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DIGEST  
OF THE  
ANNUAL REPORTS  
for the year 1919,  
OF THE  
MEDICAL OFFICERS OF HEALTH  
AND  
SANITARY INSPECTORS  
IN THE  
ADMINISTRATIVE  
COUNTY OF WORCESTER  
BY  
G. H. FOSBROKE, D.P.H., CAMB.  
County Medical Officer for Worcestershire,  
TOGETHER WITH  
Report of Chief Tuberculosis Officer.

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Ebenezer Baylis & Son, Printers, Worcester.

## INDEX.

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	PAGES
Amalgamation Scheme - - - - -	3-10
Anthrax - - - - -	41
Area and Population of County. Table I. - - - - -	12
Birth Rates- - - - -	13
Cancer. Table IX. - - - - -	41
Cerebro Spinal Meningitis - - - - -	37
Death Rates. Table II. - - - - -	14
Diphtheria - - - - -	17
Drainage and Sewage Disposal - - - - -	84
Enteric (Typhoid) Fever - - - - -	19
Food and Drugs - - - - -	95
Hop-pickers - - - - -	93
Housing of the Working Classes. Table XX. - - - - -	77
Infantile Mortality. Table XI. - - - - -	48
Isolation Hospitals - - - - -	84
Influenza - - - - -	39
Malaria - - - - -	39
Marriage Rate - - - - -	14
Maternity and Child Welfare. Table XII—XIX. - - - - -	50
Milk Supplies - - - - -	94
Measles - - - - -	37
Notifiable Diseases. Table III - - - - -	15
Ophthalmia Neonatorum - - - - -	36
Poliomyelitis, Acute - - - - -	36
Public Health Staff - - - - -	2-5
Puerperal Fever - - - - -	20
River Pollution - - - - -	88
Sanitary Inspectors, Annual Reports of - - - - -	97
Scarlet Fever - - - - -	17
Scavenging - - - - -	89
Slaughter-houses - - - - -	93
Smallpox - - - - -	17
Tuberculosis. Tables IV.—VIII. - - - - -	20
Venereal Diseases. Table X. - - - - -	44
Water Supply - - - - -	86

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No.	Residences of Medical Officers.	Districts of Medical Officers.	No. of Schools to be visited.	No. of School Clinics.	No. of Tuberculosis Dispensaries.	No. of Mid-wives in District.
1	At or near : Halesowen	Halesowen and Cradley	10	2	1	9
2	At or near : Stourbridge	Oldbury, Blackheath & The Lye	9	2	2	11
3	At or near : Stourbridge	Stourbridge and Kidderminster	19	1	2	16
4	At or near : Bewdley	Stourport, Bewdley and Tenbury	29	1	—	17
5	At or near : Droitwich	Droitwich — —	25	1	1	12
6	At or near : Worcester	Worcester — —	29	1	—	16
7	At or near : Malvern	Malvern — —	25	2	1	9
8	At or near : Pershore	Pershore and Upton	31	—	2	11
9	At or near : Evesham	Evesham, Blockley and Shipston	25	1	1	10
10	At or near : Redditch	Redditch — —	12	1	1	11
11	At or near : Bromsgrove	Bromsgrove — —	20	1	1	9
Totals			234	13	12	131

14. The Nursing Staff will consist of 18 Nurses (all of whom will be whole-time County Officials), and 50 Nurses employed by District Nursing Associations.

15. The whole of the County not included in the areas of the 50 part-time Nurses employed by Nursing Associations, has been divided into Districts; and one or more County Nurses will be stationed at or near the following places:—

Evesham Rural.  
Worcester (Dental Nurse).

Martley.  
 Upton-on-Severn.  
 Bromsgrove Urban.  
     "    Rural.  
 Kidderminster Rural.  
 Lye.  
 Redditch (2).  
 Oldbury.  
 Warley.  
 Halesowen (2).  
 Tenbury.  
 Pershore.  
 Stourbridge ; and  
 Cradley.

16. The District Association Nurses will act as School Nurses, and Infant Welfare, Tuberculosis and Mentally Defectives Visitors, in their individual Nursing areas.

17. The future duties of the County Medical and Nursing Staff will be those connected with—

- (1) School work.
- (2) Tuberculosis work.
- (3) Maternity and Child Welfare work ; and
- (4) The examinations necessitated by the Mental Deficiency Acts.

*Medical Inspection and Treatment of Children educated in Public Elementary Schools.*

18. Arrangements have now been made (a) for the Medical inspection of (1) all children admitted to Schools in the year ending March 31st, (2) all children between 8 and 9 years of age, (3) all children between 12 and 13 years of age, together with children over 13 years of age, who have not been examined on reaching the age of 12, and (4) "Specials," i.e. children with obvious defects ; and (b) for the *treatment* of Elementary School children who have—

1. Defective Teeth.
2. Nasal Obstruction, Enlarged Glands, and severe and chronic Ear diseases requiring operation.
3. Minor ailments such as Skin Diseases, slight Nasal Obstruction, External Eye Diseases, slight Ear discharges, Defective Hearing, Defective Speech, non-tubercular Lung affections, Malnutrition and General Weakness, Septic Wounds, Burns, &c.



4. Defective Vision.
5. Mental Defects.
6. Epilepsy.
7. Deafness.
8. Tuberculosis.
9. Malnutrition.
10. Deformities, and
11. Nervous Affections.

*Defective Teeth.*

19. The services of 5 registered local Dentists and 5 Nurses for the Dental treatment of children living within a radius of about two miles of established Dental Clinics have been retained ; and the localities in which they will work are : Malvern, Bromsgrove, Redditch, Stourbridge and (it is hoped) Kidderminster.

20. Treatment will be carried out by these local Dentists at Clinics provided at each of the above places.

21. In other parts of the County, where the services of local Dentists are not available, the Education Committee have appointed a whole-time Dentist and Nurse for the Dental inspection and treatment of the children, and these officials will travel from School to School in a motor car suitable for conveying themselves and the requisite Dental appliances. The whole-time Dentist will treat most of the children he attends at the Schools, as nearly all the Schools are situated in sparsely populated localities, where it is not practicable to provide Dental Clinics.

22. As arrangements cannot be made with local Dentists at Evesham and Worcester, a provisional arrangement has been entered into with the Worcester City Corporation for utilizing the services, on one day in each week, of the whole-time Dentist they are about to appoint, and this Dentist will deal with 9 Schools in and adjacent to Evesham, and 13 near to Worcester.

23. Treatment in the above instances will be carried out, either at the Worcester Clinic or Evesham Clinic.

24. It is not practicable, owing to the shortage of Dentists and for other reasons, to at once provide treatment of all the Elementary School children who require it ; and consequently for the present

the County Dental Scheme will be confined to children of 5 to 7 years of age, and those at other ages who, on Medical Inspection, are found to urgently require treatment.

25. Dental treatment will be conservative in character; and accordingly the bulk of it will be "filling" rather than extraction. Such conservative dentistry will, of course, include preventive measures.

*Nasal Obstruction, Enlarged Glands, and severe and chronic Ear Diseases requiring operation.*

*Nasal Obstruction and Enlarged Glands.*

26. Provision for the operative treatment of these conditions has been made with a number of local Hospital Committees.

*Ear Conditions.*

27. Arrangements have been made with the Committee of the Birmingham Ear and Throat Hospital to treat any cases the Education Committee send to their Institution.

*Minor Ailments, such as Skin Diseases, slight Nasal Obstruction, External Eye Disease, slight Ear Discharges, Defective Hearing, Defective Speech, slight Heart Defects, sub-acute Rheumatism, Non-tubercular Lung Affections, Malnutrition, and General Weakness, Septic Wounds, Burns, &c.*

28. Thirteen School Clinics for treating children having Minor Ailments have been arranged for, and these will be situated as under:—

- 1 in Halesowen.
- 1 „ Blackheath.
- 1 „ Cradley.
- 1 „ Stourbridge.
- 1 „ The Lye.
- 1 „ Bromsgrove.
- 1 „ Redditch.
- 1 „ Droitwich.
- 1 „ Evesham.
- 1 „ Worcester.
- 2 „ Malvern; and
- 1 „ Kidderminster.



29. Each of these will be conducted by one of the Assistant County Medical Officers, assisted by a Nurse.

30. Children living within reasonable distances of Tenbury, Broadway, Upton-on-Severn, Pershore, Shipston and Blockley, and a few outlying villages, are to be treated by local Doctors living in these localities, because it is estimated that the expense of doing so would be necessarily less than if an Assistant County Medical Officer did the work.

#### *X-Ray Treatment of Ringworm.*

31. Arrangements have been made with Dr. Hall Edwards (a noted Expert), of Birmingham, for the treatment of these cases; and the travelling expenses of those children whose parents require pecuniary assistance will be defrayed by the Education Committee.

#### *Defective Vision.*

32. Examination of children's eyes is essentially an expert's work: for the detection of most ophthalmic defects requires special experience, which exceptionally few School Medical Officers possess. Furthermore, it is not considered that the School Medical Officers would be able to undertake "refraction work," as these officials are not sufficiently trained in this difficult branch of ophthalmology. It has, therefore, been arranged that one whole-time County Ophthalmologist should visit all the Schools, and any of the School Clinics, in order to examine children's eyes, and especially those to whom the School Medical Officers call special attention.

33. Much of the "refraction work" will be carried out at the Schools, but in several instances it may be more convenient to undertake this at the School Clinics.

34. On the completion of "refraction" examinations, the children will be given prescriptions to enable the parents to buy suitable spectacles; and should the parents be too poor to do so, the Education Committee will give pecuniary assistance, either by way of loan, or in part payment, or in the cases of very poor parents, gratuitously.

35. When spectacles are used, they will of course require to be re-adjusted from time to time, and as this is often a complicated matter, it will only be done by the County Ophthalmologist.

36. The Ophthalmologist is to be provided with a portable set of appliances, to include ophthalmic lamp, test types, set of trial lenses, set of trial spectacle frames, drugs, &c.

37. Nearly all the children having ophthalmic defects could be treated at the School Clinics above referred to, but as efficient treatment of some visual defects necessitates Hospital treatment, terms have been arranged with the Committees of the Worcester, Birmingham and Dudley Eye Hospitals to provide it.

#### *Mental Defects.*

38. The County Council adopted the Elementary Education (Defective and Epileptic Children) Act 1899 in March 1908, and since then the Education Committee have been liable for the care of educable children up to 16 years of age, and consequently have sent many children to Sandlebridge (Cheshire), Besford Court (near Pershore), and Stourbridge (Wordsley) Institution for Defectives.

39. The County Council at their Meeting on the 8th December 1919, passed the following Resolution:—

“That steps be at once taken to make provision in the County  
“for an Institution to which defectives can be sent.”

and Conferences are now being held with Representatives of the Herefordshire, Shropshire and Worcester Education Committees as to the desirability of establishing one or more Joint Institutions for Mentally Defectives certifiable under the 1899 and 1913 Acts.

#### *Epileptic, Deaf and Blind Children.*

40. Arrangements have been made for the Institutional treatment of children so affected.

#### *“After-care” of Ailing Children.*

41. The “after-care” of such children will be an important duty of the Assistant County Medical Officers and the Nurses employed by the County Council.

### **Vital Statistics.**

42. On March 1st 1920, the Registrar-General issued a Memorandum directing the attention of Medical Officers of Health, and others, using the returns, to some points upon which experience has shown that misunderstandings tend to arise.



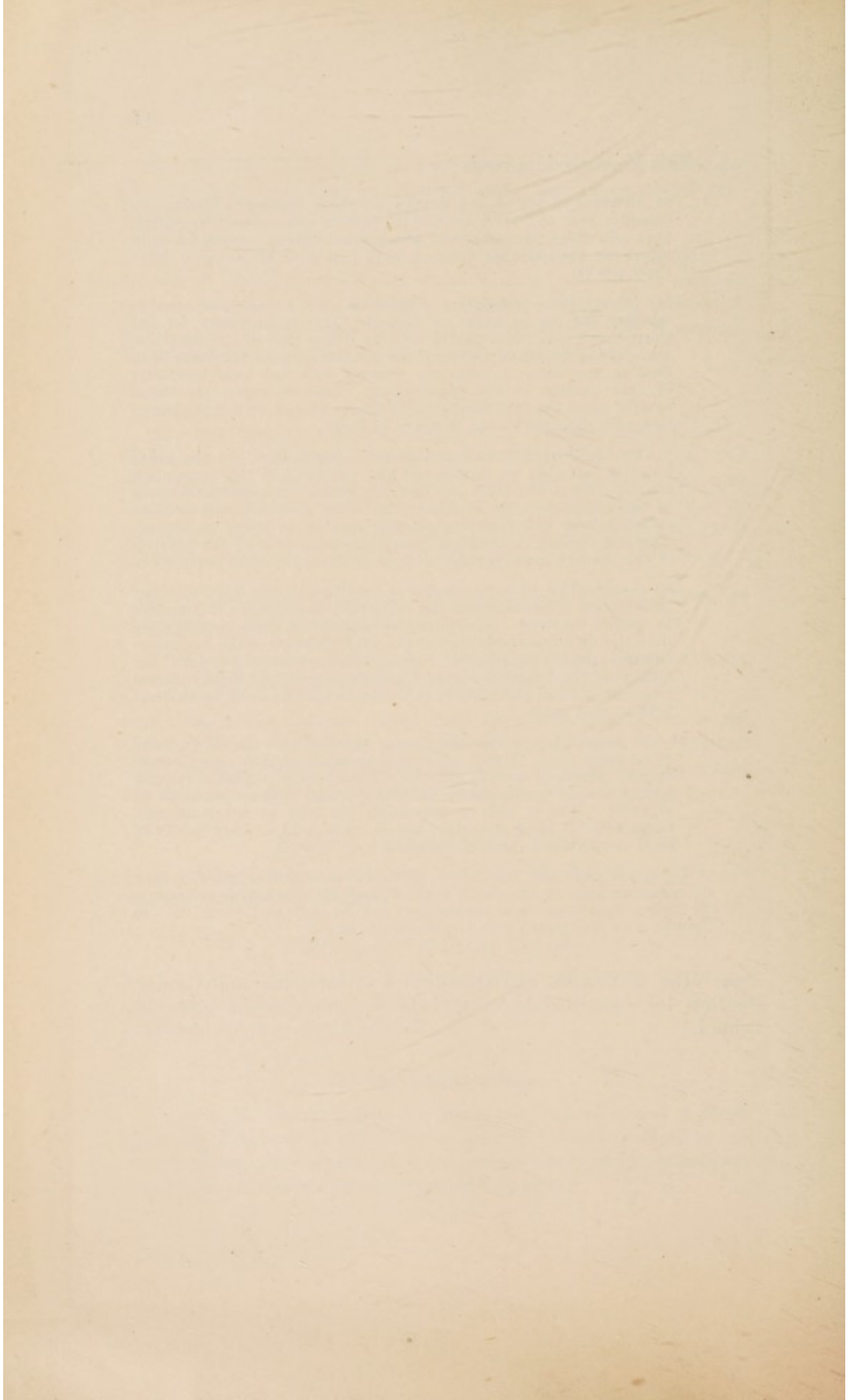
## 43. This Memorandum reads :—

- “ 1. The numbers of births and deaths are those registered during the  
 “ calendar year and are corrected for inward and outward transfers,  
 “ they will differ therefore from uncorrected figures compiled locally  
 “ either for the calendar year or for a period of fifty-two or fifty-  
 “ three weeks.
- “ 2. The ‘ death-rate population ’ excludes all non-civilian males,  
 “ whether serving at home or abroad. This is necessary for the  
 “ purposes of local death-rates because it has proved impossible to  
 “ transfer the deaths of non-civilians to their areas of residence or to  
 “ deal in any other satisfactory manner with the local mortality  
 “ of this element in the population. These estimates are based  
 “ mainly upon the rationing returns kindly placed at the Registrar-  
 “ General’s disposal by the Ministry of Food.
- “ The ‘ birth-rate (and marriage-rate) population ’ on the other  
 “ hand is intended to include all the elements of the population  
 “ contributing to the birth and marriage rates. It consists therefore  
 “ of the death-rate or civilian population *plus* all non-civilians  
 “ enlisted from this country, whether serving at home or abroad.  
 “ This non-civilian element has been distributed over all the districts  
 “ in the country in proportion to their estimated civilian population.
- “ 3. The classification of some deaths is modified in the light of fuller  
 “ information obtained from the certifying practitioner in response  
 “ to special inquiries. The principal subjects of these inquiries are  
 “ indicated in a table published in the yearly reports of the Registrar-  
 “ General; and this possible source of discrepancy between the  
 “ returns of the Registrar-General and those compiled locally should  
 “ be borne in mind particularly in regard to the causes of death dealt  
 “ with in that table.
- “ 4. If it is desired to criticize the figures supplied this should be done  
 “ at an early date. Every effort will be made in that case to clear  
 “ up any points of serious difference from locally compiled returns  
 “ and to amend the Registrar-General’s figures if these prove to be  
 “ in error. But it will be impossible for him to entertain any  
 “ suggestion for their alteration unless made within a few weeks of  
 “ their circulation to local authorities.

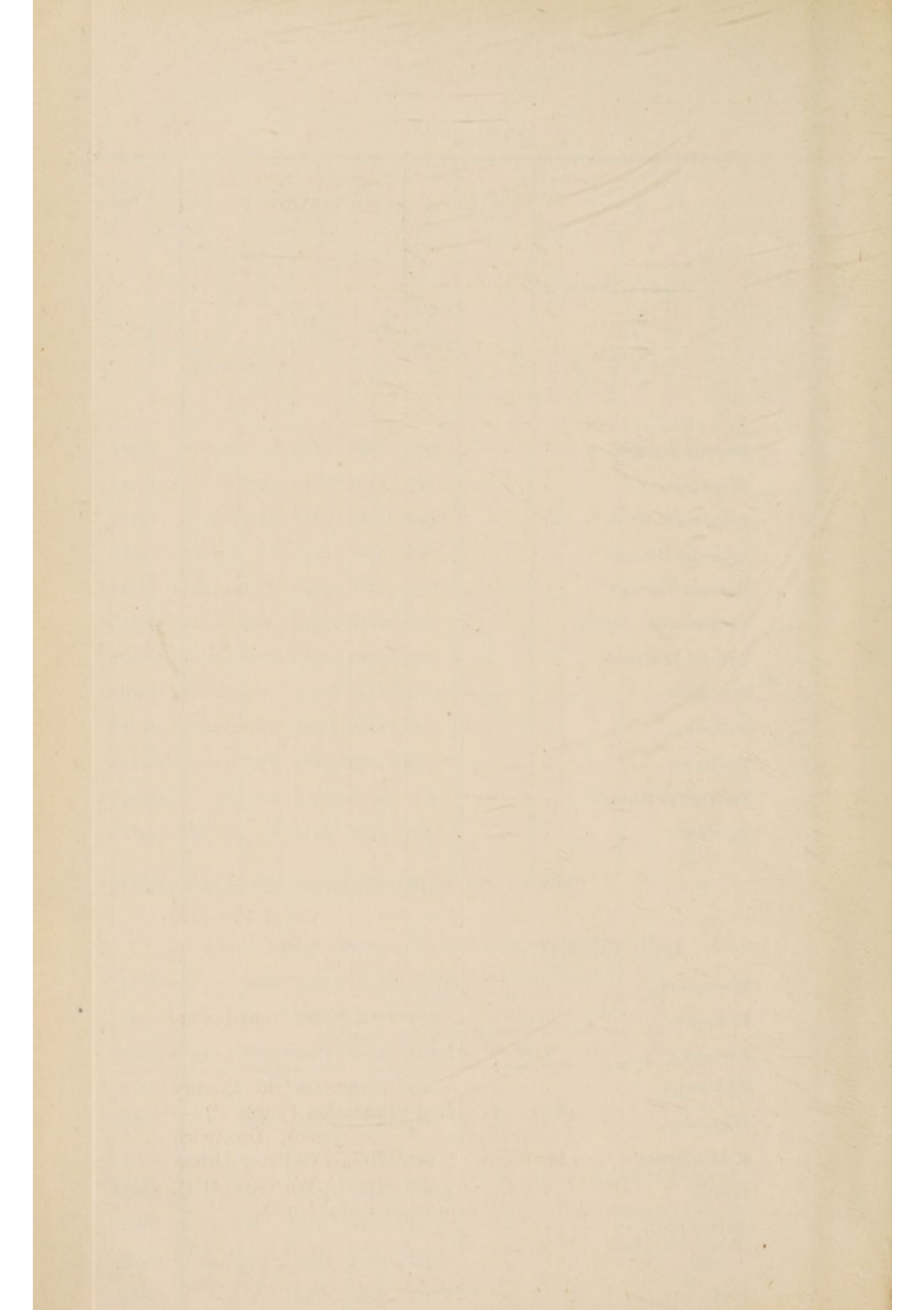
“ NOTE.—Workhouses and other poor law institutions are not now  
 “ described as such in the death register, but by alternative addresses.  
 “ In future, deaths in these institutions will be indicated by a ‘ W ’ in  
 “ Column 1 of the inward transferable death slips.”

44. The Birth-rates and Death-rates of the individual County Districts for 1919 together with other information are given in Table I.











45. Table II. shows the County Death-rates per 1,000 of the population from various diseases during 1919 and the corresponding rates for England and Wales.

TABLE II.

	Population.	Birth-rate	Death-rate	Infant Mortality (c).	Measles Death-rate.	Scarlet Fever Death-rate.	Diphtheria Death-rate.	Typhoid Fever Death-rate.	Diarrhoea & Enteritis Death-rate (d).	Phthisis Death-rate.	Cancer Death-rate.
County. 1919.	(a) 294,196 (b) 282,419	16·9	13·3	73	0·04	0·02	0·09	0·01	4·6	0·9	1·1
England and Wales in 1919	(a) 37,494,000 (b) 35,993,000	18·5	13·8	89	0·10	0·03	0·13	0·01	9·6	not given	not given

(a) For Birth-rate.

(b) For Death-rate. (Civilians only).

(c) Per 1,000 births.

(d) Under two years of age ; rate per 1,000 Births.

Rates other than (c) and (d) are calculated per 1,000 of population.

### County Birth-Rate for 1919.

46. The County Birth-rate for 1919 was 16·9, as compared with 17·0 in 1918, and 16·4 in 1917.

47. The corresponding rate for England and Wales for 1919 was 18·5. This last-named rate is higher than the corresponding rate for 1919 (17·7), which was the lowest on record.

48. Of the total Births (4,958) 4,702 (94·8 per cent.) were legitimate and 256 (4·2 per cent.) were illegitimate.

49. The Birth-rates of the following Districts in the County exceeded 17·0 per 1,000 of the estimated population (Table I.) :— Bewdley Borough (17·4), Bromsgrove Urban (20·0), Droitwich Borough (17·3), Lye and Wollescote Urban (19·4), Oldbury Urban (20·7), Halesowen Rural (22·5), Newent Rural (Worcs.) (21·1), Shipston-on-Stour Rural (17·3), Winchcombe Rural (19·8).

50. Dr. Stevenson commenting upon the "deplorably low" Birth-rate of Redditch for 1919 (16.3), says:—

"This is again deplorably low, and it ought not to be so in Redditch, where work and wages are good.

"Undoubtedly preventive measures against large families are much in use, and now that the stress of the past few years is over, it is to be hoped that there will be a marked increase in the number of births.

51. Dr. Sinton says the Birth-rate of the Borough of Stourbridge for 1919 (16.9) was the lowest yet recorded.

52. Of the Stourport Urban Birth-rate for 1919 (15.9), Dr. Robinson reports that—

"Though higher than last year (13.4), is far below the average of pre-war years, which was over 20. This low rate is doubtless due to post-war conditions, including the difficulty of getting houses, and the consequent postponement of marriages."

53. Dr. Coaker mentions that the rate for the Bromsgrove Rural District last year (13.7) is also the lowest ever recorded.

### **Marriage-rate.**

54. The Marriage-rate of England and Wales for 1919 was 19.7 per 1,000 of the population, compared with 15.3 in 1918, and 13.8 in 1917. The Registrar-General's Annual Report for 1918—just issued—shows that the Marriage-rate for 1918 (15.3) was 1.5 below the low rate in the preceding year (13.81) and 0.1 below the average in the 10 years 1905-14, which were unaffected by War conditions. The 1919 rate (19.7) was the highest on record. The Registrar in his Report says the prospects of marriage have probably been increased for women leaving quiet country homes for larger centres of population. This process would come into play more in the rural Counties, and therefore in the south than in the more industrial parts of the Country, and so always assuming the marriage to take place generally at the brides homes, the marriages of the south would naturally increase.

### **County Death-rate for 1919.**

55. The County Death-rate for 1919 was 13.3 per 1,000 of the population, as compared with 17.7 in 1918, and an average County Rate of 13.8 for the 10 years 1909-1918.



56. The Death-rate for England and Wales last year was 13·8, and indicates a fall of about 3·8 per 1,000, notwithstanding the continuance of the influenza epidemic in the early part of the year.

57. Table I. shows that the District Death-rates generally speaking were low. Dr. Buttery commenting upon the Death-rate of the manufacturing district of Oldbury for 1919 (13·2), says it "is the lowest ever recorded in the Oldbury District, the nearest to this Death-rate being reported in 1914 and 1916, when it was 13·4 per 1,000. If we take into account the very heavy mortality we experienced in the early months of the year due to the very severe epidemic of influenza which was then so rife, we may congratulate ourselves on the low mortality rate now reported."

*Redditch Urban.*

58. Dr. Stevenson says :—

"It is a satisfactory rate, and has resumed our usual average, after the extremely high one of 1918, which was caused by the epidemic of Influenza."

*Shipston-on-Stour Rural District.*

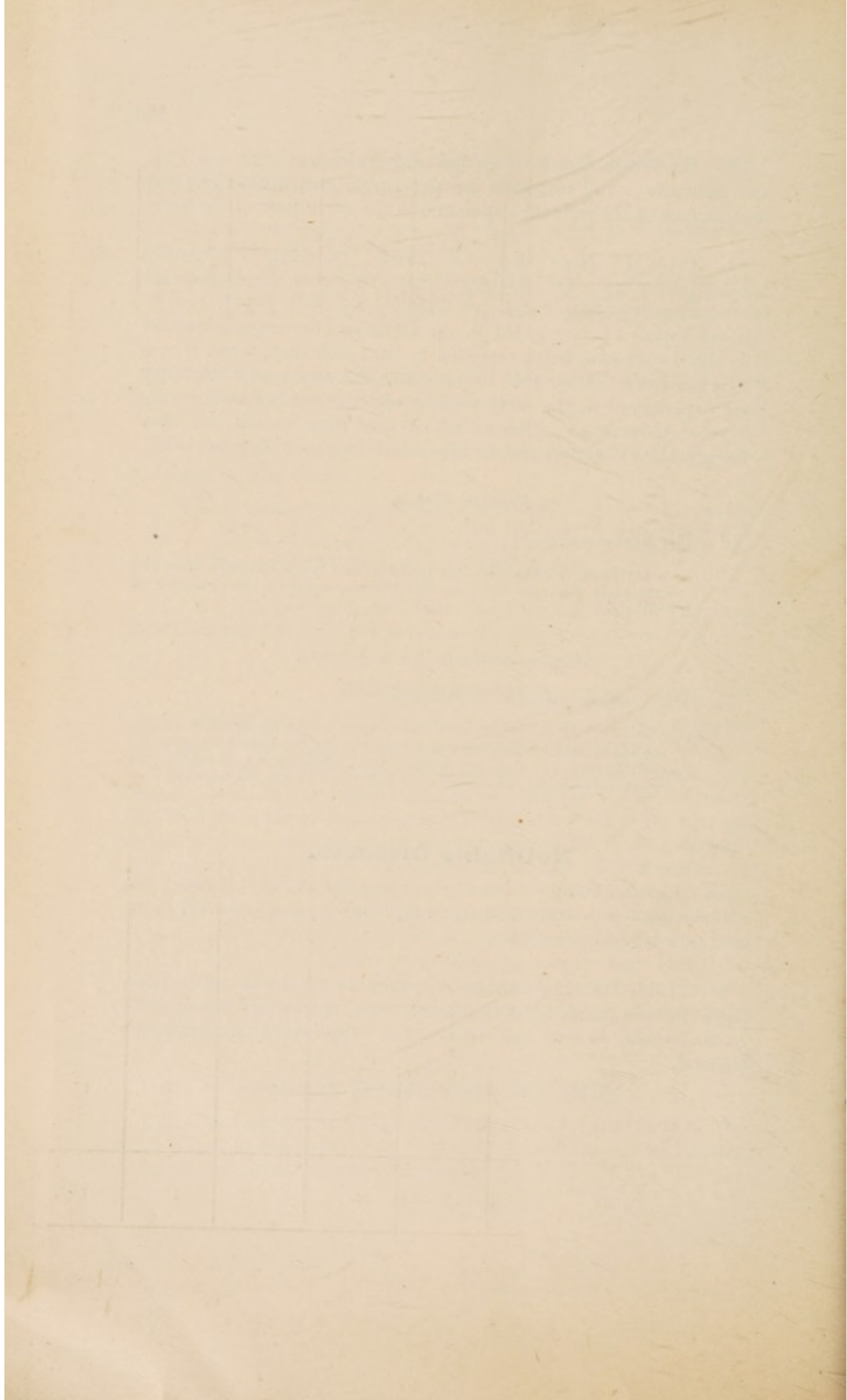
59. Dr. Findlay explains that the—

"Large increase of the death-rate (20·2) appears to be entirely due to the epidemic of Influenza which spread over the District during the early spring. If the (18) deaths from Influenza are deducted, the death-rate would have been 15·6 per 1,000 of the population."

**Notifiable Diseases.**

60. I gave a complete list of these diseases in my "Digest" for 1918, as well as a statement of their "etiology," so nothing more need now be said as to this.

61. Table III. shows the total number of cases and deaths from these diseases in each District during 1919, the former one *as given in the Annual Reports* and the latter as supplied by the Registrar-General.









### Smallpox.

62. No case occurred in the County last year.

63. A "doubtful case" was under observation in the Bromsgrove Smallpox Hospital, the patient, a boy aged 9, having been removed there in January 1919. It quickly became manifest that the eruption was not Smallpox but a form of Impetigo, so he was sent home as soon as convalescent. Dr. Kidd again points out (what he has mentioned in several of his previous Reports) that "the real remedy for (Smallpox) is early vaccination before an outbreak occurs, and (he) can only urge that this should be adopted."

### Scarlet Fever.

64. The total number of cases notified was 339 (99 in the Urban Districts and 240 in Rural), of whom 6 died. Table III. shows in which Districts these cases occurred: and that the disease only assumed extended proportions in the Pershore Rural District, where 130 cases were notified and 4 deaths took place. The Pershore cases occurred in 17 different localities; and the principal outbreak was in the Parish of Pershore, where no less than 75 of the 130 cases took place. There was no doubt that personal infection was the channel of distribution of the disease: in spite of the fact that 121 of the patients were promptly removed to the Isolation Hospital. The outbreaks in the Pershore District caused a great strain upon this Hospital. One patient deliberately ran away from this Institution while he was in an infectious condition, and consequently he was brought before the Pershore Court of Petty Sessions, and fined 10/- for assaulting the Nurse, and 10/- for exposing himself in a "public place" while in an infectious condition.

### Diphtheria.

65. The total number of cases reported in the County during 1919 was 315, viz., 186 in the Urban Districts, 129 in the Rural, 26 of whom died. This was much as it was in 1918, when there were 303 cases in the County.

*Kidderminster Borough* (25 cases, 4 deaths).

66. Dr. Hodgson Moore writes:—

"Many of the cases were mild. The Sanitary surroundings of the houses were good, with the exception of two dwellings. . . . Cases which could not be properly isolated at home were admitted to the Borough Hospital. Your Committee supply anti-toxin free of charge to Medical men for the treatment of the poorer inhabitants of the Borough."



*Oldbury Urban District (41 cases, 3 deaths).*

67. Dr. Buttery makes no comment upon these, beyond naming the "Wards" in which they occurred.

*Stourbridge Borough (68 cases, 2 deaths).*

68. Dr. Sinton mentions that 55 of the cases occurred among the scholars of Oldswinford Hospital and that he inspected this Hospital in company with the County Medical Officer, the Medical Officer of the Hospital and Sanitary Inspector, when it was found that the drainage as well as the lavatory accommodation were unsatisfactory.

69. The Sanitary Inspector subsequently made a report to the "Feoffees." The estimate of the alterations he proposed was so high, that he was requested to prepare a specification of essential repairs, and a tender was accepted. The Inspector states in his Annual Report that—

" At the end of the year most of the work had been done: this included  
 " reconstruction of the drainage in several places, complete ventil-  
 " ation of the drains, alterations to the bath and lavatory basins,  
 " improved flushing of the trough W.C.'s, improvements to the  
 " urinals, trapping open drains, various plumbing improvements and  
 " other matters."

70. This School had to be closed for three months, but since its re-opening, no other cases have been reported among the scholars during 1919.

*Feckenham Rural District (21 cases, 1 death).*

71. These cases occurred in 4 different localities: and 19 of them were treated at the Isolation Hospital. None of them require special comment, as the disease was propagated by personal infection.

*Upton-on-Severn Rural District (35 cases, 2 deaths).*

72. These cases occurred in 10 different parts of the District, and 33 of them were sent to the Isolation Hospital. Dr. Cowley says there was an increase in the notifications, but very many cases were subjected on suspicion to bacteriological examination, which in former days would have escaped attention; this often led to the detection of the bacillus.

**Typhoid Fever** (16 cases, 3 deaths).

73. The continued immunity of the County from outbreaks of Typhoid Fever is most satisfactory. Only 16 cases were notified last year, as compared with 22 in 1918, and 30 in 1917. Table III. shows the Districts in which the 16 cases occurred last year.

*Bromsgrove Urban District* (2 cases, no death).

74. Dr. Kidd says: "No source of infection could be traced "in either of these cases."

*Bromsgrove North Urban District* (1 case, no death).

75. This case was an imported one.

*Kidderminster Borough* (2 cases, 1 death).

76. Dr. Hodgson Moore says these cases occurred in one house: "no source of infection could be traced."

*Lye and Wollescote Urban District* (1 case, 1 death).

77. Dr. Darby says this "person had been visiting the hospital district and probably contracted the disease whilst there."

*Redditch Urban District* (3 cases, no death).

78. Two of the three cases occurred in one house, the second case receiving infection from the first.

*Feckenham Rural District* (1 case, no death).

79. This was 1 of 2 cases (the second was in Leamington) which was contracted in this District, and at a house where the water supply was polluted, and the drainage defective.

*Tewkesbury Rural District* (1 case, 1 death).

80. Dr. Elder writes:—

"A very careful examination was made of the sanitation of the cottage "in which the patient died, but nothing defective was discovered."

*Upton-on-Severn Rural District* (4 cases).

81. Dr. Cowley says:—

"One case only outside the Powick Asylum was notified, and removed "to Malvern Isolation Hospital. The child managed to get into the "sewage tank at the Disposal Works."



**Puerperal Fever** (15 cases, 11 deaths).

82. Four of these 15 cases were attended by Midwives, all of whom were "suspended" pending enquiries by one of the County Council Medical Officers; and the conclusions arrived at in each instance were, that no Midwife was blameworthy. Consequently, after the respective Midwives had carried out disinfection as required by the Rules of the Central Midwives Board, they were allowed to resume practice.

83. The other 11 cases were attended by Doctors, and the Medical Officers make no reference to their causation.

**Tuberculosis.**

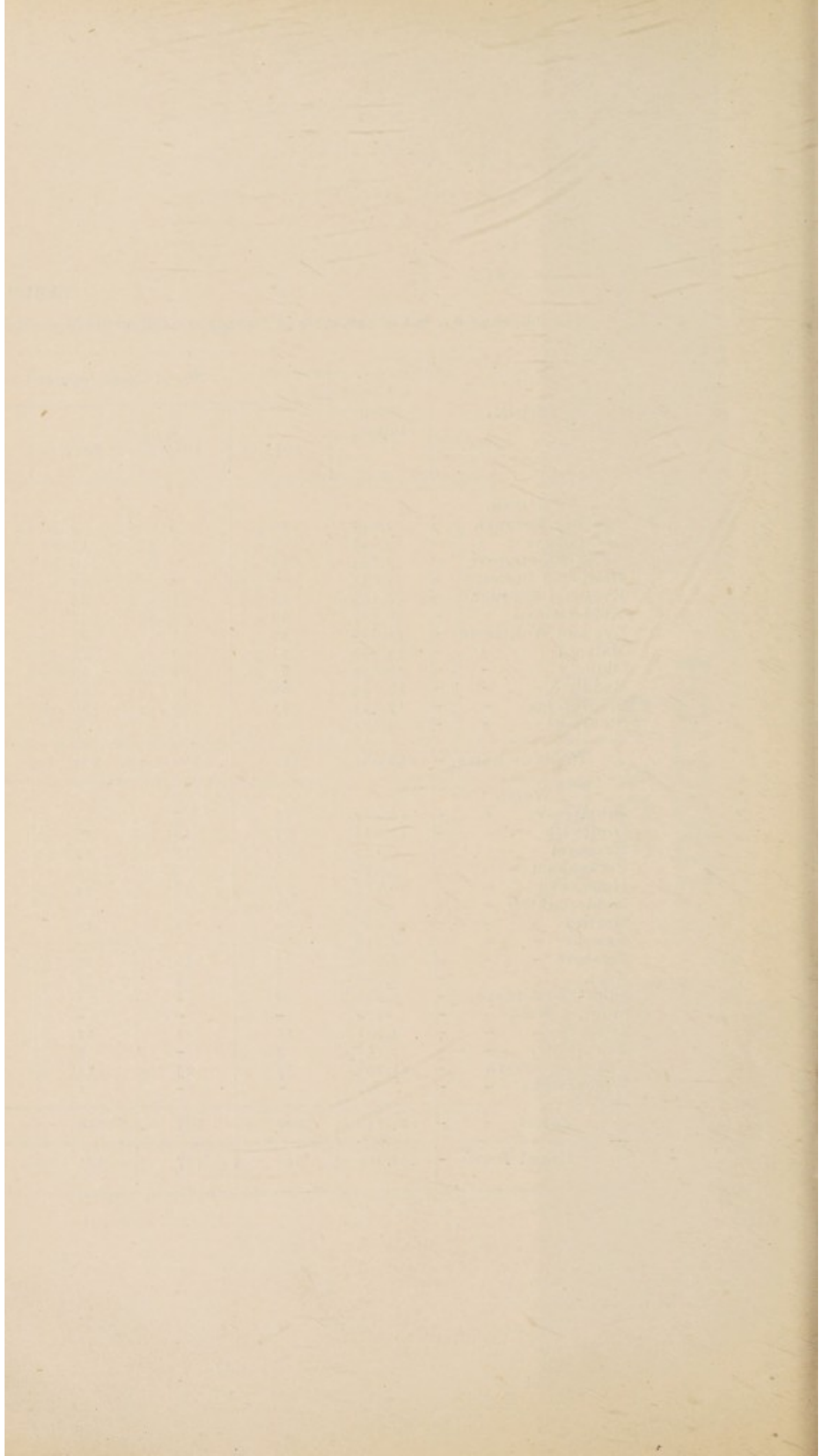
84. Table IV. gives the number of cases notified (according to the *Annual Reports*) during 1915-1919, and the death-rates of the disease in each Sanitary District during 1919, and the corresponding averages for the years 1910-14, and 1915-19.

TABLE IV.

The following is a list of the cases of Pulmonary Tuberculosis notified during 1915-19, and the death-rates :—

District.	Popu- lation.	No. of Cases reported 1915-1919.					No. of Deaths 1919.	Death-rates per 1,000 of Population for		
		1915.	1916.	1917.	1918.	1919.		1919.	Average Years 1915-1919.	Average Years 1910-1914.
<i>Urban.</i>										
Bewdley Borough	2,648	10	5	2	4	1	3	1.1	1.1	.8
Bromsgrove	9,038	7	7	13	11	15	9	1.0	.8	.7
North Bromsgrove	7,694	13	—	9	12	10	8	1.0	.7	.7
Droitwich Borough	3,834	8	—	14	9	4	4	1.0	.7	.5
Evesham Borough	8,499	23	21	25	21	24	9	1.1	1.4	.9
Kidderminster	26,564	39	25	31	25	51	26	1.0	1.1	.9
Lye and Wollescote	11,999	37	31	27	20	31	9	.8	.9	.7
Malvern	13,994	33	27	21	16	37	15	1.1	1.0	.6
Oldbury	36,242	63	62	45	57	57	25	.7	.8	.7
Redditch	16,044	25	40	44	31	29	11	.7	1.0	.8
Stourbridge	17,323	43	29	39	55	34	15	.9	1.0	.9
Stourport	4,202	9	13	3	5	8	7	1.7	1.5	.8
Totals or Rates	158,081	310	260	273	266	301	141	.9	1.0	.8
<i>Rural.</i>										
Bromsgrove	16,427	13	7	13	12	9	7	.4	.6	.7
Droitwich	12,024	23	18	17	23	14	9	.7	.8	.7
Evesham	9,159	17	15	21	17	24	11	1.2	.7	.5
Feckenham	5,059	8	9	4	16	7	3	.6	.9	1.1
Halesowen	26,187	27	38	34	47	34	32	1.2	.9	.6
Kidderminster	7,043	13	9	4	16	8	4	.6	.8	.6
Martley	11,156	19	22	10	28	—	9	.8	.9	.7
Newent	1,048	—	—	—	—	1	2	1.9	1.3	.8
Pershore	11,908	23	16	16	26	15	10	.8	.9	.7
Rock	2,020	1	3	2	—	3	—	—	.9	.5
Shipston-on-Stour	3,891	6	1	1	1	4	—	—	.5	.8
Stow-on-Wold	270	—	—	—	—	—	—	—	.7	—
Tenbury	4,601	11	4	11	13	7	1	.2	.8	.6
Tewkesbury	2,151	2	—	1	5	6	3	1.4	.8	.6
Upton-on-Severn	11,297	37	25	13	29	32	9	.8	1.1	.7
Winchcombe	97	—	—	1	—	—	—	—	—	—
Totals	124,338	200	167	148	233	164	100	.8	.8	.6
Grand Totals	282,419	510	427	421	499	465	241	0.85	0.93	0.7





85. This Table shows there were fewer notifications in 1919, than in 1918 or 1915, but slightly more than in 1916 and 1917. It should be mentioned however that the notifications in the Upton-on-Severn District do not include all there were: as the Medical Officer never includes those at Powick Asylum in his return, as he does not consider that these are among persons who strictly belong to that District.

86. The County Death-rate last year amounted to 0·85 per 1,000 of the population, as compared with 1·15 in 1918, 1·02 in 1917, 0·88 in 1916, 0·74 in 1915, and 0·72 in 1914. Last year's rate was the lowest since 1915.

87. The average District Tuberculosis Death-rate for the years 1915-1919 was highest at Stourport (1·5), and next comes Evesham Borough (1·4) for the same period. Until last year, Evesham Borough was in the unenviable position of heading this list, and consequently I caused special enquiry to be made by the Tuberculosis Officers, and shall subsequently refer to their conclusions.

88. Of Tuberculosis in Stourport Urban District, Dr. Robinson says:—

“ This disease is far too prevalent in the District, and though only 8 cases  
 “ were notified, I feel sure that many persons are infected who fail  
 “ to consult a Doctor till the disease is too far advanced for successful  
 “ treatment. Of the 8 cases notified 2 were dead before the end  
 “ of the year, two were not improving, and one had left the District ;  
 “ and in two only, the disease seems to be arrested. Possibly the  
 “ food difficulties, which are as great (if not greater) as they were  
 “ during the war, may have had some influence in increasing suscept-  
 “ ibility, but I feel sure that by building really good houses for the  
 “ working classes, and closing or improving existing property of a  
 “ poor standard, more can be done to eliminate this dreadful disease  
 “ than by any other method.”

#### *Evesham Borough.*

89. As I felt that the high Tuberculosis case and death rates in the Borough of Evesham should be thoroughly investigated, I prepared a street list of the cases notified, and deaths which occurred in Evesham during the years 1917-18 and 1919; and with the aid of the County Chief Tuberculosis Officer (Dr. Gordon Smith) drafted a Scheme of enquiry, which I instructed one of the Assistant County Medical Officers (Dr. Morgan) to carry out. Dr. Morgan visited 77 houses where Pulmonary Tuberculosis occurred, and has submitted a detailed Report of his investigations.







98. 815 cases were notified in 1918, and 671 in 1917. The increase of 144 in 1918 as compared with 1917 was due to the large number notified in the Powick Asylum; and the 243 fewer cases notified in 1919 than in 1918 were entirely due to the striking decrease of cases in that Asylum last year.

*Number of Cases under Treatment.*

99. As each case is notified I enquire from the Medical Attendant if there is any objection to the patient being examined by one of the County Tuberculosis Officers: and if no objection is raised, he is examined, and the Chief Tuberculosis Officer decides the form of treatment required.

100. The total number of cases under observation by the Medical Officers and Visiting Nurses at the end of 1919 was 1,613.

101. The following statement shows the number of patients treated in the County Sanatoria last year.

*Sanatoria. Cases Treated in 1919.*

102. 387 patients received Sanatorium treatment last year, viz. :—

At Knightwick	249	(153 insured,	96 non-insured).
„ Welland	31	( 16 „	15 „ )
„ Hayley Green	53	( 36 „	17 „ )
„ Hill Top	51	( 38 „	13 „ )
In temporary Beds	3		
	<hr/>		
	387		
	<hr/>		

*Dispensary Cases treated during 1919.*

103. 761 cases were under treatment at the various Dispensaries. Of these, 336 were insured and 425 non-insured.

*Domiciliary Cases treated 1919.*

104. 228 insured persons were newly granted Domiciliary treatment during the year 1919.

105. On the 30th October 1919, Dr. Gordon Smith, the Chief Tuberculosis Officer, presented to the County Council an interesting Report upon the methods adopted in Worcestershire for combating Tuberculosis, from which I give the following extracts, as I think some account of his valuable work ought to be included in this Annual Summary :—

REPORT OF THE CHIEF TUBERCULOSIS OFFICER FOR THE HALF-YEAR ENDING  
JUNE 30TH 1919.

1. At the request of the County Insurance Committee and the County Tuberculosis Committee, who deal with Tuberculosis, I beg to present a Report on the treatment of Tuberculosis in the County of Worcester.

2. As this is the first separate Report on the working of the Tuberculosis Scheme which has been presented, it would appear desirable to state in some detail, particulars of each branch of the County Scheme.

\* \* \* \* \*

*New Cases.*

4. New cases of Tuberculosis are brought to our notice in the following manner. Since 1913 it has been the duty of a Medical Practitioner within 48 hours of his becoming aware that a case is tuberculous to notify the local Medical Officer of Health of this fact and to set forth the name of the patient, address, age, and localization of the disease. The local Medical Officer enters these notifications on a Return which is posted to the County Medical Officer each week. On receipt of this weekly return the County Medical Officer forthwith asks the notifying Practitioner whether he, or the patient, has any objection to the Tuberculosis Officer examining the patient. On receiving an affirmative reply, the case is handed by the County Medical Officer to the Tuberculosis Officer for examination, and the patient is invited to apply for treatment under the Scheme. The majority of the replies from Doctors are to the effect that they have no objection to the examination, but there are of course a few cases where owing to various circumstances the visiting is not necessary.

5. The patient is either asked to attend at the nearest Dispensary, or is visited at home, the notifying Practitioner being given the opportunity to attend. On the result of this examination a recommendation for treatment is made.

\* \* \* \* \*

7. For the purposes of comparison, the total number of cases notified for previous years were as under, together with the deaths registered.

1913-	-	-	-	-	889 cases	270 deaths.
1914-	-	-	-	-	707 "	290 "
1915-	-	-	-	-	661 "	275 "
1916-	-	-	-	-	562 "	307 "
1917-	-	-	-	-	671 "	315 "
1918-	-	-	-	-	815 "	365 "

8. These figures would make it appear that the incidence of the disease which was falling from 1913 to 1916, is now on the increase. The first year of compulsory notification was 1913, and the figure shown for that year would include many cases which would normally have been notified in previous



years. The present increase is no doubt mainly the result of War conditions, but may be due in part to the fact that the notification of early cases is gradually improving. The increasing number of deaths from the disease is also probably due to War conditions.

9. In order that it may be possible to see how these cases are spread over the County, the following Table has been prepared.\* This shows the number of cases of Tuberculosis notified during 1918 under each Sanitary District, together with the estimated populations for 1918 and the notification rate per thousand of the population.

\* \* \* \* \*

*Details of Scheme.*

11. The County Scheme provides for the care and supervision of *all* cases of Tuberculosis where the patient is desirous of receiving such treatment.

12. The treatment granted may be described under the following headings, viz. :—

- (a) In Sanatoria.
- (b) At Dispensaries.
- (c) Domiciliary.
- (d) Use of Shelters.
- (e) Hospitals.
- (f) Visiting by Health Visitors.
- (g) Dental Treatment.

(a) *Sanatoria.*

13. This is without doubt the chief, and among patients, the most popular form of Sanatorium Benefit. The following beds are reserved for County patients :—

Knightwick Sanatorium	-	-	54	beds	(33	males,	21	females).
Hill Top Tuberculosis Pavilion, Bromsgrove	-	-	14	"	(7	"	7	"
Hayley Green Tuberculosis Pavilion, Halesowen	-	-	14	"	(8	"	6	"
Welland Sanatorium	-	-	13	"	(-	"	13	"
			95	"	(48	"	47	"
			95	"	(48	"	47	"

14. The beds at Knightwick Sanatorium are intended chiefly for the earlier cases.

15. Except in cases of extreme urgency, patients are admitted to Sanatoria in strict rotation, but discharged Service men are given preferential admission, by arrangement with the Ministry of Health.

16. The main objects kept in view in sending patients to the Sanatoria are :—

- (i.) To arrest the disease and restore working capacity ;
- (ii.) To remove infection from overcrowded houses and to relieve the often overworked family of nursing a sick relative ; and
- (iii.) Educational.

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\*This Table is not given as it is included and extended in Table IV.



17. There has been for some little time past considerable discussion as to the efficacy of Sanatorium treatment. The figures given in the Annual Reports of Knightwick Sanatorium show that many early cases are discharged apparently cured and are able to continue work for many years, while the majority are greatly improved in health. There is no doubt that the education of a patient at a Sanatorium in the matter of personal hygiene, the correct mode of living, and the great advantage to himself and others of fresh air, will eventually do much to arrest the spread of the disease. It is however discouraging for patients to be treated at a Sanatorium for a matter of 13 weeks or so, and then with the disease in many cases probably arrested, to allow them to return to the old environment of crowded, ill-ventilated, homes and workshops. I am of opinion that the Sanatorium is an essential part in the treatment and cure of Tuberculosis, but at the same time it should only be regarded as a *link* in the Treatment Chain, as all methods of attacking the disease must be co-ordinated.

18. Efficient After-Care is an essential adjunct to Sanatorium treatment, and under this head I would include—

- (1). Better housing and workshop accommodation, the provision of specially adapted houses for consumptive families; a shelter and extra bed in suitable cases;
- (2). Sufficient and suitable food and clothing;
- (3). Advice and help as to obtaining or training for a suitable occupation.

19. The proposed Training Centres should be very useful here, and though I have no doubt as to the value of Farm Colonies and Village Settlements for Tuberculous patients, I am doubtful whether a consumptive's natural instinct to be an ordinary citizen and free from restrictions, will not be a serious obstacle to their successful establishment.

(b) *Dispensaries.*

20. Out-patient treatment is granted at the following Centres:—

Dispensary.	Day.	Time.
Bromsgrove - - - -	Thursday	3.0 p.m.
Evesham - - - -	Tuesday	10 a.m.
Halesowen - - - -	Wednesday	5.0 p.m.
Kidderminster - - - -	Monday	4.0 p.m.
Malvern - - - -	Friday	5.0 p.m.
Oldbury - - - -	Friday	6.30 p.m.
Pershore - - - -	Tuesday	12.30 p.m.
Redditch - - - -	Tuesday	5.0 p.m.
Stourbridge - - - -	Monday	6.30 p.m.
Upton-on-Severn - - - -	Friday	3.0 p.m.
Warley - - - -	Friday	4.30 p.m.

21. Each Dispensary is held weekly, except Pershore and Upton-on-Severn, which are held on the first Tuesday and Friday respectively in the month. A Nurse is always in attendance.

22. So far as possible, all cases are placed on Dispensary treatment, particularly as regards patients leaving Sanatoria. It is advisable to keep all cases under periodical observation, even though no actual treatment may be required. Apart from treatment of patients, the Dispensaries are used as Sorting Centres and for examining contacts.

23. In a County like Worcestershire, it is inevitable that many cases live at too great a distance, or are too ill, to attend the Dispensaries: in these cases, if insured, they are placed on Domiciliary treatment. If non-insured, they have, apart from the visits of Nurses, to make their own arrangements for treatment, as the County Council cannot legally grant Domiciliary treatment to these patients.



24. Notices are placed in all Dispensaries, in accordance with the wish of the County Insurance Committee, that should a patient need medical attention between the Dispensary attendances, he should consult his own Doctor.

\* \* \* \* \*

(c) *Domiciliary.*

26. This part of the Scheme is confined to insured patients, and consists of treatment at home by the patient's own Panel Doctor.

27. The Doctor is required under the Regulations made by the Insurance Commissioners to send me every quarter a detailed report as to the condition of each patient undergoing treatment, and on these reports is based my recommendation for continued, or some other form of treatment.

28. All insured patients are automatically placed on Domiciliary treatment immediately they apply until the Tuberculosis Officer is able to see them.

(d) *Shelters.*

29. Open-air Shelters placed on suitable sites in patients' own gardens or in adjacent spaces are undoubtedly of great service in certain cases of Tuberculosis. The amount of infection is much lessened by patients living and sleeping in an approved open-air shelter. I am convinced that one of the chief causes of infection is due to a patient sleeping in a stuffy bedroom with other members of the family.

30. Thirty-seven shelters have been provided by the County Council and are under my supervision. Generally speaking, they are occupied throughout the year. There are also a number of private "huts" in use. I certainly think that when practicable additional shelters should be available.

31. Before a shelter is removed from one patient to another it is properly disinfected by the local Sanitary Inspector, but the disinfection of a house after a patient has died or left, is a matter for the local Sanitary Authority. So far as I am aware the Sanitary Authorities carry out this desirable procedure.

(e) *Hospitals.*

32. The treatment of Non-pulmonary Tuberculosis often involves a stay at the Worcester General Infirmary for surgical operation, followed by the provision of splints, &c.

33. Certain cases of children with Tuberculosis of the Bone have recently been treated at Surgical Homes at Baschurch, Northfield, and Rhyl, for treatment and convalescence.

34. The Ministry of Pensions have arranged for a certain number of the children of discharged service men suffering from Non-pulmonary Tuberculosis to receive special training at Chailey, Sussex.

(f) *Home Visiting by Nurses.*

35. The whole of the cases under the Scheme have been visited either by the County Council Health Visitors, or by the Nurses attached to the County Nursing Association. Formerly each Nurse reported on the patient quarterly, but the Ministry of Health now require that monthly reports be made. The Nurses see that patients are carrying out instructions, and report as to the patient's progress, disposal of sputum, proper use of shelter (if supplied), overcrowding, &c., and if necessary the Tuberculosis Officer visits to see if any



existing unsatisfactory conditions can be remedied. The Nurses still continue to visit patients even though no active treatment may be required. This is the best means of keeping in touch with past patients.

(g) *Dental Treatment.*

36. Free Dental treatment is provided under the Scheme. Where the Tuberculosis Officer is of opinion that the progress of a patient is retarded owing to bad teeth, arrangements are made for the teeth to be extracted. A special room is reserved for this purpose at the Worcester General Infirmary, and Mr. F. W. Sievers, Dentist, of Worcester, together with a Doctor to administer the anæsthetic, carry out the work. A qualified Nurse is always in attendance, and patients' travelling expenses are repaid. Discharged Tuberculous Soldiers receive necessary Dental treatment through the Ministry of Pensions.

*"Contact" Cases.*

37. One of the important factors in any Tuberculosis Scheme is the examination of contacts, that is, persons living in the same house and coming in contact with a Tuberculous person.

38. Prior to the War, contacts of definite cases were called up to the Dispensary for examination, and if any suspicion of Tuberculosis was entertained, they were kept under observation at the Dispensaries. During the War the routine examination had to be dispensed with and only contacts reported to be ailing were examined.

39. This work is of the utmost importance, and as soon as possible, it will be recommenced. Bearing on this statement, I would refer you to a Report I prepared on contact cases in February 1915, from which it appeared that no less than 2.5 per cent. of the examinations of contacts made were found to be definite cases of Tuberculosis, and 16 per cent. were suspicious cases.

*Environmental Reports.*

40. Another equally important factor is the inspection of houses in which patients reside, in order that insanitary conditions may be discovered and remedied. Before the War, I and the Assistant Tuberculosis Officers were appointed Assistant Medical Officers of Health in practically all the Districts in the County, and with power to visit the homes of the patients with the Sanitary Inspectors. Any insanitary conditions were reported to the Local Sanitary Authority. As soon as the Medical Staff is again complete, it is very desirable that this work should be resumed.

*Cases referred for the opinion of the Tuberculosis Officers.*

41. Under this heading, a considerable number of cases are examined at the Dispensaries. Medical Practitioners frequently request us to give our opinion on cases before the patients are notified officially as being Tuberculous. The smooth working of the Scheme is to a great extent due to the co-operation of the Medical Practitioners.

*Ex-Service Men.*

42. A great number of Soldiers and Sailors have been treated at the County Sanatoria. These men are usually notified by the Military Authorities, and they are given priority of admission.

43. Sets of underclothing are stored at the Sanatoria and lent to the patients if required.



*Tuberculin.*

44. During the earlier part of the period under review, many cases were treated by Tuberculin, but although the effect in some cases was satisfactory, I do not think the whole results were sufficiently promising to continue the method in Pulmonary cases. I find moreover that it has largely been given up all over the Country.

*Results of Treatment.*

45. Since the inauguration of the County Scheme in July 1912, and up to 30th June 1919, no less than 2,531 cases have been under consideration. Of these, 1,346 were insured, 505 non-insured, and 680 were children under 16 years of age.

46. Since July 1912 and prior to 1st January 1919, 258 cases left the County, 734 died, and there were 16 old cases whom it has not been possible to classify owing to lack of information. In this way 1,008 cases should be deducted from the total of 2,531, leaving 1,523 cases with which I propose to deal.

47. The number of cases who died may appear to be a large one, but bearing in mind that this number is spread over a period of  $6\frac{1}{2}$  years, and that at the commencement of the Scheme a considerable number of advanced cases were in existence, I think it is not excessive. The death-rate for Phthisis for 1918 in Worcestershire was 1.1 per thousand of the population.

48. Of the 1,523 cases to be dealt with in this Report 669 were insured, 286 were non-insured, and 568 were children under 16 years of age, i.e., 1,297 old cases who started the year under our supervision, and 226 cases who applied for treatment up to June 30th.

49. As requested, the whole of the cases have been classified into two headings—those where tubercle bacilli have been found in the sputum, and those where tubercle bacilli have never been found. These headings have each been sub-divided as under:—

- I. Tubercle Bacilli in sputum.
  - (a) Curable cases.
  - (b) Improvable cases.
  - (c) Those not likely to recover.
- II. Tubercle Bacilli not found in sputum.
  - Definite cases.
  - Suspicious cases.

50. Class I. should be useful in order to concentrate attention from a Public Health point of view on the known sources of tubercle bacilli. The sub-division of these cases into (a), (b) and (c) as shown has been determined chiefly on an estimate of the patient's resistance to the amount of his disease, or in other words the amount of his systemic disturbance.

51. Class II. contains many cases of undoubted Tuberculosis, some of which will eventually pass into Class I. Others have been notified apparently on symptoms only, and are for the time being merely suspicious. The "Definite" cases are those with persistent or typical signs, cases of genuine hæmoptysis and cases of idiopathic pleurisy. Most of the "Suspicious" cases are probably tuberculous, but up to the time of the classification have not shown unequivocal evidence.

There are also cases of non-pulmonary Tuberculosis, and a few patients who were found not to be suffering from Tuberculosis, which are shown separately.

*I. Tubercle Bacilli in Sputum.*

52. Table V, shows the number of cases divided into the three sub-headings, together with the condition of each patient's health based on working capacity.

53. From this Table it will be seen that 277 cases out of the total number were found to have Tubercle Bacilli in the sputum. Deducting the number of children from the total, the percentage of adults with Tubercle Bacilli to the total number of adult cases under review is 28.3.



TABLE V.

	Total number of cases.	In Sanatorium	Having no treatment.	At full work or School.	Part-time work or School.	No work or School.	Dead.	Left County.
Insured	(a) Curable	3	4	14	4	3	-	-
	(b) Improvable	14	17	27	1	31	2	-
	(c) Not likely to recover	5	1	1	3	28	40	3
	Total	22	22	42	8	62	42	3
Non-insured	(a) Curable	-	-	3	1	1	-	-
	(b) Improvable	4	8	2	1	6	2	2
	(c) Not likely to recover	1	3	-	-	12	23	-
	Total	5	11	5	2	19	25	2
Children	(a) Curable	-	1	1	-	-	-	-
	(b) Improvable	-	-	2	-	2	-	-
	(c) Not likely to recover	-	-	-	-	1	-	-
	Total	7	1	3	-	3	-	-
GRAND TOTAL	277	27	34	50	10	84	67	5



*II. Tubercle Bacilli not found in Sputum.*

54. Table VI. shows the number of cases under the sub-headings "Suspicious" and "Definite," together with the condition of each patient's health based on working capacity.

55. The total number of "Definite" cases is 568, or a percentage of 37.3. "Suspicious" cases number 485, or a percentage of 31.8.

56. Children form the greater majority of the "Suspicious" cases, and would in my opinion be suitable cases for treatment at an Open-Air School.

TABLE VI.

	Total number of cases.	In Sanatorium	Having no treatment.	At full work or School.	Part-time work or School.	No work or School.	Dead.	Left County.
Insured	Suspicious	9	69	34	4	19	-	1
	Definite	23	72	94	21	60	10	10
	Total	32	141	128	25	79	10	11
Non-insured	Suspicious	1	27	34	3	10	-	-
	Definite	8	25	37	4	25	12	5
	Total	9	52	71	7	35	12	5
Children	Suspicious	1	105	116	2	43	1	6
	Definite	6	33	74	6	34	5	4
	Total	7	138	190	8	77	6	10
	GRAND TOTAL	48	331	389	40	191	28	26



III. *Non-pulmonary Cases.*

57. Table VII. shows the total number of these cases, and gives the conditions of each patient's health based on working capacity.

58. Here again the majority of the cases are children, and generally speaking were largely cases of Tuberculosis of the Glands.

TABLE VII.

	Total number of cases.	In Sanatorium.	Having no treatment.	At full work or School.	Part-time work or School.	No work or School.	Dead.	Left County.
Insured	40	3	12	12	1	9	1	2
Non-insured	23	-	6	3	1	12	1	-
Children	125	6	30	53	2	31	1	2
Total	188	9	48	68	4	52	3	4

## I V. Cases found not to be Tuberculous.

59. Table VIII. shows the number of cases who applied for treatment under the Scheme and their present condition based on working capacity. These cases are not now receiving any treatment under the Scheme.

TABLE VIII.

	Total number of cases.	In Sanatorium	Having no treatment.	At full work or School.	Part-time work or School.	No work or School.	Dead.	Left County.
Insured	-	1	1	-	-	-	-	-
Non-insured	3	-	3	-	-	-	-	-
Children	-	-	-	-	-	-	-	-
Total	5	1	4	-	-	-	-	-



*Summary.*

60. It will thus be seen that at the 30th June 1919 the conditions of the 1,523 cases were as under :—

85	were	in Sanatoria.
417	„	having no treatment and are apparently cured.
507	„	at full work or School.
54	„	at part-time work or at School.
327	„	not at work or School.
98	„	dead.
35	„	had left the County.

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1,523

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\* \* \* \* \*

### **Ophthalmia Neonatorum.**

*(Inflammation of the Eyes in Children under 21 days old).*

106. The etiology and prevention of this disease were discussed in my "Digest" for 1914 (pp. 31-33).

107. 31 cases were notified last year (22 Urban, 9 Rural), as compared with 34 in 1918, and the same number in 1917. Table III. shows the Districts in which they occurred.

108. 27 of these recovered without impaired vision; 1 in Kidderminster Borough has opacity of the cornea; 2 of the 3 cases in Oldbury died of debility within 10 days of birth; 1 in Stourbridge is attending Dudley Eye Hospital.

109. All the Authorities in these instances afford facilities for the help of Nurses for treating the infants' eyes. Some of them pay fees to Health Visitors, and others subscribe to local Nursing Associations.

110. 27 cases of this disease occurred in the practices of Midwives, and each of them came under the supervision of Health Visitors: who called my attention to any case which was apparently due to carelessness on the part of the Midwife. When ever such a thing happened, a local inquiry by the Chairman of the Midwives Act Committee (at which I was present) was held, and the Midwife dealt with as circumstances required, or I "cautioned" the Midwife.

### **Acute Poliomyelitis.**

*(Infantile Paralysis).*

111. A full account of this obscure disease is given in my "Digest" for 1911 (pp. 65-68).

112. Last year Table III. shows that 6 cases were notified (2 Urban, 4 Rural), and the Districts. The Medical Officers of Oldbury and Bromsgrove North Urban, and Halesowen and Martley Rural Districts, beyond recording the notifications, make no special reference to this complaint.

*Pershore Rural District.*

" This case occurred at Naunton Beauchamp in a child 6 years and 8 months old, and was an old-standing one. The child was treated not only by his Medical Attendant but by a Surgeon at the Worcester Infirmary ; and it seems to be probable that the lad, who is of weak intellect, will never completely recover."

*Shipston-on-Stour District.*

113. The Medical Officer of Health says :—

" One case in a little girl occurred at Blockley, and was notified in October. The child had been sent to a Hospital at Birmingham and was only notified after her return home. She is now able to run about, but there is still paralysis of the left arm. No other member of the family has shown any signs of the disease."

114. The Ministry of Health when they are informed of notifications of Poliomyelitis, send to the Medical Officer of Health a form to fill up with regard to the case. This information was supplied with regard to the case in Pershore District ; but whether or not it was asked for in the other instances above referred to, I cannot say.

### **Cerebro-Spinal Meningitis.**

(*" Spotted Fever "*).

115. An account of this serious complaint will be found in my " Digest " for 1914 (pp. 28-30).

116. The two cases notified in Droitwich and Bromsgrove Rural Districts respectively were the only ones in the County last year. Beyond recording these notifications, the Medical Officers of Health make no allusion to them in their Annual Reports.

### **Measles.**

117. By an " Order " of the Ministry of Health (dated 28th November 1919) the notification of Measles is not now compulsory : although the Local Government Board made it so on 1st January 1916 ; except in special cases where the Ministry will be prepared



if reason be shown, to consider the issue of a local Order requiring compulsory notification. Upon my recommendation Measles was made "notifiable" in the Borough of Evesham in 1892, but contrary to my anticipations, it was found that "notification" did not assist in the suppression of outbreaks of Measles, and consequently the "Order" for that Borough was rescinded in 1900, with the approval of the Local Government Board. Under these circumstances I did not expect that the universal notification (ordered by the Board in 1915) would be effective. The withdrawal of this Notification Order still leaves Local Authorities free to organise various forms of combating the spread of the disease, such as the provision of Nurses and Medical attendance during epidemics.

118. Table III. shows that 2,507 (1,539 in the Urban Districts and 968 in the Rural) cases of Measles and German Measles were notified last year: and 11 deaths only were registered. From this it may be assumed that the type of the disease in this County was not severe last year.

*Bewdley Borough.*

119. Dr. Miles does not say in his Annual Report how many cases were notified last year: and consequently no number is given in Table III. But he writes as follows: "There was also an outbreak of Measles in July and August, 38 families being affected, and the Schools being closed from August 18th to September 6th; but no deaths were caused by it." I gather however from the weekly notifications he sent to the County Council that he did receive notifications of 40 cases.

*Kidderminster Borough (428 cases, 3 deaths).*

120. Dr. Moore reports that:—

"A special arrangement for the nursing of the more serious cases of Measles, Whooping Cough &c. has been made with the Kidderminster Nursing Association. The Committee pay them £25 annually, plus one shilling for each case attended."

121. So far as I know, Kidderminster Corporation is the only Authority in the County which arranges for the "nursing" of Measles cases: though many others retain the services of Health Visitors for giving advice as to the precautionary measures needed—and more particularly with regard to those desirable for averting fatal consequences. The issue of leaflets of precautionary measures seems to have been general throughout the County.



*Oldbury Urban* (452 cases, 1 death).

122. Dr. Buttery says the epidemic occurred during the warm months when the liability to chest affections was greatly lessened : hence the very light mortality which resulted.

*Stourport Urban District* (91 cases, no death).

123. Dr. Robinson says :—

“ Up to the end of the year not a single case had died, and though the  
“ type of the disease was generally mild, there were some severe  
“ cases. I attribute this excellent result to the fact that most of  
“ the children received Medical attendance and were also visited  
“ by the Sanitary Inspector and by the Nurse. . . .

“ I strongly recommend that notification of Measles be made compulsory :  
“ the Council have already made an application to the Ministry to  
“ that effect.”

*Pershore Rural District* (278 cases, 1 death).

124. 211 of these cases occurred in the Town of Pershore, which suffered not only from an epidemic of Measles but also from another of Scarlet Fever during the year. 264 of the 278 cases were under the supervision of the Health Visitor : and it seems probable that partly in consequence of this the mortality was so very slight.

**Malaria** (87 cases, no death).

125. All these cases of Malaria occurred in persons who contracted their illnesses abroad, and consequently did not necessitate any special precautions. It is the duty of a Medical Officer of Health if a case *arises* in his District, to take somewhat elaborate precautions which have been outlined by the Ministry of Health.

**Influenza.**

126. It is well-known that during Influenza epidemics, the mortality attributed to this disease, does not represent the whole of that caused by it. Other deaths, especially those of respiratory disease, are always found to increase during an epidemic, and though this did not occur in 1918 and 1919 to the same extent as in other recent outbreaks, it is still necessary to make allowance for these increases of mortality, allocated to other causes but really attributable to Influenza, in endeavouring to measure the loss of life caused by the epidemic.



127. On reference to Table I. it will be seen that the following deaths were registered in the Administrative County during 1919, viz. :—

Influenza	336	(166 in Urban Districts,	170 in Rural).
Pneumonia	240	(142 „ „ „	98 „ „
Bronchitis.	388	(221 „ „ „	167 „ „

Total deaths from  
these 3 diseases 964 (529 in Urban Districts, 435 in Rural).

128. The Registrar-General has recently issued an elaborate "Report on the Mortality from Influenza in England and Wales during the epidemic of 1918-19," and as some of the statements it contains are applicable to Worcestershire, I think it well to mention a few of them.

129. *Age distribution.* The type of age distribution which had consistently characterised Influenza mortality for many years, suddenly and completely changed with the onset of the summer epidemic of 1918, and the new type then established continued to characterise the succeeding waves of the outbreak.

130. Deaths at 0-15 years and especially at 15-35, which had formed since 1889 a fairly uniform proportion of the whole number, with a tendency of late years to decrease in relative importance, suddenly increased from 7.11 per cent. at 0-15 to 25 per cent., and from 8.10 per cent. at 15-35 to 45 per cent. In the middle age 35-55 the proportion was comparatively little affected, but shows some increase over the years immediately preceding.

131. At 55-75 and at ages over 75, which together had for many years provided 60-70 per cent. of the total deaths registered, the proportion fell to 10 per cent. at 55-75, and 2 per cent. at 75 and upwards. It may be doubted whether so sudden and so complete a change of age incidence can be paralleled in the history of any other disease. Yet all the weight of Medical testimony goes to show that the Influenza of 1918 was essentially the same as that of former years. Attempts have been made to explain the change as due to alteration in the circumstances of the population. Thus it has been suggested that aggregation of young women in munition works in 1918 may partly account for their specially heavy mortality. No simple explanation on these lines is possible.

132. The alteration in age incidence accompanying the increased prevalence and fatality of the disease in 1918 seems to be more easily explained by a sudden change in the infecting organism than in the soil provided for its growth. Prior to the recent epidemic the victims were chiefly old people, but during this epidemic, the stress of mortality fell upon young adults. Both types have this in common, that children under 5 years of age suffer a higher mortality than their immediate seniors.

133. *Cause and distribution of the Epidemic.* Judged by the number of deaths ascribed to the disease, the commencement of the epidemic in this Country may be located in the week ending June 29th 1918: and after successive waves the epidemic seems to have subsided during 1919 in Worcestershire. The 1919 epidemic was not so severe as that in the former year: and probably the type will become less virulent in future. Comparatively high maximum mortalities were attained, by the Northern Counties, by Stafford, Derby, Nottingham and Worcester in the Northern Midlands, and by Glamorgan in Wales: but generally throughout the Southern half of England were very low indeed.

134. A new wave commenced during the first week of October, and the week ending November 2nd was marked by much more rapid progress of the epidemic in the South of England. The varying waves of this epidemic cannot be mentioned now, but are clearly set out in the Report.

135. It is stated that the "epidemic of 1847 killed twice as many people (in proportion to the population) in the insalubrious parts of London as it did in those less unhealthy," but the mortality of the late epidemic fell almost alike on the sanitary just as on the unjust.

### **Anthrax.**

136. Dr. Hodgson Moore reports that:—

"One case of external Anthrax occurred during the year, the patient being a resident at Bewdley, working in Kidderminster. The case was treated in the Infirmary, Sclavos serum being used. There was complete recovery."

### **Cancer.**

137. In pre-war years I used to give Tables showing the death-rates from Cancer: but since 1914 I have not done so, as it was necessary to curtail printing. This year however I have brought the Table up to date and now submit it.



TABLE IX.

Urban Districts.	Average for years 1910 to 1919 per 10,000 of population.	Death Rate per 10,000.									
		1919.	1918.	1917.	1916.	1915.	1914.	1913.	1912.	1911.	1910.
Bewdley Borough	15.4	7.6	8.3	12.3	20.2	7.9	21.8	25.5	18.2	14.5	17.7
Bromsgrove	10.1	8.9	2.4	13.3	14.4	14.4	10.0	12.2	12.2	10.07	10.2
Bromsgrove North	9.1	9.1	13.0	6.1	6.8	9.4	9.4	10.8	4.0	5.5	8.6
Droitwich Borough	16.4	28.7	34.7	14.6	9.6	12.0	12.0	19.2	9.0	4.8	11.8
Evesham	8.8	12.9	6.5	10.4	5.0	11.6	11.6	9.4	6.0	5.9	9.6
Kidderminster	12.8	13.6	14.4	11.1	12.3	14.0	14.0	10.4	11.6	9.8	10.9
Lye and Wollescote	8.5	7.5	16.1	7.8	7.7	6.7	6.7	5.9	10.1	9.4	5.07
Malvern	15.1	15.0	17.0	16.2	23.7	10.8	10.8	9.6	16.9	12.1	16.1
Oldbury	8.0	8.0	8.3	8.1	8.4	6.6	6.6	11.1	8.7	6.2	6.7
Redditch	11.1	7.5	15.3	9.6	6.1	16.0	16.0	5.03	17.2	10.3	9.4
Stourbridge Borough	10.9	13.3	17.3	9.2	8.3	11.8	11.8	9.1	9.9	8.6	10.1
Stourport	17.5	30.9	21.1	9.8	25.9	13.6	13.6	11.3	13.5	9.02	11.8
Urban Death-rate	10.8	11.5	13.1	10.3	10.8	11.0	11.0	10.08	11.3	8.07	9.2

Rural Districts.		10.8	8.5	15.2	12.6	12.8	7.2	13.7	12.4	9.9	10.7	4.8	
Bromsgrove	-	-	10.8	8.5	15.2	12.6	12.8	7.2	13.7	12.4	9.9	10.7	4.8
Droitwich	-	-	11.3	11.6	12.1	13.8	10.6	8.5	13.0	11.5	12.3	7.7	12.3
Evesham	-	-	11.2	7.6	10.3	16.1	11.4	14.4	10.6	14.0	8.6	6.5	12.5
Feckenham	-	-	12.2	11.9	12.7	16.1	21.3	1.9	9.1	14.6	10.9	12.8	11.1
Halesowen	-	-	7.3	8.8	6.6	5.7	8.2	6.6	6.6	9.4	5.0	7.7	8.1
Kidderminster	-	-	11.2	9.9	12.4	12.7	14.8	2.8	4.1	12.5	10.8	15.2	16.8
Martley	-	-	13.4	13.4	8.5	12.3	18.9	12.4	13.0	14.5	16.8	12.2	12.3
Newent (part)	-	-	11.4	28.6	10.1	9.3	0.0	0.0	8.3	8.3	41.9	0.0	7.6
Pershore	-	-	11.5	13.4	19.3	10.5	12.8	8.7	11.9	11.2	9.0	7.5	11.02
Rock	-	-	18.1	19.8	10.2	44.2	14.6	14.1	26.9	22.5	9.0	0.0	19.5
Shipston-on-Stour	-	-	12.1	23.1	8.0	10.5	12.6	9.6	16.9	10.6	8.4	14.8	6.9
Stow-on-the-Wold (part)	-	-	17.3	37.0	36.6	0.0	0.0	34.7	0.0	32.1	32.1	0.0	0.0
Tenbury	-	-	10.1	8.7	5.1	5.0	16.1	6.6	19.1	6.3	19.0	10.5	4.2
Tewkesbury (part)	-	-	10.6	18.6	10.1	20.7	4.9	8.6	4.3	12.9	4.3	8.6	13.3
Upton-on-Severn	-	-	11.5	9.7	6.6	13.4	18.7	11.3	13.6	6.8	12.3	12.5	10.0
Winchcombe (part)	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rural Death-rate	-	10.6	11.1	10.6	11.6	12.9	8.5	11.3	11.3	10.3	9.07	9.4	
County Death-rate	-	10.8	11.3	11.9	12.3	11.5	9.7	11.1	10.6	10.9	9.1	9.2	



138. My "Digest" for 1913 (p. 50) referred to a Report issued by the "Imperial Cancer Research Committee" in July of that year, which dealt with questions of "Heredity, Cancer Areas" and "Cancer Homes," which showed that there are still no reliable data available as regards Cancer in man. The Committee is still at work, but so far as their investigations into "Cancer Homes" and "Cancer Areas" have proceeded, the Committee have come to the conclusion that they are myths.

139. Unfortunately the causation and prevention if possible, of this terrible complaint, are still unknown. The early recognition of the symptoms of Cancer, in order that the disease may be successfully treated by surgery, is as urgent as heretofore.

140. The Registrar-General in his Annual Report for 1918—to which several allusions have already been made—says:—

"Cancer mortality, as stated in the form of an ordinary crude death-rate was higher (in 1918) than in any other year; but if the comparison be made by means of standardized rates, which allow for the present abnormal age constitution of the male civilian population, it will be seen that there was an appreciable decrease from the death-rate in the preceding year. Standardization, moreover, fails to eliminate entirely the fictitious increase due to the exclusion from the population in war years of a large number of men furnishing very few deaths from Cancer. An attempt to make a fuller correction on this account shows that the standardized mortality in 1918 was most probably lower than in 1911-14 also.

"... The mortality of females from Cancer of the upper portion of the alimentary canal, that above the stomach, is a small fraction only of that of males, but females suffer more from intestine Cancer. Diseases of the stomach and rectum attacks males principally, but not at all with the overwhelming preponderance, applying from the œsophagus upwards. Cancer of the skin is also very much more fatal to males, but the excess is mainly due to diseases of the pelvis and scrutum. The excess of Cancer mortality in the female sex is dependent upon diseases of the breast and generative organs."

### **Venereal Diseases.**

141. Under the Public Health (Venereal Diseases) Regulations, which came into operation in July 1917, free treatment under conditions of secrecy has been provided for persons suffering from Venereal Diseases, at the following Centres:—

Worcester Infirmary.  
Dudley Guest Hospital.  
Birmingham General Hospital.  
Kidderminster Infirmary.

142. The Staffordshire County Council are arranging for a Clinic at the Corbett Hospital, Stourbridge, to which Worcestershire patients might have access.

143. The County Scheme was again advertised in the Newspapers circulating in Worcestershire in 1919, and by your direction I arranged for Leaflets giving details of the Clinics, to be posted not only in Public Urinals, but in similar out-offices attached to the Public Houses in the County.

144. Since May 1919, Lectures to women have been given at—  
 Bromsgrove.  
 Redditch.  
 Droitwich.  
 Kidderminster.  
 Upton-on-Severn.

145. Another Lecture was given to County and City School Teachers at Worcester, when the following Resolution was passed :—

“ That this Meeting request the City and County Authorities  
 “ to ask Teachers where possible to arrange Meetings for  
 “ mothers and fathers, to discuss this question.”

146. As a result of this Resolution, arrangements were made for a Lady Lecturer to address two Meetings of Mothers at Redditch.

147. Although the arrangements for the Meetings were well organised by local influential persons, the results were disappointing, and in view of the non-success of these Lectures, you decided not to repeat them in other places.

*Annual Statistics.*

148. I append the following Table, which shows the number of cases treated in 1919 at the County Clinics, viz. :—



Institution.	"NEW" OUT-PATIENTS.					"NEW" IN-PATIENTS.		SALVARSAN SUBSTITUTES.	
	Cases.		Attendances.			Total.	Total "days."	No. treated.	No. of Doses.
	Syphilis.	Gonorrhoea.	Syphilis.	Gonorrhoea.					
				Syphilis.	Gonorrhoea.				
Worcester - - -	31	28	226	297	23	313	46	166	
Kidderminster - -	84	26	833	274	47	1,194	144	529	
Birmingham - - -	38	48	556	386	1	2	82	317	
Dudley - - -	54	58	568	346	9	256	59	438	
Totals - - -	207	160	2,183	1,303	80	1,765	331	1,450	

Number of Worcestershire persons known to have had treatment at Institutions outside the County - - 6

149. 34·6 per cent. of the cases discontinued treatment while in an infectious condition: and consequently the Council called the attention of the Ministry of Health to this undesirable state of things and expressed the hope that steps would be taken to find a remedy. Thus far, however, no such remedy has—so far as I am aware—been found.

150. Prophylactic treatment by “packets” has not been advocated on behalf of the County Council, for reasons given in my “Digest” for 1918 (pp. 48 to 50).

151. No Evening Clinics have been arranged, for the reasons also given in my 1918 “Digest”; but the Medical Officer of Kidderminster Infirmary has held Clinics on Sunday mornings, which seem to suit the convenience of persons in that locality, and for these services it is proposed to pay that Medical Officer extra remuneration: the exact amount of which is not yet fixed.

152. The following Table gives the number of in-patients (and out-patients) who received treatment during 1918 and 1919 at the County Clinics:—

TABLE X.

			Worcester.			Kidderminster.			Birmingham.			Dudley.		
			Syphilis.	Gonorrhœa.	Total.	Syphilis.	Gonorrhœa.	Total.	Syphilis.	Gonorrhœa.	Total.	Syphilis.	Gonorrhœa.	Total.
1918	...	...	63	8	71	75	8	83	30	18	48	62	33	95
1919	...	...	54	28	82	131	26	157	39	48	87	63	58	121

153. I do not give these details for 1917, as treatment only began in the middle of that year.

154. This Table shows that the largest number of County patients were treated at the Kidderminster Clinic; but it should be borne in mind that the Table does not include the Worcester City patients treated at the Worcester Clinic. The Table also shows that more patients were treated at each of the Clinics last year than in 1918.



### Infantile Mortality for 1919.

155. The respective Infant Mortalities for 1919 of the County Districts are given in Table I.

156. Table XI. compares the rate of Infant Mortality in the Urban and Rural Districts collectively and the Administrative County with those of England and Wales for the years 1910-1919 inclusive.

TABLE XI.

Districts.	Average Rate for 10 Years 1910-1919.	Death-rates of Children under 1 year per 1,000 registered Births.									
		1919	1918	1917	1916	1915	1914	1913	1912	1911	1910
Urban ...	99	71	88	91	87	123	95	113	98	132	97
Rural ...	76	76	64	72	69	85	71	75	77	95	78
Administrative County ...	89	73	77	83	78	106	84	97	89	116	89
England & Wales	103	89	97	97	91	110	105	109	95	130	106

157. Table XI. shows that the County rate of Infant Mortality in 1919 (73 per 1,000 births) was much lower than the corresponding rate in England and Wales for the same year (89). The County rate last year also showed a satisfactory decrease on the average rate for the years 1910-1919.

158. The Table also shows the Rural rate to be higher than the Urban rate: with the exception of the year 1908 this has not occurred for the last 24 years.

159. The low Infant Mortality of 1919, and the continued decrease in these rates, are very satisfactory. During the past 16 years of the present century a remarkable fall occurred in the mortality both from Diarrhœa and from other causes; and the lowness of the rates now prevalent is due only in a minor degree to the low level of diarrhœal mortality during the last few years. Still the fact that Diarrhœa was less fatal latterly has had an important share in maintaining the low level of the total rate. Though the fall has been relatively very much less in the first three months of life than at higher ages, the movement commenced simultaneously at all ages, after a long period, when the mortality at each was stationary or tending to increase. If the aspect of the returns for later ages

is not quite so favourable, this is chiefly due to Influenza, which is returned as the cause of few deaths in early infancy, but becomes of increasing importance as the year advances.

160. The share of illegitimates in the improvement noted for the first 4 weeks of life is remarkable ; but even so, the County return for 1919 shows that whereas 77 of every 1,000 legitimate children born, died before attaining one year of age, the corresponding rate among illegitimate children was 156 : the mortality of the latter therefore is just double that of the former.

161. Dr. Stevenson (Redditch) records " a phenomenally low " rate of Infant Mortality (40) : and states that such an extremely " low rate is not likely to continue, but for many years now it has " been well under 100 : this too in a district where twenty years " ago it averaged close on 200."

162. Table I. shows that the Infant Mortality last year exceeded that of the County rate (73) in the following Districts, and for comparative purposes the average rates for those Districts for the 5 years 1915-1919 are also given, viz. :—

	Rate for 1919.	Average Rate 1915-1919.
Bewdley Borough - - - -	104	90
Kidderminster Borough - - -	87	97
Lye and Wollescote - - - -	99	98
Oldbury - - - - -	102	106
Droitwich - - - - -	75	67
Halesowen Rural - - - - -	98	93
Kidderminster Rural - - - -	105	71
Martley - - - - -	76	75
Newent - - - - -	87	66
Shipston-on-Stour - - - - -	100	53
Tenbury - - - - -	78	76

*Bewdley Borough* (Dr. Miles).

*Kidderminster Borough* (Dr. Hodgson Moore).

*Lye and Wollescote Urban* (Dr. Darby).

*Droitwich Rural* (Dr. Wilkinson).

*Martley Rural* (Dr. Dykes).

*Newent Rural* (Dr. Johnstone).

*Shipston-on-Stour Rural* (Dr. Findlay).

163. Neither of these Medical Officers makes any special comments upon the mortalities of their District, other than stating the numbers of infants who died.



*Oldbury Urban.*

164. Dr. Buttery says that there has been a continual decline in the infantile deaths for several years past, and that "this great improvement in our infantile mortality has been brought about to a considerable extent by the continuous work of the Infant Welfare Centres. The energetic and untiring efforts of the two Nurses—Miss Broughton and Miss Holloway—and the ladies who attend at the Centres all deserve the highest commendation for the excellent work they have done during past years. The number of mothers who attend weekly with their children is sufficient evidence that they fully appreciate the good advice that is given to them as to the proper ways of feeding and treating their infants from the earliest days, as well as to suggestions given as to conducting their own lives for the mutual benefit of mother and child."

*Halesowen Rural.*

165. Dr. Brett Young says that "although the infantile mortality is rather higher for 1919 than for the two previous years, yet it has steadily declined for the last several years."

*Kidderminster Rural.*

166. Dr. Addenbrooke says that "in view of the increasing attention now being paid to child welfare in other districts this figure (105) is somewhat disturbing."

*Tenbury Rural.*

167. Dr. White says: "All these infants died during the prevalence of Influenza from Bronchitis and two of them were illegitimate. The infant death-rate for legitimate babies was 45 and for illegitimate 285. These latter figures only deal with seven infants, but I think they illustrate the necessity for some supervision by the State or Local Authority of these children; they are too often the victims of neglect, which if not fatal in their early years produce results which are detrimental in later life."

## **Maternity and Child Welfare.**

### *(A) Midwives Acts 1902-1918.*

168. The general Order of the Local Government Board (dated 29th July 1910), which prescribes the duties of County Medical Officers, requires me to give in this Report "a section on the



“administration, within the County, of the Midwives Acts.” For some time past I have been able to abbreviate that part of my Annual “Digests,” as the “Midwives Act Committee” presented an Annual Report to the Council, a copy of which I sent to the Board. When, however, the “Administrative Health Committee” was constituted by the County Council on 10th February 1919, the “Midwives Act Committee” ceased to exist, and their Annual Report also. It therefore behoves me on this occasion to describe more fully than usual, what the administration of the Midwives Acts within the County, during 1919, was.

*Inspection of Midwives.*

169. Inspection of the Midwives' work has, with the approval of the Local Government Board, been carried out by Drs. Mary Williams and Basil Housman (the two senior School Medical Inspectors), ever since this responsibility was placed upon the Council. Dr. Mary Williams acted in the Western half of the County, and Dr. Housman in the Eastern half. The efficient manner in which they did their work, is well known.

170. When, however, the Council re-organised their County Medical Staff, and appointed 11 Assistant County Medical Officers, to reside and work in a corresponding number of districts into which the County was divided, the inspection of Midwives was made one of their duties. In my opinion it is unquestionable that this plan will make the control of the Midwives even better in future than it has been in the past: because each of the Medical Officers will, on the average, have but 20 Midwives to supervise, and will live near them. In addition to this, they will frequently see the local Health Visitors, who, being well acquainted with the doings of the Midwives, will be able to give the Medical Officers valuable information with regard to the way they are doing their work.

171. The Ministry of Health lately wrote the Council “that it would be preferable that this work should be undertaken separately by Lady Medical Officers specially appointed for the purpose.” To this, the Clerk of the Council replied (17 August 1920): “As regards the inspection of Midwives the Council regret that the Ministry should press for this work to be undertaken separately by Lady Medical Officers specially appointed for the purpose. The amalgamation and re-organisation of the County Medical Services was designed to promote not only efficiency but economy



“ and is based on the assumption that each of the Medical Officers  
 “ will have small areas in which they will undertake *all* duties  
 “ referred to in the re-organisation Scheme. The Council are  
 “ decidedly of opinion that it would be more satisfactory for  
 “ properly qualified Medical men and women who will have personal  
 “ knowledge of the comparatively few Midwives in their District,  
 “ to act as Inspectors of Midwives, rather than to follow the pro-  
 “ cedure which has been approved by the Ministry in the neighbour-  
 “ ing Counties of Stafford, Hereford, Warwick and Gloucester,  
 “ whereby Health Visitors and Nurses act as Inspectors of Mid-  
 “ wives.

“ Worcestershire is a rural County and in many parts without  
 “ railway accommodation, so that it would be necessary for each  
 “ of the Lady Medical Officers suggested by the Ministry to travel  
 “ by motor car, which inclusive of salary would involve an addi-  
 “ tional expenditure of at least £1,500 a year. Furthermore, these  
 “ Officers would be covering the areas in which Medical Officers for  
 “ Tuberculosis and Infant Welfare and School work would be at work,  
 “ thus causing the overlapping which the County Re-organisation  
 “ Scheme was designed to avoid.”

172. In reply to this letter the Ministry of Health wrote (31st August 1920): “ The Ministry will raise no further objection as a  
 “ temporary measure to the arrangement proposed by the Wor-  
 “ cestershire County Council for the inspection of Midwives. They  
 “ will instruct their Medical Officer at the next inspection of Maternity  
 “ and Child Welfare work in the County to report specially on the  
 “ working of the arrangement.”

*No. of Enrolled Midwives.*

173. There were 221 Midwives practising in the County during 1919, i.e., 88 in the 12 Urban Districts and 133 in the 16 Rural Districts.

174. Table XII. shows the Sanitary Districts in which the Midwives practised, and also the numbers of births and still-births notified to me by these Midwives.

TABLE XII.

Districts.	No. of Midwives practising in 1919.	Numbers notified under Notification of Births Act.	
		Births 1919.	Still-Births notified by Midwives 1919.
<i>Urban.</i>			
Bewdley - - - - -	2	60	2
Bromsgrove - - - - -	6	241	8
North Bromsgrove - - - - -	4	121	4
Droitwich - - - - -	3	99	5
Evesham - - - - -	7	161	13
Kidderminster - - - - -	13	470	24
Lye and Wollescote - - - - -	4	268	11
Malvern - - - - -	7	218	5
Oldbury - - - - -	22	872	18
Redditch - - - - -	7	282	6
Stourbridge - - - - -	10	331	4
Stourport - - - - -	3	77	3
	<u>88</u>	<u>3,200</u>	<u>103</u>
<i>Rural.</i>			
Bromsgrove - - - - -	16	241	3
Droitwich - - - - -	12	160	3
Evesham - - - - -	13	160	3
Feckenham - - - - -	9	85	2
Halesowen - - - - -	17	659	14
Kidderminster - - - - -	4	110	3
Martley - - - - -	16	200	3
Newent - - - - -	2	195	1
Pershore - - - - -	11	31	3
Rock - - - - -	2	22	-
Shipston-on-Stour - - - - -	3	83	1
Stow-on-Wold - - - - -	-	2	-
Tenbury - - - - -	7	46	1
Tewkesbury - - - - -	5	19	1
Upton-on-Severn - - - - -	16	185	4
Winchcombe - - - - -	-	3	-
	<u>133</u>	<u>2,201</u>	<u>42</u>
Grand Total - - - - -	<u>221</u>	<u>5,401</u>	<u>145</u>



175. Table XIII. gives the numbers of "trained" and "untrained" Midwives who practised in the County during each of the years 1909-19:—

TABLE XIII.

Year.	Number of practising Midwives who were				Total Numbers.
	Trained.		Untrained.		
	Number	Percentage of practising Midwives.	Number.	Percentage of practising Midwives.	
1909-	78	31	173	69	251
1910-	94	35	172	65	266
1911-	95	37	158	63	253
1912-	104	40	148	60	252
1913-	105	40	134	60	239
1914-	113	46	130	54	243
1915-	101	51	97	49	198
1916-	123	52	113	48	236
1917-	114	52	103	48	217
1918-	116	55	92	45	208
1919-	133	60	88	39	221

176. It will be seen that during the last eleven years there has been a decrease of 100 per cent. in the numbers of untrained Midwives, and that the numbers of trained women have correspondingly increased. There was an increase of 13 trained women last year over 1918, which is due to the large number trained at the County Nursing Institution, and to the establishment of additional Nursing Associations.

*Births attended by Midwives.*

177. At the end of 1919, I circularised each Midwife in the County as to the number of lying-in women each attended *as Midwives*.

178. Table XIV. shows the number of lying-in women attended by the trained and untrained Midwives respectively during the year 1919:—

TABLE XIV.

(a) *Trained Midwives.*

10	Trained	Midwives	attended	no cases.
51	"	"	"	1 to 10 cases.
15	"	"	"	11 to 20 "
8	"	"	"	21 to 30 "
-	"	"	"	31 to 40 "
3	"	"	"	41 to 50 "
7	"	"	"	51 to 75 "
1	"	"	"	76 to 100 "
3	"	"	"	101 to 152 "
35	"	"	"	made no return : and on enquiry why this was so, I found that 22 had taken temporary duty during the year and had since left the County : and the remaining 13 sent no answer although repeatedly applied to.

(b) *Untrained Midwives.*

6	Untrained	Midwives	attended	no cases.
39	"	"	"	1 to 10 cases.
12	"	"	"	11 to 20 "
4	"	"	"	21 to 30 "
3	"	"	"	31 to 40 "
7	"	"	"	41 to 50 "
3	"	"	"	51 to 75 "
1	"	"	"	76 to 100 "
3	"	"	"	101 to 146 "
10	"	"	"	either left the County or failed to send returns.

179. The chief reasons why the 10 trained and 6 untrained Midwives attended no case, were either (1) illness or (2) temporary duty where no midwifery duties were necessary, but the Statutory notice was given in case an emergency call was given.

180. The County Midwives attended 3,179 lying-in women in 1919, i.e., 58 per cent. of the total births.

181. The trained Midwives attended 1,658 (30 per cent) cases in the County, and untrained Midwives attended 1,521 cases (28 per cent.)



*Medical Aid Records.*

182. The Table shows the number of notices where trained and untrained Midwives respectively advised that Doctors should be sent for :—

TABLE XV.

62	Trained	Midwives	sent	in	No notice.
30	"	"	"	"	1 "
11	"	"	"	"	2 notices.
10	"	"	"	"	3 "
3	"	"	"	"	4 "
9	"	"	"	"	5 to 7 notices.
8	"	"	"	"	8 to 23 "
60	Untrained	Midwives	sent	in	No notice.
9	"	"	"	"	1 "
1	"	"	"	"	2 notices.
5	"	"	"	"	3 "
3	"	"	"	"	4 "
8	"	"	"	"	5 to 7 notices.
2	"	"	"	"	8 to 11 "

183. The following Table compares the numbers of such notices during each of the years 1914-1919 :—

1914.	1915.	1916.	1917.	1918.	1919.
298	283	310	262	300	354

184. 251 notices were sent in by trained and 103 by untrained Midwives.

*Still Births.*

185. Table XVI. shows that the Still-births reported were as under :

TABLE XVI.

	1914.	1915.	1916.	1917.	1918.	1919.
Notified by Mid-						
wives - -	189	155	145	142	142	145
Notified by Doctors						
and parents -	91	69	77	52	49	53
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	280	224	222	194	191	198
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>

186. Of the 5,401 Births notified in the County in 1919, 3.6 per cent. were Still-births.

*Deaths of Mothers and Infants.*

187. Two deaths of infants and one death of a mother were reported last year. Each case was investigated by a Medical Inspector ; and in no instance was it necessary for your Committee to take any action.

*Puerperal Fever.*

188. Only 4 of the 15 cases reported during 1919 were attended by Midwives, 5 cases were notified in 1918, 6 in 1917, and 14 in 1916.

189. The enquiries made as to these cases are mentioned in the paragraph on "Puerperal Fever."

*Training of Midwives.*

190. The Annual Grant made by the Higher Education Committee made it possible to train 83 women during the past fourteen years. Seventy-eight of these have obtained the certificate of the Central Midwives Board and 3 failed to do so. Two candidates are still under training.

191. The large increase in Midwives specially trained in this work, viz., 60 per cent now, as compared with 7 per cent. in 1905, is very satisfactory.

192. The great necessity and importance of increasing the number of properly trained Midwives cannot be too strongly urged.

193. It is not only at the actual time of the birth of the child that a trained Midwife is so essential, but it is during the ante-natal and post-natal time that her advice and help are productive of so much good both to the mother and to child.

194. The early diagnosis of disease such as Pemphigus and Ophthalmia Neonatorum in children is of the greatest importance, and this can only be done by a Midwife who has had special training.

195. Now that the Midwives Act 1918 has come into force, it will no longer be necessary to apply to the Education Committee for Grants for training Midwives, as the Council are empowered to make the necessary Grants out of the County Fund.



196. It is also important to continue to train suitable local women to act as Midwives to take the place of the old registered Midwife who is slowly dying out. It also becomes more apparent, that it is almost useless to train women (particularly those in country districts) unless they have some other means of livelihood.

197. One Midwife duly trained and most satisfactory in every respect is leaving the County as her income from Midwifery in 1912 was £16. The combination of District Nurse and Midwife seems to work well, and it is hoped will be still further extended, especially in the Rural Districts of the County.

#### *Fees to Medical Practitioners.*

198. In June 1918 the County Council voluntarily agreed to pay the fees of Doctors "when medical assistance was required by "Midwives for the aid in confinement of necessitous women."

199. By the Midwives Act 1918 the Supervising Authority are now obliged in such cases to pay the Practitioner's fee according to the scale fixed by the Local Government Board.

200. Last year £103 15s. 6d. was paid to Doctors for attendance on 59 cases: and between January 1st and August 30th. 1920 a further sum of £89 13s. 6d. in connection with 50 cases: at the present time the sum of £14 13s. 6d. has been recovered.

#### *Subsidies to Midwives.*

201. The County Council made 4 Midwives Grants of £10 each, during 1919, as their earnings were not sufficient for them to live upon. These Midwives resided in the following Districts, viz. :—

Offenham.  
Charlton.  
Stourport.  
Kidderminster.

#### *Grants to District Nursing Associations.*

202. Grants varying in amount from £15 to £30 have been made to 14 Associations in the County who employ Nurse-Midwives. This makes a total of 28 Associations in the County who have received such Grants. The total amount of these Grants to August 1920 was £375.

*Report of Medical Inspectors.*

203. The following are the Annual Reports for 1919 made by Drs. Mary Williams and Basil Housman :—

- “ In the Western Division of the County, inspection of Midwives has  
“ been carried out as before.
- “ Every practising Midwife has been visited at least once, twenty-two  
“ have had two visits, nine have had four visits each, and in two  
“ cases as many as six or seven have been required.
- “ The Regulations are being generally complied with.
- “ The standard of cleanliness has always been good among the trained  
“ women, but the untrained are distinctly a cleaner set than they  
“ used to be.
- “ For some years I have seen reason to believe that there is a tendency  
“ to attach blame to someone—doctor or nurse—when there is a  
“ case of Puerperal Fever. But it has been shewn that in many  
“ cases germs capable of originating this complaint, are common  
“ inhabitants of the patient’s body, and it is at least possible that  
“ some of the cases may originate without infection from outside.  
“ More work is needed before any definite verdict is possible.

“ MARY HAMILTON WILLIAMS.

“ January 16th 1920.”

- “ On being released from Military Service, I resumed my duties as  
“ Inspector of Midwives in the Eastern Division of the County, and  
“ I found that there were 60 practising Midwives, of whom 28 are  
“ trained. During the last 9 months of the year 11 trained Midwives  
“ have been added to the list, and 6 trained or untrained have retired  
“ or died. On December 31st 1919 there remained 65 Midwives  
“ in practice. All Midwives have been visited at least once with the  
“ exception of four, who only started practice late in the year.
- “ I have experienced much difficulty in finding the Nurses at home, and  
“ the curtailment of Railway service and other difficulties of transport  
“ have prevented a call later in the day. A considerable proportion  
“ are old women, really past hard work, and it is a matter of surprise  
“ to find the number of cases attended by some of them, and the  
“ distances they travel afoot. One Midwife has just retired aged 82,  
“ who has been practising since she was 18. Another aged 74  
“ attended 168 confinements in 1919.
- “ It is satisfactory to note that a very fair standard of cleanliness and  
“ accuracy in keeping registers has been maintained in spite of very  
“ infrequent inspections during the past four years, and the cases of  
“ puerperal sepsis have been few. This I attribute to the infinite  
“ patience of the Midwives and the absence of repeated examin-  
“ ations. It is to be expected that in future inspection will be  
“ carried out with regularity and increased frequency.

“ BASIL HOUSMAN.

“ 2nd February 1920.”

*Lying-in Hostels.*

204. Applications were made last year to the County Council to provide, or assisting in providing, Maternity Homes at Malvern



and Kidderminster: so this question was fully considered by the County Council at their Meeting on the 8th December 1919, when they decided that in view of the large expenditure to which they were committed they could not at present assist the establishment of Hostels at these places.

205. That being the case, a Voluntary Society decided (with the approval of the Ministry of Health) to themselves establish a Lying-in Hostel at Kidderminster.

206. Dr. Hodgson Moore, Medical Officer of Health for Kidderminster, in his Annual Report writes:—

“ There is a Home for illegitimate children established in Hurcott Road, carried on by the Worcester Diocesan Society. Maternity work is carried on. Babies, whose mothers go out to work, are cared for, and widows' or widowers' children are received. In the case of a mother going into the Infirmary, or away to a Convalescent Home for treatment, her children can be admitted and taken care of until her return.”

207. In a Special Report I made to the Administrative (Health) Committee on May 31st 1919, it is stated: “ There is a pressing need for a Lying-in Hospital in the County of Worcester. At present no accommodation for difficult cases, for cases from districts where there is no Midwife, or for unmarried mothers can be found nearer than Birmingham, Derby or Bristol. Difficult labour cases, or cases in an area destitute of Midwives, very often go through much preventable suffering and in many instances are invalided for life for lack of skilled attention. The unmarried mothers sometimes go to the most unsuitable lodgings, or being unwilling to go to the Workhouse attempt to injure themselves by bringing on abortion, or else do away with the child after birth. In addition to this, many women have to be confined in miserable, overcrowded homes, as there is no opportunity for them to seek admission to Lying-in Hostels.” But considering “ the large expenditure to which the Council are committed,” I do not think it is practicable for a rate supported Hostel to be established in Worcestershire just at the present time.

*Alteration of Rules of Central Midwives Board.*

208. During 1919 the Central Midwives Board Rules, which have reference to the duties of Midwives, were amended: and Midwives are now required to notify to the County Council whenever it is

proposed to substitute artificial feeding for breast feeding. Furthermore, power has now been given to Local Supervising Authorities to temporarily suspend from practice a Midwife whose case has been reported to the Central Midwives Board.

209. I brought these new Rules to the notice of each practising Midwife in the County.

*Scarcity of Midwives.*

210. Table XIV. shows the numbers of confinements the various Midwives attended last year ; and that only 18 of the 221 practising Midwives attended more than 50 cases each.

211. This shows (as stated in my last Report, p. 25) "how difficult (in fact almost impossible) it is for properly trained Midwives in private practice to make adequate incomes in Worcestershire ; and consequently how necessary it is, that the Nurse-Midwives Associations in the County should be increased as much as practicable ; and that where such Associations cannot be formed, Midwives should be subsidised. . . . Another way of supporting an efficient Midwifery service would be to assist the very poor classes."

212. Three new Nursing Associations have been formed and have appointed Nurse-Midwives since I wrote the above paragraph, and I previously mentioned later that a few Midwives have been "subsidised."

213. I stated in my last Digest (p. 27) that there was a scarcity of Midwives at Oldbury, and in the districts adjacent to Severn Stoke, Spetchley, Cotheridge, Crowle, Grafton Flyford, Pendock, and Upton Warren.

214. Oldbury Nursing Association has now 2 Nurse-Midwives ; Spetchley and Cotheridge are supplied by the County Nursing Association ; Grafton Flyford and Crowle will have the services of the resuscitated Himbleton Association Nurse-Midwife ; and the position at Pendock and Upton Warren is unchanged.

215. From preliminary enquiries I have made, there now appears to be a want of Midwives at the following places :—



- 1 Cradley - - At this populous place there is no resident Midwife, and the need for one or two is very urgent. The Chairman of the Administrative Health Committee, who is also Chairman of the County Nursing Association, is endeavouring to form a local Nursing Association.
- 2 Bromsgrove Urban District There are only 2 Midwives, one of whom is overworked and the other is infirm. Possibly if the local Nursing Association received considerable financial assistance they might be induced to appoint one or two Midwives.
- 3 Bromsgrove Rural District Your Inspectors of Midwives report that there are no Midwives at Dodford, Fairfield, Wildmoor, Tardebigge and Upton Warren. Special enquiries as to how to meet the local requirements of these places should be made.
- 4 Shipston-on-Stour District There is one Midwife who is very infirm. Probably if the local "Holt Ockley" Association were adequately remunerated they might be induced to provide a Midwife.
- 5 Romsley and Frankley A Midwife located in Romsley could conveniently cover the district as far as the Halesowen border, and take Frankley and Chapman's Hill, coming into touch with the Rubery Midwife. There is not enough work to supply a living. If a local woman could be trained the difficulty would be met.
- 6 Norton and Lenchwick and Harvington A Nursing Association has been formed here and as soon as a Nurse-Midwife can be obtained she will take up her duties.
- 7 Longdon - - There is need of a new Nurse—a local trained woman if possible.
- 8 Malvern Wells - Arrangements will probably be made here by the local Committee early next year.

- 9 Clifton-on-Teme - There is an old local Midwife who does the midwifery. Every attempt to make a Nurse stay here has failed as it is so lonely.
- 10 Shelsley Walsh - The District Nursing Association here  
 „ Beauchamp has been discontinued: if the  
 „ Kings Association could be resuscitated this would meet the case.
- 11 Stoke Bliss - - Needs a local trained woman.
- 12 Eastham - - A very suitable local woman has been found and has started her training.
- 13 Bayton and Mamble There used to be a District Nursing Committee which should if possible be re-started.
- 14 Stone and Chaddesley Corbett Needs a local trained woman.

(B). *Infant Welfare Work.*

216. When I made my last Annual Report there were 14 whole-time Health Visitors, and 37 District Association Nurses, whose duty it was to advise Nursing and Expectant Mothers in every part of the County. Eleven of the former were employed by the County Council, 1 by Kidderminster Corporation, 1 by Stourbridge "Voluntary Agency," and 1 by Malvern "Voluntary Agency."

217. By the new Scheme which has just come into force, 3 more whole-time County Health Visitors, and 3 additional Association Nurses have been appointed: so that now, there are 17 Health Visitors, and 40 Association Nurses engaged upon Infant Welfare work in the County. Under this new arrangement the districts of the Health Visitors are much smaller than formerly, and consequently they will in future be more closely in touch with nursing and expectant mothers, than used to be the case.

218. I pointed out last year, that although (1) I systematically inspected the work at the "Consultation Centres," (2) examined the card reports upon infants every quarter, and (3) had occasional interviews with the Health Visitors, supervision of the Health Visitors was not what it ought to be. Now however that you have appointed 11 Assistant County Medical Officers who will have



comparatively small districts, and not only reside near the Health Visitors but also constantly meet them at the Schools, supervision ought to be, and I do not doubt, will be, thoroughly effective. Furthermore, the Medical Officers will be able to visit any mothers in need of Infant Welfare advice, to whom their attention may be drawn, by the Health Visitors. I am quite hoping too, that the expectant mothers who are unable, or unwilling on account of distance or for other reasons, to attend "Consultation Centres," may be able when necessary to get the advice of the Assistant County Medical Officers, in those instances where no local Doctor is in attendance.

219. During 1919, I received 5,401 notices under the Notification of Births Act, and sent lists of these to the Health Visitor of the locality in which they occurred.

220. The following Table gives some detailed information on this point :—

TABLE XVII.

Health Visitors,	No. of "Notifica- tions" sent in 1919.	Number of		Percentage Visited.
		1st Visits.	Total Visits.	
County whole-time Health Visitors - - - -	3,513	3,243	25,215	92%
Association Nurses - -	898	664	11,126	74%
*" Voluntary Agencies "	549	452	7,044	82%
*Kidderminster Corporation	441	352	3,856	80%
Totals - - - -	5,401	4,711	47,241	88%

\* Information supplied by courtesy of the Health Visitors.

221. I have previously mentioned (Table I.) that 4,958 births were "registered" in the County: and from the above Table it appears that 5,401 births were "notified" to me. This apparent discrepancy is explained by the fact that the "notified" births, include "still-births": whereas the "registered" births merely refer to infants born alive.

222. Table XVIII. shows that 88 per cent. of the 5,401 births notified, were enquired into by the Health Visitors: and that 92 per cent.



of the 3,513 which occurred in the Districts of the whole-time County Health Visitors were supervised. These figures only apply to children under one year of age ; but infants up to 3 years of age are dealt with : and I trust when the new Infant Welfare Scheme has settled down, that children up to 5 years of age may be taken in hand.

223. I mentioned in my last Digest that on March 19th 1918 the Local Government Board suggested that 3, instead of 2, whole-time County Health Visitors should be employed in Oldbury Urban District. When this letter was received, the 2 Oldbury Health Visitors not only undertook Infant Welfare work, but acted as Tuberculosis, and Mentally Defectives' Visitors. Since then a Nurse has been specially appointed to act as Tuberculosis and Mentally Defectives' Visitor in Oldbury (and other adjacent localities) : consequently the 2 Oldbury Health Visitors will be able to devote their whole time to Infant Welfare work.

224. Last year there were 784 births in Oldbury Urban District, and 615 in the adjoining Rural District of Halesowen, and as infants are supervised until they attain 3 years of age, there were about 4,200 children for these 4 Health Visitors to look after : in other words, approximately each Health Visitor had to deal with 1,000 babies. The Ministry of Health in the circular (M. & C.W. 4) dated 9th August 1918, say: "As a result of this further experience, the Board consider that the standard of 500 births to each Health Visitor, which they have previously suggested, should be modified. The functions of a Health Visitor should comprise the visiting and supervision of all children under School age, in the districts needing their attention ; the visiting of expectant mothers who have attended at an ante-natal Centre, or for whom visits are desirable ; enquiry into still-births and the deaths of young children ; and attendance at the Centre to which women and children, including those whom she has visited in their homes, come for medical and hygienic advice. Where these duties are fully performed it appears to the Board that a district with about 400 births a year will be as much as one Health Visitor can undertake, unless the district is very compact, or is of such a class that many infants do not need visiting. The Health Visitor's district should where practicable be so arranged that it is served by one Centre."

225. Parts of the Oldbury and Halesowen Districts are "very compact," but other parts are rural in character : and the districts



of the 4 County Health Visitors have been so arranged, that each of them has charge of a "Centre."

226. To come up to the Board's standard therefore, there ought to be 10 Health Visitors at work in the Oldbury and Halesowen Districts instead of 4. This state of perfection is, in my opinion, impracticable at the present time: not only for reasons of cost, but also owing to the scarcity of Nurses.

227. It seems to me however that as the populations of these two Districts are almost entirely workers in factories, that you should *at once* increase the number of Health Visitors to 6.

228. In connection with this, it should not be forgotten that the salaries of £150, with allowances for personal and out-of-pocket expenses, which you now pay and offer, are lower than the salaries paid in adjoining Counties, and your Health Visitors have just presented a Petition asking that their remuneration should be increased. Another reason why the salaries of Health Visitors will I think have to go up, is that they will shortly have to be "certificated," as the "Ministry of Health have just decided that "in cases requiring Government sanction and Grant (a stipulation "which applies to Worcestershire), the Ministry will require that "all women appointed for the first time as Health Visitors, on and "after a date of which due notice will be given, must have obtained "the certificate described in the Regulations of the Board of "Education (dated 10th July 1919) with or without qualifications."

229. As recently as 18th August last the Ministry, when approving the appointment of one of your Health Visitors, made it a condition of their approval, that she obtained the Certificate of the Royal Sanitary Institute at an early date.

230. The following are extracts from the Annual Reports of the Medical Officers of Health of the Districts in which the whole-time County Health Visitors work:—

*Bromsgrove Urban District.*

231. Dr. Kidd says:—

"The Infant Centre at 62 High Street has continued its good work under  
"the County Council. The weekly attendances have increased,  
"and there are frequently from 40 to 50 mothers with their infants.  
"Records are kept of the weight and progress of each child, and



" advice given by the Nurse and myself. The proportion of breast fed children is satisfactory. The members of the Ladies' Committee continue to give invaluable help, but there is still room for more helpers, and I warmly recommend the work to any ladies who can give an afternoon weekly. That good work is being done is, I think, proved by the decline in the Infantile Death-rate."

*Bromsgrove North Urban District.*

232. Dr. Kidd says :—

" The Infant Centres at Catshill and Rubery have been working regularly through the year, monthly at Rubery and weekly at Catshill, though the attendance at Rubery has been so small as to make it doubtful whether even a monthly meeting should be continued. At Catshill the attendance has been better, reaching an average of double figures. As usual, it is the better class of mother who attends, and I have been glad to note the very large proportion of infants who are breast fed, certainly a large majority of the infants attending the Catshill Centre. Home visiting remains the chief method of influencing the ignorant or neglectful mother, and it is here that the visiting Nurse finds her greatest scope ; she has been indefatigable and is on the best of terms with the mothers. That real good work has been done is, I hope, shewn by the steadily diminishing infantile death-rate of recent years. It is now just 6 years since the work was first started in these Districts."

*Kidderminster Borough.*

233. Dr. Hodgson Moore says :—

" The Supervising Authority under the Midwives Act is the County Council. The Maternity and Child Welfare work is carried on by a Committee consisting of 16 Members of the Town Council eight women (two of whom represent the working classes), and one Medical man. There is a whole-time Health Missioner.

" A Clinic supervised by a Committee of Ladies is established in Prospect Lane for attendance of infants from birth to five years.

" Babies are weighed.

" Glaxo and Chymol are sold at cost price.

" Virol and Cod Liver Oil Emulsion are given when ordered by Doctor.

" Minor ailments are attended to.

" A Medical man attends fortnightly and all children are seen by him. Notes are entered on Record Cards.

" Expectant mothers can attend, but so far not many have availed themselves of the opportunity.

" Another Clinic was opened in April 1919 at St. John's Institute.

" The Health Missioner receives notification of births from the County Council and visits all the infants at their homes (excepting cases where it is not deemed necessary), assists with her advice and in necessitous cases gives milk tickets. These cases are brought before the next monthly meeting of the Committee and are reported on by a Lady Visitor appointed by the Committee.

" Expectant mothers are also visited by the Health Missioner who, if she finds anything abnormal, advises them to see a Doctor.



" The County Council pay the fee of any Medical man called in by a  
" Midwife, in necessitous cases.

" The Health Visitor pays special attention to the illegitimate children.  
" Of those born during the year, eight are at home with the mother,  
" seven with relatives, one has left the District, two have moved  
" and not been traced, and three belonged to outside districts."

*Lye and Wollescote Urban District.*

234. Dr. Darby says :—

" Sister Green has been appointed to the Welfare work, and she has  
" also done most of the visiting in connection with the outbreak of  
" Measles. The attendance has increased considerably since she  
" took up her duties.

" The following subjects have been treated upon in my Lectures to the  
" mothers :—

" A child's shoes and socks and bedclothes and the correct  
" covering for a baby's head.

" The baby's bath and how to give it.

" How much sleep a baby should have, and how to arrange for  
" exercise.

" Popular errors with regard to mothers and babies.

" Diarrhœa—how to avoid and how to treat.

" Importance of environment and surroundings in childhood,  
" especially cleanliness.

" About children's teeth—where they are at birth and how  
" influenced by blood supply to the jaws; advantage of  
" hard food.

" Adenoids—what they are and diseases they lead to.

" Rickets—its cause and prevention.

" Heart disease and rheumatism in children—importance of  
" and how to avoid.

" Measles and all about it.

" Diet of children in second year.

" Again I wish to say that I think that attendance at a Welfare Centre  
" should be made as compulsory as School attendance. It is usually  
" those children whose parents most need advice and tuition who  
" are absent.

" One cannot help being impressed by the number of congenital defects  
" which would have been overlooked if the children were not system-  
" atically examined at the Welfare. I think that the finding of  
" these defects and the advice as to their treatment, is a very  
" important part of Welfare work. My observations also lead me  
" to believe that adenoids are often congenital, a fact which I have  
" not seen elsewhere recorded.

" A Baby Show was held in August. It was well attended, and many  
" prizes were given. Dr. Fosbroke was unfortunately unable to be  
" present; his absence was regretted since his great interest in the  
" work is always an incentive to all concerned. Mrs. Lucas and the  
" ladies of the Committee of the Welfare did splendid work and the  
" affair was a great success. Mrs. Sidney Law distributed the prizes,  
" and Dr. Sinton, Medical Officer of Health for Stourbridge, kindly  
" did the judging. After the mothers had partaken of tea in the  
" Congregational Schoolroom the fathers and mothers of children  
" attending the Welfare were admitted free to the Victoria Hall  
" entertainment by the kindness of Mr. Arnold and the manage-  
" ment. I took the opportunity of speaking to the parents upon  
" the work of the Infant Welfare Centre, especially addressing my  
" remarks to the fathers present.



" Mrs. Lucas has been superceded by Sister Green. Mrs. Lucas has  
 " been in the District, working in one way or another in connection  
 " with home visiting and the care of children, for about 17 years.  
 " She has had many difficulties to contend with in the way of popular  
 " prejudices &c., such for instance as the prevalent idea that it is  
 " unlucky to have a baby weighed &c. ; but she has done good  
 " uphill work, and I wish to place it on record that she has worked  
 " so long and so well amongst the people of this District."

*Malvern Urban District.*

235. Dr. Mitchell says :—

" The Malvern Maternity and Infant Welfare Association is a voluntary  
 " Association which has received, in addition to the Government  
 " Grant, a Grant from the District Council, Members of whom are  
 " on the Committee.

" Work is undertaken in all parts of the districts with the exception of  
 " West Malvern and Upper Welland ; in the former of these the  
 " District Nurse acts as Visitor.

" There are 3 Centres in various parts of the districts at which mothers  
 " and children attend.

" I have pleasure in reporting as follows :—

" During the year the work of the Centres was somewhat interfered  
 " with by the presence of infectious disease in the District, and nine  
 " clinics only were held.

" Miss Bazell has ably filled the position of Superintendent during the  
 " regrettable absence of Miss Morson on sick leave.

" No case of acute illness was seen at the Clinics during the year, and  
 " in the majority of cases advice of a general character was all that  
 " was necessary.

" Cases requiring Hospital treatment were admitted to the Malvern  
 " Hospital ; these were mainly cases of minor operations or wasting  
 " babies. In this connection I should like to mention that there are  
 " only four beds in the children's ward at the Hospital for children  
 " up to 10, and the almost continual occupation of at least one bed  
 " by a wasting bady from the Clinics, is apt to tax the remaining  
 " beds to their utmost and causes delay in admission. Doubtless  
 " it would be of advantage if the Association could have a little  
 " Hostel of three or four cots where the babies could be taken in for  
 " a short time in cases where they are not thriving at home, and  
 " before they are bad enough to send to Hospital, but I would not  
 " say such a Hostel is absolutely necessary even if the funds of the  
 " Association could afford it.

" In the District during 1919 there were 6 deaths of children under one  
 " year, as compared with 4 in 1918, and the infantile mortality  
 " amounted to 37.4 per 1,000 births registered.

" There was only one death among the children attending the Centres.  
 " Details of the amount of work done will be found in the Report of  
 " the Superintendent.



*"Superintendent's Report.*

- " There have been 98 meetings held during the past year, 160 children  
 " are on the Centre registers, and in all have made 2,328 attendances.  
 " The average number of mothers attending the Centres is as follows :
- " Malvern Link 32, Newtown 29, Barnard's Green 20. This  
 " bringing the total weekly to 81. The weekly attendance  
 " of mothers and children at the Centres naturally varies  
 " with circumstances such as weather, sickness, whooping  
 " cough, more especially this year, though fortunately no  
 " Centre had to be closed owing to illness.
- " The Lectures given have been on Mothercraft, Home Nursing, Cooking  
 " and the cutting out and making up of simple garments. In the  
 " latter two subjects the mothers have been very interested and  
 " proved their appreciation by results.
- " As in previous years, excellent results were obtained in the National  
 " Mothercraft Competitions held in July. Fifteen competitors  
 " entered, 4 of whom won honours (one a prize), 7 were awarded  
 " First Class and 3 Second Class Certificates.
- " In the examinations held by the National Society for Prevention of  
 " Infantile Mortality in June, 2 Honours Certificates were gained,  
 " 9 Certificates for the advanced paper on Mothercraft, and 3 for the  
 " Elementary Examination.
- " The Rhondda Mothercraft Challenge Shield for England was won by a  
 " mother attending Barnard's Green Centre, her essay being printed  
 " in the July number of National Health. The subject, 'What do  
 " you consider the most important points in rearing healthy and  
 " happy children,' was reprinted in the Malvern News.
- " The home visiting is carried on regularly. 4,377 visits have been paid,  
 " of which 3,961 have been made to mothers and children, the  
 " remaining 416 in connection with the working of the 3 Centres.  
 " 143 visits have been received in office hours, and 672 letters written.  
 " Classes on Mothercraft have been held for the elder girls from  
 " the various Elementary Schools. The readiness and enthusiasm  
 " to learn and practice the practical work is wonderful.
- " Dr. Mitchell, the Medical Officer of Health, has paid 9 visits to the  
 " Centres in turn. According to routine he has seen all entrants  
 " and any other child needing attention. 26 cases have been sent  
 " to the Hospital for minor operations, and 3 wasting babies and 2  
 " expectant mothers have been provided with dentures.
- " The County Council Scheme for providing Milk for necessitous families  
 " under a strict wage limit which was started last year is proving a  
 " great help. An average of 50 weekly receiving this assistance.
- " The Malvern Maternity Charity supplies milk, groceries and the loan  
 " of maternity bags; the recipients much appreciate this extra help.
- " The Superintendent's special Nourishment Fund has had more calls  
 " than previous years owing to the ever increasing cost of living.
- " Very grateful thanks are due to all those who have so kindly subscribed  
 " to this and other funds, which add so much to the harmony and  
 " usefulness of the work.

*"Centres.*

- " There are three Centres in the Malvern area where babies are regularly  
 " weighed. The Doctor attends once a month, and homely talks  
 " given to the mothers on health, home hygiene, cookery, &c.



- " A cup of tea and a bun are supplied, for which three-halfpence is charged.
- " Three Centres opening at 2.30 p.m. are held at :—  
 " Etonhurst, Barnard's Green. Tuesdays.  
 " Workman's Institute, Newtown. Wednesdays.  
 " Church Institute, Malvern Link. Fridays.
- " There is no Maternity Hospital or beds set aside for confinements in the General Hospital.
- " No case of the special diseases peculiar to parturient women was notified."

*Oldbury Urban District.*

236. Dr. Buttery's reference to the good work carried out by the County Health Visitors in this District is found in the foregoing paragraphs headed "Infantile Mortality."

*Redditch Urban District.*

237. Dr. Stevenson says :—

- " Under the County Health Visitor the Infant Welfare work continues to progress most satisfactorily ; the weekly consultations have been regularly and well attended and undoubtedly the mothers are interested. At the same time the value of home-visiting is not lost sight of, and the Nurse continues to give this branch of her work her attention."

*Stourbridge Borough.*

238. Dr. Sinton says :—

- " This work is carried out by a Voluntary Organisation having premises at No. 24 New Road.
- " Some time ago this Town Council applied unsuccessfully to the Local Government Board to have the Notification of Births Act re-transferred from the Worcestershire County Council. I consider it is desirable that this Act should be administered locally in conjunction with the Local Voluntary Organisation."

239. With regard to what Dr. Sinton says as to the desirability of the Notification of Births Act being administered locally in conjunction with the Local Voluntary Organisation, it should be understood that from the time this Organisation was started I have sent lists to them *each day I received the births notified in the Borough*, and consequently it would be of no advantage to the working of this Organisation, if the Corporation had administered the Notification of Births Act, and which the Ministry of Health declined to re-transfer to the Corporation.

240. The County Council took over the administration of the Notification of Births Act on the application of the Stourbridge Council, and naturally the County Council now decline to re-transfer it.



*Halesowen Rural District.*

241. Dr. Brett Young says :—

*" Infant and Child Welfare Work.*

*" This is under the County Medical Officer of Health.*

*" There are two Centres, one at Halesowen and one at Cradley. Each Centre is open weekly, and to the District Medical Officer of Health is delegated the duty of attendance fortnightly. The work is carried on by the District Medical Officer of Health and 2 Health Visitors and many voluntary helpers. All new cases are seen and examined by the Medical Officer. Any cases needing actual medical attention are referred to their own Doctors. Cases of congenital defects which are considered remediable by surgical means and all surgical cases are referred to hospital.*

*" The greatest efforts are used to encourage and secure breast-feeding, and to do this in a perfectly regular and methodical way. Unfortunately, however early as the infant is visited after birth, in a large number of cases it is found to be already 'on the bottle.' It would seem that the only way to secure this undoubtedly great boon for the infant would be to get hold of the expectant mother and endeavour to convince her of the possibility and the great advantage to the infant of natural feeding and to give her such definite and specific instructions as shall secure its success.*

*" The home visiting by the Health Visitors is a very important part of the work, as it is largely by this means that the mothers are induced to attend the Consultation Centres. It is energetically carried out in the Halesowen District, to the very great advantage of the mothers and children. The mothers are willing in most cases to act upon the advice given and to try better methods of feeding and general management for their children. They are not so bound by tradition as formerly and bring their children to the Centre at a much earlier age."*

*Infant Life Protection Act.*

242. The Ministry of Health in a circular addressed to Boards of Guardians dated 13th September 1919, suggested that the duties of Infant Protection Visitors could best be performed by Health Visitors attached to the County Council in the exercise of their powers under the Maternity and Child Welfare Act 1918, and asked the Guardians to confer with the Local Authorities with a view to the appointment where practicable of the same woman as Health Visitor and Infant Life Protection Visitor.

243. By direction of the Administrative (Health) Committee a communication was addressed to each Board of Guardians in the County asking for their observations and stating that the Council would be willing to allow their Nurses to act as Infant Protection Visitors, if they so desired.



244. The result of this communication was, that all the Guardians in the County declined to interfere with their present arrangements except Bromsgrove Newent, Stow-on-Wold and Stratford-on-Avon Guardians, who have agreed with the County Council and Nursing Associations to undertake the inspection required by this Act, and to make quarterly reports to the respective Boards of Guardians.

*Consultation Centres.*

245. Cradley Consultation Centre was opened on 6th January 1919 and Blackheath Centre on 20th February 1920, so that there are now 16 "Consultation Centres" in the County which nursing and expectant mothers attend, and receive "medical and hygienic advice." These are nearly all opened weekly, when a Health Visitor is present. A Medical Officer attends either fortnightly or monthly to advise expectant or nursing mothers. Ten of the Centres are maintained by the County Council, 1 by Kidderminster Corporation, and 5 are supported by "Voluntary Agencies" who are financed by voluntary subscriptions aided by Grants from the Ministry of Health and the Local Sanitary Authorities.

246. Table XVIII. shows where the "Centres" are situated, and the average number of weekly attendances of "mothers" at each Centre.

247. The attendances of mothers at each of these "Centres" are good considering the populations of the districts they serve.

248. Those of the Oldbury and Halesowen Centres are pre-eminently satisfactory: especially when it is borne in mind that the Warley and Blackheath Centres were established as relief Centres in the Oldbury and Halesowen Districts respectively. The attendances at the Lye Centre I think ought to be greater; but unfortunately the Health Visitor in that District was partly incapacitated some time back, and there have been unavoidable changes of Health Visitors since then. The population of the Rubery District is small, and the attendances consequently so few, that I am of opinion that it is not worth while to continue it.

249. The Medical Officer of Health (Dr. Kidd), who attends this Centre on behalf of the County Council, quite shares that opinion. The accommodation at the Catshill Centre is insufficient, and is not



what was originally arranged. During the War, 2 of the rooms were required by the Local Food Control Committee; but now that the labours of that Committee are ended, I have been able to acquire the rooms originally made use of.

TABLE XVIII.

AVERAGE WEEKLY ATTENDANCES OF NURSING AND EXPECTANT MOTHERS AT THE CONSULTATION CENTRES IN WORCESTERSHIRE DURING THE 12 MONTHS ENDED JUNE 30TH 1920.

	REDDITCH.	OLDBURY.	WARLEY.	LVE.	HALESOWEN.	CRADLEY.	BLACKHATH.	RUBERY (a).	BROMS-GROVE.	CATSHILL.	EVESHAM VOLUNTARY AGENCY.	STOUR-BRIDGE VOLUNTARY AGENCY.	MALVERN LINK.	BARNARD'S GREEN.	NEWTOWN.	KIDDERMINSTER CORPORATION.
	COUNTY COUNCIL.											MALVERN VOLUNTARY AGENCY.			Since Jan. 1916.	
	Opened 5th April 1916.	Opened 15th Aug. 1916.	Opened 11th April 1918.	Opened 4th April 1916.	Opened 9th May 1916.	Opened 6th January 1919.	Opened 26th Feb. 1920.	Since 1st May 1916.	Since 1st Jan. 1916.	Since 1st Jan. 1916.	Opened 9th March 1917.	Opened 12th Jan. 1916.	Opened 10th Feb. 1916.	Opened 22nd Feb. 1916.		Opened 16th Feb. 1916.
1919.																
January ...	23-0	105-5	44-0	16-5	62-2	18-0	...	4	16-4	5-0	27-6	48-0	33-0	16-5	19-7	34-6
February ...	23-2	97-2	42-0	11-0	60-5	29-2	...	6	22-0	3-5	24-7	47-0	25-3	15-7	16-3	28-0
March ...	26-7	94-2	39-5	14-0	69-0	30-4	...	5	22-5	5-5	24-7	34-7	25-7	11-5	19-5	29-5
April ...	32-0	110-0	38-2	14-4	116-0	27-0	...	7	17-4	9-0	35-3	49-0	35-0	23-0	27-5	38-5
May ...	33-6	96-2	46-0	19-7	126-0	31-0	...	6	21-0	7-4	35-6	52-2	37-0	19-0	32-2	39-6
June ...	23-0	110-3	43-0	21-3	145-3	26-0	...	5	22-5	10-0	37-5	55-5	38-0	22-0	29-0	38-0
July ...	25-0	103-6	32-0	25-2	125-2	25-7	...	4	31-8	7-0	Closed	52-8	43-0	27-6	31-3	42-0
August ...	24-5	108-0	32-0	19-0	96-3	23-3	...	8	23-2	4-5	26-8	46-7	27-0	24-0	21-0	44-2
September ...	26-7	108-6	40-0	17-2	105-4	25-0	...	6	28-5	3-5	29-0	58-4	Closed	Closed	Closed	70-0
October ...	26-6	108-7	38-4	20-0	114-2	37-2	...	10	24-2	4-0	31-2	67-2	34-0	"	29-5	58-4
November ...	21-5	99-2	34-7	21-0	151-7	43-7	...	6	30-2	3-5	34-0	62-2	28-7	"	28-2	57-7
December ...	19-2	97-6	32-0	19-6	147-0	40-2	...	2	32-2	4-3	36-0	47-2	27-0	"	25-3	60-0
1920.																
January ...	40-2	104-0	40-8	24-3	125-5	62-7	...	3	39-3	4-8	41-8	65-2	24-8	21-3	27-2	61-6
February ...	52-0	126-7	51-2	34-2	110-7	53-5	57-0	3	43-2	6-2	39-7	75-2	26-5	24-2	27-5	90-0
March ...	50-5	127-8	58-2	42-6	121-8	49-4	64-5	3	37-6	9-0	46-7	82-4	29-2	18-2	30-0	98-2
April ...	31-2	124-0	39-5	37-6	69-0	58-3	66-0	3	28-5	5-2	36-5	62-2	19-0	14-0	22-0	80-0
May ...	45-0	129-0	48-7	39-0	105-5	64-7	77-5	3	31-5	6-7	43-2	69-0	19-5	15-3	23-3	96-2
June ...	36-0	120-2	46-0	36-6	63-8	63-7	64-5	3	33-0	7-7	48-2	81-2	19-2	18-6	17-0	109-2

(a) This Centre only opened once a month.



THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

PHYSICS 551

LECTURE NOTES

BY

PROFESSOR

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250. "Notice" has been received from the Military Authorities that the Drill Hall at Redditch, which was placed at the disposal of the County Council for "consultation" purposes, must be vacated; and in spite of efforts made not only officially, but by persons interested in Child Welfare work, no building in Redditch was available: nor was it possible to rent a site on which temporary buildings could be placed. Ultimately the Council agreed to purchase a very suitable plot of land in the centre of Redditch, where it is intended to erect—temporarily at first—some buildings suitable for a "Consultation Centre" and School Clinic, but also others that will serve as a "Tuberculosis Dispensary."

251. Local voluntary helpers are now attached to each of these Centres, but I hope the number at the Catshill Centre will be increased. A new set of voluntary helpers have been appointed for the Redditch Centre, who I quite think will take much more interest in the work than their predecessors did.

#### *Sugar.*

252. Supplies of sugar were granted by the Food Controller and the Local Government Board during 1918 until the end of January 1919 for the benefit of infants under the supervision of the Health Visitors of the Consultation Centres, and was supplied to mothers in attendance. But in February 1919, the Sugar ration was raised, and in consequence the stocks were transferred to the local Grocers. In January 1920 Sugar was again supplied to the Centres, and this continued until June last, when the Ministry of Health discontinued it. Since then a certificate may be issued by the Medical Officer, or the Health Visitor of the Centre, enabling mothers to buy from Grocers, 4 ounces extra per week, for each child under 2 years of age.

#### *Milk.*

253. The County Council have since 1918 provided Milk free or at part cost to "necessitous" and expectant mothers and children under 5 years of age, as required by the Milk (Mothers and Children) Order 1919. Before Milk was granted to "necessitous cases" free of cost, the applicants were required to show that the income of the family did not exceed 5/6 per head per week, after deducting rent. The annual cost of carrying out this Order was about £2,500 in spite of the fact that Milk Orders were not given unless it was quite clear that the families were "necessitous."



254. On the 7th February 1920 the Ministry issued a circular letter revoking that part of the Order which enabled the Local Government Board to require Local Authorities to make arrangements for the supply of Milk: and in consequence of this, the County Council at their Special Meeting on the 1st June 1920, when the Estimates of Expenditure for the financial year ending 31st March 1921 were considered, decided not to make any further provision for grants of Milk under the Order. Consequently all Milk Orders were cancelled forthwith.

*Crèches (Day Nurseries).*

*Bromsgrove Day Nursery.*

255. I expressed the opinion in my last "Digest" that this Day Nursery would probably have to be closed as so few babies were sent there: and on October 31st 1919 my anticipations were realized.

256. Closure of this, at one time very useful Institution, came about not only because the babies were so few, but also because "Watt Close Schools"—used as the Crèche—were required for educational purposes.

257. Dr. Kidd in his Annual Report said:—

"I reported last year that the numbers had become so small that it was a question whether the Nursery could be continued. Unfortunately no improvement took place, the daily average being under 10, and when the rooms at Watt Close School, which we had been allowed to use, became required by the Education Committee, it was felt that the Nursery had better be closed. It was a pity because it was excellently equipped, and was in charge of an experienced Nurse, who did her work admirably. During the War, when many mothers were engaged in munition work, the Nursery did good service and supplied a want."

*Proposed Crèche at Redditch.*

258. I stated in my last Digest that efforts had been made to establish a suitable Crèche at Redditch; but that they had been unsuccessful, owing to the shortage of houses in that Town.

259. The result of further enquiries has been, that it was found to be absolutely impossible either to rent or purchase any premises which could be utilised as a Day Nursery: consequently the idea of establishing such an Institution has been abandoned.

### **Housing of Working Classes.**

260. It is scarcely necessary to say, that the provision of houses for the Working Classes is the most urgent Sanitary problem of the day ; and it is common knowledge that the Ministry of Health, through their Regional Housing Commissioners, are strenuously pressing Local Authorities to build cottages with as little delay as possible. The State financial assistance is referred to at length in my last "Digest." Not only are Government "Grants" made to Local Authorities, but also to private Builders who erect small houses. The State "subsidies" offered to a private Builder amount to sums not exceeding £260 per house : and are given on certain specified conditions.

#### *Cottage building by the County Council.*

261. Through the courtesy of the County Architect I give the following information as to the progress of the County Council Housing Schemes, viz. :—

1. *Staple Hill, near Bromsgrove.*

Plans have been approved by the Ministry for twenty houses ; these are intended mainly for employees at the County Mental Hospital at Barnsley Hall, but owing to doubts as to the ultimate fate of the Hospital and the excessive cost of building in this neighbourhood the Scheme is at present in abeyance.

2. *Drakes Broughton.*

Four cottages are in course of erection and will probably be ready for occupation in October.

3. *Whitehall, near Worcester.*

A pair of bungalows has been completed and are now ready for occupation.

4. *Pershore.*

Tenders have been recommended for four pair of Bungalows and will be put in hand as soon as approved by the Ministry.

5. *Redditch.*

An opportunity occurred to purchase cottages already occupied by employees and three have now been bought.



6. *Astwood Bank, Broadwas, Redmarley and Shrawley.*

In each of these cases a similar opportunity occurred and four cottages have been bought.

7. *Stourbridge.*

Twelve cottages have been bought.

262. In connection with Small Holdings the following cottages are being erected :—

*Acton, near Stourport.*

12 Cottages.

*Offenham.*

12 Bungalows.

*Whitehall, near Worcester.*

4 Cottages.

*Hallow.*

2 Cottages.

263. Six Nissen Huts have been erected at Acton for the temporary accommodation of the Small Holders.

264. Schemes in other localities are intended to be proceeded with as soon as the question of accommodation becomes urgent and facilities for building are available.

*“ Form of Survey of Housing Needs ” required by the Ministry of Health.*

265. This was a lengthy “ Form ” which the Ministry required every Local Authority to fill up and return to the Regional Housing Commissioner not later than October 31st 1919. The “ Forms of Survey ” sent to the Commissioner by the Worcestershire Councils were forwarded to me (as the Ministry is empowered to do by “ the “ County Medical Officers (Duties) Order 1910 ”) with the request that they should be returned to the Commissioner with my comments within one week of the date I received them ; and before I could offer “ my comments ” I had to interview (as far as I could) the District Medical Officers of Health and Sanitary Inspectors. In due course I did as requested.

*Cottage building by Worcestershire Authorities.*

266. In order to lay before you an up-to-date summary of the Building Schemes either carried out, or contemplated by the Worcestershire Authorities, I issued a circular (dated August 21st 1920) asking their Clerks if they would be good enough to favour me with replies to a list of questions I sent them ; and it is very pleasing to me to say that all of them very courteously and promptly sent me the replies asked for : consequently I wish here to express my gratitude to them for doing so. The questions I asked were :—

1. Has your Authority built, or commenced to build, any houses for the Working Classes since August 1st 1919 ?

If so, (a) How many ?

(b) What was the average cost of each house exclusive of cost of site, roads, sewers, &c. ? and

(c) What rents are being charged ?

2. Has your Authority applied to the Ministry of Health for approval of any Housing Schemes other than those referred to in Question No. 1 ?

If so, for how many cottages ?

3. Does your Authority contemplate building *in the near future*, any cottages other than those referred to in Questions Nos. 1 and 2 ?

If so, how many ?

4. Has your Authority built any cottages with " parlours " ?

If so, how many ?

267. Table XIX summarises the replies I received to these questions :—



The first part of the paper is devoted to a general  
 introduction of the subject and a review of the  
 literature on the topic. It is found that the  
 existing theories are not sufficient to explain  
 the observed phenomena. Therefore, a new theory  
 is proposed in this paper. The theory is based  
 on the assumption that the particles are  
 interacting with each other in a way that  
 is not accounted for by the existing theories.  
 The theory is then tested against the  
 experimental data and it is found that it  
 provides a better fit to the data than the  
 existing theories.

In the second part of the paper, the theory is  
 applied to the study of the interaction of  
 particles with a medium. It is found that the  
 theory predicts a new effect which has not  
 been observed before. This effect is  
 investigated experimentally and it is found  
 that the theory is in good agreement with  
 the experimental results. The theory is  
 then used to study the interaction of  
 particles with a medium in the presence of  
 an external field. It is found that the  
 theory predicts a new effect which has not  
 been observed before. This effect is  
 investigated experimentally and it is found  
 that the theory is in good agreement with  
 the experimental results.

The results of the present study are compared  
 with the results of other studies and it is  
 found that the theory is in good agreement  
 with the experimental results.

TABLE XIX.

Name of District.	No. of Houses built or building.		Average cost, exclusive of Site, Roads, Sewers, &c.	Average Weekly Rents, exclusive of Rates.	No. of Houses with Parlours.	Remarks.
	Before 1 August 1919.	Since 1 August 1919.				
<i>Urban.</i>						
Bewdley Borough -	None	None	-	-	-	90 cottages will be built and of these 60 will have parlours.
Bromsgrove - -	None	30	£771	10/-	-	The erection of a further 42 houses towards a complete Scheme for 129 houses is in contemplation and being arranged for.
Bromsgrove North	None	50	Approximately £700 to £800	9/- and 10/-	-	Approval has been obtained to the erection of 50 more cottages.
Droitwich Borough	12	12	£750-£800	9/-	None	Further houses will be provided, but the number is not yet settled.
Evesham Borough	None	52	Not yet known. Loan of £33,000 arranged for.	7/9 and 8/-	None	The Corporation said in their "Form of Survey" sent to the Ministry that they estimated that 200 houses were needed.
Kidderminster Borough	None	40	£950	10/-, 12/6, 15/-	20	Approval to the erection of a further 222 houses has been applied for.
Lye and Wollescote	None	10	£850	Not settled.	No	It is proposed to provide a further 250 cottages.
Malvern - -	None	36	£900	Not fixed.	16	A Scheme for an additional 64 houses has been sanctioned.
Oldbury - -	None	98	£866 E-£921 F	Not settled.	42	The Ministry have approved the erection of 1,000 houses as a first instalment of the Scheme.
Redditch - -	36	80	£900	Not yet fixed.	44	
Stourbridge Borough	None	131	£850	8/-, 10/-, 12/6	107	It is proposed to build an additional 177 Cottages.
Stourport - -	None	48	£830	Not settled.	28	
<i>Rural.</i>						
Bromsgrove - -	None	16	Hagley. £722 E-£852 F	With parlour 12/6 Without " 10/-	16	An additional 160 houses are to be erected in the Parishes mentioned in the Footnote A.
		20	Stoke Prior. £825 E-£952 F			
Droitwich - -	None	None	-	-	None	Contract for 6 houses (£5,493) has been signed and the Council propose to build 4 houses at Elmley Lovett, 2 at Elmbridge and 6 at Dodderhill.
Evesham - -	146	114	£850 E-£950 F	5/6	10	Approval has been received for building cottages as under: Broadway 34, Church Honeybourne 16, North Littleton 10. A further 30 houses at Offenham is under consideration.
Feckenham - -	None	None	-	-	-	The Ministry's approval has been sought to the erection of cottages at Astwood Bank (24), Crabb's Cross (18), Feckenham (6), Cookhill (4), and Inkberrow (2).
Halesowen - -	None	104	£750 to £800	Not fixed.	32	Of the 104 houses 64 are at Hasbury and 40 at Cradley. Further cottages are to be built at Hill, Cakemore, Halesowen, and Hawne.
Kidderminster - -	None	None	-	-	-	No Schemes adopted.
Martley - -	None	40	£750	Not settled. 4/- with tenants paying rates is suggested.	None	The 40 houses are at: Grimley (6), Hallow (4), Leigh (20), Suckley (10).



TABLE XIX.

Name of District.	No. of Houses built or building.		Average cost, exclusive of Site, Roads, Sewers, &c.	Average Weekly Rents, exclusive of Rates.	No. of Houses with Parlours	Remarks.
	Before 1 August 1914.	Since 1 August 1919.				
Newent (part) - - -	None	-	-	-	-	House to house inspection is being made to see if new houses are needed.
Pershore - - -	16	-	-	-	-	The Council propose to erect 202 houses. (See Footnote B).
Rock - - -	None	None	£850	Not settled.	None	Scheme is being proceeded with and includes 4 houses at Bayton, 4 at Mamble, and 6 at Rock.
Shipston-on-Stour - - -	None	No	-	-	-	Contracts have been entered into for 42 Houses.
Stow-on-Wold (part) - - -	None	No	-	-	-	It is proposed to erect 4 houses at Evenlode.
Tenbury - - -	None	-	£715 E £850 F	12/- 15/-	-	Approval has been asked to the erection of cottages at— Tenbury (Sutton). " (Berrington). Stoke Bliss. Knighton-on-Teme. Eastham. Rochford. Kyre Parva. 8 will be of Parlour type.
Tewkesbury (part) - - -	None	None	-	-	None	Authority has been asked for the erection of houses in Bredon Parish (16), Chaceley (2), Norton (2), Teddington (2). Provision of 2 houses each at Conderton and Pendock is under consideration.
Upton-on-Severn - - -	4	96	£850 E—£950 F	Not fixed.	14	The Parishes in which houses are building or contemplated are given as a footnote (C). The erection of a further 166 Houses is contemplated in the near future.
Winchcombe - - -	None	None	-	-	-	-

NOTE A. Parishes referred to in the Bromsgrove Rural return are:—

Clent - - -	Type A	16	Type B	14
Finstall - - -	"	16	"	14
Belbroughton - - -	"	6	"	6
Hunnington - - -	"	6	"	-
Romsley - - -	"	4	"	4
Frankley - - -	"	8	"	-
Pedmore - - -	"	4	"	6
Alvechurch - - -	"	8	"	12
Wythall - - -	"	8	"	8
Beoley - - -	"	10	"	10
		86		74

NOTE B. The approximate Nos. of new houses to be built are: Pinvin (20), Peopleton (6), Defford (6), Cropthorne (15), Throckmorton (6), Bishampton (12), Eckington (12), Birlingham (12), White Ladies Aston (6), Churchill (8), Bredicot (3), Moor (6), Fladbury (12), Naunton Beauchamp (4), Whittington (6), Wyre (8), Pershore Holy Cross (32), Pershore St. Andrew (16), Pershore (out town) Broughton (6), Pershore (out town) Wadborough (6). Total 202.

NOTE C. Parishes referred to in Upton-on-Severn return and where houses are now being built are:—

Upton-on-Severn - - -	28
Callow End - - -	20
Hanley Swan - - -	12
Hanley Castle - - -	4
Ripple - - -	12
Welland - - -	12
Earl's Croome - - -	4
Baughton, Hill Croome - - -	4
	96

The approval of the Ministry has been asked to the erection of further houses at:

Kempsey - - -	18
Upton-on-Severn - - -	14
Queenhill - - -	8
Holdfast - - -	4
Eldersfield - - -	12
Berrow - - -	6
Castlemorton - - -	16
Guarford - - -	14
Welland - - -	12

NOTE D. In all cases the average cost is subject to extra cost of labour and materials.

E Non-parlour type.

F Parlour type.

268. This Table shows that five Authorities built a total number of 214 cottages prior to August 1st 1919, viz., Droitwich Corporation 12, Redditch Urban Council 36, Evesham Rural Council 146, Pershore Rural Council 16, and Upton-on-Severn Council 4.

269. Between August 1st 1919 and August 31st 1920 the Local Authorities collectively had built or are building 977 Houses (Urban 587, Rural 390).

270. It is contemplated that a further 2,652 houses will be erected *in the near future*.

271. On reference to the above Table it will be seen that the Schemes in the Evesham Rural District are more advanced than in other parts of the County.

#### *Cost of Cottages.*

272. It appears that the cost per house, exclusive of site, roads, sewers, &c., varies from £700 to £1,050. In all cases I am informed that the average cost is subject to extra cost of labour and materials.

273. In a Memorandum dated 27th August 1920 the Ministry of Health state that up to the 31st July 1920 the average cost of land was £183 per acre for the whole Country and for Rural Districts only £123.

274. The average cost of the parlour type of house was £966, and of the non-parlour type £823.

275. The average prices in the County for parlour and non-parlour type have been :—

	Parlour.	Non-parlour.
	£	£
Oldbury Urban - - - -	921	866
Bromsgrove Rural—		
(a) Hagley - - - -	852	722
(b) Stoke Prior - - - -	952	825
Evesham Rural - - - -	950	850
Halesowen Rural - - - -	800	750
Tewkesbury Rural - - - -	850	715

276. The average cost at the present time (September 1920) is probably higher than mentioned above.



*Rents.*

277. It will be gathered from the Table that the rents to be charged, in many instances have not been fixed; but where this has been done they will vary considerably.

278. Nine of the 28 Authorities contemplate erecting cottages with parlours.

*Observations by District Medical Officers of Health.*

279. Practically all the Medical Officers of Health refer in their Annual Reports to the local needs with regard to houses, and the following are a few of the observations which I think I ought to mention:—

*Bewdley Borough.*

280. Dr. Miles says: "There is a very considerable amount of overcrowding, largely due to the fact that young married couples are unable to find houses for themselves, and have to continue to live with their parents . . . . The general standard of the housing in the District is very low. The houses are nearly all very old, and of recent years, partly, no doubt, owing to shortage of labour, the repairs, which are continually necessary in this class of houses, have not been properly carried out."

*Bromsgrove Urban District.*

281. Dr. Kidd says: "This remains, as all over the country, the most pressing problem of the moment. The shortage of houses, is extraordinary, and the stories one hears of suffering from want of house accommodation would be incredible if we had not gradually become accustomed to the evil which has been accepted—more or less resignedly—as so much else has been accepted, as part of our endurance of war. Our own new Sanitary Inspector lives in lodgings with all his furniture stored, and has been separated from his wife and child for nearly five years owing to the impossibility of procuring a house. I reported last year that it was much to be regretted that the offer of a private firm to build 50 houses in the district had to be abandoned. Subsequent events have emphasized all too forcibly the truth of this regret, for prices are higher than ever now and rising every day. It remains a mystery to the ordinary man why houses cannot be built. We have had two Picture Theatres completed in this town during the last 12 months."

*North Bromsgrove Urban District.*

282. Dr. Kidd says: "As compared with last year, the general position has even increased in seriousness, and will doubtless continue to do so until the new houses are provided. Overcrowding is rife everywhere, and rooms are being occupied in some cases day and night by alternate night and day workers. As I reported last year, this Council has been commendably active, and was one of the earliest in the County to get its Housing Scheme through and the houses commenced."

*Kidderminster Borough.*

283. Dr. Hodgson Moore says: "The house shortage is still acute in the Borough."

*Lye and Wollescote Urban District.*

284. Dr. Darby states: "The Housing problem is a very big one, and is the most pressing one at present. Hundreds of houses are required in this District, as you are aware. New Factories are being built, and present ones are being extended, and the employees will need space in which to live. In a few years the available land for house building will be occupied, and only very costly or unsuitable land will be left within the boundaries of Lye and Wollescote. This will mean that people who should live in the District will have to live outside its borders, and the rates they should pay here will be paid elsewhere."

*Halesowen Rural District.*

285. Dr. Brett Young says that in the "Form of Survey" sent to the Ministry it is estimated that 470 houses are needed.

*Kidderminster Rural District.*

286. The Table shows that the District Council have not built, and do not contemplate building any cottages; but the District Medical Officer of Health, Dr. Addenbrooke, and the Sanitary Inspector, in a Joint Report say: "We are emphatically of the opinion that there is no need for a Housing Scheme in any parish in our District."

*Shipston-on-Stour Rural District.*

287. Dr. G. Findlay estimates that 62 new or repaired houses are needed for the immediate wants of the District, especially to replace houses which are old and much below the standard.



288. At Shipston there are a number of poor old houses, and he recommends that 12 new houses should be erected there. At Blockley he considers that 20 new houses should be erected, and in Tredington Parish it has been decided to build, 2 at Tredington, 6 at Newbold, 4 at Darlingscote, and 2 at Blackwell.

### **Isolation Hospitals.**

289. The Isolation Hospital accommodation of the County, taken as a whole, is good, and as I have so often described the actual accommodation in former Reports I do not propose to repeat these details in this Report.

### **Drainage and Sewage Disposal.**

290. The following references are made in the Reports of the Medical Officers, viz. :—

#### *Bromsgrove Urban* (Dr. Kidd).

“ The working of the Sewage Farm has been improved, but we still  
“ suffer from the amount of rain water which finds its way into  
“ the sewers.

“ The old principle of ‘ the rainfall to the river and the sewage to  
“ ‘ the soil ’ was not carried out as thoroughly as might have been  
“ done when the system was inaugurated, and we have suffered  
“ in consequence ever since. Every effort should be made to  
“ conduct surface rain water into the old brick sewers which dis-  
“ charge into the stream, and to connect slop drains and closet  
“ soil pipes only with the sewer.”

#### *Kidderminster Borough* (Dr. Hodgson Moore).

“ The sewers, although some are slightly deficient in fall, are well  
“ ventilated, . . . and are acting efficiently.” He also states  
“ the Drainage and Waterworks Committee have now  
“ decided to proceed forthwith with the Scheme, and have  
“ asked for tenders for sewerage Sutton Common and Broad-  
“ waters.”

#### *Malvern Urban* (Dr. C. R. P. Mitchell).

“ During the last 20 years the District has been practically re-  
“ sewered and quite two-thirds of the house drainage has been  
“ reconstructed on modern principles and submitted to the  
“ water test.”

#### *Redditch Urban* (Dr. Stevenson).

“ Notwithstanding the shortage of labour during the latter years  
“ of the War, good progress has been made to restore these  
“ works to their usual efficient state.

- " Periodical analysis of the effluent and river water show that the  
 " bacterial filters have not depreciated to any appreciable  
 " degree during the ten years they have been in regular use."  
 " Extensive repairs to the distributors have been carried out, and  
 " two new ones ordered of an improved type."

*Bromsgrove Rural* (Dr. Coaker).

- " No new work has been undertaken during the year. A Special  
 " Report was presented on the District of Drakes Cross in the  
 " Parish of Wythall, but no action has been taken as yet.  
 " This should be remedied as soon as possible. Another part  
 " which should be properly drained is the lower part of the  
 " Parish of Hunnington, which is closely adjacent to Halesowen.  
 " The only large village without a drainage scheme is Bel-  
 " broughton. The schemes which have been completed have  
 " worked well during the year."

291. Since Dr. Coaker wrote this, the Rural Council have called in an Engineer to advise as to a Scheme for dealing with this matter.

*Feckenham Rural* (County Medical Officer).

- " Quite recently (March 11th 1920) I inspected the Crabbs Cross  
 " sewage disposal in company with a Member of your Council  
 " and your Sanitary Inspector, and found it to be in a most  
 " unsatisfactory state.  
 " The bit of land over which the greater part of the sewage is supposed  
 " to flow is 'sewage sick' and water-logged; and we saw crude  
 " sewage flowing off this land down a road-side ditch quite  
 " close to some cottages, and on to the Hunt End Brook. This  
 " state of things has existed—sometimes better, sometimes  
 " worse—for many years. The defective drainage of Crabbs  
 " Cross and Hunt End must be well known to you, as I have  
 " reported it to you and the Local Government Board from time  
 " to time for many years past. The position was clearly  
 " explained in my Report for 1911 (p. 66) as well as in other  
 " Annual Reports."

*Pershore Rural District* (County Medical Officer).

- " Once more it is my duty to call your attention to the extremely  
 " bad condition of the sewerage of the Town of Pershore, which  
 " I first reported in 1893.  
 " You will notice that your Sanitary Inspector in his Annual Report  
 " says 'several of the Pershore sewers have been blocked and  
 " 'others have fallen in.' This state of things often occurs,  
 " and I agree with your Inspector when he says 'the state of  
 " 'the sewerage in Pershore is very bad.' Even so, as I have  
 " often stated before, a Sewerage Scheme for Pershore cannot  
 " be undertaken until a Water Scheme has been carried out."

*Shipston-on-Stour Rural* (Dr. Findlay).

- " At Shipston-on-Stour, the new sewerage mains and outfall works  
 " have now been put in for nearly five years, and as yet no  
 " houses have been connected to the new sewers. I am sure



“ it would be a great benefit to the town if the connections  
 “ could be made and the new system put in working order.  
 “ If this were done we would get rid of a great number of privies,  
 “ and new water closets would be gradually provided. At  
 “ present when we find defective drains it is difficult to ask  
 “ owners to spend any considerable sums of money on work  
 “ which will probably soon be useless, when the new drains are  
 “ put in. The old sewers became broken in, in a number of  
 “ cases and have been repaired and a new cover has been put  
 “ on the catchpit near the mill.”

*Tewkesbury Rural.* Mr. Shorland (Sanitary Inspector)—

Considers that another filter should be provided at Overbury  
 in order to deal with the purification more effectively.

*Upton-on-Severn Rural* (Dr. Cowley).

“ Including Upton and Kempsey, seven small Drainage Schemes  
 “ have been finished. The Madresfield and Guarlford Scheme  
 “ was not only contemplated, but plans and estimates were  
 “ prepared by the Engineers (Willcox & Raikes) and a loan for  
 “ £5,000 applied for to the Local Government Board (Madres-  
 “ field £3,485 2s. 8d., and Guarlford £1,514 17s. 4d.). This  
 “ was held up, and at present the subject is in abeyance.

“ After the completion of the Kempsey Scheme many unsatisfactory  
 “ details were discovered, and controversial meetings were held  
 “ concerning the work. A compromise was effected with the  
 “ Contractor, and in September 1915 a settlement was arrived  
 “ at, and the works finally taken over by the Council. An  
 “ additional loan was required and applied for. At the present  
 “ only a few connections with the house drains have been made.”

### Water-supply.

292. The following references are made by Medical Officers of  
 Health, viz. :—

*Bromsgrove Rural.* Dr. Coaker says of the larger Villages in  
 his District :—

“ Only Alvechurch and Belbroughton are supplied from wells. A  
 “ systematic analysis has been made of the wells in Alvechurch  
 “ Village. This was commenced in 1914, but was interrupted  
 “ on the outbreak of the War. The result of the analysis is  
 “ very bad indeed. The water from 80 wells, supplying 159  
 “ houses, with an estimated population of 700, was analysed  
 “ by the County Analyst, with the following report :—

“ Fit for drinking purposes	-	-	-	-	12
“ Unfit for drinking purposes	-	-	-	-	48
“ Suspicious	-	-	-	-	20

“ Many of the wells are old, and in gardens of limited space, where  
 “ slops have been emptied for years, so that the soil is much  
 “ polluted. In view of the fact that the Council can only insist  
 “ on a limited amount being spent in repairing each well, and  
 “ considering the high price of labour and materials, it is very  
 “ doubtful if a satisfactory job could be made of making the



“ wells watertight. The village is practically surrounded by  
 “ the Districts of North Bromsgrove and Redditch, which are  
 “ supplied by the East Worcestershire Company, and I consider  
 “ that the best way, and in the long run the most economical  
 “ way, would be to extend the Company's main to the village.  
 “ During the next year the wells at Belbroughton Village will be  
 “ analysed.”

*Feckenham Rural* (County Medical Officer).

“ Attention has been called to the contaminated state of the wells  
 “ in the Village of Feckenham for several years past.

“ A Special Report was presented, the last paragraph of which  
 “ states that—

“ ‘ I wish to make it quite clear that the duties of Medical  
 “ ‘ Officers of Health are advisory, not executive ; and  
 “ ‘ that having so often called your attention to the  
 “ ‘ polluted state of the Feckenham wells, and advised  
 “ ‘ you to provide water-works for the Village my  
 “ ‘ responsibility entirely ceases, and that the re-  
 “ ‘ sponsibility for any action you may, or may not  
 “ ‘ take in this matter, devolves upon you as the Local  
 “ ‘ Sanitary Authority.’ ”

293. Since this was written the Feckenham Council have asked two Engineers to submit Water Schemes for the Village.

*Kidderminster Rural* (Dr. Addenbrooke).

“ There is now a good, wholesome and sufficient supply to the  
 “ Parishes of Churchill and Wribbenhall, and your Medical  
 “ Officer of Health would strongly urge the immediate consider-  
 “ ation of a similar supply for the Cookley and Wolverley areas.  
 “ With so many drains and cesspools in close proximity it may  
 “ be taken for granted that the wells are either polluted or are  
 “ at all events liable to pollution. These areas—Cookley and  
 “ Wolverley—are seriously in need of a wholesome water-supply,  
 “ and as it is of the utmost importance, we desire to impress  
 “ upon the Council the urgency of the matter.

“ Where there is no public supply the water is chiefly taken from  
 “ wells. At Island Pool two samples of water were taken from  
 “ the Pool and the overflow and were condemned by the County  
 “ Analyst. This water had been used from the Pool for brewing  
 “ purposes. Conditions very similar exist at Cookley and  
 “ Wolverley, and a constructive policy to ensure a good supply  
 “ of wholesome water should be at once undertaken. The  
 “ consideration of such an important matter is long overdue  
 “ and your Medical Officer of Health respectfully points out  
 “ that the adoption of such water scheme in these Districts  
 “ is an urgent matter which should be faced at once.”

*Pershore Rural* (County Medical Officer).

“ It is now beginning to be felt—especially in the Town of Pershore—  
 “ that the water supplies of many parts of your District are  
 “ (as shown in my Special Report dated August 1909) in-  
 “ adequate and polluted ; and I believe it is being gradually



“ realized that I am not the extravagant ‘ crank ’ and ‘ faddist ’  
 “ which large numbers of the local ratepayers at one time thought  
 “ me to be. If my suggestions with regard to water supplies  
 “ had been acted upon, when I made them, it is unquestionable,  
 “ that very large sums of money, which must ultimately be  
 “ expended upon Water Schemes, would have been saved.  
 “ Furthermore, it seems as if sources of water-supply then  
 “ available, cannot now be obtained. Apropos of this latter  
 “ point, I trust the time will not be long before sources of water-  
 “ supply can—upon equitable terms—be obtained compulsorily  
 “ in the same way that land for Sewerage and Housing Schemes  
 “ can be acquired.

“ The water-supply of the Town of Pershore has from time to time  
 “ been ‘ under consideration ’ since I first called attention to it  
 “ on November 14th 1893 ; and recently a Special Committee  
 “ has again retained the services of Messrs. Willcox & Raikes—  
 “ the well-known Sanitary Engineers—to advise as to a practic-  
 “ able Water Scheme. As this question is still ‘ sub judice ’  
 “ I make no further allusion to it.”

*Shipston-on-Stour Rural (Dr. Findlay).*

“ At Shipston-on-Stour there has still been considerable trouble  
 “ with the underground leakages of water, and it has been  
 “ necessary to continue the practice of cutting off the water  
 “ during the night for a considerable part of the year. The  
 “ soil appears to have a corrosive action on the service pipes.  
 “ When faults are discovered the new pipes are laid in boxes  
 “ filled with cement. . . . .

“ At Tredington Parish the water-supply is from wells, many of  
 “ which are comparatively shallow and require constant super-  
 “ vision. At Blackwell hamlet a new cover has been put on  
 “ the public well near the pool, and at Armscote, another  
 “ hamlet, the public pump has been repaired.”

*Upton-on-Severn Rural (Dr. Cowley).*

“ Negotiations are proceeding with the Malvern Urban Authority  
 “ for the supply of Upper Guarlford where the well water is  
 “ proved to be unfit in several wells.”

### **River Pollution.**

294. This subject is referred to in the following Reports :—

*Bewdley Borough (Dr. Miles).*

“ The sewage is discharged in a crude state into the River Severn.  
 “ The volume of sewage, however, is so small compared with the  
 “ volume of water into which it flows, the current of the river  
 “ so swift, and the nature of the river bed such, that no ill  
 “ effect of the contamination is apparent.”

*Kidderminster Borough (Dr. Hodgson Moore).*

“ The River Stour flowing through the centre of the Town is free  
 “ from any injurious pollution.”

*Stourbridge Borough* (Dr. Sinton).

" The River Stour has no pollution in the Borough, but passing  
 " through manufacturing districts before reaching here, it  
 " sometimes becomes polluted with acid and other waste, but  
 " not to any great extent.

" Two streams flow through the District, both being free from  
 " pollution."

*Stourport Urban* (Dr. Robinson).

" No serious pollution of the rivers takes place in the District."

*Halesowen Rural* (Dr. Brett Young).

" No instance of pollution has come under notice during the year."

*Martley Rural* (Dr. Dykes).

" No serious pollution of the rivers and streams has taken place."

*Tewkesbury Rural* (Dr. Matthew Elder).

" There is practically no evidence of pollution of rivers and streams  
 " in the District."

### Scavenging.

295. The Medical Officers of Health make the following Reports :

*Bewdley Borough* (Dr. Miles).

" The Scavenging is done by the Corporation workmen, the house  
 " refuse being deposited on a piece of waste ground in the  
 " vicinity of the Town, and the night soil removed to a distant  
 " farm, where it is put on the land."

*Kidderminster Borough* (Dr. Moore).

" Removal of house refuse is under the control of the Sanitary  
 " Inspector. . . . .  
 " The refuse is disposed of by tipping on agricultural land and on  
 " low-lying meadows on the outskirts of the Borough."

*Malvern Urban* (Dr. Mitchell).

" A weekly collection from houses is adopted throughout the District,  
 " and a bi-weekly one from some of the business premises, by  
 " the carts of the Malvern Urban District Council, and removed  
 " to the destructor at the Electricity Works.

" Practically all of the houses are provided with portable receptacles."

" There are scarcely any privies, ashpits or cesspools in the District."



*Oldbury Urban* (Dr. Buttery).

" The scavenging of the District has now been taken out of the hands of the Contractors because of the deplorable condition to which things had been reduced. The night-soil removal was placed under the control of the Health Department in April last, and although the greatest difficulties have been encountered in organising men and materials, I am pleased to report upon the success which has attended the efforts of Mr. Davis, the Sanitary Inspector, in bringing this important work to such a successful issue. The town is now in a cleaner condition than it has ever been before. The complaints are very few, and these are almost immediately attended to. I feel sure that the Council must feel gratified that this long disputed matter has had such a good termination."

*Redditch Urban* (Dr. Stevenson).

" It is unfortunate that the Destructor was demolished in 1918 to allow for the extension of the Electricity Works, without a scheme being devised for its re-erection. The insanitary and unsightly method of tipping refuse at the Sewage Works and elsewhere has had to be resorted to, and has caused trouble with tenant farmers. Too, as the tips are some distance from the Town the same amount of work cannot be done, and I regret to say that complaints as to the infrequent removal of refuse have been numerous."

*Stourbridge Borough* (Dr. Sinton).

" The scavenging is carried out by direct labour, and the refuse is destroyed at the Corporation Destructor."

*Stourport Urban* (Dr. Robinson).

" This is regularly and systematically carried out. It is hoped that the ash-pits still existent will soon be replaced by ash-bins."

*Bromsgrove Rural* (Dr. Coaker).

" The Parish of Hagley is the only one regularly scavenged, but the removal of house refuse should be undertaken in other populous parts of the District."

*Evesham Rural* (County Medical Officer).

" Mr. Atkinson has not yet been able to find a suitable tip for the house refuse of Hampton and consequently that Village cannot be scavenged as it ought to be."

*Feckenham Rural* (County Medical Officer).

" Mr. Watling mentions which parts of your District are scavenged and records the work that was done during 1919. It would appear that there are still many premises in the District with no proper refuse receptacles, and (that) these need to be dealt with in future."

“ On 28th February last Mr. Watling wrote me that he had had  
 “ several complaints during the month about accumulations  
 “ of refuse at houses in the District, and that he should recom-  
 “ mend the District Council to provide another horse and cart  
 “ without delay. This opinion was also expressed at the recent  
 “ Parish Meeting at Feckenham, and I hope therefore the  
 “ Council will act upon Mr. Watling's recommendation.”

*Halesowen Rural* (Dr. Brett Young).

“ At the present time only one part of the District, Cradley, is  
 “ worked by contract. In the Parishes of Halesowen, Hasbury  
 “ and Hawne, the work is done entirely by the Council. The  
 “ Council have during the year rented a stable and purchased  
 “ their own horses and wagons, and since this was done the  
 “ work has been carried out with greater efficiency.”

*Pershore Rural* (County Medical Officer).

“ The methods of Scavenging in the Town of Pershore have been  
 “ improved during the past year; but until the large middens  
 “ (many of which have to be cleansed through dwelling-houses,  
 “ a most filthy state of things) have been swept away, the  
 “ excrement disposal of Pershore (which I first reported upon  
 “ in 1893) must be considered extremely bad. Mr. Jacques  
 “ suggests replacing the midden closets, with pail closets, and  
 “ adds ‘ although this is not an ideal system, it ensures frequent  
 “ ‘ removals.’ I agree with this: provided the pails have  
 “ ‘ spring lids,’ which would greatly mitigate the present  
 “ nuisances caused by carrying excrementitious refuse through  
 “ houses.”

296. Since this Report was made the Pershore Council have purchased 2 small Refuse “Destructors” made by the New Destructor Co., Atlas Works, near Pershore, at a cost of £43. These “Destructors” were used during the War at numbers of Military camps and are well adapted for small populous places.

*Tenbury Rural* (Dr. White).

“ Scavenging in the Town is undertaken by the Council, who have  
 “ one team engaged three days a week on this work. There  
 “ is a weekly collection of pails and ash-bins. The pails are  
 “ taken away to be cleansed and disinfected each time and  
 “ replaced with others that have undergone this process. Most  
 “ houses have covered receptacles for ashes, but no effort has  
 “ in the last few years been made to get covered galvanized  
 “ iron bins substituted for wooden boxes, &c., or the few ash-pits  
 “ that remain in existence.

“ The Council has a convenient tip for the ashes and refuse, and  
 “ the night soil is taken by the neighbouring farmers and used  
 “ on the land.”



*Privy Middens.*

297. The Reports on the Urban Districts show that in the populous parts of the County, W.C.'s are gradually replacing the objectionable privy middens.

*Oldbury Urban District.*

298. Dr. Buttery says that the conversion of privy middens to W.C.'s is being proceeded with, with the result that 99 old privies have been so converted during the year. He adds, however, there are still 1,287 privies in the District.

299. In a Special Report I made, in January 1899, upon Typhoid Fever in Oldbury—a disease which was then endemic in the District—I showed that the prevalence of that disease was intimately associated with the 3,254 privies which then existed; and there is no doubt that the abolition of so many privies which the Urban Council has brought about largely accounts for the comparative immunity which this District now has from that disease. Such being the case, I hope that most of the 1,287 privies now remaining will be done away with as speedily as practicable.

*Redditch Urban District.*

300. Dr. Stevenson says: "We have endeavoured to rid the town of some of the old pail closets, 30 being converted into water closets during the year. As quickly as possible we ought to get rid of pail closets in the congested areas."

*Stourbridge Borough.*

301. Dr. Sinton says "the conversion of privies into water-closets was practically completed in 1909."

302. I am glad to see this, because in my "Digest" for 1896 (p. 65) I said "the midden system of excrement disposal prevails, although excellent drainage and water-supply appears to be available. Under these circumstances it is to be hoped that by degrees this form of excrement disposal will be replaced by water-closets."

303. I also said in my "Digest" for 1897 (p. 88): "It is a matter for regret that the midden system still prevails: although Dr. Eagar mentions, endeavours are now being made to get as many ashpits as possible converted into water-closets."



### Hop Picking.

304. *Martley Rural.* Dr. Dykes and Mr. Inskip report :—

- “ During the season 74 inspections of the pickers’ quarters were  
 “ made, 28 of these being made before the picking commenced  
 “ and 46 afterwards. A total of 37 farms were visited.
- “ Approximately 4,075 foreign pickers were employed on these  
 “ farms, and the separation of the sexes was effected by the  
 “ division of the sleeping places or by the use of separate build-  
 “ ings for the males and females.
- “ No tents were supplied for the use of the pickers, and there were  
 “ no cases of infectious disease notified.
- “ Generally the accommodation provided is satisfactory, but  
 “ sufficient attention is not given to the removal of accumula-  
 “ tions of refuse, and to the cleansing of the yards and ap-  
 “ proaches. We would recommend that before next season’s  
 “ picking commences, a circular letter be sent to each of the  
 “ growers pointing out the fly dangers &c. caused by these  
 “ heaps, and requesting them to have very frequent removals  
 “ of all refuse from near any of the quarters used by the pickers.”

### Slaughter-houses.

305. The following references are made in the Reports of the Medical Officers, viz. :—

*Evesham Borough* (County Medical Officer).

For many years I have been an advocate of the establishment of public abattoirs for Urban Districts, “ but as the four Slaughter-houses in the Borough are ‘registered’ not ‘licensed’ it would be impossible to compel the butchers to use an abattoir, even if erected, until the Public Health Acts are amended in this respect. This is an additional reason for strict enforcement of the Byelaws.”

*Kidderminster Borough.* Dr. Hodgson Moore states :—

“ It would be a . . . great benefit from a public health point of view  
 “ if a Public Slaughter-house was built. Your Committee would  
 “ then be in a better position to deal with some of the old  
 “ Registered Slaughter-houses which are totally unsuitable  
 “ because of their proximity to dwelling-houses and schools.”

*Stourbridge Borough.* Dr. J. R. Sinton.

The provision of a public abattoir has been under consideration, and the Corporation passed the following Resolution :—

“ That the time is now opportune for the Government  
 “ to consider the urgent necessity of immediately  
 “ making all diseases of animals that are communic-  
 “ able to human beings compulsorily notifiable, and  
 “ of providing adequate compensation to be paid  
 “ subsequent to any action that may in the public  
 “ interest be determined upon; and considers that  
 “ in any scheme of National Reconstruction there  
 “ should be provided a Public Abattoir for every  
 “ large centre, and that in every such district full  
 “ powers should be granted to the Local Authority  
 “ to compulsorily close all private Slaughter-houses.”



*Stourport Urban.* Dr. Robinson says :—

“ A Public Abattoir would facilitate the necessary inspection of  
“ meat.”

### **Milk Supplies.**

306. Considerable action was taken under the Cowsheds and Milkshops Orders in pre-war days ; but even so, the state of many Cowsheds is not at all what it ought to be ; and the Annual Reports show that the ways in which these trades are conducted, need decided improvement. Revision of the several “ Registers ” too, I think ought to be made.

307. Larger quantities of milk are now being despatched to neighbouring towns than was formerly the case ; and consequently the overlooking of the ways in which these local industries are carried on is—if possible—more important now, than it has been in the past.

308. The “ Milk and Dairies Act 1914 ” and “ Tuberculosis Order of 1913 ” (issued by the Board of Agriculture) undoubtedly would have stimulated activity with regard to the protection of Milk supplies : for they were designed to improve the supply of pure, unadulterated and uncontaminated Milk. Under them, more stringent regulations would have been applied to the Milk industries, and a more systematic and detailed inspection set on foot. The “ Act ” and “ Order ” gave great powers for prohibiting the sale of Tuberculous Milk, and authorised Local Authorities to make regulations with regard to a number of things for the betterment of Milk supplies.

309. In June 1915, however, in consequence of the War, Parliament passed an “ Act ” postponing the operation of the Dairies Act and Tuberculosis Order “ to a date not later than one year after the “ termination of the present War.”

310. I anticipate therefore, that the “ Milk and Dairies Act 1914 ” and the “ Tuberculosis Order 1913 ” will again come into operation before very long.

311. In connection with this, the President of the Ministry of Health said in the House of Commons on 16th February last, that it is intended before bringing into force the Milk and Dairies Act to introduce proposals for legislation to provide for the licensing of Milk producers and dealers, for the definition and grading of Milk, and to empower Local Authorities to undertake the supply and distribution of Milk in their areas,

### County Chemical and Bacteriological Laboratories.

312. During the Year 1919 the total number of Samples analysed Chemically and Bacteriologically was 6,464. They may be divided as follows :—

#### *Chemical.*

Fertilisers and Feeding Stuffs	—	—	—	—	—	—	—	159
Food and Drugs	—	—	—	—	—	—	—	952
Miscellaneous	—	—	—	—	—	—	—	37
Sewage	—	—	—	—	—	—	—	14
Water	—	—	—	—	—	—	—	400
Total Chemical	—	—	—	—	—	—	—	1,562

#### *Bacteriological.*

Cerebro-Spinal Meningitis	—	—	—	—	—	—	—	40
Diphtheria	—	—	—	—	—	—	—	2,988
Miscellaneous	—	—	—	—	—	—	—	97
Ringworm	—	—	—	—	—	—	—	19
Tubercle	—	—	—	—	—	—	—	1,327
Typhoid	—	—	—	—	—	—	—	63
Water	—	—	—	—	—	—	—	368
Total Bacteriological	—	—	—	—	—	—	—	4,902

#### *Food and Drugs.*

313. Under the Sale of Food and Drugs Acts, 617 Samples were taken and 36 found to be adulterated.

314. Of the 496 Samples taken by the Police, 26 were adulterated; of the 29 taken by Inspectors of Nuisances, 4 were adulterated; of the 92 taken by the City Authorities, 6 were adulterated. The Samples were adulterated to the extent of 5.8 per cent., as against 7.6 per cent. in 1918, 7.2 per cent. in 1917, 2.9 per cent. in 1916, and 3.2 per cent. in 1915.

315. The adulterated Samples were: Honey 1, Milk 34, Mustard 1.

316. The quality of the Foods and Drugs sold in the County may be considered as satisfactory, with the exception of Milk.



During the year 332 Samples of Milk were received under the Sale of Food and Drugs Acts, of which 34 were adulterated, i.e., 10·2 per cent. Proceedings were taken in nine of the cases fines being inflicted in 6 cases varying from £2 2s. od. to £30.

317. The law regarding Milk is in a very unsatisfactory state. The High Court decisions in *Hunt v. Richardson* and *Grigg v. Smith* to the effect that Milk may be sold as it comes from the cows—even if they are only partially milked—entitles the producers to give preference to their own calves over the babies of their customers.

318. Two hundred and sixty-three Test Samples of Food and Drugs, which had been taken informally, were examined. Of these, two hundred and fifteen were taken by the County Police and forty-eight by the Inspector of Nuisances of the City of Worcester, seventeen (including 14 Milks) being adulterated.

#### *Bacteriological.*

319. During the year, 4,902 specimens have been received for Bacteriological examination, being an increase of 1,523 compared with the previous year.

#### *Diphtheria.*

320. There was a large increase in the number of specimens examined for Diphtheria, 2,988 being received, as compared with 1,744 during the previous year.

#### *Tuberculosis.*

321. There was again a considerable increase in the number of specimens of Sputa &c. received from Medical Men to be examined for the Tubercle Bacillus. The numbers received during the last five years are as follow :—

1915.	1916.	1917.	1918.	1919.
1,085	958	1,060	1,211	1,327

322. By the Public Health (Milk and Cream) Regulations 1912 and 1917 the Ministry require that this Annual Report should set out the percentage of preservatives found in each sample of Cream or preserved Cream where this has been determined and also the percentage indicated in the Statutory table.

323. In this connection the County Analyst has supplied me with the following information, viz. :—

	No. of Samples examined for the presence of a preservative.	Number in which a preservative was reported to be present.
<i>Milk.</i>		
Taken under Food and Drugs Acts - -	269	None.
Informal Samples - -	40	None.
Cream - - - -	None.	None.

324. In connection with Samples of Cream it will of course be remembered that in 1919 owing to Milk and Butter shortage the sale of Cream was illegal.

### **Annual Reports of Sanitary Inspectors.**

325. Table XX appended gives details of the work carried out during 1919 by the Sanitary Inspectors in the County.

326. The Sanitary Inspectors are under no legal obligation to forward these Reports, and I wish therefore once more to record my thanks to those Officers who have done so.

327. The only Report not received this year referred to the Redditch Urban District.

328. The following is a very brief Summary of the Reports of those Inspectors who have submitted a written as well as a statistical Report, viz. :—

#### *Bromsgrove Urban.*

Mr. J. A. H. Burford states that plans for the erection of 30 houses have been approved by the Council and tenders are being invited. Until these are erected and the shortage of houses ended, the Housing, Town Planning &c. Acts cannot seriously be carried out.

He also adds that the difficulty and high prices of labour and materials make owners of property reluctant to carry out anything beyond urgent repairs.

Mr. Burford further states that there are still a great number of privies and ash-pits in existence.

#### *Droitwich Borough.*

Mr. H. Hulse mentions that the difficulty experienced by builders and owners of property in obtaining necessary materials has to some extent retarded the progress of Sanitary work.



*Kidderminster Borough.*

Mr. Cowderoy submits his usual comprehensive Report on the work in the Sanitary Department during 1919. In regard to inspection of Canal Boats, he states that readiness is always shown by the boat people to comply with the Regulations. He has no fault to find with the Common Lodging Houses, which are conducted satisfactorily in every way.

As to unsound food, Mr. Cowderoy states that of a total weight of 1 ton 11 cwts., 1,270 lbs. were found to be tuberculous, and the Traders are encouraged to report to him if they have any doubt as to the soundness of food intended for human consumption. When doubtful food is proved to be unfit and is condemned, a certificate is given to the Trader to enable him to recover the purchase price from the Dealer who supplied him.

Full details are given of action taken under the Housing Acts, Sale of Food and Drugs Act, &c.

*Lye and Wollescote Urban.*

Mr. H. Poole says he is now able to expedite the house to house inspection and is pushing along the conversion of privies into W.C.'s.

*Malvern Urban.*

Mr. Hillyard presents his 23rd Annual Report and states that the high cost of labour and material has retarded progress in Sanitary matters; and also states that until more houses are provided it is impracticable to proceed otherwise than very cautiously with the demolition of houses.

Seven (7) of the 10 Slaughter-houses in the District have, owing to the pooling of supplies of meat and scarcity of English cattle, been but little used.

There are 11 cowkeepers in the District, but the milk actually produced within the District is very small, being only about one-tenth of the quantity actually sold by retail. A good deal of food was condemned and destroyed as being unfit for human consumption.

*Oldbury Urban.*

Mr. E. H. Davis submits a written Report and states there has been no house-to-house inspection as required by Section 17 of the Housing, Town Planning &c. Act 1909 other than the inspecting of a portion of the District where mining subsidencies had taken place.

Great difficulty has been experienced in carrying out the necessary work owing to the shortage of labour and high cost of material.

In regard to the question of refuse removal he states that direct labour was employed and the work commenced during April 1919 with beneficial results.

*Stourbridge Borough.*

Mr. A. Kent submits a very interesting and comprehensive Report on the work carried out in his Department.

He mentions that a small number of defects have been remedied, and this is accounted for by the difficulty of securing labour.

Thirteen (13) "Offensive Trades" are carried on in the District, and two applications to establish Fish Frying businesses were refused.

In 1911 the question of erecting a Public Abattoir was considered, but abandoned owing to local opposition. The Town Council are reconsidering the question of a central Slaughter-house.

*Water Closets.* Mr. Kent states that to overcome the constantly recurring nuisances arising from W.C.'s in open yards, to which the tenants of several houses have access, although each house may be provided with a separate W.C., but the yards being open, the W.C.'s may be used by others than the tenants, and it is difficult to find the actual offenders; I have suggested that a W.C. should be erected to each house with access from the scullery. For some time past many property-owners have acted upon my suggestion and removed common wash-houses and W.C.'s and erected a scullery to each house in open yards with a W.C. attached.

#### *Stourport Urban.*

Mr. G. J. Edmundson presents a written Report in addition to his statistical statement, and refers to the abnormally high cost of labour and materials which has limited the remedying of certain defects to those cases which are really necessary in the interests of public health.

Nine hundred and forty-three (943) visits were made under the Housing Acts.

During the year 25 visits were paid to Dairies and Cowsheds, and five contraventions were dealt with.

*Scavenging.* Mr. Edmundson states that "in the removal of house refuse every effort has been made to carry out the work on similar lines to those adopted in previous years; but that has been impossible, owing to the inferior quality of the team labour supplied, and when supplied the extremely independent spirit in which the work was carried out. In consequence of this there has been rather more delay than usual in getting the refuse removed."

"There has also been a scarcity of manual labour."

*Canal Boats.* A decided improvement in the general condition of the boats is reported.

#### *Droitwich Rural.*

Mr. C. Stevens states that very little progress was made during the year in improving the dwellings of the working classes owing to the shortage of material and labour.

#### *Evesham Rural.*

Mr. R. J. Atkinson who was appointed in 1919, gives a very full Report on the Sanitary work he has carried out in the District during the year.

This also includes complete details of the extensive work which has been carried out under the Housing Acts. Other details are given which have reference to sewerage and drainage, scavenging, factories and workshops, and dairies and cowsheds.



*Feckenham Rural.*

Mr. Watling, in addition to his statistical statement, writes very fully on the work he carried out in the Feckenham District in 1919.

*Halesowen Rural.*

Mr. J. Varley, the newly appointed Sanitary Inspector, only took up his duties in June 1919, so that the figures given in his Report are for part of the year only.

He says: "On coming into your District I was surprised to find such a large number of privy middens in the populous parts. As these are most unsatisfactory from a sanitary standpoint, conversions should be insisted upon where the privies are leaking and offensive. Since I came into the District I have worked on these lines, and from June to the end of the year 1919, sixteen conversions have taken place."

*Kidderminster Rural.*

Mr. Llewellyn, as usual, makes a very comprehensive and interesting report on the work he has carried out in his District.

He states that he made a large number of inspections of shops and bakehouses, and found the food supplies to be good and plentiful. In no case was it necessary for any articles of food to be condemned.

*Martley Rural.*

Mr. Inskip states that he has been able to get defects made good without serving statutory notices.

During the hop-picking, numerous inspections and re-inspections were made of the pickers' quarters and a detailed Report made upon these. Copies of the Report were forwarded to the Local Government Board and to the County Medical Officer.

He adds that Sanitary alterations have been carried out at Lower Wick, Upper Wick, and North Hallow, and reports on samples of the North Hallow sewerage effluent were again very satisfactory.

*Tewkesbury Rural.*

Mr. Shorland presents a very full Report on the work carried out in the Tewkesbury District. He considers that another filter should be provided at Overbury, in order to deal with the purification more effectively.

Nothing further has as yet been done with regard to the proposed new Sewerage Scheme for the Parish of Tredington; this should be put in hand as soon as possible as the existing defective sewer should be abolished entirely.

Your obedient Servant,

G. H. FOSBROKE, D.P.H. Camb.,  
County Medical Officer.

County Public Health Offices,  
29 Foregate Street,  
Worcester.

September 1920.





Address	Occupant	Age	Sex	Marital Status	Religion	Education	Occupation	Income	Assets	Debts	Notes
101 Main St	John Doe	45	M	Married	Protestant	High School	Teacher	\$3000	House	\$5000	...
102 Main St	Jane Smith	35	F	Single	Catholic	College	Nurse	\$2500	House	\$3000	...
103 Main St	Robert Brown	55	M	Widowed	Methodist	High School	Retired	\$1500	House	\$1000	...
104 Main St	Mary White	60	F	Married	Baptist	Elementary	Homemaker	\$1200	House	\$800	...
105 Main St	James Black	40	M	Single	Presbyterian	College	Engineer	\$4000	House	\$6000	...
106 Main St	Elizabeth Green	50	F	Married	Anglican	High School	Secretary	\$2000	House	\$4000	...
107 Main St	William King	30	M	Single	Protestant	College	Student	\$500	House	\$2000	...
108 Main St	Anna Lee	70	F	Widowed	Catholic	Elementary	Retired	\$800	House	\$1000	...
109 Main St	Thomas Hall	25	M	Single	Methodist	High School	Worker	\$1000	House	\$1500	...
110 Main St	Sarah Young	40	F	Married	Baptist	College	Teacher	\$2500	House	\$3500	...

Address	Occupant	Age	Sex	Marital Status	Religion	Education	Occupation	Income	Assets	Debts	Notes
111 Main St	George Hill	55	M	Married	Protestant	High School	Retired	\$1800	House	\$1200	...
112 Main St	Patricia Scott	30	F	Single	Catholic	College	Teacher	\$2800	House	\$4000	...
113 Main St	Richard Adams	65	M	Widowed	Methodist	High School	Retired	\$1000	House	\$800	...
114 Main St	Linda Baker	45	F	Married	Baptist	College	Homemaker	\$1500	House	\$2000	...
115 Main St	Michael Carter	20	M	Single	Protestant	High School	Student	\$300	House	\$1000	...
116 Main St	Michelle Evans	35	F	Single	Catholic	College	Nurse	\$2200	House	\$3000	...
117 Main St	Christopher	50	M	Married	Methodist	High School	Worker	\$1800	House	\$2500	...
118 Main St	Stephanie	25	F	Single	Baptist	College	Student	\$400	House	\$1500	...
119 Main St	Jonathan	40	M	Married	Protestant	High School	Teacher	\$2000	House	\$2800	...
120 Main St	Karen	60	F	Widowed	Catholic	Elementary	Retired	\$900	House	\$1200	...