 swabs for other pathogenic micro-organisms; and various miscellaneous investigations.



The 18,871 "Milk Examinations" were constituted as follows:—

Cleanliness and Phosphatase Tests .. ..	15,780
Biological Tests .. .. .	2,384
Investigations of Brucella infections .. ..	556
Cultures for Streptococci, etc. .. .. .	40
Direct film for acid fast bacilli .. .. .	4
Examination of washings from utensils .. ..	98
Examination of Milk Bottles for Sterility ..	4
Examination for cause of taint.. .. .	5
	<u>18,871</u>

As regards the biological, cleanliness and phosphatase examinations, the purposes of the tests are shown in the accompanying table, and it will be specially noted that 2 samples of "Pasteurised" milk and 18 of "Accredited" gave positive biological reactions for tuberculosis.

	* Coli and/or Reductase ; or Count and Phosphatase.			Biological Tests.			Grand Total.
	Satisfactory.	Unsatisfactory.	Total.	Negative.	Positive.	Total.	
For "Accredited" Standard and Licence .. ..	6844	3610	10454	202	18	220	10674
For "Tuberculin Tested" Standard and Licence .. ..	176	73	249	145	—	145	394
For "Tuberculin Tested" (Pasteurised) Standard .. ..	8	3	11	9	—	9	20
For Pasteurised Standard .. .. .	154	21	175	83	2	85	260
Food and Drugs Act, 1938 .. .. .	1120	794	1914	1529	105	1634	3548
School Milks .. .. .	113	38	151	156	12	168	319
Submitted by farmers, retailers and others, for their own information.. .. .	95	28	123	5	—	5	128
Submitted by Ministry of Agriculture and Fisheries under Tuberculosis Order, 1938 .. ..	—	—	—	94	19	113	113
Totals .. .. .	8510	4567	13077	2223	156	2379	15456

\* The above figures represent the number of samples examined.



The following tests were involved :—

Count and/or Coli	..	..	..	2,712
Reductase..	..	..	..	12,849
Phosphatase	..	..	..	219
Biological ..	..	..	..	2,384
Total	..	..	..	18,164

The particulars of the pathological and biochemical investigations were as follows :—

# PATHOLOGICAL AND BIOCHEMICAL WORK CONDUCTED DURING THE YEAR 1940.

## *Fractional Test Meals.*

Specimens of Gastric Contents	..	..	..	..	286
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## *Urea (Estimation of).*

Urine..	..	..	..	..	..	..	97
Blood..	..	..	..	..	..	..	174

## *Glucose (Estimation of).*

Urine..	..	..	..	..	..	..	23
Blood..	..	..	..	..	..	..	126

## *Blood.*

Estimation of Hæmoglobin	..	..	..	..	420
R.B.C. Count	..	..	..	..	420
Leucocyte Count	..	..	..	..	448
Reticulocytes	..	..	..	..	74
Differential Leucocyte Count	..	..	..	..	446
Platelets	..	..	..	..	3
Grouping	..	..	..	..	1,377
Wintrobe's Volume Index	..	..	..	..	50
Icterus Index	..	..	..	..	45
Clotting Time	..	..	..	..	1
Sedimentation Rate	..	..	..	..	9
Estimation of Calcium	..	..	..	..	3
„ „ Cholestrol	..	..	..	..	2
„ „ Plasma Protein	..	..	..	..	8
„ „ Creatinine	..	..	..	..	1
„ „ Uric Acid	..	..	..	..	7
Bendien Tests	..	..	..	..	1
Hæmolysin Tests	..	..	..	..	183
Congo Red Test	..	..	..	..	1
Van Den Bergh's Reaction	..	..	..	..	6

Carried forward .. .. 4,211



	Brought forward .. ..	4,211
<i>Urine.</i>		
Diastase Content .. .. .	6	
Creatinine Content .. .. .	1	
Nature of Reducing Substance .. .. .	1	
Zondek-Aschheim Tests (Friedman's Modification) ..	36	
<i>Fæces.</i>		
Quantitative Estimation of Fats .. .. .	3	
<i>Pathological Sections</i> .. .. .	376	
„ „ (Research) .. .. .	7	
	<hr/>	
Total .. ..	4,641	

The details of the Venereal Diseases tests are shown in the following table :—

EXAMINATIONS OF PATHOLOGICAL SPECIMENS CONDUCTED  
UNDER THE VENEREAL DISEASES SCHEME DURING THE  
YEAR 1940.

	For Detection of		For Wasser- mann Reaction	Sigma, Kahn & Laughlin Tests	Other Examin- ations	Totals
	Spirochæta Pallida	Gonococci				
1st Quarter ..	—	252	1551	1992	356	4151
2nd Quarter ..	—	341	1616	1780	329	4066
3rd Quarter ..	—	379	1468	1754	305	3906
4th Quarter ..	1	363	2182	1924	356	4826
Totals ..	1	1335	6817	7450	1346	16949

The 1,346 " Other Examinations " consisted of :—

One hundred and thirty-six cerebrospinal fluids for cell count, protein estimation, and colloidal gold test ; 1,199 complement fixation tests for gonorrhœa ; the examination of 5 specimens of urine for gonococci ; the making of 2 cultures for gonococci, and 4 pathological sections.

**CHEMICAL LABORATORY.**

Mr. E. V. Jones, the County Analyst, reports that the total number of samples analysed was made up as below :—



*For County.*

Food and Drugs Act, 1938..	..	..	..	..	2,526
"Appeal to Cow" Samples	..	..	..	..	38
Fertilizers and Feeding Stuffs Act, 1926..	..	..	..	..	1
Pharmacy and Poisons Act, 1933..	..	..	..	..	1
Drinking Waters	..	..	..	..	299
Swimming Bath Waters (Full Analysis)	..	..	..	..	2
River Waters (Full Analysis)	..	..	..	..	112
Sewage Effluents (Full Analysis)	..	..	..	..	70
Crude Sewage (Full Analysis)	..	..	..	..	2
Coroner Samples	..	..	..	..	2
Miscellaneous Samples	..	..	..	..	30

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3,083

*For Stoke-on-Trent* .. .. . 912

*For Newcastle-under-Lyme* .. .. . 134

*For Brierley Hill* .. .. . 44

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Total .. .. 4,173

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FOOD AND DRUGS ACT, 1938.

Of the 2,526 samples submitted from the County Area, 2,288 were found to be genuine and 238 adulterated or below standard.

(1) MILK.—Of 1,786 samples of undesignated milk, 206 were found to be unsatisfactory, of which 89 contained added water, 12 contained added water and were further deficient in fat, 2 contained added water and sugar, 90 were deficient in fat, and 13 were deficient in both fat and solids-not-fat.

One hundred and eighty-two samples of specially designated milks were examined, viz., 26 "Tuberculin Tested," 75 "Accredited," and 81 Pasteurised. Twenty-one were reported against, one of "Tuberculin Tested," one of "Accredited," and 14 of Pasteurised containing added water, 3 of "Accredited" being deficient in fat, and 2 others of "Accredited" being below the presumptive standard in fat and solids-not-fat.

Forty-two samples of sterilized milk were also examined, which were all found to be satisfactory with the exception of one containing added water, and one deficient in fat.

*Action taken.*—Seventy-six of the 206 unsatisfactory samples of ordinary milk were informal and no direct action could be taken, but "follow up" samples were obtained where possible.



In 49 cases, representing 72 unsatisfactory samples (two or more having been taken simultaneously from the same purveyor in several instances) the adulterations were small and cautions were issued. Eighteen producers or retailers were prosecuted in respect of 29 samples containing added water, one in respect of 2 samples containing both added water and added sugar, and one in respect of a sample deficient in fat.

The County Farm Institute, Rodbaston, was asked to give assistance in respect of 3 samples from one producer. In the remaining 23 instances no action was considered necessary.

As regards the formal samples of designated milks, proceedings were taken against a firm of retailers in respect of 12 Pasteurised samples, and against a producer-retailer in respect of one "Accredited" sample, all of which contained added water. Cautions were issued in respect of 2 samples of Pasteurised milk and one sample of Sterilized milk found to contain added water, and 2 samples of "Accredited" and one of Sterilized which were deficient in fat. The remaining 4 unsatisfactory samples, one "Tuberculin Tested" and 3 "Accredited" were informal.

In total, 55 retailers or producers were cautioned and 22 prosecuted. Fines amounting to £88 were imposed, together with £63 12s. 3d. special costs.

The average composition of the milks of all grades was :—

		<i>On all samples.</i>	<i>On genuine samples.</i>
Fat	.. ..	3.68%	3.75%
Solids-not-fat	.. ..	8.69%	8.73%

Of 1,781 samples of milks of all grades, passed as genuine, 255 were below the presumptive standard of 8.5 per cent. solids-not-fat, of which 252 were proved to be genuine milk by the Freezing Point Depression (Hortvet), and 3 were slightly sour.

(2) GENERAL ARTICLES OF FOOD.—Five hundred and sixteen general articles of food and drugs were examined, and 9 (one formal and 8 informal) were found to be adulterated or below standard, the County Analyst reporting as follows :—

*Fish Dressing, with Egg Yolk.*—Of two samples submitted, one (informal) contained no Egg Yolk.

*Gentian Root, Ground.*—Only two samples were submitted; both proved to be adulterated. One (informal) contained 66.3 per cent. powdered fruit stone shells, whilst the other, which was formal, contained at least 10 per cent. of ground barley husks.



*Margarine.*—of 39 samples, only one (informal) was adversely reported upon. It contained 0.33 per cent. of Boric Acid, instead of a maximum of 0.25 per cent., the amount sanctioned under the licence.

*Prunes.*—The only sample (informal) contained a large number of sugar mites and ova.

*Sausage.*—Of 6 samples, one (informal) proved to be preserved sausage, containing 141 parts per million of Sulphur Dioxide.

*Soda, Carbonate of.*—The only sample (informal) consisted entirely of bicarbonate of soda.

*Suet, Shredded Beef.*—Of 8 samples, 2 (informal) contained excess of rice flour to the extent of 6.4 per cent. and 5 per cent., respectively. They contained 21.4 per cent. and 20 per cent. rice flour, instead of a permissible amount of 15 per cent.

*Action taken.*—Proceedings were taken against the retailer of the formal sample of Ground Gentian Root, who successfully pleaded a warranty, and the case against him was dismissed.

#### "APPEAL TO COW" SAMPLES.

Of 38 "Appeal to Cow" samples, 6 were below the presumptive standard of 8.5 per cent. solids-not-fat; 8 were below the standard of 3 per cent. fat; and one was below in both solids-not-fat and fat.

#### FERTILIZERS AND FEEDING STUFFS ACT, 1926.

Only one sample has been submitted under this Act, viz., "Cow Concentrate," which was of satisfactory quality.

#### DRINKING WATERS.

Of 299 samples, 91 were for the ordinary full analysis, 203 for partial analysis, 3 for full and mineral analysis, and 2 for full analysis and fluorine content. One hundred and sixty were passed as satisfactory; 67 showed sewage or animal pollution; 15 were organically impure; 18 were of doubtful quality; 5 contained metallic contamination; 19 contained both animal and vegetable pollution; 2 contained both animal and metallic pollution; one was excessively hard; one contained sewage, and was also excessively hard; 3 contained vegetable and metallic pollution; 3 contained animal, vegetable and metallic pollution; one was excessively hard and also contained metallic pollution; one smelt strongly of paraffin; one contained sulphide



and iron ; one was organically of satisfactory quality, but contained 3 parts per million of fluorine, and one contained sewage and also 3.8 parts per million of fluorine.

#### CORONER SAMPLES.

Only one case was sent, consisting of 2 samples, which were examined for metallic and other irritant poisons.

### MILK SUPPLY.

As explained in previous Reports, the County Council are concerned with the milk supply, as follows :—

- (i) Under the Milk (Special Designations) Orders they are responsible for the issue and control of " Tuberculin Tested " and " Accredited " licences in the Administrative County, and
- (ii) By arrangements made with the majority of the District Councils, the County staff undertake the sampling of milk as it is being retailed to the public, *i.e.*, street samples.

The duties in connection with the above are assigned to the Sanitary Inspectors and Milk Sampling Officers of the Public Health Department, and, notwithstanding the depletion of staff, due to the war, mentioned last year, every endeavour is made to maintain efficient supervision.

Details of the work during 1940 are given in the succeeding paragraphs.

#### STREET SAMPLING.

The area covered by the ordinary activities of the County Council for this purpose is the whole of the Administrative County with the exception of the Municipal Boroughs of Newcastle and Rowley Regis and the Urban District of Brierley Hill. At the request of the Rowley Regis Municipal Borough Council, who became the Food and Drugs Authority for their district on the 1st October, 1939, special arrangements were made for the County staff to undertake the street sampling on their behalf.

In the following tables the number of samples of ordinary and specially designated milks taken during the year in the area for which the County Council is normally responsible are shown, together with the results of the bacteriological and biological tests carried out in the County Laboratory. In the table of ordinary milk the numbers of samples taken in the various Sanitary Districts of the County are indicated.



# ORDINARY MILK SAMPLES.

1ST JANUARY TO 31ST DECEMBER, 1940.

Sanitary District	No. of samples Submitted	Result of Examination		T.B.
		Cleanliness		
		Satisfactory	Unsatisfactory	
URBAN :				
Aldridge ..	32	20	12	2
Amblecote ..	9	4	5	2
Biddulph ..	42	26	16	3
Bilston ..	11	5	6	—
Brownhills ..	31	17	14	3
Cannock ..	58	43	15	6
Coseley ..	13	10	3	2
Darlaston ..	4	2	2	—
Kidsgrove ..	70	38	32	4
Leek .. ..	25	12	13	—
Lichfield ..	33	16	17	1
Rugeley ..	24	13	11	—
Sedgley ..	51	34	17	3
Stafford ..	53	38	15	5
Stone .. ..	13	9	4	2
Tamworth ..	19	15	4	—
Tettenhall ..	14	8	6	2
Tipton ..	41	22	19	1
Uttoxeter ..	32	23	9	1
Wednesbury ..	11	7	4	1
Wednesfield ..	24	12	12	1
Willenhall ..	48	30	18	8
RURAL :				
Cannock ..	86	60	26	5
Cheadle ..	136	67	69	3
Leek .. ..	59	33	26	2
Lichfield ..	98	54	44	3
Newcastle ..	51	32	19	—
Seisdon ..	53	33	20	4
Stafford ..	23	12	11	1
Stone .. ..	25	17	8	2
Tutbury ..	41	28	13	4
Uttoxeter ..	18	10	8	1
Totals ..	1,248	750	498	72



# SPECIALLY DESIGNATED MILK.

1ST JANUARY TO 31ST DECEMBER, 1940.

Designation	No. of Samples Submitted	Result of Examination		T.B.
		Cleanliness		
		Satisfactory	Unsatisfactory	
" Tuberculin Tested " ..	64	58	6	—
" Accredited " ..	132	120	12	5
Pasteurised ..	64	59	5	2
" Tuberculin Tested " Pasteurised ..	8	8	—	—
Totals ..	268	245	23	7

In addition, four samples of sterilized milk were taken for examination, and were all satisfactory.

## (i) BACTERIOLOGICAL EXAMINATION.

*Undesignated Milk.*—The 1,248 samples were bacteriologically examined, and 750 were found to conform to a certain standard of cleanliness, the remaining 498 failing to do so. Four hundred and eighty-two of the latter were produced within the County and 16 outside. The percentage of samples reported clean was 60·1, compared with 69·1 last year. In addition to being unsatisfactory from a cleanliness standpoint, 28 also contained tubercle bacilli.

As in previous years, the names of the producers of the unsatisfactory milks were reported to the County Farm Institute, and the farmers concerned were communicated with by the Assistant Director for Agricultural Education, and offered every assistance. In accordance with the usual practice, if no improvement in the cleanliness of the milk resulted, the District Council in whose area the premises are situated was informed, so that the necessary steps could be taken under the Milk and Dairies Order, 1926.

*Specially Designated Milks.*—The cleanliness test was applied to the 268 samples submitted, and 23, or 8·6 per cent., were found to be unsatisfactory, viz. : 6 " Tuberculin Tested, " 12 " Accredited " and 5 Pasteurised, as compared with 7·9 per cent in the previous year.

In addition to examination by the bacterial count method, the Pasteurised milks are submitted to the phosphatase test, which



indicates the efficiency or otherwise of the pasteurisation. In this respect 65 of the 72 samples obtained in 1940 were satisfactory.

As regards the unsatisfactory samples, other than those of Pasteurised Milk, 14 were produced in the County and 4 outside. The sources of production of the 5 Pasteurised samples were not known but 3 were of milk treated at premises outside the County.

## (ii) BIOLOGICAL EXAMINATION.

All the samples, with the exception of 4 of undesignated milk, were examined biologically, and 72 of ordinary milk, 5 of "Accredited" and 2 of Pasteurised, were found to contain tubercle bacilli.

Sixty-nine undesignated samples and the 5 "Accredited" were produced within the County. The 2 Pasteurised samples were of milk treated at premises outside the County.

Where the milk was produced in Staffordshire the positive results were reported to the Divisional Inspector of the Ministry of Agriculture and Fisheries, whose Department is responsible for the consequent veterinary examinations of the herds concerned.

The procedure adopted when the sources of production of samples containing tubercle bacilli are outside the County is dealt with in a succeeding paragraph.

## MILK IN SCHOOLS SCHEME.

At the end of the year there were 102 suppliers of designated and undesignated milks to schools or departments, as detailed in the following table :—

	No. of Suppliers.	Schools or Depts. supplied.	Children supplied (Dec.)
"Tuberculin Tested" .. ..	1	1	7
"Accredited" .. ..	80	233	10,924
Pasteurised .. ..	17	122	27,854
Undesignated .. ..	4	5	26
	<hr/> 102	<hr/> 361	<hr/> 38,811

The usual procedure is to sample the supplies at least once each term *after* delivery to the schools. During 1940, however, in view of shortage of staff, this was not always possible, but every effort was made to give adequate supervision. The samples are examined bacteriologically and biologically, and, in the case of Pasteurised milk, by the phosphatase test in addition.

All herds producing milk are, of course, under supervision by the Veterinary Staff of the Ministry of Agriculture and Fisheries,



but, in the case of undesignated production, examinations are normally made less frequently. However, as far as school milk is concerned, the Divisional Inspector agreed to deal with the matter adequately, so that the supplies, which are in districts where it is difficult to obtain designated milk, can continue.

The number of samples collected at schools during the year was 206, and of these 54 failed to conform with the required standard of cleanliness. When an unsatisfactory result is obtained notification is made to the supplier and/or producer, and repeat samples are taken.

Forty-two samples from Pasteurised supplies were submitted to the phosphatase test ; 40 passed and 2 failed.

As regards the biological examination of samples, where tubercle bacilli are found the school supply is cancelled immediately and is not resumed from the particular source until the herd is free from infection. In the meantime, where possible alternative arrangements are made so that the scheme is not interfered with. The number of tuberculous samples during the year was 11 and the procedure mentioned in a preceding paragraph was adopted.

#### FOOD AND DRUGS ACT, 1938.

In 1940, 117 representations in respect of milk produced in Staffordshire, which was found to contain tubercle bacilli, were made by Medical Officers of Health of districts outside the area administered by the County Council. Similarly, 7 complaints were made to outside Authorities in respect of milk sent into this County for sale. In this respect the County and County Borough Public Health Departments act in the capacity of clearing houses only, and the appropriate action regarding the herds is taken by the Veterinary Staff of the Ministry of Agriculture and Fisheries.

#### MILK (SPECIAL DESIGNATIONS) ORDER, 1936.

*"Accredited."*—On the 31st December, 1940, there were 2,605 farmers licensed to produce "Accredited" milk, as compared with 2,700 at the end of the previous year. During the period under review, 9,716 samples of milk were taken for examination for cleanliness, and 6,317, or 65.0 per cent., complied with the required standard.

As stated last year, in view of depletion of staff, routine sampling at the farms at two monthly intervals had to be abandoned, but endeavours are made to visit quarterly for this purpose.

One hundred and seventeen applications for new licences were received and dealt with during 1940, 7 of which were not acceded to.



When it is found that the main conditions attached to a licence, which include, of course, a good sample record, are not being observed, every effort is made to obtain a satisfactory solution, and failing this the case is dealt with by the appropriate Committee. During 1940, the licences of 44 producers were suspended for one month, 23 for two months, and 8 for three months. Forty-eight were revoked and 7 cautions were issued.

*"Tuberculin Tested."*—At the end of the year the number of licences in force for the production of "Tuberculin Tested" milk was 38, as against 37 at the close of 1939. Three new applications were received and recommended during 1940.

The routine samples are examined biologically as well as for cleanliness. Of 132 obtained during the year, 29 failed to comply with the required bacteriological standard but none was found to contain tubercle bacilli.

One unsatisfactory case only was considered by the Committee and a warning was issued.

#### GENERAL.

Apart from the foregoing, sampling was undertaken at certain hospitals, sanatoria and institutions, and of 19 samples obtained during the year 11 were unsatisfactory from a cleanliness standpoint, whilst 2 contained tubercle bacilli.

### WATER SUPPLIES AND RIVERS POLLUTION PREVENTION.

In view of the war, the activities of Local Authorities in connection with schemes for water supplies, sewerage and sewage disposal, have been curtailed, and it is possible only to comment on developments of special interest of schemes which were already in existence, as follows :—

#### Water Supplies :—

LEEK R.D.—The piped supply by stand taps is now available in the village of *Longnor*.

UTTOXETER R.D.—Further progress was made during 1940 in the scheme to provide a piped supply for the *Parish of Leigh*, and many properties are now being supplied from this source.

The scheme to provide a piped supply to the *Parish of Newborough* was also proceeded with, but, contrary to expectation, the supply was not available at the end of the year. It is anticipated that it will be completed during 1941.



## Rivers Pollution Prevention :—

### RIVER TRENT WATERSHED.

STONE U.D.—Work is proceeding on the new sewerage and sewage disposal scheme, but progress is necessarily slow.

STONE R.D.—A scheme to provide for the sewerage of *Grounds-low Sanatorium* and *Barlaston* was placed before the Ministry, and work on the Groundslow section will probably be commenced in the near future.

### RIVER TAME WATERSHED.

WILLENHALL U.D.—The new Short Heath trunk sewer is now complete, and the second of the two small works has been dispensed with.

### RIVER SEVERN WATERSHED.

SEISDON R.D.—*Kinver*.—Work is proceeding on the new sewerage and sewage disposal scheme, but progress is being retarded owing to present difficulties. It is anticipated, however, that it will be completed by the end of 1941.

## CONTRIBUTIONS TO DISTRICT COUNCILS FOR WATER AND SEWAGE DISPOSAL SCHEMES.

In the Report for 1930, the principles governing contributions from the County Council were fully stated and a brief summary has appeared in subsequent Reports.

Contributions continue to be payable in respect of all schemes mentioned in previous Reports, with the exception of two, which ceased for the following reasons :—

Lichfield R.D.	.. ..	Burntwood Mental Hospital Sewer—Contributions ceased, having been made for agreed period of 5 years.
Tutbury R.D.	.. ..	Hanbury Water Supply—Income from consumers increased to such an extent that County Council's contribution permanently discontinued.

During 1940 applications were received in respect of three new schemes and in each instance a contribution was approved. The particulars are as follows :—

<i>Sanitary District.</i>		<i>Scheme.</i>
<i>Sewerage and Sewage Disposal :—</i>		
Lichfield R.D.	.. ..	Hopwas Sewer Extension (Parish of Wigginton).
<i>Water Supplies :—</i>		
Uttoxeter R.D.	.. ..	Newborough.
Do.	.. ..	Willslock portion of Parish of Uttoxeter Rural.



## HOUSING (RURAL WORKERS) ACTS.

Under these Acts contributions are given by the County Council for the re-conditioning of old houses in rural areas, and for the conversion into dwellings of buildings not previously used for that purpose. Applications for grants must come from the owner of the property concerned. During the year, one application only was dealt with, which concerned the improvement of the water supply at a house in Checkley Parish (Cheadle R.D.). A grant of £50 was offered.

## PREVALENCE OF, AND CONTROL OVER, INFECTIOUS DISEASE.

During 1940 there has been no further development of the scheme for the provision of Isolation Hospital accommodation, and the remarks I made last year still apply.

The following statistics relate to the notifiable infectious diseases amongst civilians during the 52 weeks ended 28th December, 1940. Measles and Whooping Cough were added on the 9th February, 1940, so that information concerning them is not available for the complete year. On reference to the tables at the end of the Report the numbers and death-rates for each Sanitary District will be found.

**SMALLPOX.**—No case of Smallpox was recorded in 1940, a similar experience to that of last year. The last case recorded in the County was in 1930.

**SCARLET FEVER.**—The incidence of this disease was lower than that for the previous year, 1,598 cases having been notified, compared with 1,927 in 1939. There was a notable decrease in the Urban Districts where 1,147 cases occurred as against 1,518, but an increase in the Rural Districts, the numbers being 451 and 409, respectively. Five deaths occurred in Urban Districts, but none in Rural Districts. The case rate per thousand of the population is 2·10 compared with 1·63 for England and Wales as a whole. The death-rate in the Urban Districts is 0·01. The prevailing type of the disease was mild.

**DIPHTHERIA.**—Slightly fewer cases were notified in 1940 than in the previous year, the numbers being 852 and 931, respectively, and the decrease was mainly in the Rural Districts where there were 168 notifications compared with 229 in 1939. Six hundred and eighty-four cases occurred in the Urban Districts as against 702 in the previous year. The case rate was 1·12 compared with 1·16 for England and Wales. Fifty-two deaths occurred in the Urban and 9 in the Rural Districts, which yield death-rates of



0.09 and 0.05, respectively. As will be noted, the prevailing form of the disease was more severe than scarlet fever, but comparatively speaking it was mild.

For several years, with the consent of the District Councils, the Assistant Medical Staff have undertaken the immunisation of school children in many parts of the County Elementary Education area. In December, 1940, a circular was issued from the Ministry of Health urging all District Councils to make special efforts to secure the immunisation of as many children as possible, in order to meet the increased risks which inevitably arise out of war conditions. For this purpose children are deemed to be those aged 1 to 15 years, and the County Councils were therefore asked to co-operate in the scheme through their School Medical and Welfare Services. Arrangements were made for the District Medical Officers of Health to obtain the toxoid for inoculation free of charge from Emergency Public Health Laboratories, and suitable propaganda was made available. In Staffordshire it was decided that the County Council should co-operate immediately by permitting their medical staff to undertake the immunisation of all children of suitable age in attendance at the Welfare Centres, and children in the 5 to 8 years age group in the schools, subject, of course, to parental consent. The question of extending the work in the schools, which is dependent on the absence of staffing problems, was left for later consideration. It must be clearly understood, however, that the District Councils are officially responsible for the scheme, including general supervision, records and the subsequent rendering of returns.

Facilities are provided in the County Laboratory for bacteriological investigations, and, in 1940, 16,400 specimens were dealt with, compared with 29,518 in the previous year. These included 75 virulence tests undertaken in special cases, and 3,398 tests in connection with a special investigation.

**ENTERIC FEVER.**—Seventeen notifications of typhoid fever in Urban Districts and 15 in Rural Districts were made during the year, compared with 13 and 1, respectively, in 1939. The cases were sporadic and occurred in 20 of the 35 Sanitary Districts. Seven cases were reported from the Lichfield Rural District but they occurred at intervals during the period May to December. There were two deaths in the Urban Districts from this cause. The case rate was 0.04 compared with 0.07 for England and Wales.

The Ministry of Health Circular to District Councils in December relating to diphtheria immunisation, also dealt with immunisation against organisms of the typhoid group. Whilst it is considered that there is no occasion for mass immunisation for this



purpose, it was requested that facilities should be available for individuals the nature of whose employment exposes them to special risk, and for volunteers who desire it.

MEASLES.—As already mentioned, this disease became notifiable in February and from that time until the end of the year 4,807 cases were notified, 3,547 in Urban and 1,260 in Rural Districts. This gives a case rate of 6.30 compared with 10.24 for England and Wales. Eleven deaths occurred in the Urban Districts with a death-rate of 0.02, and two in the Rural Districts with a death-rate of 0.01.

WHOOPING COUGH.—This disease also became notifiable in February, and during the remainder of the year 2,002 cases were notified, 1,606 in Urban and 396 in Rural Districts. The case rate was 2.63, whilst that for England and Wales was 1.34. There were 25 deaths in the Urban Districts and 3 in the Rural, the death-rates being 0.04 and 0.02, respectively.

ENCEPHALITIS LETHARGICA.—Six cases only, all in Urban Districts, were notified during 1940, but 7 deaths were reported, 5 in Urban and 2 in Rural Districts.

POLIOMYELITIS AND POLIOENCEPHALITIS.—In 1940, 35 cases of Poliomyelitis were notified compared with 6 in the previous year. Twenty-five were in Urban and 10 in rural Districts. The cases, which were sporadic, occurred in 19 of the 35 Sanitary Districts. In addition, 3 cases of Polioencephalitis were notified in Urban Districts and 2 in Rural. As regards deaths from these conditions, 2 occurred in Urban Districts and a similar number in Rural Districts.

DYSENTERY.—During the year, 42 cases of Dysentery were notified. They occurred in the following districts:—Aldridge U.D., 13; Brierley Hill U.D., 1; Sedgley U.D., 1; Stafford M.B., 4; Tettenhall U.D., 1; Wednesbury M.B., 5; Cheadle R.D., 3; Stone R.D., 14.

CEREBRO-SPINAL FEVER.—There was a notable rise in the incidence of this disease in 1940, 161 cases having been notified, an increase of 133 over the previous year. One hundred and thirty-three occurred in 22 of the 25 Urban Districts, and 28 in 8 of the 10 Rural Districts. The 1939 totals for the Urban and Rural Districts were 21 and 7, respectively. The case rate was 0.21 compared with 0.32 for England and Wales. There were 40 deaths in 18 of the Urban Districts, and one each in 5 of the Rural Districts. From the foregoing it will be gathered that the



incidence was widespread, and, as far as Staffordshire was concerned, except for the month of March, during which 44 notifications were made, cases were notified fairly evenly throughout the year, so that, generally speaking, the disease did not reach epidemic proportions.

The County Council have a scheme under which the services of Consultants are at the disposal of the General Practitioners, and special arrangements exist for the cerebro-spinal fluid to be sent to the County Bacteriological Laboratory in a portable incubator, because these organisms do not survive if sent through the post in the ordinary way. One hundred and twenty-four specimens of cerebro-spinal fluid were examined in the Laboratory during the year, together with 241 swabs, and typing was undertaken when possible.

The deaths from non-notifiable infectious diseases were as follows:—

DIARRHŒA AND ENTERITIS.—Fifty-eight deaths occurred in Urban Districts, and 11 in Rural Districts, in children under 2 years of age, the death-rates being 5·5 and 3·7, respectively, per thousand live births. The deaths occurred in 19 of the Urban Districts and in 6 of the Rural Districts.

INFLUENZA.—In 1940 there were 162 deaths in Urban and 45 in Rural Districts, as compared with 123 and 43, respectively, in 1939.

The number of cases of Notifiable Infectious Diseases, with the deaths, in the Administrative County during the 52 weeks are as follows:—

Diseases	Notifications		Deaths.	
	Urban	Rural	Urban	Rural
Small-pox .. .. .	—	—	—	—
Scarlet Fever .. .. .	1147	451	5	—
Diphtheria .. .. .	684	168	52	9
Enteric Fever .. .. .	17	15	2	—
Measles .. .. .	3547	1260	11	2
Whooping Cough .. .. .	1606	396	25	3
Puerperal Pyrexia .. .. .	74	14	4	4
Erysipelas .. .. .	187	92	*	*
Cerebro-Spinal Fever .. .. .	133	28	40	5
Polio-myelitis .. .. .	25	10	} 2	2
Polio-encephalitis .. .. .	3	2		
Pneumonia .. .. .	797	269	386	88
Encephalitis Lethargica .. .. .	6	—	5	2
Dysentery .. .. .	25	17	*	*

\* Not classified in Registrar-General's Return.



## VACCINATION.

The ineffectiveness of the working of the Vaccination Acts is shown on examination of the Returns of the various Vaccination Officers for the year 1st January to 31st December, 1939, where it is seen that out of 10,744 children born during the year in whom vaccination was possible, only 26·2 per cent. were subsequently protected against smallpox.

## TUBERCULOSIS.

The treatment scheme is administered by the Staffordshire, Wolverhampton and Dudley Joint Board for Tuberculosis, whose Annual Report deals extensively with all aspects of the work.

In view of its extreme importance, each year I call particular attention to the fact that the measures for the prevention of the disease are the concern of the District Councils, the Joint Board being responsible for treatment. Adequate housing, which is the main consideration, cannot, of course, have its proper place in times of national crisis, but the question should appear prominently in post-war planning. In the 1940 Report of the Joint Board it is stated that the usual investigation into environmental conditions revealed that 44·5 per cent. of the patients had a separate bedroom, as compared with 42·1 in the previous year. On the face of it this increase seems negligible but there has been a steady improvement over a period of years, for in 1928 the corresponding figure was 25·1.

Given below are the 1940 statistics for the Administrative County.

The following table shows new cases of tuberculosis, including primary notifications and cases which came to notice otherwise than by formal notification, and deaths from the disease, classified according to ages and sex:—

AGE PERIODS.	NEW CASES				DEATHS.			
	Pulmonary		Non-Pulmonary		Pulmonary		Non-Pulmonary	
	M.	F.	M.	F.	M.	F.	M.	F.
0— .. .. .	—	—	4	1	—	1	2	2
1— .. .. .	1	7	19	19	1	2	6	13
5— .. .. .	7	2	27	18	—	3	8	5
10— .. .. .	4	8	17	19				
15— .. .. .	42	43	11	14				
20— .. .. .	48	44	6	10	116	115	10	12
25— .. .. .	85	74	5	6				
35— .. .. .	68	25	2	1				
45— .. .. .	40	25	2	4	75	19	5	6
55— .. .. .	37	9	3	1				
65 and upwards ..	5	7	1	—	9	7	3	2
Totals .. ..	337	244	97	93	201	147	34	40



Three hundred and forty-eight persons died from pulmonary tuberculosis and 74 from other forms of tuberculosis, the death-rates being 0.46 and 0.10 per thousand of the population, respectively. The corresponding rates for 1939 were 0.48 and 0.10. In the general tables at the end of the Report the numbers of deaths and rates for each Sanitary District will be found.

The table which follows shows the death-rates in the Urban and Rural Districts of the County from 1914 :—

Year	Death Rate per 1,000 of the Population			
	Phthisis		Other forms of Tuberculosis	
	Urban	Rural	Urban	Rural
1914	0.89	0.54	0.31	0.20
1915	0.94	0.67	0.34	0.29
1916	1.01	0.80	0.40	0.29
1917	1.01	0.74	0.34	0.31
1918	1.03	0.88	0.31	0.28
1919	0.83	0.61	0.22	0.30
1920	0.75	0.56	0.30	0.21
1921	0.80	0.53	0.23	0.21
1922	0.80	0.55	0.24	0.17
1923	0.75	0.58	0.25	0.22
1924	0.73	0.58	0.22	0.20
1925	0.83	0.49	0.22	0.14
1926	0.74	0.50	0.22	0.11
1927	0.73	0.44	0.21	0.22
1928	0.64	0.48	0.14	0.13
1929	0.76	0.54	0.15	0.12
1930	0.72	0.54	0.15	0.13
1931	0.78	0.52	0.17	0.13
1932	0.64	0.42	0.16	0.14
1933	0.72	0.50	0.14	0.08
1934	0.67	0.43	0.11	0.16
1935	0.67	0.35	0.13	0.08
1936	0.53	0.34	0.11	0.08
1937	0.60	0.41	0.13	0.11
1938	0.56	0.29	0.13	0.11
1939	0.52	0.35	0.09	0.11
1940	0.51	0.29	0.11	0.06

#### NOTIFICATION.

The following are particulars of the primary notifications made from 1915 :—

1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927
1233	1048	873	856	699	642	929	971	1029	974	1232	1400	1106
1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
1194	1017	1021	1129	1074	1011	929	825	831	858	789	726	669



In addition to the 669 primary notifications in 1940, 102 cases, compared with 104 in the previous year, came to knowledge from other sources, 67 of which were transfers from other areas. It was found that 24 unnotified cases had died, and in 3 further instances notification was made after death. These 27 deaths give a ratio of 1 in 15·6 of the total deaths ; roughly, 16 out of 17 deaths were of cases notified under the Regulations before decease.

The total notifications are classified in a preceding table and the incidence in the sexes and age groups should be specially observed.

#### REGISTERS OF DISTRICT MEDICAL OFFICERS OF HEALTH.

At the end of the year the following cases were included in these registers :—

TOTAL CASES	PULMONARY			NON-PULMONARY		
	M.	F.	Total	M.	F.	Total
6726	2349	2160	4509	1164	1053	2217

This indicates that there is one case of tuberculosis in every 113 persons, or 8·8 per thousand of the population. It also shows that, during the year, approximately one death occurred amongst 17 cases, which compares favourably with the expert opinion that for every death there are at least 10 persons suffering from the disease.

#### CANCER.

In the following table, the deaths from Cancer during 1940 in age and sex groups, in the Urban and Rural Districts of the County, are shown :—

Age Groups	Urban Districts			Rural Districts			Grand Total
	Male	Female	Total	Male	Female	Total	
0— ..	—	—	—	—	—	—	—
1— ..	—	—	—	1	1	2	2
5— ..	—	—	—	—	—	—	—
15— ..	30	52	82	6	13	19	101
45— ..	161	161	322	53	50	103	425
65— ..	218	184	402	80	86	166	568
Totals ..	409	397	806	140	150	290	1096



The above table deals, of course, with cancer of all sites, but, this year, the Registrar-General has placed the deaths in four groups. The detailed numbers are shown in the tables at the end of the Report relating to each district and in the table dealing generally with deaths by age which appears on page 11. In each of the last three years there has been over 1,000 deaths from this cause and the total has slowly increased. As I have mentioned on previous occasions, this can largely be accounted for by the fact that people now live longer than they did a generation ago, and, as age advances, the liability to cancer is greater.

### VENEREAL DISEASES.

Under the County Council scheme for the treatment of Venereal Diseases, agreements have been made with the North Staffordshire Royal Infirmary, Stoke-on-Trent; the Staffordshire General Infirmary, Stafford; the Royal Hospital, Wolverhampton; the Guest Hospital, Dudley; the Corbett Hospital, Amblecote; and the Walsall Corporation for the establishment of special clinics. A special arrangement also exists for the treatment of County cases at the Birmingham General Hospital, and there is an agreement with the Children's Hospital, Ladywood Road, Birmingham.

There is one whole-time Venereal Diseases Officer on the staff of the County Council who is responsible for the Clinics at Stafford and Stoke-on-Trent mentioned above.

As far as the Administrative County is concerned, the effect of the war on this service has caused little embarrassment. In view of circulars issued from the Ministry of Health stressing the importance of assistance to the Service Authorities in connection with the treatment of members of H.M. Forces, the position was reviewed, which revealed that at present the existing facilities are adequate.

Towards the end of 1940 the Staffordshire Insurance Committee organised a series of propaganda talks which were given in several areas of the County, and the County Council made a grant of £50 towards the cost. The lectures, which, on this occasion, were for women only, were supported by films obtained from the British Social Hygiene Council, and were generally well attended.

During the year, 719 Staffordshire patients attended for treatment for the first time, and the following detailed table indicates where it was obtained. The attendances shown in the appropriate column, however, relate to all patients and include visits by those referred for treatment in previous years.



CLINIC	Syphilis	Soft chancre	Gonorrhœa	Non-Venereal	Total New Cases	Attendances (all patients)
Birmingham General Hospital .. ..	9	—	11	29	49	1262
Burton-on-Trent General Infirmary ..	2	—	2	—	4	38
Derby Royal Infirmary .. ..	—	—	6	2	8	115
Dudley Guest Hospital .. ..	13	—	28	59	100	1877
Stafford (Staffordshire General Infirmary)	3	—	25	19	47	4194
Stoke-on-Trent (North Staffordshire Royal Infirmary) .. ..	32	1	57	83	173	7485
Stoke-on-Trent (Municipal Clinic, Shelton) .. ..	1	—	15	14	30	784
Stourbridge (Corbett Hospital) .. ..	5	—	9	5	19	776
Walsall (Manor Hospital) .. ..	29	—	43	37	109	5029
Wolverhampton Royal Hospital .. ..	32	—	48	100	180	5111
Totals .. ..	126	1	244	348	719	26671

Free samples of Salvarsan or its substitutes are issued to General Practitioners, who comply with the necessary requirements, for the treatment of Staffordshire cases in their practices. At the end of 1940 the names of 40 doctors appeared on the approved list, 8 of whom took advantage of the provision during the year.

The County Council have arrangements for the admission of patients from the Administrative County to Cleveland House, Wolverhampton, an institution for the reception of expectant mothers suffering from venereal disease. In 1940, four such patients were treated, three of whom were admitted during the year.

W. D. CARRUTHERS,

County Medical Officer of Health.

*September, 1941.*







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# TABLES

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Table showing Population, Number of Persons per acre, Birth and Death-rates as well as the Death-rates at all ages and among Children under 1 year, and the Death-rates from Zymotic Diseases, Tuberculosis, Diseases of the Respiratory Organs, &c.

URBAN.

DISTRICT	Population at all ages		Number of persons per acre	Zymotic Mortality										Per 1,000 of Population									
	Census 1931 of areas as constituted after changes in Boundary	Estimated 1940		Per 1,000 of Population					Typhoid and Paratyphoid Fevers	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Diarrhoea (under 2 years)	Tuberculosis of Respiratory System	Other Forms of Tuberculosis	Cancer	Bronchitis	Pneumonia	Other Respiratory Diseases	Nephritis	Premature Birth	Congenital Malformations, Birth Injuries, Infantile Diseases
				Live Birth-rate per 1,000 of Population	Still-births, Rate per 1,000 of Population	Crude death-rate per 1,000 of Population	Adjusted death-rate by comparability factor	Mortality in children under one year per 1,000 registered live births															
Aldridge ..	14,446	22,640	2.4	22.7	0.57	10.2	13.0	49	—	—	—	—	0.04	5.8	0.31	0.18	0.93	1.28	0.75	0.13	0.09	0.40	0.27
Amblecote ..	3,099	2,759	4.1	13.0	—	14.5	12.9	28	—	—	—	—	—	—	0.72	—	2.17	0.72	1.09	1.45	0.36	—	—
Biddulph ..	8,990	9,597	1.4	18.1	1.35	14.2	16.9	57	—	—	—	—	—	5.7	0.42	0.21	1.25	0.83	0.42	0.10	0.31	0.42	0.21
Bilston ..	31,321	30,520	16.3	19.0	0.72	13.0	16.6	66	—	—	—	—	0.07	6.9	0.56	—	1.61	1.28	0.88	0.20	0.26	0.29	0.29
Brierley Hill ..	44,671	44,340	7.5	17.0	0.52	12.0	13.6	42	—	—	—	—	0.16	2.6	0.59	0.18	1.47	1.49	0.72	0.14	0.36	0.18	0.27
Brownhills ..	18,368	19,480	3.1	21.4	0.72	11.3	13.4	41	—	0.26	—	0.26	0.05	—	0.56	—	1.18	0.82	0.72	—	0.67	0.31	0.10
Cannock ..	35,300	36,520	4.5	18.4	0.90	11.3	12.7	66	—	0.03	—	0.11	0.14	10.3	0.41	0.14	1.34	0.82	0.52	0.27	0.22	0.19	0.55
Coseley ..	25,137	29,960	9.1	20.2	0.93	11.9	15.0	56	—	0.03	—	0.13	0.10	9.9	0.50	0.17	1.37	1.20	0.57	0.30	0.13	0.30	0.23
Darlaston ..	20,053	20,300	13.3	18.5	0.44	12.3	15.4	48	—	—	—	0.15	—	10.7	0.74	0.15	1.72	1.18	1.08	0.15	0.20	0.15	0.20
Kidsgrove ..	14,940	13,930	3.4	17.8	1.15	12.1	13.7	64	—	—	—	—	—	4.0	0.43	—	1.36	0.72	0.50	0.14	0.22	0.14	0.65
Leek ..	19,442	19,520	4.5	12.2	0.77	12.4	12.2	70	—	—	—	—	0.10	8.2	0.26	0.05	1.74	0.67	0.31	0.10	0.26	0.26	0.36
Lichfield ..	8,574	9,474	2.6	17.2	0.42	13.9	12.6	67	—	0.11	—	—	—	18.2	0.42	0.11	1.06	0.74	0.32	0.53	0.53	0.32	0.21
Newcastle ..	54,739	63,890	7.2	17.9	0.74	12.3	14.4	60	0.02	0.02	0.02	0.02	0.03	1.7	0.38	0.06	1.50	0.95	0.75	0.16	0.53	0.28	0.42



Deaths occurring during the year 1940, classified according to Diseases and Localities, together with Births occurring during the year.

URBAN

District	Live Births		Deaths from all causes	Deaths under 1 year	Typhoid and Paratyphoid Fevers	Cerebro-Spinal Fever	Scarlet Fever	Whooping Cough	Diphtheria	Tuberculosis of Respiratory System	Other Forms of Tuberculosis	Syphilitic Diseases	Influenza	Measles	Acute Poliomyelitis and Polioencephalitis	Acute Infectious Rhinopharyngitis	Cancer						Diabetes	Intra-Cranial Vascular Lesions	Heart Disease	Other Diseases of Circulatory System	Bronchitis	Pneumonia	Other Respiratory Diseases	Ulcer of Stomach or Duodenum	Diarrhoea under 2 years	Appendicitis	Other Digestive Diseases	Nephritis	Puerperal and Post-abortive Sepsis	Other Maternal Causes	Premature Birth	Congenital Malformations, Birth Injuries, Infantile Diseases	Suicide	Road Traffic Accidents	Other Violent Causes	All other Causes		
	For Birth Rates	For Death Rates															Of Buccal Cavity and Oesophagus (M)	Of Stomach and Duodenum	Of Breast	Of all other Sites																								
Aldridge ..	515	515	13 232 25	—	3	—	—	—	1	7	4	—	3	—	—	1	5	1	1	14	3	14	50	2	29	17	3	3	3	3	1	7	2	—	2	9	6	2	9	723	—	—		
Amblecote ..	36	36	— 40 1	—	—	—	—	—	—	2	—	—	1	—	—	—	1	—	1	4	1	3	8	1	2	3	4	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	
Biddulph ..	174	176	13 136 10	—	2	—	—	—	—	4	2	1	4	—	1	—	1	1	1	9	2	18	45	—	8	4	1	1	1	1	1	—	—	3	—	4	2	1	—	—	—	—	—	—
Bilston ..	580	580	22 396 38	—	4	—	—	—	2	17	—	2	17	—	—	—	6	10	6	27	4	36	84	5	39	27	6	4	4	2	3	14	16	—	—	1	9	9	1	8	13	37	—	—
Brierley Hill ..	755	757	23 531 32	—	3	—	—	—	7	26	8	1	15	—	—	—	8	14	8	35	3	41	104	11	66	32	6	4	2	3	14	16	—	—	—	8	12	4	11	13	56	—	—	
Brownhills ..	417	418	14 220 17	—	2	—	—	5	1	11	—	1	5	5	—	—	2	4	1	16	2	22	48	2	16	14	—	3	—	1	3	13	—	—	6	2	—	2	8	25	—	—		
Cannock ..	673	682	33 413 45	—	2	—	—	4	5	15	5	1	11	1	—	—	11	12	4	22	4	13	91	37	30	19	10	2	7	1	7	8	—	—	2	7	20	3	—	15	44	—	—	
Coseley ..	606	606	28 356 34	—	—	—	—	4	3	15	5	—	4	1	—	—	7	9	3	22	6	28	54	1	36	17	9	5	6	1	10	4	—	—	1	9	7	3	1	23	62	—	—	
Darlaston ..	375	375	9 249 18	—	3	—	—	3	—	15	3	—	1	—	—	—	8	8	4	15	4	26	35	2	24	22	3	2	4	2	2	4	—	—	1	3	4	3	1	14	33	—	—	
Kidsgrove ..	248	251	16 168 16	—	1	—	—	—	—	6	—	—	10	—	—	—	3	4	1	11	3	16	38	2	10	7	2	—	1	1	3	3	—	—	2	9	1	3	5	25	—	—		
Leek ..	239	243	15 242 17	—	—	—	—	—	2	5	1	1	3	—	—	—	1	9	7	17	3	22	89	5	13	6	2	3	2	—	8	5	—	—	2	5	7	3	2	6	13	—	—	
Lichfield ..	163	165	4 132 11	—	1	—	—	—	—	4	1	—	5	1	—	—	2	1	—	7	1	20	31	3	7	3	5	—	3	—	4	5	—	—	1	3	2	1	—	—	5	16	—	—
Newcastle ..	1142	1153	47 787 69	1	3	1	1	2	24	4	1	23	1	—	—	—	12	14	15	55	5	73	193	11	61	48	10	4	2	5	17	34	—	—	3	18	27	6	8	31	74	—	—	







URBAN—continued

District	Live Births		Deaths from all causes	Deaths under 1 year	Typhoid and Paratyphoid Fevers	Cerebro-Spinal Fever	Scarlet Fever	Whooping Cough	Diphtheria	Tuberculosis of Respiratory System	Other Forms of Tuberculosis	Syphilitic Diseases	Influenza	Measles	Acute Poliomyelitis and Polioencephalitis	Acute Infectious Encephalitis	Cancer						Diabetes	Intra-Cranial Vascular Lesions	Heart Disease	Other Diseases of Circulatory System	Bronchitis	Pneumonia	Other Respiratory Diseases	Ulcer of Stomach or Duodenum	Diarrhoea under 2 years	Appendicitis	Other Digestive Diseases	Nephritis	Puerperal and Post-abortive Sepsis	Other Maternal Causes	Premature Birth	Congenital Malformations, Birth Injuries, Infantile Diseases	Suicide	Road Traffic Accidents	Other Violent Causes	All other Causes
	For Birth Rates	For Death Rates															Of Buccal Cavity and (Esophagus) (M) Uterus (F)	Of Stomach and Duodenum	Of Breast	Of all other Sites																						
Rowley Regis ..	877	878	30	533	53	—	2	1	5	16	2	3	8	—	—	2	6	10	8	35	4	40	119	6	73	33	6	5	9	2	18	12	1	1	15	16	3	3	3	24	45	
Rugeley ..	136	138	5	107	7	—	1	—	—	3	4	1	1	1	—	—	1	3	1	3	5	3	25	6	5	2	1	2	—	—	5	1	—	—	2	4	—	12	1	14		
Sedgley ..	299	300	12	236	9	—	2	—	—	12	1	1	5	—	—	7	3	3	—	19	2	26	45	3	29	13	3	2	—	1	5	3	—	1	2	4	2	3	7	35		
Stafford ..	540	544	13	394	30	1	4	2	2	14	5	1	8	—	—	4	11	4	28	4	36	103	14	26	23	6	3	1	—	8	9	—	—	12	6	1	9	9	40			
Stone ..	96	96	2	97	7	—	—	—	—	4	—	2	3	—	—	3	—	2	6	1	6	31	2	6	4	2	—	1	—	1	2	—	—	2	—	1	4	2	12			
Tamworth..	205	207	13	158	10	—	1	—	—	5	2	1	12	—	—	—	3	5	—	12	3	16	26	2	12	3	4	1	—	—	2	3	—	2	5	3	—	—	9	26		
Tettenhall..	112	114	6	87	5	—	—	—	1	4	1	—	—	—	—	—	3	3	1	8	1	10	25	—	8	3	—	—	3	—	6	2	—	—	—	—	2	2	2	2		
Tipton ..	771	771	23	435	39	—	1	3	12	33	3	1	11	—	1	1	6	11	2	28	8	34	74	4	35	30	5	3	3	3	11	13	2	1	13	9	2	4	26	41		
Uttoxeter ..	107	108	1	91	6	—	—	—	—	3	2	—	1	—	—	—	1	4	2	3	—	14	20	—	5	5	1	—	—	—	4	2	—	—	4	1	—	3	4	12		
Wednesbury	571	572	15	390	35	—	2	1	2	3	16	4	7	—	—	4	8	4	24	5	34	93	6	49	22	3	5	1	2	1	11	8	—	1	11	7	7	2	11	36		
Wednesfield	340	341	9	158	22	—	1	—	2	9	2	1	1	—	—	—	2	2	8	2	18	39	—	9	13	3	1	2	—	6	3	—	2	2	12	—	2	1	15			
Willenhall..	547	549	14	355	36	—	4	—	4	24	3	1	3	1	—	1	4	12	3	29	7	23	44	9	38	16	2	4	3	3	10	6	—	—	6	17	3	3	21	51		
Totals ..	10524	10575	380	6943	592	240	5	25	52	294	62	21	162	11	2	5	109	159	81	457	83	592	1514	134	636	386	97	57	58	26	173	170	4	21	157	186	51	93	265	753		



## RURAL

District.	Population at all ages		Mean Area per Person in acres	Live Birth-rate per 1,000 of Population	Still-births, Rate per 1,000 of Population	Crude death-rate per 1,000 of Population	Adjusted death-rate by comparability factor	Mortality in children under one year per 1,000 registered live births	Zymotic Mortality						Per 1,000 of Population														
	Census 1931 of areas as constituted after changes in Boundary	Estimated 1940							Per 1,000 of Population						Typhoid and Paratyphoid Fevers	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Diarrhoea (under 2 years)	Tuberculosis of Respiratory System	Other Forms of Tuberculosis	Cancer	Bronchitis	Pneumonia	Other Respiratory Diseases	Nephritis	Premature Birth	Congenital Malformations, Birth Injuries, Infantile Diseases
Cannock	..	20,792	21,580	2.6	17.6	0.79	12.0	12.8	68	—	—	—	—	—	—	—	0.23	5.2	0.19	0.09	1.11	0.70	1.02	0.19	0.28	0.51	0.23		
Cheadle	..	28,102	31,730	1.9	13.7	0.60	9.6	10.5	46	—	—	—	0.03	0.03	6.9	0.22	0.13	1.48	0.79	0.28	0.13	0.44	0.25	0.22	0.25	0.22			
Leek	..	14,435	16,040	4.5	17.6	0.75	11.0	11.0	49	—	—	—	—	—	3.5	0.25	0.06	1.62	0.75	0.25	0.25	0.44	0.25	0.25	0.25	0.25			
Lichfield	..	31,551	32,150	2.6	16.6	0.40	11.6	11.8	67	—	—	0.03	—	—	5.6	0.25	0.09	1.49	1.03	0.47	0.19	0.28	0.40	0.28	0.28	0.28			
Newcastle	..	16,872	16,780	2.4	14.4	0.83	13.1	12.4	66	—	—	—	0.06	—	4.1	0.36	0.06	1.97	1.13	0.30	0.30	0.48	0.18	0.36	0.36	0.36			
Seisdon	..	13,850	18,770	2.2	17.2	0.80	11.3	11.4	19	—	—	—	—	0.05	3.1	0.53	0.05	1.33	0.85	0.21	0.11	0.16	0.11	0.11	0.11	0.11			
Stafford	..	12,895	13,690	5.9	16.8	0.95	14.9	14.0	60	—	—	—	0.07	0.07	—	0.15	—	2.41	0.51	0.37	0.37	0.22	0.58	0.29	0.29	0.29			
Stone	..	11,945	13,580	4.5	14.6	0.52	11.8	11.3	35	—	—	—	—	—	—	0.37	—	1.25	0.96	0.74	0.29	0.15	0.15	0.15	0.15	0.15			
Tutbury	..	10,356	13,380	2.4	15.7	0.37	12.7	12.3	33	—	—	—	—	—	—	0.45	—	1.57	1.42	0.60	0.15	0.37	0.22	0.37	0.37	0.37			
Uttoxeter	..	8,906	9,960	5.7	14.0	0.30	12.1	11.9	71	—	—	—	—	0.10	—	0.20	—	1.61	0.20	0.60	0.20	0.20	0.60	0.10	0.10	0.10			
Totals and Averages..	..	169,704	187,660	3.1	15.8	0.63	11.7	11.8	52	—	—	0.01	—	0.02	0.05	3.7	0.29	0.06	1.55	0.86	0.47	0.20	0.31	0.32	0.24	0.24			



# RURAL

District	Live Births		Still Births	Deaths from all causes	Deaths under 1 year	Typhoid and Paratyphoid Fevers	Cerebro-Spinal Fever	Scarlet Fever	Whooping Cough	Diphtheria	Tuberculosis of Respiratory System	Other Forms of Tuberculosis	Syphilitic Diseases	Influenza	Measles	Acute Poliomyelitis and Polioencephalitis	Acute Infectious Encephalitis	Cancer					Diabetes	Intra-Cranial Vascular Lesions	Heart Disease	Other Diseases of Circulatory System	Bronchitis	Pneumonia	Other Respiratory Diseases	Ulcer of Stomach or Duodenum	Diarrhoea under 2 years	Appendicitis	Other Digestive Diseases	Nephritis	Puerperal and Post-abortive Sepsis	Other Maternal Causes	Premature Birth	Congenital Malformations, Birth Injuries, Infantile Diseases	Suicide	Road Traffic Accidents	Other Violent Causes	All other Causes
	For Birth Rates	For Death Rates																Of Buccal Cavity and (Esophagus)(M)	Of Stomach and Duodenum	Of Breast	Of all other Sites																					
Cannock ..	379	384	17	258	26	—	1	—	—	5	4	2	2	2	—	1	—	4	4	2	14	5	23	52	2	15	22	4	2	2	1	2	6	—	1	11	5	—	9	8	49	
Cheadle ..	434	437	19	305	20	—	1	—	1	1	7	4	1	6	—	—	—	5	12	3	27	2	25	71	5	25	9	4	3	3	—	15	14	—	—	1	8	7	1	4	5	35
Leek ..	283	285	12	177	14	—	—	—	—	—	4	1	—	4	—	—	—	5	7	2	12	4	12	49	—	12	4	4	2	1	1	4	7	—	—	4	4	3	5	8	18	
Lichfield ..	534	540	13	374	36	—	—	—	—	—	8	3	—	5	1	—	1	4	12	3	29	3	39	79	15	33	15	6	4	3	2	9	9	3	2	13	9	1	11	11	41	
Newcastle	241	241	*14	220	16	—	1	—	1	—	6	1	—	12	—	—	—	3	13	3	14	5	19	46	5	19	5	5	—	1	—	7	8	1	—	3	6	—	4	9	23	
Seisdon ..	322	323	15	213	6	—	1	—	—	1	10	1	—	1	—	—	—	4	3	4	14	4	25	55	4	16	4	2	—	1	—	6	3	—	3	2	2	1	3	4	39	
Stafford ..	230	232	13	204	14	—	—	—	1	1	2	—	—	5	—	—	1	4	7	4	18	2	24	45	4	7	5	5	1	—	—	7	3	—	—	8	4	1	7	4	34	
Stone ..	198	201	7	160	7	—	—	—	—	—	5	—	1	5	1	1	—	1	4	2	10	3	16	39	2	13	10	4	3	—	—	3	2	—	—	2	2	3	6	—	22	
Tutbury ..	210	212	5	170	7	—	1	—	—	—	6	—	—	1	—	—	—	1	5	4	11	—	20	42	3	19	8	2	3	—	—	4	5	—	—	3	5	1	—	2	24	
Uttoxeter	139	140	3	121	10	—	—	—	—	1	2	—	—	4	—	—	—	1	1	1	13	1	13	32	4	2	6	2	1	—	—	4	2	—	—	6	1	—	3	3	18	
Totals ..	2970	2995	*118	2202	156	—	5	—	3	9	54	12	2	45	2	2	2	32	68	28	162	29	216	510	44	161	88	38	19	11	4	61	59	4	7	60	45	11	52	54	303	

\*For Birth-Rate. Add One for Death-Rate Purposes.



Table showing the number of cases of certain Infectious Diseases notified in each sanitary area during the 52 weeks ended 28th December, 1940, and the Attack-Rates per 1,000 of the population.

66

URBAN

District	Estimated Population 1940 for calculating rates	Enteric Fever		Scarlet Fever		* Whooping Cough		Diphtheria		Erysipelas		* Measles		Pneumonia		Puerperal Pyrexia		Cerebro-spinal Fever Cases	Pollomyelitis Cases	Kneephalitis Cases	Leithargia Cases
		Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate				
Aldridge ..	22,640	2	0.09	45	1.99	137	6.05	18	0.80	11	0.49	89	3.93	40	1.77	3	0.13	8	—	—	—
Amblecote ..	2,759	1	0.36	8	2.90	6	2.17	6	2.17	—	—	1	0.36	5	1.81	2	0.72	10	—	—	—
Biddulph ..	9,597	1	0.10	30	3.13	31	3.23	9	0.94	8	0.83	101	10.52	20	2.08	—	—	2	2	—	—
Bilston ..	30,520	—	—	59	1.93	88	2.88	33	1.08	12	0.39	56	1.83	95	3.11	5	0.16	5	2	—	—
Brierley Hill ..	44,340	1	0.02	72	1.62	140	3.16	107	2.41	15	0.34	27	0.61	39	0.88	1	0.02	9	—	—	—
Brownhills ..	19,480	—	—	64	3.29	200	10.27	12	0.62	18	0.92	570	29.26	51	2.62	5	0.26	3	3	—	—
Cannock ..	36,520	1	0.03	37	1.01	157	4.30	57	1.56	11	0.30	574	15.72	18	0.49	12	0.33	7	2	1	—
Coseley ..	29,960	2	0.07	56	1.87	125	4.17	77	2.57	11	0.37	82	2.74	65	2.17	8	0.27	2	2	—	—
Darlaston ..	20,300	1	0.05	42	2.07	103	5.07	12	0.59	3	0.15	11	0.54	42	2.07	2	0.10	10	—	1	—
Kidsgrove ..	13,930	—	—	24	1.72	—	—	5	0.36	12	0.86	40	2.87	17	1.22	2	0.14	1	1	—	—
Leek ..	19,520	1	0.05	28	1.43	5	0.26	46	2.35	1	0.05	445	22.80	4	0.20	—	—	5	—	3	—
Lichfield ..	9,474	1	0.11	13	1.37	25	2.64	6	0.63	—	—	92	9.71	—	—	2	0.21	1	2	—	—
Newcastle ..	63,890	1	0.02	136	2.13	70	1.10	20	0.31	6	0.09	350	5.48	65	1.02	2	0.03	11	—	—	—

\* Became notifiable 9.2.1940.



**URBAN—continued**

District	Estimated Population 1940 for calculating rates	Enteric Fever		Scarlet Fever		*Whooping Cough		Diphtheria		Erysipelas		*Measles		Pneumonia		Puerperal Pyrexia		Cerebro-spinal Fever Cases	Pollomyelitis Cases	Encephalitis Cases
		Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate			
Rowley Regis ..	44,510	—	—	95	2.13	81	1.82	29	0.65	17	0.38	159	3.57	46	1.03	1	0.02	9	1	—
Rugeley ..	7,917	—	—	22	2.78	8	1.01	7	0.88	—	—	166	20.97	8	1.01	—	—	4	—	—
Sedgley ..	21,040	1	0.05	39	1.85	55	2.61	13	0.62	10	0.48	1	0.05	9	0.43	1	0.05	2	2	—
Stafford ..	35,320	2	0.06	86	2.43	107	3.03	34	0.96	6	0.17	507	14.35	19	0.54	5	0.14	16	2	—
Stone ..	6,511	—	—	1	0.15	40	6.14	5	0.77	1	0.15	17	2.61	8	1.23	—	—	1	—	—
Tamworth ..	12,070	—	—	31	2.57	4	0.33	7	0.58	4	0.33	38	3.15	31	2.57	1	0.08	4	2	—
Tettenhall ..	6,912	1	0.14	7	1.01	8	1.16	1	0.14	—	—	44	6.37	13	1.88	—	—	—	—	—
Tipton ..	35,050	—	—	93	2.65	24	0.68	97	2.77	15	0.43	66	1.88	98	2.80	10	0.29	5	2	—
Uttoxeter ..	7,060	1	0.14	10	1.42	17	2.41	3	0.42	2	0.28	34	4.82	4	0.57	4	0.57	—	—	—
Wednesbury ..	32,080	—	—	99	3.09	28	0.87	52	1.62	16	0.50	40	1.25	48	1.50	3	0.09	5	1	1
Wednesfield ..	14,830	—	—	16	1.08	57	3.84	16	1.08	5	0.34	12	0.81	8	0.54	2	0.13	—	—	—
Willenhall ..	28,610	—	—	34	1.19	90	3.15	12	0.42	3	0.10	25	0.87	44	1.54	3	0.10	13	1	—

\* Became notifiable 9.2.1940.



## RURAL

DISTRICT	Estimated Population 1940 for calculating rates	Enteric Fever		Scarlet Fever		*Whooping Cough		Diphtheria		Erysipelas		*Measles		Pneumonia		Puerperal Pyrexia		Cerebro-spinal Fever Cases	Polymyositis Cases	Enecephalitis Cases	Lethargia Cases
		Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate				
Cannock ..	21,580	1	0.05	35	1.62	69	3.20	62	2.87	9	0.42	133	6.16	35	1.62	4	0.19	9	1	—	—
Cheadle ..	31,730	1	0.03	82	2.58	89	2.80	9	0.28	27	0.85	53	1.67	80	2.52	5	0.16	3	—	—	—
Leek ..	16,040	—	—	12	0.75	1	0.06	11	0.69	6	0.37	33	2.06	7	0.44	1	0.06	—	—	—	—
Lichfield ..	32,150	7	0.22	153	4.76	44	1.37	32	1.00	31	0.96	536	16.67	70	2.18	1	0.03	3	4	—	—
Newcastle ..	16,780	—	—	24	1.43	18	1.07	2	0.12	9	0.54	75	4.47	26	1.55	—	—	3	—	—	—
Seisdon ..	18,770	1	0.05	40	2.13	41	2.18	28	1.49	6	0.32	73	3.89	25	1.33	1	0.05	1	3	—	—
Stafford ..	13,690	2	0.15	42	3.07	19	1.39	7	0.51	1	0.07	191	13.95	10	0.73	1	0.07	2	1	—	—
Stone ..	13,580	—	—	8	0.59	9	0.66	6	0.44	—	—	85	6.26	10	0.74	1	0.07	1	—	—	—
Tutbury ..	13,380	3	0.22	52	3.89	37	2.77	8	0.60	1	0.07	78	5.83	4	0.30	—	—	6	—	—	—
Uttoxeter ..	9,960	—	—	3	0.30	69	6.93	3	0.30	2	0.20	3	0.30	2	0.20	—	—	—	1	—	—

\* Became notifiable 9.2.1940.