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Gloucestershire County Council.

9TH JANUARY, 1929.

ANNUAL REPORT

OF

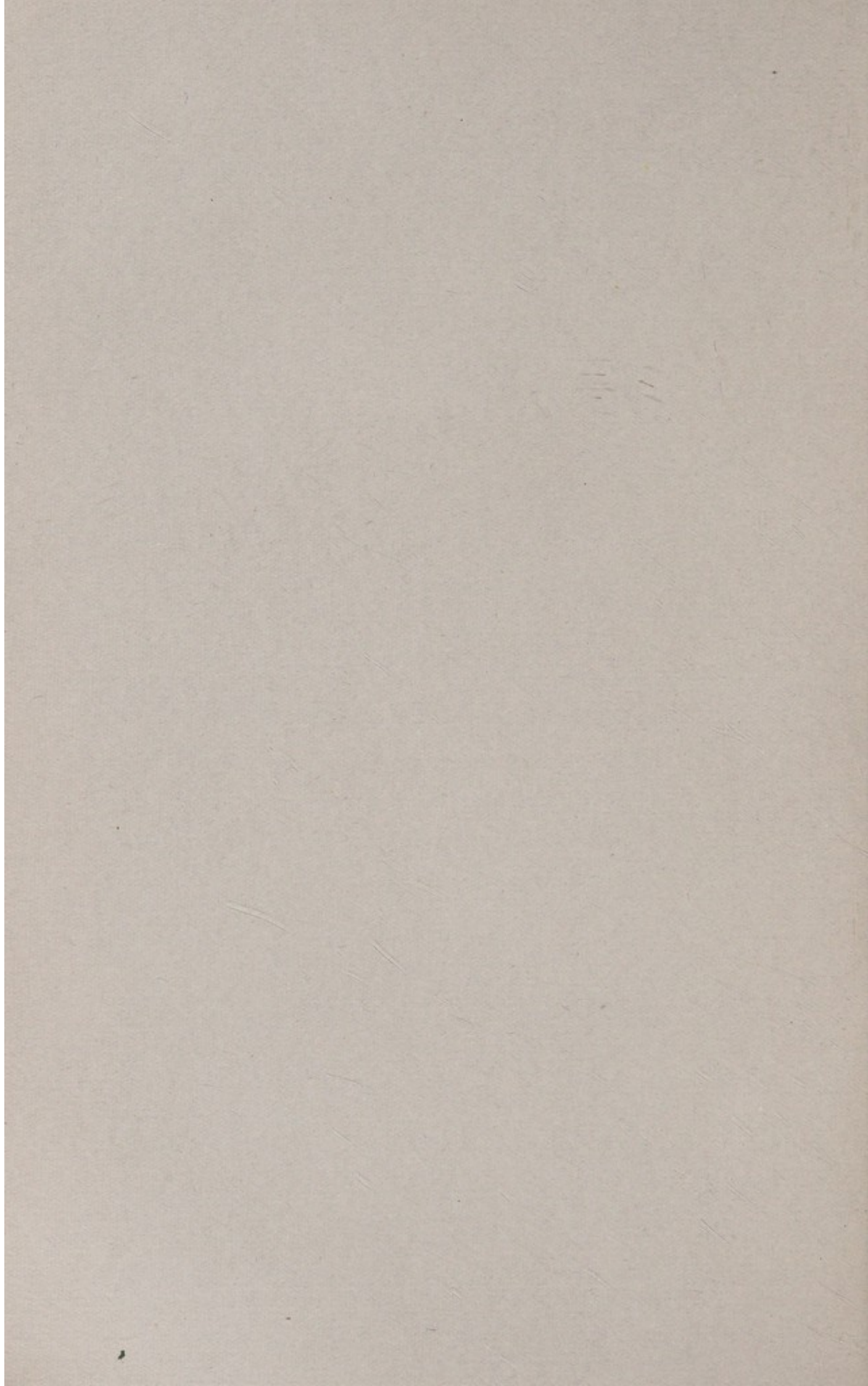
The Medical Officer of Health

FOR THE

ADMINISTRATIVE COUNTY OF GLOUCESTER

FOR 1927

SHIRE HALL, GLOUCESTER,
3RD OCTOBER, 1928.



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Gloucestershire County Council.

ANNUAL REPORT, 1927.

HEALTH DEPARTMENT,
SHIRE HALL,
GLOUCESTER,

3rd October, 1928.

*To the Chairman and Members of the
Public Health and Housing Committee.*

GENTLEMEN,

I greatly regret that, owing to the pressure of routine and special work, my 26th Annual Report will be laid before you at so late a date. I hope, however, the arrangements now made will enable a general review for the current year to be presented at a considerably earlier time in 1929.

The year under review produced no striking features. The fall in the birth rate continues and it is now only two-thirds of that at the beginning of the century: the chances of an infant reaching its first birthday have, however, doubled in the same period. The prevalence of infectious disease was not abnormal and there was no spread from the few cases of small-pox that were introduced.

There has been steady development of work under the scheme for the extension of medical services and enlargement of the arrangements is proposed.

It is very disappointing to have to report that practically no advantage to the County has resulted from the passing of the Housing (Rural Workers)

Act, 1926 : the opportunities given by this Act to encourage the preservation of dwellings, characteristic of the district, and the improvement of home conditions are great, and I hope that they may be utilised to the benefit of the population as they have in neighbouring counties.

I have the honour to remain,

Your obedient servant,

J. MIDDLETON MARTIN,

County Medical Officer of Health.

ALTERATIONS IN SANITARY AREAS.

Effect was given on 1st April, 1927 to the Order constituting Mangotsfield—a parish in the Warmley Rural District—a separate Urban District. The area of the Rural District was thereby reduced by about one-eighth and the population by rather more than one-half.

HEALTH STAFF.

Table A at the end of this Report gives the names of the Medical Officers of Health and Sanitary Inspectors for the respective Districts. Various changes were reported during 1927. The East Gloucestershire United Districts (Medical Officer of Health) Order, 1927, whereby Northleach Rural District was added to the United District in place of Wheatenhurst Rural District, came into effect on 1st December, 1927. Dr. Green, Medical Officer of Health for the adjoining group of Districts in the Stroud area, was appointed Medical Officer of Health for the Wheatenhurst Rural District on the separation of that District from the East Gloucestershire United Districts.

Changes in the appointments of Sanitary Inspectors reported are as follows:—

CHELTENHAM M.B.—Mr. J. R. Jefford succeeded Mr. A. E. Hudson.
 MANGOTSFIELD U.D. {
 WARMLEY R.D. { Mr. R. W. Musk succeeded Mr. G. C. Maslin.
 TETBURY U. & R.D.—Mr. G. Hearsey succeeded Mr. T. V. H. Davison.
 MARSTON SICCA R.D.—Mr. G. E. Boshier succeeded Mr. A. C. Mole.
 STROUD R.D.—Mr. Barrett succeeded Mr. A. Bailey.

VITAL STATISTICS.

POPULATION.

The creation of a separate Urban District of Mangotsfield out of the Warmley Rural District has had the effect of increasing the aggregate population of the Urban Districts in the County and of reducing correspondingly the aggregate rural population. The areas for the aggregate populations for the census in 1911 and that in 1921 correspond, but with respect to 1927 the above alteration came into effect.

	Census.		Estimated 1927.	
	1911.	1921.	As constituted before 1927.	As altered.
Urban Districts	100,419	99,275	102,470	110,400
Rural „	228,595	230,071	233,030	225,100
Administrative County ...	329,014	329,346	335,500	335,500

For the sake of comparison there has been included above what would have been the respective urban and rural populations had the areas remained as in 1926. The mean natural increase (excess of births over deaths) in the six years 1921–26 was 10,462 ; adding this to the census population in 1921, the total in 1927 would have been 339,808. The estimate of the Registrar-General is less than this by 4,308, which represents the emigration of persons from the County. Examined a little more closely, it appears that the aggregate of urban districts has gained by immigration of persons about 1,500, while the total loss by emigration is nearly 6,000 in the rural districts.

BIRTHS.

The number of births has fallen from 7,658 in 1920—the highest in any year since 1903—to 5,001 in 1927, the lowest in any year except 4,786 in 1917. The birth rates in groups of years have been :—

	1927	1926	1921- 1925	1916- 1920	1911- 1915	1906- 1910	1901- 1905
Urban	13.1	14.0	16.7	16.7	18.1	20.8	22.3
Rural	15.8	16.7	18.4	17.9	19.8	22.4	24.6
Administrative County	14.9	15.9	17.9	17.6	19.3	21.8	23.8
England and Wales ...	16.7	17.8	19.9	20.1	23.6	26.3	28.2

Except for the sudden rise after the end of the Great War, the rate has fallen steadily and is now only about 60 per cent. of what it was at the beginning of the century. The fall has been a little less in the rural than in the urban districts and in the County than in England and Wales as a whole. In 9 of the 14 urban districts the death rate in 1927 either equalled or excelled the birth rate, but in only 4 of the 22 rural districts was the death rate the higher.

DEATHS.

After reaching almost the minimum in 1926 (3,975), the number of deaths in 1927 rose suddenly to 4,480, the figure in 1918, when 849 were attributed to influenza. On the whole there has been a fall of 12 per cent. in the past quarter of a century,

but in the country as a whole the decrease was 24 per cent. The rates in quinquennia are set out in the following statement :—

	1927	1926	1921- 1925	1916- 1920	1911- 1915	1906- 1910	1901- 1905
Urban	14.0	12.6	13.6	15.1	14.2	14.1	14.6
Rural	13.1	11.4	11.9	14.1	13.0	12.9	13.8
Administrative County	13.4	11.9	12.4	14.4	13.4	13.3	14.1
England and Wales ...	12.3	11.6	12.2	13.7	13.8	14.4	16.0

From the above it will be seen that there was a larger increase in the rate in 1927 in rural than in urban districts. This increase occurred partly amongst children aged 1-5 years, but also amongst persons aged 25-65, and mainly amongst those over 65 years. In other age groups the numbers were less even than in the previous year. The chief cause of the increase was influenza, to which 356 deaths were attributed as compared with 96 in 1926: associated with this were larger numbers under bronchitis and pneumonia, and the number attributed to pulmonary tuberculosis rose from 168 in 1926 to 208 in 1927. The diseases under which increased deaths of children aged 1-5 years are mainly noticed are influenza and respiratory affections.

INFANTILE MORTALITY.

In the following statement is set out the infantile mortality (deaths under one year per 1,000 births) in quinquennial periods from 1896-1900 :—

	1927	1926	1921- 1925	1916- 1920	1911- 1915	1906- 1910	1901- 1905	1896- 1900
Urban	53	55	68	69	87	95.5	111	—
Rural	57	54	53	66	77	75	92.5	—
Administrative County	56	54	55	67	80	81	98	113
England and Wales ...	69	70	76	90	110	117	138	156

In the first quarter of a century there was a steady fall from 98 to 55 with a slight further drop to 54 in 1926. A relative rise to 56 is noticed in 1927, but this is due to the rate being calculated on a smaller number of births and not to an increase in the deaths : the actual number of infant deaths in 1927 was 280, the smallest on record.

MATERNITY AND CHILD WELFARE.

No change in the arrangements was made in 1927, but it is hoped that before the end of the present year an Assistant Medical Officer for Maternity and Child Welfare will be appointed and that it will be practicable to effect improvements in various directions, particularly by encouraging the opening of more Welfare Centres and by developing ante-natal activities. The growth of the work in various directions is indicated in the following paragraphs.

1. NOTIFICATION OF BIRTHS.

The proportion of births notified within 36 hours of their occurrence has increased from 89.0 per cent. in 1917 to 97.2 per cent. in 1927. Of the total 4,860 notifications, 3,257 (67 per cent.) came from certified midwives and 1,603 (33 per cent.) from doctors and parents.

2. HEALTH VISITING.

The increasing amount of work done under this heading is shown in the following summary :—

				<i>Births referred to Visitors.</i>		<i>Total Visits.</i>
1916	(From 1st April)	...	...	1,472	...	3,735
1917	...	...	...	3,650	...	13,359
1918	...	...	...	4,019	...	23,818
1919	...	...	...	4,408	...	28,817
1920	...	...	...	5,969	...	38,396
1921	...	...	...	5,112	...	48,730
1922	...	...	...	5,561	...	61,512
1923	...	...	...	5,185	...	62,177
1924	...	...	...	5,197	...	71,271
1925	...	...	...	4,958	...	72,976
1926	...	...	...	4,787	...	74,495
1927	...	...	...	5,224	...	78,928

The numbers in the first column exceed the numbers of notified births by the transfers of births occurring in other areas. The last figure includes 11,103 visits to 2,522 expectant mothers and is a welcome indication of progressive work in the direction in which development is most desired: the value of it will be increased when the certified midwives have the guidance of the Maternity and Child Welfare Medical Officer.

In accordance with the policy of the County Council of utilizing existing agencies as far as possible the Health Visitors are the District Nurses in their respective areas. During 1927 127 undertook the duty. In the Forest of Dean, where there are few District Nursing Associations, most of the work is done by whole-time Health Visitors, the number being increased from two to three during 1927: it is hoped, however, that ultimately they will be replaced by District Nurses as and when the County Nursing Association are successful in securing the formation of District Nursing Associations over the whole area. In other parts of the County where there are no District Nurses and where the Nurses are not co-operating—but few in number—the visiting is undertaken by the eight County Health Superintendents, who are responsible for all the public nursing work in their respective areas.

3. MEASLES, ETC., VISITING.

There was greatly reduced prevalence of measles during 1927, and only 398 visits were paid to 93 infants suffering from this complaint.

4. INFANT PROTECTION VISITING.

This work is undertaken by the County Health Visitors on behalf of the Boards of Guardians in eight Unions. The number of cases under regular visitation in 1927 was 46.

5. INSTITUTIONAL PROVISION FOR CONFINEMENTS.

Accommodation for the special cases requiring institutional treatment either on account of anticipated difficulty or unsatisfactory home conditions is found mainly in the Maternity Wards of the Cheltenham and Gloucester District Nursing Homes. In the early part of the present year the former was considerably enlarged, the number of beds being increased from 4 to 10. At the same time the space under the wards was arranged as an excellent Maternity and Child Welfare Centre, and provides

greatly improved facilities for ante-natal work. A grant of £400 towards the cost of this improvement was made by the County Council.

Patients from the County are also received into the Malmesbury Maternity Home and occasional cases are sent to Cottage Hospitals in the County. During 1927 a Maternity Ward was arranged at the Berkeley Cottage Hospital above the rooms added for the Out-Station, and it is hoped that similar accommodation will be provided at all Cottage Hospitals, so that the women may be confined as near their homes as possible.

While, generally, mothers do not like leaving their own homes for their confinements, there is less reluctance than formerly to take advantage of hospital treatment, and it is probable that the occasions on which the special accommodation is desired will increase considerably. The numbers of cases for which provision was made increased from 18 in 1926 to 58 in 1927.

6. ALLOWANCES OF MILK.

Supplies of milk for pregnant and nursing mothers and for infants have been granted since 1918, and the concession is greatly appreciated. Recommendations are made by the Health Visitors and the grants are made for monthly periods on the authority of the Chairman between the meetings of the Committee. In 1927 there was less demand for this assistance than in the previous year, the number of applications (including extensions) being 1,818 as compared with 2,500 in 1926.

7. MATERNITY AND CHILD WELFARE CENTRES.

The policy of the Council in the past has been to encourage local Committees desiring to establish centres by way of grants and other assistance. The number of these centres is 25. Many of them are of a very simple character, but much useful work is undertaken and they are very popular. The Committees of 11 centres in the Stroud area formed themselves into a Federation during 1927, with a view to combined action on matters of common interest. One activity of this Federation was to arrange an interesting Maternity and Child Welfare Exhibition on November 1st, 1927. It was opened by Lady Plymouth, with the Chairman of the Committee (Rev. R. H. M. Bouth) presiding. With a view to stimulating interest in this branch of work in parts of the County without the advantages, a County Federation was proposed, and it is satisfactory that the matter was taken in

hand by the County Nursing Association with the object of forming a Committee to develop this work throughout the County.

There is also one municipal centre—Cinderford—which was formerly maintained by the East Dean Rural District Council, but was transferred to the County Council with the other Maternity and Child Welfare work in that area in March 1927. It is locally managed by a small Committee of ladies.

The time and energy involved in running centres is not generally appreciated and a personal visit is necessary for a realisation of the amount of labour of the numerous voluntary workers.

8. HOSPITAL TREATMENT OF INFANTS.

In exceptional cases the opportunity for the special care of infants who are not progressing well at home is very useful, but there was no request during 1927 for such assistance.

Under the scheme for the treatment of orthopædic defects, however, it is very satisfactory that children are coming under notice at very young ages, even within a short time of birth. These are reported by Midwives and Health Visitors, and it is to their credit that the proportion of infants to children of school age is increasing steadily. In 1926 140 between the ages of three months and five years were referred to the orthopædic surgeon and 8 were admitted for varying periods to the orthopædic beds in the Cheltenham General Hospital: in 1927 the numbers were 176 and 19 respectively.

9. ADMINISTRATION OF MIDWIVES ACTS.

The analysis of the records on which this report is based has been made by Miss Milford, the Superintendent of the County Nursing Association in her capacity as Inspector of Midwives. It is impracticable in a brief summary of this nature to introduce all the information, but the value of the detail to the executive officers is very considerable and is some reward for the trouble involved in making the various summaries.

PROVISION OF MIDWIFERY SERVICES.

The development between 1905 and 1927 in the extent and

character of the midwifery services available in the County is briefly indicated in the following comparison :—

	1905.	1927.
Number of practising midwives—		
Trained women	53	244
Untrained women	175	22
	228	266
Numbers of Parishes—		
(a) covered by District Nurse-midwives	174	326
(b) covered by Independent Midwives	60	15
(c) with no certified Midwife	120	13
Number of cases attended by certified Midwives... ..	2,382	3,257
Percentage of total births	31.6	65.1
Number of notices requiring medical help	216	955

The position at the end of 1927 was as follows :—

Midwifery Services by District Nurses.	No. of D.N.A.	Parishes.	Area in Acres.	Population, 1921.
(a) Associations affiliated with Glos. C.N.A.	120	316	674,099	287,576
(b) Associations affiliated with other C.N.A.	5	5	7,802	1,527
(c) Non-affiliated D.N.A.	5	5	18,700	5,545
	130	326	700,601	294,648
Independent Midwives	—	15	55,147	27,805
No Certified Midwife	—	13	29,340	6,893
<i>Administrative County</i>	130	354	785,088	329,346

The alterations in the arrangements during 1927 were few. One District Nursing Association in one parish was given up ; one covering three parishes was revived, and provision for another parish was made by a District Nursing Association in an adjoining County. The net improvement was an addition of two to the number of provided parishes. The County Nursing Association have the formation of other District Nursing Associations under consideration but the isolated position of the remaining parishes makes provision for them difficult and special arrangements may be required in some cases.

KING EDWARD VII MEMORIAL NURSES.

The emergency Nurses, partly maintained from the King Edward Memorial Fund, did 211 weeks emergency and holiday duty for District Nurse-midwives during 1927.

WORKHOUSE MIDWIVES.

12 Certified Midwives are employed in 8 of the 12 Poor Law Institutions situated within the County.

UNCERTIFIED WOMEN.

4 cases were brought to my notice during 1927 in which uncertified women had attended or had been engaged to attend women in their confinements. The circumstances of each case were investigated—in two cases the patients were delivered by the Maternity Nurse before the arrival of the doctor who had been engaged, but they did not appear to call for special action by the County Council; warnings were given to the persons concerned.

PROPORTION OF BIRTHS ATTENDED BY CERTIFIED MIDWIVES.

The proportion of registered births attended by Certified Midwives, which had fallen from 67.5 per cent. in 1925 to 62.3 per cent. in 1926, rose in 1927 to 65.1 per cent. Approximately, two-thirds of the confinements in the County are regularly attended by certified midwives.

NOTICES UNDER THE RULES OF THE CENTRAL MIDWIVES BOARD.

From the following summary statement, the numbers of notices differed little from those in 1926 :—

Confinements attended by Midwives	Average 1916-20.		Average 1921-25.		1926.		1927	
	No.	%	No.	%	No.	%	No.	%
...	3,447		3,773		3,301		3,257	
Med. help mother	432	12.5	660	17.5	805	24.4	796	24.4
" baby	105	3.0	148	3.9	174	5.3	159	4.9
Still-births	71	2.1	74	2.0	52	1.6	78	2.4
Death of mother	2	.06	3	.08	5	.15	3	.09
" baby	11	.3	16	.4	20	.6	29	.9
Artificial feeding	(32)	—	46	1.2	31	.9	41	1.3
Total	621	18.0	947	25.1	1,087	32.9	1,106	34.0
No. of practising Midwives	272		301		306		308	
Further notices received	No.	%	No.	%	No.	%	No.	%
Change of address	116	42.6	115	38.2	110	36.0	88	28.5
Laying out dead	21	7.7	28	9.3	25	8.2	26	8.4
Source of infection	10	3.7	19	6.3	38	12.4	39	12.6
Average cases per Midwife ...	13		13		11		11	

STILL-BIRTHS.

The number of still-births in 1926 had reached the record low figure of 52, but in 1927 suddenly increased by 50 per cent. to 78 or 2.4 per 100 births. This is the highest figure since 1922 when it was 85 or 2.2 per cent. The usual enquiries were made but there appears to be no special reason for the increase which is probably an accidental variation such as always appears with small numbers. Of 77 cases 43 were full term and 34 premature: 26 were macerated and 5 had serious head deformities. In 17 cases the child was born before the arrival of the midwife, 8 were not viable, 4 were forceps cases, and 28 cases were otherwise accounted for in some manner, leaving 20 in respect of which no special reason was forthcoming. On the whole the still-birth rate in this County is not unsatisfactory, being 2.1 per cent. in 1916-1920 and 1.9 per cent. in 1921-1926, and probably the high rate last year is only accidental.

DEATHS OF INFANTS AND MOTHERS.

Under the revised rules of the Central Midwives Board all deaths occurring in the practice of midwives, whether the help of a doctor has been summoned or not, have been notifiable since 1924. The results of the enquiries into the infants' deaths call for no special note.

The number of maternal deaths notified under the Rules was 3, but the total including those in which the midwives had acted as maternity nurses only was 18.

From information supplied by the nurses and doctors the causes assigned were:—

Eclampsia 4	1 each from—
Puerperal fever 3	Embolism.
Pneumonia 2	Pre-natal sepsis.
Nephritis and toxæmia 2	Puerperal insanity.
Placenta Prævia 1	General peritonitis with appendicitis (18th day).
(No Doctor or Midwife engaged.)	Graves' disease.
	Anæmia and exhaustion and yellow atrophy of liver.

One of the 5 septic cases was reported to have been in this condition before the confinement and the woman succumbed to a pulmonary embolism in hospital, and another supervened apparently on an acute infection of the appendix. Of the remaining 3 cases, 1 was attended by a bona fide midwife aged 76 years who has since decided to give up practice, the

second had an easy forceps delivery, then developed empyema and died 7 weeks after delivery, and the third, definitely jaundiced before the confinement, had a bad tear of the perineum on delivery with forceps and died on the 6th day when she was found to have fatty degeneration of the liver. So far as could be ascertained the conduct of all trained nurses was perfectly correct and it would not appear that any action of theirs could have avoided the issue.

PUERPERAL PYREXIAS.

The occasions on which medical help was sought on account of rise of temperature reached a maximum of 47 in 1927. Detailed enquiries were made as to the cases and in addition information was obtained as regards 20 cases occurring in the practice of doctors, who were good enough to supply particulars themselves or to concur in their being obtained. Of the 67 cases, 17 were regarded as being puerperal fever and were notified as such: 3 of the patients died.

From the reports it appears that the confinement was normal in 20 cases; in 4 instances the pyrexia occurred in connection with miscarriage, and manual or instrumental action was required in 17 cases. In 25 cases the rise of temperature was first noticed between the 2nd and 4th days, and in 8 on the 5th or 6th days, and in 5 on the 10th day after confinement.

That an investigation of the causes contributing to maternal illness and death is urgently necessary, is recognised generally, and the matter is having consideration by various bodies including the Medical Research Council and the British Medical Association: various reports have already been made, including one by the former on the toxæmias of pregnancy, but so far little light has been thrown on the matter. As regards sepsis, however, it appears now to be clear that the infection is by no means always introduced from the outside at the time of the confinement, and that extensive local damage tends to exacerbate the results of the infection.

INSPECTIONS, SPECIAL REPORTS, ETC.

All the 308 certified midwives who gave notice of their intention to practise in the County during 1927 were seen on one or more occasions in the course of the year with the exception of 31: of these 31, 20 resided outside the boundary of the County and practised in two areas. The remaining 11 were mostly in the County only a short time doing temporary duty. A total of

1,128 visits were paid to 277 practising midwives resident in the County, an average of just over 4 visits per midwife : the number of times any particular woman is seen depends on the occasion for investigation in any instance, and 16 certified midwives were visited as often as 7, 8 or 9 times during the year. Included in the above are 195 special visits of inquiry in respect of particular matters—discharge from baby's eyes (63), pyrexias (57), still-births (46), deaths of infants (11), and other conditions (18).

Most of the visits were paid by Miss Milford and the County Health Superintendents. These are by no means always of an inspectorial nature, for the Superintendents are regarded by the practising midwives as persons from whom help will be readily forthcoming in time of need, and whose advice is freely sought. They have been particularly helpful in developing the ante-natal work undertaken by the certified midwives and the advantages and possibilities of this work are now widely appreciated. Practical assistance was given by the Maternity and Child Welfare Committee in obtaining calipers and selling them to the midwives at wholesale prices : instruction in the use of these instruments has been given to Nurse-midwives by the Health Superintendents. On the whole a good beginning in ante-natal work has been made, but the assistance of more skilled advice and definite ante-natal clinics by a lady doctor with special experience are desired both by the certified midwives and by the Superintendents, so that this important work may be developed and the accidents of pregnancy averted as far as practicable.

In only 2 instances was definite disciplinary action necessary. In one case the woman, a bona fide midwife now aged 76, has done good work in the past and recognises the time has come when she should resign : in the other, a trained woman, practising on her own account, had to be warned seriously on the very dirty and untidy state of her surroundings.

MATERNITY HOMES.

Sixteen applications for registration under the Maternity Homes' Act, 1926, and 4 applications for exemption were received. After inspection of the Homes, all 16 were registered, 3 being cancelled later, on the Homes being given up, and the applications of the 4 hospitals for exemption were granted.

WELFARE OF THE BLIND.

The County Association for the Blind, with the Rev. R. H. M. Bouth, Chairman of the Public Health Committee, as their

Chairman, administers the scheme approved by the County Council and submitted the following report for 1927-28.

GENERAL.—The numbers on the register (April 1st, 1928), are 599 Blind and 124 Watching Cases, those under observation. The classification of the Blind under Age Periods is as follows:—

Under 5	...	...	...	1	21—30	...	...	...	33
5—16 (school age)			...	19	30—50	...	...	...	113
			(11 at school, 2 at institutions)		50—70	...	...	...	218
16—21	...	...	...	8	over 70	...	...	...	207

The recent arrangement with the National Institute for the Blind has been in operation for a year, and the grants received through the Gloucestershire Fund have been most helpful. It is hoped that increased support will be given to this fund, upon which the Association largely depends for providing adequately for the employees at the Cheltenham Workshops and for helping the needy blind of the county.

The Cheltenham Workshops, which for so long have done such good service in the county, have now been handed over to the Glos. County Council, and will be worked by a Committee of Management appointed by the County Association.

From October last Miss L. Chapman has been working as Assistant-Secretary to Miss D. Clarke, who has been obliged to resign owing to leaving the county. Miss Chapman, however, is keenly interested in work for the *individual* blind, and has asked to be appointed as full-time Home Teacher instead of part-time Secretary. This step has been approved by the Executive Committee and by the Ministry of Health, and it is believed that much benefit will result to the blind in the south-eastern parts of the county, where Miss Chapman will work. It is hoped that a new secretary will be appointed shortly. District Representatives are needed for the areas of Chepstow (Glos. part) and Winchcombe, and Visitors for various parts.

During the year we have received substantial help from Gardner's Trust for the Blind, and from the Gyde Trustees for special cases, and also a grant from the Gyde Trustees in respect of children. Pensions have been received from Hetherington's Charity for six fresh cases, and from the Royal Blind Pension Society for two cases, and help has also been received from the Clothworkers' Company. The assistance given by the Bristol Institution and by the Cheltenham Workshops has been most valuable. We are glad to have been able to co-operate with Boards of Guardians in the care of destitute cases. The Association has been most fortunate in receiving a bequest of £500 from the late Mr. W. B. Hextall, to be used for providing motor-cars for Home Teachers and other specified objects. The money has been invested and the interest will be used for the purposes named until such time as it may be thought wise to use the capital for some definite extension of the work.

PREVENTION OF BLINDNESS.—Help to provide treatment has been given in several cases. Persons helped in this way are put on the "watching list."

TRAINING AND HOME TEACHING.—Thirteen children (including seniors) are now at Westbury School. Three have recently left, and of these one is employed as a Home Worker and two are completing training at Cheltenham Workshops. A little boy is at the Ellen Terry Home, and a man is at Plymouth. A girl at

Chorley Wood College hopes shortly to pass to a Training College as she is taking up Froebel work. Owing to the kindness of the Gyde Trustees a partially blind and delicate girl of fourteen is having a course of domestic training at St. Lucy's Home, Gloucester.

The work of the Home Teachers progresses favourably. Miss Wynn Lloyd has about 260 cases under her care, and gives lessons in Braille, Moon, handicrafts, etc., to 23 pupils. Mrs. Hartland takes charge of about 95, giving lessons to 16. Miss Chapman will have most of the remainder in her care, many of whom it is hoped will desire instruction. About 40 cases in the environs of Bristol City are visited and taught by the Bristol Home Teachers by special arrangement.

The three Clubs, at Charfield, Cirencester and Cheltenham, continue to be well attended, and much teaching is done, especially at Charfield. Community singing is now a feature, and sewing and simple dress-making are taught at Charfield. It is felt that more might be done to encourage blind women to make their own clothes, and with this idea a sewing competition has been held with 15 entries. The prize in the totally blind class was won by a woman who is also deaf and dumb.

A successful Braille competition was held for those who became blind over the age of 50. Several Braille and Moon magazines are circulated to readers of embossed type. The number of readers who obtain books from the National Library for Blind is about 113.

NECESSITOUS BLIND.—Temporary weekly grants, varying from 1/2 to 5/—, have been given to 45 cases. The aim of the Association is to bring the income (including benefits) of all blind people up to 15/— a week, but this is not yet possible in all cases. Help for special needs has been given to about 47 persons, and gifts of warm garments to about 92. Some of these latter were given to the Association for distribution by shops and individuals, other garments being made by blind workers who were paid for the making.

A blind woman at the Devonport Home is partly paid for by the Association, friends of the woman helping. We have altogether three Gloucestershire blind at the Devonport Home, which is a great blessing to the old and friendless.

EMPLOYMENT.—Nineteen men and four women (including pupils) are employed at the Cheltenham Workshops, augmentation of wages being paid by the Association. Four men are being employed at the Woodchester Piano Works—three having unfortunately been discharged owing to shortness of work. One of those discharged is now registered as a Home Worker, and the others have returned to their homes outside the county. Two girls are employed in sighted factories. There are 16 Home Workers, well looked after by the Bristol Institution, and also helped by the Association in selling their work. Other less skilled workers are given employment by the Home Teachers, who assist them in their work.

Sales or stalls of work done by the Blind have been held at Cirencester, Stow-on-the-Wold, Blakeney, Newent, Longhope, Dursley, Stroud, Tortworth—the three last-named being held in private houses. At Tortworth an address given by the Hon. Secretary of the Western Counties aroused much interest.

Miss Chapman has been made a member of the Rural Community Council, which hopes thus to help the Association in the sale of goods made by Blind.

MISCELLANEOUS.—Parties were given during the summer at Tewkesbury, Nailsworth and Cirencester, and were much appreciated. The Home Workers were as usual entertained by the Bristol Institution. Special gatherings in connection with the Clubs have also been held. One of the Post Guides spent a most

enjoyable time at the Post Guides' Camp in the New Forest. Wireless Sets have been supplied by the National Institute to a number of blind persons in the county. The total number of our blind persons having wireless is estimated at about 140.

Thanks are due for help and kindness received from eye specialists and doctors, and to the many voluntary workers, including those who have kindly entertained the blind people at their houses, and the Cheltenham League of Women Helpers (Toc H). More helpers are very much needed.

In their full report the Association give the names of 109 voluntary workers who keep in touch with the blind persons in their respective neighbourhoods: without this gratuitous assistance and much financial help coming from voluntary sources it would not be possible for the Association to assist the blind to the extent that they do. The friendly gatherings and parties are greatly appreciated, as is also the use of wireless receivers without the necessity of obtaining licences.

During the year arrangements were made for the transfer of the Workshops for the Blind at Cheltenham, employing some 22 blind persons, but the formalities were not completed until 1928. A Committee, consisting of County Council representatives on the Association, has been appointed by the County Association and took over the management of the Workshops in April 1928.

SCHEME FOR THE EXTENSION OF MEDICAL SERVICES.

A summary of the work done and of the expenditure incurred in the operation of the scheme from its inception in 1921 are set out in Table V at the end of this report.

The present Out-Stations and the dates of their opening are :—

23 May, 1921	...	Almondsbury Memorial Hospital.
25 "	"	Berkeley Hospital.
30 "	"	Thornbury Tuberculosis Dispensary.
31 "	"	Tewkesbury Rural Hospital.
1 June,	"	Cirencester Memorial Hospital.
3 "	"	Chipping Sodbury Cottage Hospital.
7 "	"	Cinderford Institute.
12 Oct.,	"	Chipping Campden Out-Station (New building).
21 Nov., 1924	...	Fairford Cottage Hospital.
2 Oct., 1925	...	Soundwell Road Out-Station, Kingswood (New building).
4 May, 1926	...	Moreton-in-the-Marsh Cottage Hospital.
1 Jan., 1927	...	Lydney Hospital.

In addition to the General Hospitals at Bristol, Cheltenham, Gloucester and Stroud, and the above Out-Stations, there are

also special facilities for treatment at the Gwy House Hospital, Chepstow, Winchcombe Cottage Hospital, Cossham Memorial Hospital, Kingswood, Ear, Nose and Throat Hospital, Bath, and the Stratford-on-Avon Hospital. The work done at the different Out-Stations is summarised in the following statement of attendances :—

<i>Out-Station.</i>	ATTENDANCES.						
	1921-2.	1922.	1923.	1924.	1925.	1926.	1927.
	(3 quarters).						
<i>Bristol Area.</i>							
Almondsbury ...	275	189	545	700	808	776	858
Chipping Sodbury	125	349	611	551	452	549	497
Thornbury ...	291	282	570	901	896	1,203	934
Soundwell ...	—	—	—	—	74	1,767	922
<i>Gloucester Area.</i>							
Berkeley ...	36	129	432	1,115	1,062	959	863
Cinderford ...	344	519	762	1,032	1,073	1,642	1,249
Lydney ...	—	—	—	—	—	—	799
<i>Cheltenham Area.</i>							
Chipping Campden	147	365	744	995	779	989	1,002
Cirencester ...	82	286	841	810	1,218	3,377	2,019
Fairford ...	—	—	—	10	200	252	166
Moreton-in-Marsh	—	—	—	—	—	107	73
Tewkesbury ...	137	264	512	470	542	634	785
Winchcombe ...	—	—	—	5	4	14	—
Total Out-Stations	1,437	2,383	5,017	6,589	7,108	12,269	10,167
Hospitals ...	161	129	328	816	1,147	1,048	1,293
GRAND TOTAL ...	1,598	2,512	5,345	7,405	8,255	13,317	11,460

The reduction in the average cost as the work develops is indicated in the following short statement :—

	1922.	1923.	1924.	1925.	1926.	1927.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Total cost—per attendance	15 6	10 5	7 11½	8 0	6 1	7 10¾
Medical Officers—per attendance at out-stations	4 3½	2 10½	2 1¾	2 0¼	1 6	1 7¾
Specialist services—cost per examination ...	12 0	11 1¼	9 6	8 8½	8 5	7 4¾

The above summary of the work under the Scheme gives evidence of much useful service, but it does not bring out the most valuable feature which is the success of the arrangements for the co-operation of existing agencies—General Hospitals and Cottage Hospitals, Medical Staffs and General Medical Practitioners, and the various branches of nursing. That this co-

operation has proved so happy in practice is most encouraging and leads to the hope that it may lead to a complete co-ordination of all branches of medical and surgical practice in the area.

The Medical Services Committee are so satisfied with the progress of the work that they have given instructions for a report to be prepared setting out proposals for extending the arrangements to cover the whole of the County, with a view to its completion within a short term of years.

ORTHOPÆDIC DEFECTS.

The Orthopædic Surgeon presented the following report to the Medical Services Committee at their meeting on 4th February, 1928.

In presenting this report to you on the work done during the past year, I wish first to generalise before proceeding to analyse the cases which presented themselves for treatment.

The method of carrying out the work in the County has proceeded on the same lines as in former years—we have added another Out-station to our list, Lydney, and it is pleasing to record that large numbers of children are brought to the Hospital there, full advantage being taken of our scheme, and the weekly visits of Miss Rodenhurst.

The attendance at Thornbury has been exceedingly poor, an average of 6 turning up, and most of these are chronic cases: the proximity to Bristol, to which city, no doubt, many of the cases in this area are sent, may account for the scanty support we receive. I do not like to suggest cutting off any of our tentacles but I feel that from every point of view, the time spent there might be more profitably employed in some other centre—Northleach, Winchcombe, etc.

The six beds placed at the disposal of your Committee by the Board of the Cheltenham General and Eye Hospitals have been invaluable. The continuity of remedial treatment thus obtained has been of much benefit to the patients, especially in cases requiring massage and remedial exercises. This point was specially emphasised by Sir George Newman in a recent report in which he lays particular emphasis on the advisability of admitting children to Hospital for such treatment, to ensure that they become thoroughly familiar with the exercises. In some cases we have found other members of the family being instructed in turn by the patients. The advantage of the freedom allowed to me in regard to the period of Hospital treatment has justified itself and I wish to record my indebtedness to you for this. Owing to prevailing epidemics, we were unable to keep the beds fully occupied at all times during the year but this lost time was made up in the succeeding periods.

The number of patients treated during that year was 316, an increase of 155 as compared with the previous year. The most important factor in dealing with congenital deformities is to get such cases early. We have had the opportunity of getting cases of congenital club foot within a few days of birth and it is pleasing to note that, in one case, Miss Rodenhurst had the opportunity of seeing a congenital club foot within a few hours of birth. The advantage of instituting early treatment in such cases is inestimable. Out of a total of 316, 156 were boys

and 160 girls, the sex percentage being practically the same. 65 up to the age of 1 year were treated, and 44 up to the age of 2 years, i.e. 109 in the first two years of life, a percentage as regards the total number of children treated, of 34. Up to the age of 5 years, 176 children were treated, a percentage of nearly 56 of the whole, the sex ratio being exactly the same. In one condition only we found a marked disproportion as regards sex, 9 cases of congenital dislocation of the hips, all girls, several of whom had to be operated on to improve their condition.

I wish to lay particular emphasis on the necessity for early recognition and treatment of this condition. A very large percentage of manipulative cures can be obtained if we get these cases within the first two years of life; after this age the possibility of a satisfactory result by manipulation is much lessened and by the age of 5 such cases, if untreated, present a surgical problem of no mean magnitude.

These remarks apply equally to congenital club foot, though the recognition is made when the child is born, and the necessary treatment instituted.

Analysis of cases treated.—58 cases of flat feet were treated, the large proportion showing a definite improvement as a result of purely remedial treatment, viz., wedged shoes and remedial exercises, carried out under supervision. 46 cases of infantile paralysis were under treatment during the year, splintage, massage and remedial treatment benefiting the majority—in a few cases tendon transplantation operations were done, with definite improvement in function. Once again, the early institution of rest to the affected muscles is all important if structural shortening is to be avoided and the optimum ultimate result obtained. Too much emphasis cannot be laid on the importance of the early recognition of this condition, as the disease is at times an insidious one, the paralysis coming on after an attack of "influenza, measles," etc. Splints require to be carefully attended to, and constant adjustment is necessary to prevent foot drop, etc.

Bow legs.—45 cases of this nature have been under treatment, the predisposing cause being rickets in a large proportion of cases. Treatment consists in keeping the child off the feet, splintage with pads to correct the deformity, and the administration of Cod Liver Oil.

Congenital club foot, 22.—The majority of these cases have responded well to daily manipulation with retentive strapping or splintage; at intervals wrenching under an anaesthetic with the application of plaster has been necessary. The earlier such cases are brought under treatment the greater chance of a successful result without having recourse to bone cutting operations, and the earlier the child will be able to walk.

Scoliosis, 15.—Remedial treatment with the application of spinal supports has benefited many of these cases, but prevention of such deformity is much easier than the cure, which, once established, is exceedingly difficult to correct—cases of this nature nearly always require hospital treatment for some weeks to begin with. The proportion of girls to boys in this series was 2—1.

Littles' Disease, 11.—Cases of this type have shown a definite improvement following operative and remedial treatment—a prolonged period of treatment is necessary in such cases, extending over many months, any operation performed being merely an incident in the attack. While the ultimate outlook is not very hopeful, the life of the child is made much more enjoyable when it is able to walk a little. A definite mental improvement is noticed in these cases when the malposition of the limbs is corrected.

Hare Lip and Cleft Palate, 15.—Cosmetically, much satisfaction is felt as the result of treatment in these cases and if the palate is closed before the child has talked much, a practically normal method of speech is obtained. It is unnecessary to refer to the other cases in detail, which include various foot deformities, knee and hip joint deformities, nerve injuries of birth origin, torticollis, etc.

Our numbers have increased markedly—by the end of 1925, 105 cases had been under treatment, 161 were treated in 1926, whilst in 1927, 316 cases in all were treated, an increase of nearly 100 per cent. Consequent on this increase, the work of the Orthopædic Nurse has been much heavier, and I feel strongly that the time has arrived when the necessity of appointing an extra Orthopædic Nurse must be considered. Miss Rodenhurst, in addition to visiting the various Out-stations weekly, pays home visits regularly, and a perusal of her report will convey some idea of the varied nature of her duties.

In conclusion, I wish to express my appreciation of her valuable services, and the interest she has taken in the cases. Mention must also be made of the invaluable help given by the Health Visitors, District Nurses, and the Matrons of the Hospitals visited; their contribution has been by no means a small one. Voluntary effort has been a great help in the transporting of cases in outlying districts, but a much greater field is available in this direction. To the staff of the Orthopædic Department of the Cheltenham General and Eye Hospitals my thanks are freely given for their excellent help and enthusiasm. The loyal co-operation of the members of the medical profession has also been a pleasing and gratifying feature during the past year.

The increase in our numbers during 1927 points to the success of your scheme, and we anticipate an enlarged field of labour, beneficial to that most vital section of any community—children.

(Signed) J. S. ROBINSON.

4th February, 1928.

The immediate future developments include the appointment of a second Orthopædic Nurse and the opening of the pavilion with 38 beds for surgical tuberculosis at Standish House. The former will enable closer oversight to be kept of cases in their homes and more intermediate treatment to be given. With the extra in-patient accommodation in the surgical beds at Standish House, the prolonged treatment required in many cases will be practicable for orthopædic defects due to tuberculosis, about one-third or one fourth of the total number of orthopædic cases. Similar accommodation is required for cases due to other causes than tuberculosis.

INFECTIOUS DISEASES.

The summary showing the numbers notified in each district, together with the numbers removed to hospital and the numbers of deaths, will be found in Table II at the end of this report.

SMALL-POX.

After four years of immunity, cases of this disease were reported in 1927. These were only four in number and were of a mild type—2 in the newly-formed Mangotsfield Urban District, 1 in the Warmley Rural District, and 1 in the East Dean Rural District. The last appears to have been infected in Glamorganshire; the two Mangotsfield cases and that in Warmley Rural District were among young men under observation as contacts with Bristol cases. In connection with each outbreak the usual procedure of isolation, observation of contacts and offer of vaccination was carried out and in no instance was there any spread.

The population of the County is becoming steadily less protected by vaccination as shown by a progressive increase in the proportion of entrants to the elementary schools not vaccinated from 29 per cent. in 1910 to 74 per cent. in 1926.

SCARLET FEVER.

The number of cases notified in 1927 was 728, one of the highest figures since 1915 (1,169 cases), being exceeded in 1925 (756 cases) and 1923 (787 cases). The areas of greatest prevalence were Cheltenham Municipal Borough (141 cases), Stroud Rural District (89 cases), East Dean Rural District (65 cases) and Kingswood Urban District (61 cases). The general trend of the incidence of the disease during the past thirty years is set out in the following summary :—

No. per year. (Average.)	1927	1926	1923- 1925	1920- 1922	1917- 1919	1914- 1916	1911- 1913	1908- 1910	1905- 1907	1902- 1904	1899- 1901	1896- 1898
Cases	728	661	672	528	293	1152	999	648	689	1216	1079	1045
Deaths	7	5	5	5	1	14	11	7	9	22	21	21
Hospital Cases ...	421	316	355	218	151	582	498	286	221	371	—	—
Case Fatality ...	.96	.76	.74	.88	.46	1.24	1.07	1.08	1.26	1.84	1.98	2.0

In addition to the reduced prevalence the most striking fact brought out in this statement is the fall in the fatality rate from about 2 deaths to 100 cases to less than 1 per cent.

DIPHTHERIA.

In only three years since 1896 were fewer cases notified. The actual number recorded in 1927 was 255, the years of lower

prevalence being 1924 (243 cases), 1919 (219 cases) and 1923 (178 cases). The triennial averages are set out in the following statement.

No. per year. (Average.)	1927	1926	1923- 1925	1920- 1922	1917- 1919	1914- 1916	1911- 1913	1908- 1910	1905- 1907	1902- 1904	1899- 1901	1896- 1898
Cases	255	295	247	384	273	476	406	479	595	374	387	301
Deaths	19	28	19	31	29	64	27	44	51	38	52	65
Hospital Cases ...	182	205	153	212	174	221	126	177	146	51	—	—
Case Fatality ...	7.45	9.5	7.8	8.0	10.6	13.5	6.6	9.25	8.5	10.1	13.5	21.7

From this it would appear that the reduction in the prevalence during the past thirty years is not so great as for scarlet fever: the fatality of the disease has been approximately halved as in the case of scarlet fever.

The areas of greatest prevalence in 1927 were Cheltenham Municipal Borough (59 cases), and Stroud Rural District (37 cases), both the districts with largest numbers in 1926 also.

ENTERIC FEVER.

More cases were notified than in any year since 1923 (90 cases), the number in 1927 being 40. The general trend of the incidence in the past thirty years is set out in the following statement:—

No. per year (Average.)	1927	1926	1923- 1925	1920- 1922	1917- 1919	1914- 1916	1911- 1913	1908- 1910	1905- 1907	1902- 1904	1899- 1901	1896- 1898
Cases	40	22	51	28	41	41	51	49	65	77	141	88
Deaths	5	7	6	3	7	9	6	9	9	10	23	18
Hospital Cases ...	18	9	17	14	12	14	18	19	23	18	—	—
Case Fatality ..	12.5	31.8	11.7	10.9	17.9	23.0	11.8	19.2	13.8	13.0	16.1	20.9

Half of the cases reported in 1927 occurred in two districts—12 in Cheltenham Municipal Borough and 8 in Gloucester Rural District.

PUERPERAL PYREXIAS.

In 1926 the range of febrile conditions notifiable among parturient women was extended under order of the Ministry of Health by which all pyrexias, whether regarded as puerperal fever or not, must be reported. There are now two official

categories of cases notifiable, puerperal pyrexia and puerperal fever, in the hope that by having information of all febrile cases and enquiries concerning them some light may be thrown on the cause of a form of mortality among mothers from which there has been little, if any, reduction in the past thirty years. Detailed enquiries were made in 67 cases (52 pyrexia and 15 fever) in 1927 and a brief note on the results is included in the report on the administration of the Midwives Acts (see p. 17).

OPHTHALMIA NEONATORUM.

The number of cases notified in 1927 was 25, 3 less than in 1926, but a higher figure than in any other year since 1921. Information bearing on this condition is also obtained in the notices, from Certified Midwives, of requiring medical assistance on account of discharge from a baby's eyes, however slight: the number reported in 1927 was 63.

TUBERCULOSIS.

The number of cases notified during 1927 was 426. Of these 289 were cases of pulmonary tuberculosis, only 6 more than in 1926, which was the record minimum. The number of cases of non-pulmonary tuberculosis was 137. Under the arrangements for the removal of names from the register after a period of non-activity of the disease, in accordance with Circular 549 of the Ministry of Health, 284 were removed in 1926 and a further 83 in 1927, making a total of 367.

The following is a statement of the known cases and of deaths among the notified population year by year from the commencement of the tuberculosis scheme:—

	PULMONARY.				NON-PULMONARY.			
	<i>Known cases in county during year.</i>	<i>Deaths.</i>	<i>% Death rate.</i>	<i>Survivors.</i>	<i>Known cases in county during year.</i>	<i>Deaths.</i>	<i>% Death rate.</i>	<i>Survivors.</i>
1913	493	41	8.3	452	121	13	10.7	108
1914	977	209	21.4	768	223	25	11.2	198
1915	1,242	214	17.2	1,028	307	36	11.7	271
1916	1,459	345	23.6	1,114	368	50	13.6	318
1917	1,490	242	16.2	1,248	381	35	9.2	346
1918	1,685	260	15.4	1,425	408	27	6.6	381
1919	1,686	234	13.9	1,452	428	39	9.1	389
1920	1,736	211	12.2	1,525	423	25	5.9	398
1921	1,784	190	10.6	1,594	442	25	5.65	417
1922	1,923	248	12.9	1,675	463	29	6.3	434
1923	1,954	191	9.8	1,763	573	51	8.9	522
1924	1,978	237	12.0	1,741	584	33	5.65	551
1925	1,995	240	12.0	1,755	595	28	4.7	567
1926	2,009	138	6.8	1,871	713	45	6.4	668
1927	2,097	194	9.3	1,903	782	34	4.35	748

It would appear that the number of known survivors among pulmonary cases has reached a fairly stationary figure of about 1,800 or approximately 6 out of every 1,000 persons. The survivors among persons notified as having non-pulmonary disease are steadily increasing in number, reaching a maximum of 748 in 1927. The death-rate from tuberculosis both for the pulmonary as well as other forms of the disease has been falling throughout the whole period for which statistics are available :—

	PULMONARY TUBERCULOSIS.		OTHER FORMS OF TUBERCULOSIS.	
	<i>England and</i>		<i>England and</i>	
	<i>Wales.</i>	<i>Gloucestershire.</i>	<i>Wales.</i>	<i>Gloucestershire.</i>
1851-60 ...	2.77	—	.71	—
1861-70 ...	2.59	—	.67	—
1871-80 ...	2.23	—	.65	—
1881-90 ...	1.81	—	.63	—
1891-1900 ...	1.42	—	.60	—
1901-10 ...	1.14	.86	.50	.31
1911-20 ...	1.01	.83	.37	.23
1921-25 ...	.82	.70	.245	.19
1926 ...	.73	.50	.21	.16
1927 ...	.74	.62	.21	.13

As has been stated before, the exact significance of the above facts is not clear. What is certain is that the mortality due to all causes is about one-half what it was in the middle of the 19th century, and that due to tuberculosis is less than one-third. The fall in the death-rate from pulmonary tuberculosis has been fairly steady all the time, showing a tendency now to slacken off: on the other hand, the fall for other forms of tuberculosis appears to be considerably greater now than it was in the 19th century.

The work undertaken in connection with the Tuberculosis Scheme is indicated in the following paragraphs :—

DISPENSARIES.

The Tuberculosis Officers attend weekly at six dispensaries and periodically visit six Out-Stations. They also see patients unable to attend at one of these places in their homes and hold frequent consultations with the usual medical attendants. Thus in addition to the work set out in the following table the Tuberculosis Officers had 298 consultations, saw 412 patients at Out-Stations, etc., and paid 191 home visits in the County. The new

cases reported and the attendances at dispensaries year by year were :—

	<i>New Cases reported.*</i>			<i>Work of Dispensaries.</i>		
	<i>Pulmonary.</i>	<i>Other forms.</i>	<i>Total.</i>	<i>New Cases.</i>	<i>Persons seen.</i>	<i>Attendances.</i>
1915...	542	137	679	921	?	4,741
1916...	476	116	592	749	?	3,743
1917...	417	80	497	734	1,216	4,069
1918...	456	65	521	879	1,483	5,211
1919...	403	57	460	693*	1,218*	5,233
1920...	388	65	453	639*	1,193*	5,005
1921...	337	58	395	620	1,311	5,346
1922...	373	63	436	557	1,318	5,553
1923...	345	127	472	597	1,288	5,886
1924...	315	112	427	689	1,485	6,465
1925...	332	68	400	718	1,597	5,883
1926...	286	172	458	698	1,793	5,811
1927...	280	131	411	677	1,714	5,579

*Excluding City.

SHELTERS.

The number of shelters in use during 1927 was 114. The number of patients to whom they were newly loaned during the year was 21, and the total persons who had the use of a shelter during 1927 was 135.

RESIDENTIAL INSTITUTIONS.

During 1927 considerable progress was made in the extensions at Standish House, and the installation of central heating was nearly completed. The additional beds will not be available for occupation until the latter half of 1928. When this is brought into use, the total accommodation at Standish House will be :—

Male Beds.						
Early Cases	...	...	...	...	...	36
Advanced Cases...	...	...	...	...	...	38
					—	74
Female Beds—Early Cases ...						
	...	...	...	...	...	26
Children.						
General Cases	...	...	...	...	...	111
Surgical Cases	...	...	...	...	...	20
Adult—Surgical	...	...	...	...	...	18
					—	
Total	...	...	...	...	...	249
					—	

Additional accommodation for advanced cases is provided in the 36 beds provided for them at the Gloucester and Stroud Isolation Hospitals.

The admissions to these beds, year by year, were :—

	<i>Beds available.</i>			<i>Admissions.</i>								
	1919	1920	1921	1922	1923	1924	1925	1926	1927			
1. <i>Early cases</i> in both sexes and advanced cases among males												
Standish House	100	{ M.74 F.26 }		133†	135†	102†	170	178	130	136	140	127
2. <i>Advanced cases</i> in City and Stroud Isolation Hospitals	38	69	78	97	80	59	84	72	51	50		
3. <i>Surgical Cases.</i> Cheltenham General Hospital ...	10	23	34	23	14	24	25	16	9	20		
4. <i>Children.</i>												
(a) Alexandra Home ...	—	33	24	21	25	17	—	—	—	—	—	—
(b) Standish House ...	78	—	—	—	40	68	93	89	89	75		

†For these years, the Sanatorium was Cranham Lodge.

HOME VISITS BY NURSES.

The work of the Tuberculosis Officers is supplemented by visits to the homes of patients by nurses with a view to their directions being carried out and to improvement in the conditions under which the patients are living. The nurses undertaking this work in 1927 were the 8 County Health Superintendents and 127 District Nurses.

The numbers of these visits have increased from 4,578 in 1917 to 9,636 in 1927.

VENEREAL DISEASES.

From the following summary it will be seen that more new cases were seen in 1927 than in 1926 :—

	NEW CASES.				<i>Total.</i>	<i>Males.</i>	<i>Females.</i>	<i>Attend-ances.</i>	<i>In-patient days.</i>	<i>Specimens examined.</i>
	<i>Syphilis.</i>	<i>Soft Chancre.</i>	<i>Gonor-rhoea.</i>	<i>Not Venereal.</i>						
1917 ...	31	2	15	13	61*	25*	36*	258*	524*	75*
1918 ...	77	7	77	58	219	135*	76*	1,090	662	214*
1919 ...	125	16	143	68	352	264*	74*	2,729	1,549	249*
1920 ...	192	7	159	64	422	280*	134*	3,982	1,035	527*
1921 ...	103	6	87	91	287	175*	65*	3,292	1,083	484*
1922 ...	94	3	77	51	225	110†	50†	2,727	810	422*
1923 ...	80	2	72	76	230	89†	75†	3,322	654	632*
1924 ...	82	5	100	80	267	148†	92†	3,655	716	697*
1925 ...	87	—	94	101	282	138*	121*	3,729	876	986*
1926 ...	57	—	102	73	232	131*	80*	3,564	718	1,016*
1927 ...	98	—	94	123	315	160*	118*	4,363	1,073	1,030

* Excluding Bristol Hospitals.

† Excluding Bristol and Gloucester Hospitals.

There was a slight drop in the number of patients with gonorrhoea, but a considerable rise in the numbers for syphilis: the increase in the numbers that were reported as not being cases of venereal disease is satisfactory, showing, as it does, a tendency to seek treatment early. Associated with an increase in the number of cases are record figures for attendances, which reached a maximum of 4,363.

BACTERIOLOGICAL AND PATHOLOGICAL WORK.

Examinations of specimens on behalf of the County Council are made in the Laboratories of the Bristol University and Gloucestershire Royal Infirmary. The total number in 1927 was slightly larger than in 1926, but less than the record figure in 1925. The numbers year by year are:—

	<i>Enteric Tuberculo- Cerebro-spinal</i>					<i>Total.</i>
	<i>Diphtheria.</i>	<i>Fever.</i>	<i>culosis.</i>	<i>Fever.</i>	<i>Others.</i>	
1905-14 yearly average	1,553	49	207	—	—	1,809
1915	1,713	31	369	6	—	2,119
1916	721	32	348	1	—	1,102
1917	716	57	523	8	—	1,304
1918	687	35	517	6	—	1,245
1919	506	20	569	2	8	1,105
1920	1,352	29	692	2	6	2,081
1921	2,465	37	804	—	2	3,308
1922	1,459	35	1,108	3	—	2,605
1923	682	112	1,347	5	—	2,146
1924	1,215	84	1,822	4	—	3,125
1925	4,106	38	2,286	1	—	6,431
1926	2,940	25	2,122	2	2	5,091
1927	2,649	50	2,445	5	6	5,155

ISOLATION HOSPITALS.

It was mentioned in my last report that accommodation for some kinds of ordinary infectious diseases was available for practically every part of the County, except that Stow-on-the-Wold Urban District Council did not appear to have made any provision. That statement can now be repeated more definitely in that, early in 1928, the position in the south of the County was made much stronger and later the arrangements in the Forest were being used. On the appearance of small-pox in the southern end of the County conferences of the local authorities were held and steps were being taken to give effect to the following proposals. The Chipping Sodbury Rural District Council were prepared to place their hospital on Sodbury Common at the disposal of the five districts—Kingswood and Mangotsfield Urban, and Chipping Sodbury, Thornbury and Warmley Rural Districts—for small-pox, while cases of ordinary infectious diseases from these districts would be admitted to the Isolation Hospital of the Mangotsfield Urban and Warmley Rural Districts.

In some cases the arrangements do not appear to be so definite and permanent as might be desired, but, with the above exception of the Stow-on-the-Wold Urban District, there is some accommodation for every part of the County, and there are indications of a desire to make the arrangements more satisfactory.

The main provision for small-pox consists of four hospitals—Longhill (Elmstone Hardwicke), Greenbottom (Littledean), Stancombe (Bisley), and Sodbury Common (Chipping Sodbury)—serving 34 of the 36 districts in the County: of the remaining 2 districts, Gloucester Rural District has the use of the City Small-pox Hospital, while the Dursley Rural District has a dwelling-house, acquired originally for small-pox and used at times for cases of scarlet fever and diphtheria.

HOUSING ACCOMMODATION.

The general progress in the provision of new houses since 1919 is shown in the following statement:—

			Under Schemes.	Privately.	Total.
1919	...	...	—	53	53
1920	...	...	98	74	172
1921	...	...	865	171	1,036
1922	...	...	637	188	825
1923	...	...	12	380	392
1924	...	...	92	516	608
1925	...	...	165*	736*	901*
1926	...	...	313	784	1,097
1927	...	...	599†	728†	1,327
Total	...	...	2,781	3,630	6,411

* These figures are exclusive of the Stow-on-the-Wold U.D.

† Exclusive of Campden, Newent and Stroud R.D.

In November 1919 the total of the estimates of District Councils of the requirements in their respective districts was 6,400 new houses. At the low pre-war rate of 350 new houses a year the ordinary number of houses erected in the past 8 years would have been 2,800 houses: the number actually erected (exclusive of the districts mentioned in the foot-note to the table) was 6,411. The estimated deficit of 6,400 of 1919 has therefore been reduced by 3,611 from 6,400 to 2,789; the accu-

mulated deficiency in 1926 was 3,937, in 1925 4,531 and in 1924 5,064. The *total* needs are therefore being gradually met. There are, however, parts of the County in which very little has been done.

The number of applications for loans and grants under the Housing (Rural Workers) Act, 1926, up to the end of 1927 was 12: in 4 cases grants were made by the County Council. During the current year loans were offered in certain cases but proved to be unacceptable: ultimately, on 11th July, 1928, the County Council decided to inform District Councils that they would concur in the application of any such Council to the Ministry of Health to be declared the Local Authority for the purpose of the Act. Very useful powers for improving unsatisfactory houses are given by the Act, and, if full advantage is taken of them, housing conditions could be made satisfactory for larger numbers of people more quickly than by the erection of new houses. An incidental advantage is that, by such improvement and adaptation of existing buildings, each area can retain the local character of the houses.

WATER SUPPLY.

Among the parts to which attention was specially directed in 1927 are Cleeve Hill in the Winchcombe Rural District, Tuffley, Hempsted and Quedgeley in the Gloucester Rural District, Ruardean in East Dean Rural District, Coleford Urban and West Dean Rural District, and the village of Cam in the Dursley Rural District.

Cleeve Hill is included in the area of three parishes, and is a growing residential area on account of its attractions. With an increasing number of houses, the difficulty in the matter of water supply becomes greater. At present various local sources are tapped and houses are supplied by the proprietors by varying arrangements. The Winchcombe Rural District Council have put forward schemes from time to time since 1908 and local inquiries have been held by the late Local Government Board. Considerable opposition caused the failure of some schemes and others involved a greater expenditure than the borrowing powers allowed. The Council have now alternative schemes in view, and the choice appears to lie between the development of a spring on the south-eastern slopes of the Cotswolds and taking water in bulk from Cheltenham. Either method entails considerable expenditure, but a satisfactory supply of water is required.

The condition in parts of the three parishes in the Gloucester Rural District is also a long-standing matter. They are within the limits of supply of the Gloucester Corporation, and it is to be

hoped that the two authorities will find the solution at an early date.

Ruardean is a parish in the East Dean Rural District with a population which has been almost stationary at about 1,250 for forty years. It is satisfactory that towards the end of 1927 matters had advanced to the stage that the Ministry of Health proposed to hold a local inquiry on the scheme propounded by the District Council.

The supply of Coleford Urban District and West Dean Rural District is a large problem. Coleford has a precarious supply which, even so, does not cover the whole district: the inhabitants of West Dean are dependent on even more precarious local supplies, water in many cases having to be carried long distances and the alternative being such rain water as can be stored. The population affected is nearly 18,000, scattered over a wide area. Boring operations at Blackpool were commenced so long ago as 1914: insufficient water was found and ultimately new works were commenced at Upper Redbrook in 1925. That boring was reported to yield sufficient water for West Dean alone, but when Coleford Urban District decided to become partners in the scheme it became necessary to seek a supplemental source. The cost of the scheme is estimated at £61,000, and it is hoped that the works would be commenced in 1928.

The village of Cam, in the Dursley Rural District, was included in a joint scheme of sewerage with Dursley at the instance of the County Council in 1902, but it was not until recent years that the houses generally were connected with the sewers in Cam. The water supply of this parish has never been regarded as arranged satisfactorily, and so long ago as 1905 the Medical Officer of Health said it was the "worst of any of the villages." For many years the County Council have impressed upon the District Council the necessity of providing a satisfactory supply, and it is understood that they have now instructed an engineer to report on the matter.

SEWERAGE AND SEWAGE DISPOSAL.

In the report for 1926 was included a general statement of the manner in which expensive sewerage schemes were thrust upon small towns and villages by lack of proper forethought and care in preventing the fouling of ditches, etc. As examples of such pollution, Mickleton, in the Campden Rural District, and Gotherington, in the Winchcombe Rural District, were mentioned. Another case was reported in 1927, where the discharge

of drainage at Cow Honeybourne (about 500 persons) in the Peabworth Rural District, to ditches and the stream causes nuisance which is aggravated by the obstructed condition of the stream bed: as in other cases, the District Council have been urged to take action, and in this instance ameliorative measures are proposed.

Among other places under special consideration during 1927 were the following:—

At King's Stanley, in the Stroud Rural District, the Chairman of the Public Health Committee met local representatives and, as a result, the District Council arranged for the disconnection of various drains from the stream and other ameliorative action which it was hoped would effect improvement.

The Campden Rural District Council have instructed an engineer to prepare a scheme for the drainage of Chipping Campden.

For Chipping Sodbury, in the District of the same name, the Council were preparing a scheme for the sewerage and for the treatment of sewage of part of the town which it was hoped would lessen the nuisance reported.

In the Dursley Rural District attention has been given to connection of houses with the sewers in Cam, and the joint disposal works for Cam and Dursley are to be overhauled. No action with respect to the sewerage of Kingswood, with a population of about 850 persons, appears to have been taken.

In the Frome Valley, the Stroud Urban and Rural District have overhauled the Sewage Disposal Works, and it is hoped improvement in the effluents will result.

SURVEY OF STREAMS AND RIVERS.

The survey of the Severn proposed for the 13th September was carried out under fair conditions: samples of the river water at 84 points from near its source to Newnham, on the estuary, as well as 12 from certain tributaries, were examined. The general conclusions were that the river showed a higher general degree of oxygenation than that observed a year previously and that, with trifling exceptions, the main river was in a satisfactory condition of oxygenation. With the co-operation of the Ministry of Agriculture and Fisheries, it was proposed that further surveys should be made and that, for Gloucestershire in particular, these should include observations to determine the

influence of Gloucester and Newnham sewages on the tideway, and on the Rivers Chelt and Frome, tributaries of the Severn.

SURVEY OF DAIRY CATTLE AND BACTERIOLOGICAL EXAMINATIONS OF MILK.

The second survey of the dairy cattle in the County by the Veterinary Inspectors was completed in June 1928. The results of the two surveys are compared in the following statement :—

		SURVEY OF DAIRY CATTLE.				
		<i>First Survey.</i>		<i>Second Survey.</i>		
Cows Examined :			%		%	
Cows in milk ...	...	39,706	76.1	38,071	71.0
Dry cows in calf ...	...	5,282	10.1	8,910	16.6
Heifers in calf ...	...	7,143	13.7	6,642	12.4
Total ...	...	52,131		53,623	
Conditions Found :		<i>Per 1,000.</i>		<i>Per 1,000.</i>		
Tuberculosis of udder ...	55	1.1		32	.60	
Giving tuberculous milk ...	—	—		—	—	
Tubercular emaciation ...	194	3.7		179	3.34	
Chronic cough with definite signs of tuberculosis ...	36	.7		53	.99	
Total tubercular ...	—	285	5.5	—	264	4.92
Acute Infection of udder, and mastitis ...	49	.9		14	.26	
Suppuration of udder ...	292	5.6		184	3.43	
Infection of udder or teats likely to cause disease ...	4	.1		1	.02	
	—	345	6.6	—	199	3.70
Actinomycosis ...	1	.02		1	.02	
Anthrax ...	—	—		—	—	
Foot and mouth disease ...	—	—		—	—	
Comatose condition ...	4	.1		1	.02	
Septic condition of uterus ...	20	.4		6	.11	
	—	25	.5	—	8	.15
Grand total ...	...	655	12.6	471	8.79

During 1927 22 reports under the Milk and Dairies' Act, 1915, were received from 4 Authorities. Arrangements were made for special visits to the farms concerned and examinations of the cattle and of samples of milk.

In addition to these examinations, authority was also given by the Diseases of Animals' Committee for bacterial counts of milks. This work was not commenced until April 1928.

CLEAN MILK COMPETITION.

A third Competition was arranged by the Agricultural Education Subcommittee of the Gloucestershire Education Committee, and was conducted

during the three months January, February and March, 1928, and was open to milk producers in the County of Gloucester. The judge (Professor J. A. Hanley) reports as follows:

The Competitors were arranged in three classes, Class 1 was open to producers of designated milk under licence and the first prize winner from each of the classes the previous year. Class 2 was open to producers of non-graded milk who had during the competition herds of over 20 cows or heifers in milk. Class 3 was open to producers of non-graded milk who had herds of 20 cows or heifers or under, but not less than 6, in milk during the Competition. There was a good entry, 9 in Class 1, 8 in Class 2 and 14 in Class 3. It is gratifying to note that the Competitors included 5 County Council Small Holders.

JUDGING.

It was clearly laid down in the conditions of the Competition that one object was to demonstrate that no elaborate or expensive appliances or buildings are necessary for the production of milk of high standard. In judging, marks were allotted (1) by inspection of the farm, (2) by examination of milk samples. The maximum number of marks obtainable was 1,500 and these marks were awarded on the following plan:—

(1) INSPECTION OF THE FARM.							<i>Marks.</i>
General condition of cows (health)	...	...	...	...	...	...	100
Equipment of cowshed, milk room, etc.	...	...	...	...	...	...	100
Methods, including the cleanliness of milkers, cows, cowshed, milk room, utensils and the handling of milk	...	...	...	...	...	...	400
							—
Total for inspection of farm	...	...	...	...	...	...	600
							—
(2) EXAMINATION OF MILK.							<i>Marks.</i>
Sediment test	...	...	...	...	...	...	50
Bacterial Count	...	...	...	...	...	...	300
Absence of B. coli	...	...	...	...	...	...	200
Keeping quality	...	...	...	...	...	...	300
							—
Total for examination of milk samples	...	...	...	...	...	...	850
							—

The remaining 50 marks were utilised as a bonus, part of which was awarded for consistency, that is to those competitors who, in all their samples, had had consistently good results in bacterial counts and B. coli. Another portion of the bonus was allotted to farms which were handicapped by obviously unsuitable buildings, that is, buildings which in one respect or another were difficult to clean or to keep clean.

Whilst it is recognised that milk of a high standard can be produced in poor buildings, it is also recognised that it is much easier to produce a high-class milk if the buildings and equipment are suitable, but care was taken all through the judging that marks were awarded not for the buildings themselves, but for the way in which the existing buildings were utilised. A competitor was not handicapped so far as the marking was concerned by having bad buildings, the judge recognising that he was already sufficiently handicapped by having to work harder, be much more thorough, and take much greater care in keeping his milk free from bacteria. Marks were, however, awarded to those competitors who availed themselves of the right type of utensils for obtaining a high-grade milk.

Certain items in the equipment of an up-to-date dairy, such for example as a boiler and steaming outfit, require an outlay which to many farmers in these days is a consideration, but on many farms such an outlay has been replaced entirely by a home-made apparatus which, judging by samples of milk examined and the results of previous competitions, can, if properly and carefully used, give quite satisfactory results. A milk producer, therefore, who has taken the trouble to make an efficient kind of steamer either by using an ordinary copper or any other means, has been credited with the marks available for a steaming outfit. The results of the competition, which are appended, show that the prizes have gone on the whole to those farms where great care has been taken, where attention has been paid to small details, irrespective of whether such farms possessed model buildings.

The results on the whole are very good when one considers that only 8 of the competitors are producing milk under licence, and, therefore, that 23 out of 31 competitors are ordinary commercial milk producers. Of the total samples received, 61 per cent. reached certified milk standard so far as bacterial count and *B. coli* were concerned. (The milk produced in many of these cases is, of course, not strictly a certified milk since it is not produced from tested cows.) In addition, 23 per cent. of the samples reached Grade "A" standard and only 16 per cent. were below Grade "A" standard. The judge's visits were surprise visits and three of the samples tested were surprise samples.

POINTS IN THE PRODUCTION OF HIGH-GRADE MILK.

HEALTH OF COWS.—Only a very small proportion of the competitors lost any marks on cows. Marks were deducted only for cows which were wasters or for cows with obvious udder troubles. The number of both was very small indeed.

METHODS OF MILKING.—Full marks were not obtainable unless all the milking was dry-handed. Marks were commonly lost by milkers not discarding the first draw of milk which is always liable to add to the bacterial count. On the whole, the methods of milking were good and the milkers themselves were clean. There were few farms where adequate arrangements were not made for washing the hands of milkers regularly. The cleanliness of cowsheds was also good so long as the floors and standings were reasonably good and water was available in sufficient quantity. On just a few of the farms the conditions of the buildings made the cleaning of them so difficult that some of the men appeared to have given up in despair. It appears to be most important that the floors and gutters of the cowsheds should have first attention when facilities for producing high-grade milk are under consideration.

One very common fault through which many farms lost marks was having too much litter about at milking time. Moreover, in order to make the cowshed appear as neat and tidy as possible the litter was often shaken up and disturbed just before milking. Dusty straw and dusty hay, which unfortunately was all too common last winter, will, if thrown about in the cowshed at or about milking time, add seriously to the count. Every effort should be made to keep down dust. This is best done by pushing all litter well forward towards the mangers before milking and by having the floor, gutters, etc., wet. It is, of course, advisable to have neither litter nor hay about at milking time.

CLEANLINESS OF COWS.—Clipping of cows is not nearly so general as it would be if the owners realised how much more easily they could be kept clean when clipped. A good deal depends of course on the breed of cow and on the amount of hair, but the labour of cleaning cows before milking is reduced by a very large

amount if there is no long hair to which dirt, especially dung, can adhere. One heard, occasionally, remarks from cowmen as to the impossibility of keeping the hind-quarters clean when cows were lying indoors. There is a great deal of labour and time required to clean up a herd which has become very dirty, but the amount of time and labour needed once the herd is clean and especially if the cows are clipped is very small indeed. The washing of the udders is almost invariably done at each milking, but far too frequently one finds only one bucket of water and one cloth available. He is a very lucky milk producer who, adopting that method, does not sooner or later become credited with a fairly high quantity of *B. coli*.

HANDLING OF MILK.—The mistake is still often made of leaving the warm milk about for some time uncooled. If it is left in open pails the producer is asking for a high count, since at blood temperature the bacteria which happen to be present will develop rapidly. The milk should not only be covered but should be transferred to the cooler as soon as possible after milking. Once it has been cooled to a satisfactory temperature development of bacteria becomes slower and the count correspondingly lower.

The judge has little further criticism to offer on the handling of milk throughout this Competition. In not one instance did he find evidence of badly cleaned utensils. The evidence found, if any, was reflected in the counts. It is not only the visible remains of milk which affect the count and keeping quality. The absence of facilities for steaming utensils results in the presence of invisible contamination usually reflected in the *B. coli* figures. This point has been repeatedly tested at Bristol and the presence of *B. coli* can often be found on utensils, for example a cooler, well washed but not steamed.

It will be noticed that no marks have been awarded for fat determinations. The milk has always been tested for the percentage of fat as this is to some extent a guide as to the reliability of sampling. Samples with abnormally low or abnormally high facts have usually been wrongly taken. Although in many Clean Milk Competitions marks are awarded for fat the judge feels that this is an undue advantage to producers keeping certain breeds of cows and that it has nothing to do directly with the production of "clean" milk.

One feature of this year's Competition was the number of marks lost through low keeping quality of the milk. It is a feature not only of the Gloucestershire but also of the other county competitions. Even very high-grade samples, where presumably the counts were low enough to ensure milk of really high keeping quality, lost marks on this determination. It is not possible at the moment to explain the relatively low keeping quality of these samples. . . .

In Class 3 competition was probably keenest and . . . the second prize winner, only beat the third in the class by three marks. It was not an easy matter to judge between the merits of these two farms. They differed in several respects, the conditions and equipment on Mr. — farm being distinctly more difficult than those on Mr. — and the judge therefore considered that Mr. — put up the finer performance of the two. Very closely following these was No. 31, to whom great credit is due for an effort to convert very ordinary buildings and surroundings into more suitable places for milk production. It is surprising how a few bags of cement and a little gravel will convert a bad floor or a bad yard into a place easily kept clean. It is perhaps noticeable that in this class were other competitors with very up-to-date buildings and equipment who, whilst producing quite good milk, were distinctly behind some of the small holders with very ordinary farm buildings.

EXAMINATION OF FOODS AND DRUGS.

The number of samples examined year by year is set out in the following table:—

Samples examined 1908-1927.

(Figures in brackets are the numbers found adulterated).

	1908-21.		1922.		1923.		1924.		1925.		1926.		1927.	
	Samples.	Per-centage adul-terated.	Samples.	Per-centage adul-terated.	Samples.	Per-centage adul-terated.	Samples.	Per-centage adul-terated.	Samples.	Per-centage adul-terated.	Samples.	Per-centage adul-terated.	Samples.	Per-centage adul-terated.
Spirits of Nitre...	37 (8)	21.6	4	—	4 (1)	25.0	2 (2)	100.0	—	—	—	—	4	—
Rum ...	57 (9)	15.7	—	—	—	—	—	—	—	—	—	—	—	—
Cocoa ...	90 (13)	14.4	7	—	21	—	—	—	1	—	—	—	—	—
Brandy ...	61 (8)	13.1	—	—	—	—	—	—	—	—	—	—	—	—
Milk ...	2,155 (251)	11.6	302 (18)	6.0	223 (23)	10.3	350 (26)	7.4	456 (54)	11.8	412 (64)	15.5	442 (64)	14.5
Mustard ...	85 (9)	10.6	—	—	2	—	3	—	2	—	—	—	—	—
Whiskey ...	363 (36)	9.9	—	—	—	—	—	—	—	—	—	—	7	—
Gin ...	175 (15)	8.6	—	—	—	—	—	—	—	—	—	—	2	—
Beer ...	97 (4)	4.1	—	—	2	—	—	—	—	—	—	—	22	—
Camphorated Oil ...	74 (3)	4.1	—	—	6	—	1	—	—	—	—	—	—	—
Butter ...	1,032 (13)	1.3	26	—	15 (1)	6.7	22 (1)	4.5	15 (1)	6.7	9	—	23	—
Coffee ...	321 (2)	.6	16	—	12	—	7	—	7	—	3	—	1	—
Sugar ...	269 (1)	.4	5	—	—	—	1	—	—	—	—	—	8	—
Total ...	4,816 (372)	—	366 (18)	—	285 (25)	—	386 (29)	—	481 (55)	—	424 (64)	—	509 (64)	—
Other Foodstuffs ...	1,515	—	95	—	80 (1)	—	61 (1)	—	60 (4)	—	113 (18)	—	184 (21)	—
Other Alcoholic Drinks ...	5	—	—	—	—	—	—	—	—	—	—	—	20	—
Non-alcoholic Drinks ...	67	—	—	—	—	—	—	—	—	—	—	—	15	—
Other Drugs ...	182	—	6	—	4	—	3	—	1	—	—	—	12	—
Total ...	1,769	—	101	—	84 (1)	—	64 (1)	—	61 (4)	—	113 (18)	—	231 (21)	—
Grand Total ...	6,585 (372)	5.7	467 (18)	3.9	369 (26)	7.0	450 (30)	6.7	542 (59)	10.9	537 (82)	15.3	740 (85)	11.5

The County Analyst makes the following observations on the samples examined during 1927 :—

During the 12 months ending 30th November, 1927, the Public Health (Preservatives, etc., in Food) Regulations have come into operation, whereby preservatives are prohibited in all Dairy Produce. In the case of certain articles of Food, some preservatives are still allowed, but the kind of preservative and the quantity are definitely scheduled. These Regulations have greatly increased the work under this head, as all foodstuffs must now be definitely examined for preservatives, and it has brought under examination a large number of foodstuffs which were previously not examined.

The samples adulterated under the heading " Other Foodstuffs " were as follows : Jam (3), Margarine (1), Malt Vinegar (1), Dried Milk (3), Cream (2), Sauce (1), Sausages (8), and Coffee Extract (2).

In the cases of the samples of Margarine, Cream, Sauce, Sausages and Coffee Extract, the adulteration consisted in breaches of the Preservative Regulations.

The samples of milk taken show that the quality of the milk produced in the County is exceptionally good, the Fat content being well above the minimum fixed by the Board of Agriculture for genuine Milk.

When this fact is taken into consideration, the number of adulterated samples is very high, viz., 14.5 per cent., and in some of these cases the adulteration was of a very serious nature, showing 30.4 per cent., 10.1 per cent., 41.9 per cent., 8.7 per cent., 16.6 per cent., 33.5 per cent., 35.3 per cent. and 37.2 per cent. respectively of added water. In other cases there were very serious deficiencies in the Fat content, viz., 18.7 per cent., 12.3 per cent., 24.7 per cent., 37.3 per cent., 14.3 per cent., 38.7 per cent., and 14.3 per cent.

There is an increasing tendency for the magistrates to inflict heavier penalties, which should act as a deterrent, but in many cases only nominal penalties have been inflicted.

Two samples of Milk were coloured with annatto colouring matter.

One sample of Malt Vinegar was brewed from cereals other than malt.

Fines ranging from 5s. to £10 were imposed, totalling in all £106 13s. 2d.

TABLE A. 1927.

Health Staff.

<i>Urban.</i>	<i>Medical Officer of Health.</i>	<i>Sanitary Inspector.</i>
Awre	O. W. Andrews ...	H. E. W. Hook
Charlton Kings	A. Barrett Cardew ...	F. A. Middleton
Cheltenham	J. H. Garrett ...	J. R. Jefford
Cirencester	H. F. W. Adams ...	Wentworth Jones
Coleford	<i>See Awre</i> ...	H. Vaughan
Kingswood	C. J. Perrott ...	H. Glynn Warne
Mangotsfield	T. Aubrey ...	R. W. Musk
Nailsworth	R. Green ...	T. Wood
Newnham	<i>See Awre</i> ...	<i>See Awre</i>
Stow-on-the-Wold	L. R. King ...	P. W. Alcock
Stroud	<i>See Nailsworth</i> ...	W. A. Hudson
Tetbury	<i>See Cirencester</i> ...	G. Hearsey
Tewkesbury	M. Elder ...	W. Ridler
Westbury-on-Severn	<i>See Awre</i> ...	<i>See Awre</i>
<i>Rural.</i>		
Campden	G. Findlay ...	C. J. Gander
Cheltenham	F. J. Lidderdale ...	E. W. Moore
Chipping Sodbury	T. Rhind ...	{ W. H. Williams H. S. Hale
Cirencester	<i>See Cirencester U.</i> ...	E. J. Matthews
Dursley	Ditto ...	W. Webb
East Dean and United Parishes	<i>See Awre U.</i> ...	A. W. Collinson
Faringdon (part of)	W. Sisam ...	J. J. Beresford
Gloucester	<i>See Awre U.</i> ...	O. M. Hale
Lydney	Ditto ...	G. J. Elliott
Marston Sicca	L. L. Fyfe ...	G. E. Boshier
Newent (part of)	W. M. Lucas Johnstone	W. Francis
Northleach	<i>See Cirencester U.</i> ...	S. A. Green
Pebworth	D. Gordon Evans ...	{ R. J. Atkinson H. Tabberer
Stow-on-the-Wold	R. E. B. Yelf ...	A. E. Clifford
Stroud	<i>See Nailsworth U.</i> ...	{ — Barrett D. E. Whittaker
Tetbury (part of)	<i>See Cirencester U.</i> ...	<i>See Tetbury U.</i>
Tewkesbury (part of)	<i>See Tewkesbury U.</i> ...	E. F. Brading
Thornbury	<i>See Chipping Sodbury R.</i>	F. W. Davies
Warmley	T. Aubrey ...	<i>See Mangotsfield</i>
West Dean	P. Buchanan ...	P. Phipps
Wheatenhurst	<i>See Nailsworth U.</i> ...	A. J. Mugliston
Winchcombe (part of)	G. R. Cox ...	H. Brown

1927.

TABLE I.—RATES, &c.

DISTRICTS.	Estimated Population.	BIRTHS.					DEATHS.					
		Legiti- mate.	Illegiti- mate.	Total.	% Illegiti- mate.	Birth Rate.	Total.		Under one year.			
							No.	Rate.	Legiti- mate.	Illegiti- mate.	Total.	Infantile Mortality.
URBAN :												
Awre	1,175	13	—	13	—	11.0	18	15.3	2	—	2	154
Charlton Kings	4,456	53	—	53	—	11.9	68	15.2	4	—	4	75.5
Cheltenham	49,580	578	54	632	8.5	12.7	734	14.8	31	1	32	51
Cirencester	7,641	85	6	91	6.6	11.9	93	12.2	2	—	2	22
Coleford	2,792	51	1	52	1.9	18.6	33	11.8	3	—	3	58
Kingswood	13,860	160	5	165	3.0	11.9	159	11.5	13	—	13	79
Mangotsfield	7,930	130	4	134	3.0	16.9	86	10.8	5	—	5	32
Nailsworth	3,283	42	—	42	—	12.8	53	16.1	4	—	4	95
Newnham	1,247	19	1	20	5.0	16.0	20	16.0	1	—	1	50
Stow-on-the-Wold	1,147	14	1	15	6.6	13.1	17	14.8	—	—	—	—
Stroud	8,476	96	3	99	3.0	11.7	136	16.0	6	1	7	71
Tetbury	2,147	36	2	38	5.3	17.6	34	15.8	2	—	2	53
Tewkesbury	4,755	58	5	63	7.9	13.2	69	14.5	2	—	2	32
Westbury-on-Severn	1,911	30	—	30	—	15.7	26	13.6	—	—	—	—
Total Urban Districts	110,400	1,365	82	1,447	5.7	13.1	1,546	14.0	75	2	77	53
RURAL :												
Campden	5,311	87	5	92	5.4	17.3	71	13.3	3	—	3	33
Cheltenham	5,551	90	6	96	6.25	17.3	69	12.4	7	—	7	73
Chipping Sodbury	22,540	356	17	373	4.6	16.5	282	12.5	25	3	28	75
Cirencester	12,680	184	7	191	3.7	15.1	155	12.2	4	—	4	21
Dursley	12,590	152	9	161	5.6	12.8	173	13.7	8	—	8	50
East Dean	20,930	365	25	390	6.4	18.6	260	12.4	18	2	20	51
Faringdon	1,038	11	2	13	15.4	12.5	10	9.6	2	1	3	231
Gloucester	13,720	168	10	178	5.6	13.0	178	13.0	12	2	14	79
Lydney	11,160*	173	7	180	3.9	16.1	115	11.4	5	1	6	33
Marston Sica	1,698	25	2	27	7.4	15.9	22	13.9	2	—	2	74
Newent	6,496	112	4	116	3.45	17.9	71	10.9	6	—	6	52
Northleach	7,197	103	4	107	3.7	14.9	108	15.0	4	1	5	47
Pebworth	3,376	48	3	51	5.9	15.1	32	9.5	—	—	—	—
Stow-on-the-Wold	6,014	88	7	95	7.4	15.8	64	10.6	4	—	4	42
Stroud	27,900	366	6	372	1.6	13.3	432	15.5	24	1	25	67
Tetbury	2,757	49	3	52	5.8	18.9	36	13.1	2	1	3	58
Tewkesbury	4,377	54	5	59	8.5	13.5	70	16.0	—	2	2	34
Thornbury	18,730	290	10	300	3.3	16.0	250	13.3	12	1	13	43
Warmley	11,803	179	6	185	3.2	15.7	154	13.0	10	1	11	59
West Dean	14,480	281	12	293	4.1	20.2	171	11.8	16	4	20	68
Wheatenhurst	6,069	91	5	96	5.2	15.8	90	14.8	8	—	8	83
Winchcombe	8,683	122	5	127	3.9	14.5	121	13.8	11	—	11	87
Total Rural Districts	225,100*	3,394	160	3,554	4.5	15.8	2,934	13.1	183	20	203	57
Administrative County	335,500*	4,759	242	5,001	4.8	14.9	4,480	13.4	258	22	280	56

* Population for Death-rates: Lydney R.D., 10,060; R.D.'s., 224,000; County, 334,400.

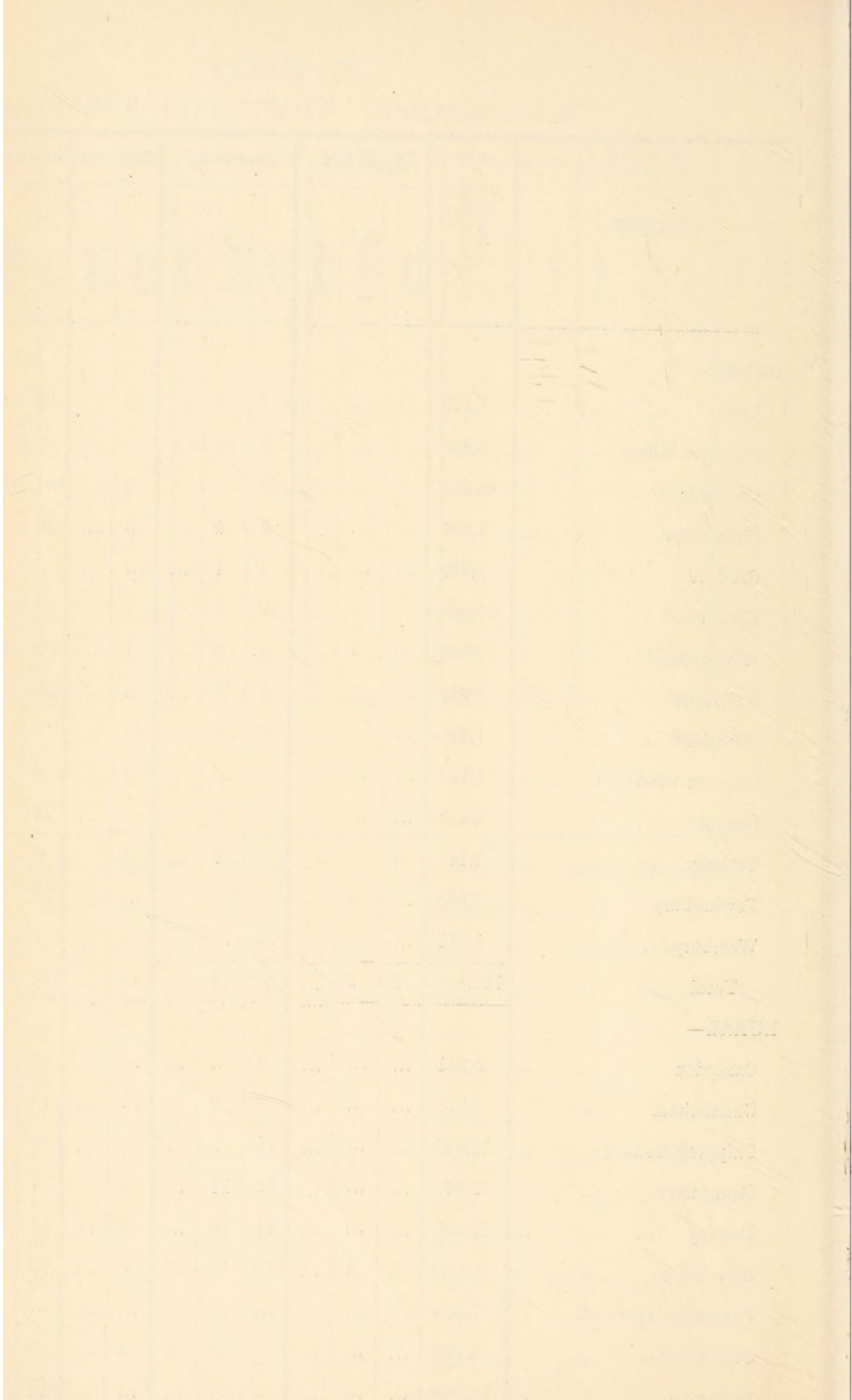


TABLE III. (A)—URBAN DISTRICTS.

1927.

L.G.B.—TABLE III.—CAUSES OF AND AGES AT DEATH.

CAUSES OF DEATH.	All Ages	AGES AT DEATH.									URBAN DISTRICTS.													
		Under 1 year	1—2 years	2—5 years	5—15 years	15—25 years	25—45 years	45—65 years	65—75 years	75 and over	Avon	Charlton Kings	Cheltenham	Cirencester	Coleford	Kingswood	Mangotsfield	Naishworth	Newnham	Stow-on-the-Wold	Stroud	Tetbury	Tewkesbury	Westbury-on-Severn
1. Enteric Fever	2	1	1	1	1
2. Small Pox
3. Measles	2	...	...	1	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
4. Scarlet Fever... ..	3	...	...	...	2	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...
5. Whooping Cough	4	1	2	1	...	...	...	...	...	...	1	...	2	...	...	...	...	...	...	...	1	...	...
6. Diphtheria	5	...	...	1	4	...	...	...	...	...	1	1	...	2	...	...	...	...	...	1	...	...	...
7. Influenza	109	2	2	2	4	4	11	21	23	40	1	9	56	9	3	7	2	3	...	9	7	2	1	
8. Encephalitis Lethargica	7	...	1	1	2	1	1	1	...	...	...	1	...	2	...	1	...	1	...	...	...	2	...
9. Meningococcal Meningitis	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
10. Tuberculosis of Respiratory System	82	...	1	...	1	21	34	19	4	2	...	2	30	7	1	18	9	2	...	2	7	...	2	
11. Other Tuberculous Diseases	14	...	1	1	3	1	4	4	...	...	...	2	7	3	...	...	1	...	...	1	...	...	...
12. Cancer, Malignant Diseases	196	...	...	...	...	1	9	68	66	52	2	8	99	9	1	18	10	11	4	2	16	6	8
13. Rheumatic Fever	7	...	1	...	1	...	3	2	...	...	...	...	1	...	...	3	...	1	...	...	2	...	...
14. Diabetes	21	...	...	...	...	1	1	11	7	1	...	...	11	2	...	4	1	1	...	...	2	...	...
15. Cerebral Hæmorrhage, etc.	102	...	...	...	...	...	1	28	28	45	...	7	47	4	3	5	6	5	1	1	11	1	7
16. Heart Disease	277	...	...	...	2	3	15	59	83	115	1	5	141	16	9	31	18	6	4	2	26	5	12
17. Arterio-sclerosis	74	...	...	...	...	...	...	13	23	38	1	1	34	5	2	9	4	1	...	2	4	3	6
18. Bronchitis	72	1	2	...	...	...	1	6	19	43	1	1	28	3	...	9	5	4	...	...	11	3	5
19. Pneumonia (all forms)	100	17	5	6	3	...	6	22	19	22	3	4	60	4	...	11	6	...	...	1	3	2	6
20. Other respiratory diseases	18	2	...	...	1	...	...	5	4	6	...	1	6	3	1	2	1	...	1	...	1	1	1
21. Ulcer of stomach or duodenum	11	...	...	...	...	...	4	6	1	...	...	1	4	...	...	1	1	...	...	1	2	...	1
22. Diarrhoea, &c.	3	2	1	...	...	...	...	...	...	...	...	1	...	...	...	1	1	...	...	...	...	...	...
23. Appendicitis and Typhlitis... ..	12	...	...	...	2	1	1	4	4	...	...	1	5	2	1	...	1	1	...	...	...	...	1
24. Cirrhosis of Liver	5	...	...	...	...	...	...	3	1	1	...	...	4	...	1	...	...	...	...	...	...	...	...
25. Acute and chronic nephritis	51	...	1	...	...	1	1	16	11	21	2	3	25	4	...	1	3	1	2	2	6	1	1
26. Puerperal sepsis ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27. Other accidents and diseases of pregnancy and parturition	4	...	...	...	...	1	3	...	...	...	...	...	2	...	...	...	...	...	...	...	1	...	1
28. Congenital debility and malformation, premature birth	41	40	1	...	...	...	...	...	...	...	2	2	19	1	1	6	2	3	1	...	2	...	1
29. Suicide	14	...	...	...	...	1	5	6	2	...	...	...	8	2	...	2	...	1	...	...	1	...	...
30. Other deaths from violence	28	2	1	3	2	4	3	7	4	2	...	2	7	2	1	4	2	...	3	...	3	1	2	
31. Other defined diseases	280	10	1	5	8	3	23	46	56	128	3	17	133	17	7	23	13	12	3	4	25	3	12	
32. Causes ill-defined or unknown	1	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Total	1,546	77	21	21	36	44	126	349	356	516	18	68	734	93	33	159	86	53	20	17	136	34	69	

HOUSING. TABLE IV.

(Figures in brackets are numbers of houses erected under Schemes.)

	No. of houses proposed in Scheme	HOUSES ERECTED.										Total	Under Schemes	Private-ly
		1919	1920	1921	1922	1923	1924	1925	1926	1927				
URBAN :														
Awre	26	—	2	—	2	1	—	—	—	—	—	5	—	5
Charlton Kings	40	—	—	16 (14)	10	9	11	8	34 (20)	8	96	34	62	
Cheltenham	520	2	2	97 (92)	82 (64)	17	64 (40)	80 (44)	132 (94)	112 (78)	588	412	176	
Cirencester	48	—	5	20 (16)	38 (36)	14	32	13	11	10	143	52	91	
Coleford	100	—	—	40 (40)	—	2	2	1	12 (12)	15 (14)	72	66	6	
Kingswood	200	1	4 (4)	2	3	—	23 (12)	54 (25)	73 (16)	101 (41)	261	98	163	
Mangotsfield	—	—	—	—	—	—	—	—	—	115 (24)	115	24	91	
Nailsworth	60	—	2	22 (22)	2 (2)	7	7	5	7	11	63	24	39	
Newnham	25	—	—	1	—	—	2	—	—	—	3	—	3	
Stow-on-the-Wold	25	—	—	25 (25)	—	—	—	—	—	—	25	25	—	
Stroud	125	—	—	17 (16)	52 (50)	6	17	9	26 (18)	24 (16)	151	100	51	
Tetbury	30	—	—	12 (12)	—	—	—	—	4	14 (12)	30	24	6	
Tewkesbury	122	—	—	12 (12)	—	—	—	13 (12)	6 (4)	27 (20)	58	48	10	
Westbury-on-Severn	50	1	—	1	—	1	1	1	4	—	9	—	9	
Total U.D.	1,371	4	15 (4)	265 (249)	189 (152)	57	159 (52)	184 (81)	309 (164)	437 (205)	1,619	907	712	
RURAL :														
Campden	88	—	—	14 (14)	2	3 (2)	3	20 (12)	54 (42)	*	96	70	26	
Cheltenham	80	2	10 (10)	68 (54)	9	18	29	25	17	36	214	64	150	
Chipping Sodbury	471	10	22	123 (88)	40 (40)	34	78	134	117 (26)	207 (90)	765	244	521	
Cirencester	176	4	6 (6)	65 (58)	74 (64)	18	14	53	50 (8)	31 (10)	315	146	169	
Dursley	212	1	15 (15)	75 (62)	89 (87)	9	6	9	17	139 (84)	360	248	112	
East Dean	305	—	—	—	—	19	33 (10)	32	26	33 (12)	143	22	121	
Faringdon	—	—	—	2	2	2	—	—	—	—	6	—	6	
Gloucester	270	—	19 (19)	38 (34)	36 (18)	28	28	99	108 (8)	65	421	79	342	
Lydney	106	26	2 (2)	8 (2)	34 (26)	20 (10)	35 (20)	55 (20)	39	74 (50)	293	130	163	
Marston Sicca	15	—	2	—	6	8	3	5	3	10	37	—	37	
Newent	75	—	3	—	—	7	5	3	10	*	28	—	28	
Northleach	86	—	—	12 (10)	1	4	7	1	7	11	43	10	33	
Pebworth	36	—	26 (26)	8	4	9	4	24 (20)	11	9	95	46	49	
Stow-on-the-Wold	71	—	12	16 (16)	39 (31)	4	12	4	7 (2)	8	102	49	53	
Stroud	217	2	—	66 (50)	45 (22)	95	78	53	37	*	376	72	304	
Tetbury	26	—	7	—	—	—	—	2	4	4	17	—	17	
Tewkesbury	88	2	10 (10)	28 (22)	12 (10)	6	2	5	15 (1)	13 (8)	93	51	42	
Thornbury	297	—	6 (6)	41 (33)	44 (24)	31	26	63 (8)	94 (44)	149 (88)	454	203	251	
Warmley... ..	343	—	10	54 (38)	22	5	59 (10)	94 (24)	118 (18)	72 (52)	434	142	292	
West Dean	400	1	4	80 (74)	157 (148)	—	9	18	19	17	305	222	83	
Wheatenurst	21	1	—	21 (21)	15 (15)	1	11	9	16	2	76	36	40	
Winchcombe	117	—	3	52 (40)	5	14	7	9	19	10	119	40	79	
Total R.D.	3,500	49	157 (94)	771 (616)	636 (485)	335 (12)	449 (40)	717 (84)	788 (149)	890 (394)	4,792	1,874	2,918	
COUNTY														
Schemes	—	—	98	865	637	12	92	165	313	599	2,781	—	—	
Private	—	53	74	171	188	380	516	736	784	728	—	—	3, 30	

* Figures not yet available.

TABLE V.—SCHEME FOR THE EXTENSION OF MEDICAL SERVICES.

	Period to 31st December, 1921	Year ending 31st December, 1922	Year ending 31st December, 1923.	Year ending 31st December, 1924.	Year ending 31st December, 1925.	Year ending 31st December, 1926.	Year ending 31st December, 1927.
NO. OF OUT STATIONS,	8	8	8	9	10	11	12
OPENINGS.							
Regular	225	407	407	420	442	533	571
Intermediate	—	—	—	280	289	603	501
Total No. ...	225	407	407	700	731	1,136	1,072
NO. OF CASES.							
School Children	272	942	1,566	1,954	2,132	3,161	3,394
Tuberculosis	44	117	111	181	286	481	221
M. & C. W.	39	92	177	299	400	488	647
Others	5	17	24	25	—	—	—
General Hospitals	41	74	—	—	—	—	—
Out-Stations	319	1,094	1,709	487	675	705	830
Total ...	360	1,168	1,878	2,459	2,824	3,880	4,262
NO. OF ATTENDANCES							
School Children	758	2,282	4,239	5,326	5,443	10,768	8,618
Tuberculosis	173	471	548	980	1,084	1,075	1,075
M. & C. W.	71	245	438	994	1,128	1,474	1,767
Others	24	86	120	105	—	—	—
General Hospitals	115	175	328	816	1,135	1,008	1,293
Out-Stations	911	2,909	5,017	6,589	7,120	12,309	10,167
Totals ...	1,026	3,084	5,345	7,405	8,255	13,317	11,460
AVERAGE ATTENDANCE PER ROUTINE OPENING AT OUT-STATIONS ...	4.0	7.1	12.0	15.7	16.1	23.1	17.8
SPECIALIST SERVICES							
Visits ...	12	45	63	80	97	131	163
Cases seen ...	179	705	1,091	1,485	1,855	2,570	3,142
Operations ...	56	159	312	412	556	651	768
COST.							
Specialists:—							
Operations ...	£ s. d. 88 4 0	£ s. d. 250 8 6	£ s. d. 391 19 0	£ s. d. 463 10 0	£ s. d. 624 5 0	£ s. d. 732 7 6	£ s. d. 864 0 0
Examinations ...	344 19 6	424 12 0	605 8 0	709 14 6	806 3 6	1,038 11 6	1,158 19 6
Medical Officers	433 3 6	675 0 6	997 7 0	1,173 4 0	1,430 8 6	1,770 19 0	2,022 19 6
Other Items	378 0 0	625 16 0	723 9 0	702 3 0	720 16 6	895 13 0	837 17 0
Orthopaedic	—	—	1,051 9 10	1,068 14 5½	1,144 3 5	1,393 10 0	1,648 9 3
Total Cost	£1,728 2 0	£2,392 2 11	£2,842 5 1	£3,242 16 1½	£3,295 8 5	£4,060 2 0	£4,509 5 9
Total Cost in shillings (less orthopaedic) per attendance ...	33.7	15.5	10.4	7.95	8.0	6.1	7.9
Cost of Medical Officer per attendance at Out Stations ...	8.3	4.3	2.86	2.13	2.02	1.45	1.65
Special Service per attendance ...	38.4	12.0	11.1	9.5	8.7	8.4	7.4

