SEVENTY-EIGHTH

ANNUAL REPORT

OF THE

REGISTRAR-GENERAL

OF

BIRTHS, DEATHS, AND MARRIAGES

IN ENGLAND AND WALES.

(1915.)

Presented to both Houses of Parliament by Command of His Majesty.

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OF THE

REGISTRAR-GENERAL'S ANNUAL REPORT FOR 1915.

(8676—42.) Wt. L 2624/16. 1375. 3/17. D & S. G. 46/2.

* Several tables which appeared in the Report for 1914 are omitted from the present Report. For list of these *see* page 1.

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† The following statistics formerly published in the Abstracts of the Annual Reports have been omitted from this issue.

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REPORT

TO

THE RIGHT HONOURABLE LORD RHONDDA,

PRESIDENT OF THE LOCAL GOVERNMENT BOARD, &C., &C.

(1915.)

MY LORD,

I HAVE the honour to submit to you my Report on the estimated population, and on the marriages, births, and deaths registered in England and Wales during the year 1915.

The provisional numbers of marriages, births, and deaths during 1915 in the registration counties of England and Wales, and of births and deaths in towns with a census population of 20,000 or more were published early in March, 1916, in the Annual Summary, which was incorporated with the Return for the Fourth Quarter of the year, the numbers being derived from returns furnished by the registrars acting throughout the country.

The present Report also relates to the year 1915, but the statistics have been compiled from the registers deposited in this office, and they have been analysed in much greater detail than was possible in the "Annual Summary."

The salient features of the vital statistics of 1915 are as follows:—The marriage-rate was 19·5 per 1,000, being 3·6 above the rate in the preceding year, and 4·1 above the average in the ten years 1905–1914. It is the highest rate on record. The provisional figures for 1916, however, indicate a return to the average experience in 1905–1914.

The birth-rate in 1915 was 22·0 per 1,000, being the lowest rate on record. Although this rate is 3·5 below the average for the preceding decennium and 1·8 below the rate in 1914, the fall in the birth-rate in England and Wales during 1915 compares very favourably with the experience of other belligerent countries. The provisional rate for 1916 is 21·6.

The civilian death-rate in 1915 was 15·7 per 1,000, being 1·2 above the average for the total population in the preceding 10 years. Although higher than the rates in recent years the civilian death-rate in 1915 was below the rate for the whole population in any year before 1903. In making these comparisons it must be borne in mind that the civilian death-rate is adversely affected (1) by the withdrawal by enlistment of a large body of men of an age at which mortality experience is below the average, and (2) by the fact that the men remaining in the civil population at this age are on the whole much less healthy than those that have been withdrawn. The process of standardizing death-rates corrects for the first of these factors, but no correction is practicable for the second. When comparison is made of standardized death-rates it will be seen that the civilian death-rate in 1915 exceeded the average rate for the total population in the preceding 10 years by only 0·4 per 1,000, and that it was below the rate for the whole population in any year before 1907. It will be seen, therefore, that the mortality of 1915, though slightly exceeding the standard of the immediate past, does so only to an extent which is less than might under the circumstances have been anticipated, and which is indeed not outside the range of its normal fluctuation. The provisional rate for 1916 is appreciably lower than that for 1915.

Apart from the abnormally high death-rate of males of military age, the increase of mortality in 1915 mainly occurred in later childhood and old age.

Infant mortality was 110 per 1,000 births, being 5 per 1,000 above the rate in the preceding year but below the average of the 10 years 1905–1914 by the same amount. The provisional infant mortality rate for 1916 shows a decrease to 91 per 1,000 births, the lowest rate on record.

Compared with 1914 most of the principal causes of death show increased mortality, the converse being the case with regard to scarlet fever, enteric fever and diarrhœal diseases. The death-rate from enteric fever was the lowest on record, but that from influenza was the highest since 1900 and that from measles the highest since 1896. Other special features of the year's mortality are the abnormally high death-rate from cerebro-spinal fever consequent upon the first outbreak in recent years of this very fatal disease, and the remarkable decrease of male suicides.

Compared with the average of the preceding 10 years, mortality from scarlet fever, enteric fever and diarrhœal diseases showed a decrease, that from measles and diphtheria an increase, and that from whooping cough practically no change.

Cancer caused a higher mortality than in any other year judged by the crude or ordinary death-rates, but this form of statement of mortality is unsatisfactory in dealing

with such a disease as cancer in view of the present constitution of the civilian population. Comparison of standardized death-rates shows that the mortality of both males and females was slightly below that of either of the two preceding years.

Mortality from phthisis and from tuberculosis as a whole showed a marked increase among males and a slight one among females, but it must be remembered that the rates for 1915 relate only to the civil population, and that enlistment has withdrawn a very large number of healthy males at ages considerably affected by the incidence of tuberculosis.

Diseases of the respiratory and circulatory systems also showed distinctly increased mortality, especially among the male civil population.

In spite of the difficulties occasioned by the exceptional conditions which have prevailed during the preparation of this Report, the date of publication is approximately the same as in 1916. That more has not been accomplished is due to the serious depletion of the permanent staff. Clerks of military age have, with very few exceptions, joined His Majesty's forces or have been lent for war services to other Departments, and their places have been filled temporarily by untrained clerks—mostly women—with the result of greatly increasing the responsibility borne by the senior members of the staff. Work in connection with the Central Register of War Refugees and with the National Register set up by the National Registration Act, 1915, has also been maintained, and important new duties are being undertaken under the Registration of Business Names Act, 1916.

Notwithstanding these difficulties I am happy to say that it has been found possible to comply with a request received from your Board that this Office should undertake the responsibility of furnishing local mortality statistics to the various Sanitary Authorities of the country for 1916 and subsequent years. The immediate object in view is economy of labour in the local sanitary offices during the War; but if the experiment proves a success it may be found advantageous to continue the system permanently, so avoiding the duplication of work which has existed hitherto. For the purposes of the Local Government Board it was necessary that the tabulation should be complete and the figures issued by April 1st, which allows a very narrow margin of time when the delay involved by the transference of deaths to the area of residence is taken into account, but there is fortunately every reason to believe that the returns will be dispatched by the date in question this year.

The extensive movement of population occasioned by the war made it necessary to devise new methods of estimating populations, and after consideration it was decided only to attempt to estimate civilian populations, and to restrict the estimate of sex- and age-populations to England and Wales as a whole. The only local estimates attempted have been those of total civil population in the different localities based on the results obtained from the National Registration in 1915. The methods employed are fully explained in Dr. Stevenson's Review. In consequence of this limitation several tables of mortality rates have had either to be modified or omitted altogether.

It was also decided as a measure of war economy to suspend most of the tabulation of marriages and likewise the classification of secondary causes of death, the suspension of the marriage abstracts involving that of the corresponding tables of marriage-rates. If it is thought desirable in the interest of continuity, or for any other reason, these tables can of course be supplied at some subsequent date. On the other hand, special tables have been given relating to deaths which have been the subject of inquest or the causes of which have been uncertified, and summary tables relating to infant mortality in the quinquennium 1911–1915 have also been inserted. The preparation of these new tables demanded, of course, much less labour than that which has been saved by the suspension of the others.

A list of the changes made in the Abstracts will be found in the Contents (page vi) and one of those made in the numbered tables on page 1.

I have to convey my thanks to the Registrars-General of Scotland and Ireland and the various foreign and Colonial authorities for the information from which the tables of International Vital Statistics have been compiled, to medical officers of health throughout the country, especially county medical officers of health, for their valuable assistance in securing accurate transfer of deaths from the district of occurrence to that of residence, and to Sir Napier Shaw, F.R.S., for the Meteorological Report upon the year 1915.

I have the honour to be,
My Lord,
Your Lordship's obedient Servant,
BERNARD MALLET,
Registrar-General.

General Register Office,
Somerset House,
March, 1917.

REVIEW OF THE VITAL STATISTICS OF THE YEAR 1915.

Population.

The final report on the census of 1911 shows that the total population of England and Wales on April 3rd, 1911, was 36,070,492.

For the purposes of the Annual Report for 1914 the population of the country as a whole in the middle of each of the years 1911–1914 was estimated by applying the returns of births, deaths, and migration to the enumerated population of the United Kingdom, and by taking the balance after subtracting the estimates for Scotland and Ireland as representing the population of England and Wales; the total populations thus obtained were distributed over the various parts of the country by the method described in the Annual Reports for 1907, pages cxxxii–cxxxiv and for 1910, pages xi and xii.

The war, however, made it impossible to adhere to these methods of estimation of local and national populations. Men of military age have been largely drafted to military training centres, or sent abroad with the army, and the remainder of the male adult population, as well as, to a lesser extent, the female population, has migrated on an unprecedented scale into areas other than those in which it was enumerated at the last census.

Under these circumstances estimates of both total and local populations based on the census returns were clearly inadmissible, and it became necessary to search for a substitute. Fortunately this was ready to hand in the shape of the National Register, which referred to a date only six weeks removed from that for which estimates were required, viz., the middle of the year 1915. No doubt this does not form a perfect record as it is known that a number of persons escaped registration. There is good reason, however, to believe that the defects in the register taken as a whole were not on such a scale as to have any very serious effect upon the estimates of population based upon it. By the method described below it was possible to derive from these returns estimates of the *civil* population only of each administrative area on August 15th. No attempt has been made to increase these by allowance for members of the fighting forces because, apart altogether from the difficulty of ascertaining the average military population of each district during the year, experience has shown that under the present system of transferring deaths to the area of previous residence only civilian deaths can be tabulated for local areas.

The method by which the estimates of civil population have been derived from the National Register returns is as follows:—The ratio at the date of the census of the total population less the males of registrable age, 15–65, to the number of females aged 15–65 was calculated for each administrative area, and this ratio was applied to the number of females on the National Register; the resulting product plus the number of males aged 15–65 years on the National Register was taken to be the number of the civil population of the district. The assumption underlying this procedure is of course that the proportion of females aged 15–65 to total population outside these ages has remained constant in every area since 1911. Naturally this cannot always be the case, for, apart from the gradual changes which occur during peace, the special circumstances of the war must have altered the proportion in question very considerably in certain areas. Demand for female labour, for instance, must have increased the proportion in some areas by leading to immigration of female workers unaccompanied by children or old people. The estimates framed in this manner are therefore put forward only as the best obtainable under the circumstances.

A small adjustment was necessary in order to make the sum of the estimates for the several districts equal to the estimate for the country as a whole made on the same basis. Further the population in institutions was not registered, and this (taken to be the same in the aggregate for England and Wales as at census date) together with a number of persons of no fixed abode was distributed evenly over the whole country. These two adjustments raised the original estimates by about one per cent. The civil population of England and Wales at all ages thus obtained was 35,358,896.

Although the labour of framing estimates of the sex and age-grouping of the populations of local areas by the method to be described below was considered prohibitive, it was found that an estimate of this kind made for the country as a whole approximated very

closely to the total civil population obtained by the method already described. The various sex- and age-populations were obtained as follows :—

(1) For males aged 15–65 the numbers on the National Register, together with a corresponding distribution of the numbers of males with no fixed abode, and the addition of the male institutional population at these ages in 1911 were taken to represent the male civil population at the several age-groups.

(2) For females aged 15–65 the total number at this age, consisting of those on the Register, those with no fixed abode, and those in institutions in 1911, was distributed over the several age-groups in proportion to the numbers enumerated at these age-groups in 1911. It was considered inadvisable to treat the female population in the same manner as the male, since the ages of females as stated in the Register were found to be insufficiently reliable.

(3) For both males and females under 15 and at ages 65 and over the populations were estimated by taking the appropriate sex and age proportions as in 1911 of a total population in 1915, estimated by the method described above as used in the Annual Report for 1914, this course being considered permissible since these sections of the population are affected but little by the movement of naval and military forces.

The various sectional populations estimated under (1) to (3) summed to a total of 35,343,685 as against the general estimate of 35,358,896, and they were accordingly adjusted so as to total to the latter number. The results are shown in the following table :—

TABLE I.—ENGLAND AND WALES: ESTIMATED CIVIL POPULATION by SEX and AGE, 1915.

Age-group.	Males.	Females.	Persons.
All Ages	15,993,554	19,365,342	35,358,896
0—	2,012,415	1,993,857	4,006,272
5—	1,920,072	1,922,397	3,842,469
10—	1,816,482	1,821,093	3,637,575
15—	1,251,135	1,748,894	3,000,029
20—	844,691	1,739,892	2,584,583
25—	2,092,245	3,249,389	5,341,634
35—	2,198,370	2,609,632	4,808,002
45—	1,808,986	1,907,193	3,716,179
55—	1,207,841	1,261,697	2,469,538
65—	626,527	787,480	1,414,007
75—	191,133	280,890	472,023
85 and upwards ...	23,657	42,928	66,585

The estimated total civil population of each administrative area will be found in the table of populations, births and deaths in administrative areas, pages 89–121.

Throughout this Report death-rates in 1915 are invariably based upon civil deaths and civil population.

The question of the population to be used for the calculation of birth-rates also required consideration. The births registered are not only those of the children of civilians, and the estimates of civil population therefore form an unsuitable basis for the calculation of birth-rates. It is impossible to frame any estimate of total populations that would give reliable birth-rates, and the birth-rates for 1915 are, therefore, based upon the existing estimates of total population for 1914. These will sometimes be seriously in error owing to extensive migration having occurred, but although the information as to migration necessary for correcting these errors may be available for the use of local authorities it is not in the possession of the Registrar-General.

The want of estimates of sex- and age-populations in local areas has necessitated the omission, or substantial modification, of many of the tables usually appearing in these Reports. For instance, the tables showing mortality by sex and age in England and Wales and in groups of Administrative Areas, which since 1911 have been incorporated in this Review of Vital Statistics, have now to be restricted to the country as a whole. Among the main tables of the Report Tables 2–4 (1914 numbering) showing the estimated sex- and age-population in Administrative Counties and County Boroughs and in certain groups of these cannot be given ; although, as mentioned before, the civil

population at "all ages" in Administrative Areas will be found on pages 89–121. The Standardizing Factors are moreover omitted from these pages, as being no longer applicable. The absence of requisite populations also accounts for the suspension of Tables 16–18, dealing with sex- and age-mortality in Administrative Counties and County Boroughs, and of Tables 24–28 dealing with mortality by sex, age and cause in Administrative Groups, while for the same reason the mortality from measles, whooping-cough, scarlet fever, and diphtheria and croup in Table 13 (formerly 23) could no longer be based upon those ages upon which the mortality from these causes more particularly falls, but is stated in terms of population at all ages.

MARRIAGES.

The marriages in England and Wales during the year 1915 numbered 360,885, corresponding to a rate of 19·5 persons married per 1,000 of the 1914 population at all ages, the 1914 population being used for the same reason as in the case of the birth-rate. This rate was 3·6 above that in 1914, and 4·0 above the average rate in the decade 1901–1910, and is the highest rate recorded since civil registration of marriages was enforced. The proportion to total population of persons married since 1838 has ranged from a previous maximum of 17·9 per 1,000 living in 1853 to a minimum of 14·2 per 1,000 in 1886, the mean annual rate for the whole period (1838-1915) being 15·9 per 1,000 (*see* Table 3, page 5).

The proportion of marriageable persons in the population at different dates is not, however, a fixed one, and a more accurate measure is given by a rate in terms of the marriageable population only. Marriage-rates so calculated are shown for a series of years in Table 3. Using the marriageable population of 1914, the rates for 1915 are 65·0 for males and 54·4 for females. The highest rates previously recorded since 1851 were in 1873, in which year the rate for males was 64·9, for females 55·2. Thus the male rate is the highest on record, while the female rate has been exceeded on four occasions, viz., in 1865, 1866, 1872, and 1873. Since 1876 there has, however, been no other year in which a male rate of over 60, or a female rate of over 50 has been recorded.

It is hardly necessary to point out that the phenomenal rise in the marriages for 1915 is directly due to the war, that the conditions under which they have taken place are quite unprecedented, and that they must be regarded as entirely exceptional. The rise was not evenly spread over the year, as in the first quarter the rate per 1,000 of the total population showed an increase of only 0·7 over the average of the quinquennium immediately preceding. In the second quarter however the rise was 5·3, in the third, 4·4, while in the fourth quarter it reached 5·8.

First Marriages and Re-Marriages.—Owing to depletion of staff and war pressure the details as to age at marriage have been worked out only in regard to the marriages of bachelors with spinsters, *i.e.*, to first marriages of both contracting parties. In the year 1915 these first marriages numbered 321,149 out of 360,885, or 890 out of every 1,000 marriages solemnized. This proportion is slightly higher than has been the case of recent years, the proportions having been—

1911	887
1912	886
1913	885
1914	884

Marriages of Minors.—For the reason stated in the preceding paragraph the Table showing the proportions of marriages of minors to all marriages cannot be given. Among first marriages, however, which form an overwhelming majority of the whole, the proportion of marriages of minors shows a marked decline for the year 1915 from the proportions of previous years, as will be seen by reference to Table II.

TABLE II.—ENGLAND AND WALES, 1911–1915.—FIRST MARRIAGES. MINORS MARRIED per 1,000 MARRIAGES AT ALL AGES.

1911	Husbands 44·2	Wives 148·6
1912	,, 44·1	,, 150·9
1913	,, 47·4	,, 160·7
1914	,, 46·9	,, 159·7
1915	,, 38·9	,, 144·2

The appreciable increase in the rates for both sexes which occurred in 1913, and was almost sustained in 1914 has entirely disappeared, and the persistent decline which set in after 1874 has been resumed, the ratios for 1915 being lower for both sexes than at any previous period.

TABLE III.—ENGLAND AND WALES, 1896–1915.—MARRIAGES of BACHELORS WITH SPINSTERS at DIFFERENT AGES, per 1,000 at ALL AGES.

Period.	All Ages.	Under 18 Years.	18—	19—	20—	21—	25—	30—	35—	40—	45—	50—	55 and upwards.	Age not Stated.
						Bachelors with Spinsters.								
1896–1900	1,000	0	3	15	40	424	349	106	34	11	4	2	1	11
1901–1905	1,000	0	3	14	36	401	363	118	36	13	5	2	1	8
1906–1910	1,000	0	3	12	31	379	376	129	41	14	6	2	1	6
1911–1915	1,000	0	3	12	29	360	379	136	48	17	7	3	2	4
1911 ...	1,000	0	3	12	29	360	386	135	45	15	6	2	2	5
1912 ...	1,000	0	3	12	29	357	385	137	46	16	6	3	2	4
1913 ...	1,000	0	3	13	31	358	378	137	48	17	6	3	2	4
1914 ...	1,000	0	3	13	30	361	376	135	48	18	7	3	2	4
1915 ...	1,000	0	2	11	26	365	376	135	50	18	7	3	2	5
						Spinsters with Bachelors.								
1896–1900	1,000	6	28	62	94	454	254	65	18	5	2	1	0	11
1901–1905	1,000	5	25	56	86	444	274	72	20	6	2	1	0	9
1906–1910	1,000	5	22	50	78	436	288	81	23	7	2	1	0	7
1911–1915	1,000	6	24	49	73	417	296	89	28	8	3	1	1	5
1911 ...	1,000	5	22	48	73	419	303	87	25	8	3	1	1	5
1912 ...	1,000	6	23	49	74	414	300	89	27	8	3	1	1	5
1913 ...	1,000	7	26	53	76	412	294	87	27	8	3	1	1	5
1914 ...	1,000	7	26	52	74	415	290	89	28	9	3	1	1	5
1915 ...	1,000	5	22	46	70	422	295	90	30	9	4	1	1	5

Ages and Mean Ages at First Marriages.—In Table III. the proportions of first marriages at various ages are shown for the four quinquennial periods from 1896 to 1915, and for the last five years by single years. Generally speaking the table shows a tendency towards increasing age at marriage which may be demonstrated by taking the percentages of marriages contracted at ages under 25 during the various quinquennia. These, as shown by the Table, are—

1896–1900	...	...	Bachelors	48·2	Spinsters	64·4
1901–1905	...	...	„	45·4	„	61·6
1906–1910	...	...	„	42·5	„	59·1
1911–1915	...	...	„	40·4	„	56·9

By comparing the proportions at ages in Table III. we find that in the last of the four quinquennia shown, as compared with the first, there was a fall of 24 per cent. for marriages of bachelor minors, of 15 per cent. for the group aged 21–25, and a rise of 9 per cent. for the group 25–30, of 31 per cent. for those aged 30–40, and of 61 per cent. for those aged 40 and upwards. Amongst spinsters there is a fall of 20 per cent. in the proportion of marriages of minors and of 8 per cent. for ages 21–25, and a rise of 17 per cent. for ages 25–30, of 41 per cent. for ages 30–40, and of 63 per cent. for ages over 40.

The mean age of bachelors marrying spinsters in 1915 was 27·33, and of spinsters marrying bachelors 25·47; these being in each case the highest recorded. In 1896 the mean ages were 26·30 for bachelors with spinsters, and 24·54 for spinsters with bachelors, so that in the period of 20 years there has been a rise of 1·03 year for bachelors and 0·93 for spinsters.

Seasonal Distribution of Marriages.—In Table IV. the proportions of marriages celebrated in each quarter of the year are given from 1841 onwards. It will be seen that for the first 40 years covered by this Table the seasonal incidence of marriage remained practically unchanged. In the six months from April to September the numbers of marriages celebrated were slightly lower than in the six months from October to March. From 1880 onwards, however, a marked change set in, the proportional number of marriages in the winter half of the year falling steadily, while the proportion in the summer months steadily rose. In the last quinquennium this latter proportion has reached 55 per cent., and since 1891–1900 the September has displaced the December quarter as that in which most marriages take place.

TABLE IV.—ENGLAND AND WALES, 1841–1915—PROPORTION in each QUARTER per 1,000 MARRIAGES.

Period.	Quarter ended 31st March.	Quarter ended 30th June.	Quarter ended 30th September.	Quarter ended 31st December.
1841–1850	205	255	239	301
1851–1860	206	252	242	300
1861–1870	205	253	246	296
1871–1880	204	253	246	297
1881–1890	197	257	250	296
1891–1900	184	265	266	285
1901–1910	182	265	281	272
1911–1915	171	263	287	279

The proportion of marriages in the March quarter has fallen by about 20 per cent., while that in the September quarter has risen by about the same amount. The June quarter shows a rise of over 3 per cent., and the December quarter a fall of more than 7 per cent. The marriages in the March and June quarters are affected to a certain extent by the incidence of Easter, a favourite time for marriages, but this does not account for the fall in the March quarter, as the only period in which the Easters falling in the June quarter show any appreciable excess over the average is that from 1881 to 1890.

Buildings in which Marriages may be Solemnized.—At the end of the year 1915 the numbers of churches or chapels of the Established Church, and of registered buildings in which marriages could be legally solemnized, were as follows :—

Established Church	16,027
All other Religious Denominations	16,825
Total	32,852

The increase upon the numbers at the end of the previous year was : Established Church 32, other religious denominations 168. The number of these buildings belonging to the various denominations is shown for each registration county in Table 5, (p. 6).

By the Acts 15 and 16 Vict. c. 36, and 18 and 19 Vict., c. 81, it was enacted that all places of religious worship not being churches or chapels of the Established Church should, if the congregations desired, but not otherwise, be certified to the Registrar-General, certification for public worship being a necessary preliminary to the registration of a building for the solemnization of marriages. The number of places of meeting for religious worship on the official register on 31st December, 1915, and the number of buildings registered for the solemnization of marriages are shown in the following table :—

TABLE V.

Denomination.	Buildings certified to the Registrar-General as Meeting-places for Religious Worship.	Buildings registered for the Solemnization of Marriages.*	Denomination.	Buildings certified to the Registrar-General as Meeting-places for Religious Worship.	Buildings registered for the Solemnization of Marriages.*
Roman Catholics ...	1,474	1,396	New Church	53	59
Wesleyan Methodists ...	7,524	3,932	Catholic Apostolic Church	69	49
Congregationalists ...	3,290	2,978	Countess of Huntingdon's Connexion	47	42
Baptists	3,101	2,695			
Primitive Methodists ...	4,306	1,779	Salvation Army	1,175	64
United Methodist Church	1,965	1,192	Society of Friends ...	426	—†
Calvinistic Methodists ...	1,239	938	Jews	225	—†
Presbyterians	441	445	Other Denominations ...	2,989	1,062
Unitarians	181	194	All Denominations ...	28,505	16,825

* Of these buildings nearly 1,000 were certified before 1852, as Places of Meeting for Religious Worship, to some other Authority than the Registrar-General and therefore are not included in the preceding column.

† It is not necessary for buildings to be registered for the solemnization of Quaker or Jewish marriages. Under section 31 of the Births, Deaths, and Marriages Registration Act (1836) Registering Officers of the Society of Friends and Secretaries of Jewish Synagogues who have been certified to the Registrar-General record the marriages in each case.

The Marriage Act, 1898, provided that under specified conditions marriages might be solemnized in registered buildings in the presence of duly authorised persons without the attendance of a Registrar of Marriages. The governing bodies of some of the registered buildings have availed themselves of this provision, and at the end of the year 1915 the number of such buildings which had been brought under the operation of the Act, and so remained, was 4,044 out of the total of 16,825 ; the numbers of these buildings and the denominations to which they belonged, were as follows :—

1,701	Wesleyan Methodists.
621	Congregationalists.
596	Primitive Methodists.
415	Baptists.
356	United Methodist Church.
103	Calvinistic Methodists.
252	Other Denominations, and Unsectarian.
4,044	All Denominations.

These 4,044 buildings were distributed among 543 of the registration districts. In the remaining 91 registration districts there was no registered building under the operation of the Act.

Births.

The births registered in the year 1915 numbered 814,614 ; of these 778,369 were legitimate and 36,245 illegitimate.

In proportion to the estimated total population of both sexes and all ages in 1914,* the total births were equal to a rate of 22·0 per 1,000 living ; this rate was 1·8 per 1,000 below that recorded in 1914, which so far as the birth-rate is concerned may be regarded as the last year of peace. The fall is considerably greater than any other recorded in Table 3 for a single year, but cannot under the circumstances be considered at all surprising. In countries where mobilization on the grand scale occurred at the beginning of the war far greater declines have naturally been recorded. For instance, the joint birth-rate of the eight largest German cities fell from 21·5 in 1913 to 16·4 in 1915, of Vienna from 17·1 to 13·0, and of Paris from 17·4 to 10·7, as against a fall for London from 24·5 in 1913 to 22·6 in 1915.

In the year 1876 the birth-rate in this country attained the highest point on record, viz., 36·3 per 1,000 living, since which date the ratio has, with a few insignificant exceptions, fallen year by year.

Birth-rates of different parts of the Country.—The birth-rates of individual administrative areas, tabulated on pages 89–121, are summarized in Table VI. The reasons for employing this form of table have been stated in previous Reports, and the limits of the four geographical divisions dealt with are indicated in a footnote.†

* In the absence of an estimate of the total population for 1915, the estimate of 1914 has been taken as furnishing the best basis available. *See* page x.

† The "North" includes the administrative counties and county boroughs corresponding to the registration counties in the eighth, ninth, and tenth "registration divisions" of the Registrar-General, *i.e.*, Lancashire, Cheshire, and Yorkshire, and counties north of them. The "South" includes England south of the Thames, with the whole of the County of London and the five south-western counties, forming the first, second, and fifth registration divisions. "Wales" corresponds to the eleventh or Welsh registration division and so includes Monmouthshire. All the rest of the country, corresponding to the third, fourth, sixth, and seventh registration divisions, is included in the Midland area. The counties in the four areas are as follows :—

North.	Midlands.		South.	Wales.
Cheshire.	Middlesex.	Gloucestershire.	London.	Monmouthshire.
Lancashire.	Hertfordshire.	Herefordshire.	Surrey.	Glamorganshire.
Yorks, West Riding.	Buckinghamshire.	Shropshire.	Kent.	Carmarthenshire.
„ East Riding.	Oxfordshire.	Staffordshire.	Sussex, East.	Pembrokeshire.
„ North Riding.	Northamptonshire.	Worcestershire.	„ West.	Cardiganshire.
Durham.	Soke of Peterborough.	Warwickshire.	Southampton.	Brecknockshire.
Northumberland.	Huntingdonshire.	Leicestershire.	Isle of Wight.	Radnorshire.
Cumberland	Bedfordshire.	Rutlandshire.	Berkshire.	Montgomeryshire
Westmorland.	Cambridgeshire.	Lincolnshire.	Wiltshire.	Flintshire.
	Isle of Ely.	Parts of Holland.	Dorsetshire.	Denbighshire.
	Essex.	„ Kesteven.	Devonshire.	Merionethshire.
	Suffolk, East.	„ Lindsey.	Cornwall.	Carnarvonshire
	„ West.	Nottinghamshire.	Somersetshire.	Anglesey
	Norfolk.	Derbyshire.		

Table VI.—Births in 1915 per Thousand Total Population in 1914.

—	North.	Midlands.	South.	Wales.	England and Wales.
London	—	—	22·6	—	22·6
County Boroughs	23·9	23·5	18·9	25·3	23·3
Other Urban Districts	22·4	21·7	17·9	26·9	21·6
Rural Districts	23·2	20·2	17·5	23·0	20·5
All areas	23·3	21·9	20·0	25·3	22·0

The highest birth-rates recorded in Table VI are those of Wales, and next to them those of the North of England, while those of the South are much the lowest. Moreover, if it were not for the inclusion of London in the South the rate for this portion of the country as a whole would fall short of those recorded elsewhere to a considerably greater extent than appears in the table.

Compared with 1914 the table, as might have been anticipated, shows decreases throughout.

The highest rates are as usual yielded by the small towns of Wales, and the lowest by the rural districts of the South of England.

Sex Proportions at Birth.—Births of males in England and Wales numbered 415,205, and those of females 399,409 ; the proportion of male to female births being, therefore, 1,040 to 1,000. The corresponding proportions in each year since 1866 and in groups of years since the commencement of registration are shown in Table 3, page 5 ; the extreme range during the last 50 years has been from 1,032 per 1,000 in 1898 to 1,043 in 1866, 1867, and 1875.

As the influence of the war on the birth-rate was first experienced in 1915 it is of interest to note whether any marked alteration has occurred in the proportion of the sexes born in view of the statements which have been made that the ratio of male to female births is increased in time of war. It must be remembered that, owing to the delay permitted in birth registration, the births occurring in any month are most nearly represented by those registered during the following month, so that it was probably not till June, 1915, that the majority of births registered were those of war babies.

The ratio for the whole year (1,040) is therefore no index of the proportion born under war influences. Taken quarter by quarter, however, the ratios are very interesting. During the March quarter, entirely unaffected by the war, the ratio was very low, viz., 1,032, during the June quarter, partially affected, it rose to 1,043, while in the September and December quarters, fully affected, it rose further to 1,044. At the time of writing the ratios for the four quarters of 1916 are known to be 1,050, 1,051, 1,045, and 1,050 respectively, while for the year extending from 1st July, 1915, to 30th June, 1916, that is for the first complete year during which the births registered have been fully affected by war conditions the ratio is 1,047, a figure considerably above any recorded during the preceding fifty years, and within measurable distance of the general European ratio, which for many years has been much in excess of our own.

Table VII.—Male Births per Thousand Female Births, 1911–15.

—	North.	Midlands.	South.	Wales.	England and Wales.
London	—	—	1,038	—	1,038
County Boroughs	1,040	1,034	1,038	1,031	1,038
Other Urban Districts	1,035	1,036	1,039	1,039	1,037
Rural Districts	1,044	1,042	1,040	1,047	1,043
All areas	1,039	1,037	1,038	1,040	1,038

In Table VII the sex ratio of births in different parts of the country in the quinquennium 1911–1915 is given. The table shows that during this period the rural districts had a somewhat higher proportion of male to female births than the urban. This is the case in each of the four divisions, the excess over all areas ranging from seven in Wales to two in the South. It is in Wales also that the most striking

variation is seen, for while the range between different classes of area is only two in the South of England it is no less than 16 in Wales, which has in the county boroughs the lowest and in the rural districts the highest proportions of male to female births. It will be of interest to note whether the experience of this quinquennium is confirmed in the future.

Illegitimate Births.—The births registered during the year 1915 included 36,245 of illegitimate children.

Illegitimate fertility is frequently measured by the proportion of illegitimate births either to total births or to total population. Neither of these measures is a satisfactory index, and a comparison of the illegitimate births with the number of possible unmarried mothers is that to which most importance should be attached, though unfortunately this comparison can be made for 1915 only in the case of the country as a whole (*see* page ix). In 1915 the rate per 1,000 total births was 44·5, and compared with the rate in the quinquennium 1876–80 this shows a fall of 6·3 per cent. The rate per 1,000 total population (1914) was 0·98 which compared again with the rate in 1876–80 shows a fall of 41·7 per cent. Finally the rate taken in proportion to the unmarried and widowed female population aged from 15 to 45 years was 7·4 per 1,000, a fall of 48·6 per cent. from that obtaining in 1876–80.

This latter rate is the lowest yet recorded (Table 3), but owing to the fact that the legitimate rate has fallen still more the proportion of illegitimate to total births is the highest since 1889.

Some idea of the extent of illegitimacy in different classes of area and parts of the country may be gathered from Table VIII, but it must be borne in mind that statement in proportion to total population minimizes the excess of illegitimacy in the rural districts.

TABLE VIII.—ILLEGITIMATE BIRTH-RATES, 1915.

—	Per 1,000 total Population (1914).				
	North.	Midlands.	South.	Wales.	England and Wales.
London	—	—	0·91	—	0·91
County Boroughs	1·06	0·99	1·13	0·92	1·04
Other Urban Districts	0·91	0·94	0·98	0·99	0·94
Rural Districts	1·07	1·00	0·86	1·18	1·00
All areas	1·01	0·97	0·94	1·04	0·98

Natural Increase.—In 1915 the excess of births over deaths registered in England and Wales was 252,361, as compared with 362,354 in 1914. As the deaths amongst the casualties published up to the end of the year fall far short of this number, and as emigration has practically ceased since the commencement of the war, it is interesting to note that the English population must have increased appreciably during the first complete year of the war.

The rate of natural increase cannot be precisely stated in the form of excess of births over deaths per 1,000 population, so as to compare with previous records, for the reasons referred to on page ix. The excess of births over deaths in 1914, however, 362,354, having amounted to 9·8 per 1,000, the lowest rate then on record except that for 1911 (9·7 per 1,000), it may be inferred that the excess of 252,361 in 1915 would correspond to a rate of about 6·8 per 1,000. But even this rate is largely meaningless, as it excludes all casualties except the 1,947 deaths from wounds registered in this country (page 258).

DEATHS.

The deaths of 562,253 persons were registered in England and Wales during 1915, 292,381 (viz: 283,604 civilians and 8,777 non-civilians) of these being males and 269,872 females.

The 553,476 civilian deaths correspond to a rate of 15·7 per 1000 of the estimated civil population. When standardized* to correct for the deviation of the sex- and age-distribution of the civilian population from that of the standard population of 1901 this rate is reduced to 14·6 (Table IX). The extent of the reduction is due to the withdrawal from the civilian population of males of an age when mortality is below the average for all ages. The mortality of the remaining population is, of course, raised by this withdrawal, and it is the correction for this circumstance which has increased the difference between the crude and standardized rates from 0·4 per 1,000 in 1914 to 1·1 in 1915.

The standardized rate is of course comparable with that for any other year notwithstanding that it applies to civilians only in 1915. But though this is true so far as correction for the altered sex and age distribution of the population is concerned, the change has involved a source of increase in the death-rate to which correction cannot be applied. The males withdrawn from the population were selected lives, so the death-rate amongst the remainder of military age has necessarily been higher than would have been recorded for the total male population of these ages. Standardization cannot correct for this deterioration in the quality of the population dealt with in 1915, which accounts for some portion of the excess of the standardized rate over those recorded for each year since 1907 (Table 3). The lowest standardized death-rate of the nineteenth century was 16·4 in 1894, and the usual rates were considerably higher, the standardized rate for 1861–70 being 21·3 and that for 1891–95 18·5, since when the fall has been very rapid.

For the reason stated on page ix the tables in these reports showing mortality at different ages and standardized mortality at all ages by sex for the different classes of areas, urban and rural, from the year 1911 onwards, cannot be repeated for 1915. Table IX, however, gives the crude and standardized rates for sexes and persons for the whole country, and also the mortality at different ages per million living at those ages, for the civil population in 1915 and the total population in 1911–1914 and 1906–1910.

TABLE IX.—ENGLAND AND WALES: MORTALITY from ALL CAUSES per MILLION POPULATION, 1906–10, 1911–1914, and 1915.*

—	Males.			Females.			Persons.		
	1906–10.	1911–14.	1915 (Civilians only).	1906–10.	1911–14.	1915.	1906–10.	1911–14.	1915 (Civilians only).
All Ages { Crude ...	15,636	14,870	17,732	13,809	13,041	13,936	14,692	13,926	15,653
All Ages { Standardized.	15,806	14,951	16,311	13,218	12,318	13,063	14,431	13,556	14,597
0–	45,445	40,084	39,812	37,980	33,444	32,534	41,724	36,779	36,190
5–	3,326	3,277	3,772	3,438	3,223	3,717	3,382	3,250	3,744
10–	1,971	1,954	2,309	2,092	2,052	2,308	2,032	2,003	2,309
15–	2,975	2,911	3,826	2,764	2,664	2,972	2,869	2,787	3,328
20–	3,971	3,683	5,902	3,339	3,093	3,244	3,638	3,372	4,112
25–	5.251	4,824	6,182	4,462	3,979	4,054	4,837	4,381	4,887
35–	8.615	8,171	9,089	7,051	6,561	6,796	7,806	7,337	7,844
45–	15,511	15,030	15,449	12,000	11,530	12,274	13,687	13,211	13,819
55–	31,218	30,514	31,897	24,278	23,178	25,233	27,546	26,642	28,493
65–	64,400	64,626	71,413	53,125	51,620	56,881	58,124	57,383	63,320
75–	137,722	139,418	160,731	119,591	119,363	140.461	127,003	127,485	148.669
85 and upwards	283,035	271,307	313,776	250,862	244,248	289,228	262,398	253,855	297,950

* The method of estimating the population in 1915 differs from that used for 1911–14. (*See* page ix).

It will be seen that under peace conditions standardization led to a slight and diminishing increase in the statement of male mortality, to a considerable decrease in that of females, and to a slight decrease in that of persons of both sexes. These results follow from the facts that the age distribution of males in recent years has been slightly but decreasingly more favourable to low mortality than that of persons of undistinguished sex

* The term "standardized" death-rate means the death-rate corrected for differences of sex- and age-constitution of the population. For a description of two methods of effecting this "standardization" of recorded death-rates *see* the Annual Report for 1911 (pp. xxvii–xxxi). Standardized death-rates for the sexes separately quoted in this report are based upon the age-distribution of persons of undistinguished sex in the general population of England and Wales in 1901. (*See* Annual Report for 1913, p. xx.)

in the general population in 1901, which is used as the standard of comparison for males and females (page xvii) ; that that of females has been considerably less so than the same standard ; and that the sex- and age- constitution of the total population (persons) has been becoming increasingly less favourable than in 1901. Under war conditions standardization in 1915 decreases the death-rate of persons much more than in previous years, as already pointed out, so as to compensate for the withdrawal of males at ages at which mortality is below the average, and instead of increasing the mortality of males it decreases it even more than that of persons for the same reason. The correction for females is of course unaffected.

The decrease by standardization of male mortality would be much greater than it is but for the fact that, as already pointed out also, the death-rates of the remaining civilian population at military ages, which are applied to the standard population of persons of undistinguished sex, are artificially inflated by selection of the healthier men for military service. When dealing with mortality from all causes even these inflated rates are much below the average for all ages, and so the net effect is a considerable reduction, but as will be seen in the case of tuberculosis this may not hold good of a cause of death mortality from which at military age is not greatly below the average for all ages.

Mortality of each Sex.—The standardized mortality of males regularly exceeds that of females. Up to 1860 or so the excess was only about nine per cent., but for the last 15 years it has averaged about 20 per cent. In 1915, on account of the deterioration in quality of a section of the male population just referred to, the excess has risen to 25 per cent. Between 1841–1845 and 1911–15, the first and the last quinquennium in Table 3, the standardized mortality of females has fallen by 36·9 per cent. while the fall in that of males has been only 29·6 per cent.

Table IX and Tables 6 and 7 show that the excess in the mortality of males manifested itself at all ages in 1915 except at 10–15 years, at which the figures for the two sexes are equal. This is the only one of the last fifty years in which the mortality of females has not exceeded that of males at any of the age-periods dealt with in Tables 6 and 7, female excess having always previously been recorded at some one at least of the three quinquennia 5–10, 10–15, or 15–20.

The same tables also clearly bring out the effect on mortality of the deterioration in quality of the civilian male population of military age already referred to as brought about by selection of physically fit men for military service.

The ratios of male per cent. of female mortality at the various age-periods during the years 1911–1914 and 1915 are as follows :—

—	All Ages (standardized).	0—	5—	10—	15—	20—	25—	35—	45—	55—	65—	75—	85—
1911–14	122	120	102	95	109	119	121	125	130	132	125	117	111
1915	125	122	101	100	129	182	152	134	126	126	126	114	108

At all ages affected by military service, *i.e.*, 15–45, the ratios have risen considerably and from 20 to 35 they are wholly abnormal. The deaths concerned, it may be repeated, are those of civilians only, and the abnormal male mortality at military age is therefore quite independent of casualties.

Mortality at different Ages.—Taking the rates for the four years 1911–1914 as 100, the proportionate rates in 1915 are as follows :—

—	All Ages (standardized).	0—	5—	10—	15—	20—	25—	35—	45—	55—	65—	75—	85—
Males ...	109	99	115	118	131	160	128	111	103	105	111	115	116
Females ...	106	97	115	112	112	105	102	104	106	109	110	118	118

Thus we see that in both sexes and at all ages there has been some increase of mortality in 1915 above the standard of recent years except in the first five years of life, where the standard used is affected by the exceptional infant mortality of the hot summer of 1911. The increase is considerable in later childhood and in old age for both sexes, but in the intervening portion of life it is slight at all ages for females, and for males where the influence of recruitment does not manifest itself. The latter factor has caused

a remarkable elevation of the male rates at ages 15–35 which attains its maximum at the age of maximum recruiting, 20–25. The male mortality recorded at this age, 5·9, is the highest in Table 6 since the year 1884.

The very considerable rise in mortality shared almost equally by the aged of both sexes must also in all probability be regarded as in some degree, at least, an effect of the war. It is a feature which has appeared in the statistics of other belligerent countries than our own, and has been regarded as a reflex of the unusual mental stress and anxiety to which these relatively feeble existences have been subjected. The total excess of deaths at all ages from 70 onwards over the corresponding figures for 1914 was 17,020. Towards this number excess of deaths from bronchitis contributes 30 per cent., from influenza 11 per cent., pneumonia of all varieties 6 per cent., organic heart disease 17 per cent. and "old age" 16 per cent., these five causes thus accounting for 80 per cent. of the total increase. The figures for heart disease and pneumonia are not very greatly in excess of the share normally borne by these causes in the total mortality of old age, and that for "old age" is much less than the usual proportion of mortality at ages over 70 attributed to this cause (24 per cent. in 1914), but the increase from bronchitis and influenza is out of all proportion to their normal importance as causes of death at these ages. The mortality at all ages from influenza is the highest recorded for the present century (page 21) though far below the levels reached in several years of the last decade of the nineteenth century, so a portion of the excess of mortality of old people in 1915 must be attributed to the recrudescence of this scourge.

Infant Mortality.—Of the 562,253 deaths registered during the year in England and Wales, 89,380, or 15·9 per cent., were those of infants under one year of age, corresponding to a mortality rate of 110 per 1,000 births. This rate was 5 per 1,000 births, or 4·3 per cent., below the average in the preceding 10 years, but exceeded that of 1912, the lowest hitherto recorded, by 15 per 1,000 births, and that of the preceding year by 5. This excess over 1914 occurred in spite of a slight decrease in diarrhœal mortality, and therefore presumably of somewhat more favourable climatic conditions in the summer. The non-diarrhœal mortality, which stood at 87 per 1,000 births in 1914 as in 1912, the lowest rate hitherto recorded, rose in 1915 to 95. It was not however until 1909 that this rate fell below 100, and since then it has never reached that figure.

Table X shows how the infant mortality of 1915 was distributed between the sexes and throughout the country. For infants of both sexes jointly the rate varied from 131 in the county boroughs of the North to 78 in the rural districts of the South.

TABLE X.—INFANT MORTALITY (DEATHS UNDER 1 YEAR per 1,000 BIRTHS), 1915.

—	Males.					Females.					Both Sexes.				
	North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.
London	—	—	125	—	125	—	—	100	—	100	—	—	112	—	112
County Boroughs	147	129	103	124	137	114	102	84	103	107	131	116	94	114	122
Other Urban Districts ...	135	114	97	136	121	106	86	76	104	93	120	100	87	120	107
Rural Districts	119	95	88	106	101	92	74	68	88	79	106	84	78	97	90
All areas	139	114	110	125	123	109	88	87	99	96	124	102	99	112	110

The fact that infant mortality is considerably higher under the conditions of town than of country life is well known, and the rate for the rural districts is exceeded accordingly by 19 per cent. in the case of the smaller towns, and by 36 per cent. in that of the county boroughs, but only by 24 per cent. in the case of London. The comparatively small excess in London shows to what a large extent the adverse influence of urban surroundings on infant life may be avoided.

The geographical variation of the mortality dealt with by the table is remarkable, especially in view of its constancy from year to year. In each sex and in every class of area the English mortality was highest in the North and lowest in the South. The urban excess in 1915 is analysed by age, legitimacy and cause of death in Table 15.

Causes of Infant Mortality.—It will be seen from Table XI, which compares the rates recorded in Table 14 with the experience of previous years, that infant mortality from the common infectious diseases and from bronchitis and pneumonia showed a marked increase in 1915 upon that both in 1914 and in the quinquennium 1910–14, while mortality from diarrhœa decreased. The great rise in mortality from infectious diseases was chiefly due to the extensive prevalence of measles in the spring.

The summer of 1915 was appreciably cooler and wetter than that of the preceding year, and diarrhœal mortality fell from 17·40 in 1914 to 15·14, though this rate was nearly double that obtaining in 1912 when it stood at the extraordinarily low rate of 7·72 per 1,000 births.

From tuberculosis the rate rose to 2·88 per 1,000 births as compared with a rate of 2·86 in 1914, but was lower than in any year except 1912 and 1914. The fall noted in the Reports for 1913 and 1914 in the mortality from tuberculous meningitis was not maintained, the rate for 1915 being 1·09 as against 0·99 in 1914. There was, moreover, a further rise in the year in deaths ascribed to other forms of meningitis, the rate for 1915 being 1·60 per 1,000 births as against 1·37 in 1914, and 1·34 in 1913.

TABLE XI.—ENGLAND AND WALES, 1915.—PERCENTAGE INCREASE OR DECREASE of INFANT MORTALITY as compared with 1910–14 and with 1914.

—	Under 1 month.		1–3 months.		3–6 months.		6–9 months.		9–12 months.		Under 1 year.	
	1910–14.	1914	1910–14.	1914.	1910–14.	1914.	1910–14.	1914.	1910–14.	1914.	1910–14.	1914.
Whooping cough	+ 9	—	− 9	− 9	+ 2	− 5	+11	+ 3	+20	+14	+ 7	+ 2
Other common infectious diseases.	+67	+67	+25	+43	+48	+63	+53	+76	+58	+77	+55	+75
Diarrhœa and enteritis ...	− 8	− 7	−21	−17	−20	−15	−18	−10	−18	−10	−19	−13
Premature birth	− 5	− 4	+ 1	+ 1	− 5	−21	+33	+33	—	—	− 4	− 4
Congenital defects... ...	− 0	+ 2	− 2	+ 4	+ 8	+ 5	+24	+17	+27	+27	+ 1	+ 3
Atrophy, debility, marasmus	− 5	+ 0	−12	+ 2	−17	− 1	−18	—	− 9	+11	− 9	+ 1
Developmental and wasting diseases	− 4	− 2	− 7	+ 2	−12	− 2	−10	+ 4	− 2	+14	− 5	− 1
Tuberculous diseases ...	—	+25	−10	− 8	−17	− 5	− 9	+ 3	−13	+ 7	−12	+ 1
Convulsions	− 7	+ 2	− 8	+ 8	− 5	+ 6	+11	+13	+20	+21	− 2	+ 7
Bronchitis and pneumonia	+ 5	+10	+ 2	+ 6	+24	+22	+37	+36	+44	+44	+26	+26
Other causes	+ 6	− 1	+ 2	− 1	+ 5	+ 5	+ 2	+ 5	+ 7	+18	+ 5	+ 3
All causes	− 3	− 1	− 7	− 2	− 3	+ 2	+ 9	+15	+20	+27	+ 1	+ 5

The important group of developmental and wasting diseases, which includes the whole of the three lines appearing above it in Tables XI and XII, shows a decrease on the previous year of 1·4 per cent., the rate being the lowest yet recorded in Table XII.

TABLE XII.—ENGLAND AND WALES.—DEATHS of CHILDREN under ONE YEAR OF AGE from DEVELOPMENTAL and WASTING DISEASES per 1,000 BIRTHS, 1886–1915.

—	Sex.	Proportion of Deaths to 1,000 Births of each Sex.						
		1886–1890.	1891–1895.	1896–1900.	1901–1905.	1906–1910.	1911–1915.	1915.
Premature birth (151A) ...	M.	17·8	20·3	21·7	22·4	22·0	21·7	21·0
	F.	14·4	16·4	17·5	18·1	17·8	17·6	16·8
	P.	16·1	18·4	19·6	20·2	19·9	19·7	18·9
Congenital defects (150 and 152B).	M.	3·5	3·9	4·3	6·4	7·3	6·2	6·5
	F.	2·9	3·3	3·5	5·0	5·9	4·9	5·1
	P.	3·2	3·6	3·9	5·7	6·6	5·6	5·8
Atrophy, Debility, Marasmus (151 B–E).	M.	24·9	25·0	23·9	20·8	17·5	15·3	14·2
	F.	20·6	20·3	19·3	16·6	13·7	11·6	10·8
	P.	22·8	22·7	21·7	18·7	15·6	13·5	12·5
Total: Developmental and wasting diseases.	M.	46·2	49·2	49·9	49·6	46·8	43·2	41·7
	F.	37·9	40·0	40·3	39·7	37·4	34·1	32·7
	P.	42·1	44·7	45·2	44·6	42·1	38·8	37·2

The mortality in 1915 from premature birth and from atrophy, &c., is appreciably below, while that from congenital defects is slightly above the average of 1911–15.

The sudden rise in mortality from congenital defects shown for the period 1901–05 in Table XII is in large measure at least due to the inclusion under this heading during the years 1901–10 of deaths from icterus neonatorum (151c) amounting to about 700 annually. Even when this is allowed for, however, the rate from this cause shows an increase probably due largely to improvement of certification.

The rate from premature birth is the lowest for many years.

Table XIII, which contrasts the mortality of male with that of female, and of legitimate with that of illegitimate infants, shows that the mortality of males was 28 per cent. greater than that of females, and that all the principal causes of death except whooping cough display the same feature, and on the whole to a very uniform extent. The excess in the mortality of males was greatest in the first three months of life, decreasing thereafter. All these features of the table—excess in male mortality of about 25 per cent. from all causes and from the principal groups of causes, excess of female mortality from whooping cough, and the decrease with advancing age of the excess in male mortality—reproduce themselves with curious fidelity from year to year. The proportionate male excess was less in the case of illegitimate infants, as it has been in (at least) each of the past eight years, and the male excess for all infants was the greatest recorded during the same period.

The table also resembles similar tables relating to previous years in showing that the mortality of illegitimate infants was about twice as great as that of the legitimate, the excess being rather greater in the case of females. This excess was highest at one to three months for males, 135 per cent., and at three to six months for females, 145 per cent.

The excess in mortality of illegitimate children varied greatly also for different causes of death. It was comparatively slight for infectious disease in general (Table 14), whooping cough, which accounts for almost half of this mortality, having killed legitimate and illegitimate impartially. The excess was moderate in the case of deaths from congenital defects, but heavy for diarrhœa and atrophy, &c. These are all very constant features of this table.

TABLE XIII.—ENGLAND AND WALES, 1915: INFANT MORTALITY by SEX and LEGITIMACY.

	—	Deaths per 1,000 Births.						Mortality per cent.				
		All Infants.		Legitimate Infants.		Illegitimate Infants.		Male of Female Infants.			Illegitimate of Legitimate Infants.	
		Male.	Female.	Male.	Female.	Male.	Female.	All Infants.	Legitimate.	Illegitimate.	Male.	Female.
All causes	under one month ...	43·16	32·40	41·55	31·11	78·13	60·01	133	134	130	188	193
	1–3 months	21·74	16·18	20·51	15·26	48·26	35·82	134	134	135	235	235
	3–6 „	21·24	16·88	20·18	15·85	44·12	38·90	126	127	113	219	245
	6–9 „	19·16	15·24	18·56	14·79	32·05	24·80	126	125	129	173	168
	9–12 „	17·56	15·36	17·35	15·05	22·03	21·89	114	115	101	127	145
	Total under one year ...	**122·86**	**96·06**	**118·15**	**92·06**	**224·59**	**181·42**	**128**	**128**	**124**	**190**	**197**
All ages under one year.	Whooping cough ...	4·23	4·69	4·20	4·73	4·84	4·03	90	89	120	115	85
	Other common infectious diseases.	4·90	4·19	4·90	4·09	4·62	6·16	117	120	75	94	151
	Diarrhœa and enteritis	17·14	13·06	16·23	12·33	36·72	28·66	131	132	128	226	232
	Premature birth ...	20·99	16·81	20·32	16·32	35·36	27·48	125	125	129	174	168
	Congenital defects ...	6·51	5·09	6·42	5·03	8·49	6·16	128	128	138	132	122
	Atrophy, debility and marasmus.	14·18	10·80	13·30	10·11	33·03	25·47	131	132	130	248	252
	Developmental and wasting diseases.	41·68	32·70	40·04	31·46	76·88	59·11	127	127	130	192	188
	Tuberculous diseases ...	3·26	2·47	3·15	2·38	5·49	4·31	132	132	127	174	181
	Convulsions	9·91	7·42	9·52	7·11	18·39	14·05	134	134	131	193	198
	Bronchitis and pneumonia.	26·04	19·83	25·52	19·32	37·16	30·62	131	132	121	146	158
	Other causes	15·70	11·70	14·59	10·64	40·49	34·48	134	137	117	278	324
	All causes	**122·86**	**96·06**	**118·15**	**92·06**	**224·59**	**181·42**	**128**	**128**	**124**	**190**	**197**

The mortality of illegitimate exceeds that of legitimate infants most of all in the case of deaths attributed to syphilis, being nearly eight times as heavy (Table 14). Probably there is much less reluctance to certify the true cause of death in such cases for illegitimate infants, but the difference is greater than could well be explained in this way, and it is, moreover, of a nature to be expected from the circumstances of the case. Fatal injury at birth is very much commoner with illegitimate infants. No doubt many of the confinements take place under disadvantageous circumstances. The excess of mortality amongst illegitimate infants ascribed to overlying is also greater than that from all causes.

Table 15 compares towns of various sizes and rural districts in respect of infant mortality. These effects are summarized by comparison of the death-rate from each cause in the urban areas as a whole and in the rural areas. The total mortality in the former exceeded that in the latter by nearly 28 per cent., but this excess was very unevenly distributed over the different age-periods into which the first year of life is divided in the table, being only 3 per cent. in the first month, and thereafter increasing with age. The constancy of this feature in the reports for different years is shown by the following table :—

TABLE XIV.—INFANT MORTALITY in URBAN DISTRICTS per cent. of that in RURAL DISTRICTS, 1911–15.

—	Under 1 month.	1–3 months.	3–6 months.	6–9 months.	9–12 months.	Total under 1 year.
1911	106	136	145	155	164	132
1912	103	123	141	145	157	122
1913	105	141	144	149	157	129
1914	106	138	150	143	149	128
1915	103	128	148	153	154	128

The chances of survival seem to differ but little at birth in town and in the country, but the noxious influences of the former soon come into play, and make themselves felt to an increasing extent as the first year of life progresses, and to a still greater extent in the second and third years, when the urban excess generally approaches 100 per cent., thereafter gradually declining.

When comparison is made between towns of varying size it is seen that apart from London, those of larger size are at a disadvantage at every age, in the case both of legitimate and illegitimate infants. The mortality of legitimate infants in London, however, was little more than that in the smaller towns. This is due mainly to the low mortality in London during the first month of life, which, as also in each of the preceding four years, was below that even of the rural districts. After the first month London comes between the county boroughs and the smaller towns, but much nearer the former.

Apart from the special case of London, Table 15 shows that the mortality from all of the five groups of diseases under which it summarizes infantile deaths, except infectious diseases, increases regularly from the rural areas to the large towns, but the difference in the case of the wasting diseases is small. This statement applies also to each quarter of the first year of life.

The harmful effect of town life is well marked in regard to the respiratory diseases, but it is especially evident in the case of diarrhœa, the mortality from which in London approached three times that in the rural districts. Syphilis shows a similar variation with urban conditions, the mortality in the country districts, whether of legitimate or illegitimate children, being about one-third of that returned in the great towns. Another cause of infant mortality particularly associated with the great towns is overlying, which caused over three times as great a mortality in London as in the rural districts.

The total infant mortality in 1915 in each administrative area will be found on pages 89–121, and special tables (Tables 16–20) relating to infant mortality during the quinquennium 1911–15, are given on pages 48–57.

Centenarians.—Among the deaths registered during the year there were 73 of reputed centenarians, 23 of whom were males and 50 females. In the preceding three years the numbers were 67, 52, and 88 respectively. Particulars of the ages returned and of the classes of area concerned are given in Table XV.

TABLE XV.—ENGLAND AND WALES, 1915.—DEATHS of CENTENARIANS.

—	Males. Age. 100 and over.	100.	101.	102.	104.	105.	107.	Females. Age. 100 and over.	100.	101.	102.	103.	104.	105.
London	6	2	—	2	—	1	1	6	3	2	1	—	—	—
County Boroughs	4	2	2	—	—	—	—	10	2	3	2	2	—	1
Other Urban Districts ...	7	5	1	—	1	—	—	21	13	2	2	3	1	—
Rural Districts	6	4	1	1	—	—	—	13	7	3	1	1	1	—
All areas	23	13	4	3	1	1	1	50	25	10	6	6	2	1

CAUSES OF DEATH.

The causes of death of males and females at 27 groups of ages are stated in the abstracts at pages 137–239 for the whole country, for London, for county boroughs in the aggregate, for other urban districts in the aggregate, and for rural districts in the aggregate ; and at pages 240–257 these deaths are shown by cause but not by age for each quarter of the year. So far as they relate to the whole country these tables include all deaths registered during the year ; but owing to the special circumstances arising from the war, it has been found necessary to exclude naval and military deaths from all tables relating to portions of the country (*see* page ix). A condensed table stating by ages, the causes of these latter deaths will be found on page 258. The tables on pages 137–257 include the full International List of Causes of Death with certain subdivisions introduced for reasons stated in the "Manual of the International List" (page vi). All other abstracts of the causes of death are arranged in the form ot the short list of causes adopted by the Registrar-General and the Local Government Board in 1911. The relation of this list to the detailed and condensed International Lists as revised by the International Commission which met for the purpose at Paris, in 1909, is as follows :—

	Short List of Registrar-General and of Local Government Board.	Corresponding Number. Detailed International List.	Abridged International List.
1.	Enteric fever	1	1
2.	Small-pox	5	4
3.	Measles	6	5
4.	Scarlet fever	7	6
5.	Whooping cough	8	7
6.	Diphtheria and croup	9	8
7.	Influenza	10	9
8.	Erysipelas	18	12 part of.
9.	Phthisis (pulmonary tuberculosis) ...	28, 29	13
10.	Tuberculous meningitis...	30	14
11.	Other tuberculous diseases	31–35	15
12.	Cancer, malignant disease	39–45	16
13.	Rheumatic fever...	47	37 part of.
14.	Meningitis	61	17
15.	Organic heart disease	79	19
16.	Bronchitis	89, 90	20, 21
17.	Pneumonia (all forms)	91, 92	22, and 23 part of.
18.	Other diseases of respiratory organs ...	86–88, 93–98	23 part of.
19.	Diarrhœa and enteritis, ages stated ...	104, 105	25, and 37 part of.
	,, ,, ages unstated ...	104	25
20.	Appendicitis and typhlitis	108	26
21.	Cirrhosis of liver	113	28

Short List of Registrar-General and of Local Government Board.	Corresponding Number. Detailed International List.	Abridged International List.
21A. Alcoholism	56	37 part of.
22. Nephritis and Bright's disease	119, 120	29
23. Puerperal fever	137	31
24. Other accidents and diseases of pregnancy and parturition.	134–136, 138–141	32
25. Congenital debility and malformation, including premature birth.	150, 151	33
26. Violent deaths, excluding suicide	164–186	35
27. Suicide	155–163	36
28. Other defined diseases	2–4, 11–17, 19–27, 36–38, 46, 48–55, 57–60, 62–78, 80–85, 99–103, 105–107, 109–112, 114–118, 121–133, 142–149, 152–154.	37 plus detailed list Nos. 2–4, 11–17, 19, 64, 65, 102, 103,109, 128–132, 154 ; and less detailed list Nos. 47, 56, and, where ages are stated, 105.
29. Diseases ill-defined or unknown	187–189	38

The contents of every heading in both the short and the detailed list now in use, and their relation to the items in the list previously used are defined in the Manual, which should be consulted in all cases where it is desired to ascertain the precise significance of any heading in the lists.

On pages 275–401 deaths of civilians are shown for urban and rural portions of administrative counties, and for county and metropolitan boroughs, arranged by sex, short list of causes as above, and the eight age-groups of Table III of the Local Government Board. These tables, in fact, are the same as the Board's Table III with the addition of the distinction of sex. For all other administrative areas the deaths are shown on pages 402–500 arranged by sex and short list of causes without distinction of age.

In addition to the above presentations, all of which follow the International List, the deaths and death-rates of the year are shown in Tables 9 and 10 for England and Wales only, and with distinction of sex but not of age, arranged according to the list in use up to 1910. In these tables the figures for each cause in the old list are shown for each of the last 15 years, the series being uninterrupted by the adoption in 1911 of the International List. The method by which this result is secured is described in the "Manual" above referred to (pages vi and xxvi–xxxi).

General Diseases.

1. **Enteric Fever.**—The deaths of 1,388 persons (viz., 1,254 civilians and 134 non-civilians) of all ages and of both sexes were classified to enteric fever during 1915. The lowest number heretofore recorded was 1,505 in 1913, but it must be remembered that in 1915 a large number of males of the ages at which this disease causes most deaths were absent from the country.

The civil deaths correspond to a rate of 35 per million civil population.

5. **Small-pox.**—Thirteen deaths (all of civilians) were attributed to this disease, being nine more than in 1914. Of these persons four adults were stated to have been vaccinated in infancy only, while a fifth, also vaccinated in infancy, had been re-vaccinated four days before the appearance of the eruption (*i.e.*, to all intents and purposes this man was not re-vaccinated). Two others, both women, stated to have been vaccinated, one of them twice, bore no vaccination marks. The remaining six persons, of ages ranging from 19 months to 29 years, were stated to be unvaccinated.

6. **Measles.**—The deaths registered from this cause numbered 16,445 (viz., 16,336 of civilians and 109 of non-civilians). The civil deaths correspond to a death-rate of 462 per million civil population at all ages. At ages under 15 years, for which comparison is unaffected by the calculation of the rate upon civil population only, the mortality was 1,414 per million living at those ages ; and Table 12 shows that this is the highest rate recorded since 1896, and that it has only six times been exceeded in the last fifty years. This table also shows that the tendency to decline in measles mortality, which was manifesting itself a few years ago, has been arrested during the past quinquennium, in which the death-rate for children under 15 rose from 930 per million in 1906–1910 to 1,096 in 1911–1915. The distribution of the increased mortality of 1915 is shown in Table XVI. For the reason already indicated this table cannot be restricted as in former years to ages under 15. This circumstance does not, however, materially affect the regional contrasts brought out.

Table XVI.—Measles, 1915—Crude Death-Rates per Million Civil Population at All Ages.

	North.	Midlands.	South.	Wales.	England and Wales.
London	—	—	530	—	530
County Boroughs	583	524	403	389	538
Other Urban Districts	657	457	250	503	488
Rural Districts	540	219	128	182	262
All areas	602	413	369	374	462

It will be seen that, as is generally the case, London records a high mortality, but this rate, though higher than that for every class of area in the Midlands, South, and Wales, is exceeded by every class of area, including even the rural districts, in the North. The mortality of the North of England was greater than that of any of the other three sections of the country in each of the years 1913–1915, but it is quite exceptional for the rural districts of the North to exceed the mortality recorded for London, and for every other section of the other portions of the country, as has happened in 1915. The table of deaths in each quarter of the year (page 240) shows that the excess of measles mortality was concentrated on the first two quarters, in the second of which it rose for the whole country to double the average of the previous ten years. In the third quarter the mortality was little over, and in the fourth well below the ten years' average for those quarters. In London the deaths in the first quarter were slightly more numerous than those in the second, but in other classes of area the brunt of the epidemic fell upon the second quarter, the difference increasing regularly from county boroughs to rural districts. It would seem, therefore, that the spread was mainly from town to country, and that the epidemic had exhausted itself by the summer.

Table 13 shows that the three administrative counties recording the highest death-rates were all situated in the North of England—Durham, Northumberland, and Cumberland, in the order named. Next to these comes another mining county, Monmouthshire, which recorded the highest mortality in 1914. As might be expected from Table XVI, comparison of the county boroughs does not show the same predominance in mortality for the great towns of the North. The highest rate of all, 1,798 per million living at all ages, is that for West Bromwich. Next comes Middlesbrough with 1,754, followed by Northampton, Merthyr Tydfil, Darlington, and Wolverhampton, in the order named.

7. **Scarlet Fever.**—The deaths allocated to this disease during 1915 numbered 2,406 (viz., 2,318 of civilians and 88 of non-civilians). The civil deaths were equal to a rate of 66 per million civil population at all ages, and of 183 per million at ages under 15 years. These rates correspond very closely to the average rates in the four years 1911–1914 and compare most favourably with the rates prevalent prior to 1910. Table 12 shows to what a remarkable extent mortality from this disease has declined during the last 50 years.

Table 13 shows the distribution of scarlet fever mortality by administrative counties and county boroughs. The counties yielding the highest rates were Durham, Carmarthenshire, and Northumberland, in the order named. The same three counties headed the list in 1914, and Durham has returned a mortality above the average for the counties in each of the last five years. The towns yielding the highest rates were Warrington, Wigan, Ipswich, Preston, and Carlisle in the order named ; and of these Preston has returned rates above the average for the county boroughs in each of the last five, and Warrington in each of the last four years. Preston returned the highest rate in 1912, 1913, and 1914. This tendency to persistently high mortality year after year in the same locality may be compared with the same tendency in the case of enteric fever and contrasted with the behaviour of measles and whooping cough, which seldom furnish high rates of mortality for three consecutive years in the same locality.

8. **Whooping Cough.**—The deaths allocated to this heading numbered 8,143—3,694 of males and 4,449 of females. All these deaths occurred among the civil population.

The corresponding rates of mortality are 230 per million living at all ages, and 708 at ages under 15 years. Reference to the last column of Table 12 will show that the latter rate, which is unaffected by the exclusion of non-civilian deaths and population, is a very low one, appreciably lower rates having been only twice recorded, in 1909 and in 1913.

The greater concentration of mortality from this cause on early infancy in the rural districts which has been noted in previous reports can be traced for 1915 only within the first year of life owing to the difficulty in estimating district populations at different ages. Here, however, it is sufficiently apparent, as from the figures recorded in Table 15 it may be seen that the proportion of the whole mortality of the first year of life sustained by the first six months rose from 34·5 per cent. in London to 48·3 in the Rural Districts.

The administrative counties returning the highest mortality are shown by Table 13 to be Glamorganshire, Northumberland, the North Riding of Yorkshire and Monmouthshire. The large towns with highest rates were Wigan, Merthyr Tydfil and Bootle.

All of these seven counties and county boroughs except Glamorganshire and Merthyr Tydfil had a mortality from whooping cough in 1914 below that of the country as a whole. On the other hand, four of the eight administrative counties and county boroughs having the highest mortality in 1914 had a mortality in 1915 below the same standard.

9. **Diphtheria and Croup.**—The deaths in 1915 classed to diphtheria and croup numbered 5,895 (viz., 5,878 of civilians and 17 of non-civilians) all but 39 (of civilians) being allocated to diphtheria. The deaths of civilians were equal to a rate of 166 per million civil population at all ages. The deaths under 15 years of age correspond to a mortality of 494 per million living at the same ages. These rates are about the same as in 1914, when the mortality was heavier than in any of the previous five years (Table 12).

From Table 13 it appears that the administrative counties with highest mortality were Bedfordshire, Northamptonshire (which occupied the first and second places also in 1914), Rutlandshire, Flintshire and Durham. The county boroughs of highest mortality were Northampton, Stoke on Trent, Canterbury, Middlesbrough and St. Helens. Of these the administrative county of Durham and the county boroughs of Northampton and Stoke on Trent had a mortality exceeding that of England and Wales in each of the last five years. These facts confirm the point emphasised in previous Reports that, in this tendency to recurrence of high rates of mortality in successive years in the same area, diphtheria resembles enteric fever and scarlet fever and differs from measles and whooping cough.

10. **Influenza.**—The deaths allocated to this disease during the year numbered 10,484 (viz., 10,363 of civilians and 121 of non-civilians). The deaths of civilians were equal to a rate of 293 per million civil population. This is the highest rate yet recorded for the present century, but is far below the level attained in several years of the last decade of the previous one.

20c. **Vaccinia.**—Five deaths have been assigned to this cause, one of them being that of a soldier from anti-typhoid inoculation. Until 1911 it was the practice to class to this heading not only deaths returned as due to vaccinia, but all in the case of which vaccination appeared to have been in any way connected with the cause of death. In 1911 and subsequent years, however, the general rule with regard to erysipelas, blood poisoning, &c., following slight injury (Manual, page xxxiii, 4 (*e*)), has been followed in the case of vaccination, with the result that in 1915 the deaths of six persons, two of them soldiers, which in former years would have been assigned to effects of vaccination, appear under other headings. The causes to which they have been assigned are as follows :—Erysipelas (1 death), septicæmia (4 deaths), and phlegmon (1 death).

28–35. **Tuberculosis.**—The deaths assigned to tuberculous affections in the aggregate numbered 54,295, or 3,997 more than those so classified in the previous year. Of these 733 were deaths of non-civilians. The mortality amongst the civil population amounted to 1,515 per million, a figure in excess of the total mortality recorded for any year since 1909 (Table 10). We have to go back to the same year also to find a total number of deaths as large as that registered in 1915, notwithstanding the absence from the country in the latter year of a large number of males on military service.

It is to be observed, however, that the mortality of males in early adult life is n normal years very little above the average for all ages, and that as the section of the population withdrawn had been subjected to medical examination presumably few men left the country who would have died from tubercle during the year had they remained in it. For these reasons, which are borne out by examination of the death-rates at military ages in Table XVII, it seems probable that the civilian death-rate, which alone can be stated for 1915, is considerably higher than the total death-rate would have been in the absence of any extraordinary withdrawal of a section of the population. Tables 9 and 10 would seem to indicate that when all due allowances have been made 1915 compares unfavourably with any year since 1911, but that its record is better than that of any year previous to 1910. The increase over 1914 in tuberculosis mortality has been the same as that in mortality generally, for in both years tubercle has accounted for 9·7 per cent. of the total deaths.

TABLE XVII.—ENGLAND AND WALES: MORTALITY from TUBERCULOSIS (ALL FORMS) per MILLION POPULATION, 1906–10, 1911–14, and 1915.*

—	Males.			Females.			Persons.		
	1906–10.	1911–14.	1915 (Civilians only.)	1906–10.	1911–14.	1915.	1906–10.	1911–14.	1915 (Civilians only).
All Ages { Crude ...	1,798	1,594	1,851	1,350	1,194	1,237	1,566	1,388	1,515
All Ages { Standardized.	1,781	1,571	1,888	1,353	1,195	1,237	1,556	1,373	1,546
0–	2,832	2,145	2,053	2,379	1,784	1,703	2,606	1,966	1,879
5–	611	577	616	697	596	610	654	586	613
10–	460	443	529	702	693	749	581	568	639
15–	980	948	1,332	1,245	1,225	1,387	1,114	1,087	1,364
20–	1,665	1,505	2,659	1,401	1,343	1,372	1,526	1,419	1,793
25–	2,041	1,801	2,453	1,587	1,402	1,426	1,803	1,592	1,828
35–	2,441	2,246	2,698	1,574	1,430	1,524	1,992	1,823	2,061
45–	2,728	2,445	2,547	1,362	1,218	1,298	2,018	1,807	1,906
55–	2,496	2,298	2,273	1,140	1,033	1,042	1,778	1,630	1,644
65–	1,683	1,464	1,411	883	792	814	1,237	1,090	1,078
75–	695	652	638	546	487	552	607	554	587
85 and upwards	327	272	85	214	245	256	255	255	195

* The method of estimating the population in 1915 differs from that used for 1911–14. (*See* page ix.)

Table XVII shows as the result of enlistment similar disturbances of male death-rates at military ages to those already pointed out in regard to mortality from all causes on page xvii, but the resulting effects upon standardization are different, in fact for males they are exactly reversed, as will be seen on comparison of Tables IX and XVII. The increases or decreases in the crude rate effected by standardization may be compared as follows :—

—	Males.		Females.		Persons.	
	All causes.	Tubercle.	All causes.	Tubercle.	All causes.	Tubercle.
1911–1914 ...	+	–	–	=	–	–
1915	–	+	–	=	–	+

The total male population under peace conditions, though slightly more favourably constituted than the standard so far as mortality from all causes is concerned, was slightly less so in regard to tubercle, these differences being compensated by increase on standardization in the former case and decrease in the latter. In 1915, however, *a*, the loss of males from the civilian population at ages at which mortality from all causes is much below average increased the crude death-rate to an extent which can be allowed for by decrease on standardization, the standarized rate being, therefore, unaffected ; and, *b*, the

artificially inflated mortality of the men remaining at these ages (owing to selection of the healthiest lives for military service) further increased the crude death-rate, but in a way which is not allowed for by standardization. In fact the effect of *b* upon the standardized rate is greater than on the crude, the numbers at the ages concerned being reduced in the actual (war civilian) but not in the standard (peace) population, and therefore *b* tends towards increase on standardization, therein antagonizing *a* in the case under consideration, that of mortality from all causes. In this case *a* is much the most important factor, and the net result is decrease on standardization; but in the case of tubercle, the average mortality from which at military ages appears from Table XVII to be normally much the same as at all ages (it is impossible to speak more precisely without exact knowledge of the numbers and ages of men serving), the effect of factor *a* is uncertain, but can only be slight in the direction either of increase or decrease in 1915. Factor *b* is, therefore, the deciding one, and accordingly leads to increase on standardization.

The mortality of females from any or all causes is naturally affected the same way by standardization in 1915 as in any other year; and the effect upon that of persons is compounded of that on males and on females, the greater outweighing the lesser effect where the two are opposed.

Comparison of the rates for males at other than military ages and for females at all ages gives a measure of the relative position of tubercle mortality in 1915 and previous years. It will be seen that these rates in 1915 are for the most part slightly higher than those in 1911–1914, but lower than in 1906–10.

This general tendency to increase over the average of the preceding four years is not shared in by the rates for children under five years, the rapid decline of which has been such a notable feature of the history of tuberculosis in England since the commencement of the century. They are, however, higher than in 1914. The death-rate at 0–5 is still the highest at any age for females, though by a rapidly diminishing margin. The table shows that the corresponding death-rate for males which was the highest at any age in 1906–10, had ceased to be so by 1911–14.

Comparison of the mortalities of the two sexes at the ages of military service and at all ages jointly is, of course, disturbed in the same way and for the same reason as in the case of mortality from all causes, dealt with on page xviii. Notwithstanding the great increase caused by the war in the mortality recorded for males aged 15–20 this figure still remains below the corresponding rate for females.

The mortality in each administrative county and county borough from tuberculosis of all forms and from phthisis is stated in Table 13. These, however, are uncorrected for peculiarities of sex and age distribution. Comparison of crude rates without such correction is probably more fallacious than usual owing to the disturbance of population distribution by the war, but it follows from the extent of these disturbances that the factors for correction by which the Medical Officer of the Local Government Board has been enabled to publish standardized rates for these localities from the year 1911 onwards are no longer applicable.

28 and 29. **Phthisis.**—These headings in the international list of causes of death now in use include acute miliary tuberculosis in addition to the deaths so classified prior to 1911. The addition from this cause in 1915 amounts to 873 deaths, and the total contents of the headings to 41,676 deaths, of which 25,807 were returned as pulmonary tuberculosis, 11,874 as "phthisis," and the remainder as acute forms of the disease. In comparison with those for 1914 these numbers show a continuance of the transfer from the less to the more definite form of return. The 41,676 deaths form 77 per cent. of the total deaths allocated to tuberculosis, the mortality amongst civilians amounting to 1,161 per million living, or 7·4 per cent. of the death-rate from all causes.

Deaths of non-civilians numbered 626 (page 258) of which 361 were certified as due to pulmonary tuberculosis, 115 to phthisis not otherwise defined, 130 to acute phthisis, and 20 to acute miliary tuberculosis.

Table XVIII shows that as in the case of tuberculosis in general, phthisis mortality was higher than the average for the four preceding years in most sex- and age-groups for which comparison is not spoiled as a consequence of enlistment. For females mortality has increased at all ages over 10 years, and for males there is an increase in boyhood but a decrease in old age, as compared with the average of the preceding four years.

The comparison with 1914 alone yields almost identical results, for the table brings out the fact that the rates for that year were practically identical with those for 1911–

1914. The rate of phthisis mortality, which has been falling for many years, reached the lowest level hitherto attained in 1913, and both 1914 and 1915, so far as the latter year can be judged, have shown increases.

TABLE XVIII.—ENGLAND AND WALES: MORTALITY from PHTHISIS (28 and 29) per MILLION POPULATION, 1911–14, 1914, and 1915.*

	Males.			Females.			Persons.		
	1911–14.	1914.	1915. (Civilians only).	1911–14.	1914.	1915.	1911–14.	1914.	1915 (Civilians only).
All Ages { Crude ...	1,222	1,220	1,438	882	882	932	1,046	1,045	1,161
All Ages { Standardized.	1,191	1,188	1,487	863	862	912	1,018	1,016	1,185
0—	346	325	357	306	271	294	326	298	325
5—	146	137	176	197	200	196	171	169	186
10—	190	208	236	424	443	473	307	325	355
15—	740	764	1,030	1,008	1,011	1,155	875	889	1,103
20—	1,342	1,338	2,367	1,198	1,208	1,229	1,266	1,269	1,601
25—	1,667	1,621	2,277	1,282	1,253	1,317	1,465	1,428	1,693
35—	2,116	2,144	2,561	1,315	1,322	1,405	1,701	1,719	1,933
45—	2,307	2,352	2,421	1,109	1,160	1,192	1,684	1,732	1,791
55—	2,144	2,144	2,135	903	887	929	1,489	1,480	1,519
65—	1,324	1,246	1,258	661	640	706	955	908	950
75—	545	564	471	361	413	384	436	474	419
85 and upwards	206	86	85	156	142	163	174	122	135

* The method of estimating the population in 1915 differs from that used for 1911–14. (*See* page ix.)

30. **Tuberculous Meningitis.**—In considering the total deaths classified under this head the effects of withdrawal of males of military age from the population are almost negligible, as nearly all the deaths occur before this age is reached. Their number, which had fallen to a minimum, 4,667, in 1914, increased to 5,329 in 1915, the increase being shared about equally by males and females. This figure is the highest recorded in Table 9 since 1910.

The deaths in 1914 and 1915 compare age by age as follows:—

	All Ages.	0–	1–	2–	3–	4–	5–	10–	15–	20–	25–
1914	4,667	866	793	489	349	327	866	422	231	89	235
1915	5,329	888	992	621	422	318	974	474	260	121	259

It is very difficult even to surmise why the mortality should show this considerable increase at almost all ages. Even remembering that the figures for 1914 were particularly low it is difficult to avoid associating an increase in mortality quite without parallel in recent years with the fact of the country being at war. The scarcity of medical men could not well affect the matter except by way of diminished prevention of meningeal infection, since we must admit that, once the condition is set up, treatment is almost hopeless.

There is another manner, however, in which it is conceivable that the demands of the Army upon the medical profession may have affected the returns of deaths from this as from other causes of death in 1915. The men withdrawn from civil practice must have come mainly from the younger ranks of the profession, so it follows that the deaths of 1915 have been certified by men older in years, and presumably therefore, to some extent, also in ideas, than those certifying in 1914. It would be strange if the death certificates of the older practitioners, taken as a class, did not depart less from the certification practice of the past than those of the younger men, and therefore, if the decline in mortality attributed to meningeal tubercle has been in any degree attributable to a change in the practice of certification, and not wholly to an actual fall in the mortality due to the disease, it is only natural that the special circumstances of the year should have involved a certain throw-back to earlier conditions. This indirect influence

of the war upon the mortality records of 1915 is not put forward in this instance as more than a possibility to be borne in mind, but it is a possibility which may be worth some consideration in other instances than that of tuberculous meningitis, though it must be admitted that the figures appearing in Table 9 against such titles as tabes mesenterica, croup, and convulsions lend no support to the hypothesis.*

This latter fact is interesting as indicating that changes in nomenclature and the abandonment of names of symptoms as statements of the cause of death seem to affect the older practitioners in common with the younger, but it does not follow that this also holds good of the less easily measured changes in the diagnostic interpretation of symptoms which doubtless also occur.

There was no increased privation in 1915 which could account for the increase, and although the employment of women had doubtless increased it seems unlikely that it had done so to an extent involving any appreciable increase in neglect of young children. On the other hand it has been stated that such increase of neglect did occur as a result of increase of drinking habits on the part of some women.

The severe measles epidemic of the spring naturally suggests itself as possibly a contributory cause, but this is not supported by reference to the Annual Report for 1911, in which deaths certified as due to tuberculous meningitis following measles are separately tabulated. They amounted to 32 in all, but of course there may have been many other cases where the origin of the tubercle in an attack of measles was not recorded. Measles moreover could not account for an increase applying to all ages, and would presumably have involved a corresponding increase in mortality from the other forms of tubercle chiefly affecting young children, which has not occurred, the increases under heading 31–35 being small compared with that under 30.

Deaths of Belgian and other refugee children have been far too few to affect the matter appreciably. Eight Belgian refugee children died of tuberculous meningitis, three of tuberculous peritonitis, and four of other forms of non-pulmonary tubercle.

Whatever the cause of the increase may be it probably applies also in part at least to the increased mortality from tubercle generally. There was no corresponding increase in mortality from non-tuberculous meningitis.

31. **Tuberculosis of Peritoneum and Intestines.**—There is no such increase to account for under this heading as from tuberculous meningitis, the deaths so classified amounting to 3,457 in 1914—the smallest number recorded except 3,246 in 1912—and 3,615 in 1915. The decline in mortality from this form of tubercle shown in Tables 9 and 10 is much more rapid than that from meningeal infection.

32–35. **Tubercle of the Spine, of the Joints, of other organs, and Disseminated Tubercle.**—These forms of the disease jointly accounted for 3,675 deaths as against 3,537 in 1914, and of these 2,057 were assigned to disseminated tubercle against 1,979 in 1914, and 1,618 to the other forms of the disease, as against 1,558. As it is unlikely that any appreciable number of men were enlisted who would have died during the year from these causes had they remained civilians, the figures for the two years may be taken as comparable, and it will be seen that the increase is of the order of that for tuberculous peritonitis rather than of tuberculous meningitis, *i.e.*, allowing for increase of population, very slight.

39–45. **Cancer.**—The deaths ascribed to cancer during 1915 numbered 39,847, of which 25,855 were referred to carcinoma, 2,214 to sarcoma, and 11,778 to "cancer," not otherwise defined.

The disturbance of continuity in the death-rates recorded for males and for persons by their necessary limitation to the civilian population is so great that comparison with previous years is best made for females. The crude male death-rate shows a large increase owing to the exclusion from the population of a large number of men furnishing very few deaths from cancer. The slight increase of 272 in deaths of females (Table 9) was less in proportion than the estimated increase in the number living, so the female death-rate shows a minute fall. The fact that the death-rates of males were lower than in 1914 at all the ages chiefly concerned except 75–80 suggests that a more substantial fall would have been recorded for males if peace conditions had prevailed. The rates for the two years are not, however, fully comparable, owing to changes in the methods used for estimating the populations (page ix). The deaths of non-civilians registered in this country numbered only 209, of which 108 were of men over 40 years of age (page 258). It is

* On the other hand the proportion of cases of malignant disease returned simply as cancer shows a slight increase.

probable, therefore, that of the young selected lives in the army abroad very few indeed would have been lost from cancer and that the increase over 1914 of 58 deaths in the *total* male population (Table 9) would have been little larger under peace conditions, and if so the crude death-rate, for males as well as females, would have been lower than in 1914. The standardized rate is lower than that of either 1913 or 1914 on the basis of the estimates of their populations now in use. For the first time since 1907 there would appear to have been an interruption in 1915 of the steady yearly increase of cancer mortality (*see* page 20).

TABLE XIX.—ENGLAND AND WALES: MORTALITY from CANCER per MILLION POPULATION, 1906–10, 1911–14, 1914, and 1915.*

	Males.				Females.				Persons.			
	1906–10.	1911–14.	1914.	1915 (Civilians only).	1906–10.	1911–14.	1914.	1915.	1906–10.	1911–14.	1914.	1915 (Civilians only).
All Ages { Crude...	819	934	971	1,076	1,052	1,134	1,161	1,158	939	1,037	1,069	1,121
All Ages { Standardized.	814	915	952	921	944	995	1,018	1,015	882	955	985	969
0—	24	25	24	24	20	20	21	17	22	22	23	20
15—	45	44	42	63	34	35	32	32	40	39	37	44
25—	113	111	104	129	164	156	160	147	140	135	133	140
35—	422	280	285	311	822	564	546	575	629	427	420	459
40—		634	655	607		1,137	1,172	1,136		895	923	885
45—	1,589	1,286	1,278	1,204	2,282	1,914	1,862	1,934	1,949	1,612	1,581	1,582
50—		2,267	2,347	2,205		2,862	2,981	2,977		2,577	2,677	2,598
55—	4,051	3,700	3,790	3,621	4,432	4,011	4,064	4,088	4,253	3,863	3,933	3,858
60—		5,598	5,782	5,414		5,338	5,551	5,536		5,459	5,659	5,447
65—	6,967	7,282	7,819	7,417	6,753	6,562	6,739	6,648	6,848	6,889	7,229	6,997
70—		9,197	9,824	9,346		8,300	8,355	8,591		8,684	8,984	8,914
75—	8,345	10,038	10,558	10,861	8,318	9,541	9,924	9,854	8,329	9,745	10,185	10,268
80—		9,174	9,814	9,772		9,242	9,989	9,538		9,215	9,921	9,629
85 and upwards	7,928	8,380	8,995	8,116	7,603	9,303	10,641	8,805	7,720	8,975	10,057	8,560

* The method of estimating the population in 1915 differs from that used for 1911–14. (*See* page ix.)

The parts of the body affected by fatal cancer in 1915 are shown in Tables XX and XXI in greater detail than that provided by the International classification, five out of its seven headings (Nos. 39–45) relating to cancer being subdivided according to a scheme approved by the Director of the Cancer Research Fund, at whose request also deaths returned from institutions are separately tabulated.

The proportion of deaths returned from institutions differs greatly in the case of different organs. As usual it is greatest in the case of brain cancer, and least in the case of cancers of the breast and liver.

A few only of the most important sites have been selected for incorporation in Table XXII, which shows the rates of mortality at different ages from cancer of certain organs, and in Tables XXIII and XXIV, which compare the returns of deaths at various ages in private houses with those occurring in institutions. The age distributions shown in Table XXII are very similar to those tabulated in previous reports, the same characteristic differences between the ages at which the largest proportions of deaths occur from disease of the various organs reappearing year after year.

The object of the separate tabulation of institutional deaths in Tables XX, XXI, XXIII and XXIV is to compare the experience of institutions, where presumably the details of the cause of death have as a rule been confirmed by *post mortem* examination, with the certification of other deaths from cancer in the case of which such facilities are, as a rule, lacking.

It cannot be assumed, however, that the institutional deaths are a fair sample of the whole. That they are subject to some selection by age is shown by the fact that the average age at death is lower in institutions than elsewhere. The proportion under the age of 65 in institutions amounts to 66·5 per cent. for males and 70·0 per cent. for females, as against 54·4 per cent. for males and 57·5 per cent. for females in the case of deaths occurring in private houses; and in both sexes more deaths occur at 55–65 than at any other period in institutional practice, but in private practice the period 65–75 furnishes the largest number of deaths (Table XXIV). Moreover, it is very possible

Table XX.—England and Wales, 1915.—Sites of Fatal Cancer—Males.*

		All Ages.	0–	5–	15–	25–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80–	85–
	All Deaths.																
	Total	17,421	75	61	164	317	366	691	1,205	1,870	2,462	2,883	2,822	2,301	1,439	573	192
39	Lip	240	—	—	—	1	2	2	10	17	19	28	36	42	37	29	17
	Tongue	926	1	—	—	5	7	37	74	142	155	165	146	104	60	25	5
	Mouth	444	—	2	3	4	7	13	31	72	80	75	63	51	22	18	3
	Jaw	500	1	4	2	2	11	21	38	75	75	71	88	54	40	13	5
	Pharynx	225	—	2	7	2	2	8	22	23	36	38	43	28	9	4	1
40	Œsophagus	1,208	—	—	1	5	9	42	88	156	213	224	210	134	88	29	9
	Stomach	3,644	—	—	3	39	70	149	288	404	515	623	638	523	267	100	25
	Liver and gall bladder	1,837	9	3	7	26	32	52	134	189	266	321	305	260	154	64	15
	Mesentery and peritoneum ...	100	4	—	3	12	6	1	7	13	14	11	13	12	1	3	—
41	Intestines	1,861	—	1	15	31	53	82	103	162	242	323	335	254	178	60	22
	Rectum	1,854	1	—	10	35	37	80	104	166	251	300	324	272	188	62	24
43	Breast	34	—	—	—	—	2	2	4	3	4	1	7	5	1	4	1
44	Skin...	611	2	—	1	7	15	22	34	40	67	81	66	99	98	48	31
	Larynx	441	1	—	1	5	6	21	35	68	73	83	72	48	17	10	1
	Lung and pleura	258	—	3	12	20	18	19	20	32	34	38	28	21	8	3	2
	Pancreas	327	—	1	2	7	10	22	24	47	54	46	46	39	21	5	3
	Kidneys and suprarenal glands ...	182	29	7	4	9	8	8	15	13	26	25	18	11	5	4	—
	Bladder	539	—	2	2	4	5	15	24	53	57	94	98	92	58	24	11
	Prostate	513	—	1	1	2	—	3	10	14	48	86	105	119	87	29	8
5	Testes	94	2	1	8	27	6	11	5	5	7	7	5	2	6	2	—
	Brain	41	1	5	5	6	6	2	6	2	3	2	—	2	1	—	—
	Bones (jaw excepted)	285	8	15	35	22	15	16	22	21	29	32	32	19	10	7	2
	Other specified organs	585	10	13	27	25	28	43	48	76	87	81	61	42	31	10	3
	Abdominal cavity, organ unspecified.	119	1	—	4	3	4	2	8	7	17	27	18	11	12	4	1
	Other and undefined	553	5	1	11	18	7	18	51	70	90	101	65	57	40	16	3
	Deaths in Institutions.																
	Total	5,093	33	24	75	153	165	264	441	636	731	863	774	501	284	105	44
9	Lip	79	—	—	—	1	1	1	5	6	4	11	17	13	7	6	7
	Tongue	386	1	—	—	1	3	17	34	58	73	77	56	39	20	7	—
	Mouth	173	—	1	3	1	1	5	14	35	26	32	29	12	8	5	1
	Jaw	183	1	1	2	—	4	5	16	36	25	27	25	19	15	4	3
	Pharynx	79	—	1	2	—	1	2	8	10	13	12	17	7	4	2	—
40	Œsophagus	398	—	—	1	1	4	20	38	60	79	66	69	36	17	4	3
	Stomach	882	—	—	2	21	35	57	105	120	123	152	137	75	34	16	5
	Liver and gall bladder	333	2	—	2	8	9	17	31	36	42	65	58	41	17	5	—
	Mesentery and peritoneum ...	35	1	—	3	7	1	—	3	5	3	9	2	1	—	—	—
41	Intestines	563	—	—	10	16	22	39	41	64	84	110	90	48	31	6	2
	Rectum	493	1	—	4	15	21	24	29	63	68	87	78	68	23	8	4
43	Breast	13	—	—	—	—	2	1	2	1	2	1	1	—	1	1	1
44	Skin...	230	—	—	—	2	7	12	17	14	31	27	25	31	35	18	11
	Larynx	154	—	—	—	4	4	6	15	22	30	29	19	16	6	3	—
	Lung and pleura	77	—	2	9	13	12	7	4	6	5	7	6	3	2	1	—
	Pancreas	127	—	1	2	6	6	10	14	17	20	17	19	7	8	—	—
	Kidneys and suprarenal glands ...	58	14	2	3	5	2	3	5	6	7	5	3	2	1	—	—
	Bladder	148	—	—	—	3	2	7	8	14	17	29	29	21	13	4	1
	Prostate	147	—	1	—	1	—	2	2	2	16	33	33	25	21	8	3
45	Testes	20	2	—	2	6	2	1	—	3	1	2	—	1	—	—	—
	Brain	27	—	3	5	4	3	2	6	—	1	1	—	2	—	—	—
	Bones (jaw excepted)	84	5	6	12	11	2	5	7	6	7	5	11	3	2	—	2
	Other specified organs	196	2	6	8	17	18	13	18	23	22	23	18	15	9	3	1
	Abdominal cavity, organ unspecified.	23	1	—	1	1	2	—	1	1	1	8	3	2	—	2	—
	Other and undefined	185	3	—	4	9	1	8	18	28	31	28	29	14	10	2	—

* Including deaths of non-civilians.

that there may be greater relative frequency of cancer of certain sites amongst that section of the population which chiefly furnishes the deaths reported from institutions. The tables, however, are of interest as showing, in institutional and private practice respectively, the chance of cancer at any given age in either sex affecting any particular organ (Table XXIII); and the chance of a cancer of any organ occurring at any given age (Table XXIV). The principal features in these tables also recur with regularity from year to year.

Table XXI.—England and Wales, 1915.—Sites of Fatal Cancer—Females.

		All Ages.	0–	5–	15–	25–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80–	85–
	All Deaths.																
	Total...	22,426	48	51	112	479	809	1,367	2,010	2,583	2,850	3,125	3,047	2,828	1,869	870	378
39	Lip	12	—	—	—	—	—	—	1	1	1	—	2	1	2	1	3
	Tongue	108	—	—	1	3	7	4	9	6	15	13	15	13	10	9	3
	Mouth	68	—	—	—	2	4	3	3	4	12	7	10	8	9	3	3
	Jaw	165	1	2	4	4	2	13	9	12	24	36	26	16	10	3	3
	Pharynx	56	—	2	—	1	4	1	6	10	10	5	2	8	4	1	2
40	Œsophagus	371	—	—	1	14	30	36	39	43	33	48	45	36	26	10	10
	Stomach	3,420	—	—	4	52	72	128	219	333	466	540	540	532	343	145	46
	Liver and gall bladder	2,690	5	4	5	18	38	90	152	265	342	438	476	433	270	111	43
	Mesentery and peritoneum ...	280	2	—	3	11	10	22	29	33	40	37	29	24	20	16	4
41	Intestines	2,519	—	4	9	37	52	87	129	228	306	359	410	422	276	146	54
	Rectum	1,402	—	1	5	34	29	59	89	137	158	220	215	220	152	64	19
	Ovary and fallopian tube ...	562	—	3	9	25	37	72	88	91	69	53	57	37	15	6	—
42	Uterus	3,899	—	—	5	105	237	389	545	585	562	506	410	309	165	58	23
	Vagina and vulva	306	2	—	—	8	7	11	26	25	28	46	51	42	33	18	9
43	Breast	3,920	—	—	—	80	181	310	467	540	484	479	419	407	272	185	96
44	Skin	392	2	—	4	4	5	12	18	23	24	49	56	57	73	36	29
	Larynx	111	—	—	1	7	7	12	18	15	17	15	7	9	2	—	1
	Lung and pleura...	168	1	1	4	4	10	13	24	16	19	26	26	14	8	2	—
	Pancreas	303	—	—	4	3	8	15	19	43	43	48	47	38	26	8	1
	Kidneys and suprarenal glands...	155	10	5	—	5	6	11	16	13	19	26	18	16	7	1	2
	Bladder	223	—	1	—	2	4	6	13	20	25	29	33	50	28	11	1
45	Brain	47	1	2	1	4	8	4	6	10	6	4	—	—	—	1	—
	Bones (jaw excepted)	286	6	14	35	14	13	11	22	25	29	23	27	32	20	10	5
	Other specified organs	401	14	9	10	21	20	25	25	49	45	53	50	33	29	10	8
	Abdominal cavity, organ unspecified.	296	3	2	2	7	8	17	16	32	43	35	36	51	31	7	6
	Other and undefined	266	1	1	5	14	10	16	22	24	30	30	40	20	38	8	7
	Deaths in Institutions.																
	Total...	4,361	17	8	44	173	225	383	477	577	550	595	523	403	236	105	45
39	Lip	3	—	—	—	—	—	—	—	—	—	—	1	1	—	1	—
	Tongue	24	—	—	—	1	3	—	—	1	3	3	6	3	2	2	—
	Mouth	11	—	—	—	1	—	—	—	1	2	2	1	3	—	—	1
	Jaw	52	—	1	—	1	1	2	3	3	5	14	11	6	4	—	1
	Pharynx	13	—	—	—	1	2	—	1	4	1	1	—	2	1	—	—
40	Œsophagus	67	—	—	1	7	5	9	12	3	5	9	9	3	3	1	—
	Stomach	495	—	—	1	18	23	40	46	71	72	72	56	50	33	9	4
	Liver and gall bladder	312	3	—	1	6	11	21	29	38	33	47	48	35	22	12	6
	Mesentery and peritoneum ...	73	—	—	2	5	2	11	10	11	12	11	4	—	2	3	—
41	Intestines	577	—	2	5	12	22	39	47	78	76	98	89	56	36	13	4
	Rectum	319	—	1	2	16	12	18	25	37	39	56	45	37	23	6	2
	Ovary and fallopian tube ...	162	—	1	5	12	9	20	30	32	20	13	13	7	—	—	—
42	Uterus	915	—	—	2	36	69	118	140	131	133	107	82	65	18	9	5
	Vagina and vulva	78	—	—	—	3	1	5	6	5	7	12	16	10	7	5	1
43	Breast	691	—	—	—	21	34	54	77	98	79	83	78	74	43	35	15
44	Skin	98	1	—	2	2	2	4	3	7	5	15	13	14	19	5	6
	Larynx	18	—	—	1	2	2	3	3	2	2	1	2	—	—	—	—
	Lung and pleura...	24	—	—	1	1	3	5	5	2	2	2	2	—	1	—	—
	Pancreas	67	—	—	3	1	2	5	4	12	11	8	9	9	3	—	—
	Kidneys and suprarenal glands...	46	4	—	—	2	3	4	8	5	3	9	5	3	—	—	—
	Bladder	41	—	—	—	1	—	1	3	7	7	7	7	7	1	—	—
45	Brain	18	—	—	—	2	4	2	3	3	3	1	—	—	—	—	—
	Bones (jaw excepted)	72	2	1	11	6	3	6	3	6	7	4	8	6	7	2	—
	Other specified organs	79	4	1	4	8	8	9	6	10	10	10	2	3	2	2	—
	Abdominal cavity, organ unspecified.	50	3	—	1	4	1	5	6	6	9	4	4	5	2	—	—
	Other and undefined	56	—	1	2	4	3	2	7	4	4	6	12	4	7	—	—

46. **Other Tumours (situation undefined).**—This title includes only tumours not ascertained to be malignant, and (excepting only tumours of the pituitary body, for which there is no appropriate local heading) of which the situation either cannot be ascertained or is of an ill-defined nature. Other benign tumours, *i.e.*, those returned as affecting the various organs, are classified in the International List under the organ concerned; but in order to secure a comprehensive presentation of all deaths attributed to tumours, all those not returned as due to cancer are assembled in Table XXV from

TABLE XXII.—ENGLAND AND WALES, 1915.—MORTALITY PER MILLION CIVIL POPULATION AT SEVERAL AGES FROM CANCER OF VARIOUS PARTS OF THE BODY.

Part of Body affected.		All Ages.	0—	25—	35—	40—	45—	50—	55—	60—	65—	70—	75—	80—	85—
Tongue	M.	58	0	2	6	34	73	168	229	311	384	422	453	426	211
	F.	6	0	1	5	3	9	7	22	23	33	39	53	99	70
Œsophagus	M.	74	—	2	8	38	83	180	313	418	552	544	664	495	380
	F.	19	0	4	21	30	38	50	47	85	98	109	137	110	233
Stomach	M.	225	0	14	60	128	287	476	756	1,169	1,678	2,124	2,015	1,705	1,057
	F.	177	0	16	51	106	211	384	668	957	1,178	1,616	1,808	1,590	1,072
Liver & gall bladder.	M.	114	2	11	27	44	134	224	390	604	799	1,056	1,162	1,091	634
	F.	139	2	6	27	75	146	305	491	776	1,039	1,315	1,424	1,217	1,002
Intestines	M.	115	1	13	43	71	105	190	355	606	881	1,032	1,343	1,023	930
	F.	130	1	11	37	72	124	263	439	636	895	1,282	1,455	1,601	1,258
Rectum	M.	115	1	15	33	73	105	197	369	565	852	1,105	1,419	1,057	1,014
	F.	72	1	10	21	49	86	158	227	390	469	668	801	702	443
Uterus	M.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	F.	201	1	32	169	323	524	674	806	896	895	939	870	636	536
Breast	M.	2	—	—	2	2	3	4	6	2	18	20	8	68	42
	F.	202	—	25	129	258	449	622	694	849	914	1,236	1,434	2,028	2,236
Skin	M.	38	0	3	13	20	35	48	99	151	174	402	740	819	1,310
	F.	20	1	1	4	10	17	27	34	87	122	173	385	395	676

TABLE XXIII.—ENGLAND AND WALES, 1915.—SITES OF FATAL CANCER: PERCENTAGE of DEATHS at VARIOUS AGES to TOTAL DEATHS from CANCER at the same AGES in the TOTAL POPULATION.

	0—		25—		35—		45—		55—		65—		75—		85—		All Ages.	
	Instn.	Private.	Instn.	Private.	Instn.	Private.	Instn.	Private.	Instn.	Private.	Instn.	Private.	Instn.	Private.	Instn.	Private.	Instn.	Private.
MALES.																		
Tongue	0·8	—	0·7	2·4	4·7	3·8	8·5	6·2	9·4	4·5	7·5	4·0	6·9	3·6	—	3·4	7·6	4·4
Œsophagus	0·8	—	0·7	2·4	5·6	4·3	9·1	7·3	9·1	7·8	8·2	6·2	5·4	5·9	6·8	4·1	7·8	6·6
Stomach	1·5	0·6	13·7	11·0	21·4	20·2	20·9	23·4	17·3	23·0	16·6	24·7	12·9	19·5	11·4	13·5	17·3	22·4
Liver and gall bladder.	3·0	8·9	5·2	11·0	6·1	9·2	6·2	12·8	6·7	12·8	7·8	12·1	5·7	12·1	—	10·1	6·5	12·2
Intestines	7·6	3·6	10·5	9·1	14·2	11·8	9·7	8·0	12·2	9·9	10·8	11·7	9·5	12·4	4·5	13·5	11·1	10·5
Rectum	3·8	3·6	9·8	12·2	10·5	11·5	8·5	8·9	9·7	10·6	11·5	11·7	8·0	13·5	9·1	13·5	9·7	11·0
Skin	—	1·8	1·3	3·0	4·4	2·9	2·9	2·2	3·6	2·4	4·4	2·8	13·6	5·7	25·0	13·5	4·5	3·1
Other organs	82·5	81·5	58·1	48·9	33·1	36·3	34·2	31·2	32·0	29·0	33·2	26·8	38·0	27·3	43·2	28·4	35·5	29·8
All sites	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0
FEMALES.																		
Œsophagus	1·4	—	4·0	2·3	2·3	3·3	1·4	1·9	1·2	1·4	1·3	1·4	1·2	1·3	—	3·0	1·5	1·7
Stomach	1·4	2·1	10·4	11·1	10·4	8·7	11·1	12·3	12·6	17·8	11·4	19·5	12·3	18·6	8·9	12·6	11·4	16·2
Liver and gall bladder.	5·8	7·0	3·5	3·9	5·3	6·1	6·4	9·9	7·0	14·5	9·0	16·7	10·0	14·5	13·3	11·1	7·2	13·2
Intestines	10·1	4·2	6·9	8·2	10·0	5·0	11·9	6·6	15·2	10·2	15·7	13·9	14·4	15·6	8·9	15·0	13·2	10·8
Rectum	4·3	2·1	9·2	5·9	4·9	3·7	5·9	4·6	8·3	5·9	8·9	7·1	8·5	7·8	4·4	5·1	7·3	6·0
Uterus	2·9	2·1	20·8	22·6	30 8	28·0	25·7	24·3	21·0	17·1	15·9	11·6	7·9	8·2	11·1	5·4	21·0	16·5
Breast	—	—	12·1	19·3	14·5	25·7	16·6	23·5	14·1	16·6	16·4	13·6	22·9	15·8	33·3	24·3	15·8	17·9
Skin	4·3	2·1	1·2	0·7	1·0	0·7	0·9	0·9	1·7	1·1	2·9	1·7	7·0	3·5	13·3	6·9	2·2	1·6
Other organs	69·8	80·4	31·9	26·0	20·8	18·8	20·1	16·0	18·9	15·4	18·5	14·5	15·8	14·7	6·8	16·6	20·4	16·1
All sites	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0

TABLE XXIV. — ENGLAND AND WALES, 1915.—SITES OF FATAL CANCER: PERCENTAGE OF DEATHS AT VARIOUS AGES TO DEATHS FROM CANCER OF THE SAME SITE AT ALL AGES in the TOTAL POPULATION.

		0—	25—	35—	45—	55—	65—	75—	85—	All Ages.
MALES.										
Tongue	Instn.	0·3	0·3	5·2	23·8	38·8	24·6	7·0	—	100·0
	Private	—	0·7	4·4	23·0	31·6	28·7	10·7	0·9	100·0
Œsophagus	Instn.	0·3	0·3	6·0	24·6	36·3	26·4	5·3	0·8	100·0
	Private	—	0·5	3·3	18·0	36·1	29·5	11·9	0·7	100·0
Stomach	Instn.	0·2	2·4	10·4	25·5	31·2	24·0	5·7	0·6	100·0
	Private	0·0	0·7	4·6	16·9	31·2	34·4	11·5	0·7	100·0
Liver and gall bladder	Instn.	1·2	2·4	7·8	20·1	32·2	29·7	6·6	—	100·0
	Private	1·0	1·2	3·9	17·0	31·9	31·0	13·0	1·0	100·0
Intestines	Instn.	1·8	2·8	10·8	18·6	34·5	24·5	6·6	0·4	100·0
	Private	0·5	1·2	5·7	12·3	28·6	34·7	15·5	1·5	100·0
Rectum	Instn.	1·0	3·0	9·1	18·7	31·5	29·6	6·3	0·8	100·0
	Private	0·4	1·5	5·3	13·1	29·1	33·0	16·1	1·5	100·0
Skin	Instn.	—	0·9	8·3	13·5	25·2	24·3	23·0	4·8	100·0
	Private	0·8	1·3	4·7	11·3	23·6	28·7	24·4	5·2	100·0
Other organs	Instn.	6·0	4·9	7·9	20·3	28·1	23·5	8·2	1·1	100·0
	Private	3·7	2·2	6·2	17·0	29·7	28·0	12·1	1·1	100·0
All sites	Instn.	2·6	3·0	8·4	21·1	31·4	25·0	7·6	0·9	100·0
	Private	1·4	1·3	5·1	16·2	30·4	31·2	13·2	1·2	100·0
FEMALES.										
Œsophagus	Instn.	1·5	10·4	20·9	22·4	20·9	17·9	6·0	—	100·0
	Private	—	2·3	17·1	22·1	22·0	22·7	10·5	3·3	100·0
Stomach	Instn.	0·2	3·6	12·7	23·6	29·2	21·4	8·5	0·8	100·0
	Private	0·1	1·2	4·7	14·9	29·5	33·0	15·2	1·4	100·0
Liver and gall bladder	Instn.	1·3	1·9	10·3	21·5	25·6	26·6	10·9	1·9	100·0
	Private	0·4	0·5	4·0	14·7	29·4	34·8	14·6	1·6	100·0
Intestines	Instn.	1·2	2·1	10·6	21·7	30·1	25·1	8·5	0·7	100·0
	Private	0·3	1·3	4·0	11·9	25·3	35·4	19·2	2·6	100·0
Rectum	Instn.	0·9	5·0	9·4	19·4	29·9	25·7	9·1	0·6	100·0
	Private	0·3	1·7	5·4	15·1	26·1	32·5	17·3	1·6	100·0
Uterus	Instn.	0·2	3·9	20·4	29·7	26·2	16·1	3·0	0·5	100·0
	Private	0·1	2·3	14·7	28·7	27·8	19·2	6·6	0·6	100·0
Breast	Instn.	—	3·0	12·7	25·4	23·4	22·0	11·3	2·2	100·0
	Private	—	1·8	12·5	25·8	24·8	20·9	11·7	2·5	100·0
Skin	Instn.	3·1	2·0	6·1	10·2	20·4	27·6	24·5	6·1	100·0
	Private	1·0	0·7	3·7	10·5	18·0	29·4	28·9	7·8	100·0
Other organs	Instn.	5·4	6·2	14·3	23·9	24·4	19·4	6·1	0·3	100·0
	Private	3·9	2·7	10·0	19·4	25·6	24·5	12·1	1·8	100·0
All sites	Instn.	1·6	4·0	13·9	24·2	26·3	21·2	7·8	1·0	100·0
	Private	0·8	1·7	8·7	19·6	26·7	27·4	13·3	1·8	100·0

the various headings to which that list of causes of death allocates them. It will be convenient, therefore, to deal here not only with tumours of undefined situation (46) but with all other tumours not returned as malignant.

Table XXV.—England and Wales, 1915.—Tumours not returned as Malignant.

Part affected.		All Ages.		0—		15—		35—		45—		55—		65—		75—	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Tumours classed with other disease of organ affected.																	
74C. Cerebral tumour...	Cyst	6	6	—	—	4	2	—	1	—	1	2	1	—	1	—	—
	Glioma	53	30	12	5	14	10	13	5	7	7	5	3	1	—	1	—
	Other benign ...	8	5	2	1	1	—	—	1	2	1	2	—	1	1	—	1
	Nature unstated ...	441	460	62	56	105	117	89	102	91	103	67	52	21	25	6	5
	Total (74C) ...	508	501	76	62	124	129	102	109	100	112	76	56	23	27	7	6
129. Uterine tumour ...	Fibroid	—	253	—	—	—	14	—	76	—	85	—	26	—	29	—	23
	Fibro-cystic ...	—	3	—	—	—	—	—	1	—	—	—	—	—	2	—	—
	Fibro-myoma ...	—	34	—	—	—	—	—	12	—	15	—	2	—	4	—	1
	Myoma	—	15	—	—	—	4	—	3	—	4	—	1	—	2	—	1
	Polypus	—	7	—	—	—	—	—	3	—	2	—	—	—	—	—	2
	Non-malignant ...	—	3	—	—	—	—	—	—	—	2	—	1	—	—	—	—
	Nature unstated ...	—	13	—	—	—	1	—	3	—	3	—	2	—	3	—	1
	Total (129)... ...	—	328	—	—	—	19	—	98	—	111	—	32	—	40	—	28
131. Ovarian tumour ...	Cyst	—	213	—	1	—	32	—	34	—	44	—	42	—	43	—	17
	Fibro-cystic ...	—	3	—	—	—	1	—	—	—	1	—	—	—	1	—	—
	Papilloma	—	5	—	—	—	1	—	1	—	1	—	2	—	—	—	—
	Non-malignant ...	—	12	—	—	—	3	—	2	—	3	—	2	—	2	—	—
	Nature unstated ...	—	67	—	—	—	4	—	9	—	13	—	14	—	14	—	13
	Total (131)... ...	—	300	—	1	—	41	—	46	—	62	—	60	—	60	—	30
In 63. Spinal cord ...	Glioma	2	2	—	—	—	1	1	—	—	—	—	1	1	—	—	—
	Cyst	2	1	—	—	—	—	2	—	—	1	—	—	—	—	—	—
	Myeloma	—	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—
	Nature unstated ...	10	4	—	—	2	—	1	1	2	—	4	2	1	1	—	—
,, 86. Nose	Polypus	2	4	—	—	2	1	—	—	—	2	—	—	—	—	—	1
,, 87. Larynx ...	Papilloma	4	2	4	2	—	—	—	—	—	—	—	—	—	—	—	—
	Other benign ...	1	2	—	—	—	1	—	—	—	—	—	1	1	—	—	—
	Nature unstated ...	1	4	—	—	—	1	—	2	—	—	1	1	—	—	—	—
,, 88. Thyroid ...	Adenoma	2	5	—	1	1	—	—	—	—	—	—	2	1	1	—	1
	Cystic-adenoma ...	—	2	—	—	—	—	—	1	—	1	—	—	—	—	—	—
	Fibro-adenoma ...	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
	Fibroid	—	1	—	—	—	—	—	—	—	—	—	—	—	1	—	—
	Nature unstated ...	2	3	—	1	1	—	—	—	1	1	—	1	—	—	—	—
,, 98. Lung	Nature unstated ...	9	6	1	—	1	—	—	—	2	2	4	—	1	4	—	—
,, 101. Œsophagus ...	Non-malignant ...	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—
	Nature unstated ...	3	3	—	—	—	—	—	2	1	1	1	—	1	—	—	—
,, 110. Intestine ...	Papilloma	2	2	—	—	—	—	—	1	—	—	—	—	2	—	—	1
	Other benign ...	6	3	1	—	1	—	—	—	—	—	—	1	4	—	—	2
	Nature unstated ...	14	20	—	—	1	1	—	1	1	1	5	2	4	6	3	9
,, 115. Liver	Non-malignant ...	—	3	—	—	—	—	—	—	—	1	—	—	—	1	—	1
	Nature unstated ...	8	8	—	—	2	1	—	—	5	2	1	—	—	4	—	1
,, 118. Pancreas ...	Cyst	2	4	—	—	—	1	1	—	—	1	—	1	1	1	—	—
	Nature unstated ...	2	3	—	—	—	2	—	—	1	1	1	—	—	—	—	—
,, 122. Kidney ...	Cyst	2	2	—	—	2	—	—	—	—	—	—	2	—	—	—	—
	Other benign ...	1	1	—	—	—	—	—	—	1	1	—	—	—	—	—	—
	Nature unstated ...	4	7	1	—	1	1	—	1	—	—	1	—	1	2	—	3
,, 124. Bladder ...	Papilloma or villous	81	23	1	—	—	—	2	3	7	2	25	4	26	5	20	9
	Other benign ...	3	1	—	—	—	—	—	—	—	—	1	1	1	—	1	—
	Nature unstated ...	15	5	1	—	—	1	3	—	—	—	2	—	4	2	5	2
,, 126. Prostate ...	Adenoma	52	—	—	—	—	—	—	—	3	—	11	—	20	—	18	—
	Non-malignant ...	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
	Nature unstated ...	4	—	—	—	—	—	—	—	1	—	1	—	—	—	2	—
,, 132. Broad ligament	Cyst	—	3	—	—	—	—	—	1	—	1	—	1	—	—	—	—
	Other benign ...	—	2	—	—	—	—	—	—	—	1	—	1	—	—	—	—
Other sites ...	Non-malignant ...	12	13	2	2	2	2	—	3	5	1	2	1	1	1	—	3
	Nature unstated ...	11	13	2	1	—	2	—	—	4	1	2	4	2	1	1	4
	Total	259	154	13	7	16	16	10	16	34	22	64	26	72	30	50	37
Tumours not classed with other disease of organ or part of body affected.																	
46. Pituitary body ...	Non-malignant ...	3	2	—	—	1	—	1	1	—	—	1	—	—	—	—	1
	Nature unstated ...	2	3	—	—	—	1	1	—	1	1	—	1	—	—	—	—
Mediastinum ...	Non-malignant ...	—	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—
	Nature unstated ...	45	34	1	1	4	2	6	6	9	7	13	8	11	7	1	3
Abdomen	Non-malignant ...	—	5	—	—	—	—	—	—	—	1	—	1	—	1	—	2
	Nature unstated ...	17	40	—	1	—	5	—	—	2	10	3	9	5	9	7	6
Other ill-defined sites	Non-malignant ...	5	17	1	3	—	2	—	—	—	3	1	3	1	2	2	4
	Nature unstated ...	11	5	1	—	1	1	2	—	2	1	1	3	2	—	2	—
Site not stated ...	Angioma	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—
	Cyst	2	2	1	—	—	—	—	1	—	—	—	—	1	1	—	—
	Non-malignant ...	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—
	Nature unstated ...	2	4	—	—	1	1	—	1	1	—	—	—	—	—	—	2
	Total (46)	87	115	4	5	7	13	10	9	15	25	19	25	20	20	12	18
Total, all tumours ...		854	1398	93	75	147	218	122	278	149	332	159	199	115	177	69	119
,, benign tumours ...		253	696	24	15	28	77	20	150	25	185	52	100	62	99	42	70
,, nature unstated ...		601	702	69	60	119	141	102	128	124	147	107	99	53	78	27	49

The table includes 2,252 deaths, of which 949 were returned as due to tumours of non-malignant nature, and 1,303 as due to tumours the nature of which could not be ascertained. It will be seen that even if all the latter could be assumed to have been malignant the mortality from cancer would be increased by only a little over 3 per cent. Of these 1,303 cases of undetermined nature no less than 901 were cerebral tumours. Inquiries made in previous years concerning these having established the fact that in the majority of cases, even in institutional practice, where "cerebral tumour" is returned as the cause of death no further information can be furnished, inquiry was limited in 1915 to those cases where the death certificate recorded that a *post mortem* examination had been made. This fact largely accounts for the increase of deaths under this heading from 754 in 1914 to 901 in 1915, the number of cases as to which additional information was obtained having fallen from 144 to 22 (Table XXXII).

The age-distribution of the deaths from tumour of unstated nature is sufficient in itself to show that a great many of them were non-malignant, for it does not at all resemble that of cancer mortality. A large proportion of the deaths, especially of those from cerebral tumour, occur before middle age, so it seems probable that these latter at least include a fair proportion of tuberculous cases, as more than half the deaths returned from tuberculous brain tumour occur at ages under 20 years (Annual Report for 1912, page 589). About half the deaths from cerebral syphilis are at ages under 45 (*Ib.*, page 608).

While the mortality from tumours of doubtful nature does not differ greatly in the two sexes, growths of known non-malignant nature caused the deaths of nearly three times as many females as males. This is due to the comparatively large number of deaths from uterine and ovarian tumour in Table XXV. Apart from these two organs the male mortality considerably exceeds the female, as a result of the comparative frequency among males of fatal non-malignant tumours of the bladder and prostate.

56. **Alcoholism.**—This heading in the International List of causes of death excludes organic disease attributed to alcoholism, therein differing from the "alcoholism, delirium tremens" of the list in use prior to 1911. The effect of the change may be gathered from comparison of the number of deaths (497) from alcoholism in the new list on page 144 with that (1,551) of deaths referred to the same heading in the old list in Table 9.

Although exact comparison with previous years cannot be made owing to the restriction of the death-rates in Table 10 to civilians, it may be inferred from this table that a satisfactory drop in mortality from alcoholism occurred in 1915, the death-rate, which had risen in 1913 and 1914 above the low level of the three years 1910–1912, returning to about its former level. This is certainly true of the death-rate of females, for which comparison is unaffected by war conditions; and as about three-quarters of the deaths occur above military age and very few at the ages from which the Army in 1915 had been mainly drawn, it must be substantially true also of males.

In order that the change in classification referred to above might not lessen the information afforded with regard to mortality from over indulgence in alcohol, all the death certificates in which any mention of alcohol appears have been assembled in Table XXVI.

It will be seen that these deaths make up a total of 1,772, or only 221 in excess of the 1,551 referable to the old heading, the difference being accounted for mainly by causes of death formerly selected in preference to alcoholism when recorded in conjunction with it.

The contents of Table XXVI are on the whole very much what might have been expected from the general medical experience of the connexion of intemperance with disease, cirrhosis of the liver, lobar pneumonia in males and neuritis in females being the diseases most frequently associated with alcoholism on death certificates.

TABLE XXVI.—ENGLAND AND WALES, 1915.—DEATHS from or CONNECTED with ALCOHOLISM.

—	All Ages.		Under 25.		25—		35—		45—		55—		65—		75—	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Deaths attributed directly to alcoholism ...	293	204	2	1	36	18	71	62	88	72	66	33	27	17	3	1
Deaths of which alcoholism was recorded as a secondary cause :																
10. Influenza	8	5	—	—	1	—	2	2	2	3	2	—	1	—	—	—
18. Erysipelas	3	1	—	—	1	—	—	1	—	—	1	—	1	—	—	—
20. Pyæmia, Septicæmia	2	—	—	—	—	—	1	—	—	—	1	—	—	—	—	—
28, 29. Phthisis	16	14	—	—	2	3	4	4	6	5	3	2	1	—	—	—
37, 38. Venereal diseases	2	1	—	—	—	—	1	1	—	—	1	—	—	—	—	—
39–45. Cancer	5	2	—	—	1	—	—	—	1	1	1	1	1	—	1	—
47. Rheumatic fever	4	—	—	—	—	—	3	—	1	—	—	—	—	—	—	—
Other general diseases	11	2	—	—	—	—	4	1	3	1	2	—	2	—	—	—
60. Encephalitis	3	1	—	—	—	—	2	—	—	1	1	—	—	—	—	—
61. Meningitis	2	2	1	—	—	—	—	1	1	—	—	1	—	—	—	—
64. Cerebral hæmorrhage, apoplexy ...	33	30	—	—	1	1	6	6	10	12	16	8	—	3	—	—
65. Softening of brain	4	7	—	—	—	—	—	2	—	3	1	2	2	—	1	—
67 { General paralysis of the insane / Alcoholic paralysis ... ... }	11	6	—	—	—	—	1	2	3	2	2	1	5	1	—	—
69. Epilepsy	12	7	—	—	4	—	4	3	2	2	2	2	—	—	—	—
73B. Neuritis	23	49	—	1	1	2	4	18	11	16	4	9	3	3	—	—
Other nervous diseases	5	6	—	—	1	1	—	—	1	1	1	2	2	1	—	1
78. Acute endocarditis	4	—	1	—	—	—	3	—	—	—	—	—	—	—	—	—
79A. Valvular disease of the heart ...	15	10	—	—	1	—	4	2	4	3	4	2	2	2	—	1
79B. Fatty degeneration of the heart ...	18	31	—	—	3	1	3	12	7	6	2	11	3	1	—	—
79C. Other organic disease of the heart ...	38	32	—	—	1	2	5	8	12	12	14	8	5	2	1	—
81. Disease of the arteries, atheroma, aneurysm, &c.	10	6	—	—	—	—	—	1	4	2	4	2	2	1	—	—
Other diseases of circulatory system	5	3	—	—	—	—	3	1	2	—	—	—	—	2	—	—
89, 90. Bronchitis	29	15	—	—	2	1	6	1	11	9	10	1	—	2	—	1
91. Broncho-pneumonia	6	5	—	—	1	—	2	2	2	1	1	1	—	—	—	1
92A. Lobar pneumonia	86	26	—	—	10	4	32	11	30	8	11	3	3	—	—	—
93. Pleurisy	6	3	—	—	2	—	2	2	2	—	—	1	—	—	—	—
Other diseases of respiratory system	8	3	1	—	—	—	1	—	2	—	3	2	1	1	—	—
103. Other diseases of the stomach ...	19	18	—	—	1	2	3	3	11	6	2	6	2	—	—	1
104, 105. Diarrhœa and enteritis	5	9	—	—	—	—	1	1	2	6	2	2	—	—	—	—
113B. Cirrhosis of liver	160	161	—	—	11	8	31	41	45	59	54	37	17	13	2	3
Other diseases of digestive system ...	9	1	—	—	—	—	3	—	4	—	1	—	1	1	—	—
120. Bright's disease	31	26	—	—	2	1	7	10	9	9	9	5	3	—	1	1
Other diseases of bladder	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
127. Non-venereal diseases of male genital organs.	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
134–141. Abortion, Childbirth, &c.	—	2	—	—	—	1	—	1	—	—	—	—	—	—	—	—
142. Gangrene	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
144A. Phlegmon	3	—	—	—	2	—	—	—	—	—	1	—	—	—	—	—
145A. Ulcer, bedsore	—	1	—	—	—	—	—	—	—	—	—	—	—	1	—	—
155–186. Violence	135	56	2	—	23	8	34	17	38	14	23	12	11	2	4	3
Total	1027	745	7	2	107	53	243	216	314	254	248	154	95	53	13	13

Poliomyelitis.—Deaths from poliomyelitis and polioencephalitis are included under title 63, "other diseases of the spinal cord." So much interest, however, attaches to this disease at the present time that it seems desirable to state its mortality separately.

Including the encephalic form the total number of deaths registered was 178, of which six (three of males and three of females) were, under the rules for classification, allocated to some other cause of death mentioned on the certificate. The sex- and age-distribution was as follows :—

—	All Ages.	Under 1 month.	1—3 months.	3—6 months.	6—12 months.	1—	2—	3—	4—	5—	10—	15—	20—	25—	35—	45—	55—	65—
Males ...	87	2	3	2	10	18	3	6	3	19	6	5	3	2	3	—	1	1
Females ...	91	—	—	5	9	11	7	9	6	13	13	5	3	4	1	3	2	—

The proportion of deaths occurring under five years of age was 53 per cent., and under 20 years 87 per cent.

The number of cases notified was 517, so that the fatality experienced was 34 deaths per 100 cases notified.

61A. **Cerebro-spinal Fever.**—The deaths allocated to this cause numbered 1,974, the highest numbers previously recorded since 1876, when the disease was first distinguished in these reports, having been 194 in 1914, 163 in 1913, and 161 in 1907. Previous to 1905 the number of deaths recorded never reached 100, but comparison with the records of years previous to 1901 is vitiated by the fact that from that date onwards inquiries regarding deaths certified as due to "cerebro-spinal meningitis" have added considerably to the number classed to cerebro-spinal fever, the increase brought about in this way in 1915 being 487 (Table XXXII). It is unfortunate that orders relating to the compulsory notification of the disease, etc., should have given official sanction to the loose use of the general term cerebro-spinal meningitis, which is of course applicable to inflammation of the parts concerned from any cause, as implying inflammation of one specific origin, meningococcal infection. This use of the term is not sanctioned by the Nomenclature of the Royal College of Physicians, and that it is not universal amongst certifying practitioners is shown by the fact that of deaths so certified in 1915 31 were ascertained not to be due to cerebro-spinal fever, 13 of them being from tubercle (Table XXXII).

An additional difficulty in instituting comparisons with the mortality of former years arises from the fact that it is probable that in this as in other countries many fatal cases of the disease may not have been recognised as such. Mistakes in regard to its diagnosis are even now of frequent occurrence, the features of the disease being variable and often puzzling in nature, so that it is not unlikely that sporadic cases are still liable to be returned under other headings.

But while the official returns of cases and of deaths alike must for these reasons be interpreted with great caution, we are probably justified by the facts above recited in assuming that the first outbreak on a considerable scale in England within recent years of this very fatal disease was experienced in 1915. Other countries however have not shared this immunity. About the year 1905 heavy mortality was recorded in Prussia and in New York ; and, to come nearer home, an outbreak in Scotland and Ireland caused 1,732 deaths in the former country and 631 in the latter in 1907, the cities of Glasgow and Belfast suffering with especial severity. These figures correspond to a mortality of 372 per million population in Scotland, and of 144 in Ireland, as against 39 per million for the civilian population of England and Wales in 1915.

The distribution of the disease throughout the country was very unequal, its incidence upon London and the South of England generally having been very much heavier than upon the North. The civilian mortality in the South was 80 per million as against 35 in the Midlands, 25 in Wales, and 12 only in the North. The fact that the malady has been compulsorily notifiable since 1912 makes it possible to give the following figures for the various classes of areas, showing the fatality of the disease as well as the mortality caused by it. It is probable that a certain number of cases of posterior basal meningitis may be included in the notifications. The London practitioners were advised that such cases should be notified as "cerebro-spinal meningitis," but elsewhere no rule appears to have been laid down upon this point. In the tabular statement the figures first given refer to cerebro-spinal fever alone, and those in brackets to posterior basal meningitis as well (61A and B). Moreover, the need for caution in interpreting the official returns in view of the unsatisfactory means of diagnosis which has been pointed out must be borne in mind, especially in regard to numbers of cases notified. On investigation some are found to have been notified more than once and others not to be cases of cerebro-spinal fever ; while a number of the milder cases, in which perhaps the cerebral symptoms may not be very pronounced, probably escape notification altogether. Still, taking them for what they may be worth, the official figures yield the following results for the civilian population :—

—	Mortality per Million Civilian Population.	Fatality per Cent. of Cases.
London	74 (83)	51 (58)
County Boroughs	32 (40)	53 (67)
Urban Districts	36 (41)	54 (61)
Rural Districts	34 (38)	56 (63)
England and Wales	39 (45)	53 (62)

The mortality in London was not, it will be seen, quite so high as in the South of England generally, and the fatality, very consistently high throughout, though less

than has been recorded in some other outbreaks, was a trifle lower in London than in other classes of area. There is nothing however in the figures to indicate that the greater facilities for treatment possessed by the large towns have had any appreciable effect upon the mortality.

Notwithstanding the depletion of the male civilian population, there were 742 deaths of male civilians as against 627 of females. Males in our records have as a rule suffered most. The age distribution of the civilian deaths differs from that of the preceding years (*see* Annual Report for 1913, page lxix) in that the proportion of adult deaths is greater. Deaths over 20 years of age amounted to 24 per cent. of the whole for males and 30 per cent. for females as against 17 and 18 per cent. respectively in 1911–1913. Mortality remains appreciable until old age is attained, when it practically ceases.

Three quarters of the deaths of civilians occurred during the first half of the year, and almost half during its second quarter. This is in accord with the usual experience that the disease is most fatal in the early part of the year, though during the preceding four years, for which the information is available, this characteristic is not apparent in the English figures.

The mortality amongst the troops occurred earlier in the year than that in the civilian population, 49 as against 27 per cent. of the total deaths occurring in the first quarter. This fact of course supports the supposition that the disease spread from the military to the civilian population. The fatality rate amongst the troops was 53 per cent., the same rate as amongst civilians, so it would seem that the case mortality is about the same for adults as for children.

61B. **Posterior Basal Meningitis.**—As this disease appears now to be regarded merely as a sporadic form of meningococcal cerebro-spinal meningitis occurring in young children, it may be doubted whether its distinction from cerebro-spinal fever should be continued after the next revision of the list of causes of death. Under our present rules of assignment however it is probable that a few deaths are allocated to this heading which should be classed to 61C.

In order to test this point particulars as to the exact form of certification have been taken out with regard to 141 out of the 169 deaths so classified in 1913 for which the information happened to be conveniently available. These included all the deaths at ages over five years, which are those to which most suspicion naturally attaches. The result may be tabulated as follows :—

———	All ages.	0—	1—	5—	20—
Posterior basal meningitis	75	39	17	15	4
Post-basal ,, ...	8	4	4	—	—
Posterior basic ,, ...	26	13	6	4	3
Post-basic ,, ...	21	13	6	—	2
Basal and acute basal meningitis	7	—	—	6	1
Basic and acute basic ,, ...	4	—	1	2	1
Total	141	69	34	27	11

It will be seen that under all forms of certification containing the word "posterior" or "post" at least half the deaths occurred during the first year of life, but that none of the eleven deaths returned as due to basal or basic meningitis occurred at this age. It seems clear therefore that these latter forms of returns should be included under 61C—**Meningitis—other forms**, and the annual figures for 61B discounted by some 8 per cent. or so on this account. In four out of these eleven cases in fact there is evidence that the certifying practitioner cannot have considered the infection to be meningococcal.

In addition to these 11 deaths a certain amount of suspicion must attach to the nine deaths of adults from posterior basal meningitis and the three other forms of return which may be accepted as of equivalent significance, and possibly also to the 19 such deaths of children over the age of five. It seems not improbable that in some such cases the words posterior basal may be used merely to indicate the seat of inflammation without any implication as to its origin. Even so, however, there seems no reason to doubt that the great bulk of the deaths returned under this heading should be regarded as due to the disease known in the "Nomenclature" as posterior basal meningitis.

If we may take it that three quarters or more of the deaths allocated to 61B should be regarded as of meningococcal origin, the deaths due to this organism are in non-epidemic years at least twice as numerous as those returned under cerebro-spinal fever. During the four non-epidemic years for which we have the information, 1911–14, 633 deaths were referred to 61A and 839 to 61B; the latter being the more numerous in all classes of urban, but not in the rural areas. It follows therefore that even if as many as a quarter of the deaths allocated to 61B are not to be regarded as due to meningococcal infection the remainder are equal in number to those allocated to 61A.

During the epidemic year of 1915 the case was, however, quite otherwise. Contrary to what might, perhaps, have been expected no significant increase in mortality from posterior basal meningitis occurred, so that the deaths listed to 61B form only a small proportion of the total meningococcal mortality.

The fatality of posterior basal meningitis cannot be determined from the official records, but is probably very high. In London, where these cases are included amongst the notifications of cerebro-spinal fever, the cases notified as posterior basal meningitis are recorded for 1914. They numbered only 19 as against 31 deaths. The figures for 61A and 61B jointly are available for the last five years for London, and are as follows :—

Year.	Cases Notified.	Deaths.
1911	101	98
1912	105	64
1913	92	49
1914	73	72
1915 (civilians only)	624	361

If the London deaths from 61A alone are compared with the notifications, which in London include 61B also, as in the recent Report to the Local Government Board on cerebro-spinal fever (New Series No. 110), the fatality is of course made to appear much too low in ordinary years; and this result has been further accentuated in the reports of the medical officer of health of the County of London by accidental understatement of deaths from cerebro-spinal fever.

But even as stated above little reliance can be placed upon the figures, the inconsistence in different years of the fatality rates derivable from them being sufficient commentary upon their value. Reports of the Local Government Board and of the London County Council which record the results of investigation of notified cases help to show how this comes about. Some cases are notified twice, others not at all, the first record of the disease being that returned upon the death certificate, and a large proportion of other cases prove on investigation not to be of meningococcal origin. Doubtless this would hold good also of the deaths, to a greater or less extent, but this only forms a particular instance of the general rule that the figures in these reports represent not necessarily the diseases from which people have died but those from which they are certified to have died.

91 and 92. **Pneumonia.**—The total deaths assigned to pneumonia in its various forms numbered 48,874, 27,914 of males and 20,960 of females. These are the highest figures on our records both for males and females. The excess of male deaths is the more remarkable in view of the depletion of the male population. In the main it is independent of the military conditions to which a portion of the male population has been subjected, for there is no quinquennium of life at which more deaths of males have not occurred than in 1914, both from broncho-pneumonia and from lobar and undefined pneumonia. The non-civilian deaths however (*see* page 258) appear possibly to be somewhat high in proportion to the number of troops in the country, at all events in the case of broncho-pneumonia, but in the absence of any precise knowledge of what that number amounted to it is impossible to speak definitely on this point. If some excess of mortality did occur amongst the military population—and it cannot have been great—this is little to be wondered at in view of the circumstances inevitably attaching to military training in the earlier stages of the war.

The main feature of the year's record however is the heavy mortality amongst civilians. Even amongst males of military age the civilian deaths in 1915 did not fall far short of the total deaths in 1914, notwithstanding the large withdrawals to military service.

The best means of comparing the mortality of 1915 with that of former years is afforded by the death-rate of females, which was higher for pneumonia as a whole than in any year since 1909, though it had been exceeded in four previous years from 1901 onwards (Table 10). Previous to 1901 the records from 1875 onwards show a rate exceeding that for 1915 in 1891 only. For broncho-pneumonia the death-rate of females in 1915 is the highest recorded since 1901, when the forms of the disease were first distinguished in our records, except in 1907 ; while that from lobar and undefined pneumonia is the highest since 1909, but was exceeded in that and previous years except 1901 and 1908.

The mortality shown for males in 1915 is raised by its restriction to civilians, but very much more so in the case of broncho- than of lobar and undefined pneumonia. When allowance is made for this the death-rate for males from pneumonia as a whole is found to have been higher in 1915 than in any of the previous 40 years except 1890 and 1891, the time of the great influenza invasion, and 1900, 1902, and possibly one or two other years. As has already been pointed out, there was a considerable recrudescence of influenza mortality in 1915.

To sum the matter up, there was a serious increase in pneumonia mortality above the rates prevalent during the five preceding years, but in the twenty years previous to these the rates of 1915 had been several times exceeded. The increase is common to both sexes and all ages, and applies to all forms of pneumonia. Its distribution throughout the country is illustrated in Table XXVII, but in reading this it must be borne in mind that the rates given for 1915 are raised by restriction to the civil population to an extent which may be estimated at about 3 per cent. Comparison between different sections of the population is not, of course, appreciably affected by this consideration, and as standardization for variations in sex- and age-constitution of the populations compared alters pneumonia death-rates but little, the crude rates in the table may be accepted as giving a fair indication of the distribution of pneumonia mortality.

TABLE XXVII.—PNEUMONIA (ALL FORMS), 1913–1915.—CRUDE DEATH-RATES per MILLION POPULATION (CIVILIAN POPULATION and DEATHS in 1915).

—		North.	Midlands.	South.	Wales.	England and Wales.
London	1913 ...	—	—	1,281	—	1,281
	1914 ...	—	—	1,240	—	1,240
	1915 ...	—	—	1,655	—	1,655
County Boroughs	1913 ...	1,483	1,054	822	1,026	1,260
	1914 ...	1,634	1,222	878	1,422	1,415
	1915 ...	1,800	1,367	1,180	1,494	1,588
Other Urban Districts	1913 ...	1,186	810	621	1,055	923
	1914 ...	1,128	824	730	1,223	946
	1915 ...	1,404	1,154	1,012	1,627	1,256
Rural Districts	1913 ...	946	620	541	883	697
	1914 ...	901	662	590	901	720
	1915 ...	1,138	940	857	1,070	976
All areas	1913 ...	1,305	831	917	992	1,025
	1914 ...	1,359	903	941	1,155	1,084
	1915 ...	1,578	1,165	1,286	1,416	1,356

It will be seen that in each of the three years dealt with in the table mortality, except in the case of London, where it was fairly high, decreased from North to South in all classes of area, the position of Wales being generally intermediate between that of the North and Midlands. The excess of the northern over the southern rates is however less in 1915 than in previous years, the increase of mortality, which is common to all areas, having been greater in the South than in the North. This increase is everywhere much too great to be accounted for by the restriction of the 1915 rates to the civilian population. As in previous years there is a steady and considerable decrease in mortality with decreasing urbanization. Standardization to some extent accentuates these differences, slightly increasing the urban and decreasing the rural mortality. The increase over the 1914 rates was less in the county boroughs than in the smaller towns or rural districts, but was heavy in London.

Not far from half the deaths from broncho-pneumonia, as from bronchitis, occurred during the first quarter of the year (page 248). This was the heaviest quarter also for other forms of the disease but not nearly to the same extent. Measles was very prevalent at this time (*see* page xxv) and in view of the fact that 75 per cent. of the deaths from broncho-pneumonia were those of children under five years of age a considerable number of them may possibly have resulted from measles. It is to be hoped however that the propriety of mentioning measles on the death certificate in such cases is widely recognised, with the result that deaths so certified are allocated to the infectious disease. Moreover the mortality from measles was even higher during the second quarter of the year, in which that from broncho-pneumonia was very greatly reduced.

134–141. **The Puerperal State.**—The number of deaths assigned to pregnancy or childbirth was 3,408 (Table XXVIII), corresponding to a rate of 4·18 per 1,000 births. It will be seen from Table 9 that this number is 198 in excess of that assignable to these causes of death under the classification in use up to 1910 (*see* Manual of Causes of Death, pages xxvi. and xxx.). Deducting these 198 deaths, 196 of which are those allocated to puerperal nephritis and albuminuria, formerly not distinguished as puerperal, the mortality amounted to 3·94 per 1,000 births, as against an average rate of 3·80 in the ten years immediately preceding. Inclusion of the 881 deaths in Table XXIX raises the proportion to 5·27 deaths stated to have been caused by or associated with pregnancy and childbirth for every 1,000 births.

The mortality amongst women aged 15–45 years from all the causes included in Tables XXVIII and XXIX was 453 per million living, against 466 per million in 1913, and 482 in 1914. While, therefore, the mortality per 1,000 births has very slightly increased, that per million women of fertile age has decreased owing to the fall in the birth-rate.

Table XXVIII gives particulars of the deaths assigned to the puerperal state, and in the case of the headings "other accidents of pregnancy," "other accidents of childbirth," and "puerperal fever" amplifies the information on pages 160 and 161 by giving details of the causes comprised by those titles.

Table XXIX shows the causes of deaths stated to have been complicated by the existence of the puerperal state. Heart disease was the commonest of these, and after it pneumonia, tuberculosis and influenza.

TABLE XXVIII.—ENGLAND and WALES, 1915.—DEATHS of WOMEN CLASSED to PREGNANCY and CHILDBEARING.

Cause of Death.	All Ages.	Ages. 15—	20—	25—	30—	35—	40—	45 and upwards.
134A. Abortion	126	3	9	23	38	35	14	4
B. Hæmorrhage of pregnancy	91	—	5	10	19	37	16	4
C. Uncontrollable vomiting	37	2	9	12	5	7	1	1
D. Ectopic gestation	74	—	4	16	24	21	8	1
E. Other accidents of pregnancy :—								
Carneous mole	1	—	—	—	—	1	—	—
Hydatid mole	7	—	1	1	1	1	1	2
Molar pregnancy	1	—	—	—	—	1	—	—
Hydramnios	2	—	—	1	—	1	—	—
Retroversion of gravid uterus ...	11	—	3	4	2	2	—	—
Cystic degeneration of ovum ...	1	—	—	—	—	1	—	—
Pregnancy apart from above complications :—								
(*a*) With secondary causes as follows :—								
Dilatation of heart	1	—	—	—	—	—	1	—
Embolism, thrombosis ...	3	—	—	2	1	—	—	—
Pneumonia	1	—	—	—	—	1	—	—
Acute œdema of lung ...	1	—	—	—	—	1	—	—
Acute yellow atrophy of liver	2	1	1	—	—	—	—	—
Cystitis	1	—	—	—	—	1	—	—
(*b*) Without stated secondary cause	5	1	—	—	1	3	—	—
135. Placenta praevia	211	—	13	35	55	68	38	2
Other Puerperal hæmorrhage	254	4	31	38	61	72	42	6

TABLE XXVIII—*continued.*

Cause of Death.	All Ages.	Ages. 15—	20—	25—	30—	35—	40—	45 and upwards.
136. Other accidents of childbirth :—								
Contracted pelvis	35	1	3	8	12	7	4	—
Craniotomy	3	—	—	1	1	1	—	—
Cæsarean section	26	—	3	5	6	7	4	1
Version	4	—	—	2	—	1	1	—
Instrumental delivery	6	—	1	2	—	2	1	—
Rupture of uterus	38	—	2	2	13	15	6	—
Rupture of uterus and vagina ...	3	—	—	—	2	1	—	—
Rupture of perineum	1	—	1	—	—	—	—	—
Malpresentation	11	—	—	2	2	4	2	1
Inversion of uterus	9	—	4	4	—	1	—	—
Inertia of uterus	5	—	—	—	3	1	1	—
Difficult and prolonged labour ...	73	1	10	17	15	21	8	1
Childbirth apart from above complications :—								
(*a*) With secondary causes as follows :—								
Anæmia	17	1	2	7	3	2	2	—
Alcoholism	1	—	—	—	—	1	—	—
Meningitis	5	—	3	1	1	—	—	—
Cerebral effusion	1	—	—	1	—	—	—	—
Pericarditis	1	—	—	1	—	—	—	—
Acute endocarditis	1	—	—	—	—	1	—	—
Valvular disease	3	1	1	—	—	—	1	—
Dilatation of heart	4	—	1	—	—	3	—	—
Status lymphaticus	1	—	—	—	1	—	—	—
Bronchitis	16	1	3	4	2	3	3	—
Broncho-pneumonia ...	6	—	1	1	2	2	—	—
Pneumonia	52	1	5	11	13	17	5	—
Pleurisy	7	—	—	3	3	1	—	—
Congestion of lungs	3	—	—	—	—	3	—	—
Gastritis	5	—	—	2	2	—	1	—
Vomiting	3	—	—	—	1	2	—	—
Hæmatemesis	3	—	2	—	—	1	—	—
Diarrhœa and enteritis ...	8	—	1	3	2	1	—	1
Intestinal paralysis	2	—	—	1	1	—	—	—
Acute yellow atrophy of liver	1	—	—	—	1	—	—	—
Jaundice	2	—	—	1	—	1	—	—
(*b*) Without stated secondary cause	53	—	9	7	12	18	7	—
137. Puerperal fever :—								
Puerperal septicæmia	702	19*	119	181	193	127	58	5
„ streptococcal infection ...	1	—	—	—	—	1	—	—
„ bacillus coli infection ...	1	—	—	—	—	1	—	—
„ pelvic infection	1	—	—	—	1	—	—	—
„ sapræmia	35	1	5	13	8	2	5	1
„ pelvic peritonitis ...	20	—	—	7	7	6	—	—
„ peritonitis	112	4	16	34	30	22	5	1
„ salpingitis	5	—	1	1	3	—	—	—
„ metritis	19	—	2	3	6	7	1	—
„ endometritis	10	—	1	—	2	7	—	—
„ parametritis	9	—	1	2	3	2	1	—
„ perimetritis	5	—	—	1	3	1	—	—
„ erysipelas	9	—	1	3	—	5	—	—
„ pyæmia	36	—	5	12	7	9	2	1
„ pelvic cellulitis	34	3	5	10	9	6	1	—
„ pelvic abscess	10	1	4	2	2	1	—	—
„ tubal abscess	1	—	—	—	1	—	—	—
„ blood poisoning	2	—	1	—	—	1	—	—
„ fever (not otherwise described).	189	3	49	45	47	28	16	1
138A. Puerperal nephritis and uræmia ...	151	2	26	36	36	33	15	3
B. Puerperal albuminuria and Bright's disease.	45	2	5	13	9	11	4	1
C. Puerperal convulsions	430	27	104	84	89	93	31	2

* Including one aged 14 years.

TABLE XXVIII.—*continued.*

Cause of Death.	All Ages.	Ages. 15—	20—	25—	30—	35—	40—	45 and upwards.
139A. Puerperal phlegmasia alba dolens and phlebitis.	50	—	9	13	18	8	2	—
B. Puerperal embolism and sudden death	242	—	29	68	61	61	19	4
140. Puerperal insanity	34	1	1	10	7	11	3	1
141. Puerperal diseases of the breast ...	16	2	3	1	5	3	2	—
Total	3,408	82	515	767	852	816	332	44

TABLE XXIX.—ENGLAND AND WALES, 1915.—DEATHS of WOMEN not CLASSED to PREGNANCY and CHILDBEARING, but RETURNED as ASSOCIATED THEREWITH.

Enteric fever	4	—	2	—	—	1	1	—
Measles	2	—	2	—	—	—	—	—
Scarlet fever	13	1	1	6	2	3	—	—
Diphtheria	2	—	—	—	2	—	—	—
Influenza	65	1	8	20	15	13	6	2
Erysipelas	1	—	—	—	—	1	—	—
Pyæmia, septicæmia	1	—	—	—	—	1	—	—
Tetanus (bacillary)	1	—	—	1	—	—	—	—
Pulmonary tuberculosis	46	—	7	8	16	11	4	—
Phthisis (not defined as tuberculous) ...	24	—	3	7	3	9	2	—
Acute phthisis	21	1	5	6	5	3	1	—
Acute miliary tuberculosis	5	1	—	2	—	2	—	—
Tuberculous meningitis	1	—	—	—	1	—	—	—
Tuberculosis of peritoneum and intestines ...	3	—	—	—	1	2	—	—
Other forms of tubercle	2	—	—	—	1	1	—	—
Syphilis	3	—	—	1	1	1	—	—
Cancer	12	—	1	1	3	4	3	—
Rheumatic fever	19	1	3	2	8	3	2	—
Diabetes	2	—	—	1	1	—	—	—
Exophthalmic goître	4	—	1	2	1	—	—	—
Leucocythæmia, lymphadenoma	1	—	—	—	—	1	—	—
Anæmia	25	1	1	7	6	8	2	—
Purpura	7	—	3	—	2	1	1	—
Alcoholism	1	—	—	—	—	1	—	—
Encephalitis	1	—	—	1	—	—	—	—
Meningitis	1	—	1	—	—	—	—	—
Cerebro-spinal fever	2	1	—	1	—	—	—	—
Cerebral hæmorrhage, apoplexy	1	—	—	—	—	1	—	—
General paralysis of the insane	1	—	—	—	—	1	—	—
Epilepsy	12	2	1	1	6	1	1	—
Chorea	5	1	3	1	—	—	—	—
Neuritis	1	—	—	—	—	—	1	—
Cerebral tumour	1	—	—	—	1	—	—	—
Diseases of the ears	1	1	—	—	—	—	—	—
Infective endocarditis	5	—	—	2	3	—	—	—
Acute endocarditis	7	—	—	2	1	1	2	1
Valvular disease	107	—	10	26	24	27	18	2
Fatty degeneration of the heart	9	—	—	3	2	1	2	1
Other organic disease of the heart	77	—	7	13	20	20	17	—
Embolism and thrombosis	2	—	1	—	1	—	—	—
Phlebitis	1	—	—	—	—	1	—	—
Varicose veins	2	—	—	—	2	—	—	—
Laryngitis	1	—	—	—	1	—	—	—
Diseases of the thyroid body	6	—	—	1	3	1	1	—
Bronchitis	39	1	2	6	16	9	5	—
Broncho-pneumonia	19	—	4	3	6	4	2	—
Lobar pneumonia	94	4	12	21	25	18	14	—
Pneumonia (type not stated)	62	3	10	8	21	10	10	—
Pleurisy	5	—	—	—	1	2	2	—
Pulmonary apoplexy	1	—	—	1	—	—	—	—
Asthma	9	—	1	4	2	2	—	—
Pulmonary emphysema	1	—	1	—	—	—	—	—
Tonsillitis	1	—	—	—	—	1	—	—

TABLE XXIX—*continued.*

Cause of Death.	All Ages.	Ages. 15—	20—	25—	30—	35—	40—	45 and upwards.
Diseases of the pharynx	1	—	—	1	—	—	—	—
Perforating ulcer of stomach	18	—	3	4	3	5	3	—
Inflammation of stomach	6	—	1	—	2	3	—	—
Diarrhœa and enteritis	13	—	2	7	1	2	1	—
Intestinal parasites	1	—	—	1	—	—	—	—
Appendicitis	12	1	2	6	1	1	1	—
Hernia	1	—	—	—	—	—	1	—
Intestinal obstruction	6	—	1	2	2	—	1	—
Acute yellow atrophy of liver	5	—	—	1	1	1	2	—
Cirrhosis of the liver	1	—	—	—	—	—	—	1
Other diseases of the liver	3	—	1	—	1	—	1	—
Bright's disease...	41	—	6	6	9	9	8	3
Other diseases of the kidney	6	—	—	2	2	2	—	—
Calculus	1	—	—	—	1	—	—	—
Diseases of the bladder	1	—	1	—	—	—	—	—
Uterine tumour	16	—	—	1	5	6	4	—
Other diseases of uterus	1	—	—	1	—	—	—	—
Ovarian cyst	2	—	—	1	1	—	—	—
Diseases of the bones	1	—	—	—	—	—	1	—
Congenital malformation of heart	1	—	1	—	—	—	—	—
Violence	5	—	1	2	1	1	—	—
Total	881	20	109	193	233	196	120	10

Anæsthetics.—Deaths during or connected with the administration of an anæsthetic have all, from 1911 onwards, been classified to the condition for which the anæsthetic was administered. In order, however, to continue the information previously afforded as to such cases a secondary tabulation is now made of all deaths on the certificates relating to which any mention is made of the administration of an anæsthetic. These are

TABLE XXX.—ENGLAND AND WALES, 1915.—DEATHS UNDER OR CONNECTED WITH THE ADMINISTRATION OF VARIOUS ANÆSTHETICS.

Anæsthetic.		All Ages.	0–	1–	2–	3–	4–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	65–
A.C.E. Mixture	M.	6	—	—	—	—	—	1	—	1	—	—	1	—	—	—	1	2	—
	F.	*4*	—	*1*	*1*	*1*	—	—	—	—	—	*1*	—	—	—	—	—	—	—
Chloroform	M.	71	3	3	3	—	—	2	7	4	4	7	4	9	7	4	10	3	1
	F.	*31*	—	*2*	—	—	—	*4*	—	*1*	*3*	*1*	*3*	*4*	*7*	*1*	*1*	*3*	*1*
Chloroform and alcohol ...	M.	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Chloroform and ether ...	M.	14	—	1	1	—	—	—	—	—	1	—	2	3	1	—	1	1	3
	F.	*10*	—	*1*	—	*1*	—	—	—	*4*	—	—	—	*1*	—	*2*	—	*1*	—
Chloroform followed by open ether.	M.	1	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
Chloroform, ether and oxygen.	F.	*1*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*1*	—
Cocaine and chloroform ...	F.	*1*	—	—	—	—	—	—	—	—	—	—	*1*	—	—	—	—	—	—
Ether	M.	8	1	—	—	—	—	1	—	—	1	—	—	1	1	1	—	1	1
	F.	*13*	—	—	—	—	—	*3*	—	—	*2*	*1*	—	*2*	*2*	—	*2*	—	*1*
Ether and oxygen ...	M.	1	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
Ethyl chloride	F.	*1*	—	—	*1*	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ethyl chloride, ether and chloroform.	F.	*1*	—	—	—	—	—	—	—	—	—	*1*	—	—	—	—	—	—	—
Nitrous oxide	M.	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1
	F.	*2*	—	—	—	—	—	—	*1*	—	—	—	—	—	*1*	—	—	—	—
Nitrous oxide and ether ...	M.	3	—	—	—	—	—	—	—	—	1	1	—	—	—	—	1	—	—
Kind not stated	M.	55	5	2	2	2	1	4	3	3	2	4	7	2	4	6	4	2	2
	F.	*35*	*1*	*1*	—	*1*	—	*6*	*2*	*1*	*2*	*2*	—	*2*	*4*	*2*	*5*	*6*	—
Total	M.	162	9	6	6	2	1	8	10	8	9	12	14	17	13	11	18	9	9
	F.	*99*	*1*	*5*	*2*	*3*	—	*13*	*3*	*6*	*7*	*6*	*4*	*9*	*14*	*5*	*8*	*11*	*2*

classified in Table XXX according to sex and age and to the nature of anæsthetic, while the list appended to the table shows for each sex the disease or accident to which the death has been primarily classed and the age of the patient, but not the kind of anæsthetic. Causes of death in this list are numbered in International List order. The bracketed figures following them denote the exact ages of the deceased, ages of males being printed thus (3), and of females thus (*3*).

CONDITIONS FOR WHICH ANÆSTHETICS WERE ADMINISTERED IN THE ABOVE CASES.

9. Diphtheria, tracheotomy (1). **28.** Operation for injury to head (20) ; operation, nature not stated (*9*). **32.** Tuberculosis of spine (2). **34.** Tuberculous glands of neck (3, 11, 17, *8*). **35.** Disseminated tuberculosis, Examination (*8*). **37.** Circumcision (38, 41). **39–45.** Cancer of lip (43, 54) ; tongue (52, 53) ; tongue, operation for extraction of teeth (59) ; œsophagus (34, *55*) ; pylorus (72) ; stomach (*40*) ; mouth (69) ; cæcum (58) ; rectum (*42*, *50*, *57*) ; intestine (63) ; uterus (*50*) ; breast (*43*, *44*, *50*) ; larynx (38) ; testicle (48, 53) ; throat and neck glands (52) ; throat, operation for removal of teeth (51). **46.** Fatty tumour (*29*) ; abdominal tumour (*28*) ; internal tumour (*42*). **48.** Osteo-arthritis (37, *42*). **51.** Exophthalmic goitre (*23*) ; removal of half thyroid (*19*). **55.** Adiposis dolorosa, laryngeal paralysis, tracheotomy (*49*). **60.** Abscess of brain (22). **75.** Removal of injured eye (37) ; glaucoma (73). **76.** Mastoid disease (2, 12, *1*, *14*) ; middle ear disease (7, 33, 39, *5*) ; disease of ear (*14*). **77.** Removal of pus around heart (37). **78.** Endocarditis, exploratory abdominal operation (29). **82.** Embolism, femoral artery (*45*). **83.** Hæmorrhoids (25, 37, 42, 53) ; varicose veins (31, 38, 45). **84.** Sub-mental glands (*1*). **86.** Adenoids (12, 13, *8*) ; adenoids and ear trouble (13) ; adenoids and large turbinates (16) ; diseased bone and polypus of nose (*32*). **88.** Removal of thyroid (6, *15*). **90.** Muco-purulent bronchitis (36). **92.** Lobar pneumonia, pleurisy (44). **93.** Empyema (1, 2, 4, 10, 33, 47, 52, *1*, *5*, *7*). **98.** Abscess of trachea (*3*). **99.** Extraction of teeth (19, 65, *22*) ; bad teeth (58) ; parotid tumour (46). **100.** Removal of tonsils (1, 2, 3, 5, 6, 7, 8, 13, 17, 23, *2*, *2*, *10*, *18*) ; removal of tonsils and abscess of cavity of nose (*28*) ; Ludwig's angina (53, *42*, *55*) ; pharyngeal abscess (1). **102.** Gastric ulcer (35, 40, 49, *18*) ; gastric ulcer, induced labour (*27*). **103.** Gastritis (*48*) ; enlarged stomach (*69*) ; obstruction of pylorus (*50*). **108.** Appendicitis (9, 12, 13, 20, 27, 67, *3*, *7*, *15*, *18*, *36*). **109.** Hernia (0, 0, 0, 0, 11, 21, 23, 28, 34, 36, 40, 43, 48, 52, 53, 53, 54, 72, *0*, *5*, *54*, *55*, *57*, *64*) ; intestinal obstruction (0, 0, 5, 34, 49, 50, 59, *9*, *19*, *26*, *64*). **110.** Rectal abscess (52). **114.** Gallstones (69, *38*, *44*, *51*, *56*). **115.** Cholecystitis (62) ; abscess of liver (*35*). **117.** Peritonitis (38, 52). **118.** Pancreatitis (40). **122.** Pyonephrosis, removal of kidney (*52*). **124.** Cystitis (*34*) ; abscess of bladder (44) ; retention of urine (63). **125.** Stricture of urethra (32) ; extravasation of urine (42). **126.** Enlarged prostate (65). **127.** Hydrocele (36) ; removal of testicle (19). **129.** Fibroid of uterus (*38*, *40*, *45*, *55*) ; fibro-myoma (*39*) ; tumour of uterus (*46*). **130.** Prolapse of the uterus (*57*) ; diseased membrane of womb (*24*). **132.** Tubo-ovarian abscess (*24*). **135.** Placenta prævia (*26*) ; placenta prævia, podalic version (*39*). **136.** Induced labour (*34*) ; obstructed labour (*22*) ; for speedy delivery and repair of perineum (*23*) ; parturition (*35*, *38*, *40*, *42*). **137.** Instrumental delivery (*35*). **143.** Carbuncle of neck (60). **144.** Cellulitis (24) ; abscess (*1*, *43*). **145.** Ulcer of great toe (43) ; abscess of bone of leg (16, 30) ; osteo-myelitis (6) ; disease of femur (50). **149.** Sewing of divided tendon (20) ; hammer toe (25) ; operation to relax stiff toe (19). **150.** Phimosis (0) ; circumcision (0, 1, 1, 2) ; cleft palate (0, 2, *1*, *5*) ; congenital dislocation of hip (*3*). **155–186.** Various forms of violence (19, 20, 25, 27, 27, 27, 29, 29, 29, 30, 30, 32, 32, 32, 34, 35, 37, 39, 40, 41, 45, 46, 48, 48, 51, 56, 68, *5*, *22*, *40*, *43*, *46*, *58*, *66*). **189.** Examination for an obscure condition (*52*) ; operation, nature not stated (37, *8*, *30*).

The total number of deaths in Table XXX., 261, is the lowest in any of the five years 1911–1915 for which comparable figures are available. The fall chiefly applies to females, the lowest previous figure for whom was 113 in 1913, notwithstanding the depletion of the male population. The results of such depletion must however have been much more than offset by operations in military hospitals, which would not have taken place but for the war. The effect of these is shown in the list above under the heading violence, 19 deaths of males of military age (18–41) being recorded as against 10 in 1914 and a maximum of 9 in any of the three preceding years. It is therefore the more remarkable that the total of deaths for the year should be low. The nature of the anaesthetic was stated in only 66 per cent. of the cases. In 60 per cent. of the

cases in which it was stated, chloroform is recorded as the only anæsthetic administered, and in 23 per cent., as administered in combination with some other agent, so that in only 17 per cent. of these cases was chloroform not used.

Operations for tubercle, cancer, the removal of tonsils and adenoids, diseases of the ear, empyema, appendicitis, hernia, intestinal obstruction, and various forms of injury, appear to involve the greatest mortality under or related to anæsthetics. In some cases this is evidently due to the frequency with which the operation is performed and in others to its gravity or the severity of the condition requiring it.

84A. **Status Lymphaticus.**—In addition to the 199 deaths primarily classified to status lymphaticus condition (page 150) its presence was noted in the case of 23 deaths under anæsthetics, which were referred to the condition leading to the administration of the anæsthetic.

The sex- and age-distribution of these was as follows :—

——	0—	5—	10—	15—	20—	25—	35—
Males ...	4	3	2	4	1	1	2
Females ...	3	1	—	—	1	1	—

In 6 of the cases the nature of the anæsthetic was not stated ; in 12 of the remainder it was chloroform only, in 1 chloroform and ether, in 2 A.C.E. mixture, in 1 ether, and in 1 ethyl chloride ; in 1 case death was stated to have resulted from acidosis. The operations during which these deaths occurred seem for the most part not to have been of a dangerous nature.

155–163. **Suicide.**—As may be seen from Table 10 (page 29) there was a remarkable fall in the mortality of males from suicide in 1915. For both sexes the rates had been almost constant during the present century, before which there had been a gradual increase, the mortality of males being about three times that of females. In 1915 the rate for females maintained its old level, but that for males fell by over 25 per cent., the crude rate in Table 10 (113 per million) being the lowest recorded since 1883.

TABLE XXXI.—ENGLAND AND WALES.—SUICIDE: DEATHS in 1914 and 1915, and MORTALITY in 1901–10, 1914, and 1915.

——	Deaths.				Mortality per Million Living.					
	Males (Including Non-civilians).		Females.		Males.			Females.		
	1914.	1915.	1914.	1915.	1901–10.	1914.	1915 (Civilians only).	1901–10.	1914.	1915.
All Ages ...	2,802	2,029	922	937	157*	151*	104*	47*	45*	45*
0—	—	—	—	—	—	—	—	—	—	—
5—	—	—	—	—	0	—	—	—	—	—
10—	7	4	4	4	4	4	2	3	2	2
15—	65	33	47	63	36	38	21	34	27	36
20—	121	103	76	68	91	79	72	45	44	39
25—	457	274	161	131	152	157	95	56	50	40
35—	596	436	203	208	252	249	166	80	79	80
45—	603	433	212	214	397	348	226	109	113	112
55—	571	446	132	156	523	514	368	109	106	124
65—	311	229	73	75	508	504	366	88	94	95
75—	71	71	14	18	382	336	331	49	44	56

* Standardized rates.

The comparison is complicated, as in other cases, by the necessary restriction of the rates for 1915 to the civilian population. Table XXXI, however, shows that the fall is a real one, since it is common to all periods of life, including that after military age is past, at which the tendency to suicide is greatest. It is impossible to avoid associating this sudden change with the war, and it is remarkable both that the net

effect of this great preoccupation of the national mind, with all its attendant anxieties and distresses, should be to lessen the tendency to suicide, and that this effect should be restricted to the male sex.

Although the comparison of rates in the table has had to be restricted to the civilian population, the 223 deaths of non-civilians registered in this country are included in the portion of the table dealing with numbers, so as to minimize the difficulty of comparison at military ages.

Comparison of the numbers of male deaths returned under the principal methods of suicide in these two years shows decreases of very similar proportions under most of the headings, the greatest actual decrease being under that of "hanging or strangulation."

189. **Ill-defined Causes of Death.**—The deaths allocated to No. 189 of the list of causes, with which this title is particularly associated, number 2,686. Addition of Nos. 187 and 188 however, which are included under the same group title in the International List, brings this number up to 3,023. This figure excludes from the group as given in the old list of causes of death (see Tables 9 and 10) the ill-defined diseases of infancy and old age, which now appear under titles 151 and 154, and together accounted for 40,997 deaths in 1915, as well as 632 deaths from other causes of less numerical

TABLE XXXII.—ENGLAND AND WALES, 1915.—REPLIES TO INQUIRIES RESPECTING INDEFINITELY CERTIFIED CAUSES OF DEATH.

Subject of Inquiry.	Replies received.	Replies amplifying previous information.	Deaths allocated as the result of inquiry to various important headings.
Croup	124	111	Diphtheria 16, Laryngismus stridulus 26, Laryngitis 56.
Membranous laryngitis	16	13	Diphtheria 9.
Pyæmia, septicæmia, &c.	177	122	Diseases of the teeth and gums 6, Puerperal fever 20, Diseases of the skin 16.
Tuberculosis	373	371	Pulmonary tuberculosis 154, Acute phthisis 55, Acute miliary tuberculosis 45, Tuberculosis of peritoneum 21, Disseminated tuberculosis 81, Other forms of tubercle 13.
Cancer (part or organ not stated)	886	816	Part or organ stated in 816 cases.
Tumour, growth, &c.	536	396	Tuberculosis 6, Syphilis 5, Cancer 250, Aneurysm 5.
Rheumatism	40	40	Gonorrhœa 1, Rheumatic fever 25, Chronic rheumatism 6.
Basal or basic meningitis	98	85	Tuberculous meningitis 57.
Cerebro-spinal meningitis	545	518	Tuberculous meningitis 13, Cerebro-spinal fever 487.
Paraplegia	159	104	Syphilis 13, Diseases of the spinal cord 42, Cerebral hæmorrhage, apoplexy 17.
General paralysis (outside asylums)	181	169	Cerebral hæmorrhage, apoplexy 10, General paralysis of the insane 118.
Paralysis	116	100	Diseases of the spinal cord 19, Cerebral hæmorrhage, apoplexy 28, Hemiplegia 6, Arterial sclerosis 12, Cerebral embolism and thrombosis 8.
Cerebral tumour (P.M. cases) ...	28	22	Syphilis 4, Cancer 11, Glioma 6.
Fibroid phthisis	158	107	Pulmonary tuberculosis 86.
Hæmoptysis	86	70	Pulmonary tuberculosis 41, Phthisis 5, Aneurysm 7.
Stomatitis	88	85	Syphilis 8, Thrush, aphthous stomatitis 46.
Stricture of œsophagus	84	60	Cancer 53.
Hæmatemesis	42	33	Cancer 9, Gastric ulcer 10, Cirrhosis of liver 5.
Pyloric obstruction, stenosis, &c....	49	38	Cancer 21, Gastric ulcer 11.
Jaundice	56	41	Cancer 19, Gallstones 9.
Peritonitis	331	196	Tuberculosis of peritoneum, &c. 25, Cancer 13, Gastric ulcer 17, Duodenal ulcer 6, Appendicitis 65, Hernia, intestinal obstruction 13, Diseases of female genital organs 13, Puerperal fever 8.
Pemphigus (of infants)	96	49	Syphilis 41.
Hydrocephalus	117	108	Tuberculous meningitis 20, Syphilis 4, Congenital hydrocephalus 62.
Violence	199	197	Precise form of suicide 8, Injury by fall 62, Injury in mines and quarries 7, Injury by machines 5, Injury by crushing 50.
Ascites, dropsy	43	40	Diseases of the heart 20, Cirrhosis of liver 9.
Syncope, heart failure (ages 1–70)	227	194	Influenza 9, Alcoholism 11, Diseases of the heart 106, Arterial sclerosis 6, Bronchitis 9.
Operation	178	172	Cancer 18, Varicose veins 7, Tonsillitis 7, Gastric ulcer 7, Hernia, intestinal obstruction 19, Uterine tumour 11.
Other indefinite forms of certificate	918	660	——
All Subjects	5,951	4,917	——

importance ; and includes 1,800 deaths, mainly from syncope and heart failure, not formerly classified as ill-defined.† When the appropriate additions and deductions have been made the number of ill-defined deaths in Table 9, *viz.*, 42,852, is arrived at. These deaths form 7·6 per cent. of the total, as against 7·9 per cent. in 1914, and 9·5 per cent. in 1901–1910.

Inquiries sent to medical practitioners requesting further information as to indefinitely certified deaths were reduced owing to the war, and numbered less than in the previous year notwithstanding the increase in deaths registered. Since 1911 these inquiries have been addressed to coroners as well as to medical practitioners, with a gratifying resultant increase of precision in the returns of deaths from violence. The total number of inquiries issued was 6,869, and to these, notwithstanding the special difficulties created by the war, no less than 5,951 replies were received, with results to classification the most important of which are set out in the table on page xlix.

Certification of Causes of Death.—Previous to 1911 a section of this report dealt annually with the numbers of deaths uncertified and the numbers on which inquests had been held. This section has since been omitted, but now, at the end of a five years' interval, it appears desirable to return to the subject.

TABLE XXXIII.—ENGLAND and WALES : CERTIFIED and UNCERTIFIED DEATHS, and INQUEST CASES, in 1878–1910 and in 1915.

	Proportion per 100 Deaths.		
	Certified by Registered Medical Practitioners.	Inquest Cases.	Uncertified Deaths.
1878	90·15	5·00	4·85
1879	90·25	5·05	4·70
1880	90·79	4·94	4·27
1881	90·35	5·54	4·11
1882	90·80	5·30	3·90
1883	90·86	5·44	3·70
1884	91·05	5·31	3·64
1885	91·21	5·32	3·47
1886	91·25	5·34	3·41
1887	91·13	5·58	3·29
1888	91·33	5·59	3·08
1889	91·48	5·61	2·91
1890	91·54	5·62	2·84
1891	91·73	5·52	2·75
1892	91·60	5·70	2·70
1893	91·72	5·76	2·52
1894	91·19	6·30	2·51
1895	91·68	6·00	2·32
1896	91·53	6·26	2·21
1897	91·69	6·25	2·06
1898	91·92	6·19	1·89
1899	91·86	6·29	1·85
1900	91·81	6·27	1·92
1901	91·52	6·67	1·81
1902	91·52	6·68	1·80
1903	91·40	6·91	1·69
1904	91·85	6·53	1·62
1905	91·52	6·86	1·62
1906	91·64	6·83	1·53
1907	91·59	6·96	1·45
1908	91·52	7·04	1·44
1909	91·61	7·03	1·36
1910	91·35	7·27	1·38
1915	91·67	6·96	1·37

Of the 562,253 deaths registered in England and Wales during 1915, the causes of 515,441, or 91·7 per cent., were certified by registered medical practitioners ; inquests were held respecting 39,128, or 7 per cent. ; while the causes of the remaining 7,684, or

† See Manual of Causes of Death, page xxxi.

1·4 per cent., were uncertified. These proportions may be seen from Table XXXIII. to be almost identical with the latest previous records available, and, as far as cases certified by registered medical practitioners are concerned, with those of the preceding 25 years as well.

The increase in proportion of inquests and decrease in that of uncertified deaths, which were progressive up to 1910, have not been maintained since, and the state of certification in 1915, so far as revealed by Table XXXIII., may be said to be identical with that in 1909.

No doubt the exceptional circumstances of the year may have affected the matter ; and it should be noted that the slight decrease recorded for inquests in 1915 has occurred notwithstanding an increase in the death-rate from violence, which was especially low in 1910 (Table 10), the proportion of violent to total deaths in 1915 being 4·15 per cent. as against 3·87 in 1910. The distinction of uncertified deaths into those reported and those not reported to coroners, which was made in former reports, is no longer applicable, all such deaths having been reported to coroners since March, 1914.

The facts recorded with regard to the 39,128 deaths on which inquests were held are summarized in Table XXXIV.

Over half the inquests held—53 per cent.—were upon persons who had died violent deaths. Inquests were held upon nearly all such deaths when occurring in the civilian population, the proportion so investigated being highest in London and lowest in the rural districts, but more than half the non-civilian deaths from violence, including deaths in military hospitals from wounds, were not investigated in this manner. Save in one instance in London, all deaths classified to suicide had been the subject of inquests. The other causes of death most frequently investigated by inquest, and the proportion in each case of inquests per cent. of total deaths so classified were :—Lack of care in early infancy 91, status lymphaticus 75, tetanus 48, septicæmia 45, alcoholism 44, fatty degeneration of the heart 32, aneurysm 28, and ill-defined causes of death 25. Of the 121 deaths for which no statement of cause whatever was received 62, or 51 per cent., had been the subject of inquests.

The causes of death, other than violence, leading to most inquests, were :—Heart disease 4,217, pneumonia 1,892, bronchitis 962, cerebral hæmorrhage 790, tuberculosis 771, ill-defined causes (largely heart failure) 734, and convulsions 722. Generally speaking it is, as might be expected, the causes which are liable to lead to sudden death which are investigated by inquest rather than those generally involving illness of some considerable duration. The proportion of inquests on deaths from phthisis was 13 per thousand, and from cancer only 6 per thousand.

Almost twice as many inquests were held on males as on females. This is mainly due to the great excess in deaths of males from violence, but of deaths not due to violence 59 per cent. were deaths of males. Considerable excess of investigation by inquests of deaths of males is the rule for almost all diseases except those mainly or entirely affecting young children, aneurysm and cirrhosis of the liver being the only other exceptions in the table. On the other hand most of the causes in the table which specially affect infants show a higher proportion of inquests on females, the excess being very considerable in the cases of injury at birth and atelectasis.

Amongst the civilian population the proportion of deaths investigated by inquest declines with decreasing urbanization from 10 per cent. in London to 5·5 in the rural districts. If we exclude deaths from violence, upon nearly all of which inquests are held in all classes of area, this difference is greatly accentuated. It reaches its maximum in the cases of the diseases of the puerperal state, 13 per cent. of the deaths from which were investigated in London as against only 1·4 in the rural districts, and of alcoholic cirrhosis of the liver, for which the percentages are respectively 54 and 2·9. The latter difference, however, is probably due to specification of the form of alcoholism to a much greater degree in London than elsewhere, as while the London deaths in the table from alcoholic cirrhosis much exceed those from undefined alcoholism, the reverse holds good in the provinces.

The proportions of deaths investigated by inquest at various ages may be seen from Table XXXV., which for the sake of convenience deals also with uncertified deaths.

Table XXXIV.—England and Wales: Inquest Cases Registered in 1915, Proportions of Inquest Cases per 1,000 classified by Sex, Age, Nature of Area, and Assigned Cause of Death; and Total Deaths registered from the same cause.

International List Number.	—	Numbers of Inquest Cases.								Inquest Cases per 1,000 Deaths registered from the same cause.																		International List Numbers.
						Civilians.								Civilians.				Ages.										
		Total.	Males.	Females.	Non-Civilians.	London.	County Boroughs.	Urban Districts.	Rural Districts.	Total.	Males.	Females.	Non-Civilians.	London.	County Boroughs.	Urban Districts.	Rural Districts.	0—	1—	5—	15—	25—	35—	45—	55—	65—	75 and upwards.	
1–19	Infectious Diseases	481	269	212	6	145	154	116	60	10	11	9	9	24	10	7	7	77	179	71	8	12	23	34	34	34	9	1–19
20–59	Other General Diseases	1,864	1,228	636	34	489	728	391	222	17	22	11	29	31	18	11	11	128	138	145	127	172	297	360	239	206	52	20–59
60–76	Nervous Diseases (including Diseases of Organs of Special Sense).	2,617	1,462	1,155	43	519	1,118	626	311	44	48	40	43	85	54	32	26	629	167	134	118	137	224	386	399	310	113	60–76
77–85	Circulatory Diseases	5,196	3,240	1,956	104	1,340	1,800	1,269	683	71	89	53	211	135	75	55	42	105	53	94	111	219	502	929	1,367	1,287	529	77–85
86–98	Respiratory Diseases	3,383	1,953	1,430	43	936	1,437	674	293	31	34	28	36	61	35	20	17	714	432	218	77	118	218	393	450	485	278	86–98
99–118	Digestive Diseases	1,462	826	636	38	340	561	342	181	35	38	33	77	59	35	27	28	345	158	135	79	79	150	195	166	112	43	99–118
119–127	Male Genito-urinary Diseases	320	320	—	10	108	103	76	23	26	26	—	37	65	26	19	10	5	6	11	6	20	38	63	73	65	33	119–127
119–133	Female Genito-urinary Diseases	238	—	238	—	96	85	36	21	26	—	26	—	80	28	12	12	2	3	9	10	24	38	37	40	45	30	119–133
134–141	The Puerperal State	130	—	130	—	37	56	27	10	38	—	38	—	130	46	23	14	—	—	—	21	60	48	1	—	—	—	134–141
150–153	Malformations; Infantile Diseases	1,145	611	534	—	309	457	233	146	35	33	38	—	81	39	22	24	1,113	18	7	3	1	2	—	1	—	—	150–153
154	Old Age	548	283	265	—	45	252	117	134	17	21	14	—	15	26	11	14	—	—	—	—	—	—	—	12	198	338	154
155–186	Violence	20,813	14,742	6,071	1,434	2,837	6,801	6,091	3,650	896	869	971	424	993	989	968	958	1,368	1,899	2,087	2,171	2,258	2,740	2,734	2,428	1,743	1,385	155–186
187–189	Ill-defined and unstated Causes	796	465	331	21	14	305	267	189	263	284	239	568	156	280	258	245	58	23	21	22	40	85	165	229	139	14	187–189
	Other Causes	135	75	60	8	32	49	33	13	30	30	29	148	56	34	22	13	8	11	10	13	8	14	18	18	22	13	—
	Total	39,128	25,474	13,654	1,741	7,247	13,906	10,298	5,936	70	87	51	198	100	71	58	55	4,552	3,087	2,942	2,766	3,148	4,379	5,315	5,456	4,646	2,837	
6	Measles	156	71	85	—	71	39	32	14	9	8	11	—	31	6	6	7	40	104	12	—	—	—	—	—	—	—	6
10	Influenza	117	77	40	4	23	33	36	21	11	15	8	33	22	12	10	7	5	8	8	4	9	10	22	27	20	4	10
20B	Septicæmia	246	188	58	5	32	91	72	46	452	522	315	200	444	558	434	390	5	9	18	18	19	43	51	38	32	13	20B
24	Tetanus	75	72	3	3	5	24	22	21	481	567	103	231	556	649	440	447	1	3	22	14	9	9	12	1	4	—	24
28 & 29	Phthisis	536	344	192	3	201	195	95	42	13	15	11	5	29	12	8	7	19	40	32	36	81	104	107	61	48	8	28 & 29
30–35	Other Tuberculous Diseases	235	142	93	1	72	92	45	25	19	21	16	9	43	19	11	12	55	60	61	25	7	10	10	4	2	1	30–35
39–45	Cancer	234	156	78	3	85	71	47	28	6	9	3	14	16	6	4	3	—	—	2	8	7	29	56	47	65	20	39–45
56	Alcoholism	219	126	93	9	19	121	41	29	441	430	456	692	352	590	283	363	—	—	—	3	29	55	72	38	20	2	56
61	Meningitis	177	104	73	7	65	54	33	18	29	29	29	11	92	27	18	19	27	33	56	25	11	7	10	5	1	2	61
64A	Apoplexy	342	184	158	5	48	154	86	49	64	77	54	417	130	91	47	35	1	—	3	4	11	28	86	92	87	30	64A
64E	Cerebral Hæmorrhage	790	442	348	17	205	319	179	70	40	50	33	193	101	49	28	16	2	1	5	17	22	90	183	228	180	62	64E
69	Epilepsy	285	171	114	6	32	110	87	50	93	104	80	176	84	105	88	80	2	4	19	48	58	51	49	33	16	5	69
70 & 71	Convulsions	722	372	350	—	89	361	176	96	83	75	93	—	163	107	56	58	583	116	19	1	—	—	2	1	—	—	70 & 71
77	Pericarditis	120	75	45	3	32	42	31	12	239	270	200	176	311	251	235	143	9	8	12	8	6	15	19	14	18	11	77
79A	Valvular Disease of Heart	1,393	902	491	16	402	498	308	169	56	77	37	116	117	59	40	31	—	5	23	35	78	131	270	388	328	135	79A
79B	Fatty Degeneration of Heart	1,084	591	493	18	322	304	296	144	323	387	270	783	477	321	292	208	1	3	2	5	39	103	193	323	317	98	79B
78 & 79C	Other Organic Disease of Heart	1,484	917	567	36	265	587	365	231	50	64	37	207	72	62	38	33	3	6	22	41	59	139	252	398	393	171	78 & 79C
80	Angina Pectoris	136	108	28	2	24	43	38	29	108	128	69	167	163	103	90	114	—	—	—	—	3	6	36	36	35	20	80
81A	Aneurysm	320	237	83	17	116	93	69	25	280	265	339	293	426	247	240	171	—	—	—	5	17	58	82	77	57	24	81A
81B	Arterial Sclerosis	288	194	94	2	68	126	61	31	36	41	29	87	68	43	25	19	—	—	1	1	3	19	42	81	90	51	81B
84A	Status Lymphaticus	150	86	64	1	52	40	43	14	754	717	810	500	897	645	782	636	87	21	28	8	2	2	1	—	1	—	84A
89, 90	Bronchitis	962	523	439	3	249	477	166	67	19	21	17	19	35	25	11	8	147	74	11	2	16	34	109	171	237	161	89, 90
91	Broncho-Pneumonia	517	285	232	3	202	166	107	39	22	23	22	20	58	18	15	12	237	150	29	2	2	9	17	28	24	19	91
92A	Lobar Pneumonia	555	339	216	13	161	254	88	39	52	52	52	33	95	63	29	26	68	49	71	21	29	82	82	72	55	26	92A
92B	Pneumonia, undefined	820	488	332	15	246	314	175	70	55	55	55	38	126	57	38	28	188	105	67	33	42	53	104	102	79	47	92B
93	Pleurisy	145	96	49	—	29	58	34	24	94	107	77	—	131	108	73	92	13	19	19	3	5	12	18	24	24	8	93
94	Pulmonary Congestion, Pulmonary Apoplexy.	175	104	71	4	27	70	47	27	102	127	79	444	124	127	88	67	49	19	11	7	6	8	28	14	26	7	94
104 & 105	Diarrhœal Diseases	438	233	205	7	120	189	83	39	22	21	23	75	39	21	15	17	184	88	40	19	12	21	25	23	16	10	104 & 105
108	Appendicitis	49	36	13	3	10	13	9	14	20	25	12	21	37	17	11	28	—	3	17	9	7	2	5	2	2	2	108
109	Hernia, Intestinal Obstruction	231	159	72	4	45	84	69	29	52	73	32	73	80	58	47	31	38	17	26	12	9	24	21	39	31	14	109
113A	Cirrhosis of Liver (not returned as Alcoholic).	53	22	31	6	15	16	12	4	16	11	23	188	27	16	11	7	—	—	—	—	2	12	20	13	5	1	113A
113B	Cirrhosis of Liver (returned as Alcoholic).	76	26	50	1	46	19	9	1	237	163	311	500	541	178	97	29	—	—	—	—	6	25	28	15	2	—	113B
120	Bright's Disease	434	255	179	8	159	150	87	30	31	34	28	51	81	32	19	12	—	—	8	7	26	62	78	101	98	54	120
150	Congenital Malformations	166	97	69	—	58	59	37	12	43	45	40	—	113	46	29	15	134	18	7	3	1	2	—	1	—	—	150
151A	Premature Birth	247	134	113	—	64	125	37	21	16	15	17	—	36	22	7	7	247	—	—	—	—	—	—	—	—	—	151A
151B	Atrophy, Debility, and Marasmus of Infants.	162	87	75	—	23	63	48	28	17	16	19	—	23	18	15	17	162	—	—	—	—	—	—	—	—	—	151B
152B	Atelectasis	118	62	56	—	44	42	19	13	87	76	106	—	200	88	45	55	118	—	—	—	—	—	—	—	—	—	152B
152C	Injury at Birth	170	87	83	—	69	56	26	19	183	157	220	—	483	167	94	109	170	—	—	—	—	—	—	—	—	—	152C
153	Lack of Care (0–3 months)	211	99	112	—	33	96	43	39	966	839	974	—	1,000	914	782	975	211	—	—	—	—	—	—	—	—	—	153
155–163	Suicide	2,965	2,029	936	223	377	861	915	589	1,000	1,000	999	1,000	997	1,000	1,000	1,000	—	—	8	266	405	644	647	602	304	89	155–163
164–186	Violence apart from Suicide	17,848	12,713	5,135	1,211	2,460	5,940	5,176	3,061	881	851	966	383	992	988	963	950	1,368	1,899	2,079	1,905	1,853	2,096	2,087	1,826	1,439	1,296	164–186
187–189E	Ill-defined Causes	734	433	301	20	10	291	247	166	253	275	227	556	118	271	247	234	27	22	19	20	37	77	158	228	133	13	187–189E
189F	Cause not stated	62	32	30	1	4	14	20	23	512	500	526	1,000	800	778	556	377	31	1	2	2	3	8	7	1	6	1	189F

TABLE XXXV.—ENGLAND AND WALES, 1915.—INQUESTS and UNCERTIFIED CASES per cent. of TOTAL DEATHS registered at the same ages.

——	Inquests.			Uncertified Cases.
	Total.	Deaths from Disease.	Deaths from Violence.	Total.
All Ages.	7·0	3·3	3·7	1·4
0—	5·1	3·6	1·5	2·4
1—	5·6	2·1	3·5	1·0
5—	12·9	3·8	9·1	0·9
15—	11·5	2·5	9·0	0·6
25—	10·9	3·1	7·8	0·7
35—	11·1	4·2	6·9	0·9
45—	10·2	5·0	5·2	1·1
55—	7·7	4·3	3·4	1·3
65—	5·2	3·3	1·9	1·5
75 and up.	3·2	1·7	1·5	1·4

It will be seen that the maximum proportion is attained in later childhood and fairly well maintained throughout the working period of life, falling away greatly in old age. This distribution is mainly due to the fact that deaths from violence calling for inquests are most common at 5–25, thereafter continuously declining with age. Deaths from disease of the type occasioning inquests are, on the other hand, relatively most common in later middle life. In old age, as in infancy, comparatively few deaths are investigated by inquest.

A tabulation of inquest cases by cause of death was included in the reports for 1897 and 1898, and it may be of interest to compare the record for the latter year with that for 1915. The classifications used in the two years are not identical, but any differences arising from this fact for which it has not been possible to make allowance must be too slight to influence the comparison appreciably, especially in view of the large number of deaths returned as ill defined in the earlier year. The reduction in this number is largely due to the inquiries in regard to such cases which for the last few years have been addressed to coroners as well as to medical men.

TABLE XXXVI.—ENGLAND AND WALES.—DEATHS from VARIOUS CAUSES investigated by INQUEST in 1898 and 1915.

——	Number recorded.		Percentage Increase (+) or Decrease (−).	——	Number recorded.		Percentage Increase (+) or Decrease (−).
	1898.	1915.			1898.	1915.	
Nervous diseases ...	3,205	2,617	− 18	Tuberculosis ...	559	771	+ 38
Circulatory diseases...	3,252	5,196	+ 60	Cancer	62	234	+277
Respiratory diseases...	1,694	3,383	+100	Epilepsy	199	285	+ 43
Digestive diseases ...	974	1,462	+ 50	Convulsions ...	1,577	722	− 54
Violence	18,940	20,813	+ 10	Bronchitis	549	962	+ 75
Other defined causes	3,603	4,861	+ 35	Pneumonia	737	1,892	+157
Total defined causes...	31,668	38,332	+ 21	Puerperal state ...	139	130	− 6
Ill defined causes ...	2,491	796	− 68	Premature birth and congenital defects.	338	413	+ 22
Total deaths	34,159	39,128	+ 15	Old age	429	548	+ 28

The number of inquests has grown in the 17 years by 15 per cent., the increase for deaths from violence being 10, and from other causes 20 per cent. The proportion of inquests to total deaths is seen from Table XXXIII. to have grown from 6·19 to 6·96 per cent., or by 12 per cent.

The increase in inquests, which is thus seen to be accounted for only to a slight extent by increase in deaths, is very unevenly distributed over the various diseases dealt with. Inquests attributing death to digestive, circulatory, and especially respiratory

diseases have largely increased, while fewer deaths are now attributed to diseases of the nervous system. The decrease under the latter heading is fully accounted for by the large and satisfactory decline under the heading of convulsions; while the increase shown for respiratory diseases is mainly due to the surprising growth in the number of verdicts attributing death to pneumonia, though bronchitis has also come more into favour.

The very large increase in the comparatively small number of deaths attributed to cancer may throw some light upon these changes. It seems most likely that the increase here is due to greater frequency of *post mortem* examinations and perhaps greater care in their conduct, and if this is the case it is also likely that consolidation of the lung may have been found in a number of cases where formerly in the absence of such examination evidence of pneumonia would have been lacking.

Table XXXVII. provides a similar summary of the facts as to uncertified deaths to that given in Table XXXIV. for inquests.

The causes to which the largest numbers of these deaths were attributed by the informants, and the percentages of the total uncertified deaths in each case are as follows:—Old age 15·5, convulsions 13·5, "heart failure" (at ages 1–70) 12·4, heart disease 11·1, premature birth 7·1; these five forms of return accounting for almost 60 per cent. of the total.

The forms of return contributed to in largest degree by these uncertified deaths, with the proportion in each case of uncertified per 1,000 total deaths so classified, were:—Heart failure 666, croup 367, syncope 247, convulsions 119, and lack of care in early infancy 52. It will be seen from these figures to what a large extent the maintenance of certain unsatisfactory forms of death return is accounted for by these uncertified cases.

The proportion of uncertified to total deaths is, unlike that of inquests, almost identical for the sexes, and sex differences of significance from individual causes are few.

Amongst the civilian population the proportion of uncertified deaths rises with decreasing urbanization from 1 per 1,000 in London to 22 in the rural districts. The reasons for a maximum proportion in the rural districts are obvious, but it is somewhat surprising that absence of certification should be twelve times as common in the county boroughs as in London, and fifteen times in the smaller towns. Evidently coroners in the provincial towns are satisfied to allow a number of deaths to remain uninvestigated which would be made the subjects of inquests in London, especially north of the Thames, where, as shown by Table XXXVIII., inquests are more frequently held than elsewhere. Deaths from violence for the certification of which a medical practitioner has not made himself responsible appear to be as fully investigated by coroners in the county boroughs as in London, the proportion uncertified being only one per thousand in each case. This proportion rises to 13 per thousand in the case of the rural districts, and to 33 in that of the non-civilian population. Deaths from drowning are less fully investigated than those from violence in general, the proportion uncertified rising from 5 per 1,000 in London to 43 in the rural districts.

In the case of lack of care in early infancy, the usual rule of better certification in the towns is departed from. There were no uncertified deaths from this cause in London, but elsewhere the proportion falls from 7·6 per cent. in the county boroughs to 2·5 in the rural districts. As it appears strange that deaths of this nature, where no medical man was in attendance, should be allowed to remain uninvestigated at all, the returns of the 12 appearing in Table XXXVII. have been examined. All are attributed to want of attention at birth, and 6 of the 12 occurred in Birmingham, thus accounting for the high proportion in the county boroughs, with three in its immediate neighbourhood, leaving three only for the remainder of England and Wales.

The ages at which deaths are most frequently left uncertified may be seen from Table XXXV. From a maximum in infancy the proportion of uncertified cases sinks to a minimum at 15–25, thereafter gradually rising again as age increases. Probably the value ordinarily attached to human life waxes and wanes in somewhat similar proportion. The uncertified mortality in infancy may be seen from Table XXXVII. to be attributed in 77 per cent. of its total extent to the three headings, convulsions, premature birth, and atrophy, &c. of infants.

Table XXXVIII. shows the proportions of inquests and uncertified deaths in each registration county in 1915. A statement based upon administrative areas would have been preferable, but its compilation is at present impracticable. Questions of certification are, of course, connected with the area in which death occurred, whereas the deaths shown in these Reports for administrative areas are tabulated according to the area in which the

TABLE XXXVII.—ENGLAND AND WALES: UNCERTIFIED DEATHS REGISTERED in 1915, classified by SEX, AGE, NATURE of AREA, and ASSIGNED CAUSE of DEATH; and PROPORTIONS of UNCERTIFIED DEATHS per 1,000 TOTAL DEATHS registered from the same cause.

International List Numbers.	—	Numbers of Uncertified Deaths.								Uncertified Deaths per 1,000 Deaths registered from the same cause.																International List Numbers.
						Civilians.								Civilians.				Ages.								
		Total.	Males.	Females.	Non-Civilians.	London.	County Boroughs.	Urban Districts.	Rural Districts.	Total.	Males.	Females.	Non-Civilians.	London.	County Boroughs.	Urban Districts.	Rural Districts.	0–	1–	5–	15–	25–	35–	45–	55–	65–	75 and upwards.	
1–19	Infectious Diseases	242	124	118	1	3	81	71	86	5	5	5	2	1	5	4	10	45	115	30	2	5	10	4	15	6	10	1–19
20–59	Other General Diseases	251	115	136	3	9	100	88	51	2	2	2	3	1	3	3	2	14	17	12	24	30	37	42	33	32	10	20–59
60–76	Nervous Diseases (including Diseases of Organs of Special Sense).	1,518	833	685	3	13	502	555	445	26	27	24	3	2	24	29	36	843	192	45	22	19	39	56	90	137	75	60–76
77–85	Circulatory Diseases	905	468	437	15	8	196	366	320	12	13	12	30	1	8	16	20	4	2	6	20	31	65	129	220	284	144	77–85
86–98	Respiratory Diseases	771	361	410	6	8	292	274	191	7	6	8	5	1	7	8	11	151	118	30	7	16	28	60	95	154	112	86–98
99–118	Digestive Diseases	242	139	103	—	4	95	89	54	6	6	5	—	1	6	7	8	74	37	31	6	5	14	19	15	29	12	99–118
119–127	Male Genito-urinary Diseases	42	42	—	1	—	16	21	4	3	3	—	4	—	4	5	2	—	—	3	1	1	3	11	10	9	4	119–127
119–133	Female Genito-urinary Diseases	23	—	23	—	—	6	12	5	3	—	3	—	—	2	4	3	—	4	2	—	1	3	2	3	5	3	119–133
134–141	The Puerperal State	21	—	21	—	—	7	9	5	6	—	6	—	—	6	8	7	—	—	—	2	9	9	1	—	—	—	134–141
150–153	Malformations; Infantile Diseases	914	520	394	—	21	364	292	237	28	28	28	—	5	31	27	39	906	3	1	1	1	2	—	—	—	—	150–153
154	Old Age	1,191	568	623	1	17	294	404	475	36	41	32	1,000	6	31	37	50	—	—	—	—	—	—	—	7	373	811	154
155–186	Violence	193	178	15	111	2	7	25	48	8	10	2	33	1	1	4	13	4	1	1	37	55	53	20	5	4	13	155–186
187–189	Ill-defined and unstated Causes	1,358	729	629	13	5	389	494	457	449	445	455	351	56	357	477	593	86	41	48	26	41	108	241	427	296	44	187–189
	Other Causes	13	9	4	—	—	4	7	2	3	4	2	—	—	3	5	2	1	—	—	—	1	—	2	5	2	2	—
	Total	7,684	4,086	3,598	154	90	2,353	2,707	2,380	14	14	13	18	1	12	15	22	2,128	530	209	148	215	371	587	925	1,331	1,240	
6	Measles	106	54	52	—	—	50	28	28	6	6	7	—	—	8	5	14	17	81	7	—	—	—	—	1	—	—	6
8	Whooping Cough	35	18	17	—	2	8	14	11	4	5	4	—	2	3	5	8	16	15	4	—	—	—	—	—	—	—	8
9A	Diphtheria	19	9	10	—	—	5	6	8	3	3	3	—	—	2	3	8	—	6	12	1	—	—	—	—	—	—	9A
9C	Croup	11	7	4	—	—	4	4	3	367	412	308	—	—	308	308	750	1	7	3	—	—	—	—	—	—	—	9C
10	Influenza	60	32	28	1	—	10	15	34	6	6	5	8	—	4	4	11	11	4	2	1	4	6	3	13	6	10	10
28 & 29	Phthisis	119	56	63	3	4	48	44	20	3	2	3	5	1	3	4	3	2	4	8	21	23	33	17	7	4	—	28 & 29
30–35	Other Tuberculous Diseases	15	7	8	—	—	7	4	4	1	1	1	—	—	1	1	2	2	6	2	1	1	—	2	—	1	—	30–35
39–45	Cancer	32	9	23	—	3	12	10	7	1	1	1	—	1	1	1	1	—	—	—	—	1	1	7	11	9	3	39–45
61	Meningitis	21	13	8	1	—	8	7	5	3	4	3	2	—	4	4	5	2	5	11	3	—	—	—	—	—	—	61
64A	Apoplexy	180	84	96	—	2	57	60	61	34	35	33	—	5	34	32	44	—	1	3	1	2	8	20	40	65	40	64A
64E	Cerebral Hæmorrhage	135	73	62	1	6	38	50	40	7	8	6	11	3	6	8	9	1	—	1	2	7	10	17	34	45	18	64E
66	Paralysis	35	17	18	—	1	6	12	16	12	13	11	—	3	5	14	22	—	—	—	3	—	—	5	4	11	12	66
69	Epilepsy	90	48	42	1	2	23	28	36	29	29	29	29	5	22	28	57	3	2	14	11	9	16	8	10	13	4	69
70 & 71	Convulsions	1,038	586	452	—	2	361	394	281	119	118	121	—	4	107	126	169	836	182	14	—	—	1	2	1	2	—	70 & 71
79A	Valvular Disease of Heart	84	51	33	3	—	22	29	30	3	4	2	22	—	3	4	5	—	—	2	3	5	13	11	20	24	6	79A
79B	Fatty Degeneration of Heart	37	15	22	—	—	11	14	12	11	10	12	—	—	12	14	17	—	—	—	—	—	1	5	16	13	2	79B
77, 78, 79C	Other Organic Disease of Heart	705	359	346	8	6	149	292	250	23	24	22	42	2	16	30	36	2	2	4	17	23	44	101	169	217	126	77, 78, 79
80	Angina Pectoris	27	17	10	1	1	3	10	12	22	20	25	83	7	7	24	47	—	—	—	—	1	1	5	8	9	3	80
81B	Arterial Sclerosis	18	11	7	—	1	5	6	6	2	2	2	—	1	2	2	4	—	—	—	—	1	—	—	2	12	3	81B
89, 90	Bronchitis	512	228	284	3	7	205	177	120	10	9	11	19	1	11	11	14	90	64	13	3	3	10	36	64	127	102	89, 90
91	Broncho-pneumonia	51	25	26	—	—	16	21	14	2	2	2	—	—	2	3	4	26	22	—	1	—	1	—	—	1	—	91
92B	"Pneumonia" (undefined)	90	43	47	3	—	35	27	25	6	5	8	8	—	6	6	10	24	28	11	—	4	4	7	8	2	2	92B
96	Asthma	52	29	23	—	1	15	19	17	22	22	23	—	4	20	24	36	1	—	1	—	2	7	7	13	16	5	96
103A	Inflammation of the Stomach	37	26	11	—	—	17	13	7	11	15	6	—	—	14	10	11	14	5	5	1	3	—	2	4	2	1	103A
102, 103B	Other Disease of Stomach	43	26	17	—	—	16	11	16	16	19	13	—	—	19	13	30	6	1	4	1	1	5	8	4	10	3	102, 103B
104 & 105	Diarrhœal Diseases	114	63	51	—	3	40	52	19	6	6	6	—	1	4	9	8	50	30	16	2	1	2	3	1	4	5	104 & 105
109	Hernia, Intestinal obstruction	20	10	10	—	1	11	5	3	4	5	4	—	2	8	3	3	1	—	—	1	—	2	2	2	9	3	109
120	Bright's Disease	46	28	18	—	—	15	24	7	3	4	3	—	—	3	5	3	—	4	4	—	2	5	10	8	9	4	120
150	Congenital Malformations	30	14	16	—	1	7	16	6	8	7	9	—	2	5	13	8	22	3	1	1	1	2	—	—	—	—	150
151A	Premature Birth	545	325	220	—	11	212	171	151	35	37	33	—	6	37	34	52	545	—	—	—	—	—	—	—	—	—	151A
151B	Atrophy, Debility, and Marasmus of Infants	262	132	130	—	8	114	76	64	28	25	33	—	8	33	24	39	262	—	—	—	—	—	—	—	—	—	151B
152B	Atelectasis	24	13	11	—	—	5	11	8	18	16	21	—	—	10	26	34	24	—	—	—	—	—	—	—	—	—	152B
152C	Injury at Birth	24	16	8	—	—	13	4	7	26	29	21	—	—	39	14	40	24	—	—	—	—	—	—	—	—	—	152C
153	Lack of Care (0–3 months)	12	10	2	—	—	8	3	1	52	85	17	—	—	76	55	25	12	—	—	—	—	—	—	—	—	—	153
169	Drowning	51	51	—	6	1	6	11	27	19	23	—	22	5	7	14	43	—	—	1	5	13	19	10	2	1	—	169
188A	Syncope (age 1–70)	72	46	26	—	1	18	30	23	247	272	213	—	111	170	303	324	—	3	2	3	2	2	18	28	14	—	188A
189A	Heart Failure (age 1–70)	956	509	447	12	4	291	355	294	666*	632	711	500	308	633	669	722	—	12	25	18	33	97	189	352	230	—	189A
187, 188B, 189B–E	Other Ill-defined Causes	279	144	135	1	—	79	97	102	237	240	235	167	—	156	263	440	67	24	20	3	6	8	27	44	46	34	187, 188B
189F	Cause not Stated	51	30	21	—	—	1	12	38	421	469	368	—	—	56	333	623	19	2	1	2	—	1	7	3	6	10	189B–E
																												189F

deceased person resided. To retabulate deaths by the administrative area of occurrence would have involved an amount of labour which, under the exceptional circumstances of the present time, was prohibitive. On the other hand the information was readily available in regard to registration areas, and they were, therefore, adopted for the purposes of this table.

TABLE XXXVIII.—INQUEST CASES and UNCERTIFIED DEATHS in 1915: PROPORTIONS per 100 DEATHS in each REGISTRATION COUNTY.

Registration County.	Proportion per 100 deaths.		Registration County.	Proportion per 100 deaths.	
	Inquest Cases.	Uncertified Deaths.		Inquest Cases.	Uncertified Deaths.
England and Wales	6·96	1·37	Worcestershire	5·58	2·40
			Warwickshire	5·00	3·16
London { North of Thames ...	11·51	0·01	Leicestershire...	5·62	0·99
London { South of Thames ...	8·84	0·23	Rutlandshire...	5·79	1·16
Surrey	7·80	0·38	Lincolnshire	5·38	1·65
Kent	7·85	2·88	Nottinghamshire	5·37	2·10
Sussex	6·89	0·46	Derbyshire...	5·77	2·78
Hampshire	7·50	1·05	Cheshire	7·18	0·32
Berkshire	5·96	2·05	Lancashire	6·11	1·89
Middlesex	7·41	0·20	West Riding of Yorkshire ...	7·26	0·58
Hertfordshire	5·60	1·85	East Riding of Yorkshire ...	8·90	0·48
Buckinghamshire	5·00	2·21	North Riding of Yorkshire ...	6·32	0·50
Oxfordshire	5·30	1·37	Durham	5·34	3·29
Northamptonshire	4·11	2·53	Northumberland	7·41	1·92
Huntingdonshire	4·39	3·66	Cumberland	5·65	2·73
Bedfordshire	4·48	2·56	Westmorland	4·19	1·86
Cambridgeshire	4·41	1·82	Monmouthshire	6·23	1·10
Essex	6·41	1·92	Glamorganshire	8·39	0·21
Suffolk	6·26	2·17	Carmarthenshire	5·07	2·15
Norfolk	6·05	1·69	Pembrokeshire	5·24	5·67
Wiltshire	6·69	1·44	Cardiganshire	3·24	3·45
Dorsetshire	4·48	1·84	Brecknockshire	6·57	0·91
Devonshire	6·52	0·73	Radnorshire	5·04	4·20
Cornwall	7·48	0·72	Montgomeryshire	4·41	2·94
Somersetshire	6·55	0·63	Flintshire	4·84	2·23
Gloucestershire...	7·68	0·42	Denbighshire	3·52	1·65
Herefordshire	4·45	3·75	Merionethshire	2·36	1·33
Shropshire	5·78	2·93	Carnarvonshire	4·68	1·43
Staffordshire	6·46	1·44	Anglesey	3·44	2·17

It will be seen from the above table that the proportions of inquests ranged from 11·51 per cent. in London, North of the Thames, 8·90 in the East Riding of Yorkshire, 8·84 in London, South of the Thames, and 8·39 in Glamorganshire to 3·52 in Denbighshire, 3·44 in Anglesey, 3·24 in Cardiganshire, and 2·36 in Merionethshire. The proportions of uncertified deaths ranged from 5·67 per cent. in Pembrokeshire, 4·20 in Radnorshire, 3·75 in Herefordshire, and 3·66 in Huntingdonshire to 0·23 in London, South of the Thames, 0·21 in Glamorganshire, 0·20 in Middlesex, and 0·01 in London, North of the Thames.

Generally speaking the table presents the same features as did the last similar table which was given in the Annual Report for 1910 (page lxxix.), counties falling into the same categories as before, both as regards inquests and uncertified deaths.

The greatest variations between the two periods were :—decreases of 3·26 in the percentage of inquests in Buckinghamshire, 2·90 in those in Cumberland, and 2·11 in Montgomeryshire ; and in the case of uncertified deaths an increase of 1·61 in Pembrokeshire, and decreases of 1·48 in Carnarvonshire, and 3·46 in Anglesey.

These variations may be due in part to the nature of the causes of the deaths registered in the two years. For instance, the number of deaths subject to inquest in Cumberland was abnormally increased in 1910 by a mine explosion. No such ready explanation is to hand, however, in regard to Buckinghamshire and Montgomeryshire.

DEATHS IN INSTITUTIONS FOR THE SICK OR INFIRM.

The numbers of deaths occurring in various classes of institutions are shown on pages 259–273, with distinction of the four classes of area dealt with in this Report, and of sex and cause, but not of age.

Including those of 6,275 non-civilians the deaths in Poor Law Institutions (workhouses and workhouse infirmaries) numbered 64,097, those in lunatic asylums 14,379, and in hospitals 47,835. In addition to these, 1,056 occurred at addresses known as those of nursing homes, but it is probable that many more deaths in nursing homes were not recognised as such. The numbers quoted above yield the proportions in the following table, which is continued from previous Reports :—

TABLE XXXIX.

Public Institutions.	Percentage of Total Deaths.			Rate per 1,000 living.		
	Ten years, 1905–14.	1914.	1915.	Ten years, 1905–14.	1914.	1915.*
Workhouses and Workhouse Infirmaries.	10·55	11·51	11·40	1·52	1·61	1·81
Lunatic and Idiot Asylums ...	2·08	2·33	2·56	0·30	0·33	0·40
Hospitals...	7·31	8·41	8·51	1·05	1·18	1·18
Total	19·94	22·25	22·47	2·87	3·12	3·39

* Civilians only ; based upon estimated civil population, 1915.

UNITED KINGDOM.

Population.

The first complete census of the United Kingdom was taken in 1821, when the population numbered 20,893,584 persons ; during the 90 years, 1821–1911, the population more than doubled itself, the numbers enumerated at the beginning of April, 1911, amounting to 45,221,615 persons.

The method adopted for estimating the civil population of England and Wales has been described on page ix. The populations of the several divisions of the United Kingdom are provisionally estimated as follows :—

TABLE XL.—POPULATION ESTIMATED to the MIDDLE of the YEAR 1915.

—	Persons.	Males.	Females.
England and Wales (Civil population only) ...	35,358,896	15,993,554	19,365,342
Scotland	4,785,598	2,320,815	2,464,783
Ireland (Movements of Military taken into account).	4,337,000	2,139,000	2,198,000

Marriages.

The marriages in the United Kingdom during the year 1915 numbered 421,311, corresponding to a rate of 18·3 persons married per 1,000 of the population at all ages in 1914.

This rate was 3·0 per 1,000 above the corresponding rate in 1914 and 3·5 per 1,000 above the average rate in the ten years 1905–1914.

TABLE XLI.

—	Marriages, 1915.	Persons Married per 1,000 Living.	
		Ten Years, 1905–1914.	1915.
England and Wales	360,885	15·4	19·5*
Scotland	36,272	13·8	15·2
Ireland	24,154	10·4	11·1
United Kingdom	421,311	14·8	18·3*

* Based upon estimated population, mid. 1914.

Births.

The births registered in the United Kingdom in the year 1915 numbered 1,024,378 and were in the proportion of 22·2 per 1,000 of the population at all ages in 1914.

This rate was 1·7 per 1,000 below the corresponding rate in 1914; compared with the average in the ten years 1905–1914 the birth-rate in 1915 showed a decrease of 3·2 per 1,000.

TABLE XLII.

—	Births, 1915.	Births per 1,000 Living.	
		Ten Years, 1905–1914.	1915.
England and Wales	814,614	25·5	22·0†
Scotland	114,181	27·0	23·9
Ireland	95,583	23·2	22·0
United Kingdom	1,024,378	25·4	22·2†

† Based upon estimated population, mid. 1914.

Deaths.

The deaths registered in the United Kingdom in the year 1915 numbered 720,035 and were in the proportion of 15·6 per 1,000 of the population at all ages.

This rate was 1·2 per 1,000 above the corresponding rate in 1914; compared with the average in the ten years 1905–1914 the death-rate in 1915 showed an increase of 0·8 per 1,000.

TABLE XLIII.

—	Deaths, 1915.	Deaths per 1,000 living.	
		Ten years, 1905–1914.	1915.
England and Wales	562,253‡	14·5	15·7§
Scotland	81,631	15·8	17·1
Ireland	76,151	17·0	17·6
United Kingdom	720,035	14·8	15·6‖

‡ Including deaths of non-civilians.

§ Civil death-rate.

‖ Including civil deaths only for England and Wales.

Infant Mortality.

The following Table shows the proportion of deaths of infants under one year of age to 1,000 births in each division of the United Kingdom.

TABLE XLIV.

	Deaths under 1 year per 1,000 Births.	
	1905–1914.	1915.
England and Wales	115	110
Scotland	112	126
Ireland	93	92
United Kingdom	113	110

In Table 29 (pages 74, 76, 80 and 81) the population, marriages, births, deaths and principal causes of death are given for a series of years for the United Kingdom and for each of its three divisions.

BIRTHS AND DEATHS AT SEA.

Marine Register Book.—In accordance with the Births and Deaths Registration Act of 1874 and the Merchant Shipping Act of 1894, Commanding Officers of ships trading to or from British ports are required, under penalty, to transmit returns of all births and deaths occurring on board their ships to the Registrar-General of Shipping and Seamen, who furnishes certified copies of such returns to the Registrars-General of Births and Deaths for England, Scotland, and Ireland. Similar returns are furnished to the Registrars-General of Births and Deaths by officers in charge of His Majesty's ships. These returns of births and deaths at sea constitute the "Marine Register Book." During the year 1915, this register was increased by the addition of 130 entries of birth and 4,395 entries of death.

PROGRESS OF REGISTRATION.

The names in the alphabetical indexes of births, deaths, and marriages recorded in the national registers of England and Wales were increased during the year 1915 by 2,098,637, this addition raising the total of names in the indexes, which at the end of 1915 embraced a period of 78½ years, to 130,540,741. (Table 21.)

The following statements as to the number of prosecutions for offences against the Registration Acts and of searches in the registers have been prepared by the Secretary:—

OFFENCES AGAINST THE REGISTRATION ACTS.

In 1915, 12 persons, on prosecution by order of the Registrar-General, were convicted of different offences against the Registration Acts. The offences for which convictions were obtained were as under:—

For giving a false age when registering the death of an old-age pensioner	6
For otherwise giving false information to the registrar when registering a birth or death	1
For falsifying certificate of birth or death and using same as true ...	3
For failing to notify registrar of a burial performed without production of authority	1
For issuing a false medical certificate	1

In addition to the above prosecutions initiated by the Registrar-General, proceedings were taken by the Public Prosecutor in several cases of false notice and declaration for marriage.

Searches and Certificates.

Besides the certified copies of the registered births, deaths, and marriages kept in England and Wales pursuant to the Registration Acts, a large number of other registers and records are deposited in this Office under statute or other arrangement. A list of these various registers and records will be found on pages xxix–xxxii of the Annual Report for 1895. Searches may be made in any of these registers, and certificates obtained on payment of the prescribed fees.

During the 52 weeks ended 1st January, 1916, the total number of searches was 84,151, and of certificates issued 69,746. The total amount received in fees was 13,007*l.* 10*s.* 0*d.*

Table XLV affords an indication of the extent to which the copies of the records kept in this Office have been utilised by the public for legal evidence of births, deaths, and marriages since 1866.

Table XLV.

Years.	Total Searches.	Certificates Issued.	Amount Received. £	s.	d.
1866 (52 weeks)	12,135	10,017	1,860	15	6
1875 (52 weeks)	26,356	20,282	3,879	15	6
1885 (52 weeks)	36,450	27,682	5,317	13	6
1895 (52 weeks)	53,289	35,727	7,200	12	6
1905 (52 weeks)	65,142	50,310	9,611	9	0
1906 (52 weeks)	64,340	49,429	9,458	6	0
1907 (52 weeks)	69,249	53,058	10,194	9	0
1908 (53 weeks)	72,370	54,870	10,550	8	0
1909 (52 weeks)	73,543	54,674	10,568	8	0
1910 (52 weeks)	75,369	57,019	10,939	5	6
1911 (52 weeks)	75,005	56,347	10,875	6	0
1912 (52 weeks)	80,601	61,143	11,752	6	0
1913 (52 weeks)	79,315	60,356	11,613	19	0
1914 (53 weeks)	83,447	65,817	12,482	11	6
1915 (52 weeks)	84,151	69,746	13,007	10	0

In addition to the above, 62,080 searches were made during 1915 free of charge for the purpose of verifying the ages of persons claiming old age pensions, and 56,708 searches were also made free of charge to assist dependents of men serving with H.M. Forces to produce evidence of marriage and of the births of children under 16 years of age in connexion with claims to Naval and Military Separation Allowances, Pensions, &c.

T. H. C. Stevenson.

METEOROLOGY OF THE YEAR 1915.

Remarks on the Conspicuous Occurrences in the British Isles in 1915.

(Prepared in the Meteorological Office under the direction of Sir Napier Shaw, LL.D., Sc.D., F.R.S., Director.)

A Cool Year.

Wet January, February, July, and December, otherwise generally dry. Very little snow and frost. Great prevalence of East and North-East winds in spring.

The following are the outstanding features of the meteorology of the year 1915 :—

1. *Gales.*—The spring and autumn months, which generally bring many gales of considerable violence, were much quieter than usual, the only really stormy months being January, February, and December. The year opened with a Southerly gale, caused by a large and unusually deep depression that had been spreading over these islands since December 30th. Force 8 to 9 (Beaufort scale) was reported on all coasts, and at Pendennis Castle the velocity in the gusts reached 37 m/s. Further Southerly to Westerly gales affected some part of the coast daily during the succeeding fortnight, but none of these was of extreme violence, and it was not until the 15th, when a deep disturbance was centred off the north of Scotland, that a general gale occurred. Force 9 was very common, while squalls of force 10 were experienced in places in southern England, with gusts of 30 m/s at Southport and 35 m/s at Quilty. By the 16th a depression had developed over the North Sea, and the gale continued in most places from North-West veering to North. In the gusts the velocity attained 28 m/s at Kew and Dover, 30 m/s at Shoeburyness, and 31 m/s at Benson. Further gales, from between South-West and North-West, were felt on various parts of the coast from the 20th to 22nd, the greatest gust velocity reported being 31 m/s at Scilly.

By February 2nd an Atlantic depression caused a general Southerly to South-Westerly gale. On the 3rd, when the gale had become more widespread, gusts of 33m/s were experienced at Paisley, and of 34 m/s at Edinburgh. Further depressions on the 5th, 6th, and 7th produced gales—mainly from between South-West and South-East—on many parts of the coast. After a few days of relative quiet, a well-marked depression travelling eastward over southern Ireland and England on the 13th caused gales over an extensive area, force 10 was reported at some south coast stations, and force 11 in squalls at Dover. At the anemometrical stations the highest gust velocity was 35 m/s at Scilly and Pendennis Castle. Most parts of the coast experienced another gale from between South-West and South-East on the 16th and 17th, gusts of 34 m/s being recorded at Pendennis Castle. At Lerwick, South-East 10 continued for some hours.

No windstorm of importance was now reported until the 26th or 27th, when the extension eastward of an Atlantic depression was attended by Southerly to South-Westerly gales on our northern and western coasts. At Pendennis Castle and Southport the gust velocity reached 26 m/s, at Paisley 28 m/s, and at Edinburgh 32 m/s. In the rear of this depression on March 1st strong winds or gales from West, veering to North-West, prevailed over the whole Kingdom. The velocity in gusts attained 28 m/s at Holyhead, 30 m/s at Southport, and 29 m/s at Scilly.

The subsequent conditions were generally very quiet until the 18th, when they were temporarily interrupted by a Northerly gale over a considerable portion of the Kingdom. Force 9 or 10 was reported at many stations, and the gust velocity reached 28 m/s at Holyhead, and 30 m/s at Dover aud Spurn Head.

April brought Southerly gales to some stations in the north-west and north on the 2nd and 4th, to a much larger area on the 6th, and to all coasts on the 8th. As a rule the force was not greater than 8 or 9, but the gusts reached 28 m/s at Rosyth, 29 m/s at Scilly, 30 m/s at Paisley, and 31 m/s at Eskdalemuir. On the 9th, when the wind had veered to North-West, there were gusts of 29 m/s at Southport and Aberdeen. The rest of the month was quiet except very occasionally in the extreme north, and with the

exception of a slight gale in the English Channel on May 9th and 10th, there was no rough weather until July 17th. On that occasion, in the rear of a depression centred over the North Sea, a Northerly gale occurred at Spurn Head, and gusts exceeding 20 m/s on many other parts of the coast. From this date a long period of light winds began, and continued until broken by a slight Southerly gale in the West on October 7th. October being unusually free from gales, and the only subsequent occasions were a North-Easterly gale in the eastern part of the English Channel on the 25th, and a Southerly to South-Easterly gale over the greater part of the Kingdom on the 28th or 29th. Most of November was also very quiet, but gales were rather general between the 9th and 13th. On one or more of these dates force 9 was common on several sections of the coast, while at some western and north-western stations 10 was reported, and at Scilly and Dover 11. The extreme velocity recorded in the gusts was 34 m/s at Holyhead and Quilty and 38 m/s at Weaver Point on the 12th, and 39 m/s at Pendennis Castle and Scilly on the 13th.

December proved a very stormy month, few days failing to bring strong winds or gales. On the 6th there was a gust of 29 m/s at Scilly and Pendennis Castle; on the 6th 27 m/s at Spurn Head, 28 m/s at Shoeburyness, and 34 m/s at Pendennis Castle; on the 11th 30 m/s at Southport; and on the 15th 32 m/s at Plymouth. After a week's interval the gales recommenced in the west on the 22nd and continued daily on some portion of the coast until they became general and of great violence on the 27th. On the 22nd there was a gust velocity of 36 m/s at Weaver Point, and on the 27th, when a strong to whole gale blew over England and part of Ireland, the gust velocity recorded 29 m/s at Gorleston, 30 m/s at Shoeburyness and Warlingham, 39 m/s at Plymouth, and 40 m/s at Scilly and Pendennis Castle. This gale was the most serious of the year, and caused much structural damage and uprooted many trees. As many as 1,000 trees were blown down in the neighbourhood of Lampeter. By the 31st another gale had begun, but its full force was not developed until January 1st.

2. *Rainfall.*—Only four months, January, February, July, and December were wet over the Kingdom as a whole, but May had an excess of rain in most English districts. All the others had less rain than usual, and during the spring and autumn there were lengthy periods of drought. The excess during the wet months over nearly the whole of England and a portion of Ireland was, however, so pronounced that the aggregate rainfall for the year was much more than the average, and owing chiefly to some abnormal downpours in the east of Scotland in the autumn, there was a substantial excess in that district also. In Scotland North and West the percentage of the average was only about 80, while in England South-East it was as high as 131. January and February continued the almost daily rain that characterised the last six or seven weeks of 1914, the wetter of the two being February. The aggregate fall in July was nearly equal to that of February, but the wettest month of the year over the Kingdom generally was December. The four months following February were very dry, the driest being June, both in the actual fall and in the number of rain days. The dry months succeeding the rainy July had a higher total fall than those of spring and early summer, but the divergence from the average was very marked.

Heavy downpours accompanying thunderstorms are dealt with in a separate paragraph, but irrespective of these there were many falls exceeding 30 mm. within 24 hours. In January, apart from the usual heavy and continuous rains accompanying cyclonic disturbances in Snowdonia and other elevated regions in the west and north-west, 50 mm. fell at Marlborough, 53 mm. at Wexcombe, and 58 mm. at Mildenhall on the 3rd, 60 mm. at Glencarron on the 10th, and 54 mm. at Meltham on the 15th. February yielded many heavy falls. On the 1st there was 69 mm. at Ardnadam, on the 2nd 56 mm. at Delphi (Co. Mayo), on the 16th 43 mm. at Torquay and Falmouth, 50 mm. at Jersey, 75 mm. at Ashburton, 87 mm. at Holne, and 96 mm. at Princetown. Late in the month 41 mm. fell at Eskdalemuir and 46 mm. at Aspatria. In March the few heavy falls were confined to the north-western districts. On the 4th Fort William had 50 mm., Glencarron 62 mm., and Ballachulish (Loch Leven) 79 mm. A well-marked depression on May 13th yielded large quantities over southern England, the highest value being 50 mm. at Heathfield, and a similar quantity fell in the same region on the 17th.

Nearly all the heavy downpours of the next three months were associated more or less intimately with electrical disturbances, but on July 16th extremely heavy falls occurred over a wide area, the most striking being 72 mm. at Kingston-on-Soar, 73 mm. at Lichfield, and 80 mm. at Rugeley. On September 22nd 52 mm. came in a steady fall at Valencia; on the 24th 51 mm. at Southampton, and 65 mm. at Totland Bay. On the 25th, with a North-East and North wind, the precipitation round

the Moray Firth was abnormal, ranging from 96 mm. at Nairn to 179 mm. at Dalcross Castle. This was followed by further considerable falls on the 26th. On the 28th a very wide area over the southern counties of England received more than 30 mm., the heaviest falls being 45 mm. at Warlingham, 48 mm. at Newick, and 60 mm. at Margate. The latter part of October brought some heavy downpours. On the 23rd 58 mm. fell at Rousdon and 67 mm. at Sidmouth. Some days later further abnormally heavy falls occurred in the east of Scotland; 116 mm. fell at Durris on the 27th and 28th and 131 at Crathes between the 27th and 29th. On the same dates heavy downpours were recorded over nearly the whole of southern England and locally in Ireland. At Sandgate the value was 56 mm. and at Foffany, Co. Down, 90 mm. On the 31st there were further heavy falls, the largest being 56 mm. at Grayshott.

The greater part of the rain of November occurred between the 9th and 13th, when heavy downpours were general with a depression that made a detour over the southern parts of the Kingdom on the 12th. On this last date 51 mm. fell at Dublin and 80 mm. at Little Massingham. On the 13th there was 60 mm. at Bettws-y-Coed. Most of the heaviest rains in December came on the 4th, 5th, 9th, 14th, and 26th, but, relatively, few exceeded 35 mm. at ordinary altitudes. On the 4th Belper had 35 mm., on the 5th there was 37 mm. at Holyhead and Redruth, and 39 mm. at Darwen. On the 14th Falmouth and Dorchester had 48 mm. and Princetown 100 mm.

3. *Snowstorms.*—No generally severe storm was experienced, but occasionally the southern and more frequently the northern districts were covered. On January 22nd and 23rd heavy snow accompanied a strong Northerly wind in the south-east of England, and a considerable area had a covering ranging in depth from 19 cm. to 30 cm. On February 13th Hemel Hempstead reported a depth of 8 cm., and following a fall on the 22nd and 23rd a similar or greater depth covered a large area in Britain. During March slight snow was common in the northern and eastern districts, and on the 18th and 19th a large portion of the country was covered, the depth ranging from about 19 cm. in various Scottish localities to 10 cm. towards the south of England. The low temperature of November was accompanied by snow in many localities on the 15th and 16th, the greatest depth being 10 cm. at Chelmsford, Carnforth, and Ardross. With the milder temperature of December snow was very rare, almost the only fall being on the 9th and 10th, when there was about 10 cm. in parts of the north and north-west of England.

4. *Floods.*—The floods in the Thames Valley, which had commenced in December, 1914, continued to rise for some time in January, and were the highest since November, 1894. Large areas in southern England were under water for a time after the middle of February, and considerable local inundation occurred in consequence of the abnormal rain in the vicinity of Moray Firth at the end of September. A serious and destructive landslip at The Warren, between Dover and Folkestone, on December 19th was attributed to the excessive rainfall in that region.

5. *Dry Periods.*—There were several periods of absolute or partial drought. The first began on the 19th or 20th of May, and until the third week in June absolute drought prevailed over a large area in southern England. At Eltham it continued through 39 days, at Dover 37 days, Clifton (Bristol) 33 days, and at Bucklebury 32 days. Partial droughts continuing 6 weeks were experienced at Totland Bay and at a few places towards the north of England. Over extensive areas in the north of England a drought that commenced on the 2nd or 3rd of June continued for two or three weeks. The second period began on August 14th and continued over a large portion of the Kingdom until the 28th or later. At Waterford there were 16, and at Killerton 18 rainless days. Another rainless spell set in early in September and lasted two or three weeks—mostly in England. At Halstead (Essex) it continued for 20 days, and at Holme-on-Spalding-Moor and Bucklebury for 21 days. A similar droughty period began in the last week of October and continued in various parts of England for 18 or more days. At Weston-Turville, Wokingham and York (Deighton Grove) there was absolute drought during 20 days, and at Brandon (Suffolk) for 21 days. The last period began after the middle of November and continued through 13 days or longer over a considerable portion of the Kingdom; at Allan's Green (Bardon Mill) it prevailed for 18 days.

6. *Thunderstorms.*—Occasional brief thunderstorms accompanied the numerous depressions until the beginning of March, but during the succeeding eight weeks they were much rarer. In April the total number reported was no more than 27, or 65 less than in the corresponding month of the preceding year. The greater part of May was free, but between the 5th and 7th, and on the 21st or 22nd, thunderstorms occurred over

a large portion of England and Wales, and a few days later in the south-western districts. Very heavy rains were not common, but on the 6th, accompanying the storm in the Metropolis, between 50 mm. and 75 mm. fell locally in the City and a little further north. During most of June the weather was too settled for electrical disturbances, but on the 8th they were experienced in various parts of England, and on the 10th a local storm at Llanddeusant yielded 77 mm. of rain in less than three hours. With the break-up of the droughty conditions towards the end of the month thunderstorms became general, especially in the eastern half of Britain. The rain with these storms was very heavy in places ; on the 25th more than 50 mm. at Stockport, on the 30th 71 mm. at Buxton, and between 50 mm. and 75 mm. of rain and hail within an hour at Wellingborough. The thundery period that began in late June continued through July and until the middle of August. Very few days passed without a storm in some part of the Kingdom—often over a very considerable area. In July the total number reported from all the stations amounted to 794, and in August to 964. In July of the preceding year the number was only 550, and in August it was less. In numerous instances the accompanying rainfall was very heavy. On July 4th 65 mm. fell at Skegness, 48 at Llangammarch Wells, and 44 mm. at Hull. Several places in south-western England experienced a destructive hailstorm. At Shipham (Somerset) some of the stones were 5½ in. in circumference. On the 23rd there was 47 mm. of rain at Middlesbrough in an hour and a quarter. On August 2nd 44 mm. fell at Biggar (Peebleshire) in an hour ; at Ardross on the 12th there was 33 mm. in 45 minutes, and at Scaleby about 62 mm. in 90 minutes. At Tenbury on the 13th 16 mm. fell in 15 minutes, and at Warlingham on the 17th 37 mm. in 40 minutes. With the stable conditions prevalent during the greater part of September there was a complete absence of thunderstorms, but they passed over a very large area on the 1st, and occurred locally in Essex on the 13th, in the west and south-west between the 21st and 24th, and again a little later. Thunderstorms of the winter type passed over many parts of these Islands during the latter half of October, and also from time to time during November and December.

7. *Air Temperature.*—Only two months, July and November, were cold for the time of year over the whole Kingdom, and only August had a mean temperature above the average. The mean value for the year was a little below the average except in England East, the greatest departure being − 1° in Scotland East. Over these Islands generally the mean temperature was 1·5° lower than in 1914.

Neither January nor February brought any continuous frost and no abnormally low minima. Both months had a temperature rather above the average in England and slightly below in Ireland and Scotland. In the former month the thermometer rose to 60° at Torquay on the 13th, and fell to 13° at Braemar, and to 10° at Matfield on the 23rd. The first week of February gave maxima between 53° and 58° very generally, and the last week minima as low as 11° at Kingussie and Wolfelee, and 15° at Marlborough. Very few days had a maximum as low as 32° in January and not one in February. During March and April the mean temperature diverged little from the normal, but both months furnished a few high maxima and some low minima. The The first reading of the year above 60° occurred at Crieff on March 12th, and on the 14th and 24th readings between 60° and 65° were common. On March 20th there was a minimum as low as 11° at Balmoral, and 15° at Logie Coldstone ; on the 28th 14° at Wellington (Shropshire), and on the 30th 19° at Raunds and some other stations. On April 1st the thermometer descended to 22° at Kingston-on-Soar, and much later in the month readings of about 25° were noted in various districts. Between the 28th and 30th maxima about 70° became rather common, but earlier in the month some were unduly low for the time of year.

May fully maintained its reputation for its great range of temperature. Between the 6th and 8th there were maximum readings as high as 70°, and between the 21st and 26th an outburst of premature summer gave readings of about 80°. On the 12th and 13th, on the other hand, the maxima were abnormally low, and on the nights of the 13th and 14th sharp frost was experienced, doing much injury to farm and garden produce in the north-west of England. At Leyland the thermometer fell to 25° in the screen and to 20° on the grass. June gave the greatest heat of the year. The 4th, with bright, anticyclonic conditions, saw the beginning of a brief spell of extreme heat, which culminated on the 8th with maxima as high as 90° at Cromer and Norwich, and but little lower in the east and south-east of England generally. The minimum readings for the month occurred either on the 1st or between the 18th and 21st, and were unusually low. Frost was experienced over a very wide area, and a considerable amount of damage done to tender vegetation in England.

Although generally cold for the time of year July yielded some high temperatures. On the 3rd and 4th maxima above 80° were recorded in the south-east and east of England. July was the only month with no minimum as low as 32° in the screen. No very high maximum and few low minimum readings occurred in August, but towards the end of the month the thermometer sank to 30° or 31° in some Scottish localities. September was cold both early and late in the month, but between the 16th and 18th there was a return to summer, the thermometer rising to 80° locally in the south-eastern and midland counties, and to nearly as high in several other parts of the Kingdom. The temperature of October was not far from the normal, but became rather low at the end. November diverged more from the normal than any other month, and was, in many parts of the country, the coldest November on record. At Dublin it was the coldest since 1878. The rigorous temperature was especially severe in the north-west of England. Except in Scotland North December was milder than January, and in all the English districts the temperature exceeded the normal, the departure being nearly 4° in the east and south-east. High maxima for the time of year were frequent and low minima rare. On the 4th, however, many stations in the north had a no higher maximum than 32°, and at Nairn the figure was as low as 28°. One or two days later were also cold in the north. Some severe passing frosts occurred—mostly in Scotland. At Kingussie on the 4th the minimum was 9°, and at Balmoral on the 5th a degree lower.

8. *Sea Temperature.*—The mean temperature of the sea surface water ranged from 47° off the north-east of Scotland to 53° off the south-west of England, and except off the east and south-east of England it was slightly higher than the air readings on the coast.

9. *Fog.*—Although not a special feature, fog was frequently reported on various parts of the west and south-west coasts, and more rarely over a larger area, the chief months being May and October. Along the east and south coasts fog was seldom experienced, and except for a time in October, there was little fog over the inland districts.

10. *Bright Sunshine* was less than the average in England East and South-East and the English Channel, but exceeded it elsewhere. In almost all districts the divergence was small, the greatest being 0·48 hr. above the average in England North-West. In Ireland, England North-West and Scotland North and West the duration was longer than that of 1914, but in all other districts it was less.

11. *Barometer.*—In every month except January and July the pressure distribution was widely different from the average, or even quite abnormal. The mean distribution for the year, however, differed little from the normal, although the mean height of the barometer was considerably below the average in the southern half of the Kingdom, and the mean gradient consequently slighter than usual. The chief feature of the year was the persistency with which the distribution favoured winds between North and East in the spring, especially during May. The lowest readings of the year occurred with the depression of January 1st and 2nd in Ireland, Scotland, and over northern England, but in February or November elsewhere. The highest values were mostly recorded on November 20th or 21st, when an anticyclone extended over these Islands from the north-east and east. Some remarkably rapid local changes of pressure were recorded in December. In the rear of the depression centre of the 11th the barometer rose 7 millibars almost instantaneously at Blacksod, and on the 22nd there was a rise of 6 millibars at Valencia in an hour.

12. *Aurora.*—The phenomenon was much more common than during the year preceding. It was observed on at least one occasion in every month except May, June, and July. As a general rule it was reported in the northern half of Scotland, but it was also noted at Carrick-on-Suir in March, September, and October, while in November it occurred more frequently, and was seen as far south as Farnborough and Roche's Point. On December 6th it was reported in most parts of the Kingdom, and locally on some subsequent dates.

13. *Extremes of Temperature, etc.*—As in previous Annual Reports the following notes refer exclusively to the stations the results from which are given in the tables on pages 66–69.

The highest temperatures of the air were 90° at Cromer ; 89° at Camden Square ; and 88° at Cambridge.

The lowest temperatures were 14° at Llangammarch Wells ; 15° at Wistanstow and 17° at Buxton.

The heaviest totals of rain were 1411 millimetres at Llangammarch Wells ; 1344 millimetres at Falmouth ; and 1324 millimetres at Buxton.

The least falls of rain were 586 millimetres at Cromer ; 600 millimetres at Shields ; and 612 millimetres at Cambridge.

The stations with the greatest number of days of rain were Bettws-y-Coed with 227 ; Scilly Islands with 208 ; and Cromer with 207.

The stations with the least number of days of rain were Tottenham, with 146 ; Shrewsbury 148 ; Portsmouth 149.

14. *Further Information.*—Charts showing the distribution of pressure, temperature, sunshine, and rainfall for the year will be found in the Annual Summary of the Monthly Weather Report (issued by the Meteorological Office) for 1915.

A list of publications concerning the weather will be found in Meteorological Office Circular 001 "Statement of Provisions for the Supply of Information to the Public," which can be obtained on application at the Meteorological Office.