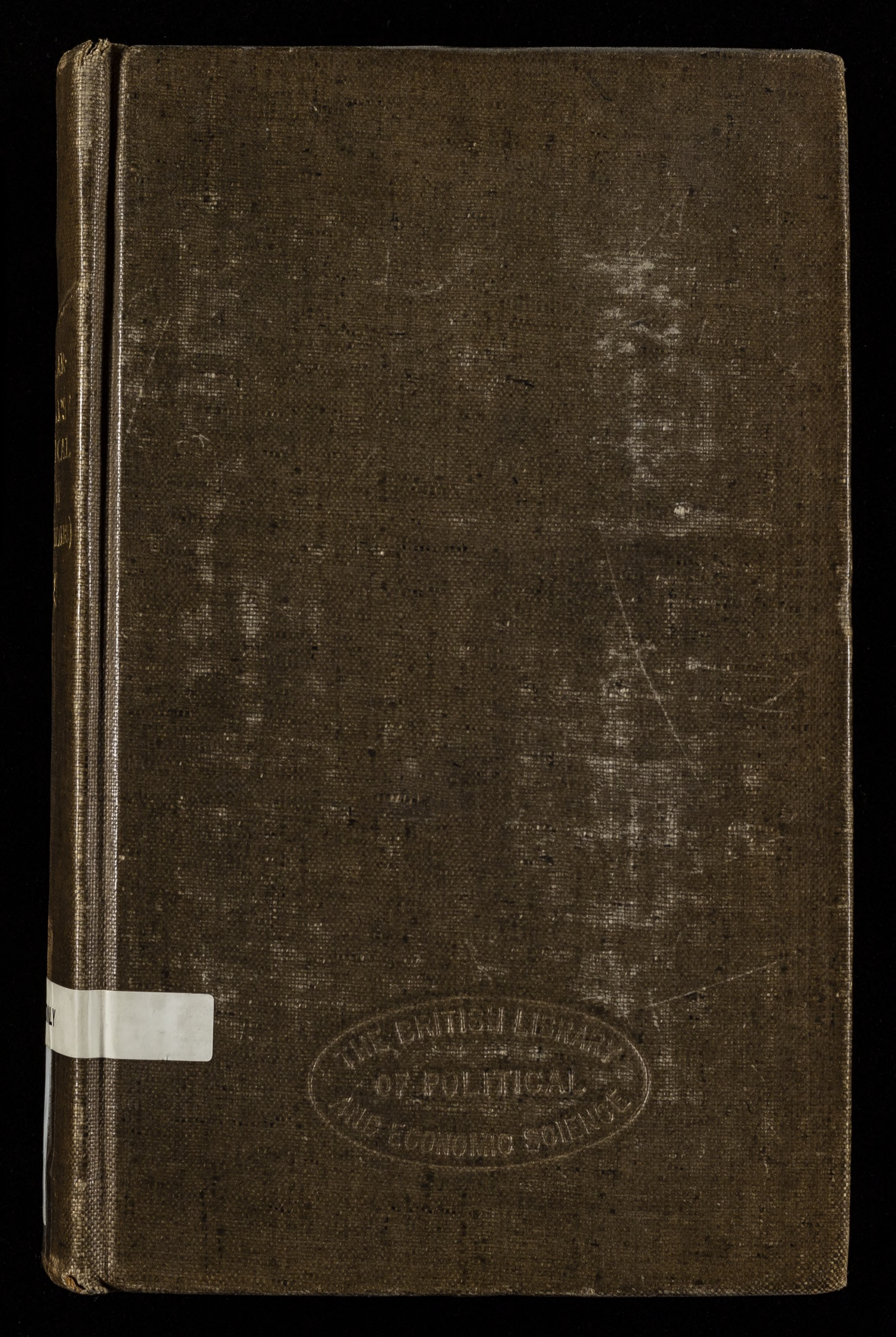


THE

REGISTRAR-GENERAL'S

STATISTICAL REVIEW

OF

ENGLAND AND WALES,

FOR THE YEAR

1925.

(New Annual Series, No. 5.)

TEXT.

LONDON
PRINTED AND PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE
To be purchased directly from H.M. STATIONERY OFFICE at the following addresses:
Adastral House, Kingsway, London, W.C.2; 120, George Street, Edinburgh;
York Street, Manchester; 1, St. Andrew's Crescent, Cardiff;
15, Donegall Square West, Belfast;
or through any Bookseller.

1927.

Price 5s. 0d. net.

70-141-3-25.

REGISTRAR-GENERAL FOR ENGLAND AND WALES.

CENSUS 1921 :—

PRELIMINARY REPORT : Population enumerated in each Administrative and Parliamentary Area. [Cmd. 1485]. Price 1*s.* (1*s.* 2*d.*)

COUNTY OF LONDON :—

Tables, Part I. Price 2*s.* 6*d.* (2*s.* 8*d.*)
Tables, Part II. Price 8*s.* (8*s.* 3*d.*)
Tables, Part III (Supplementary). Workplaces in London and Five Home Counties. Price 3*s.* (3*s.* 1½*d.*)
Text. Price 1*s.* 6*d.* (1*s.* 8*d.*)

TEXT AND TABLES. COUNTY OF :—		TEXT AND TABLES. COUNTY OF :—	
BEDFORD.	Price 6*s.* (6*s.* 2*d.*)	HERTFORD.	Price 7*s.* 6*d.* (7*s.* 8*d.*)
BERKSHIRE.	Price 7*s.* 6*d.* (7*s.* 8*d.*)	KENT.	Price 14*s.* (14*s.* 4*d.*)
BRECKNOCK AND RADNOR.	Price 9*s.* (9*s.* 2½*d.*)	LANCASTER.	Price 20*s.* (20*s.* 6*d.*)
BUCKINGHAM.	Price 6*s.* 6*d.* (6*s.* 8*d.*)	LEICESTER.	Price 8*s.* 6*d.* (8*s.* 8½*d.*)
CAMBRIDGE AND HUNTINGDON.	Price 10*s.* (10*s.* 2*d.*)	LINCOLN AND RUTLAND.	Price 16*s.* (16*s.* 4*d.*)
CARDIGAN.	Price 5*s.* 6*d.* (5*s.* 8*d.*)	MERIONETH AND MONTGOMERY.	Price 9*s.* (9*s.* 2½*d.*)
CARMARTHEN.	Price 6*s.* (6*s.* 2*d.*)	MIDDLESEX.	Price 10*s.* (10*s.* 3½*d.*)
CAERNARVON AND ANGLESEY.	Price 10*s.* (10*s.* 2½*d.*)	MONMOUTH.	Price 8*s.* 6*d.* (8*s.* 8½*d.*)
CHESTER.	Price 12*s.* 6*d.* (12*s.* 9½*d.*)	NORFOLK.	Price 9*s.* (9*s.* 3*d.*)
CORNWALL.	Price 8*s.* (8*s.* 2½*d.*)	NORTHAMPTON.	Price 10*s.* (10*s.* 2½*d.*)
CUMBERLAND AND WESTMORLAND.	Price 10*s.* (10*s.* 3*d.*)	NORTHUMBERLAND.	Price 9*s.* (9*s.* 3*d.*)
DENBIGH.	Price 6*s.* (6*s.* 2*d.*)	NOTTINGHAM.	Price 7*s.* 6*d.* (7*s.* 8½*d.*)
DERBY.	Price 10*s.* (10*s.* 3*d.*)	OXFORD.	Price 7*s.* (7*s.* 2*d.*)
DEVON.	Price 11*s.* 6*d.* (11*s.* 9*d.*)	PEMBROKE.	Price 6*s.* (6*s.* 2*d.*)
DORSET.	Price 7*s.* (7*s.* 2*d.*)	SALOP.	Price 7*s.* 6*d.* (7*s.* 8*d.*)
DURHAM.	Price 12*s.* 6*d.* (12*s.* 9½*d.*)	SOMERSET.	Price 10*s.* (10*s.* 3*d.*)
ESSEX.	Price 12*s.* 6*d.* (12*s.* 9*d.*)	STAFFORD.	Price 12*s.* (12*s.* 3½*d.*)
FLINT.	Price 5*s.* 6*d.* (5*s.* 8*d.*)	SUFFOLK.	Price 10*s.* (10*s.* 3*d.*)
GLAMORGAN.	Price 10*s.* (10*s.* 4*d.*)	SURREY.	Price 10*s.* (10*s.* 2½*d.*)
GLOUCESTER.	Price 9*s.* (9*s.* 3*d.*)	SUSSEX.	Price 11*s.* (11*s.* 3*d.*)
HAMPSHIRE.	Price 12*s.* (12*s.* 3*d.*)	WARWICK.	Price 6*s.* 6*d.* (6*s.* 8½*d.*)
HEREFORD.	Price 6*s.* (6*s.* 2*d.*)	WILTSHIRE.	Price 7*s.* 6*d.* (7*s.* 8½*d.*)
		WORCESTER.	Price 8*s.* (8*s.* 2½*d.*)
		YORKSHIRE.	Price 25*s.* (25*s.* 9*d.*)

SECTIONAL VOLUMES :—

Classification of Industries. Price 3*s.* 6*d.* (3*s.* 8½*d.*)
Classification of Occupations. Price 7*s.* 6*d.* (7*s.* 11*d.*)
Ecclesiastical Areas [England]. Price 17*s.* 6*d.* (17*s.* 10½*d.*)
Occupations. Price 24*s.* (24*s.* 6*d.*)
Index of Names and Places. Price 31*s.* (31*s.* 9*d.*)
Isle of Man. Price 2*s.* 6*d.* (2*s.* 7*d.*)
Jersey, Guernsey and adjacent Islands. Price 4*s.* (4*s.* 1½*d.*)
Industry Tables. Price 47*s.* 6*d.* (48*s.* 3*d.*)
Dependency, Orphanhood and Fertility. Price 30*s.* (30*s.* 6*d.*)
General Tables. Price 13*s.* (13*s.* 5*d.*)
Workplaces. Price 16*s.* (16*s.* 4½*d.*)
General Report with Appendices. Price 5*s.* 0*d.* (5*s.* 5½*d.*)

A Limited Number of Complete Sets of the whole Census Publications is available at the reduced price of £12 per set (Carriage Forward).

May be purchased through any Bookseller or directly from the Sale Offices of H.M. STATIONERY OFFICE *at the Addresses shown on the front cover. (All prices are net and those in parentheses include postage.)*

THE

REGISTRAR-GENERAL'S

STATISTICAL REVIEW

OF

ENGLAND AND WALES,

FOR THE YEAR

1925.

(New Annual Series, No. 5.)

TEXT.

LONDON:
PRINTED AND PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE
To be purchased directly from H.M. STATIONERY OFFICE at the following addresses:
Adastral House, Kingsway, London, W.C.2; 120, George Street, Edinburgh;
York Street, Manchester; 1, St. Andrew's Crescent, Cardiff;
15, Donegall Square West, Belfast;
or through any Bookseller.

1927.

Price 5s. 0d. net.

TABLE OF CONTENTS.

TEXT.

(25283) Wt. 20104/1383/2129 1375 5/27 Harrow G94/14a B

LIST OF CORRIGENDA IN THE STATISTICAL REVIEW, 1925.

TABLES: PART I—MEDICAL.

Table 4. (*Page* 13.)—Deaths. Cause No. 90 (1)–(4), year 1915. For 1670 *read* 11670.

Table 14. (*Page* 69.)—Devonshire (Ivybridge U.D.)—Estimated Population (mid-1925). For 1613 *read* 1683.

TABLES: PART II—CIVIL.

Table E. (*Page* 14.)—Devonshire (Ivybridge U.D.)—Estimated Population (mid-1925). For 1613 *read* 1683.

STATISTICAL REVIEW, 1925.

Note—Of the tables referred to below, those numbered in Arabic will be found in "Tables, Part I—Medical," and those lettered in "Tables, Part II—Civil," while those numbered in Roman numerals appear in the text of this volume.

In this year's Review it has been necessary to condense the treatment of the subjects usually dealt with, in order to make room for matter of a type not hitherto included, in the shape of an examination of the seasonal distribution of mortality from various causes (pages 85–111).

DEATHS.

The deaths of 472,841 persons were registered in England and Wales during 1925, 240,875 of these being males and 231,966 females. This number is almost the same as that for 1924, and, except for three recent years, 1920, 1921, and 1923, is the smallest registered since 1867, when the population was only 56 per cent. of that estimated for 1925.

Deaths of civilians, including all deaths of females and 99·81 per cent. of those of males, are referred in tabulation to their administrative area of residence, and therefore figure in all tables relating to portions of the country. It has been found, however, that similar treatment cannot be satisfactorily applied to the deaths of non-civilians, which are therefore excluded from all tables relating to local areas. Table 17, accordingly, so far as it refers to England and Wales as a whole, includes all deaths registered, but when referring to the population as subdivided by class of area, includes only deaths of civilians; and the same restriction to civilian mortality only applies to all tables embodying distinction of local area.

The 472,841 deaths correspond to a rate of 12·2 per 1,000 of the estimated population. When standardized* to correct for the deviation of the sex and age distribution of the population, as shown in Table LXI, from that of the standard population of 1901, this death-rate is reduced to 10·7.

As the population of this country in 1901 included relatively few infants and old people it forms a standard exceptionally favourable to low mortality. Its use for this purpose accordingly yields comparatively low standardized rates all round. In order to correct any wrong impression which might arise from this fact, and to provide standardized rates for this country comparable

* 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 (pages xxvii-xxxi). Standardized death-rates for the sexes separately quoted in this Review 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, page xx.)

with those of countries using the standard recommended by the International Statistical Institute (a composite population made up of those of a large number of European countries in 1900 or 1901), rates calculated upon the latter by the method suggested by the Institute on p. viii of the "Annuaire international de statistique, II. Mouvement de la population (Europe)," 1917, are shown in Table XII, as well as those based on the 1901 English standard, which is that always used elsewhere in this Review. It will be seen that use of the less favourable standard increased the rate from 10·7 to 12·0 per thousand.

The standardized rate of 10·7 in 1924 and 1925 is less than for any other year except 1923, when the low record of 10·3 was reached. The increase over 1923 is much the same for each sex.

Table 2 (Part I) shows that mortality was fairly low throughout the whole year, though not remarkably so in any quarter. In the first quarter, which, as usual, returns the highest rate of the four, mortality fell from the comparatively high rate of 16·6 in 1924, to 14·4, a record surpassed only in 1921 and 1923. The rate for the second quarter, 11·7, was the most favourable of the four, being in excess only of that for 1921, 11·5. The third quarter rate, 9·7, was higher than those for the three preceding years, but lower than for any year before 1922. The fourth quarter rate, 12·9, was the highest for any year since the great influenza epidemic of 1918.

To the rule of highest mortality in the first quarter, there have been but ten exceptions during the 88 years 1838–1925, and of these the most important have been due to mortality from epidemics in other quarters—cholera in the third quarter of 1849, diarrhœa in the third quarters of 1868 and 1899, influenza in the second quarter of 1891 and in the fourth quarter of 1918. The exceptional mortality of the fourth quarter of 1846 was ascribed to typhoid fever ('dothinenteria'), respiratory disease, and the effects of the Irish famine. In each of the other four years, 1874, 1884, 1893 and 1896, in which the first quarter did not furnish the highest mortality of the four, its place was taken by the fourth, the other cold quarter of the year. As in each year since 1911, the mortality of the third quarter, July—September, was the lowest of the four. This rule is not quite so constant as that by which the rate for the first quarter is highest, the 88 years furnishing 20 exceptions, the lowest rate in fifteen of these years being that of the second, and in five of the fourth quarter. All of these were years of high diarrhœal mortality. Each of the seven years 1895–1901, when mortality from infantile diarrhœa was persistently high, is included amongst the twenty exceptions to the rule, and the last year of high diarrhœal mortality in our annals, 1911, forms the last exception to the rule of minimum mortality in the summer quarter, the experience of subsequent years conforming to the simple type of yearly distribution, with winter maximum and summer minimum, discussed on pages 88–93.

Mortality of each sex.—Table 1 (Part I) shows that, like the (standardized) total mortality, that for each sex in 1925 was considerably lower than for any year before 1923.

The standardized mortality of males regularly exceeds that of females. Up to 1860 or so the excess was only about 9 per cent., but for the 15 years ending with 1914 it averaged about 20 per cent.

During the war this excess increased to a maximum of 37 per cent. in 1917, as a consequence of deterioration, by selective recruiting, of the male element in the civilian population, to which the mortalities compared necessarily refer during the war period, but Table I shows that the sex ratio for total mortality is now very much as it was before the war, the rate for females being the lower, in 1925, at each age compared. Change has occurred chiefly at 10–55, the relative position of males having improved considerably at 15–35, and deteriorated at 10–15 and at 35–55. It is worthy of note that the period of improvement includes that most affected by war service.

Table I.—England and Wales: Mortality of Males of Various Ages per cent. of that of Females of Like Age, 1911–14 and 1925.
(*See* Table XII.)

—	All Ages (standardized).	0—	5—	10—	15—	20—	25—	35—	45—	55—	65—	75—	85 and upwards
1911–14	121	120	102	96	110	116	121	125	130	132	125	121	113
1925 ..	123	122	106	102	103	107	113	133	135	135	129	121	108

Infant Mortality.

Of the 472,841 deaths registered during the year, 53,316, or 11·3 per cent., were those of infants under one year of age. This proportion has fallen greatly of late years, owing largely to reduction of the birth-rate. So recently as 1901–10 it was 22·6 per cent.

The rate of infant mortality resulting from these deaths is 75 per 1,000 births. Like the death-rate at all ages this is the lowest recorded in this country except in 1923, when it fell to 69.

The history of infant mortality in this country during the past 65 years is outlined in Table II. In this table, correction is made, by the figures in brackets, for the distortion of the conventional statement of infant mortality on the basis of births registered in the same year by the violent fluctuations in the birth-rate during and after the war. The method employed for this purpose is described in the Report for 1920. For the past three years this correction has affected the conventional rate but slightly, if at all, so it may be inferred that the effect of the war disturbance has now passed off, but to obtain a true picture of the course of infant mortality during the last eleven

years it is necessary to have regard to the corrected figures. These show that the experience of 1925, though apparently the same as that of 1924, was in reality slightly less favourable, the corrected rate rising from 74 to 75 deaths per 1,000 corresponding births, as a consequence of increase of the corrected diarrhœa rate from 6 to 7, probably as a result of increased summer temperature. From all other causes jointly, lower corrected mortality than that of 1925 has been returned only in 1921 and 1923.

Table II.—England and Wales : Infant Mortality, distinguishing Mortality from Diarrhœal Diseases, 1861–1925.

Deaths under 1 year of age per 1,000 Births.

	Diarrhœal Diseases.	Other Causes.	All Causes.		Diarrhœal Diseases.	Other Causes.	All Causes.		Diarrhœal Diseases.	Other Causes.	All Causes.
1861–65	15	136	151	1911	36 (36)	94 (93)	130 (129)	1923	7 (7)	62 (62)	69 (69)
1866–70	20	137	157	1912	8 (8)	87 (87)	95 (95)	1924	6 (6)	69 (68)	75 (74)
1871–75	19	134	153	1913	19 (19)	89 (90)	108 (109)	1925	**7** (7)	68 (68)	75 (75)
1876–80	16	129	145	1914	17 (17)	88 (87)	105 (104)				
1881–85	14	125	139	1915	15 (15)	95 (91)	110 (106)				
1886–90	17	128	145	1916	11 (10)	80 (81)	91 (91)				
1891–95	20	131	151	1917	10 (9)	86 (82)	96 (91)				
1896–00	31	125	156	1918	10 (10)	87 (88)	97 (98)				
1901–05	23	115	138	1919	9 (9)	80 (84)	89 (93)				
1906–10	18	99	117	1920	8 (9)	72 (76)	80 (85)				
1911–15	19 (19)	91 (90)	110 (109)	1921	14 (14)	69 (67)	83 (81)				
1916–20	9 (9)	81 (83)	90 (92)	1922	6 (5)	71 (70)	77 (75)				
1921–25	8 (8)	68 (67)	76 (75)								

The rate of fall in infant mortality has been very different in different portions of the first year of life. Table III shows the mortality per 1,000 registered births at ages under three months, at 3–6, and 6–12 months, for the forty-five years 1881–1925, and the proportions of the total infant mortality occurring at each age, the corrected figures for the last fifteen years being shown in brackets.

The corrected mortality for the first four weeks of life was the lowest yet recorded, the 1925 rate being equalled only by that for 1923, which at all later ages remains the lowest yet attained. The decline at all periods of infancy, including the earliest, is substantial and well maintained, but there is a general tendency for it to increase as age advances and the influence of environment increases.

The local differences in the rate for the first four weeks, recorded in Table 13, suggest that this is still capable of considerable further reduction, as it ranges from 26 in London and the South generally, to 37 in the North, and up to 49 in South Shields and Wigan. The rate of 26 in the South compares favourably even with the corresponding rate of 27·7 in New Zealand (1921–24) where the total rate (of 43·4 in 1921–24) gives that country year after year the distinction of national supremacy in this respect.

Table III.—England and Wales : Age Distribution of Infant Mortality, 1881–1925.

	Deaths per 1,000 Births registered.						Proportion of Deaths at each age.					
	Under 4 weeks.	4 Weeks to 3 months.	Total under 3 months.	3–6 months.	6–12 months.	Total under 1 year.	Under 4 weeks.	4 Weeks to 3 months.	Total under 3 months.	3–6 months.	6–12 months.	Total under 1 year.
1881–1885	—	—	67	28	44	139	—	—	484	199	317	1,000
1886–1890	—	—	69	30	46	145	—	—	480	204	316	1,000
1891–1895	—	—	74	31	46	151	—	—	488	207	305	1,000
1896–1900	—	—	74	34	48	156	—	—	477	215	308	1,000
1901–1905	—	—	70	28	40	138	—	—	505	202	293	1,000
1906–1910	40	23	63	22	32	117	344	194	538	188	274	1,000
1911–1915	39 (39)	20 (20)	59 (59)	20 (20)	31 (30)	110 (109)	356	185	541	180	279	1,000
1916–1920	37 (37)	17 (17)	54 (54)	14 (15)	22 (23)	90 (92)	412	183	595	160	245	1,000
1921–1925	33 (33)	13 (13)	46 (46)	11 (11)	18 (17)	76 (75)	439	168	607	150	243	1,000
1911	40 (40)	25 (25)	65 (65)	26 (26)	39 (38)	130 (129)	313	190	503	201	296	1,000
1912	38 (38)	18 (18)	56 (56)	15 (15)	24 (24)	95 (95)	405	186	591	156	253	1,000
1913	39 (40)	20 (20)	59 (60)	20 (20)	29 (29)	108 (109)	364	188	552	182	266	1,000
1914	39 (38)	19 (19)	58 (57)	19 (19)	28 (28)	105 (104)	368	185	553	179	268	1,000
1915	38 (38)	19 (19)	57 (57)	19 (18)	34 (31)	110 (106)	346	173	519	174	307	1,000
1916	37 (37)	17 (17)	54 (54)	15 (15)	22 (22)	91 (91)	404	185	589	166	245	1,000
1917	37 (37)	17 (17)	54 (54)	16 (15)	26 (22)	96 (91)	388	181	569	167	264	1,000
1918	36 (37)	17 (17)	53 (54)	16 (16)	28 (28)	97 (98)	376	175	551	163	286	1,000
1919	40 (41)	15 (16)	55 (57)	13 (14)	21 (22)	89 (93)	446	174	620	148	232	1,000
1920	35 (35)	16 (16)	51 (51)	12 (13)	17 (21)	80 (85)	441	196	637	156	207	1,000
1921	35 (35)	15 (15)	50 (50)	14 (14)	19 (17)	83 (81)	427	179	606	169	225	1,000
1922	34 (34)	13 (12)	47 (46)	11 (11)	19 (18)	77 (75)	442	165	607	143	250	1,000
1923	32 (32)	11 (11)	43 (43)	10 (10)	16 (16)	69 (69)	460	163	623	144	233	1,000
1924	33 (33)	12 (12)	45 (45)	11 (11)	19 (18)	75 (74)	440	160	600	147	253	1,000
1925	32 (32)	13 (13)	45 (45)	11 (11)	19 (18)	75 (75)	427	173	600	147	253	1,000

Distribution of Infant Mortality.—Table IV shows how infant mortality was distributed in 1925 between the sexes and throughout the country.

The rates for the county boroughs and for the North are, as usual, in considerable excess, the highest rate in the table for infants of both sexes being 96 for the Northern county boroughs and the lowest 51 for the rural districts of the South. In each year from 1911 onwards the rate for the Northern county boroughs has been the highest in the table, and in each year except 1923 that for the rural districts of the South has been the lowest. For each sex in each class of area mortality in 1925 decreased regularly from the North to the South of England.

The comparisons suggested by Table IV are facilitated by Table V, which states them, for infants of both sexes jointly, in percentage form. It shows that while, viewed in relation to the total for the country as a whole, excess of mortality is greatest in the county boroughs of the North, at 28 per cent., it is much decreased for these, and increased for the smaller towns and rural districts of the North, when comparison is made only with similar areas. Viewed in the latter way the advantage of the South is greatest for its county boroughs and least for its rural districts. The constancy of the decline from the North to South of England remains, of course, unaffected.

Table IV.—Distribution of Infant Mortality, 1925.*

	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	—	—	76	—	76	—	—	60	—	60	—	—	68	—	68
County Boroughs ..	107	90	69	98	98	84	69	48	74	76	96	80	59	86	87
Other Urban Districts	97	71	59	94	80	74	56	47	75	63	86	63	53	84	72
Rural Districts ..	86	68	56	83	71	70	53	46	62	57	78	61	51	73	64
All Areas	101	77	67	91	84	79	60	53	71	66	90	68	60	82	75

* 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.	Caernarvonshire.
	,, West.	Nottinghamshire.	Somersetshire.	Anglesey.
	Norfolk.	Derbyshire.		

Table V.—Proportionate Distribution of Infant Mortality, 1925. (Both Sexes).

	Mortality per cent. of that in England and Wales.					Mortality per cent. of that in England and Wales in the same class of Area.				
	North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.
London	—	—	91	—	91	—	—	—	—	—
County Boroughs	128	106	78	115	116	111	92	67	99	100
Other Urban Districts.. ..	115	85	71	112	96	120	88	74	118	100
Rural Districts..	104	81	68	97	86	122	94	80	114	100
All Areas	120	91	80	109	100	—	—	—	—	—

Note.—These percentages are based on the rates in Table VII.

Details of the distribution of infant mortality by sex, age, cause, legitimacy and locality will be found in Tables 8–14.

Mortality of Separate Weeks and Months of Age.—Tables VI and VII continue the analysis of infant mortality by detail of age, initiated in 1905 with distinction of registration counties mainly urban and mainly rural, and expanded in 1917 to the degree of geographical distinction now in use. Distinctions of sex and legitimacy are shown only for England and Wales as a whole, but are available for each of the populations dealt with. Some of the facts and rates applying to the illegitimate will be found in Table 13.

Table VII, like its eight predecessors, shows that the decrease of mortality from North to South is observable from the very first day of life. At each age in each class of area distinguished mortality is highest in the North, while the table reveals but three cases, urban districts at ages under one day and 5–6 months and rural districts at 2–3 weeks, in which the rate for the South is not lowest. For the county boroughs there is no exception to the rule of decrease of mortality from North to South. As in each of the eight preceding years with which comparison can be made the mortality of the first day was highest in the rural districts of the North.

As is usually the case, more deaths of illegitimate infants occurred on the first day than during the remainder of the first week, whereas with the legitimate this ratio is reversed. London, as usual, returns a particularly low neo-natal mortality, its rates for the first four weeks of life as a whole being the lowest in Table VII. This was shown in the Review for 1923 to have been a feature of London infant mortality for many years.

The comparisons suggested by Table VII are facilitated by Table VIII, which, with some condensation of ages, states the rates recorded for the various populations as ratios to those for England and Wales as a whole, and thus serves to analyse by age the comparison made in Table V for the first year of life as a whole.

In this table it may be noted that (1) the excess mortality of male infants is considerable from the first day of life onwards, and decreases as the end of the first year approaches; (2) the excess mortality of the great towns is but slight at birth, but

Table VI.—Deaths under One Year by Week and Month of Age, 1925.

			Under 1 Day.	1–7 Days.	Weeks. 1–2	Weeks. 2–3	Weeks. 3–4	Months. Total under 4 Weeks	Months. 4 Weeks to 2 Months	Months. 2–3	Months. 3–4	Months. 4–5	Months. 5–6	Months. 6–7	Months. 7–8	Months. 8–9	Months. 9–10	Months. 10–11	Months. 11–12	Total under 1 Year.
England and Wales.	All Infants	M	4,053	4,551	1,848	1,483	1,143	13,078	3,058	2,143	1,851	1,520	1,380	1,314	1,283	1,289	1,251	1,244	1,087	30,498
		F	3,107	3,369	1,470	1,141	806	9,893	2,163	1,607	1,272	1,061	945	980	947	1,028	971	956	995	22,818
		P	7,160	7,920	3,318	2,624	1,949	22,971	5,221	3,750	3,123	2,581	2,325	2,294	2,230	2,317	2,222	2,200	2,082	53,316
	Legitimate	M	3,706	4,264	1,727	1,405	1,076	12,178	2,814	1,935	1,706	1,395	1,297	1,217	1,198	1,224	1,183	1,178	1,022	28,347
		F	2,776	3,152	1,355	1,053	744	9,080	2,001	1,452	1,161	970	872	921	877	963	912	903	940	21,052
		P	6,482	7,416	3,082	2,458	1,820	21,258	4,815	3,387	2,867	2,365	2,169	2,138	2,075	2,187	2,095	2,081	1,962	49,399
	Illegitimate	M	347	287	121	78	67	900	244	208	145	125	83	97	85	65	68	66	65	2,151
		F	331	217	115	88	62	813	162	155	111	91	73	59	70	65	59	53	55	1,766
		P	678	504	236	166	129	1,713	406	363	256	216	156	156	155	130	127	119	120	3,917
All Areas.	North		2,816	3,119	1,428	1,109	867	9,339	2,200	1,611	1,315	1,144	1,037	997	1,002	1,009	1,000	1,007	976	22,637
	Midlands		2,157	2,391	996	819	576	6,939	1,542	1,038	869	664	607	632	589	660	636	582	539	15,297
	South		1,598	1,662	637	512	347	4,756	1,033	812	685	573	508	474	430	429	420	408	375	10,903
	Wales.		589	748	257	184	159	1,937	446	289	254	200	173	191	209	219	166	203	192	4,479
London			702	697	319	247	157	2,122	502	446	405	347	305	283	245	252	243	240	209	5,599
County Boroughs	England and Wales		2,548	2,874	1,274	989	794	8,479	2,112	1,515	1,303	1,072	1,047	1,005	957	1,065	1,011	977	956	21,499
	North		1,455	1,673	780	579	475	4,962	1,246	924	807	658	649	615	590	642	607	597	605	12,902
	Midlands		756	828	374	310	220	2,488	638	426	362	290	291	288	272	305	304	277	253	6,194
	South		202	226	68	65	60	621	138	98	72	83	61	56	51	62	58	48	52	1,400
	Wales		135	147	52	35	39	408	90	67	62	41	46	46	44	56	42	55	46	1,003
Other Urban Districts	England and Wales		2,411	2,637	1,119	860	656	7,683	1,707	1,175	990	768	634	696	701	682	667	672	630	17,005
	North		944	998	471	367	290	3,070	711	481	381	346	276	288	296	272	303	308	266	6,998
	Midlands		797	847	364	307	209	2,524	553	400	339	232	184	212	197	226	215	187	184	5,453
	South		391	408	140	88	80	1,107	217	157	134	94	91	86	74	68	70	66	63	2,227
	Wales		279	384	144	98	77	982	226	137	136	96	83	110	134	116	79	111	117	2,327
Rural Districts	England and Wales		1,499	1,712	606	528	342	4,687	900	614	425	394	339	310	327	318	301	311	287	9,213
	North		417	448	177	163	102	1,307	243	206	127	140	112	94	116	95	90	102	105	2,737
	Midlands		604	716	258	202	147	1,927	351	212	168	142	132	132	120	129	117	118	102	3,650
	South		303	331	110	112	50	906	176	111	74	49	51	49	60	47	49	54	51	1,677
	Wales		175	217	61	51	43	547	130	85	56	63	44	35	31	47	45	37	29	1,149
England and Wales	First Quarter		1,843	2,274	970	825	597	6,509	1,543	1,004	851	741	708	700	720	738	684	710	673	15,581
	Second ,,		1,841	1,987	760	622	428	5,638	1,067	730	586	479	447	480	528	637	629	586	614	12,421
	Third ,,		1,744	1,697	691	474	352	4,958	1,087	879	733	599	539	499	449	416	373	410	371	11,313
	Fourth ,,		1,732	1,962	897	703	572	5,866	1,524	1,137	953	762	631	615	533	526	536	494	424	14,001

Table VII.—Infant Mortality by Week and Month of Age, 1925.

			Under 1 Day.	1–7 Days.	Weeks. 1–2	Weeks. 2–3	Weeks. 3–4	Months. Total under 4 Weeks	Months. 4 Weeks to 2 Months.	Months. 2–3	Months. 3–4	Months. 4–5	Months. 5–6	Months. 6–7	Months. 7–8	Months. 8–9	Months. 9–10	Months. 10–11	Months. 11–12	Total under 1 Year.
England and Wales.	All Infants	M	11·16	12·53	5·09	4·08	3·15	36·01	8·42	5·90	5·10	4·19	3·80	3·62	3·53	3·55	3·44	3·43	2·99	83·98
		F	8·94	9·70	4·23	3·28	2·32	28·48	6·23	4·63	3·66	3·05	2·72	2·82	2·73	2·96	2·79	2·75	2·86	65·68
		P	10·08	11·15	4·67	3·69	2·74	32·33	7·35	5·28	4·39	3·63	3·27	3·23	3·14	3·26	3·13	3·10	2·93	75·03
	Legitimate	M	10·64	12·24	4·96	4·03	3·09	34·96	8·08	5·55	4·90	4·00	3·72	3·49	3·44	3·51	3·40	3·38	2·93	81·37
		F	8·33	9·46	4·07	3·16	2·23	27·24	6·00	4·36	3·48	2·91	2·62	2·76	2·63	2·89	2·74	2·71	2·82	63·16
		P	9·51	10·88	4·52	3·61	2·67	31·18	7·06	4·97	4·21	3·47	3·18	3·14	3·04	3·21	3·07	3·05	2·88	72·47
	Illegitimate	M	23·46	19·40	8·18	5·27	4·53	60·84	16·50	14·06	9·80	8·45	5·61	6·56	5·75	4·39	4·60	4·46	4·39	145·42
		F	23·47	15·39	8·15	6·24	4·40	57·64	11·49	10·99	7·87	6·45	5·18	4·18	4·96	4·61	4·18	3·76	3·90	125·21
		P	23·46	17·44	8·17	5·74	4·46	59·28	14·05	12·56	8·86	7·48	5·40	5·40	5·36	4·50	4·40	4·12	4·15	135·56
All Areas	North		11·23	12·43	5·69	4·42	3·46	37·23	8·77	6·42	5·24	4·56	4·13	3·97	3·99	4·02	3·99	4·01	3·89	90·24
	Midlands		9·64	10·68	4·45	3·66	2·57	31·00	6·89	4·64	3·88	2·97	2·71	2·82	2·63	2·95	2·84	2·60	2·41	68·34
	South		8·83	9·18	3·52	2·83	1·92	26·28	5·71	4·49	3·79	3·17	2·81	2·62	2·38	2·37	2·32	2·25	2·07	60·25
	Wales		10·72	13·62	4·68	3·35	2·89	35·26	8·12	5·26	4·62	3·64	3·15	3·48	3·80	3·99	3·02	3·70	3·50	81·53
London			8·52	8·46	3·87	3·00	1·91	25·75	6·09	5·41	4·91	4·21	3·70	3·43	2·97	3·06	2·95	2·91	2·54	67·95
County Boroughs	England and Wales		10·29	11·60	5·14	3·99	3·21	34·24	8·53	6·12	5·26	4·33	4·23	4·06	3·86	4·30	4·08	3·95	3·86	86·81
	North		10·82	12·44	5·80	4·31	3·53	36·91	9·27	6·87	6·00	4·89	4·83	4·57	4·39	4·77	4·51	4·44	4·50	95·96
	Midlands		9·73	10·66	4·81	3·99	2·83	32·03	8·21	5·48	4·66	3·73	3·75	3·71	3·50	3·93	3·91	3·57	3·26	79·74
	South		8·45	9·46	2·84	2·72	2·51	25·98	5·77	4·10	3·01	3·47	2·55	2·34	2·13	2·59	2·43	2·01	2·18	58·57
	Wales		11·62	12·65	4·48	3·01	3·36	35·12	7·75	5·77	5·34	3·53	3·96	3·96	3·79	4·82	3·62	4·73	3·96	86·33
Other Urban Districts	England and Wales		10·18	11·13	4·72	3·63	2·77	32·43	7·20	4·96	4·18	3·24	2·68	2·94	2·96	2·88	2·82	2·84	2·66	71·77
	North		11·60	12·27	5·79	4·51	3·56	37·74	8·74	5·91	4·68	4·25	3·39	3·54	3·64	3·34	3·72	3·79	3·27	86·02
	Midlands		9·27	9·85	4·23	3·57	2·43	29·36	6·43	4·65	3·94	2·70	2·14	2·47	2·29	2·63	2·50	2·18	2·14	63·43
	South		9·30	9·71	3·33	2·09	1·90	26·34	5·16	3·74	3·19	2·24	2·17	2·05	1·76	1·62	1·67	1·57	1·50	52·99
	Wales		10·12	13·92	5·22	3·55	2·79	35·61	8·19	4·97	4·93	3·48	3·01	3·99	4·86	4·21	2·86	4·02	4·24	84·38
Rural Districts	England and Wales		10·44	11·92	4·22	3·68	2·38	32·64	6·27	4·28	2·96	2·74	2·36	2·16	2·28	2·21	2·10	2·17	2·00	64·16
	North		11·90	12·79	5·05	4·65	2·91	37·31	6·94	5·88	3·63	4·00	3·20	2·68	3·31	2·71	2·57	2·91	3·00	78·13
	Midlands		10·03	11·89	4·29	3·36	2·44	32·01	5·83	3·52	2·79	2·36	2·19	2·19	1·99	2·14	1·94	1·96	1·69	60·63
	South		9·29	10·14	3·37	3·43	1·53	27·77	5·39	3·40	2·27	1·50	1·56	1·50	1·84	1·44	1·50	1·65	1·56	51·39
	Wales		11·12	13·79	3·88	3·24	2·73	34·75	8·26	5·40	3·56	4·00	2·80	2·22	1·97	2·99	2·86	2·35	1·84	73·00

Table VIII.—Infant Mortality at various Ages, in different Classes of Area and Sections of the Country, per cent. of that of all Infants of the same Age in England and Wales, 1925.

		Under 1 day.	1–7 days.	1–2 weeks.	2–3 weeks.	3–4 weeks.	Total under 4 weeks.	4 weeks –2 months.	2–3 months.	3–6 months.	6–9 months.	9–12 months.	Total under 1 Year.
England and Wales .. All Areas	P	100	100	100	100	100	100	100	100	100	100	100	100
	M	111	112	109	111	115	111	115	112	116	111	108	112
	F	89	87	91	89	85	88	85	88	84	88	92	88
North		111	111	122	120	126	115	119	122	123	124	130	120
Midlands		96	96	95	99	94	96	94	88	85	87	86	91
South		88	82	75	77	70	81	78	85	87	77	72	80
Wales		106	122	100	91	105	109	110	100	101	117	112	109
London		85	76	83	81	70	80	83	102	114	98	92	91
County Boroughs—													
England and Wales ..		102	104	110	108	117	106	116	116	122	127	130	116
North		107	112	124	117	129	114	126	130	139	143	147	128
Midlands		97	96	103	108	103	99	112	104	108	116	117	106
South		84	85	61	74	92	80	79	78	80	73	72	78
Wales		115	113	96	82	123	109	105	109	114	131	134	115
Other Urban Districts—													
England and Wales ..		101	100	101	98	101	100	98	94	89	91	91	96
North		115	110	124	122	130	117	119	112	109	109	118	115
Midlands		92	88	91	97	89	91	87	88	78	77	74	85
South		92	87	71	57	69	81	70	71	67	56	52	71
Wales		100	125	112	96	102	110	111	94	101	136	121	112
Rural Districts—													
England and Wales ..		104	107	90	100	87	101	85	81	71	69	68	86
North		118	115	108	126	106	115	94	111	96	90	93	104
Midlands		100	107	92	91	89	99	79	67	65	66	61	81
South		92	91	72	93	56	86	73	64	47	50	51	68
Wales		110	124	83	88	100	107	112	102	92	75	77	97

gradually increases with age, reaching its maximum of 30 per cent. in the last three months of infancy; and (3) that the excess of mortality in the North over that in the South of England is greater than that of the county boroughs over the rural districts, and of more general application to all stages of infancy, including, as the urban excess does not, the first week of life. In all these respects Table VIII is in general accord with the experience of other recent years.

Causes of Infant Mortality.—The causes of infant mortality are set forth in Tables 8–12, which compare the records of 1925 with those of previous years, and show the incidence of mortality from each cause upon infants distinguished by sex, age, legitimacy, class of area, and section of the country. From these tables has been prepared the comparison in Table IX between the mortality from the chief causes distinguished at various ages in 1925, 1924, and 1920–24.

Table IX.—England and Wales: Comparison of Infant Mortality Rates in 1925 with those of recently preceding years.

	Under 4 weeks.	4 weeks to 3 months.	3–6 months.	6–9 months.	9–12 months.	Under 1 year.
	Increase or Decrease of Mortality in 1925, per cent. of that in 1924.					
Crude	− 2	+ 1	+ 4	+ 1	+ 1	—
Revised.. ..	− 2	+ 1	+ 4	+ 1	+ 3	—
	Increase or Decrease of Mortality in 1925, per cent. of that in 1920–24.					
Crude	− 5	− 7	− 4	+ 2	+ 9	− 3
Revised.. ..	− 4	− 6	− 3	− 1	+ 5	− 3
	Increase or Decrease from various Causes, as compared with 1920–24.					
Measles (7)	− 0·01	—	—	+ 0·09	+ 0·15	+ 0·22
Whooping cough (9)	+ 0·04	+ 0·23	+ 0·17	+ 0·34	+ 0·40	+ 1·19
Influenza (11)	+ 0·02	− 0·01	− 0·07	− 0·07	− 0·05	− 0·17
Tuberculosis, all forms (31–37) ..	—	− 0·06	− 0·09	− 0·05	+ 0·03	− 0·17
Convulsions (80)	− 0·28	− 0·24	− 0·10	− 0·08	− 0·05	− 0·76
Bronchitis and pneumonia (99–101)	—	− 0·23	+ 0·02	+ 0·07	+ 0·33	+ 0·18
Diarrhœa and enteritis (113) ..	− 0·15	− 0·26	− 0·23	− 0·09	− 0·02	− 0·75
Developmental and wasting diseases (159, 160, 161 : 1, 162 : 2).	− 1·35	− 0·04	− 0·01	− 0·03	+ 0·03	− 1·42
Congenital defects (malformations and atelectasis) (159, 162 : 2).	*+ 0·10*	*+ 0·26*	*+ 0·05*	*+ 0·04*	*+ 0·03*	*+ 0·47*
Congenital debility, sclerema and icterus (160).	*− 0·68*	*− 0·19*	*− 0·06*	*− 0·07*	—	*− 1·02*
Premature birth (161 : 1)	*− 0·77*	*− 0·10*	—	—	—	*− 0·86*
Suffocation—in bed or not stated how (180 part).	− 0·02	− 0·01	+ 0·02	—	—	− 0 01
Other causes	+ 0·09	− 0·31	− 0·19	—	− 0·03	− 0·42
All causes	− 1·66	− 0·93	− 0·48	+ 0·18	+ 0·79	− 2·11
	Percentage Increase or Decrease as compared with 1920–24.					
Measles (7)	− 50	—	—	+ 23	+ 20	+ 17
Whooping cough (9)	+ 57	+ 43	+ 28	+ 49	+ 56	+ 45
Influenza (11)	+ 33	− 8	− 39	− 35	− 26	− 23
Tuberculosis, all forms (31–37) ..	—	− 43	− 24	− 11	+ 7	− 12
Convulsions (80)	− 13	− 24	− 14	− 16	− 14	− 16
Bronchitis and pneumonia (99–101)..	—	− 6	+ 1	+ 2	+ 9	+ 1
Diarrhœa and enteritis (113) ..	− 18	− 13	− 8	− 6	− 2	− 9
Developmental and wasting diseases (159, 160, 161 : 1, 162 : 2).	− 5	− 1	− 1	− 6	+ 13	− 4
Congenital defects (malformations and atelectasis) (159, 162 : 2).	*+ 2*	*+ 30*	*+ 13*	*+ 24*	*+ 30*	*+ 8*
Congenital debility, sclerema and icterus (160)	*− 15*	*− 11*	*− 7*	*− 24*	—	*− 14*
Premature birth (161 : 1)	*− 5*	*− 7*	—	—	—	*− 5*
Suffocation—in bed or not stated how (180 part).	− 7	− 6	+ 22	—	—	− 2
Other causes	+ 2	− 18	− 12	—	− 3	− 4
All causes	− 5	− 7	− 4	+ 2	+ 9	− 3

Note.—The percentages in this table are based on rates per 100,000 births, and differ on this account from those derivable from Table III.

The fall of 3 per cent. as compared with the preceding quinquennium is seen to be chiefly accounted for by congenital debility, premature birth, convulsions, and diarrhœa, which jointly record a decline of 3·39 deaths per 1,000 births. The chief offset to this is the increase of 1·19 from whooping cough, which, with minor changes, reduces the total fall from all causes to 2·11 per 1,000 births. The fall has occurred chiefly in the first four weeks of life, while the rates for the second six months have risen as a result of increased mortality from whooping cough, measles, and bronchitis and pneumonia.

Table 9 displays many remarkable changes within the last eleven years in the causes to which infant mortality is attributed. The infectious diseases rate, chiefly due to whooping cough, varies considerably from year to year, but shows less decline than those for many other causes, though looking back to the beginning of the century the figures now prevailing are little more than half those of twenty-five years ago. Measles, whooping cough and diphtheria all exhibit substantial declines. The fall recorded for tuberculosis is much greater—indeed, this disease is rapidly losing all importance as a contributor to the registered mortality of infancy. During the present century the rate has fallen from 6·41 deaths per 1,000 births in 1901 to 1·26 in 1925. The decline is great for each of the forms of this disease distinguished in Table 9, but greatest of all for peritoneal and intestinal tubercle, mortality from which is now less than one-tenth of that recorded in the early years of the century, and is still falling rapidly. How far this change is a real one, dependent on such causes as improvement of the milk supply, and how far it is due to ascription in earlier years of deaths to abdominal tuberculosis on evidence which would not now be accepted, must remain largely an open question. But it may be noted that during the whole of the present century the mortality of infants returned for all the forms of tuberculosis distinguished in the table has been falling steadily. Another very striking fall is that for convulsions. During the 11 years covered by Table 9, this mortality has been reduced by more than one half, and it is now less than a quarter of that returned at the commencement of the century. Here again, improvement in certification, attributing the death to the cause of the convulsions, is probably largely responsible for the change. Mortality from respiratory disease, which now forms almost a quarter of that from all causes, shows an interesting change. In the first two years of the century the death-rate ascribed to bronchitis exceeded that to pneumonia, but since then the bronchitis rate has been reduced by more than one half, while that from pneumonia has remained fairly constant, so that it is now more than double the bronchitis rate. In all probability this change is mainly one of nomenclature, the attention of the medical profession having been called a few years ago to the fact that the proportion of bronchitis to pneumonia in death certification for young children was in much

excess of that met with in the pathological departments of hospitals. As the distinction between these diseases in the records of infant mortality must be regarded as of doubtful validity, they have for many purposes been combined. Infant mortality from "other respiratory diseases" has fallen of late years even faster than that from bronchitis, the 1925 rate of 0·33 comparing with that of 0·75 in 1911. Here the greatest fall has been in diseases of the larynx, but pulmonary congestion, etc. (103) also shows a large fall, which is probably due to change in nomenclature in favour of pneumonia. An exception to the general rule of declining mortality is presented by hernia, intestinal obstruction, mortality from which rather tends to increase. Table 17 shows that the great bulk of these infant deaths are due to obstruction, and the only detailed record available for any year shows that in 1917 81 per cent. of infant deaths from intestinal obstruction were ascribed to intussusception. It is, of course, to be expected that as facilities for accurate diagnosis increase, the proportion of deaths for which a cause such as intussusception is recognised should increase to a corresponding extent.

The decline of mortality during the first four weeks of life falls largely under the head of congenital debility, the rate at this age from which is now 3·20 deaths per 1,000 births as against 6·81 in 1906–1910. Premature birth, on the other hand, shows comparatively little change, its variation during the present century having been only between a rate of 21·68 in 1919 and of 17·64 in 1925. But even in this case the fact that the latest rate is also the lowest gives some indication of progress. Atelectasis resembles premature birth in regard to its relative insusceptibility to remedial treatment after birth, and we find, accordingly, that its mortality also has varied little during the past twenty-five years.

Diseases of the umbilicus show a rapid decline, which probably affords one indication amongst many others of the increasing care now given to infancy.

Another is provided by the mortality of 0·57 for overlying, a rate which has fallen steadily from 1·71 in 1901. In contrast, however, with these evidences of increasing care of the infant after birth the continued increase of mortality from injury at birth must occasion some concern. This has steadily grown from 0·65 in 1901, the lowest rate of the century, to 1·49 in 1925, the highest rate. The fact that this mortality has more than doubled during the past twenty-five years suggests an increasing tendency to interfere, at the infant's expense, with the natural processes of childbirth; and some support may perhaps be lent to this view by certain hitherto unpublished figures relating to the social incidence of infant mortality in 1921. It was found that when for that year these returns were graded into five social strata in accordance with the occupation of the father, the mortality from birth injury was 1·8 in the first social class, 1·6 in the second, 1·3 in the third, 1·4 in the fourth, and 1·1 in the fifth.

Table X.—England and Wales : Infant Mortality by Sex and Legitimacy, 1925.

		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 four weeks	36·01	28·48	34·96	27·24	60·84	57·64	126	128	106	174	212
	4 weeks—3 months	14·32	10·85	13·63	10·36	30·56	22·48	132	132	136	224	217
	3–6 months	13·08	9·44	12·62	9·01	23·86	19·50	139	140	122	189	216
	6–9 ,,	10·70	8·51	10·45	8·28	16·70	13·75	126	126	121	160	166
	9–12 ,,	9·86	8·41	9·71	8·27	13·45	11·84	117	117	114	139	143
	Total under 1 year	**83·98**	**65·68**	**81·37**	**63·16**	**145·42**	**125·21**	**128**	**129**	**116**	**179**	**198**
All ages under one year.	Measles (7)	1·77	1·32	1·71	1·32	3·04	1·21	134	130	251	178	92
	Whooping cough (9)	3·65	3·98	3·61	3·95	4·53	4·68	92	91	97	125	118
	Tuberculosis, all forms (31–37)	1·40	1·12	1·36	1·09	2·29	1·64	125	125	140	168	150
	Syphilis (38)	0·97	0·67	0·80	0·55	5·00	3·40	145	145	147	625	618
	Convulsions (80)	4·70	3·21	4·60	3·11	7·17	5·60	146	148	128	156	180
	Bronchitis and pneumonia (99–101)	18·62	14·37	18·40	14·14	23·80	20·06	130	130	119	129	142
	Diarrhœa and enteritis (113)	8·64	6·24	8·23	5·78	18·39	17·09	138	142	108	223	296
	Developmental and wasting diseases (159, 160, 161 : 1, 162 : 2).	33·53	26·66	32·63	25·80	54·89	46·87	126	126	117	168	182
	Congenital defects (malformations and atelectasis) (159, 162 : 2).	*6·64*	*5·58*	*6·62*	*5·51*	*6·96*	*7·30*	*119*	*120*	*95*	*105*	*132*
	Congenital debility, sclerema and icterus (160).	*7·55*	*5·22*	*7·11*	*4·97*	*17·85*	*11·06*	*145*	*143*	*161*	*251*	*223*
	Premature birth (161 : 1).	*19·34*	*15·86*	*18·89*	*15·32*	*30·08*	*28·50*	*122*	*123*	*106*	*159*	*186*
	Other causes	10·70	8·11	10·03	7·42	26·31	24·66	132	135	107	262	332
	All causes	**83·98**	**65·68**	**81·37**	**63·16**	**145·42**	**125·21**	**128**	**129**	**116**	**179**	**198**

It is of course conceivable that more skilled attendance upon class 1 confinements leads to the recognition of many deaths as due to birth injury (cerebral laceration, etc.) which in other circumstances are referred to other causes, but whether explanation on these lines can account for so great an apparent excess of risk for the upper and middle class infant is a matter which must be left for the consideration of obstetricians.

Table X, which contrasts the mortality of male with that of female and of legitimate with that of illegitimate infants, shows that the excess in mortality of males, which has greatly increased along with and in consequence of (Review for 1921) the fall in infant mortality during the present century, was only 28 per cent. in 1925, as against its maximum of 31 per cent. in 1922.

The male excess is shared, as usual, by all the principal causes of death quoted except whooping cough, its extent varying from 19 per cent. in the case of congenital defects to 46 in that of convulsions.

As is regularly the case, the excess mortality of males was greater for legitimate than for illegitimate infants—29 per cent. for the legitimate as against 16 for the illegitimate (Table X). This has been so in, at least, each of the last 20 years. The excess mortality of males is greater for the legitimate because excess in the mortality of the illegitimate is year after year greater for females (98 per cent. for females and 79 for males in 1925).

Distribution throughout the country of Infant Mortality from various causes.—Table XI, which is derived from Table 12, furnishes an analysis by cause of the differences in total mortality under one year of age shown in Tables IV and V.

The greatest departures from the average mortality of the whole country in Table 12 are furnished by the county boroughs of the North, with excesses under every cause distinguished, ranging from 6 to 98 per cent. and aggregating to 20·93 deaths per 1,000 births, and by the rural districts of the South, with comparatively favourable experience under every head except congenital malformations and injury at birth, aggregating to an advantage of 23·64 fewer deaths than average from all causes.

The causes of death responsible for these variations in infant mortality throughout the country are set forth in Table XI. The usual features of this table, including increase of mortality from diarrhœa and respiratory disease from the country districts to the large towns in all sections of England and Wales, and of that from premature birth from the South to the North of England in all classes of area, as well as excess of mortality from convulsions in Wales, are repeated in 1925.

Table XI.—Comparison of Infant Mortality from the Principal Causes in different Classes of Area and Sections of the Country, 1925.

	Measles (7).	Whooping Cough (9).	Tuberculosis, all forms (31–37).	Syphilis (38).	Convulsions (80).	Bronchitis and Pneumonia (99–101).	Diarrhœa and Enteritis (113).	Congenital Malformations (159).	Congenital Debility and Sclerema (160 : 1).	Premature Birth (161 : 1).	Injury at Birth (161 : 2).	Suffocation—in bed, or not stated how (180 pt).	Other Causes.	All Causes.
Differences from Rates for England and Wales per 100,000 Births.														
All Areas — North	+ 93	+ 6	+17	+41	+133	+513	+217	+28	+109	+219	+10	− 7	+142	+1521
All Areas — Midlands	− 51	− 1	−16	−25	− 71	−228	−140	−18	− 27	− 32	− 5	+ 7	− 62	− 669
All Areas — South	− 94	− 18	+ 2	−21	−212	−447	−114	−19	−137	−295	− 4	+ 3	−122	−1478
All Areas — Wales	+ 91	+ 36	−17	− 9	+388	+ 66	− 48	+ 6	+ 63	+104	−14	−11	− 5	+ 650
London	− 68	+ 77	+22	−15	−266	−125	+225	−59	−148	−333	− 5	+ 6	− 19	− 708
County Boroughs — England and Wales	+ 73	+ 47	+24	+44	+ 42	+405	+254	− 3	+ 33	+144	+ 1	+13	+101	+1178
County Boroughs — North	+115	+ 62	+22	+80	+139	+734	+401	+26	+ 91	+202	+14	+ 6	+201	+2093
County Boroughs — Midlands	+ 38	+ 89	+23	+ 3	− 57	+114	+176	−38	− 8	+116	−14	+31	− 2	+ 471
County Boroughs — South	−105	−172	+29	− 3	−200	−424	−274	−44	− 91	−178	− 3	− 7	−174	−1646
County Boroughs — Wales	+181	+ 58	+46	− 5	+ 76	+257	+165	−10	−103	+328	−46	+20	+163	+1130
Other Urban Districts — England and Wales	− 6	− 24	−12	−16	+ 37	− 94	−139	+20	+ 12	− 15	− 6	− 8	− 75	− 326
Other Urban Districts — North	+ 76	− 53	+17	+13	+145	+356	+ 54	+52	+140	+235	+ 3	−25	+ 86	+1099
Other Urban Districts — Midlands	− 84	− 18	−28	−35	−102	−278	−247	−21	− 55	−153	− 2	+ 2	−139	−1160
Other Urban Districts — South	−107	− 45	−17	−32	−154	−779	−383	+39	−180	−305	−16	+14	−239	−2204
Other Urban Districts — Wales	+153	+ 80	−39	−17	+444	+192	− 4	+24	+133	+125	−33	−21	−102	+ 935
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*	*(12)*	*(13)*	*(14)*

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*	*(12)*	*(13)*	*(14)*
Rural Districts — England and Wales	− 79	− 86	−34	−39	+ 21	−469	−339	+ 4	+ 8	− 34	+10	−15	− 35	−1087
Rural Districts — North	+ 45	− 67	− 3	−45	+ 80	+ 30	−110	−21	+103	+246	+ 8	−14	+ 58	+ 310
Rural Districts — Midlands	−118	− 94	−48	−47	− 47	−597	−395	+10	− 10	− 51	+ 2	−17	− 28	−1440
Rural Districts — South	−137	−108	−46	−36	−158	−851	−508	+26	− 89	−268	+13	−11	−191	−2364
Rural Districts — Wales	− 85	− 57	−24	+ 1	+518	−294	−283	−13	+ 63	− 99	+42	−19	+ 47	− 203
Rates per cent. of those for England and Wales.														
All Areas — North	160	102	113	150	134	131	129	106	119	112	107	88	115	120
All Areas — Midlands	67	100	87	70	82	86	81	96	95	98	97	112	93	91
All Areas — South	39	95	102	74	47	73	85	96	77	83	97	105	87	80
All Areas — Wales	159	109	87	89	198	104	94	101	111	106	91	81	99	109
London	56	120	117	82	33	92	130	87	75	81	97	111	98	91
County Boroughs — England and Wales	147	112	119	154	111	124	134	99	106	108	101	123	111	116
County Boroughs — North	174	116	117	198	135	144	154	106	116	111	109	111	121	128
County Boroughs — Midlands	125	123	118	104	86	107	124	92	99	107	91	154	100	106
County Boroughs — South	32	55	123	96	50	74	63	90	84	90	98	88	82	78
County Boroughs — Wales	217	115	137	94	119	116	122	98	82	119	69	135	117	115
Other Urban Districts — England and Wales	96	94	90	80	109	94	81	104	102	99	96	86	92	96
Other Urban Districts — North	149	86	113	116	137	122	107	111	124	113	102	56	109	115
Other Urban Districts — Midlands	46	95	78	57	74	83	67	95	91	91	99	104	85	85
Other Urban Districts — South	31	88	87	61	61	53	49	109	69	83	89	125	75	71
Other Urban Districts — Wales	199	121	69	79	212	112	99	105	123	107	78	63	89	112
Rural Districts — England and Wales	49	77	73	52	105	72	55	101	101	98	107	74	96	86
Rural Districts — North	129	82	98	45	120	102	85	95	118	114	105	75	106	104
Rural Districts — Midlands	24	75	62	43	88	64	47	102	98	97	101	70	97	81
Rural Districts — South	12	72	63	56	60	49	32	106	85	85	109	81	80	68
Rural Districts — Wales	45	85	81	101	230	82	62	97	111	94	128	67	105	97

Mortality at Ages over One Year.

Table XII gives the crude and standardized death-rates at all ages for sexes and persons for the whole country, as well as the mortality per million living at different ages, for 1924 and 1925, and, in order to provide means of comparison with the most recent pre-war experience, for 1911–14.

Table XII.—England and Wales: Mortality from all Causes per Million Population, 1911–14, 1924, and 1925. (Total deaths registered.)

	Males.			Females.			Persons.		
	1911–14.	1924.	1925.	1911–14.	1924.	1925.	1911–14.	1924.	1925.
All Ages:									
Crude	14,895	12,939	12,949	13,061	11,484	11,434	13,948	12,180	12,158
Standardized A	14,899	11,842	11,878	12,263	9,693	9,683	13,503	10,702	10,710
Standardized B	15,974	12,932	12,928	13,720	11,159	11,118	14,807	12,010	11,985
0–..	40,572	25,055	25,286	33,900	20,153	20,702	37,253	22,637	23,023
5–..	3,302	2,389	2,538	3,253	2,202	2,400	3,277	2,296	2,470
10–..	1,971	1,650	1,684	2,054	1,667	1,650	2,013	1,658	1,667
15–..	2,940	2,550	2,615	2,681	2,481	2,542	2,809	2,515	2,579
20–..	3,719	3,444	3,286	3,198	3,068	3,063	3,448	3,250	3,172
25–..	4,911	3,908	3,857	4,054	3,499	3,420	4,462	3,684	3,618
35–..	8,030	6,481	6,349	6,432	4,965	4,766	7,201	5,667	5,496
45–..	14,797	11,544	11,603	11,353	8,637	8,603	13,007	10,026	10,030
55–..	29,741	24,889	24,454	22,453	18,867	18,104	25,883	21,728	21,122
65–..	64,043	60,037	59,586	51,181	47,339	46,203	56,882	53,024	52,211
75–..	137,646	137,522	140,249	113,927	115,987	115,830	123,339	124,476	125,432
85 and upwards	265,564	271,407	289,967	234,632	249,542	269,130	245,481	256,762	276,039

A. English Standard (Population of England and Wales, 1901). B. International Standard. (*See* page 1).

At all ages under 75 the mortality of each sex is lower than it was before the war. At all ages jointly the crude rate has fallen by 12·8 per cent., but when allowance is made by standardization for increased age of the population the extent of the fall is increased to 20·7 per cent. It is much the same for the two sexes. Of the two standards used in the table the English (A) shows a rather greater fall than the International (B) because it gives less weight to the higher ages, at which reduction has been least. This difference between the two would be greater were it not that the English standard gives less weight also to mortality at 0–5, at which the fall has been greatest. The extent of the fall at the various ages distinguished can be better appreciated from Table XIII, in which the mortality in 1924 and 1925 of each sex and age group is shown as a proportion of the corresponding rate for 1911–14.

The fall is much greater at 0–5 than at any later period of life, amounting in 1925 to almost 40 per cent. for each sex. Thereafter it very rapidly decreases with advancing age till at 15–25 it amounts only to eleven per cent. for males and less than half

Table XIII.—England and Wales: Mortality at various ages of Males and Females from all causes in 1924 and in 1925 per cent. of that for the same sex and age in 1911–14.

	Males.		*Females.*	
	1924.	1925.	1924.	1925.
All Ages:				
Crude	86·9	86·9	87·9	87·5
Standardized A	79·5	79·7	79·0	79·0
Standardized B	81·0	80·9	81·3	81·0
0— ..	62	62	59	61
5— ..	72	77	68	74
10— ..	84	85	81	80
15— ..	87	89	93	95
20— ..	93	88	96	96
25— ..	80	79	86	84
35— ..	81	79	77	74
45— ..	78	78	76	76
55— ..	84	82	84	81
65— ..	94	93	92	90
75— ..	100	102	102	102
85— ..	102	109	106	115

as much for females. After this age the decline again increases, to reach a maximum of 22 per cent. for males at 45–55, and of 26 per cent. for females at 35–45. Thereafter the decrease recorded becomes steadily less for each sex, till at ages over 75 it is replaced by the only increases recorded in the table.

The smallness of the decline for females aged 15–25 is mainly due to the increase in their mortality from tuberculosis at these ages recorded in Table XXXIV.

As already noted under Table I, mortality was lower for females at every age, including 10–15, at which Table 3 shows the advantage generally to rest with males, though the exceptions to this rule are increasing of late years. This latter table also shows that for each sex mortality was lower in 1925 than in any year prior to 1920 at all ages up to 75, though for the two highest ages distinguished, 75–85 and 85–, lower rates have frequently been returned in previous years. For most earlier ages lower rates than those of 1925 have been returned in only one or two previous years, notably 1923. But for males aged 20–45 and for females aged 25–45 the 1925 rates are the lowest yet returned, though in some cases the same level had already been reached in one or two recent years.

Table XIV.—England and Wales: Comparison of Crude and Standardized Death-Rates per 1,000 living at Age 0–5, 1916–25.

	Males.		Females.		Both Sexes.	
	Crude.	Standardized.	Crude.	Standardized.	Crude.	Standardized.
1916	32·4	34·1	26·4	27·8	29·4	31·0
1917	31·8	34·3	26·3	28·4	29·1	31·4
1918	38·9	43·1	34·1	37·5	36·5	40·3
1919	32·8	36·6	26·4	29·5	29·6	33·1
1920	36·2	31·8	28·8	26·0	32·5	29·0
1921	32·3	29·2	25·8	23·6	29·1	26·4
1922	30·2	28·5	24·5	23·1	27·4	25·8
1923	24·3	25·0	19·6	20·1	22·0	22·5
1924	25·1	27·3	20·2	21·8	22·6	24·6
1925	25·3	27·1	20·7	22·1	23·0	24·6

The great fall in mortality at age 0–5 (Table XIII) is somewhat lessened when allowance is made, by standardization on the basis of the population of England and Wales in 1901, for change in the proportions living at the five years of life making up the group (Table XIV), but the death-rate for both sexes in 1925, even as raised by standardization, was the lowest yet recorded except in 1923, that for 1924 being the same.

Mortality at 1–5.—Table XV shows that at these ages, at which 34 per cent. of the total deaths under five years of age occurred in 1925 (Table 17), the recent reduction of mortality has been even greater than in that of infants. While the table records little change as compared with 1924, there can be little doubt that the reduction of this mortality by more than one-third since so recent a period as 1911–14 is due to increased care of children associated with decrease in the size of the family. Evidence of this is afforded by the remarkable decrease in mortality of young children from burns discussed on p. 77.

The distribution throughout the country of mortality at these ages is shown in Table XVI, which may be compared with Tables IV and V (infant mortality). The worst and best positions at both ages are occupied by the county boroughs of the North and the rural districts of the South respectively, the rate for the latter at 1–2 being little more than a quarter that for the former. These positions are very constant, the eight years (1911–14 and 1922–25) available for comparison at the time of writing providing but one exception of any consequence, when at both ages in 1922 mortality was higher for London than for the Northern county boroughs.

Table XV.—England and Wales : Mortality per 1,000 living in each of the First Five Years of Life, 1911–14, 1924, and 1925.

Year of Life.	Males.					Females.					Both Sexes.				
	1911–14.	1924.	1925.	1925 per cent. of		1911–14.	1924.	1925.	1925 per cent. of		1911–14.	1924.	1925.	1925 per cent. of	
				1911–14.	1924.				1911–14.	1924.				1911–14.	1924.
0–1	131·76	88·90	88·25	67·0	99·3	104·28	67·20	68·04	65·2	101·2	118·16	78·21	78·30	66·3	100·1
1–2	35·46	23·62	22·64	63·8	95·9	32·65	20·45	20·40	62·5	99·7	34·06	22·04	21·53	63·3	97·7
2–3	13·85	8·70	9·02	65·1	103·7	13·49	8·38	8·61	63·8	102·7	13·67	8·54	8·82	64·5	103·3
3–4	8·39	5·53	5·57	66·4	100·7	8·24	5·39	5·45	66·1	101·1	8·31	5·46	5·51	66·3	100·9
4–5	6·14	3·99	4·35	70·8	109·0	6·12	3·58	3·97	64·9	110·9	6·13	3·79	4·16	67·9	109·8
0–5 Crude	40·57	25·06	25·29	62·3	100·9	33·90	20·15	20·70	61·1	102·7	37·25	22·64	23·02	61·8	101·7
0–5 Standardized* ..	40·78	27·27	27·08	66·4	99·3	34·23	21.83	22·13	64·7	101·4	37·52	24·56	24·61	65.6	100·2
1–5 Crude	16·04	10·11	10·15	63·3	100·4	15·18	9·17	9·39	61·9	102·4	15·61	9·65	9.77	62·6	101·2
1–5 Standardized* ..	15·95	10·45	10·39	65·1	99·4	15·12	9·45	9·60	63·5	101·6	15·54	9·95	10·00	64·4	100·5

* Based on the constitution of the population in 1901.

The differences are greater at 1–2 than at 2–5 years, and greater at the latter age than in the first year of life (Table V), the influence of environment upon mortality being thus, in 1925, as in other recent years, at a maximum in the second year of life. At both these ages the general type of mortality distribution is the same as that persistently maintained for infant mortality, and illustrated by Tables IV and V.

Table XVI.—Distribution of Mortality in Early Childhood, 1925.

	1—2 years.					2—5 years. (Mean Annual Mortality.)				
	North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.
Deaths per 1,000 Living (Both Sexes).										
London	—	—	17·70	—	17·70	—	—	5·30	—	5·30
County Boroughs	34·63	25·62	13·98	24·60	29·30	8·92	7·02	4·35	7·39	7·79
Other Urban Districts	25·85	16·32	11·13	27·41	19·95	7·32	4·96	3·72	7·31	5·80
Rural Districts	20·89	11·03	9·41	14·17	13·34	5·89	3·49	3·35	4·97	4·17
All Areas	29·82	18·07	14·20	23·02	21·53	7·98	5·28	4·46	6·65	6·10
Mortality per cent. of that in England and Wales.										
London	—	—	82	—	82	—	—	87	—	87
County Boroughs	161	119	65	114	136	146	115	71	121	128
Other Urban Districts	120	76	52	127	93	120	81	61	120	95
Rural Districts	97	51	44	66	62	97	57	55	81	68
All Areas	139	84	66	107	100	131	87	73	109	100
Mortality per cent. of that in England and Wales in the same class of Area.										
County Boroughs	118	87	48	84	100	115	90	56	95	100
Other Urban Districts	130	82	56	137	100	126	86	64	126	100
Rural Districts	157	83	71	106	100	141	84	80	119	100

At age 1–2 years the mortality of the North has been more than double that of the South for each class of area compared in each of the last five years, 1921–25. The lower section of the table shows that in 1925, as in each of the other seven years mentioned, the Northern excess, both at 1–2 and at 2–5, was lowest in the county boroughs and highest in the rural districts. The advantage of the South, on the other hand, was as usual, greatest in the county boroughs and least in the rural districts at both ages.

The causes of death responsible for mortality at 1–5, and recent changes in the rates applying to each, are shown in Table XVII. From this it appears that the total rate for 1925 would have fallen to 9152 per million, but for an increase from each of the infectious diseases distinguished in the table except influenza.

Table XVII.—England and Wales: Deaths from Various Causes per Million living at Ages 1–5 Years in 1911–14, 1924, and 1925. (Both Sexes.)

Cause of Death.	Death-rate per million.			Cause of Death.	Death-rate per million.		
	1911–14.	1924.	1925.		1911–14.	1924.	1925
7. Measles	2,671	1,155	1,326	98:2. Laryngitis	152	46	47
8. Scarlet Fever	373	149	172	99. Bronchitis	871	492	467
9. Whooping Cough	1,215	716	1,108	100. Broncho-pneumonia	2,169	2,316	2,049
10. Diphtheria	780	438	473	101. Pneumonia (Lobar and not otherwise defined).	866	560	517
11. Influenza	60	372	155	Other respiratory diseases	140	80	80
31. Tuberculosis of Respiratory System.	237	135	145	112 : 1 Inflammation of the Stomach.	94	53	40
32. Tuberculosis of Nervous System.	705	465	459	113 & 114. Diarrhœa and Enteritis.	1,638	424	466
33. Tuberculosis of Intestines and Peritoneum.	391	180	161	128. Acute Nephritis	89	42	46
34–37. Other tuberculous diseases.	288	177	159	159. Congenital Malformations.	85	67	75
56. Rickets	172	94	102	179. Burns	360	240	242
1. Meningitis	451	205	188	Other Violence	274	214	226
8 Convulsions	460	189	191	Other Causes	1,069	837	879
				All Causes	15,610	9,646	9,773

Mortality of the Aged.—At each of the two highest age periods distinguished in Table 3, 75–85 and 85 and upwards, mortality was higher in 1925 than in many recent years. It is often stated that the death-rate at these ages is not declining in this country; but a glance at the upper section of Table 3 shows that when the massed facts for complete decades are compared, decline at 75–85 has been almost—and that at 85 and upwards quite—uninterrupted for each sex since 1871–80. The causes to which mortality at ages over 70 was attributed in 1925 were much the same as have been shown in special tables for many recent years. Cancer and diseases of the heart and blood vessels continue their tendency to increase, while relatively fewer deaths are attributed to bronchitis and to old age. The rapid decrease in deaths returned under the latter heading (from over 25 per cent. of the total at ages over 70 in 1911–15 to under 17 per cent. in 1925) has to be taken into account in considering the increase above referred to.

Table XVIII repeats the information usually given as to deaths of persons whose age was stated to exceed 100 years, as to judge by the allotment of space in the press, such statements appear to possess interest peculiar to themselves.

Table XVIII.—England and Wales: Age at Death of Centenarians, 1925.

	Males.						Females.						
	100 and over	100.	101.	102.	103.	106.	100 and over	100.	101.	102.	103.	104.	105.
London	2	1	—	1	—	—	7	2	1	1	1	2	—
County Boroughs	4	2	1	1	—	—	9	3	1	1	1	2	1
Other Urban Districts	5	2	2	—	—	1	29	11	10	1	1	3	3
Rural Districts	12	6	4	—	2	—	24	15	6	3	—	—	—
All Areas	23	11	7	2	2	1	69	31	18	6	3	7	4

CAUSES OF DEATH.

The causes of death of males and females at 18 groups of ages are stated in Table 17 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 in Table 17A further detail of age is shown for causes of significance at ages 0–5. In Table 18 deaths from each cause distinguished are tabulated by month of occurrence and by sex, but not by age. This table differs from all the rest in referring to date of occurrence and not of registration. So far as they relate to the whole country these tables include all deaths, but deaths of non-civilians are excluded from all tables relating to portions of the country (*see* page 1). The causes and ages of the latter are stated in Table 19 for the country as a whole. Appendix B (Part 1) distinguishes the numbers of deaths of males and females during 1921–25 from each cause which occurred in various classes of institutions for the sick and infirm and elsewhere than in such institutions, in continuance of a series of similar tables for single years, of which the first appeared in the Report for 1911, and the last in that for 1920. Table 17 includes the full International List of causes of death, as revised in 1920. Certain of the numbered items in it are subdivided, and where this occurs the letters (*a*), (*b*), etc., indicate subdivisions in international use, and numbers (1), (2), etc., subdivisions made without international agreement. All other abstracts of the causes of death are arranged in the form of the short list of causes adopted by the Registrar-General in consultation with the Ministry of Health for use during 1921–30. 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 1920, is as stated in previous Reviews.

The contents of every heading in both the short and the detailed lists now in use are defined in the Registrar-General's "Manual of the International List of Causes of Death" (1920 Revision)*, which should be consulted in all cases where it is desired to ascertain the precise significance of any heading in the lists.

In Table 20, deaths of civilians are shown for different classes of area in various sections of the country, for urban and rural portions of administrative counties, and for county and metropolitan boroughs, arranged by sex, age, and the short list of causes as above. For other administrative areas of over 10,000 population in 1921 deaths of civilians are shown in Table 21, arranged by sex and short list of causes, but without distinction of age.

In addition to the above tables, relating, except Appendix B, to the year 1925, Table 4 contains a statement of the number of deaths registered in each year 1915–25 from each cause distinguished in Table 17, so far as available, with distinction of sex but not of age; while Table 5 states the corresponding crude death-rates

* Copies of which may be obtained from H.M. Stationery Office. Price 2*s*. net.

per million living for persons, males, and females, so far as these can be regarded as of any significance. Similar tables (Nos. 8 and 9) state the mortality during the same eleven years of infants under one year of age from the causes of chief importance at that age, but without distinction of sex.

1. **Enteric Fever.**—The deaths classified to this heading during 1925 numbered 388. Of these, 41, or 11 per cent., were returned as paratyphoid, as against only 6, or 0·25 per cent., in 1911, the first year for which the information is available.

The mortality corresponding to these deaths, 10 per million living, is the lowest recorded in this country. (Table 5.)

The distribution of this mortality throughout the country is outlined in Table XIX.

Table XIX.—Enteric Fever, 1925: Mortality per Million Civilian Population.

Class of Area.	North.	Midlands.	South.	Wales.	England and Wales.
London	—	—	11	—	11
County Boroughs ..	10	9	9	7	10
Other Urban Districts	13	7	9	12	10
Rural Districts ..	12	7	12	10	10
All Areas	12	8	11	10	10

Comparing the three sections of England, mortality, as in each of the preceding 14 years, was highest in the North and lowest in the Midlands. It is now very similar in town and country, the rural districts having lost of late the advantage held by them during the first six of the 15 years 1911–25 available for this comparison, when mortality was lower in the rural districts than in either the county boroughs or the smaller towns (though in each of them it was lower still in London).

Table 23 shows that the rate of prevalence recorded in Table XX is the lowest since 1922, when the low record of ·06 per 1,000 was reached, in contrast to ·38 in 1911.

Table XX shows that in England prevalence was highest and fatality lowest in the South.

Table XX.—Enteric Fever, 1925: Prevalence and Fatality.*

Class of Area.	Cases per 1,000,000 Population.					Deaths per 1,000 Cases notified.				
	North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.
London	—	—	91	—	91	—	—	116	—	116
County Boroughs	58	59	110	98	65	179	154	86	71	148
Other Urban Districts ..	80	55	84	81	72	164	135	113	148	142
Rural Districts	75	59	84	76	71	159	117	148	127	138
All Areas	68	57	91	83	72	170	137	116	123	139

* Excluding non-civilian cases and deaths.

The fatality-rates returned for this and other notifiable diseases from 1911 onwards are compared in Table XXI.

The rate for 1925 is the lowest since the commencement of the record in 1911, except that for 1924. For both small-pox and diphtheria the 1925 rate is the lowest recorded, without exception.

Table XXI.—England and Wales : Fatality of certain Infectious Diseases (Deaths per 1,000 Notified Cases), 1911–25.*

Year.	1. Enteric Fever.	6. Small-pox.	8. Scarlet Fever.	10. Diphtheria.	21. Erysipelas.	22. Poliomyelitis.	24. Meningococca Meningitis.
1911	174	78	18·1	103	39	?	?
1912	191	73	18·6	96	39	?	?
1913	182	87	16·1	88	35	283	1,089
1914	194	62	17·2	99	42	348	1,257
1915	197	144	18·2	109	45	333	623
1916	188	107	17·8	103	40	270	704
1917	203	429	15·0	103	42	468	692
1918	206	32	20·0	109	46	1,013	767
1919	160	82	14·7	90	41	294	732
1920	171	114	12·0	81	52	404	911
1921	158	16	9·5	72	55	314	1,007
1922	191	28	12·7	78	53	352	1,046
1923	140	3	11.6	68	50	185	944
1924	120	3	10·5	60	52	183	746
1925	139	2	10·8	58	57	370	876

6. **Small-pox.**—The number of deaths allocated to this cause in 1925 was nine, yielding a death-rate of 0 (less than 0·5) per million living (*see* Table 6, in which the history of small-pox mortality during the whole registration period is recorded). Small-pox mortality has now been of this insignificant order in each year since 1905.

These nine deaths include all on the certificates of which any mention is made of small-pox, even when, as sometimes occurs, the certificate is so worded as to suggest that mild small-pox was not regarded as at all a decisive factor in causing the death. For this reason the number so allocated in this Review exceeds that of six accepted by the Chief Medical Officer of the Ministry of Health in his Annual Report as deaths due to small-pox. Particulars of the three rejected by him may be found in his report.

The number of cases notified was 5,365, yielding an incidence-rate of ·14 per 1,000 (Table 23). This is much the highest rate experienced since the commencement of this record in 1911, and its relation to the death-rate of course demonstrates the extraordinarily mild type of small-pox infection prevalent during 1925.

* The rates in this table are given with reserve, being in some respects unsatisfactory. For the years 1911–13 cases of disease among non-civilians have been excluded from the notification returns, but it has not been possible to distinguish their deaths; for 1914 both cases and deaths relate to the total population; while for subsequent years the figures relate exclusively to the civilian population.

The numbers of small-pox cases in some years are too small to yield significant rates, but their basis of fact can be inferred from Table 4, and the rates quoted serve to bring out the extremely mild type of disease prevalent in 1923–25. The rates for poliomyelitis include polioencephalitis, which was not distinguished in the notification returns until 1919. The extraordinary rise in 1918 is partly ascribable to certification of a number of deaths from the then "new disease," encephalitis lethargica, as polioencephalitis, but mainly to a reduction in notifications unaccompanied by significant change in the number of deaths (*see* Report for 1918). The rates from this disease will be found to differ from some of those published in the Annual Reports of the Chief Medical Officer of the Ministry of Health, partly because polioencephalitis is included throughout and partly because special inquiries made by the Ministry in certain years have led to revision of the returns for those years, which is not embodied in Table XXI. The cases there referred to are similar for each year dealt with, being in all cases derived from the published notification returns. The latter source of discrepancy applies also to meningococcal meningitis, and in this case there is a possibility that some cases of posterior basal meningitis may not have been notified as cerebro-spinal fever though all such deaths are included in the table.

7. **Measles.**—The death-rate of 137 at all ages is seen from Table 6 to be lower than for any year prior to 1919, and than for any year except three in our records. A fairer comparison is provided by the rate for children of under 15, for whom rates lower than the 520 per million in 1925 have been recorded in five earlier years, but in none before 1916.

The excess of mortality for males in the first two or three years of life, and that for females at later ages, pointed out in last year's Review, are shown also in the latest returns, those for 1921–25, which are now added to Table XXII.

Table XXII.—Measles: Mortality of Females per cent. of that of Males in Early Life at Various Periods.

	0–1*	1–2	2–3	3–4	4–5	5–10
1861–70	88	94	102	107	106	111
1871–80	84	94	102	107	106	111
1881–90	84	91	101	101	100	107
1891–1900	85	92	100	106	105	111
1901–10	89	91	100	106	112	118
1911–20	85	90	99	100	103	106
1921–25	80	89	96	104	88	105

* Infant Mortality.

The extent to which each sex and age group dealt with in this table has contributed to the decline of 49·6 per cent. shown for mortality at 0–15 from 891 per million in 1911–20 to 449 in 1921–25 (Table 6) is as follows, the later mortality being stated as a proportion per 1,000 of that recorded for 1911–20 in last year's Review.

Males.						Females.					
0–1	1–2	2–3	3–4	4–5	5–10	0–1	1–2	2–3	3–4	4–5	5–10
554	503	464	418	438	432	523	496	449	434	375	431

The enormous reduction which has occurred is thus widely distributed over both sexes and all the ages chiefly concerned.

The distribution throughout the country of mortality from measles is stated in Table XXIII in the form of death-rates per 100,000 living at ages 0–5.

Table XXIII.—Measles, 1925 : Mortality per 100,000 Living at Ages under 5 Years.

	North.	Midlands.	South.	Wales.	England and Wales.
London	—	—	77	—	77
County Boroughs ..	241	198	64	260	211
Other Urban Districts	184	84	35	259	129
Rural Districts ..	153	44	20	69	66
All Areas	210	112	55	205	138

The rule of decline for measles mortality from the North to the South of England for each class of area compared, and from county boroughs to rural districts in each section of the country, is seen to be without exception in 1925, and in previous years from 1911 onwards, exceptions to it have been few and unimportant.

8. **Scarlet Fever.**—The mortality in 1925 of 86 per million living at ages under 15 years is seen from Table 6 to be lower than in any previous year except four—1917, 1918, 1923 and 1924. It is less than half that recorded for any year prior to 1911, less than one-third of that for any prior to 1908, and less than a quarter of that for any prior to 1898, when the rate of 320 looked very low in comparison with previous experience, notably in 1861–70, with its average mortality of 2,617, over 30 times that for 1925.

Since 1917, however, when the low record of 62 was reached, the decline of this rate, which had for many years previously been extremely rapid, has been arrested. But for 10 years in succession it has remained much lower than in any single year prior to 1916. The fatality of notified cases remains low (11 per 1,000, Table XXI) as compared with that of most years since the commencement of the record in 1911, a remarkable change in this respect having occurred between 1918 (20·0) and 1921 (9·5).

Table XXIV.—Scarlet Fever, 1925 : Mortality per Million Living at Ages under 15 years.

	North.	Midlands.	South.	Wales.	England and Wales.
London	—	—	79	—	79
County Boroughs ..	163	96	50	44	125
Other Urban Districts	106	59	24	66	69
Rural Districts ..	95	38	34	48	51
All Areas	135	66	53	56	86

Table XXIV shows that the mortality of each type of area compared decreased from the North to the South of England, in accordance with the general experience of recent years; but that in the South mortality was, as in 1924, higher in the rural districts than in the small towns, though in the North and Midlands it increased regularly with urbanization. While the rate for the rural districts of the South remains the lowest but one in the table, these areas have not shared in the general reduction since the commencement of this record in 1911.

Table XXV shows that the high mortality of the Northern county boroughs was mainly due to high fatality. The prevalence in London was almost as high, but fatality there was

Table XXV.—Scarlet Fever, 1925 : Prevalence and Fatality.

	Cases per 10,000 Population aged 0–15 years.					Deaths per 1,000 Cases notified.				
	North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.
London	—	—	106	—	106	—	—	8	—	8
County Boroughs	109	89	103	55	99	16	13	6	9	14
Other Urban Districts ..	105	77	73	64	84	11	8	5	11	9
Rural Districts	99	72	59	61	74	12	7	9	9	9
All Areas	106	80	88	62	90	14	10	7	10	11

only half that of the Northern boroughs. For each class of area both prevalence and fatality were highest in the North, and, except for the rural districts, fatality in all cases decreased from the North to the South of England. It was higher, however, in the rural districts of the South than of the Midlands, and much higher in the rural districts than in the small towns of the South. It is to an increase of fatality, shared by no other section of the country, that the absence of reduction in the mortality of the Southern rural districts is mainly due, just as the reduction in mortality for the country generally since 1911 is mainly due to decrease of fatality. Thus scarlet fever resembles small-pox and influenza in that mortality is influenced more by fatality than by prevalence.

9. **Whooping Cough.**—Mortality was considerably higher in 1925 than in 1924, the rate per million living at ages 0–15 increasing from 384 to 594 (Table 6). But even the latter rate is much lower than any recorded during the 19th century, and is also lower than for 17 out of the last 25 years.

The distribution of mortality from this cause is indicated in Table XXVI.

Table XXVI.—Whooping Cough, 1925 : Mortality per 100,000 Living at Ages under 5 Years.

	North.	Midlands.	South.	Wales.	England and Wales.
London	—	—	202	—	202
County Boroughs ..	226	208	86	176	204
Other Urban Districts	153	138	135	188	148
Rural Districts ..	126	104	101	125	111
All Areas	188	153	153	167	166

It will be seen that extra-metropolitan mortality increased regularly with urbanization, as it did also in twelve out of the fourteen preceding years. For each class of area also, considered separately, decrease in mortality is, as usual, regular from North to South.

Table XXVII.—Whooping Cough, 1925 : Deaths under One Year of Age per cent. of those at All Ages.

	North.	Midlands.	South.	Wales.	England and Wales.
London	—	—	43	—	43
County Boroughs ..	39	44	44	52	42
Other Urban Districts	42	50	48	48	47
Rural Districts ..	49	53	50	51	51
All Areas..	41	48	45	49	45

Table XXVII shows that, as usual, the proportion of total deaths occurring in the first year of life declined with increasing urbanization, the rule applying, in 1925, to each section of England considered separately, as well as to the country as a whole. This proportion was, as usual, higher for males (47·8) than for females (42·1).

It was pointed out in the Review for 1922 that the excess of mortality of females which is so striking a feature of this disease varies in a curious manner with age, being quite pronounced in the first three months of life, slight or often absent at 3–6 months, and almost invariably met with at later ages. These statements were based on a comparison of deaths alone, but are little affected when these are related to the population at risk for each sex. This has now been done for each year from 1911 onwards for each year of life 1–5 and for ages 5–10 jointly (after which whooping cough ceases to count as a factor in mortality), while for the first year of life similar sex comparisons are based on infant mortality. For the last three quinquennia the sex mortalities compare as follows :—

Table XXVIII.—Mortality of Females from Whooping Cough per cent. of that of Males at various Ages.

	Infant Mortality per 1,000 Births.					Child Mortality per 1,000 Population.				
	0–3 mths.	3–6 mths.	6–9 mths.	9–12 mths.	0–12 mths.	1–2 yrs.	2–3 yrs.	3–4 yrs.	4–5 yrs.	5–10 yrs.
1911–15 ..	118	112	116	121	117	130	146	152	156	146
1916–20 ..	130	97	111	125	115	136	149	156	155	144
1921–25 ..	120	97	103	115	108	132	150	150	138	140

In each period the rule as stated above is seen to apply to the comparison of sex mortalities, though the reduction of the share of females at 3–6 months in 1911–15 was much less than in the two later quinquennia, when it fell below that of males. From this age onwards the female ratio steadily increases to a maximum at 3–5 years, at which age there are more than three deaths of females for every two of males. At ages over ten the deaths are

too few to afford significant results, but the tendency to female excess appears to continue throughout life. The number of deaths ascribed to whooping cough at ages over ten has increased considerably of late years, from 70 in 1911–15 to 98 in 1916–20 and 102 in 1921–25. The regularity with which the mortality of females exceeds that of males during the first three months of life, as well as at all ages over six months, while at 3–6 months the rate for males is often in excess, may be gathered from the following statement of numbers of instances of excess of mortality for males and females respectively at different ages during the fifteen years, 1911–25 :—

	Months.				Years.				
	0–3	3–6	6–9	9–12	1–2	2–3	3–4	4–5	5–10
Excess for males	2	5	1	0	0	0	0	0	0
Excess for females	12	8	13	15	15	15	15	15	15
Equality ..	1	2	1	0	0	0	0	0	0

The excess of mortality for legitimate infants during the first three months of life, followed by excess for the illegitimate at later ages, which was pointed out in 1922, is seen from the following statement to be of very regular occurrence :—

Infant Mortality from Whooping Cough at

	0–3 months.		3–6 months.		6–9 months.		9–12 months.		Total under 1 year.	
	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.
1911–15.	0·87	0·69	0·95	1·10	1·10	1·33	1·15	1·14	4·07	4·26
1916–20.	0·64	0·56	0·66	0·98	0·79	1·03	0·87	0·97	2·96	3·54
1921–25.	0·66	0·52	0·65	0·91	0·76	1·02	0·83	1·15	2·91	3·61

When it is remembered that the total mortality of the illegitimate is generally at least double that of the legitimate for the first three months of life, the reversal of this rule for whooping cough appears the more striking. It may be that the chances of infection are less for the illegitimate, but that after three months this advantage is counterbalanced by greater care of the legitimate.

10. **Diphtheria.**—The death-rate in 1925 of 260 per million at ages under 15 is seen from Table 6 to be lower than for any previous year except 1923 and 1924, although the same table shows that up to 40 years ago more than half the deaths caused by diphtheria were probably certified as due to croup (and not included under diphtheria) whereas the number so returned is now quite negligible. As in every year on record, except 1922, more deaths of females than of males were returned (Table 4) though Table 5 shows the crude death-rate to be consistently higher for males. Here the numbers are the safer guide, as standardization shows the decennial rates to be consistently a little higher for females.

Table XXIX.—Diphtheria, 1925 : Mortality per 100,000 living at Ages under 15 Years.

	North.	Midlands.	South.	Wales.	England and Wales.
London	—	—	41	—	41
County Boroughs ..	29	34	25	29	30
Other Urban Districts	21	24	22	29	23
Rural Districts ..	13	18	11	28	16
All Areas	24	26	29	28	26

As in each of the six preceding years the highest rate in Table XXIX is that for London, but its mortality is no longer, as in 1921–24, double that of England and Wales. Table XXX however, shows that the notified prevalence of the disease in London is still more than double the average, the result of this upon mortality being partly neutralized by the fact that the fatality in London is the lowest in the table. This has been the case also in many other recent years, but no such fatality-rate as 3·9 per cent. has previously been recorded in this series of tables. The rapid decline of its fatality in quite recent years is indeed an outstanding feature in the diphtheria situation. From 10·5 per cent. for England and Wales in 1911 it increased to 11·0 in 1918, but since then it has fallen without interruption to 5·8 in 1925 (Table XXI). The excesses of prevalence in the South over the North and of fatality in the North over the South in Table XXX conform to a rule to which there has been no exception during the years, 1911–13 and 1918–25, for which this comparison can be made. In all parts of England prevalence in 1925 increased greatly with urbanization.

Table XXX shows how far variation in mortality has been due to variation in prevalence and in fatality respectively.

Table XXX.—Diphtheria, 1925 : Prevalence and Fatality.

	Cases per 10,000 Population aged 0–15 years.					Deaths per 1,000 Cases notified.				
	North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.
London	—	—	108	—	108	—	—	39	—	39
County Boroughs	43	62	56	41	50	71	57	46	72	63
Other Urban Districts ..	26	41	35	49	36	82	63	66	60	68
Rural Districts	23	28	20	35	26	55	70	57	85	67
All Areas	35	44	67	43	47	72	61	44	68	58

It would be interesting to know, but difficult to ascertain, whether these differences are inherent in the disease itself, or in the standards applying to its recognition, though the latter seems the more probable hypothesis. Dealing with the country at large, prevalence almost uniformly declines every year from county boroughs to rural districts, as in Table XXX, whereas fatality is as a rule returned as much the same in town and country.

The differences between London and England and Wales may thus be regarded as an exaggeration of those between town and country generally. But such considerations do not affect the excess of London mortality in Table XXIX, which falls into line with the series of still greater excesses for London during 1921–24. Similar excess of London mortality was recorded in 1893–97.

11. **Influenza.**—The mortality of 327 per million living in 1925 from this cause was less than for the preceding year, and quite moderate as judged by recent standards. But it may be pointed out that this rate has been exceeded in only ten years of the 35 following the recrudescence of the disease in 1890.

Table XXXI shows that the age distribution of mortality from influenza (standardized, to neutralize the effect of changes in the age distribution of the population, and, to permit of comparison throughout the period of the war, for females only) still tends on the whole to continue that process of reversion towards the type prevalent before 1918 which set in immediately after the great epidemic, the proportion of deaths at 75 and upwards having for the first time re-attained the standard for that period.

Table XXXI.—Deaths from Influenza at various Ages per 1,000 at all Ages.

Age.	1890–1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.	1925.
0– ..	104	249	193	186	169	176	139	159	142
15– ..	107	454	366	281	187	182	157	122	138
35– ..	181	176	197	201	184	191	171	184	174
55– ..	388	98	184	229	294	310	348	337	326
75– ..	220	23	60	103	166	141	185	198	220
All Ages	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

The distribution of influenza mortality throughout the country is indicated in Table XXXII.

Table XXXII.—Influenza, 1925 : Civilian Mortality per Million Living at All Ages.

	North.	Mid-lands.	South.	Wales.	England and Wales.
London	—	—	235	—	235
County Boroughs ..	319	338	338	242	324
Other Urban Districts ..	352	311	306	318	324
Rural Districts	412	409	381	346	396
All Areas..	343	346	294	311	328

The facts that the lowest rate in the table is that for London, and the highest that for the rural districts of the North, suggest that many of these deaths might have been more appropriately returned under other causes.

23. **Encephalitis Lethargica.**—The mortality of 35 per million from this cause was almost the same as that for the previous year, 36, the highest previous rate since the introduction of the disease in 1918 having been 19 in 1921. The age distribution of the deaths remained much as described in last year's Review for that and the three preceding years—widely scattered over the whole of life except old age, which escaped lightly, while young children and elderly adults suffered most.

The distribution throughout the country of mortality from this cause is stated in Table XXXIII.

Table XXXIII.—Encephalitis Lethargica, 1925: Civilian Mortality per Million Living at All Ages.

	North.	Midlands.	South.	Wales.	England and Wales.
London	—	—	28	—	28
County Boroughs..	39	39	41	16	38
Other Urban Districts.	42	35	36	33	37
Rural Districts ..	30	34	36	16	32
All Areas	39	36	33	24	35

The mortality appears to have been fairly uniform on the whole throughout the country, but is returned as lower in London and in Wales than elsewhere. The report of the Chief Medical Officer of the Ministry of Health refers to the frequency with which other diseases, such as tuberculous meningitis, are probably mistaken for encephalitis lethargica, so it cannot be assumed that the experience of London and Wales has in reality been as relatively favourable as is suggested by Table XXXIII.

31–37. **Tuberculosis.**—The deaths assigned to tuberculous affections in the aggregate number 40,387—22,234 of males and 18,153 of females.

Table XXXIV.—England and Wales: Mortality from Tuberculosis (All Forms) per Million Population, 1912–14, 1924, and 1925.

	Males.			Females.			Persons.		
	1912–14	1924	1925	1912–14	1924	1925	1912–14	1924	1925
All Ages { Crude	1,572	1,202	1,195	1,169	926	895	1,364	1,058	1,038
All Ages { Standardized ..	1,543	1,156	1,143	1,175	934	904	1,348	1,039	1,017
0–	2,080	1,142	1,088	1,716	943	910	1,899	1,044	1,000
5–	572	365	351	579	367	357	576	366	354
10–	447	320	318	687	535	476	567	427	397
15–	938	823	853	1,225	1,273	1,274	1,083	1,047	1,063
20–	1,500	1,512	1,346	1,380	1,526	1,496	1,438	1,519	1,423
25–	1,815	1,491	1,483	1,402	1,270	1,234	1,599	1,370	1,347
35–	2,189	1,704	1,693	1,373	993	951	1,766	1,322	1,293
45–	2,382	1,724	1,770	1,184	760	730	1,760	1,221	1,224
55–	2,211	1,436	1,538	966	657	654	1,552	1,027	1,074
65–	1,407	1,022	978	759	544	506	1,046	758	718
75 and upwards	590	335	427	438	344	320	498	341	362

Table XXXV.—Distribution of Mortality from Respiratory Tuberculosis, 1921–25.

	London.	County Boroughs.					Urban Districts.					Rural Districts.					All Areas.				
		North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.
Mortality per 100,000 living.																					
All Ages.																					
Persons Crude	101	104	95	93	116	101	77	75	77	83	77	63	64	67	93	68	90	79	88	93	86
Persons Standardized	94	99	90	90	110	95	73	72	74	82	74	62	64	66	91	67	85	76	83	91	82
Males Crude	127	126	114	111	127	121	85	85	92	81	86	62	66	73	91	70	103	89	106	94	98
Males Standardized	116	117	107	106	119	113	80	81	87	79	81	61	65	72	87	68	97	85	99	90	92
Females Crude	78	85	78	79	105	83	69	66	65	85	69	63	63	60	95	66	77	69	72	92	74
Females Standardized	73	82	74	75	102	80	68	64	62	86	67	63	64	60	95	66	75	68	68	92	72
Mortality per cent. of that for England and Wales.*																					
All Ages (Standardized). Persons	115	121	110	110	135	117	90	88	90	100	90	76	79	80	111	82	104	93	101	111	100
All Ages (Standardized). Males	126	127	116	115	129	122	86	87	94	85	88	66	70	78	94	74	105	92	107	97	100
All Ages (Standardized). Females	102	114	103	105	142	111	94	89	86	119	93	88	89	83	132	92	104	94	95	128	100
Males :—																					
0–	77	193	101	58	172	150	121	71	50	84	86	75	43	33	84	53	153	74	60	102	100
5–	92	161	91	76	102	128	122	74	55	82	88	104	74	63	97	81	140	80	75	90	100
15–	120	120	107	1 1	142	118	91	92	102	102	94	72	78	81	105	80	103	93	109	111	100
25–	118	118	117	120	130	119	82	91	101	80	89	69	77	92	92	80	100	96	109	94	100
45–	147	137	124	102	121	128	85	80	84	81	83	55	55	58	86	59	108	87	107	90	100
65–	165	145	117	107	95	129	85	78	94	97	86	42	53	55	128	59	107	80	113	108	100
75–	208	144	101	98	165	123	73	84	90	67	81	51	50	97	86	67	101	74	130	91	100
Females :—																					
0–	104	166	96	54	136	132	124	72	41	107	89	90	57	43	67	62	142	76	71	101	100
5–	81	156	81	84	159	125	121	80	69	92	93	110	65	59	120	80	138	77	75	114	100
15–	98	112	99	108	152	109	94	91	87	131	95	80	96	83	131	93	102	95	94	136	100
25–	99	109	107	105	141	109	89	91	89	124	93	92	93	92	136	97	100	97	96	131	100
45–	122	113	117	108	129	114	93	85	86	94	89	85	77	77	131	84	102	93	102	113	100
65–	137	102	97	120	72	102	88	93	96	90	92	70	88	89	152	91	92	92	113	111	100
75–	169	78	102	162	22	100	73	95	119	63	94	54	63	69	209	77	72	85	131	117	100

* Based on Rates per million living.

The figure for males is the lowest recorded during the present century except that of 22,085 in 1923, and that for females is, without exception, considerably the lowest, 1923 coming next, with 18,703 deaths. Table XXXIV shows that mortality is still falling for each sex, and is now much below the lowest rates recorded before the war, those for the years 1912–14. The reduction in 1925 applies chiefly to females, whose rates have fallen at each age distinguished except 15–20, while for males there has been some increase both at this age and at 45–65. But for each sex mortality was distinctly lower in 1925 than in any previous year.

The distribution of the respiratory form, which accounted for 80 per cent. of the total mortality throughout the country during 1921–25, is shown in greater detail than usual in Table XXXV, part of the country as well as class of area being taken into consideration. This table shows that, in contrast to mortality from other respiratory diseases (Table XLVIII), which is as much affected by part of the country as by class of area, that from phthisis varies much less with part of country than with class of area, the chief local variation being an excess in Wales of 11 per cent. (35 per cent. in the Welsh county boroughs). The Welsh standardized rates for persons of all ages are much higher than for any section of England in each class of area, this being due chiefly to excessive mortality of Welsh females. There is little difference, so far as total mortality is concerned, between the North and South of England, but that of the great towns, which is in excess in all parts of England, is more so in the North than elsewhere. Urban excess, associated no doubt with conditions of employment, is much greater for males than for females.

When age is distinguished striking differences between the North and South emerge which do not apply to the total rates. The juvenile rates are in heavy excess in the North, especially in the great towns, and those for advanced age in London. It is, of course, possible to conceive of such differences as due to varying types of infection, but they seem more likely to be due to varying types of certification. All available evidence goes to show that this is at its best in London, and it may well be that the difficult recognition of late phthisis is more frequently effected here. On the other hand, the difference for males aged 0–5 between London (77) and the Northern county boroughs (193 per cent.) is similar to that for the same age between the England and Wales of to-day and of thirty years ago, the recorded mortality having fallen much more meanwhile at this than at any other age. This early mortality varies greatly also with urbanization, being nearly three times as great for males in the county boroughs as in the rural districts. But for each sex, and in all classes of area, it decreases enormously from North to South. At the intermediate periods of life, including those at which mortality is highest (Table XXXIV) its local variations are much less than in early

childhood and old age. There is no great difference at these ages between North and South, but at all ages increase with urbanization may be noted, especially for males.

As it has not been possible to afford space in Table XXXV for the display of the sex and age group rates, which are there shown in ratio to the corresponding rates for the country at large, the latter are shown in Table XXXVI, where they are also compared with those for 1925.

Table XXXVI.—Respiratory Tuberculosis, England and Wales, 1921–25 and 1925 : Mortality per 100,000 living at Various Ages.

	Males.		Females.		Persons.	
	1921–25.	1925.	1921–25.	1925.	1921–25.	1925.
All Ages :—						
Crude ..	98	97	74	71	86	83
Standardized	92	90	72	69	82	79
0–	16	16	14	14	15	15
5–	11	11	22	20	16	15
15–	97	90	123	121	110	105
25–	150	146	106	101	126	121
45–	156	157	66	61	109	107
65–	91	89	45	42	66	63
75–	32	33	23	21	27	26

This comparison shows that the total death-rate has fallen for both sexes in 1925, especially for females.

Of the groups distinguished males aged 45–65 and males over 75 alone show any increase in 1925.

42 (1). **Vaccinia.**—Three deaths were classed to this cause, as against one in 1924. The yearly number of these deaths may be seen from Table 4 to have varied between one and nine during 1915–25. The three in 1925 were of two males and one female, all under six months of age. Mention of vaccination was made on the certificates relating to five other deaths, not classed to this heading, all of these also being of infants under twelve months of age. One was classed to convulsions, being attributed thereto, " probably following vaccination," two to septicæmia from infection of vaccination wounds, and one to abscess and the fifth to dermatitis resulting from the same cause. In these cases classification has been governed by the general practice of classing to the infection deaths from infection of slight wounds.

43–49. **Cancer.**—The deaths ascribed to cancer during 1925 number 51,939—24,002 of males and 27,937 of females. For both sexes these numbers are the highest yet recorded.

Of these deaths 40,832 were referred to carcinoma, 2,729 to sarcoma, and 8,378 to "cancer" not otherwise defined.

The parts of the body affected by fatal cancer in 1925 are shown in Table XXXVII in greater detail than that provided by the international classification, six out of its seven headings (Nos. 43–49) relating to cancer being subdivided according to a scheme approved by the Director of the Imperial Cancer Research Fund.

Table XXXVII.—England and Wales, 1925—Sites of Fatal Cancer.

		All Ages.	0–	5–	15–	25–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80–	85–
		MALES.															
	All Sites	24,002	70	72	159	305	329	752	1,358	2,466	3,265	4,071	4,181	3,447	2,247	948	332
43	Lip	284	—	—	—	—	1	4	4	7	26	42	48	54	49	33	16
	Tongue	1,180	—	—	1	4	4	15	70	136	202	232	226	165	83	33	9
	Mouth and tonsil ..	662	1	1	1	2	3	10	40	107	122	134	104	70	40	22	5
	Jaw	523	1	1	5	6	3	17	23	61	92	87	88	68	47	19	5
	Total 43	2,649	2	2	7	12	11	46	137	311	442	495	466	357	219	107	35
44	Pharynx	304	—	1	1	2	3	4	12	37	56	53	52	45	30	5	3
	Œsophagus	1,669	—	—	—	4	3	19	77	214	277	339	326	211	137	45	17
	Stomach	5,315	—	—	7	55	87	216	375	596	737	925	954	740	443	139	41
	Liver and gall bladder..	1,715	4	2	4	17	20	48	89	167	193	289	313	274	172	97	26
	Total 44	9,003	4	3	12	78	113	287	553	1,014	1,263	1,606	1,645	1,270	782	286	87
45	Mesentery and peritoneum	120	3	1	2	9	7	8	11	24	14	15	14	5	6	1	—
	Intestines	2,851	1	2	6	32	37	96	137	211	341	471	549	463	314	147	44
	Rectum	2,573	—	—	6	23	24	69	116	241	328	442	493	431	268	104	28
	Total 45	5,544	4	3	14	64	68	173	264	476	683	928	1,056	899	588	252	72
47	Breast	39	—	—	—	—	1	1	3	2	4	6	9	4	4	3	2
48	Penis	156	—	—	1	—	—	5	5	16	25	18	21	24	19	13	9
	Scrotum	59	—	—	1	—	1	1	7	9	8	13	7	8	2	2	—
	Other skin	572	—	—	2	11	6	13	14	31	45	63	71	100	92	77	47
	Total 48	787	—	—	4	11	7	19	26	56	78	94	99	132	113	92	56
49	Larynx	801	—	—	1	2	3	20	51	106	154	173	132	102	41	11	5
	Lung and pleura ..	508	1	4	9	16	30	32	62	65	87	76	64	41	17	2	2
	Pancreas	595	1	—	—	10	9	29	52	78	84	110	89	68	42	18	5
	Kidneys and suprarenal glands	258	33	9	1	6	6	16	15	28	33	46	31	14	15	4	1
	Bladder	745	—	1	1	3	6	21	38	58	91	123	127	138	83	37	18
	Prostate	1,116	1	—	1	—	2	4	13	42	79	160	230	249	218	87	30
	Testes	103	2	1	9	27	8	9	9	5	4	10	7	4	4	3	1
	Brain	65	3	7	3	7	5	6	7	11	6	5	1	4	—	—	—
	Bones (jaw excepted)..	389	5	21	61	20	15	20	25	41	31	50	33	32	21	9	5
	Other specified organs..	847	7	17	28	36	39	56	79	114	146	95	99	60	51	14	6
	Abdominal cavity, organ unspecified	111	3	1	—	4	—	1	1	6	13	19	24	15	17	5	2
	Other and undefined ..	442	4	3	8	9	6	12	23	53	67	75	69	58	32	18	5
	Total 49	5,980	60	64	122	140	129	226	375	607	795	942	906	785	541	208	80

Table XXXVII.—England and Wales, 1925—Sites of Fatal Cancer—*cont.*

		All Ages.	0–	5–	15–	25–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80–	85–
		FEMALES.															
	All Sites	27,937	55	43	114	515	746	1,467	2,346	3,149	3,318	3,809	3,963	3,609	2,667	1,457	679
43	Lip	15	—	—	—	--	1	—	1	1	1	2	1	1	2	1	4
	Tongue	113	—	—	—	3	3	4	6	10	15	15	15	18	10	5	9
	Mouth and tonsil ..	114	—	—	1	1	—	9	3	9	17	20	19	13	12	6	4
	Jaw	186	1	—	3	5	14	6	16	22	24	18	27	23	12	6	9
	Total 43	428	1	—	4	9	18	19	26	42	57	55	62	55	36	18	26
44	Pharynx	87	1	—	1	2	5	7	5	13	9	14	8	8	8	4	2
	Œsophagus	517	—	—	—	4	13	25	58	76	55	64	65	84	39	25	9
	Stomach	4,471	—	—	4	46	60	161	287	396	521	659	783	736	484	232	102
	Liver and gall bladder..	2,353	2	1	3	11	28	61	96	187	234	328	422	411	327	170	72
	Total 44	7,428	3	1	8	63	106	254	446	672	819	1,065	1,278	1,239	858	431	185
45	Mesentery and peritoneum	215	4	—	4	9	8	12	18	23	23	42	27	13	20	9	3
	Intestines	3,692	—	1	7	44	50	94	147	321	350	499	626	635	493	300	125
	Rectum	1,694	—	—	11	28	34	61	113	152	207	254	272	236	202	94	30
	Total 45	5,601	4	1	22	81	92	167	278	496	580	795	925	884	715	403	158
46	Ovary and Fallopian tube	887	—	2	12	46	44	65	123	156	127	113	98	52	29	19	1
	Uterus	4,467	1	3	7	121	210	379	574	684	629	602	500	387	226	110	34
	Vagina and vulva ..	351	—	—	1	5	4	10	28	30	32	46	50	58	46	27	14
	Total 46	5,705	1	5	20	172	258	454	725	870	788	761	648	497	301	156	49
47	Breast	5,372	—	—	2	93	180	409	626	733	681	676	593	539	436	265	139
48	Skin	432	1	—	1	9	4	17	14	23	27	32	47	60	83	60	54
49	Larynx	191	—	—	—	4	10	19	27	32	28	20	20	13	7	9	2
	Lung and pleura ..	276	1	—	3	8	11	16	35	40	40	42	34	22	16	6	2
	Pancreas	531	—	1	1	5	7	20	27	51	83	94	90	68	53	20	11
	Kidneys and suprarenal glands	215	25	6	2	8	6	7	15	21	19	40	25	21	10	9	1
	Bladder	333	—	1	—	2	8	10	16	26	42	47	54	59	37	22	9
	Brain	55	—	3	1	7	3	4	11	11	1	8	3	3	—	—	—
	Bones (jaw excepted) ..	321	6	21	34	18	10	22	28	30	26	28	33	30	22	7	6
	Other specified organs..	582	11	3	12	19	20	30	48	59	75	84	85	61	41	18	16
	Abdominal cavity, organ unspecified	244	—	—	2	6	8	9	12	24	21	34	38	33	29	16	12
	Other and undefined ..	223	2	1	2	11	5	10	12	19	31	28	28	25	23	17	9
	Total 49	2,971	45	36	57	88	88	147	231	313	366	425	410	335	238	124	68

Table XXXIX deals with the distribution of cancer mortality throughout England and Wales, but, in order to provide a more stable basis of comparison for the populations dealt with, it refers to the five years 1921–25, and not to the single year 1925. As in other similar tables (XXXV, etc.) the death-rates for the separate age groups are shown as percentages of the corresponding rate for England and Wales, in order to facilitate comparison between them and, it therefore becomes necessary to state the corresponding age group mortality-rates for England and Wales.

Table XXXVIII.—Cancer, England and Wales, 1921–25 and 1925. Mortality per 100,000 Living at Various Ages.*

	Males.		Females.		Persons.*	
	1921–25.	1925.	1921–25.	1925.	1921–25.	1925.
All Ages :—						
Crude ..	121	129	132	138	127	134
Standardized	98	103	99	100	98	101
0–	3	4	3	2	3	3
25–	26	27	44	44	36	36
45–	290	295	305	303	297	299
65–	911	956	755	773	825	855
75–	1,180	1,322	1,059	1,132	1,106	1,205

It will be seen that increase of mortality continues to be much more rapid for males than for females. Since 1911–14 the increases in the standardized rates have been as follows :—males, 13 per cent. ; females, 2 per cent. ; both sexes, 6 per cent.

A broad survey of the picture presented by Table XXXIX shows in the first place that as compared with other causes similarly dealt with, the respiratory diseases for instance, cancer mortality is on the whole strikingly constant all over the country.† The standardized rate for persons of both sexes varies only from a maximum in London of 10 per cent. above the general average to a minimum in the rural districts of the South of 12 per cent. below it, the range of variation for males (118–84 per cent.)

* The standardized rates in this table are based on the rates for the five age groups shown. Those for 1925 differ on this account from the rates derived from the more detailed age grouping ordinarily employed for the purpose, which are as follows :—males 102, females 99, persons 101. The latter more fully corrected rates can be given only for England and Wales and the main classes of area, not for other divisions of the population dealt with in Table XXXIX.

† This statement and the remainder of the comment upon Table XXXIX which follows it, are based entirely upon the facts as presented in that table. Examination, at present incomplete, of the corresponding returns for administrative counties reveals certain apparently significant differences when geographical distinction is carried to this extent. Thus, dealing with rural districts and with mortality at ages over 45 only, we find that in the five years 1919–23 there were 15 administrative counties (out of 61) whose mortality exceeded the corresponding average for the whole country by ten per cent. or more. With one exception (Westmorland 116 per cent.) these range themselves into two groups of contiguous counties, in the fen districts and in North Wales respectively, as follows :—(1) Soke of Peterborough 135, Hunts. 125, Suffolk West 119, Lincs. Holland 118, Cambs. 115, Rutland 113, Beds. 112, Northants 111, and Oxford 110 per cent. ; and (2) Merioneth 135, Carnarvon 130, Montgomery 124, Anglesey 119, and Cardigan 113 per cent. It seems probable that in these two areas cancer mortality in 1919–23 was significantly above the average, notwithstanding the uniformity displayed by Table XXXIX. In all of the Welsh counties mentioned, and in five of the English, the excess of 10 per cent. or more applies to each sex.

Table XXXIX.—Distribution of Mortality from Cancer, 1921–25.

	London.	County Boroughs.					Urban Districts.					Rural Districts.					All Areas.				
		North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.
Mortality per 100,000 living.																					
All Ages.																					
Persons Crude	138	123	123	151	106	125	118	125	151	96	125	111	133	140	123	129	120	127	143	107	127
Persons Standardized	109	106	102	102	97	104	97	96	99	89	97	88	88	86	91	88	100	95	101	92	98
Males Crude	141	121	119	143	101	122	109	119	145	89	117	104	124	134	112	124	114	121	141	98	121
Males Standardized	116	108	103	103	94	105	94	97	101	84	96	83	84	85	85	84	100	95	104	87	98
Females Crude	137	126	126	158	110	129	126	131	155	104	132	119	142	146	134	137	125	132	146	115	132
Females Standardized	103	104	101	102	100	103	100	97	98	94	98	92	91	88	101	91	101	96	98	96	99
Mortality per cent. of that for England and Wales.*																					
All Ages (Standardized) Persons	110	107	104	104	99	106	99	98	101	90	98	89	89	88	93	89	102	97	102	93	100
All Ages (Standardized) Males	118	109	105	104	96	107	95	98	103	85	97	84	85	86	87	86	101	96	105	88	100
All Ages (Standardized) Females	104	106	102	103	101	104	102	98	99	95	99	94	93	89	99	92	103	98	100	98	100
Males :—																					
0–	124	94	100	133	73	97	100	109	91	67	97	103	100	100	61	97	97	103	112	67	100
25–	125	109	98	103	100	105	96	96	97	85	95	86	86	87	88	86	102	94	108	89	100
45–	119	117	108	104	102	112	95	95	98	87	95	79	79	81	82	80	104	95	104	89	100
65–	115	110	107	101	91	107	97	102	104	85	99	87	86	87	91	87	102	98	103	89	100
75–	115	91	99	109	87	97	92	101	116	81	101	92	99	98	91	97	92	99	110	86	100
Females :—																					
0–	128	84	120	96	72	96	88	88	112	96	96	60	112	100	124	100	84	104	116	100	100
25–	103	111	103	106	123	109	100	94	94	94	96	84	93	88	91	89	104	97	98	99	100
45–	105	107	103	102	103	105	101	98	96	98	98	92	91	90	101	92	103	97	99	100	100
65–	100	105	104	105	97	104	104	100	99	95	100	101	93	88	99	94	104	99	98	97	100
75–	107	98	98	103	85	98	103	101	110	86	103	96	95	92	95	94	99	98	104	90	100
Rates for Males per cent. of Rates for Females.																					
All Ages (Standardized)	113	103	102	101	94	103	93	100	104	89	98	90	92	96	88	92	98	98	105	90	100
0–	128	148	110	183	133	133	150	164	107	92	133	227	118	132	65	128	152	131	128	88	132
25–	71	57	56	57	48	57	56	60	60	53	58	60	54	58	57	56	57	57	65	53	59
45–	108	103	100	97	95	101	89	93	97	85	92	82	83	86	78	83	96	93	100	85	95
65–	138	126	124	116	112	124	113	123	128	108	119	103	111	119	111	112	118	119	127	110	121
75–	120	104	112	118	113	110	100	111	117	104	109	106	116	118	106	114	103	113	117	107	111

* Based on rates per million living.

being much greater than that for females (106–89 per cent.). Moreover, the differences which do occur are all of such a nature as to suggest that they may depend rather upon differences in completeness of certification than upon differences in prevalence of the disease. If this is in fact the case the uniformity of distribution implied is remarkable, and is far from suggestive of the varying local action of an infective agent. If cancer is indeed due to such agency it would seem that, unlike other infections, it affects all parts of the country and all classes of area to substantially the same extent. It will be seen that, as often noted in previous years, mortality is shown as decreasing with urbanization, from a maximum in London to a minimum in the rural districts. But this is surely only what might be expected from the relative facilities for diagnosis in the areas compared. The difference applies much more to males than to females, as is to be expected in view of the much greater accessibility of cancer in the female. It was shown in Table XLI of last year's Review that during 1911–20 the proportion for males of mortality (crude and standardized alike) ascribable to the sites classed as accessible was 29 per cent., while for females the corresponding proportion was 47 per cent.

The differences in Table XXXIX between London and the rural districts may be compared with those between England and Wales of the present time and of a few years ago. Thus in London standardized mortality is shown as 12·6 per cent. higher, and in the rural districts as 7·7 per cent. lower, for males than for females in 1921–25. But it was only in 1922 that the standardized rate for males in England and Wales first equalled that for females, and only in 1924 that it first was in excess, an excess which has increased in 1925. And it was pointed out in the Review for 1922 that the excess of cancer mortality for females is declining in the United States as it has done in this country, though it has not yet there reached the point of extinction.

A similar observation applies to distribution by age as to that by sex. The preponderance of increase at the later ages in both sexes demonstrated diagrammatically in last year's Review has been recorded and discussed also in such widely separated countries as the United States and New Zealand. And Table XXXIX shows that the mortality recorded for the extremes of cancer age (under 25 and over 75) increases from North to South to an extent not applying to other ages, both for all areas jointly, and, with certain exceptions, especially in the rural districts, for each class of area considered separately. And at both these ages the rate for London is outstandingly high.

For males, indeed, it is the highest in the table for each age distinguished except 0–25 and 75 and upwards, but for females only at 0–25, though also particularly high at 75 and upwards. The London excess at all ages jointly amounts to 18 per cent. for males, but only to 4 per cent. for females, a difference readily explicable in view of the greater accessibility of cancer in females.

Relative excess in mortality at the extremes of age varies more with the section of the country than with urbanization (London excepted), while, with the same exception, excess for males varies more with class of area than with part of the country. At both extremes of age there is probably special liability to overlook the existence of malignant disease. The evidence of this so far as the aged are concerned (apart from Table XXXIX) is to be found in the specially rapid increase of mortality returned at these ages, and in the fact, pointed out in this Review for 1923, that whereas the mortality ascribed to cancer of accessible sites such as the breast increases continuously with age, that ascribed to inaccessible sites tends to increase only up to about 75–80, and after that age to decrease somewhat. No similar confirmatory evidence can be adduced regarding age 0–25, mortality ascribed to which has not increased of late years. The view that it also varies to some extent with efficiency of certification is therefore more open to question, as, apart from any inherent probability which may attach to it, it can only be based on the excess shown by Table XXXIX for London, and, in lesser degree, for the South of England generally, where other evidence suggests that certification is most reliable.

The great drop, for all the populations compared, in the ratio of male to female mortality at age 25–45 is due to the heavy death rate at this age from cancer of the female genital organs, particularly the uterus. This drop is less in London than elsewhere, the male ratio being at a maximum in London at 25–45, as at all other ages except 0–25, at which the small numbers concerned render the sectional rates unreliable. London is, in fact, in advance of all the rest of the country in recognising that the male sex is the chief sufferer from cancer. On the other hand, there is probably some ground for inferring, on the lines of argument followed in interpreting Table XXXIX, that certification for females is now almost as complete as present knowledge and technique admit. Their certified mortality has of recent years been increasing very slowly, while that of males has increased rapidly, and between the ages of 25 and 75 the London rates for females are in very slight excess, while those for males are in much excess at all ages. Judged by the same test cancer is, indeed, under-diagnosed at the extremes of age for females as well as for males, but the influence of these ages, particularly 0–25, upon the total rate is slight.

The reduction on standardization in Table XXXIX is striking evidence of the disproportionate increase in all sections of the population of persons at the cancer ages since 1901, the population at which date is used as standard. This reduction is much greater in the South than in the North of England or in Wales, but no change since 1901 is necessarily implied by this fact, as even then the proportion of elderly persons was higher in the South than elsewhere.

50. **Tumours not returned as Malignant.**—As in other recent years all deaths from tumours not definitely stated to be malignant have been assembled in Table XL. These numbered 2,658, the tumour being returned as benign in 1,378 instances, and its nature in the remaining 1,280 being unstated. "Adenoma" of the prostate is classed to 135, Diseases of the Prostate, and not to 50 because the deaths so returned seem to be of the nature of prostatic hypertrophy. They have increased from 32 in 1911 to 206 in 1925, and have the age distribution of prostatic hypertrophy.

Table XL.—England and Wales, 1925 : Deaths attributed to 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.																
84.2. Cerebral tumour	518	517	70	56	109	105	93	103	111	126	93	76	33	42	9	9
Cyst	18	9	5	2	3	4	4	1	4	2	2	—	—	—	—	—
Fibroma	1	2	—	—	1	—	—	—	—	—	—	—	—	1	—	1
Glioma	105	80	14	9	24	16	21	23	21	17	20	8	4	7	1	—
Psammoma	1	2	—	—	1	—	—	1	—	1	—	—	—	—	—	—
Other benign	4	1	—	—	1	1	—	—	1	—	2	—	—	—	—	—
Nature unstated	389	423	51	45	79	84	68	78	85	106	69	68	29	34	8	8
In 85. Eye	1	2	—	2	1	—	—	—	—	—	—	—	—	—	—	—
Cyst	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—
Glioma of retina	—	2	—	2	—	—	—	—	—	—	—	—	—	—	—	—
In 135. Prostate	206	—	—	—	—	—	—	—	3	—	28	—	90	—	85	—
Adenoma	191	—	—	—	—	—	—	—	3	—	26	—	83	—	79	—
Adenomyoma	8	—	—	—	—	—	—	—	—	—	1	—	5	—	2	—
Fibro-adenoma	7	—	—	—	—	—	—	—	—	—	1	—	2	—	4	—
137. Ovarian tumour	—	282	—	—	—	23	—	44	—	55	—	51	—	60	—	49
Cyst	—	234	—	—	—	23	—	40	—	44	—	40	—	48	—	39
Fibroid	—	6	—	—	—	—	—	1	—	—	—	2	—	2	—	1
Papilloma	—	5	—	—	—	—	—	—	—	2	—	2	—	—	—	1
Other benign	—	7	—	—	—	—	—	1	—	3	—	—	—	3	—	—
Nature unstated	—	30	—	—	—	—	—	2	—	6	—	7	—	7	—	8
139. Uterine tumour	—	387	—	—	—	15	—	130	—	150	—	41	—	30	—	21
Fibroid, Fibro-myoma, Myoma	—	352	—	—	—	14	—	120	—	137	—	37	—	26	—	18
Polypus	—	16	—	—	—	1	—	6	—	6	—	1	—	—	—	2
Other benign	—	10	—	—	—	—	—	4	—	3	—	1	—	1	—	1
Nature unstated	—	9	—	—	—	—	—	—	—	4	—	2	—	3	—	—
In 141.2. Other female genital organs	—	6	—	1	—	1	—	—	—	3	—	—	—	—	—	1
Broad ligament, cyst	—	2	—	—	—	1	—	—	—	1	—	—	—	—	—	—
,, fibroid	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—
Fallopian tube, nature unstated	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—
Vagina, papilloma	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—
Vulva, papilloma	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1
50. *Tumours not classed with other diseases of organ or part affected.*																
Pituitary gland — Non-malignant	—	4	—	—	—	2	—	—	—	—	—	1	—	1	—	—
Nature unstated	10	9	—	4	3	1	2	1	1	—	3	2	1	—	—	1
Thyroid — Adenoma	4	31	—	2	1	2	—	2	1	6	2	10	—	6	—	3
Other benign	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Nature unstated	—	1	—	—	—	—	—	—	—	—	—	—	—	1	—	—
Spleen — Non-malignant	—	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—
Nature unstated	1	2	—	—	—	—	—	—	1	—	—	—	—	2	—	—

Table XL.—England and Wales, 1925 : Deaths attributed to Tumours not returned as Malignant—*continued*.

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.
50. *Tumours not classed with other diseases of organ or part of body affected*—contd.																
Spinal cord — Glioma	—	3	—	—	—	—	—	1	—	1	—	1	—	—	—	—
Other benign	4	1	—	—	—	—	1	—	1	1	2	—	—	—	—	—
Nature unstated	8	10	1	3	1	1	—	2	2	—	2	3	2	1	—	
Ear — Cholesteatoma	2	2	1	—	—	—	1	1	—	1	—	—	—	—	—	—
Nose — Polypus	2	6	—	—	—	1	1	1	—	1	1	1	—	1	—	1
Larynx — Papilloma	7	7	5	7	—	—	1	—	—	—	1	—	—	—	—	—
Other benign	1	1	1	—	—	1	—	—	—	—	—	—	—	—	—	—
Nature unstated	2	1	—	—	—	—	—	—	—	—	—	—	2	—	—	1
Mediastinum — Non-malignant	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
Nature unstated	81	52	—	—	2	2	8	8	27	13	22	13	15	14	7	2
Lung — Nature unstated	39	17	—	—	1	1	3	1	11	2	12	8	8	4	4	1
Œsophagus — Nature unstated	3	4	—	—	—	—	—	—	1	—	2	2	—	—	—	2
Intestine — Papilloma	2	3	—	—	—	—	—	—	—	1	1	1	1	1	—	—
Polypus	4	3	1	—	1	2	—	—	—	1	2	—	—	—	—	—
Other benign	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
Nature unstated	14	21	—	—	—	—	1	—	—	2	1	5	6	8	6	6
Liver — Non-malignant	1	1	—	1	—	—	—	—	—	—	—	—	1	—	—	—
Nature unstated	8	8	—	—	—	—	—	1	1	—	4	3	2	2	1	2
Pancreas — Cyst	5	2	—	1	—	—	2	1	2	—	—	—	1	—	—	—
Nature unstated	1	1	—	—	—	—	—	—	—	1	—	—	1	—	—	—
Kidney — Non-malignant	1	6	—	—	—	—	—	1	—	1	1	1	—	3	—	—
Nature unstated	7	9	1	—	—	1	1	—	2	—	—	1	—	4	3	3
Bladder — Papilloma or villous	92	37	—	1	1	—	4	2	25	1	17	4	25	12	20	17
Other benign	6	1	1	—	—	—	1	—	—	—	—	—	3	—	1	1
Nature unstated	6	6	—	—	—	—	—	—	—	—	2	—	1	5	3	1
Prostate — Non-malignant	2	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—
Nature unstated	4	—	—	—	—	—	—	—	—	—	—	—	2	—	2	—
Spine — Non-malignant	1	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—
Nature unstated	4	4	—	—	—	—	—	2	1	1	1	—	1	—	1	1
Sacrum — Non-malignant	1	2	—	—	—	1	—	—	1	—	—	1	—	—	—	—
Nature unstated	2	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—
Neck — Non-malignant	3	1	—	—	—	—	1	—	—	—	1	—	—	—	1	1
Nature unstated	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
Thorax — Nature unstated	3	5	—	—	—	1	—	—	1	1	1	2	1	1	—	—
Abdomen — Non-malignant	—	3	—	—	—	—	—	—	—	—	—	1	—	—	—	2
Nature unstated	14	43	2	—	—	1	—	1	2	5	4	9	4	12	2	15
Other sites — Non-malignant	22	27	1	1	3	5	8	2	3	6	3	7	2	—	2	6
Nature unstated	10	13	—	1	1	—	4	3	1	1	2	1	—	4	2	3
Site not stated — Non-malignant	1	4	—	—	—	—	—	1	—	1	—	—	2	—	—	1
Nature unstated	2	3	—	—	—	—	—	1	—	1	—	—	2	1	—	—
Total (50)	383	356	14	21	14	22	39	32	86	47	89	80	83	83	58	71
Total, all tumours	1108	1550	84	80	124	166	132	309	200	381	210	248	206	215	152	151
,, benign tumours	499	879	29	27	37	74	45	209	64	238	84	122	128	112	112	97
,, nature unstated	609	671	55	53	87	92	87	100	136	143	126	126	78	103	40	54

57. **Diabetes.**—The deaths allocated to this cause number 4,357—1,814 of males and 2,543 of females, corresponding to death-rates of 98 per million males and 125 per million females. Both this number of deaths and the death-rate for males have been exceeded in a number of earlier years—most of all in 1914–16—but for females both deaths and death-rate exceed those of any previous year.

The failure of this mortality to respond to the introduction in 1923 of a specific remedy which has undoubtedly saved many lives which must have been lost without it has naturally excited considerable interest, and it seems opportune, therefore, to examine the mortality records in some detail. This has, indeed, already been done in the Statistical Department of the National Institute for Medical Research,* but the matter is of so much importance that any fresh light which re-examination can throw upon it must be of interest.

The history of the crude mortality during the last 11 years is to be found in Table 5, from which it may be seen that the rate for females, which before 1920 was constantly below that for males (as also for the whole of our recorded medical history prior to 1915), has been uniformly and increasingly in excess from 1920 onwards. Since the effective introduction of the new remedy early in 1923 the crude death-rate for females has increased from 122 in 1922 to 125, while that for males has fallen from 116 to 98.

In order to ascertain how far this remarkable record represents the real trend of mortality, and how far it might be accounted for by changes taking place in the age constitution of the sex populations compared, standardized rates have been calculated for each year 1911–25 as follows :—

	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925
Males ..	108·8	113·8	115·5	120·4	123·5	120·6	99·6	92·5	95·8	86·8	92·4	101·0	89·7	85·9	81·4
Females ..	91·6	93·5	101·6	102·8	103·9	98·0	82·0	76·8	82·6	82·2	89·3	97·1	94·1	88·2	93·7

The substitution of standardized for crude rates has merely postponed the date of sex reversal from 1920 to 1923, the first year of insulin supply. In comparing the sex rates for the war years it should be remembered that those for civilian males, though not inflated, like the crude rates, by exclusion of young men, with their low diabetic mortality (Table XLI) are artificially increased by selective recruitment of the healthy for military service, which largely reduced the population dealt with without corresponding reduction of deaths. For males as well as females a very abrupt decline is nevertheless seen to have occurred in 1917, which was maintained till 1920, after which a rise occurs till 1922, since when there has been considerable continuous fall for males, and little net movement for females (the slight rise in their crude rates disappearing on standardization). There can probably be little doubt that this war fall was due to food restriction, a similar effect having been experienced at the same time by various other combatant populations.

* Young and Russell, Quarterly Journal of Medicine, No. 77, October, 1926.

These changes are so remarkable that it has been thought desirable to analyse them by age for each sex in the following table, and in Diag. 1 prepared from it.

Table XLI.—England and Wales—Variation in the Mortality from Diabetes of various Sex and Age Groups of the Population, 1911–25.

		0–5	5–15	15–25	25–35	35–45	45–55	55–65	65–75	75–
Death-rate per million 1901–10.		4	14	41	59	78	160	415	731	720
Males: Death-rate per cent. of that for 1901–10.	1911	127	115	108	94	99	94	102	116	113
	1912	198	118	97	97	104	95	111	120	127
	1913	177	123	102	112	102	102	110	120	118
	1914	214	109	119	120	120	108	113	114	132
	1915*	202	176	130	118	119	112	115	110	135
	1916*	182	143	111	127	112	108	109	117	135
	1917*	125	110	91	100	111	76	85	106	109
	1918*	145	104	116	118	91	74	72	86	103
	1919*	143	152	96	96	100	78	81	92	112
	1920*	111	113	96	90	83	70	73	90	93
	1921	134	116	104	103	91	90	73	85	101
	1922	91	162	113	108	91	89	77	97	127
	1923	100	101	82	81	77	62	78	102	122
	1924	134	77	72	63	66	69	77	95	130
	1925	127	101	55	73	55	59	69	96	128
Death-rate per million, 1901–10.		5	15	31	51	63	129	357	574	473
Females: Death-rate per cent. of that for 1901–10.	1911	98	121	86	99	102	110	108	118	130
	1912	111	109	109	105	103	111	107	119	130
	1913	145	158	102	102	105	121	113	133	152
	1914	157	117	113	105	115	118	122	124	169
	1915	168	148	114	94	108	100	124	144	158
	1916	126	111	113	105	119	101	111	129	147
	1917	166	88	94	105	85	81	90	109	128
	1918	177	97	114	100	99	80	80	90	107
	1919	177	140	98	79	107	94	89	100	122
	1920	106	123	115	87	83	87	91	107	117
	1921	91	143	119	90	118	95	94	112	131
	1922	87	155	104	105	97	104	113	125	152
	1923	60	105	98	87	94	110	109	128	155
	1924	104	92	90	64	74	77	109	135	168
	1925	111	95	96	63	83	86	110	150	171

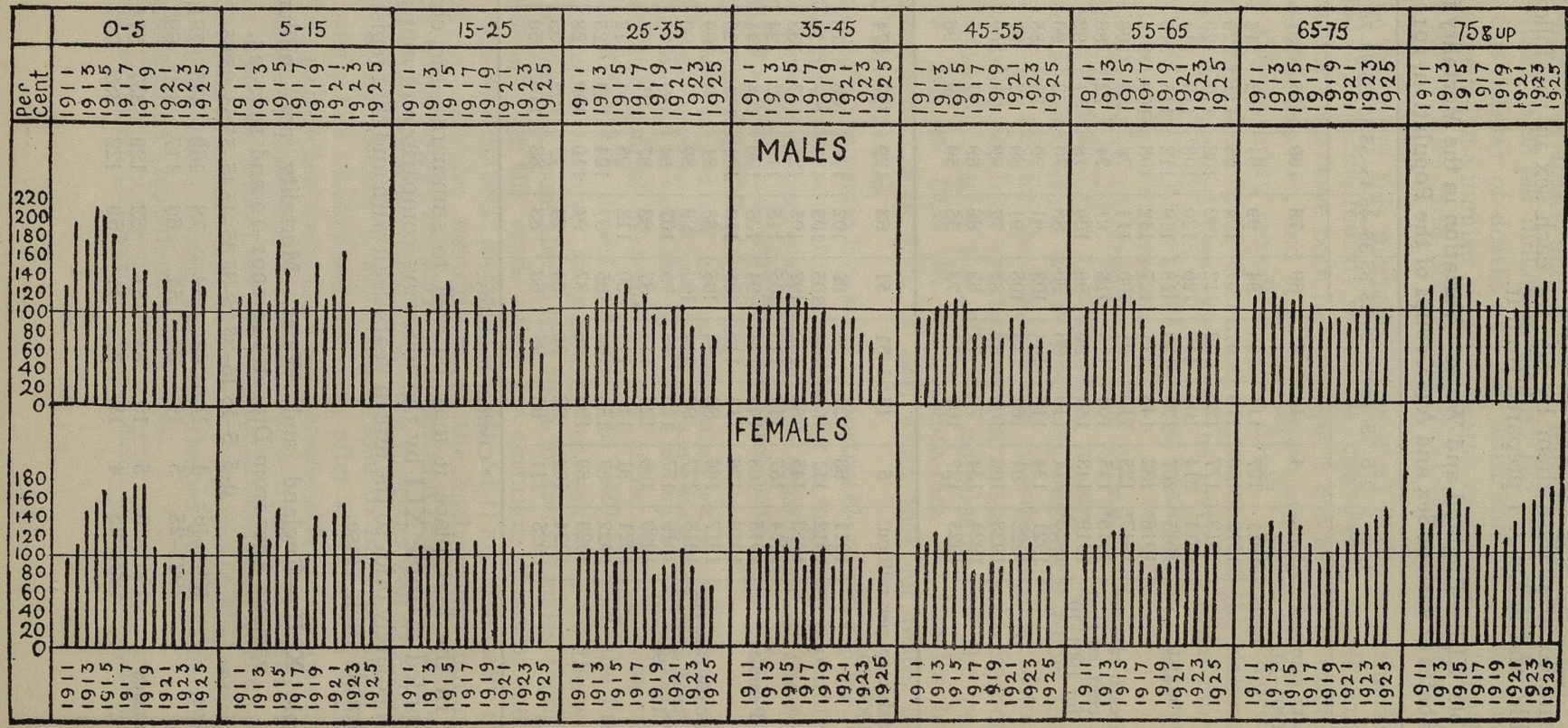
* Civilian mortality.

In the first place it may be well to summarise the change recorded in Table XLI by the following comparison of mortality immediately prior to the fifteen years dealt with and that registered towards their close.

Table XLII.—England and Wales, Mortality per million at various Ages from Diabetes in 1901–10 and 1921–25.

		0–5	5–15	15–25	25–35	35–45	45–55	55–65	65–75	75–
Males ..	1901–10	4	14	41	59	78	160	415	731	720
,, ..	1921–25	5	16	34	51	60	117	310	695	878
Females ..	1901–10	5	15	31	51	63	129	357	574	473
,, ..	1921–25	4	18	31	41	59	122	382	747	738

DIAGRAM 1. ENGLAND & WALES DIABETES MORTALITY BY SEX AND AGE IN EACH YEAR 1911-25 PER CENT OF THAT IN 1901-10.



During this interval there has been little change in the small mortality of childhood, substantial decrease for males at all ages 15–75 with some increase at higher ages, and slight decrease for females at 25–55 only, with large and progressive increase at later ages. The movement is clearly, as the diagram shows, very dissimilar for the two sexes, and we can see at what ages the relative increase for females has occurred, accounting for the recent reversal of the long observed order of sex mortality.

Turning now to detailed examination of Diagram 1 it will be seen in the first place that a very definite and progressive reduction of mortality since 1922 is recorded for both sexes, but chiefly for males, at all ages 15–55. (It has been possible to insert the date only for each alternate mortality column, those relating to odd-number years, but it is hoped that this, when understood, will not prove embarrassing to the reader, whose attention, it is suggested, should be directed primarily to the broad effects portrayed.) There can be little doubt that this fall is due to the use of insulin in the years 1923 onwards, and it will be seen that the effect has been much greater for males than for females. This contrast is especially evident at age 15–25, where the rate for males has been reduced by more than 50 per cent., but that for females is almost unaffected. At these ages (15–55) the reduction caused by food restriction from 1917 onwards, with subsequent increase until the insulin drop in 1923, can also be traced for each sex, but these features are more in evidence at the later ages. The movements in childhood are irregular, and indeed it might perhaps have been better to merge the very low mortality at 0–5 with that at 5–15. Both the war and the insulin reductions can be traced for each sex at 5–15, but at 0–5 the significance of the irregular changes charted is very doubtful.

At ages over 55 insulin seems to have had little effect upon the picture presented, which is dominated by the food restriction fall in mortality, starting as a rule in 1916 and culminating in 1918. After 1918, progressive increase of mortality sets in, which by 1925 amounts for females over 65 years of age to quite 60 per cent. It is this large increase, applying to an age of relatively high diabetic mortality, which has so effectively masked the effect of insulin upon the total mortality at all ages. These features become more pronounced as age advances, and are much more definitely observable for females than for males.

The suggestion which obviously presents itself that this *post bellum* increase represents the reaction of the old, especially of the female sex, against resented food restriction during war time, must be left to the judgment of the reader. It is hard to bring an indictment against a generation. And it is quite conceivable that a similar reaction, in the form of overeating when supplies of food once more became abundant, may have occurred at all ages, but that the danger of its causing hyperglycæmia is restricted to later life. Indeed the "mild diabetes" of the elderly, specially amenable to dietetic treatment, has long been a common-

place of clinical medicine. Whether such deaths are correctly to be regarded as due to diabetes at all is perhaps in some degree open to question, as a tendency may be observed at present to limit the concept of " true " diabetes to cases of pancreatic origin. But this limitation does not apply to the international title No. 57, which is defined as including " glycosuria," nor does it apply to the accepted use of the term diabetes in the past in this country, which has included hyperglycæmia and glycosuria due to defective liver storage (the probable explanation of most of these elderly cases) or other cause as well as the more pernicious cases occurring earlier in life as the result of pancreatic disease. Moreover, continued hyperglycæmia is believed to be capable of setting up pancreatic diabetes in the elderly by prolonged overstimulation of the islands of Langerhans. How far the recent sudden increase of mortality in later life may be due to " true " diabetes so caused and how far to other consequences of hyperglycæmia resulting from overeating, or to attribution of the deaths of hyperglycæmic subjects from some independent cause to their hyperglycæmia, are matters which must be discussed in the light of other evidence than that of death certification.

The failure of the total diabetes death-rate to respond as might have been expected to the introduction of insulin has been attributed, especially in America, to increased consumption of sugar since the war, presumably as a part of a general reaction after dietetic restriction. In the United States consumption rose from 78 pounds per head in 1918 to 98 pounds in 1921,* and there can be little doubt that similar increase has occurred here also. But there appears to be no reason to believe that cane sugar is more harmful than other forms of carbohydrate consumed in excess, since the blood sugar is found to rise as quickly after a meal of starch as a meal of sugar. Dr. W. H. Davis, in the 1922 report referred to, makes two other suggestions as to the cause of the increase of mortality from diabetes in that year noted also in the United States which appear to have greater intrinsic probability—(1) increased attention directed to the disease by the dramatic discovery of a new specific remedy, and (2) overeating in general. Against (1) may be urged the restriction of the increase to old age, with simultaneous large reduction of mortality at earlier ages, so general overeating seems to survive alone as a suggestion consistent with all the facts under discussion.

In this connexion some figures extracted from the report soon to be published on occupational mortality in 1921–23 are of interest. For the five social classes of the population therein distinguished on the basis of occupation, ranging from 1, the upper and middle classes to 5, unskilled labour, the standardized mortality from diabetes of males aged 20–65 compares as follows, that for all occupied and retired males being taken as 1,000 :—

*Mortality Statistics, 1922, page 51.

1. 1,246, 2. 1,451, 3. 918, 4. 754, and 5. 664. Thus it appears that mortality varies widely and in direct proportion to ability to pay for food except for reversal of the order as between the first two classes, which may be taken as both possessing the financial means of overeating, probably more held in check for class 1 than for class 2 by prudential and other considerations. A few examples may be quoted for employers and wage earners—

master builders ..	1,213	builders' labourers ..	434
farmers	1,311	agricultural labourers ..	598
publicans ..	2,852	barmen	402

The recent (1921–25) distribution of diabetes mortality throughout the country is recorded in Table XLIII. This shows a very uniform incidence on all sections of the population. The disease appears no longer to be, if indeed it ever was, one of town life in this country, for London returns the lowest standardized death-rate in the table both for persons and for females, its rate for males being exceeded only by that for the small towns and rural districts of Wales. In the light of the evidence of other similar tables on the comparative quality of local certification this suggests that the disease is commonly over-diagnosed, glycosuric conditions being returned as fatal diabetes in other parts of the country which would not be accepted to the same extent as such in London. Outside London there is practically no variation of mortality with urbanization, the standardized rates ranging only from 9·2 (per 100,000) in the rural districts to 9·6 in the urban. There is, however, definite excess of standardized mortality for the North over the Midlands and South of England in each class of area, a fact which, in the light of the evidence above referred to, supports the hypothesis of over-diagnosis.

As to the comparison for different ages provided by the table little need be said, the facts being placed on record for examination by those interested. Deaths at 0–5 are too few to yield significant rates, and are therefore not dealt with separately. The numbers here represented will be found in Table 20 for each year dealt with. The consistent lowness of the London ratios will be noticed. At every age in each sex the mortality returned for London is below average, the difference being greatest in early life. This latter fact may perhaps be held to supply evidence against the surmise that the low rates in London are to be explained by better certification, for non-fatal glycosuria seems more likely to be wrongly returned as causing death in later than in earlier life. And it will be seen that at all ages up to 45 the mortality returned for each sex progressively increases inversely to urbanization, from a minimum in London to a maximum in the rural districts. The London minimum therefore falls into its place in a series applying to the whole of the country at those ages at which the liability of the mortality to overstatement is least, and so can hardly be assumed to be a mere consequence of such overstatement

Table XLIII.—Distribution of Mortality from Diabetes, 1921–1925.

	London.	County Boroughs.					Urban Districts.					Rural Districts.					All Areas.				
		North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.
Mortality per 100,000 living.																					
All Ages.																					
Persons :—Crude	9·6	11·0	9·9	12·8	10·2	10·8	12·6	11·1	13·3	8·6	11·8	12·1	12·6	12·6	9·9	12·2	11·7	11·1	11·5	9·4	11·3
Standardized	7·8	9·8	8·5	9·0	9·6	9·3	10·8	9·0	9·4	8·2	9·6	10·2	9·4	8·7	8·0	9·2	10·2	8·8	8·5	8·4	9·1
Males :— Crude	8·9	10·3	9·4	12·5	10·3	10·2	11·3	10·8	13·1	7·5	11·0	11·8	11·6	11·4	9·2	11·4	10·8	10·5	10·9	8·6	10·5
Standardized	7·7	9·7	8·5	9·4	10·0	9·3	10·2	9·2	9·9	7·3	9·5	10·2	8·8	8·3	7·6	8·9	9·9	8·8	8·6	7·9	9·0
Females :—Crude	10·2	11·7	10·4	12·9	10·2	11·4	13·9	11·3	13·4	9·8	12·5	12·3	13·6	13·7	10·6	13·0	12·5	11·6	12·0	10·1	11·9
Standardized.. ..	7·9	9·9	8·6	8·7	9·3	9·3	11·4	8·8	9·1	9·0	9·7	10·1	9·8	9·1	8·3	9·5	10·5	8·9	8·5	8·8	9·3
Mortality per cent. of that in England and Wales.*																					
All Ages (Standardized) { Persons	85	108	93	98	105	102	119	98	103	90	105	111	102	96	87	101	112	97	93	92	100
Males	85	107	94	105	111	104	113	102	110	81	106	114	98	92	84	99	110	98	95	88	100
Females.. ..	85	107	92	93	100	101	123	94	98	96	104	109	105	98	90	102	113	96	92	95	100
Males—																					
5–	38	94	100	88	50	94	88	100	113	94	100	144	125	194	81	144	100	106	94	81	100
15–	71	124	79	44	115	100	129	79	115	115	106	135	112	112	109	118	126	88	85	112	100
25–	82	102	84	80	96	95	115	107	93	100	105	147	115	98	93	116	113	102	87	96	100
45–	91	111	94	105	110	105	109	110	106	75	106	98	92	84	86	91	109	99	95	86	100
65–	93	105	99	113	118	105	118	100	110	73	106	105	96	80	67	90	109	98	97	79	100
75–	84	104	109	159	130	116	108	93	141	63	108	94	77	86	95	84	103	90	110	88	100
Females—																					
5–	61	78	100	94	22	83	111	72	111	67	94	150	167	156	89	150	100	106	94	67	100
15–	58	84	87	68	61	84	129	106	116	74	113	142	152	129	168	145	106	110	84	100	100
25–	78	112	82	90	98	100	112	96	102	96	102	116	129	100	98	114	114	98	90	98	100
45–	92	108	90	91	109	100	130	92	86	110	104	113	96	87	91	96	117	92	89	104	100
65–	87	114	102	86	104	106	128	95	94	98	105	103	92	88	73	91	118	96	89	89	100
75–	96	104	92	134	123	106	100	99	122	71	104	68	88	110	71	90	97	93	112	80	100
Deaths in 1924 and 1925 per cent. of Deaths in 1921 and 1922.																					
Both sexes—																					
15–	47	71	63	114	133	73	77	74	59	120	76	72	76	109	71	80	73	71	67	103	73
25–	73	76	58	64	62	69	67	60	57	53	62	74	81	81	78	79	73	65	69	62	69
45–	97	101	108	87	141	103	107	96	100	92	101	88	103	83	91	93	102	102	93	101	99
65–	114	134	139	101	100	129	119	134	107	142	122	122	107	103	108	109	126	126	108	120	120
75–	102	130	103	133	140	123	141	132	114	100	126	153	118	156	114	133	137	119	122	114	124

* Based on Rates per Million living.

elsewhere. Although the total mortality (at all ages) varies little between town and country, yet it is remarkable to what an extent rural mortality falls differentially upon the young, and urban upon the old. This feature appears to be of old standing in our records, as it is clearly discernible in Table LXIII of the Report for 1913, applying to the years 1911–13.

The lower section of the table has been inserted in order to provide some measure of the immediate effect upon mortality of the introduction of the new remedy in 1923. For this purpose it has been held sufficient to compare deaths in 1924–5 with deaths in 1921–2, as population changes within so short a period as five years could not materially affect the matter. In order to avoid excessive inadequacy of data the comparison omits ages under 15 and is made for both sexes jointly, but even so the basis of fact for some of the comparisons made is scanty. The worst instance is that of the county boroughs of Wales at age 15–25, where 8 deaths in 1924–5 are compared with 6 in 1921–2, but most of the numbers compared exceed 100. The case quoted accounts for the chief exception to the rule of substantial decrease of mortality at ages under 45 subsequent to the introduction of insulin. The other increases at 15–25 are all also based on small numbers, ranging up to 35 and 36 deaths for Wales as a whole. The much larger numbers of deaths at 25–45 yield no increases at all, the decreases of 27 per cent. at 15–25 and 31 per cent. at 25–45 being common in some degree to all sections of the population. Evidently the new remedy was adopted simultaneously throughout the whole country. But at 45–65 its effect was almost exactly counterbalanced throughout the land by the adverse influence, overeating or other, which led to an actual increase of the death-rate of every section* at the two later age periods, amounting for the whole country to 20 and 24 per cent.

66. **Alcoholism.**—This heading in the International List of causes of death excludes organic disease attributed to alcoholism, so, in order to obtain as complete information as possible with regard to mortality from overindulgence in alcohol, all the deaths in certification of which any mention of alcohol appears are assembled in Table XLIV. These deaths make up a total of 508, as against 150 attributed solely to alcohol.

The former number is a little smaller, and the latter a little larger, than for 1924, but each is only about one quarter of the corresponding figure in the years immediately preceding the war. The history of the mortality attributed directly to alcoholism may be traced in Table 5. In 1911–14 it varied from 15–19 per

---

* Except the urban districts of Wales at 75–, and the county boroughs of Wales at 65–75, where the number of deaths remained unchanged at 17 and 32 respectively.

million, fell during the war to 2 in 1918, then rose to 6 in 1920, a rate not again reached during the period of depression of trade and heavy taxation of alcohol which has followed. In 1925 the mortality was 4 per million, 5 for males and 3 for females. The features of Table XLIV, which were discussed for 1924 in last year's Review, change but little from year to year, the observations there made applying largely also to 1925.

Table XLIV.—England and Wales, 1925 : 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.
66.	Deaths attributed solely to alcoholism	95	55	—	—	7	3	26	9	31	22	22	14	8	5	1	2
	Deaths attributed to other causes in conjunction with alcoholism :—																
11.	Influenza	10	2	—	—	—	—	6	—	2	2	2	—	—	—	—	—
31.	Tuberculosis of the respiratory system	3	1	—	—	—	1	—	—	3	—	—	—	—	—	—	—
41–2.	Septicæmia	1	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—
43–49.	Cancer	2	—	—	—	—	—	—	—	1	—	—	—	1	—	—	—
57.	Diabetes	2	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—
58(a).	Pernicious anæmia	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
70(2).	Chronic encephalitis ..	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
71.	Meningitis	2	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—
74(a–1).	Cerebral hæmorrhage ..	8	3	—	—	1	—	3	1	2	1	1	—	1	1	—	—
75(b).	Paraplegia	—	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—
78.	Epilepsy	5	—	—	—	1	—	1	—	2	—	1	—	—	—	—	—
82.	Neuritis	8	11	—	—	—	1	1	1	2	2	5	4	—	3	—	—
	Other diseases of the nervous system	6	3	—	—	—	—	2	1	—	—	2	—	1	2	1	—
88(3).	Acute myocarditis	2	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—
90 (1–4).	Valvular disease of heart ..	2	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—
90 (5).	Fatty heart	7	7	—	—	1	—	1	—	4	1	1	5	—	1	—	—
96(6).	Cardiac dilatation	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—
90(7).	Other or unspecified myocardial diseases	11	11	—	—	—	—	1	3	4	3	4	3	2	1	—	1
90(9).	Undefined heart disease ..	2	1	—	—	—	—	—	—	—	—	2	1	—	—	—	—
91(b).	Arterio sclerosis	1	4	—	—	—	—	1	—	—	2	—	1	—	—	—	1
96.	Hyperpiesis	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
99.	Bronchitis	4	3	—	—	—	—	—	—	1	—	3	1	—	2	—	—
100.	Broncho pneumonia ..	5	1	—	—	1	—	—	—	2	—	2	—	—	1	—	—
101(a).	Lobar pneumonia	12	6	—	—	—	—	4	3	6	2	1	1	1	—	—	—
	Other diseases of the respiratory system	2	1	—	—	—	—	—	—	—	1	1	—	1	—	—	—
109(1).	Streptococcal sore throat ..	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
111(a).	Ulcer of the stomach ..	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
112(1).	Inflammation of the stomach	5	3	—	—	2	—	1	2	1	—	1	1	—	—	—	—
112(2).	Gastric hæmorrhage ..	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
113–114.	Diarrhœa and enteritis ..	2	1	—	—	1	—	—	—	1	1	—	—	—	—	—	—
118(b).	Intestinal obstruction ..	—	1	—	—	—	—	—	—	—	—	—	—	—	1	—	—
122(a)	Cirrhosis of the liver ..	87	49	—	—	3	2	7	7	27	16	33	14	15	7	2	3
123(a).	Biliary calculi	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—
128–129.	Nephritis	5	7	—	—	—	—	1	2	3	2	—	1	1	2	—	—
165–174.	Suicide	3	1	—	—	2	1	—	—	—	—	—	—	1	—	—	—
182.	Accidental drowning ..	3	1	1	1	1	—	1	—	—	—	—	—	—	—	—	—
185.	Injury by fall	15	—	—	—	—	—	6	—	5	—	1	—	2	—	1	—
188.	Injury by crushing (vehicles, railways, etc.)	5	—	—	—	1	—	—	—	1	—	3	—	—	—	—	—
	Other violence	8	4	1	—	2	—	—	1	4	—	—	2	1	1	—	—
		331	177	2	1	24	8	65	30	105	55	93	49	37	27	5	7

99. **Bronchitis.**—The (crude) mortality of 906 per million persons living assigned to this cause in Table 5 is the lowest for the present century with two exceptions, 1921 (889) and 1923 (852).

The distribution throughout the country of mortality from bronchitis in 1921–25 is set forth in Table XLVI, while Tables XLVII and XLVIII provide similar information regarding pneumonia and respiratory disease in general. The sex and age group rates of mortality for England and Wales, in proportion to which those for the various sections of the population are set forth in Table XLVI and its fellows, are as follows :—

Table XLV.—England and Wales, Mortality per million, by Sex and Age, from Respiratory Diseases, 1921–25.

	Males.							Females.						
	0–	5–	15–	25–	45–	65–	75–	0–	5–	15–	25–	45–	65–	75–
Bronchitis ..	1,763	23	22	129	1,042	6,296	19,937	1,436	22	18	65	695	5,082	18,802
Pneumonia (all forms)	5,046	194	232	547	1,253	2,838	4,611	4,101	180	124	257	631	2,055	4,088
Other Diseases ..	229	29	30	81	304	857	1,810	165	25	20	46	153	559	1,630
All Respiratory Diseases ..	7,038	246	284	758	2,599	9,991	26,357	5,702	227	162	368	1,480	7,695	24,520

Table XLVI shows, in the first place, that bronchitis mortality varies greatly both with urbanization and with geographical situation. The excess of standardized mortality in the county boroughs over that in the rural districts is 91 per cent., and in the North over that in the South 74 per cent., the differences being similar for each sex, though the Northern excess is greater for females (78 per cent. as against 65) ; and the increases from country to town in each section of the country and from South to North in each class of area are both also quite regular, not only for persons but for each sex separately. Bronchitis, as indeed respiratory disease in general, is particularly fatal to the urban population of the North of England. It may be urged that this is a consequence of the more severe climatic conditions of the North, but if the excessive respiratory mortality of the North is due to greater cold this should give it an advantage as regards diarrhœa, just as till the last few years Scotland consistently returned a lower infant diarrhœa rate than England and Wales (though it has now ceased to do so). But Table XI shows that for each class of area the infant diarrhœa rate of the North is more than double that of the South, that of the Midlands being intermediate in each case. Simultaneous excesses of 74 per cent. for mortality supposed to be promoted by cold and of over 100 per cent. for mortality known to be promoted by heat cannot both be explained on the score of climate. There must be other influences at work, and both diarrhœa and respiratory disease are much affected by all that is summed up in the word " hygiene." There is little evidence in Table XLVI that working conditions can explain the difference, as this is greater for females, and trying conditions of work would tell chiefly on males. Moreover, the Northern excess applies

Table XLVI.—Distribution of Mortality from Bronchitis, 1921–25.

		London.	County Boroughs.					Urban Districts.					Rural Districts.					All Areas.				
			North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales	England and Wales.
Mortality per 100,000 living.																						
	All Ages.																					
Persons	Crude	97	122	102	86	100	111	102	81	74	89	88	81	78	68	83	77	110	87	85	90	94
	Standardized ..	81	121	93	60	101	103	98	68	50	89	75	71	50	41	64	54	106	70	61	82	79
Males	Crude	101	125	107	83	110	115	105	84	74	98	91	85	80	71	87	80	113	90	86	97	97
	Standardized ..	92	132	105	65	117	115	107	76	56	104	84	77	56	46	72	60	114	78	69	95	88
Females	Crude	93	118	98	89	90	107	99	79	75	80	85	78	76	66	80	74	107	85	83	82	91
	Standardized ..	71	111	83	56	88	94	90	60	45	77	67	66	45	37	57	49	98	62	55	72	72
Mortality per cent. of that in England and Wales.*																						
All Ages (Standardized)	Persons	102	152	118	76	128	130	123	85	63	112	95	90	63	52	80	68	133	88	77	104	100
	Males	104	150	120	74	133	130	121	86	63	117	95	87	63	52	82	68	130	89	78	108	100
	Females	99	155	116	78	123	130	126	84	63	107	94	92	63	52	79	68	136	87	76	100	100
Males :—																						
0–		57	152	108	68	109	128	139	80	52	117	99	133	66	47	84	79	145	86	55	105	100
5–		57	161	109	74	83	130	130	83	78	139	104	70	65	48	157	74	135	87	61	130	100
15–		114	168	82	41	36	123	132	82	68	118	100	100	64	50	59	68	145	77	82	82	100
25–		133	172	121	60	118	143	99	78	50	108	84	56	40	26	59	42	133	83	84	96	100
45–		133	161	118	65	149	137	108	75	52	128	87	58	40	37	76	47	129	79	85	116	100
65–		112	154	126	71	155	134	126	87	61	129	97	78	58	46	79	61	132	88	78	114	100
75–		114	134	125	88	129	123	114	98	81	104	98	82	82	73	88	80	116	98	90	101	100
Females :—																						
0–		58	154	103	68	125	128	137	81	54	113	99	130	64	49	83	78	145	84	57	107	100
5–		77	136	91	73	105	114	145	64	59	118	95	118	82	50	155	91	136	77	64	127	100
15–		67	194	83	83	144	144	111	50	50	128	78	117	56	72	94	78	156	61	67	122	100
25–		95	163	109	75	143	135	131	66	42	138	89	95	52	29	69	58	145	77	68	118	100
45–		113	181	111	72	127	144	120	74	46	107	85	68	45	32	68	48	146	78	74	98	100
65–		110	164	122	76	132	137	128	85	56	110	92	77	57	47	70	59	139	87	77	98	100
75–		115	138	122	88	113	122	119	92	82	98	96	87	75	67	86	75	123	94	91	95	100

* Based on rates per million living.

throughout life from the cradle to the grave, much more, indeed, towards the cradle end. Thus both sex and age incidence supply evidence against working conditions as the cause of Northern excess still stronger than that supplied by diarrhœal mortality against climatic. The regularity with which the figures are marshalled is indeed amazing. At no age is the rule of large excess in the North over the South broken for either sex for any class of area, and exceptions to the rule of steady decline from North to Midlands and Midlands to South are few and unimportant. In only 15 out of the 42 sex age and class of area group comparisons provided (14 sex and age groups each for county boroughs, urban districts, and rural districts) is mortality in the North not at least double that in the South, and in all 42 cases it is the highest for any section of England. The rule of decline from county boroughs to rural districts also applies in the great majority of cases—76 out of 84. (14 sex and age groups in three parts of England, each providing two comparisons, of county boroughs with urban districts and of urban districts with rural districts—$14 \times 3 \times 2 = 84$.)

100, 101. Pneumonia (all forms).—As for bronchitis so for pneumonia, the mortality of 1925 (951 per million persons living, Table 5) is the lowest of the century except those for 1921 (916) and for 1923 (870).

The distribution throughout the country of mortality from this cause during 1921-25 is set forth in Table XLVII.

This table in all its important features is practically a replica of Table XLVI. The excess of standardized mortality in the county boroughs over that in the rural districts is 103 per cent. as against 91, and in the North over that in the South 56 as against 74 per cent., these excesses being again much the same for each sex. So the influence of class of area appears to be somewhat greater for pneumonia than for bronchitis, and that of section of the country somewhat less. But for each sex and in every class of area mortality regularly declines from North to South at every age under 75, while similar comparison between classes of area in each section of England reveals few exceptions to the rule of increase with urbanization. The excess for mortality of males over that of females, 41 per cent. for England and Wales, is very constant for all the sections of the population compared.

As already noted for bronchitis, there is no evidence that the Northern excess is due to differences in conditions of work, for it is much the same for both sexes, and it is greatest in childhood, before work commences.

97–107. Respiratory Diseases.—From these diseases, which jointly cause about one-sixth of the total mortality, the death-rate was the lowest of recent years with the same two exceptions, 1921 and 1923, as for bronchitis and pneumonia. As there is evidence of much interchange in certification between the diseases constituting the group (bronchitis 46 per cent., pneumonia 47 and other diseases 7 per cent. in 1921–25), Table XLVIII has been prepared to show the distribution throughout the country of these deaths as a whole, under whichever title they may be returned.

Table XLVII.—Distribution of Mortality from Pneumonia (all forms), 1921–25.

		London.	County Boroughs.					Urban Districts.					Rural Districts.					All Areas.				
			North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.
Mortality per 100,000 living.																						
	All Ages.																					
Persons	Crude	114	139	105	75	104	120	110	77	62	93	87	87	59	52	79	65	122	81	84	91	96
	Standardized ..	116	147	109	73	107	126	116	78	58	94	89	87	55	46	75	62	128	82	82	91	98
Males	Crude	137	169	127	90	129	146	133	93	74	109	104	103	67	59	94	76	148	97	101	108	115
	Standardized ..	136	174	129	85	133	149	138	93	69	111	105	103	63	53	90	72	152	96	96	109	116
Females	Crude	94	112	84	64	78	97	89	63	52	76	70	72	50	45	64	55	99	67	70	73	79
	Standardized ..	97	122	90	61	82	104	95	65	49	78	74	73	47	40	61	52	107	68	70	74	82
Mortality per cent. of that for England and Wales.*																						
All Ages (Standardized)	Persons ..	117	150	110	74	109	127	117	80	59	96	90	89	55	47	76	63	130	83	84	92	100
	Males	117	150	111	73	115	128	118	80	59	96	91	88	54	45	77	62	131	83	83	94	100
	Females ..	118	149	109	75	100	127	116	79	59	95	90	89	57	49	74	64	130	83	85	90	100
Males :—																						
0–		114	155	112	73	109	131	119	76	51	98	89	88	50	38	70	58	134	81	80	92	100
5–		81	164	107	78	75	133	145	70	51	76	92	102	63	51	67	69	149	80	68	73	100
15–		82	151	98	56	132	125	140	82	56	114	101	103	60	55	70	70	141	81	67	104	100
25–		98	155	111	60	125	131	122	81	59	86	92	91	57	48	81	65	136	85	75	93	100
45–		131	142	110	72	126	124	109	85	68	92	90	83	55	51	86	63	123	84	92	97	100
65–		143	139	110	78	119	121	110	88	73	98	93	85	61	58	101	69	120	85	96	103	100
75–		157	124	114	115	116	119	108	92	92	105	97	88	63	64	89	70	111	85	107	100	100
Females :—																						
0–		116	158	114	67	99	132	116	76	50	99	88	83	50	38	66	57	133	82	80	90	100
5–		95	142	107	101	77	123	136	85	63	98	99	96	57	52	68	66	133	84	80	85	100
15–		90	143	91	77	94	117	124	78	67	98	94	102	82	78	100	88	131	84	81	98	100
25–		100	139	96	73	89	116	117	84	68	97	93	110	79	67	89	84	128	87	83	93	100
45–		131	142	107	80	110	122	111	79	66	82	87	89	63	60	79	69	125	84	93	87	100
65–		137	137	106	79	110	118	119	85	76	85	93	86	63	61	89	69	123	84	96	91	100
75–		151	125	104	108	114	115	101	93	88	94	94	96	59	65	92	70	113	84	107	97	100

* Based on rates per million living.

Table XLVIII.—Distribution of Mortality from Diseases of the Respiratory System (97–107), 1921–25.

		London.	County Boroughs.					Urban Districts.					Rural Districts.					All Areas.				
			North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.
Mortality per 100,000 living.																						
	All Ages.																					
Persons	Crude	226	275	221	179	219	245	227	173	152	200	190	184	150	135	181	157	247	183	185	198	205
	Standardized ..	210	282	215	146	223	243	228	158	121	200	177	172	115	98	154	127	248	163	156	190	191
Males	Crude	257	311	251	193	257	278	256	193	167	230	214	205	163	149	202	173	278	204	206	227	229
	Standardized ..	244	323	250	166	268	280	261	184	140	237	206	196	131	112	181	146	283	189	180	224	220
Females	Crude	201	243	194	167	181	216	201	155	140	170	168	163	138	123	159	142	218	164	167	169	183
	Standardized ..	180	245	183	128	183	208	197	135	104	168	152	151	100	85	130	110	215	140	134	159	164
Mortality per cent. of that in England and Wales.*																						
All Ages (Standardized)	Persons ..	110	148	112	77	117	127	119	83	63	105	93	90	60	51	81	67	130	85	82	99	100
	Males	111	147	113	76	122	127	119	84	63	107	94	89	60	51	82	66	129	86	82	102	100
	Females ..	109	149	111	78	112	127	120	82	63	102	92	92	61	52	79	67	131	85	82	96	100
Males :—																						
0–		99	153	110	72	109	130	124	78	52	104	92	100	55	41	75	65	136	83	74	96	100
5–		77	157	106	89	83	130	142	73	57	88	94	103	67	50	83	73	144	82	68	85	100
15–		86	150	96	56	120	123	136	82	61	115	101	104	64	56	73	73	138	82	71	104	100
25–		105	153	112	68	120	131	116	81	63	93	91	84	54	49	81	63	132	85	80	96	100
45–		129	145	112	74	136	127	108	82	65	112	90	74	51	50	85	59	123	83	90	108	100
65–		120	144	120	74	143	127	120	89	68	124	97	82	61	53	89	65	125	88	84	114	100
75–		122	131	121	93	121	120	112	97	85	106	98	84	79	72	91	79	115	95	94	102	100
Females :—																						
0–		100	156	111	68	107	131	121	78	52	104	91	97	54	42	72	63	136	83	74	95	100
5–		92	136	102	98	81	119	137	83	65	106	100	102	66	54	82	73	132	85	79	94	100
15–		88	144	90	83	113	119	120	75	70	106	92	102	78	72	118	86	131	81	80	110	100
25–		100	139	98	76	103	118	118	81	68	112	94	108	74	61	88	80	128	85	82	103	100
45–		120	157	108	80	117	131	114	79	59	96	87	81	56	48	76	61	133	82	85	94	100
65–		118	152	116	78	126	129	124	86	64	105	93	80	61	53	78	64	133	87	84	98	100
75–		122	133	118	93	114	120	115	92	84	98	96	90	72	68	88	75	120	92	94	96	100

* Based on rates per million living.

Naturally the features of this table are very similar to those of Tables XLVI and XLVII. The excess in standardized mortality for the county boroughs over the rural districts is 91 per cent., and for the North over the South 59 per cent., being little affected by sex in either case. Taking the sex and age groups separately there are very few instances of departure from the urbanization rule, and none at all from that of increase from South to North. This is to say that for each of the 14 sex and age groups distinguished mortality increases regularly from South to North, not only for the country as a whole, but for each class of area separately considered. As noted for bronchitis and pneumonia separately, there is no evidence that the Northern excess is due to conditions of work. The rates for Wales are in all cases intermediate between those for the North and the Midlands considered as a whole, and exceptions to this rule as applied to classes of area are not many. Taken as a whole, the uniform gradation of this mortality both by class of area and by section of the country is most impressive.

The distribution of mortality from respiratory diseases as between the forms distinguished in Table 20, bronchitis, pneumonia (all forms), and other diseases of the respiratory system (chiefly asthma, pulmonary congestion and hæmorrhagic infarct, and pleurisy) differs considerably in different parts of the country, the comparison suggesting that the " bronchitis " of one area may include a number of deaths which would be attributed to pneumonia in another, and *vice versa*. For this reason Table XLIX has been prepared to show the proportions in which these causes are returned as contributing to the total respiratory mortality of the various sections of the population.

It will be seen that at the two earliest ages distinguished, 0–5 and 5–15, London returns the lowest rate in the table for bronchitis and the highest for pneumonia. Evidently many deaths at these ages attributed elsewhere to bronchitis are classed in London to pneumonia. Similarly at the two highest age groups London again attributes a larger proportion of its deaths to pneumonia than any other section of the population, while in extreme old age, 75–, its bronchitis proportion is lowest of all, and at 65–75 decidedly low. Thus at both extremes of life London appears to call pneumonia many cases which are elsewhere regarded as bronchitis. At intermediate ages the differences are less, but at 15–45 the general tendency is the opposite of that applying to childhood and old age, the bronchitis ratio being high and that for pneumonia low in London. In all sections of the population pneumonia is much the more important cause of death in early life, and this feature increases (for England and Wales) up to age 15–25, after which bronchitis gains and pneumonia loses importance, till in old age the former causes several times as many deaths as the latter. At all ages except 25–45 the proportion of deaths from " other respiratory diseases " is higher in Wales (all areas) than in any part of England.

Table XLIX.—Deaths of Persons in 1921–25 from 1 Bronchitis, 2 Pneumonia and 3 Other Respiratory Diseases per 1000 from Total Respiratory Diseases 4.

Age.		London.	County Boroughs.					Urban Districts.					Rural Districts.					All Areas.				
			North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.	North.	Midlands.	South.	Wales.	England and Wales.
0–5	1 ..	145	249	240	243	269	247	282	261	255	277	272	335	300	290	285	310	267	259	190	277	251
	2 ..	830	726	736	719	695	727	687	700	703	683	692	626	657	659	664	646	705	709	778	682	718
	3 ..	25	25	24	38	36	26	31	39	42	40	36	39	43	51	51	44	28	32	32	41	31
	4 ..	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
5–15	1 ..	74	95	92	75	109	93	94	89	109	126	98	86	104	90	178	105	94	94	83	137	95
	2 ..	828	825	810	752	733	813	795	786	738	711	776	760	715	781	644	732	808	780	791	697	790
	3 ..	98	80	98	173	158	94	111	125	153	163	126	154	181	129	178	163	98	126	126	166	115
	4 ..	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
15–25	1 ..	96	110	79	82	66	99	84	76	85	99	83	93	77	88	76	84	100	77	91	86	90
	2 ..	777	800	814	760	803	801	823	808	742	775	803	798	779	819	724	786	807	804	774	768	798
	3 ..	127	90	107	158	131	100	93	116	173	126	114	109	144	93	200	130	93	119	135	146	112
	4 ..	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
25–45	1 ..	198	197	188	162	191	192	164	157	123	206	161	131	124	87	129	120	181	164	166	183	173
	2 ..	684	720	705	653	710	712	734	724	688	641	714	752	753	729	718	743	727	721	686	678	714
	3 ..	118	83	107	185	99	96	102	119	189	153	125	117	123	184	153	137	92	115	148	139	113
	4 ..	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
45–65	1 ..	424	483	445	385	461	466	438	395	339	479	414	344	337	301	381	337	459	406	390	449	427
	2 ..	480	437	454	451	434	442	460	472	491	385	460	511	502	507	472	501	449	470	482	420	461
	3 ..	96	80	101	164	105	92	102	133	170	136	126	145	161	192	147	162	92	124	128	131	112
	4 ..	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
65–75	1 ..	602	692	678	627	690	683	671	635	569	672	642	615	614	565	571	598	678	647	593	646	645
	2 ..	324	256	253	284	236	257	259	274	310	221	269	291	282	309	315	294	260	267	314	253	276
	3 ..	74	52	69	89	74	60	70	91	121	107	89	94	104	126	114	108	62	86	93	101	79
	4 ..	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
75–	1 ..	718	789	788	724	781	780	783	761	740	757	761	738	789	760	740	767	780	779	732	755	763
	2 ..	214	161	153	202	167	164	156	168	181	166	168	180	139	158	173	155	162	154	194	169	170
	3 ..	68	50	59	74	52	56	61	71	79	77	71	82	72	82	87	78	58	67	74	76	67
	4 ..	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

143–150. The Puerperal State.—The number of deaths assigned to pregnancy or childbirth was 2,900 (Tables 4, 17 and LII), corresponding to a rate of 4·08 per 1,000 (live) births. Inclusion of the 759 deaths in Table LIV raises the proportion to 5·15 deaths stated to have been caused by, or associated with, pregnancy and childbirth for every 1,000 births.

For comparison of the deaths definitely assigned to pregnancy and childbirth with those so classed for years prior to 1911 deduction is required of 156 deaths from puerperal nephritis and albuminuria (Table LII), which before that date were not classified as puerperal. The resultant rate of 3·86 deaths per 1,000 births is compared in Table L with similar rates for the preceding thirty-four years, before which the comparability of the figures is doubtful.

Table L.—England and Wales. Mortality of Women in or associated with Childbirth per Thousand Children born alive, 1891–1925.

Year.	Classification in use from 1911 onwards.				Classification in use before 1911.				Total Maternal Mortality.
	Puerperal Sepsis.	Other Puerperal causes.	Total Puerperal Mortality.	* Non-puerperal causes.	Puerperal Sepsis.	Other Puerperal causes.	Total Puerperal Mortality.	Non-puerperal causes.	
1891–95 ..	—	—	—	—	2·60	2·89	5·49	—	—
1896–1900 ..	—	—	—	—	2·12	2·57	4·69	—	—
1901–05 ..	—	—	—	—	1·95	2·32	4·27	1·29	5·56
1906–10 ..	—	—	—	—	1·56	2·18	3·74	1·26	5·00
1911–15 ..	1·42	2·61	4·03	0·99	1·50	2·31	3·81	1·21	5·02
1916–20 ..	1·51	2·61	4·12	1·68	1·59	2·29	3·88	1·92	5·80
1921–25 ..	1·40	2·50	3·90	1·14	1·48	2·21	3·69	1·35	5·04
1911	1·43	2·44	3·87	1·04	1·52	2·15	3·67	1·24	4·91
1912	1·39	2·59	3·98	0·97	1·47	2·31	3·78	1·17	4·95
1913	1·26	2·70	3·96	0·91	1·34	2·37	3·71	1·16	4·87
1914	1·55	2·62	4·17	0·95	1·63	2·32	3·95	1·17	5·12
1915	1·47	2·71	4·18	1·09	1·56	2·38	3·94	1·33	5·27
1916	1·38	2·74	4·12	0·94	1·47	2·40	3·87	1·19	5·06
1917	1·31	2·58	3·89	0·95	1·39	2·27	3·66	1·18	4·84
1918	1·28	2·51	3·79	3·81	1·35	2·20	3·55	4·05	7·60
1919	1·67	2·70	4·37	1·93	1·76	2·36	4·12	2·18	6·30
1920	1·81	2·52	4·33	1·13	1·87	2·25	4·12	1·34	5·46
1921	1·38	2·53	3·91	1·09	1·46	2·25	3·71	1·29	5·00
1922	1·38	2·43	3·81	1·35	1·46	2·12	3·58	1·58	5·16
1923	1·30	2·51	3·81	1·01	1·38	2·22	3·60	1·22	4·82
1924	1·39	2·51	3·90	1·16	1·48	2·22	3·70	1·36	5·06
1925	1·56	2·52	4·08	1·07	1·62	2·24	3·86	1·29	5·15

* See Table LIV.

After falling steadily from 5·49 in 1891–95 to 3·74 in 1906–10, this mortality has remained almost stationary, apart from minor fluctuations, during the last 15 years.

Since 1922 it has risen from 3·58 to 3·86, which compares with 3·67 in 1911. These fluctuations have been due chiefly to changes in mortality from sepsis, which accounts for about two-fifths of the total, non-septic mortality varying but little. Of these changes the most important has been the outburst of puerperal sepsis following demobilisation in 1919–20, which was discussed in the Review for 1923. But the sepsis rate, after falling from 1·87 in 1920 to 1·38 in 1923, has since risen again to 1·62, so that half the ground gained since the exceptional year 1920 has now again been lost. Apart, indeed, from the two exceptional years 1919 and 1920, the 1925 sepsis rate of 1·62 deaths per 1,000 births has only once (in 1914) been exceeded since 1910.

The distribution throughout the country of the mortality ascribed to childbirth is outlined in Table LI.

As regards the distinction between town and country the rule for sepsis mortality of increase with urbanization (London apart), pointed out in previous Reviews, has been broken in 1925 for the first time since the commencement of this record in 1919 by excess of mortality in the rural districts over that in the small towns, the former having risen while the latter has fallen. But the converse rule for non-septic puerperal mortality, of decrease with urbanization from a maximum in the rural districts to a minimum in London, applies to 1925 as well as to each of the six preceding years. The highest sepsis rate is that of the Welsh county boroughs (2·24) as also in 1922 and 1923, the rural districts of Wales having returned the highest rate in three more of the seven years 1919–25. For non-septic causes the Welsh rural districts are highest, with 4·07, as in each of the four preceding years, the highest rates for 1919 and 1920 also applying to Welsh populations.

In each of the seven years the London non-septic rate has been the lowest in the table. As in four out of the six preceding years the London rate for all puerperal causes is the lowest in the table. The total rate for Wales is higher than for any section of England, as has been the rule throughout the seven years dealt with, but it has fallen, whereas that for each section of England has risen, in 1925. The Welsh excess is mainly due to heavy mortality from non-septic causes.

Table LI.—Distribution throughout England and Wales of Mortality of Women in Childbirth, per Thousand Children Born Alive, distinguishing Septic and Other Causes, 1925.

——	North.	Mid-lands.	South.	Wales.	England and Wales.
Sepsis.					
London	—	—	1·42	—	1·42
County Boroughs ..	1·90	2·15	1·30	2·24	1·93
Other Urban Districts..	1·55	1·15	1·14	1·27	1·30
Rural Districts	1·48	1·35	1·44	1·65	1·43
All Areas	1·73	1·55	1·34	1·58	1·56
Other Causes.					
London	—	—	1·77	—	1·77
County Boroughs ..	2·45	1·97	2·51	2·84	2·33
Other Urban Districts..	3·66	2·12	2·12	3·23	2·78
Rural Districts	3·31	2·36	2·70	4·07	2·86
All Areas	2·97	2·13	2·12	3·39	2·52
All Causes.					
London	—	—	3·19	—	3·19
County Boroughs ..	4·35	4·12	3·81	5·08	4·26
Other Urban Districts..	5·21	3·27	3·26	4·50	4·08
Rural Districts	4·80	3·70	4·14	5·72	4·29
All Areas	4·69	3·68	3·46	4·97	4·08

Table LII gives particulars of deaths ascribed to the puerperal state.

Table LII.—England and Wales, 1925 : Deaths of Women Classed to Pregnancy and Childbearing.

Cause of Death.	All Ages.	Ages. 15–	20–	25–	30–	35–	40–	45 and upwards.
143. (*a*) Abortion	89	3	5	16	29	22	13	1
(*b*) Ectopic Gestation	87	2	7	19	35	19	5	—
(*c*) Other accidents of pregnancy :—								
Accidental hæmorrhage	9	—	—	1	1	3	4	—
Ante partum hæmorrhage	58	—	3	7	6	21	17	4
Chorea	3	—	2	1	—	—	—	—
Uncontrollable vomiting	53	2	14	11	14	9	2	1
Carneous mole	1	—	—	—	1	—	—	—
Hydatid mole	5	—	—	2	1	2	—	—
Retroversion of gravid uterus	1	—	—	—	—	1	—	—
Hydramnios	2	—	—	1	—	1	—	—
" Pregnancy " unqualified	10	—	—	3	1	3	3	—
144. Puerperal hæmorrhage :—								
Placenta prævia	183	1	13	33	50	55	27	4
Adherent or retained placenta	26	1	1	7	8	6	3	—
Accidental hæmorrhage	11	—	1	1	3	2	3	1
Post-partum hæmorrhage	153	4	22	28	36	43	18	2
145. Other accidents or abnormalities of childbirth :—								
Contracted pelvis	64	—	13	19	13	12	7	—
Craniotomy	4	—	—	1	2	1	—	—
Cæsarean section (reason unstated)*	10	—	3	—	2	3	1	1
Malpresentation	17	—	1	1	2	6	6	1
Version	1	—	—	—	—	1	—	—
Instrumental delivery	7	—	1	3	2	—	1	—
Rupture of uterus	17	—	—	1	6	7	3	—
Rupture of bladder and uterus	1	—	—	1	—	—	—	—
Laceration of perineum	3	—	—	—	1	—	2	—
Bruising of bladder wall	1	—	—	—	1	—	—	—
Inversion of uterus	8	—	6	1	—	1	—	—
Sub-involution of uterus	1	—	1	—	—	—	—	—
Inertia of uterus	9	—	2	—	3	3	—	1
Retroflexion of uterus	1	—	—	—	—	1	—	—
Contraction of uterus	2	—	1	1	—	—	—	—
Rigid cervix of uterus	1	—	—	—	—	1	—	—
Abnormal fœtus	7	—	—	—	6	1	—	—
Adherent and retained placenta (without hæmorrhage)	7	—	—	2	4	1	—	—
Precipitate labour	1	—	—	—	—	—	1	—
Difficult and prolonged labour	85	2	12	20	17	22	12	—
Childbirth apart from above complications :—								
With secondary causes as follows :—								
Anæmia	14	—	2	3	2	2	5	—
Cerebral abscess	1	—	—	—	1	—	—	—
Endocarditis	1	—	—	—	—	—	—	1
Myocarditis	3	—	—	2	—	—	1	—
Cardiac dilatation	4	—	—	1	—	2	1	—
Bronchitis	2	—	—	—	1	1	—	—

* In addition Cæsarean section was stated to have been performed in the case of 80 deaths included under other headings in this table—Persistent vomiting 1, concealed accidental hæmorrhage 1, placenta prævia 9, contracted pelvis 31, uterine inertia 2, malpresentation 2, difficult and prolonged labour, 19, puerperal albuminuria and convulsions 8, puerperal mania 1, puerperal sepsis 6—and of 29 other deaths included in Table LIV.

Table LII.—England and Wales, 1925 : Deaths of Women Classed to Pregnancy and Childbearing—*continued.*

Cause of Death.	All Ages.	Ages. 15–	20–	25–	30–	35–	40–	45 and upwards.
145. Childbirth apart from above complications, &c.—*cont.*—								
Broncho-pneumonia	10	—	1	5	2	2	—	—
Pneumonia (type not stated)	13	—	1	3	2	4	2	1
Pleurisy	7	—	1	—	3	2	1	—
Gastric catarrh	1	—	—	—	—	—	1	—
Diarrhœa and enteritis	3	1	—	1	—	—	1	—
Intestinal paralysis	2	—	—	1	—	1	—	—
Acute pancreatitis*	1	—	—	1	—	—	—	—
Suppression of urine	1	—	—	—	1	—	—	—
Without stated secondary cause	21	—	3	3	5	6	3	1
146. Puerperal sepsis :—								
scarlet fever with sepsis	6	—	1	1	1	2	1	—
streptococcal infection	14	—	4	3	2	3	2	—
pneumococcal infection	1	—	—	—	—	1	—	—
bacillus ærogenes	2	—	—	1	—	1	—	—
bacillus coli infection	2	—	—	1	1	—	—	—
septic phlegmasia alba dolens, phlebitis, thrombosis	26	—	2	7	7	5	4	1
septic pneumonia	4	—	—	1	3	—	—	—
septic endocarditis	2	—	1	1	—	—	—	—
septicæmia	585	9	112	166	118	115	53	12
sepsis	111	4	24	28	19	20	15	1
septic intoxication, sapræmia	59	—	15	10	15	13	3	3
pelvic peritonitis	14	—	2	3	3	4	2	—
peritonitis	63	—	10	20	14	13	5	1
salpingitis	11	—	1	4	1	3	2	—
metritis	8	—	1	3	1	2	—	1
endometritis	25	—	6	7	5	5	2	—
parametritis	11	—	3	3	3	—	2	—
perimetritis	7	—	1	3	1	2	—	—
erysipelas	2	—	—	—	—	1	1	—
pyæmia	32	2	9	7	6	4	3	1
pelvic cellulitis	21	1	3	8	5	2	2	—
cellulitis	1	—	—	—	1	—	—	—
pelvic abscess	6	—	1	—	3	1	1	—
blood poisoning	4	—	3	—	1	—	—	—
other specified septic conditions	4	—	—	—	2	1	1	—
" puerperal fever "	89	3	18	24	29	11	4	—
147. (1) Puerperal phlegmasia alba dolens and phlebitis, not returned as septic	35	—	2	6	9	10	8	—
(2) Puerperal embolism and sudden death	205	4	35	43	58	42	21	2
148. Puerperal albuminuria and convulsions :—								
Puerperal nephritis, albuminuria, &c.	156	3	29	37	34	27	25	1
Puerperal convulsions	343	21	79	96	66	50	25	6
149. Puerperal insanity	23	—	4	8	1	5	5	—
150. Puerperal diseases of the breast	6	1	1	1	—	3	—	—
Total	2,900	64	483	692	670	613	330	48

* This clearly absurd assignment was made in conformity with the existing rules for selection from jointly stated causes (Manual of International List, pp. xxi–xxv) which give no special precedence to acute pancreatitis. Steps have now been taken, by arranging for such precedence, to prevent a recurrence of such assignments.

The records of cases of puerperal fever notified are collated with those of births and deaths in Table LIII.

The proportion to births of cases notified has increased from 30 per 10,000 in 1924 to 34, along with the increase in mortality shown in Table L from 1·39 to 1·56.

As in each of the preceding six years for which Table LIII has been prepared a large urban excess of notifications in proportion to births is shown without corresponding excess for deaths in Table LI. This involves large rural excess of deaths in proportion to cases notified (Table LIII). Notification is evidently much less incomplete in the towns than in the rural districts. In every one of the last seven years notifications have been, proportionately, most numerous in the county boroughs, and fewest in the rural districts, and in each of the last six years deaths have been fewest, in proportion to cases notified, in the county boroughs, and most numerous in the rural districts. The county boroughs of the South, again, have in each year returned a comparatively low notification rate, but only at the cost, also in each year, of a fatality rate in large excess of those for similar areas in the North and Midlands.

Table LIII.—Puerperal Fever, 1925 : Prevalence and Fatality.

	Cases notified per 10,000 Births.					Deaths per 1,000 Cases notified.				
	North.	Mid-lands.	South.	Wales.	England and Wales.	North.	Mid-lands.	South.	Wales.	England and Wales.
London	—	—	39	—	39	—	—	364	—	364
County Boroughs ..	46	52	26	43	46	410	413	508	520	421
Other Urban Districts ..	28	26	27	25	27	560	450	417	515	490
Rural Districts	19	23	20	23	22	765	574	723	722	665
All Areas	36	34	31	28	34	473	454	432	565	463

Table LIV shows the causes of deaths stated to have been complicated by the existence of the puerperal state. The cause of death most largely represented in this table is heart disease (183 deaths, 110 of these being from valvular disease). Next to this come pneumonia (127), influenza (96), and phthisis (76). Of 58 deaths of females at all ages from acute yellow atrophy of the liver, and 44 at ages 15–45 (Table 17), 30 are seen to have been associated with pregnancy or childbirth.

Table LIV.—England and Wales, 1925 : Deaths of Women not classed to Pregnancy and Childbearing, but returned as associated therewith.

	Cause of Death.	All Ages.	Ages. 15–	20–	25–	30–	35–	40–	45 and upwards.
7	Measles	2	—	1	—	1	—	—	—
8	Scarlet fever	9	—	3	4	1	1	—	—
10	Diphtheria	2	—	—	1	—	—	1	—
11	Influenza	96	—	12	11	26	37	9	1
22 (1)	Acute poliomyelitis ..	1	—	—	1	—	—	—	—
23	Encephalitis lethargica	4	—	1	—	—	2	1	—
31	Tuberculosis of respiratory system	76	2	18	23	17	10	6	—
33	Tuberculosis of intestine and peritoneum ..	4	—	—	3	1	—	—	—
35	Tuberculosis of the hip joint	1	—	—	1	—	—	—	—
36 (*c*)	Tubercular adenitis ..	1	—	—	—	—	1	—	—
37	Disseminated tuberculosis	5	1	1	—	3	—	—	—
38	Syphilis	4	—	2	1	1	—	—	—
41	Non-puerperal septicæmia	3	—	—	—	1	2	—	—
43–49	Cancer	6	—	—	3	—	1	2	—
51	Rheumatic fever ..	11	—	1	3	4	2	1	—
52 (2)	Rheumatoid arthritis ..	1	—	—	—	1	—	—	—
57	Diabetes	5	1	—	—	2	2	—	—
58 (*a*)	Pernicious anæmia ..	18	1	2	3	6	3	2	1
58 (*b*)	Splenic anæmia ..	1	—	—	—	—	1	—	—
60 (*a*)	Exophthalmic goitre ..	5	—	—	1	3	—	1	—
60 (b-3)	Goitre	1	—	—	—	—	1	—	—
63	Diseases of the adrenals	2	—	1	—	1	—	—	—
65 (*a*)	Leukæmia	1	—	—	—	1	—	—	—
69 (1)	Purpura	1	—	—	1	—	—	—	—
69 (2)	Hæmophilia	1	—	—	—	—	1	—	—
71	Meningitis	1	—	—	1	—	—	—	—
74	Cerebral apoplexy ..	2	—	—	—	1	1	—	—
78	Epilepsy	10	—	1	1	4	2	2	—
82	Neuritis	1	—	1	—	—	—	—	—
84 (2)	Cerebral tumour ..	1	—	—	1	—	—	—	—
87	Pericarditis	3	—	—	—	1	—	2	—
88 (1)	Infective endocarditis ..	10	—	5	2	1	2	—	—
88 (2)	Other acute endocarditis	5	—	—	2	1	2	—	—
88 (3)	Acute myocarditis ..	13	1	—	1	3	4	4	—
89	Angina pectoris ..	1	—	—	—	—	1	—	—
90 (2)	Mitral valve disease (alone)	57	1	9	15	13	13	4	2
90 (1.3.4)	Other or unspecified valvular disease ..	53	3	3	19	14	11	2	1
90 (5)	Fatty heart	11	—	1	2	1	3	3	1
90 (7)	Other or unspecified myocardial degeneration	10	—	—	1	5	2	2	—
90 (9)	Heart disease (undefined)	20	1	1	5	3	4	6	—
92	Embolism and thrombosis (not cerebral) ..	3	—	—	—	3	—	—	—
93	Diseases of the veins ..	4	—	—	—	—	2	2	—
98 (2)	Laryngitis	2	—	—	1	1	—	—	—
99	Bronchitis	19	—	1	3	5	5	5	—
100	Broncho pneumonia ..	15	—	—	2	2	6	5	—
101 (*a*)	Lobar pneumonia ..	78	2	6	20	22	17	10	1
101 (*b*)	Pneumonia (type not stated)	34	—	4	4	10	12	4	—
102 (2)	Pleurisy	6	—	—	1	2	3	—	—

Table LIV.—England and Wales, 1925 : Deaths of Women not classed to Pregnancy and Childbearing, but returned as associated therewith—*continued*.

	Cause of Death.	All Ages.	Ages. 15–	20–	25–	30–	35–	40–	45 and upwards.
105	Asthma	3	—	—	—	1	2	—	—
108 (1)	Carious teeth	1	—	—	1	—	—	—	—
109 (1)	Adenoids	1	1	—	—	—	—	—	—
111	Ulcer of the stomach	4	—	1	1	—	1	1	—
112 (1)	Inflammation of the stomach	2	1	—	1	—	—	—	—
113–114	Diarrhœa and enteritis	4	—	—	—	1	1	1	1
117	Appendicitis and typhlitis	9	4	1	3	1	—	—	—
118 (*b*)	Intestinal obstruction	24	—	1	8	6	4	4	1
119	Diverticulitis	1	—	—	1	—	—	—	—
120	Acute yellow atrophy of liver	30	1	5	7	10	4	3	—
121	Hydatid cyst of liver	1	—	—	—	1	—	—	—
122	Cirrhosis of the liver	2	—	1	—	1	—	—	—
124	Cholecystitis	1	—	—	—	—	1	—	—
129	Chronic nephritis	25	1	1	6	5	5	6	1
137	Cysts and other tumours of the ovary not returned as malignant	5	—	1	—	1	2	1	—
138 (1)	Non-puerperal Salpingitis	1	—	1	—	—	—	—	—
139	Tumours of the uterus not returned as malignant	15	—	—	1	3	8	3	—
141 (1)	Uterine ulceration	1	—	—	—	—	—	1	—
153 (2)	Acute abscess of leg	1	—	—	—	1	—	—	—
155 (1)	Osteomyelitis of femur	1	—	—	—	—	1	—	—
165–203	Violence	7	—	1	—	4	2	—	—
	Total	759	21	87	166	196	185	94	10

Anæsthetics.—The usual annual statement is continued of deaths during or connected with the administration of an anæsthetic. This is obtained by secondary tabulation of these deaths, since the primary tabulation, represented by Table 17, classifies all such deaths to the disease or injury on account of which the anæsthetic was administered.

These deaths are classified in Table LV according to sex and age and to the nature of the anæsthetic, while the list appended to the table shows the condition for which the anæsthetic was administered and the sex and 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*).

No very striking changes from 1924 are recorded in Table LV in the numbers of deaths under different kinds of anæsthetics a subject dealt with at some length in last year's Review.

Table LV.—England and Wales, 1925 : Deaths under or connected with the Administration of various Anæsthetics.

Anæsthetic.		Age. All Ages.	0–	1–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	65–
Chloroform	M.	43	5	5	1	3	1	3	2	1	1	1	1	5	9	5
	F.	*40*	–	*5*	–	*3*	*1*	*1*	*7*	*9*	*2*	*4*	*2*	*3*	*1*	*2*
Chloroform and ether	M.	91	4	7	3	5	4	1	4	6	5	6	5	11	19	11
	F.	*57*	*1*	*3*	*2*	*1*	*2*	*2*	*5*	*11*	*7*	*5*	*6*	*5*	*3*	*4*
Chloroform, ether and ethanesal	M.	1	–	–	–	1	–	–	–	–	–	–	–	–	–	–
Chloroform, ether and ethyl chloride	M.	2	–	1	–	–	–	1	–	–	–	–	–	–	–	–
Chloroform and ethyl chloride	M.	1	–	–	–	–	1	–	–	–	–	–	–	–	–	–
Ether	M.	61	4	8	3	2	3	2	1	3	2	6	6	4	9	8
	F.	*52*	–	*9*	*3*	*1*	*2*	*3*	*3*	*3*	*3*	*3*	*5*	*2*	*13*	*2*
Ether and ethyl chloride	M.	7	–	3	2	–	–	–	–	–	1	1	–	–	–	–
	F.	*3*	–	–	*2*	–	–	–	–	*1*	–	–	–	–	–	–
Ether and stovaine	F.	*1*	–	–	–	–	–	–	–	–	–	–	–	–	*1*	–
Ether and novocaine	M.	1	–	–	–	–	–	–	–	–	–	–	–	–	1	–
	F.	*1*	–	–	–	–	–	–	–	–	–	–	*1*	–	–	–
A.C.E. mixture	M.	11	–	–	1	–	–	1	1	–	1	1	2	–	1	3
	F.	*3*	–	–	–	–	–	–	*1*	–	*1*	–	–	–	–	*1*
Ethyl chloride	M.	5	–	–	2	2	–	–	–	–	–	–	–	–	1	–
	F.	*6*	–	*2*	–	–	*1*	–	–	–	–	–	*2*	–	–	*1*
Ethanesal	M.	1	–	–	–	–	–	–	–	–	1	–	–	–	–	–
Nitrous oxide	M.	5	–	1	–	–	–	–	1	2	–	–	–	–	1	–
	F.	*4*	–	*2*	–	–	–	–	–	*1*	*1*	–	–	–	–	–
Stovaine	M.	2	–	–	–	–	–	–	–	–	–	–	1	–	–	1
	F.	*5*	–	–	–	–	–	*1*	–	–	–	–	–	–	*2*	*2*
Novocaine	M.	2	–	–	–	–	–	–	–	–	–	–	–	–	1	1
	F.	*2*	–	–	–	–	–	–	–	–	–	–	–	–	*1*	*1*
Cocaine	F.	*1*	–	–	–	–	–	–	–	–	*1*	–	–	–	–	–
Hypodermic injection of morphia scopolamin and atropine followed by cocaine and adrenalin on gauze pack	M.	1	–	–	–	–	–	–	–	–	–	–	–	–	1	–
Kind not stated	M.	15	–	5	–	–	–	–	1	1	1	1	2	2	2	–
	F.	*18*	–	–	*1*	*1*	*1*	*1*	–	*2*	*5*	–	*3*	–	*2*	*2*
Total	M.	249	13	30	12	13	9	8	10	13	12	16	17	22	45	29
	F.	*193*	*1*	*21*	*8*	*6*	*7*	*8*	*16*	*27*	*20*	*12*	*19*	*10*	*23*	*15*

Conditions for which Anæsthetics were administered in the above cases.

9. Whooping cough (0). 10. Diphtheria (3),—tracheotomy (0). 24. Meningococcal meningitis, lumbar puncture (18). 30. Actinomycosis (22). 32. Tubercular meningitis (*26*),—lumbar puncture (*20*). 33. Tubercular peritonitis (4, 26). 34. Tuberculous retro pharyngeal abscess (25). 36. Tuberculous mastoiditis (35), glands (*9*), glands of neck (13, *5*, *15*,) kidney (*19*). 38. Syphilitic ulcer of vocal cord (45). 40. Gonorrhœal stricture, retention of urine (61). 41 Septicæmia (32, 59). 43–49. Cancer of—tongue (50, 50, 51, 59, 73), internal cheek (52), tonsil (57, *72*), œsophagus (62, *42*, *68*), stomach (53, 60, *48*), liver (40, *36*), gall bladder (60),

cæcum (59), pelvic colon (60, 63), large intestine, pancreas and liver (50), rectum (54, 65, 70, *65*), ovary (*55*), cervix uteri (*48*), body of uterus (*61*), uterus (*35, 52, 59, 64*), breast (*45, 52, 60*), eye (rodent ulcer) (70), face (59), scrotum (59), skin of neck (*76*), larynx, tracheotomy (61), lung (51), pancreas (67), prostate (61, 68), inguinal glands (60), skull (34), thyroid (*63*), pelvic organs (*37*), neck (57). **50.** Cyst on back (69), papilloma of bladder (53, 53), sub-lingual dermoid cyst (33), nasal polypi (56, *60*), adenoma of thyroid (*13, 29*), pelvic tumour (*17*). **56.** Rickets and bow legs, osteoclasis (3). **60.** Exophthalmic goitre (24, 31), goitre (*69*). **70.** Intracranial abscess (45). **71.** Meningitis (*13*), —opening of dura mater (2). **84.** Glioma (8), cerebellar tumour (50). **86.** Mastoid disease (3, 5, 20, *4, 13*), mastoid abscess (*4, 19*), otitis media (14, *1, 58*). **93.** Varicocele (25). **94.** Enlarged glands in neck (54). **97.** Deviation of septum (*21*), empyema of maxillary antra (31), sinusitis (22), antral and ethmoidal disease (*52*), nasal abscess (*46*). **98.** Abscess of larynx (3). **101.** Lobar pneumonia (*3*). **102.** Empyema (2, 3, 3, 7, 19, 24, 65, *1, 2, 2, 2, 3, 4, 32, 40, 49*), pleurisy (44). **108.** Extraction of teeth (28, 31, 42, 47, 48, 62, 63, 67, *24, 31, 31, 34, 37,*) pyorrhœa (59), oral sepsis, draining of abscess (39). **109.** Enlarged tonsils (10, 16, 20, 30, *40, 50, 50*), enlarged tonsils and adenoids (7, 7, 12, 13, 19, 24, *2, 5, 7, 11, 14*), enlarged tonsils and glands of neck (*5*), adenoids (11, 14, *19*), peritonsillar abscess (*4*), enlarged tonsils and lymphoid tissues at base of tongue (35), adenoids and deviation of septum (12), quinsy (34), glosso-pharyngeal abscess (48). **111.** Gastric ulcer (28, 32, 36, 36, 36, 42, 42, 47, 48, 50, 57, 60, 60, 70, *45, 48, 55*), duodenal ulcer (31, 42, 42, 44, 55, 55, 73). **112.** Dilated stomach (54, *32*). **113.** **114.** Enteritis (*6*). **117.** Appendicitis (2, 2, 4, 5, 7, 10, 17, 18, 19, 28, 32, 33, 36, 37, 42, 59, 59, 64, 65, 65, *5, 10, 18, 20, 25, 32, 34, 38, 54*). **118.** Hernia (0, 0, 1, 1, 2, 3, 6, 29, 38, 42, 51, 65, *2, 52, 60, 65*)—strangulated (1, 2, 41, 43, 64, 66, 77, 86, 91, *48, 65, 75, 89*)—radical cure (1), intestinal obstruction (0, 0, 4, 42, 47, 47, 57, 61, 67, 69, *0, 1, 44, 45, 55, 65, 74*). **119.** Prolapse of bowel (*2, 32*), fistula (*33*). **123.** Gallstones (39, 52, *35, 39, 45, 49, 52, 58, 64, 64*). **124.** Cholecystitis (*51, 57, 62*), abscess of gall bladder (*30*), abscess of liver (*5*), calcified abscess of liver (*65*), cholangitis (*49*), ulcerated gall bladder (*63*), empyema of gall bladder (*69*). **125.** Pancreatitis (36, 39, *45, 49, 53, 57*). **131.** Pus in kidney (*35*). **132.** Stone in ureter (49). **134.** Stricture of urethra (55). **135.** Enlarged prostate (61, 64, 65, 66, 67, 70, 72). **136.** Circumcision (0, 0, 1, 1, 1, 2, 3). **137.** Ovarian cyst (*37, 39*). **138.** Pyosalpinx (*28, 32*). **139.** Fibroid tumour of uterus (*30, 36, 40, 49, 55*), fibroid of uterus and ovarian cyst (*39*). **140.** Metrorrhagia (*32*). **141.** Metritis (*48*), prolapse of uterus (*47*), endometritis (*46*), removal of enlarged ovary (*28*). **143.** Removal of dead fœtus (*40*), ectopic gestation (*40*), concealed accidental hæmorrhage of pregnancy, Cæsarean section (*41*), hæmorrhage from bladder due to abnormal pregnancy (*27*). **144.** Retained placenta (*33*). **145.** Childbirth (*20, 24, 25, 33, 38*), contracted

pelvis (*27, 33*).—Cæsarean section (*36*), instrumental delivery (*25, 26, 29, 30, 32, 37, 39, 39, 42*), craniotomy (*33, 34*), delayed labour (*26, 36, 42*), malpresentation (*31*), rupture of uterus (*30*), rupture of perineum (*32*). **146.** Puerperal sepsis (*33*),—curetting (*26*),—removal of placenta (*44*),—drainage of uterus (*24, 29*),—evacuation of uterus after miscarriage (*27*). **148.** Albuminuria, Cæsarean section (*30*). **150.** Abscess of breast (*28*). **152.** Carbuncle (55). **153.** Abscess—neck (54), lower lip (42), perineum (*32*). **154.** Wart on neck (56). **155.** Osteomyelitis (2, 7, 14, *1, 2, 4*), abscess of jaw (55). **157.** Amputation of finger (31, 48). **158.** Elongation of tendo achillis (45), contraction of toes, amputation (*38*), contracted ham string (*59*). **159.** Hydrocephalus (0), hare lip (0, 0), cleft palate (2), removal of extra rib (14), diaphragm across urethra (45), malformation of ear (0), double club foot (0), nævus of neck and face (*1*). **165–203.** Various forms of violence (3, 4, 5, 7, 11, 14, 15, 16, 21, 26, 42, 44, 46, 48, 48, 49, 50, 50, 51, 53, 58, 60, 60, 61, 63, 66, 67, 74, *2, 16, 24, 30, 36, 42, 49, 61, 63, 65*). **205.** Exploratory laparotomy (58), gastro-enterostomy (56), placing plate in old trephine gap (9), œsophagoscopy (*68*), laparotomy (27), " operation " (1, 25, 50, 55, 62, *2, 64*).

For the sixth time in succession the total number of deaths in Table LV (442) is considerably higher than in any of the years 1911–19, complete figures being available only from 1911 on.

Table LVI.—England and Wales: Deaths under or associated with Anæsthesia, 1901-25.

Year.	Males.									Females.								
	All ages	0–.	5–.	15–.	25–.	35–.	45–.	55–.	65–.	All ages	0–.	5–.	15–.	25–.	35–.	45–.	55–.	65–
Yearly average:																		
1901–05	*95	14	20	9	13	16	11	7	4	53	6	9	7	11	8	8	3	2
1906–10	*125	26	20	12	16	18	16	9	8	77	7	14	9	18	11	10	4	3
1911–15	167	30	23	14	20	28	24	16	10	116	14	17	15	16	22	18	10	5
1916–20	188	36	25	25	27	22	20	19	13	119	11	16	14	21	22	17	7	9
1921–25	229	40	28	20	18	27	36	37	24	169	20	17	17	30	29	25	17	12
1921 ..	204	30	29	16	16	19	34	30	30	133	16	23	16	24	21	19	11	3
1922 ..	185	29	21	16	9	27	30	35	18	151	16	15	12	29	31	26	12	10
1923 ..	262	45	37	29	17	38	35	34	27	184	22	23	14	23	32	32	23	15
1924 ..	245	51	30	21	25	21	42	39	16	184	26	11	30	29	31	21	18	18
1925 ..	249	43	25	17	23	28	39	45	29	193	22	14	15	43	32	29	23	15

* Excluding deaths from cancer and strangulated hernia—*see* page 72.

Deaths in later periods compared with those of 1901–05, taken as 100.

Yearly average:																		
1901–05	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1906–10	132	186	100	133	123	113	145	129	200	145	117	156	129	164	138	125	133	150
1911–15	176	214	115	156	154	175	218	229	250	219	233	189	214	145	275	225	333	250
1916–20	198	257	125	278	208	138	182	271	325	225	183	178	200	191	275	213	233	450
1921–25	241	286	140	222	138	169	327	529	600	319	333	189	243	273	363	313	567	600
1921 ..	215	214	145	178	123	119	309	429	750	251	267	256	229	218	263	238	367	150
1922 ..	195	207	105	178	69	169	273	500	450	285	267	167	171	264	388	325	400	500
1923 ..	276	321	185	322	131	238	318	486	675	347	367	256	200	209	400	400	767	750
1924 ..	258	364	150	233	192	131	382	557	400	347	433	122	429	264	388	263	600	900
1925 ..	262	307	125	189	177	175	355	643	725	364	367	156	214	391	400	363	767	750

For the years before 1911 the record is contained in the tables of accidental deaths, but certain causes—strangulated hernia and cancer—were at this time preferred in tabulation to the anæsthetic used. In 1925 the 442 deaths included 49 associated with cancer, and 30 with hernia. So for comparison with the years prior to 1911 the number of deaths should be reduced to 363. But during 1901–10 the deaths ranged from 133 (1901) to 234 (1910).

Subject to allowance, on the scale indicated by this reduction, for the more comprehensive nature of the figures from 1911 onwards, the records of the present century may be compared as in Table LVI.

The increase applies to both sexes and to all ages, and has been, on the whole, steadily progressive throughout the twenty-five years covered by the table, though showing sudden spurts in 1920 and 1923 (and again in 1926, when the numbers have risen from 442 to 556). It has been greater for females than for males, and in early childhood and in later life than during the intervening years. But throughout, deaths of males have been in considerable excess at most ages, though least so between 15 and 45, at which period of life deaths of females have been in excess in four out of the past five years, though there was excess for males in each quinquennium 1901–05 to 1916–20.

For reasons discussed in last year's Review it seems probable that the increase of deaths so returned since 1901–05 of 199 per cent. (148 to 442) is not in the main a mere matter of change in recording practice, but that it probably implies a rapid growth in the number of deaths occurring under anæsthesia, whether this is due to increase in the number or in the fatality of (or associated with) administrations. As to the first of these two possibilities no official records are available, but a statement may be noted in a recent number of "The Lancet"* that between 1911 and 1923 the number of operations (not administrations) in a large London general hospital increased by 13 per cent. This yields, after all, but a modest contribution towards the explanation of an increase, during the same period, of 62 per cent. in the number of deaths in England and Wales. It is from anæsthetists that an adequate explanation of the startling increases now so frequently reported must be sought, and no doubt the matter will receive their attention.

The proportion of these deaths reported from different classes of institutions, etc., in various sections of the country is shown in the following table.

* Jan. 22nd, 1927, page 173.

Table LVII.—Deaths under Anæsthetics in 1925. Distribution by Part of the Country and Place of Occurrence.

		Hospitals.	Poor Law Institutions.	Mental Hospitals.	Nursing Homes.	Elsewhere (private houses).	Total.
North ..	M.	62	7	1	2	4	76
	F.	42	5	—	6	9	62
Midlands	M.	39	9	—	2	4	54
	F.	28	5	—	6	5	44
London ..	M.	63	13	—	1	1	78
	F.	31	9	—	1	6	47
Remainder of South	M.	25	4	—	1	3	33
	F.	20	4	—	1	8	33
Wales ..	M.	7	—	—	—	1	8
	F.	1	1	—	—	5	7
England and Wales	M.	196	33	1	6	13	249
	F.	122	24	—	14	33	193

This table departs from the general scheme of this Review by assigning the deaths not to the district of residence but to that of registration (i.e. of occurrence), which is evidently of more interest in this connexion. The tabulation has therefore been made by the "registration counties" of former Annual Reports, which have been grouped into the five sections of the country employed on the lines indicated in the footnote to Table IV.

The high proportion of these deaths reported by institutions will be noted. Of the whole, 72 per cent. occurred in hospitals, 13 in Poor Law institutions, 5 in nursing homes, and only 10 per cent. elsewhere, i.e. mainly in private houses. There can be little doubt that the practice of resorting to institutions for the purpose of operation is increasing rapidly, but many cases must continue to occur where anæsthetics are administered in the home as a matter of choice or of necessity, and such a ratio as 10 per cent. is therefore bound to raise the question whether deaths are as fully reported from private as from institutional practice. Of the 318 hospital deaths 94, or 30 per cent. occurred in London, forming 21 per cent. of the total. These figures are certainly high, but they do not necessarily cast any reflection upon anæsthetic practice in the London hospitals, which of course serve a large population outside London, especially for purposes of operative surgery. According to the Report of the Voluntary Hospitals Commission, 1925 (Cmd. 2486), there were in London in July, 1924, 13,757 hospital beds out of a total of 50,460 in England and Wales, or 27 per cent of the whole. The proportion of London hospital deaths is thus only slightly in excess of the proportion of London beds. And another important consideration may be involved by the surgical policy pursued. It must be borne in mind that these are deaths not necessarily from, but under, anæsthetics, and if a bolder surgical policy is followed in London than on average elsewhere its price must be

paid by more deaths on the operation table. But it does not follow that even if this is so—a point on which the mortality returns throw no light other than any suggestion contained in Table LVII—the London policy is too bold; it may be that the provincial is too cautious. There are emergencies which can be adequately met only by taking very grave risks, and these are often experienced by the surgeon. If in a difficult case of cancer, for instance, the choice lies between palliative treatment involving the certainty of a lingering and painful death in the course of a few months or years and a radical operation offering an appreciable chance of permanent relief at the cost of grave risk of immediate but painless death, there is surely much to recommend the latter alternative, even though it necessarily increases the number of "deaths under anæsthetics."

It is, indeed, stated, in the "Lancet" article quoted, that the operations occasioning the 123 deaths under ether in 1923 were only of normal gravity, but definite proof of this from the statements appearing on death certificates would be impossible. It would be useless on this evidence to attempt an appreciation of the relative gravity of operations with fatal result in London and elsewhere. The task could be attempted only by means of central investigation and appraisement of the facts of each death.

For some reason the proportion of males is exceptionally high for the London hospital deaths. On the other hand females, contrary to the general rule, are in considerable excess amongst those dying in private houses and nursing homes. This excess is probably to a large extent accounted for by obstetric practice, the number of such deaths on pages 70 and 71 being 38.

Status Lymphaticus and Anæsthetics.—In addition to the 169 deaths from status lymphaticus primarily classified to diseases of the thymus in Table 17, there were 35 deaths under anæsthetics in the case of which record was made of the presence of this condition, but which have been referred in tabulation to the condition occasioning the administration of the anæsthetic.

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

	All Ages.	0–	5–	10–	15–	20–	25–	35–
Males	20	9	3	2	1	2	3	—
Females	15	5	1	3	2	—	1	3

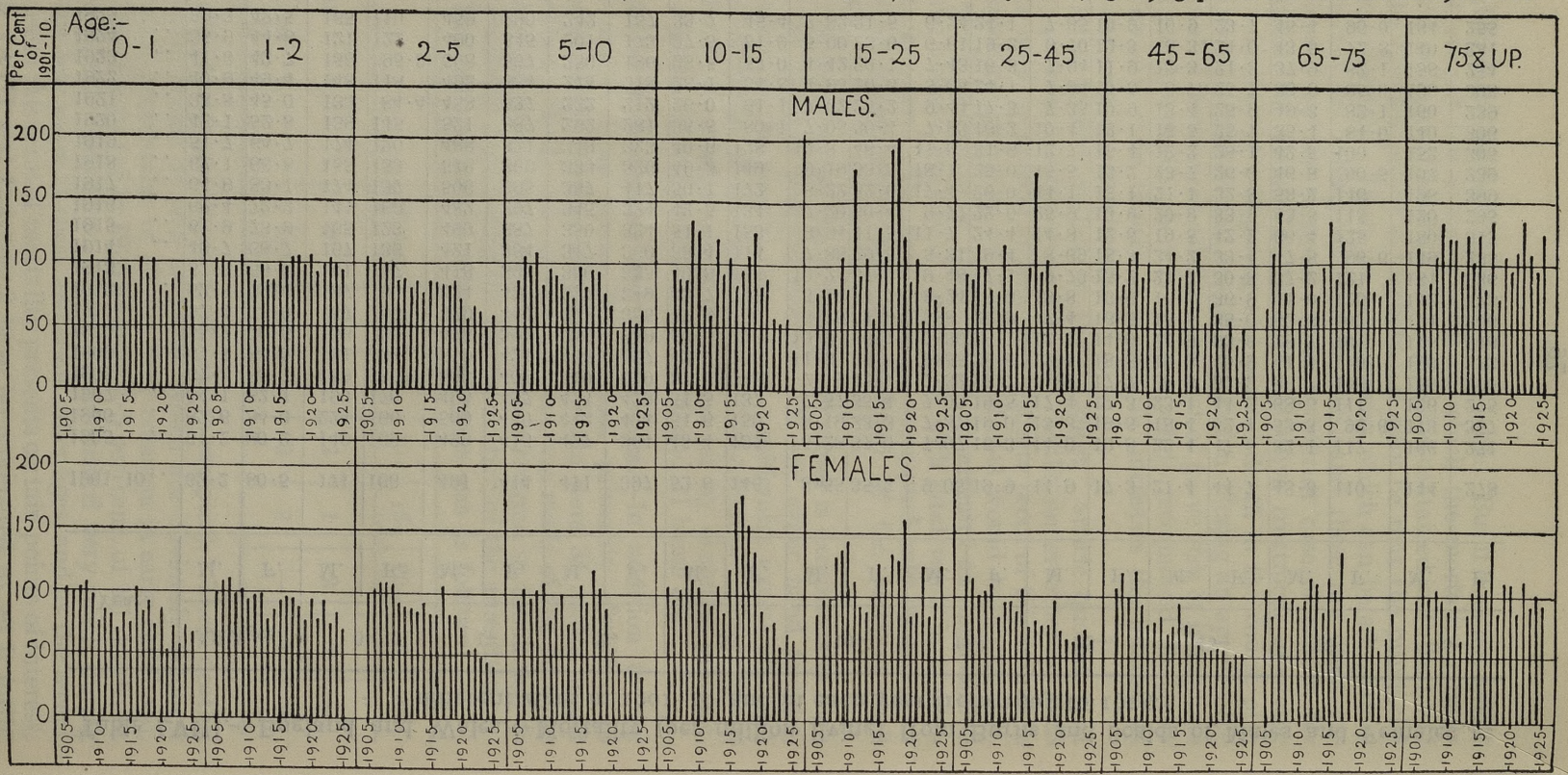
179. **Accidental Burns (conflagration excepted).**—These deaths, including scalds as well as burns, which are obviously amongst the most preventable of all, are very common in early childhood, the 687 at ages 1–5 in 1925 forming 2·5 per cent. of all deaths at those ages. They have, however, diminished very much during the last few years at these and some other ages, and as the recent history of this form of mortality presents certain points of interest, Table LVIII and Diagram 2 have been prepared to set it forth.

Table LVIII.—England and Wales.—Mortality (per million living) from Burns and Scalds of Males and Females at different Ages in 1901–10 and in each year from 1905 to 1925.

Year.	All Ages.		0–		1–		2–		5–		10–		15–		25–		45–		65–		75–	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1901–10 ..	62·2	80·5	171	166	491	414	411	397	52·6	146	8·55	35·2	9·05	19·9	14·9	17·3	21·4	44·7	48·3	110	144	278
1905 ..	61·2	80·2	149	169	499	415	427	394	45·4	135	5·28	37·0	7·07	16·3	14·0	19·8	22·4	47·6	32·1	117	166	271
1906 ..	62·6	84·0	224	166	509	450	412	404	54·6	150	8·19	33·3	7·37	19·0	13·3	19·5	18·4	52·1	53·5	92·6	113	357
1907 ..	64·1	82·1	190	170	493	457	424	429	51·5	137	7·57	35·4	7·03	19·5	17·4	17·3	23·1	44·2	68·6	111	126	275
1908 ..	61·3	85·7	159	180	480	408	410	429	57·1	148	7·51	42·7	7·32	25·7	14·9	17·7	23·8	52·9	38·7	108	155	290
1909 ..	61·1	84·0	181	164	519	424	416	427	42·7	156	11·5	38·6	9·55	26·6	12·1	18·8	19·3	40·9	41·4	110	193	272
1910 ..	55·7	70·5	156	126	475	391	359	359	50·6	113	10·9	36·7	7·30	28·1	12·1	14·0	21·9	33·6	28·7	101	176	248
1911 ..	57·4	73·0	157	143	429	411	363	355	47·6	130	5·75	31·9	15·8	21·9	17·4	16·5	15·5	35·0	52·8	107	174	256
1912 ..	52·8	72·6	187	136	484	416	327	349	43·7	146	5·14	31·7	8·24	18·0	13·8	16·6	16·2	36·9	41·0	125	142	178
1913 ..	51·8	65·0	141	117	418	325	350	335	40·8	108	10·2	37·1	9·48	17·1	9·73	15·2	21·7	30·8	37·2	121	181	236
1914 ..	48·7	68·7	167	136	421	354	317	360	38·4	114	7·88	29·5	5·31	19·4	8·69	18·3	24·2	33·4	47·8	96·6	149	285
1915 ..	61·9	73·9	165	123	490	387	350	324	51·1	153	8·94	41·5	11·7	24·4	14·8	12·6	19·5	42·2	66·4	125	180	317
1916 ..	62·4	72·2	141	169	482	397	345	324	42·5	134	7·20	60·4	9·77	22·6	25·9	13·9	20·9	33·9	43·5	115	120	295
1917 ..	64·9	83·1	174	137	506	395	337	417	50·1	172	8·22	62·9	17·4	26·0	14·1	13·1	21·1	32·8	58·2	146	198	399
1918 ..	62·1	66·8	155	153	518	369	333	326	49·5	149	9·19	53·5	18·1	25·0	15·5	13·2	23·7	26·8	46·8	90·5	107	239
1919 ..	51·7	64·7	174	120	488	321	348	323	40·6	128	10·8	46·4	11·0	31·6	12·7	16·4	12·2	25·1	42·5	100	152	305
1920 ..	42·1	52·8	139	145	521	387	292	281	35·5	80·1	7·05	30·4	7·93	16·2	10·4	12·1	15·5	25·7	35·4	84·0	140	306
1921 ..	38·8	45·0	133	84·4	458	327	232	212	26·0	61·1	7·62	25·2	9·44	17·3	7·35	10·9	13·4	25·9	49·3	82·1	160	239
1922 ..	40·9	49·4	148	118	492	384	274	218	28·1	54·8	4·93	26·6	5·08	24·1	7·94	10·5	9·78	25·7	38·8	85·0	198	308
1923 ..	41·3	42·7	158	95·8	508	307	250	196	28·5	57·0	4·42	20·1	7·43	16·3	7·94	11·9	12·3	21·3	37·9	62·1	158	254
1924 ..	35·9	44·8	121	122	490	345	201	173	27·5	51·9	5·00	23·6	6·61	19·2	6·70	12·3	8·34	24·0	43·6	72·8	140	281
1925 ..	39·3	42·5	165	110	459	290	242	157	33·7	45·4	2·82	21·5	6·24	24·1	7·65	10·9	10·9	23·7	46·4	96·0	184	255

Diagram 2. England and Wales.

Mortality at various ages from Accidental Burns (Conflagration excepted) in each year 1905–1925 per cent. of that in 1901–10.



As the Children Act, 1908, which came into force on April 1st, 1909, for the first time made it an offence to allow a child under seven years of age to be in a room with an open unguarded fire if in consequence the child is killed or seriously injured, the series of mortality rates dealt with has been carried back to 1905, in order to embrace any effects of this new legislation.

These however are not very striking. There has been some fall in the first two years of life, especially for girls, but in the second year, at which this mortality is at its highest,* there has been practically no reduction for boys. At these ages the deaths, especially of males, are due as a rule more to scalding than to burning, whereas from five on burning deaths are in the majority for both sexes. Under five also mortality is, generally speaking, higher for males, whereas at all ages over five it is consistently higher for females. This is due to excess of female mortality from burns at all ages over five, arising from the more inflammable type of clothing worn, for at all ages mortality from scalds is higher for males. But from five on scalds are of little relative importance. There has been much variation, at different periods, in the relative numbers of deaths under five years of age attributed to burns and to scalds, so that it has been thought better not to make the distinction in Diagram 2, but to relate it to the International List title, which includes both burns and scalds. For years prior to 1915 all deaths are included, but for the war period it has been necessary to exclude non-civilian deaths, and this rule has been followed for all subsequent years.

At 2–5, when, as at all later ages, the mortality has generally been mainly due to burns, though of late years scalds have been in a large majority for boys, a very striking reduction is seen to have occurred for both sexes since the war, though for each also a fall in 1910, maintained in subsequent years, may be related to the legislation of 1908. Indeed, the stationary state of the mortality at this age from 1910 to 1919 may conceivably be regarded as the resultant of two opposing forces—the effect of the 1908 Act, and adverse conditions of domestic life during the war—the former of which has only had an opportunity of fully manifesting itself, in the form of the great decline during 1920–25, since the latter ceased to operate. But if this is so it is not apparent why the effect of the 1908 Act is not shown in the shape of further decline during 1911–14.

At 5–10 the record is very similar, but there is some indication of a rise for females during the war, which becomes much more definite at the next age period, 10–15. Girls at this age have shared in the improvement since the war, but while the war was in progress they were evidently exposed to very special risk. This is easily explained if we assume that the demand for munition

---

* i.e., from burns and scalds together. For each sex mortality from scalds is highest in the second, and that from burns in the third, year of life.

workers led mothers to go to the factories and leave their daughters of 10–15 responsible for household tasks, such as cooking, to an abnormal extent. If so we have in this diagram the record of yet one more class of war victims.

At the next age, 15–25, it was the turn of the males to suffer, for it seems likely that their great increase of mortality in 1917 and 1918, shared also, though not to the same extent, by females, was largely due to accidents in munition works. The actual rates, at these as at all other ages over 5, are, as already noted, consistently higher for females; it is the increase in the war years which was greater for males. And even as to this the exceptional rate in 1911 for males shows that a rate of about 7 per million is subject to considerable chance variation.

At 25–45 also the rates for males were much influenced by the war, the decline in progress up to 1914 being converted into increase for the four following years, after which however rapid fall to 50 per cent. of the 1901–10 rates occurred. The gradual fall for females at this age was scarcely affected by the war, their war work presumably involving less exposure to special risk from burns. This holds good also for females aged 45–65, at which age a war time increase for males may have been connected with special industrial risks even though it appears to have commenced in 1913. In old age, 65 and upwards, there is on the whole little change in the mortality, which rapidly increases with advancing age.

Chief interest, probably, attaches to the movement of mortality in early childhood. This is characterized by little decline under, and great decline over, two years of age. The stationary rate, for boys especially, under two years of age, must be considered disappointing in view of the influences making for reduction, such as smaller families and consequent increased opportunity for individual care, substitution of gas cookers for open fires, of woollen for flannelette clothing and so forth, in addition to the Act of 1908. It might have been expected that these influences would have affected children under two quite as much as those of 2–10, but the diagram shows how far this is from being the case. As this improvement at 2–10 is much greater for girls than for boys it may be largely due to improvement in clothing, for which that of girls left greater scope.

182. Accidental Drowning.—This form of mortality has diminished greatly of late years, having fallen since the commencement of the century by over a half for males, and by one-third for females. But it still makes an appreciable contribution to the total death-rate, causing 1,617 deaths in 1925, or 0·34 per cent. of the total, 1,302 of males and 315 of females.

The seasonal distribution of these deaths is shown in Diagram 4, figure LXXXVII. As the very pronounced maximum occurs

not in August, the chief summer holiday month, as might have been expected, but in July, an explanation of this circumstance was sought by examination of the records for 1924 and 1925 in some detail. The record of these deaths for 1925 in Table 22 (Part I, p. 426) shows that of those for which details are available it is deaths whilst bathing which must chiefly influence the seasonal distribution of deaths from drowning as a whole. No doubt some of the others, as to the causation of which there is no record, may also have occurred whilst bathing. Detailed examination was therefore made of the records of deaths of males whilst bathing in 1924 and 1925, and the result is displayed in Diagram 5 (facing page 109).

This shows that it is deaths chiefly of boys and very young men which occur early in the drowning season, the proportion being much smaller for males over 25 years of age. At ages under 25 80 per cent. of the total deaths occurred before the end of July, but over 25 only 63 per cent. As, however, 84 per cent. of the total deaths occurred at ages under 25 the seasonal distribution characteristic of this period of life necessarily dominates the picture. The extent, indeed, to which this mortality is limited to ages under 25, as indicated by the heavy line marking that age, is a very striking feature of the diagram. It looks almost as if prudence in matters of this kind were a faculty somewhat suddenly acquired at or about this age. In this connexion the experience of the London General Omnibus Company as to the age at which men become suitable for training as bus drivers is of interest. In the "Evening Standard" of August 25, 1926, an official of the company is quoted as saying:—

> "Our rule is that we do not take men as drivers until they are 26, though we will take them as conductors at 24. Experience has shown that in those two years young men generally acquire a greater sense of responsibility. Of course, there may be exceptions, but there must be some kind of rule, and we find that this works very satisfactorily."

The company's experience tallies remarkably with that of registration of deaths while bathing. It seems odd that prudence and responsibility should be faculties suddenly acquired at any age, and, further, that this acquisition should occur for all men, whatever their environment, at much the same age; but the evidence of bathing deaths and of bus driving accidents is strangely harmonious in pointing to 25 or thereabouts as such a critical age, when the man, as it were, really "grows up," so far as prudence and responsibility are concerned.

But the other point brought out by the diagram—that boys and youths are drowned early in the year, and mature men late—is also very definite. The facts are summarised in the following statement, in which the figures represent the percentages of total

drowning deaths in the various months occurring at ages under and over 25 :—

	Under 25.	*Over* 25.
January	100	—
April	100	—
May	100	—
June	87	13
July	85	15
August	80	20
September	37	63
October	—	100

The eleven deaths before June are all of juniors, but from that month onwards their proportion steadily decreases in accordance with the increasing proportion of deaths at ages over 25.

A further point brought out by more detailed examination of the figures for 1925 is that boys and youths are drowned mainly while bathing in fresh, and men in salt, water. The fresh water deaths occur earlier in the season than those in salt water, partly, no doubt, because the temperature of inland waters rises more quickly, and this must largely explain why young lives are lost earlier than older ones. Excluding four deaths, all under 25, in docks and baths, which may have been of salt or fresh water, there were 112 deaths of youths in fresh and 36 in salt water, but seven of men in fresh and twenty-one in salt water. These were distributed by months as follows :—

	Under 25.		*Over* 25.	
	Fresh Water.	*Salt Water.*	*Fresh Water.*	*Salt Water.*
April ..	3	—	—	—
May ..	4	—	—	—
June ..	49	10	5	3
July ..	42	13	1	7
August ..	14	10	—	6
September .	—	3	—	5
October ..	—	—	1	—
Total ..	112	36	7	21

Evidently the prevention of death while bathing is an inland rather than a coastal problem, though we are accustomed to think of it as almost exclusively the latter. Moreover, it is one to be taken in hand at the very opening of the bathing season.

Both over and under 25 more lives were lost in salt as well as in fresh water in July than in August, though the total amount of sea bathing must be much greater in the latter month. There is therefore some other influence operating to bring about the early seasonal distribution of this mortality in addition to the attraction of rivers, ponds and canals for boys in June and July. It may be suggested that this is to be found in seasonal inexperience. The boy or man who has once got into difficulties is probably cautious for the remainder of the season, but by the

next summer the effect of his warning may have largely worn off, and risks are run again, sometimes with fatal consequences. To suggest that the novice may err in supposing himself capable of swimming as far at the commencement of one bathing season as at the end of the previous one is little more than a restatement of the same proposition in other words, as what had become fairly safe at the end of one season may once more be risky at the beginning of the next. In either case the death may be ascribed to undue temerity arising from seasonal inexperience.

204, 205. Ill-defined Causes of Death.—This heading in the International List of Causes of Death, to which 1,604 deaths have been allocated, excludes the ill-defined diseases of infancy and old age, 160 (1) and 164 (2). In the more comprehensive sense resulting from their inclusion, the deaths from ill-defined causes in 1925 numbered 29,357, or 6·21 per cent. of the total, as compared with 6·34 in 1924, and 9·67 in 1911.

Inquiries sent to medical practitioners and coroners requesting further information as to indefinitely certified deaths amounted to 8,788, and to these 7,905 replies were received, with results to classification, some of the most important of which are set out in Table LIX.

Unfortunately these replies relate to only 1·67 per cent. of the year's deaths, or but a small fraction of those regarding which additional information would be desirable. The present limit is imposed by considerations of expense, and in many cases the very fact that an inquiry is often called for is sufficient to rule it out, owing to the large amount of work which it would entail. But though inquiry on the limited scale practised cannot possibly clear up more than a fraction of the more serious ambiguities met with, it is believed to have an excellent effect in promoting definiteness of statement generally ; and it is also being used to ascertain definitely the meaning attaching to certain more or less ambiguous terms in order to check the correctness of their present assignments.

It is largely inquiries of this latter type which have increased the total sent from 6,586 in 1924 to 8,788 in 1925. They were issued on a special form, explaining their object to be rather the establishment of the meaning attached to an ambiguous term than the proper assignment of the death in question, though of course both purposes were served. In some cases the result indicated that the inquiry might be discontinued, and one or other of various possible meanings assumed to attach to the form of certificate in question, but unfortunately as a rule this did not prove to be the case, the significance of these doubtful terms varying in the minds of different users. A few examples may be quoted :—

Chronic arthritis.—The question in this case has been whether deaths so certified may be assigned to 52 chronic rheumatism, osteo-arthritis, gout, and the result of the test is to establish that this is so, for out of 27 cases 26 were assigned to this heading as the result of the inquiry.

Arthritis also proves mainly to be of the same significance, 24 out of 32 cases being assigned, after inquiry, to No. 52, while 4 were stated to be cases of acute arthritis. Of three cases returned originally as acute arthritis two proved to be rheumatic fever, and the third not.

Spinal sclerosis.—Of 42 cases 33 proved to be disseminated sclerosis, 4 lateral sclerosis (assigned to " other diseases of the spinal cord ") 3 syphilis and 2 tabes.

Hemiplegia.—At present these deaths are internationally assigned to cause No. 75, paralysis of unstated origin, and it was desired to test with what degree of safety they could be assigned to 74, cerebral hæmorrhage, etc. (including embolism and thrombosis). Of seven cases tested all were ascribed to cerebral hæmorrhage, so the evidence, so far as it goes, indicates that this transfer might safely be made.

Softening of the brain.—This term has two principal but unrelated significances; 1, certain gross structural changes in the brain resulting from circulatory disease, and 2, senile dementia. Out of 206 cases 140 were attributed to circulatory disease and 55 to senile dementia, while the remaining 11 included syphilis 2, general paralysis of the insane 2, alcoholism 3, imbecility 1, Bright's disease (probably to be included with the circulatory group) 2, and puerperal mania 1.

Cerebral sclerosis.—Of 20 cases 11 were found to be, and 4 not to be, regarded as disseminated sclerosis, 84 (3). Of the other five, 1 was returned as syphilis, 2 cerebral hæmorrhage and 2 arterio-sclerosis.

Endarteritis.—This form of return raises suspicion of syphilis. Of 7 cases 3 were returned as syphilitic and 2 as not syphilitic, and the remaining 2 as arterio-sclerosis.

Bronchitis and asthma.—This combination of causes is under some suspicion as to whether true asthma is implied. Information as to this was obtained for 299 deaths, of which 193 were ascribed to asthma, 100 to bronchitis without asthma, and 6 to "cardiac asthma." But the significance of the combination proves to vary with its order; 242 returns of "bronchitis, asthma" proved to imply asthma in 146 cases, or 60 per cent., bronchitis alone in 90 cases, or 37 per cent., and cardiac asthma in 6 cases, 3 per cent.; whereas of 57 returns of "asthma, bronchitis," 47 proved to be asthma, 82 per cent., and only 10 bronchitis.

Pneumonia.—Various descriptions applied to pneumonia were tested to ascertain whether they imply the distinction between lobar and broncho-pneumonia, but the results were mainly negative. Of 36 cases certified as "septic pneumonia" 19 were reported in the replies to have been bronchial and 17 lobar pneumonia. Of 9 certified as basal 6 were lobar, 2 bronchial, and 1 was returned as hypostatic pneumonia. Of 13 "unresolved" pneumonia 4 were bronchial and 9 lobar. Of 96 "double" pneumonia 26 were bronchial and 70 lobar. Of 16 hypostatic

pneumonia 4 were stated to be lobar, 3 bronchitis, and 3 heart disease, while the remainder represented the mode of death from an extremely varied assortment of causes.

Silicosis—Of 23 deaths 7 were stated to have been due, and 16 not due, to tuberculosis.

Intestinal toxæmia.—This form of return leaves it doubtful whether diarrhœa or constipation is referred to. Of ten cases 3, all of adults of mature age, proved to be constipation, and seven, 3 adults of similar age, and 4 young children, diarrhœa. Evidently, even when age is taken into consideration, no inference can be drawn as to the allocation of deaths so certified.

Cirrhosis of the liver in the new born—Of three cases all proved, as might be expected, to be syphilitic. This raises a question as to the international assignment of this return to No. 160—whether it should not be transferred to 38 syphilis.

Jaundice, epidemic, infective or toxæmic—Of four cases two were assigned to spirochætosis ictero-hæmorrhagica and two to " other diseases of the liver " (No. 124).

Uræmia.—It was desired to test in what proportion of cases the present international assignment of this condition to 129 chronic nephritis, holds good. Of 69 cases 53 were assigned after inquiry to chronic nephritis, 2 to acute nephritis, 4 to other diseases of the kidneys, 5 to enlarged prostate, 1 to cystitis, 2 to arterial disease, 1 to intestinal obstruction, and 1 to pancreatitis.

Icterus neonatorum.—Of 71 cases 27 proved to be the result of congenital malformation, 22 of syphilis, and 10 of sepsis. In three other cases the condition was stated to be familial, in 12 not syphilitic, and in 4 not due to disease of the umbilical cord.

Twin birth.—This statement on a certificate raises the question whether prematurity is indicated as a cause of death, as if not the significance of the entry is obscure. Of 89 replies received 40 recorded prematurity and 49 its absence, so it appears quite impossible to infer from this form of return whether prematurity is indicated as a cause of death.

Immaturity—The same question arises here. Of 49 replies, 33 stated the birth to be premature and 16 at full term.

It will be seen that in many of the cases quoted, the significance of the form of statement in question can be appraised only by inquiry of its users. These are for the most part ambiguous forms of statement not likely to be employed by the recognised professional authorities, who are therefore in no position to define their meaning. To each individual user the term used may seem quite definite, and he is found often to think that it is always used in the sense in which he understands it, but it has been seen that in many cases the significance varies with the user. So long as this state of affairs persists it will probably be necessary to undertake periodical reassessment, by such inquiries as those above dealt with, of the significance of statements of this kind.

Table LIX.—England and Wales, 1925: 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	27	23	Diphtheria 5, Laryngismus stridulus 3, Laryngitis 5.
Membranous laryngitis	7	7	Diphtheria 6.
Pyæmia, septicæmia, etc.	182	158	Measles 1, Scarlet 1, Syphilis 2, Diseases of the teeth and gums 15, Tonsillitis 7, Appendicitis 1, Puerperal sepsis 8, Diseases of the skin 23.
Tuberculosis ..	192	191	Tuberculosis of the respiratory system 125, Tuberculosis of the intestines and peritoneum 8, Tuberculosis of the vertebral column 1, Disseminated tuberculosis 34, Other forms of tubercle 18.
Cancer (part or organ not stated) ..	1,076	1,003	Part or organ stated in 992 cases.
Tumour, growth, etc.	697	598	Syphilis 6, Cancer 417.
Rheumatism ..	122	121	Rheumatic fever 55, Chronic rheumatism 11, Osteo-arthritis 7.
Encephalitis ..	130	110	Influenza 5, Polio-encephalitis 1, Encephalitis lethargica 40, Tuberculosis of nervous system 5, Syphilis 7, Other forms of encephalitis 33, Meningitis 2.
Basal or basic meningitis	48	47	Meningococcal meningitis 16, Tuberculosis of nervous system 17, Syphilis 1, Meningitis—other forms 11.
Posterior or post, basal or basic meningitis	68	68	Meningococcal meningitis 32, Tuberculosis of nervous system 20, Meningitis—other forms 11.
Cerebro-spinal meningitis	143	138	Meningococcal meningitis 94, Tuberculosis of nervous system 12, Meningitis—other forms 15.
Spinal sclerosis ..	48	45	Syphilis 3, Tabes dorsalis 2, Other diseases of spinal cord 5, Disseminated sclerosis 35.
Cerebral sclerosis ..	23	20	Disseminated sclerosis 11.
Paraplegia	73	63	Syphilis 9, Diseases of the spinal cord 18, Cerebral hæmorrhage, apoplexy 14.
General paralysis (outside asylums) ..	61	58	Other diseases of the spinal cord 2, General paralysis of the insane 37, Disseminated sclerosis 2.
Paralysis	35	28	Diseases of spinal cord 4, Cerebral hæmorrhage, apoplexy 12.
Fibroid phthisis ..	112	105	Tuberculosis of respiratory system 79, Chronic interstitial pneumonia 13.
Hæmoptysis ..	49	39	Tuberculosis of respiratory system 25.
Stomatitis	29	28	Thrush, aphthous stomatitis 13.
Stricture of œsophagus	44	33	Syphilis 2, Cancer 20.
Hæmatemesis ..	47	39	Cancer 5, Gastric ulcer 21, Cirrhosis of liver 5.

Table LIX.—England and Wales, 1925: Replies to Inquiries respecting Indefinitely Certified Causes of Death—*continued*.

Subject of Inquiry.	Replies received.	Replies amplifying previous information.	Deaths allocated as the result of inquiry to various important headings.
Pyloric obstruction, stenosis, etc. ..	50	44	Cancer 19, Gastric ulcer 14.
Jaundice	73	61	Cancer 21, Cirrhosis of liver 1, Biliary calculi 8.
Peritonitis	183	141	Tuberculosis of peritoneum, etc., 7, Cancer 2, Gastric ulcer 13, Appendicitis 36, Hernia, intestinal obstruction 12, Diseases of female genital organs 11, Puerperal sepsis 5.
Pemphigus (of infants)	185	167	Syphilis 34.
Hydrocephalus ..	80	74	Tuberculosis of nervous system 5, Syphilis 1, Congenital hydrocephalus 45.
Violence	362	355	Precise form of suicide 67, Accidental poisoning 10, Accidental drowning 5, Injury by fall 65, Injury in mines and quarries 38, Injury by machines 7, Injury by crushing 64.
Ascites, dropsy ..	33	25	Diseases of the heart 7, Cirrhosis of liver 6.
Syncope, heart failure (ages 1–70) ..	154	138	Influenza 2, Diseases of the heart 85, Arterio-sclerosis 8, Bronchitis 7.
Operation	284	276	Cancer 25, Tonsillitis 7, Gastric ulcer 14, Duodenal ulcer 8, Appendicitis 13, Hernia, intestinal obstruction 17, Biliary calculi 18, Ovarian tumour 9, Uterine tumour 27, Violence 8.
Other indefinite forms of certificate ..	3,288	2,889	
Total ..	7,905	7,902	

The total additions to certain definite headings resulting from these enquiries were as follows:—To influenza 49; to encephalitis lethargica 43; to meningococcal meningitis 147; to tuberculosis of the respiratory system 284; to tuberculosis of the nervous system 73; to other forms of tuberculosis 131; to venereal diseases 202; to cancer 1,612; to general paralysis of the insane 43; to disseminated sclerosis 59; to arterio-sclerosis 152; to ulcer of the stomach or duodenum 119; to appendicitis 82; to biliary calculi 47; to puerperal sepsis 66; and to congenital malformation 109.

SEASONAL DISTRIBUTION OF MORTALITY.

As Table 18 has now been published for five years, 1921–1925, recording the number of deaths, from each cause distinguished, which has occurred during each calendar month of these years, the opportunity presents itself for the first time of undertaking a comprehensive examination for a reasonably adequate period of the distribution throughout the year of mortality ascribed to different causes.

Similar tabulation has been carried out in the past only for London, the results being published in the " Annual Summaries " of the Registrar-General for 1880, 1890 and 1910, for the periods 1841–80, 1841–90 and 1841–1910 respectively, with separate tabulation in the 1910 Summary also for 1891–1910. This tabulation was carried out for mortality in general and for that attributed to respiratory disease, diarrhœa, smallpox, whooping cough, measles, scarlet fever, diphtheria, and typhoid fever. Apart from respiratory disease these were the causes of death, other than violence, distinguished for the " Great Towns " in the " Weekly Return."

This tabulation, while of much value and interest, suffered from certain defects which it has now been possible to correct.

(1) The deaths were those registered in London, with partial correction for deaths of Londoners occurring elsewhere and of non-Londoners occurring in London. It is quite possible that the results so arrived at did not always accurately represent the seasonal mortality of London residents. The deaths now dealt with are those registered in the whole of England and Wales, which could be little affected seasonally by correction for deaths of persons resident elsewhere, or of English people dying in other countries.

(2) The deaths were tabulated by date of registration, which was not necessarily a faithful index to date of occurrence. In the Summary for 1880 it is pointed out that the curve of recorded mortality shows " a slight jump upwards in the last week of each of the four quarters," and this is attributed to the fact that " the registrars make up their books at the close of each quarter, so that any outstanding entries will be made in its final week." This distortion may be seen to some extent in all the curves hitherto published, except that for 1891–1910. The records for 1921–25, on the other hand, are for date of occurrence of death, and so are free from distortion by variation of interval between occurrence and registration as well as from the need for correction for the average interval of several days.

It is not possible to carry the present tabulation back further than 1921, when Table 18 was first published. The information given in the Annual Summaries quoted for London could have been supplied, for the causes dealt with, for other towns as well, from the same source (the Weekly Return) ; and for London, but London only, similar information could have been given for many other causes distinguished for London in the same return ; but for the country at large the record of monthly distribution of deaths begins with 1921.

It was not till 1911 that the annual mortality statistics classified deaths by the season of occurrence. Such tables were first published for 1912 for the full list of causes of death, distinguishing the four quarters of the year only. Similar quarterly tables for each year 1914–20 have appeared in the " Quarterly Return," but with distinction of age as well as cause and season.

This detailed tabulation, which is now being discontinued, is available, either in printed or manuscript form, for the whole of the period 1911–25. Detail of season was increased from the quarter to the month in 1921, when Table 18 first appeared, and at the same time the basis of tabulation was changed from date of registration to date of occurrence.

The results of the first five years tabulation on these lines will now be examined. For all but London mortality from the eight causes already referred to (and for maternal mortality in childbirth, dealt with in the Review for 1923) this is the first occasion on which this aspect of mortality has been studied on the basis of our national records. And even for infectious disease it would seem that there is need for restatement of the facts (even apart from the important changes which will be found to have occurred) since it can be stated by a reputable authority* that " as a rule infectious diseases sink to their lowest " (as regards mortality) " for a period in April."

The basis of this statement is not given. It is not derived from the London curves, as last published in the Annual Summary for 1910 ; and it is so far from conforming with recent experience, as embodied for 1921–25 in Table 18 and its predecessors, that for the diseases grouped by the International List as epidemic, causes 1–25 (deaths from which during 1921–25 formed 42 per cent. of the total from all the causes, Nos. 1–42, described as " epidemic, endemic and infectious," tuberculosis accounting for 95 per cent. of the remainder) the April mortality exceeded the average for the whole year by 39 per cent., mortality from infectious disease, as from most other causes, being highest in winter and spring and lowest in summer and autumn.

This is demonstrated by figures III and IV, Diagram 4, which have been included for the purpose. Otherwise these figures, relating as they do to the aggregate mortality from a number of unrelated diseases which have nothing in common except their infectious nature, would not have been included in the diagram. The object of including figure IV in addition to figure III is to show the distribution of mortality from infectious disease in general, after excluding the dominant influence of influenza, to which 45 per cent. of the mortality from infectious diseases in 1921–25 was attributed, and which has an exceptionally pronounced seasonal distribution (figure X). But so far as April is concerned this exclusion makes little difference, the excess for the month being merely raised from 39 to 40 per cent.

The method by which the facts for 1921–25 are presented in Table LX (pages 107–111) and Diagrams 3 and 4 is the same as was followed in the Annual Summaries quoted, except as modified for application to calendar months instead of weeks.

---

* *The Lancet*, 11th September, 1926, p. 562.

The total deaths in January during the five years are assembled, and divided by 155 (31 × 5) to ascertain deaths per day in January. The other months are similarly dealt with, allowing for 141 days in February and 150 in April, June, September and November. Then, in order that the degree of seasonal variation charted may be comparable for each cause, these average numbers of deaths per day in each month are shown as percentages of the deaths per day throughout the whole twelve months (during the five years), and it is these percentages which are charted in the diagrams.

The degree in which a five year period is adequate for the purpose in hand may be judged from the smoothness or otherwise of the curves shown. Where the basis of fact is large, as for mortality in general and for the more numerically important causes, the seasonal distribution curve is smooth, but for some of the rarer causes dealt with, and of course for most of those not dealt with, the inadequacy of a five year basis is indicated by irregularity of the distribution curve. In these cases the irregularities might be smoothed out, but it has been thought best to leave them alone, both because they provide a useful warning of unreliability and because the smoothing process might obliterate features which time will show to be characteristic. But mere patience will not solve the difficulty, by deferring judgment pending the accumulation of adequate material, for it will be seen that some of these distributions are rapidly altering. Where this is so, we are faced by the dilemma that a short exposure is required to register the changing conditions, but a long exposure to eliminate chance variations. However, the main features of seasonal distribution are as a rule clearly marked for important causes of death on the unsmoothed five year curves, and it is with these that we shall deal.

Mortality from all causes jointly is seen from Diagram 3 to vary very smoothly with temperature, from a maximum in February to a minimum in August, the maximum and minimum both occurring a little later in the year than the extremes of temperature. The total range is considerable—from 28 per cent. above the yearly mean in February to 22 per cent. below in August. This curve differs materially from those published in the Annual Summary for 1910 for London in 1841–1910 and in 1891–1910, the latter of which is reproduced for comparison in Diagram 3. During both these extended periods the London curve was much less regular than that for England and Wales in 1921–25. In both, an August elevation was imposed upon the summer depression, the lowest levels being attained about the end of June and beginning of October. The maximum of mortality in early January for both these periods may have been due in part to delayed Christmas registration, though to produce this effect to any considerable extent a delay in excess of the five days permitted by law must be assumed. From this maximum London mortality rapidly fell during January to

rise again in a secondary wave during later February and March. Of this late winter rise the national records now show no indication, the fall from February to August being smooth and continuous. It might indeed be less so if the weekly records were plotted, as in the London curves. The change from weekly to monthly records, however, cannot explain the disappearance of the August rise. This was, at the time of its occurrence, attributed to diarrhœa (Annual Summaries 1880, etc.), and its disappearance has coincided with a remarkable decline in diarrhœal mortality, the later stages of which may be traced in Table 5 (from 551 deaths per million living in 1915 to 191 in 1922 and 214 in 1925). The fall as there recorded is partly due to decline in the proportion of young children in the population, but when allowance is made by standardization for such changes we find that diarrhœal mortality fell by 27 per cent. between 1901–10 and 1911–20 and by 45 per cent. between 1911–20 and 1925. Moreover, mortality from this cause is now much less seasonal in type than formerly. In London in 1891–1910 almost one third of the deaths occurred in August alone, whereas in England and Wales in 1921–25 the August deaths formed only 15·8 per cent. of the total. The effect of these two changes upon the contribution of diarrhœa to total mortality in August is measured by the fact that in 1906–10 diarrhœa deaths in August (i.e. in weeks ending in August) formed 11·2 per cent. of the total in London, whereas in 1921–25 the corresponding proportion was 5·4 per cent. For both these reasons then—that diarrhœa mortality is very much less, and that it is much less concentrated upon the summer months—it is natural that its effect upon the seasonal curve of total mortality should have diminished. It has disappeared without trace from the curve for England and Wales in Diagram 3, but the corresponding curve for London in 1921–25 still shows a very slight tendency to summer elevation which might well appear of no significance, but which demands consideration on account of its historical background. As compared, however, with 1891–1910 the summer rise may be said to have disappeared for London also.

There is no longer any actual rise in the curve, but a failure to fall during July to an extent in harmony with the records for adjacent months. The mortality records for the months are as follows, each being expressed as the percentage ratio of the mean daily deaths during the month (of 4 or 5 weeks) to the yearly mean—135, 129, 119, 109, 91, 78, 77, 75, 81, 86, 110, 121. The slight irregularity referred to may quite as well be regarded as a deviation for the August ratio of 75 below the general trend of the curve as for the July proportion of 77 in the opposite direction—if regard is had only to the monthly records. But the weekly figures from which these are derived show that the July position is accounted for by a sudden elevation in the 28th week, mortality in which is distinctly above the trend for those before and after. With this, however, diarrhœa

had practically nothing to do, for in these five years mortality from almost all causes rose in London during the 28th week, but the contribution of diarrhœa to the total rise was very small indeed, less than 1 per cent.

In order to test the assumption that the summer rise in total mortality during 1891–1910 was due to diarrhœa, a curve has been included in Diagram 3 showing the seasonal distribution of mortality from all causes other than diarrhœa during those years. This shows a summer elevation, in the 29th to the 34th weeks of the year, less than one-third the magnitude of that in the curve for all causes. But it must not be inferred from this fact that a portion of the summer rise was due to causes other than diarrhœa. Unless every death properly ascribable to diarrhœa was so certified as to receive this assignation—a somewhat utopian assumption—deduction of deaths assigned to this cause is bound to leave behind a certain remnant, with the same seasonal distribution, which should have received this allocation but did not receive it.

It is of interest to note that in presenting a simple swing from high mortality in winter to low in summer our experience now conforms with that characteristic of Northern Europe generally, whereas the former compound curve, with its main winter and subsidiary summer elevations, appears to prevail generally throughout the middle and southern sections of the continent.

A table in Westergaard's " Lehre von der Mortalität und Morbilität " gives the monthly distribution of mortality for nine European states in or about the years 1889–93. Of these, Italy, Würtemberg, Bavaria, Prussia, France and Belgium all showed the compound curve with a greater or smaller summer rise, slighter for Bavaria, France and Belgium than that shown in Diagram 3 for London in 1891–1910, but pronounced for Italy, Prussia and Würtemberg, and for the two former, as for London in Diagram 3, exceeding the yearly mean in August. On the other hand, Scotland, Sweden and Finland, the three most northern countries included in the comparison, all returned a simple curve without trace of summer rise. As London at this time conformed to the compound and Scotland to the simple type of curve, it would appear that the boundary between the areas presenting these types passed through England and Wales. Change from the southern to the northern type of curve as a consequence of the recent great fall in diarrhœa mortality is therefore easily to be understood in the case of a border state such as this country. As a consequence of the change which has taken place here the English and Scotch distribution curves now (1921–25) correspond very closely indeed except that the English maximum of 128 per cent. in February is replaced in the Scotch curve by one of 129 per cent. in January (February 124). The Scotch curve is slightly less regular, as might probably be expected for three reasons—the smaller number of deaths

concerned, tabulation by date of registration, and the surprising regularity of the English curve. The summer minimum is identical in both countries, 78 per cent. in August ; and apart from that affecting the winter maximum the chief difference between the curves for the two countries occurs in early summer, when the fall of mortality in Scotland lags behind that in England and Wales. The position in April is the same for both countries, 112 per cent., which in England falls to 96 in May and 84 in June, but in Scotland only to 98 in May and 89 in June. The difference does not appear to be of climatic origin since the monthly distribution of summer warmth is similar for both countries though its degree is naturally higher in England and Wales.

In order to show the relation of mortality to temperature the mean air temperature at Greenwich during 1921–25 has been charted in Diagram 3, and in order the more easily to compare its rise with the fall in the death-rate the temperature scale has been inverted, so that a rise in temperature is represented by an apparent fall in the curve shown ; and the averages for mortality and for temperature have been made to coincide. In order to display the winter rise of mortality as a whole, as well as the summer fall, two yearly cycles are included in this diagram.

It will be seen that the swing of temperature is not nearly so regular as that of mortality, but that the mortality variations are due to temperature seems to be indicated by the fact that the summer and winter extremes of temperature both tend to precede the corresponding extremes of mortality.

It will also be noted that whereas the winter rise of mortality is out of proportion to the corresponding fall of temperature the position is reversed in summer, the rise of temperature being greater in proportion than the fall in mortality. This latter excess is partly, of course, the effect of summer diarrhœa, but for which the August minimum of mortality would have amounted to only 75·8 instead of 78·2 per cent. of the yearly average. But even so, August mortality would be only 24·2 per cent. below average, or, with the scales selected for Diagram 3, (which, though aiming at equality between the total excursions of the temperature and mortality curves, in fact make those of the former slightly greater) nearer the yearly average than the August temperature, whereas with the same scales the position is reversed in winter, the February temperature being nearer the yearly average than the February mortality. The cold of winter thus appears to have a greater effect in our climate in increasing mortality than the warmth of summer in decreasing it, even when the increase by the latter of mortality from diarrhœa is discounted.

If figures I and LII in Diagram 4 are compared it may be seen that the yearly variation of mortality from all causes is almost precisely the same in type as, though much less in degree than, that of mortality from respiratory disease. Even when, as in figure II, deaths classed to respiratory disease are deducted

from the total, the seasonal distribution of the remainder still conforms to the same type, with a definite winter rise and summer fall. This might of course be regarded as evidence that mortality from non-respiratory causes in general is influenced by season in the same sense as, though in less degree than, that from respiratory causes. But the possibility of another explanation has to be borne in mind. Many cases of chronic disease of diverse types are terminated by respiratory complications, and it may be that these suffice to explain the distribution found in figure II. Whatever its origin, this type of distribution is very widespread, and will be found to apply, in greater or less degree, to most of the causes of death represented in Diagram 4.

In support of the view that respiratory disease exercises a dominant influence upon the seasonal distribution of mortality in general it may be noted that in Scotland, where the peak of the winter rise in mortality has been seen to occur in January, and not February as in England and Wales, the same contrast to southern experience is to be noted for respiratory disease. This distinction emerges very clearly from the following comparison for the two countries of monthly percentages of the yearly mean of daily deaths from respiratory diseases (International Code Nos. 97–107) during 1921–25.

	England and Wales.	*Scotland.*
January	155	171
February	166	156
March	154	146
April	127	115
May	90	85
June	62	66
July	50	52
August	43	47
September	49	55
October	63	68
November	104	109
December	141	133

In each case the daily deaths in each month are compared with those for the twelve months. The Scotch winter rise is much steeper but less sustained than the English, culminating, like that for the general death-rate, a month earlier. Presumably climatic conditions account for the contrast, which is quoted here to show that the distinction between the two countries as regards mortality in general may be accounted for by a similar distinction as regards respiratory disease. It has already been seen that the February maximum may be a recent feature in the English returns, the London weekly curves of deaths from all causes for 1841–1910 and for 1891–1910 printed in the "Annual Summary" for 1910 both showing a definite January maximum. That for 1891–1910, indeed, shows a pronounced February depression in the position of the present yearly maximum for England

and Wales, followed by a secondary peak in March. So the evidence suggests that the winter contrast with Scotland, like the summer agreement, may be of quite recent origin.

Figure V shows that typhoid fever has retained the autumn maximum of mortality which it showed in London during 1869–1910, but with transfer of the maximum incidence from November to October.

For this and other notifiable diseases the monthly distribution of notifications during 1921–25 has been plotted in Diagram 4 as well as that of the deaths. The method followed in doing so is similar to that employed for deaths except in one particular. The returns of notifications as received refer to weeks, and do not give the date of notification. It is, therefore, impossible to ascertain from them the numbers of cases notified in each month. In order to group them by months for comparison with the deaths in Diagram 4 it has, therefore, been necessary to distribute the weeks of the year arbitrarily to the calendar months. For this purpose the assumption doing least violence to the facts for the five years in question was found to be as follows:—January, weeks 1–5; February, 6–9; March, 10–13; April, 14–17; May, 18–22; June, 23–26; July, 27–30; August, 31–35; September, 36–39; October, 40–44; November, 45–48; and December, 49–53. Fifty-three weeks were included in the year 1924, and 52 in each of the other four.

The variation in length of these months does not affect the result, as the proportions charted are those of cases per day in each month per cent. of cases per day throughout the whole period. The only error involved lies in the assumption that the first five weeks of the year belong to January, whereas some of the days included belong to December, and some to February, and so on. This error, however, is not cumulative; and as the present form of the returns admits of no more precise monthly statement it has seemed better to admit the small degree of inaccuracy involved than to forgo the opportunity of comparing the distribution of cases with that of deaths from these diseases in Diagram 4.

For typhoid fever (figure V), which excludes paratyphoid, it will be seen that notifications vary with season far more than deaths. The autumn maximum is much higher for cases and occurs in September instead of October. Some such time interval as a month is to be expected in view of the clinical features of the disease, but the greater range of variation for cases cannot be similarly inferred. It would seem that, broadly speaking, at the time of year when the disease is most prevalent it is least deadly, and *vice versa*, the proportion of deaths to cases being evidently much larger in spring than in autumn. From Table LX, where the daily numbers of both are stated, the following percentage ratios of deaths to cases may be obtained for the notifications of each month of the year, assuming a constant interval of one month between notification and death—January, 16·7; February, 18·5; March, 19·3; April, 19·5; May, 14·7;

June, 14·8; July, 15·6; August, 13·9; September, 13·1; October, 13·0; November, 13·5; December, 18·8. Thus, case mortality is much higher during December–April, when the disease is least prevalent, than during May–November, five, July–November, of these seven months representing the period of prevalence. But whether this annual fluctuation of the reported fatality of the disease really corresponds with the facts is, perhaps, matter for discussion. It may be, for instance, that during the season of prevalence a larger proportion of the cases of the disease actually met with by medical practitioners is recognised as typhoid than during the "off season," when the possiblity of typhoid, remote enough at all times now, is less in men's minds. All we can say definitely is that the proportion of deaths to notified cases showed a large seasonal fluctuation during 1921–25.

Whooping cough (figure VI) shows great concentration of mortality on the first half of the year, with a maximum of 70 per cent. excess in February, and a minimum of 56 per cent. below average in October. This distribution may be largely a consequence of the respiratory complications so fatal in this disease, but there appear to be other factors at work than this, for the October minimum is two months later than that from respiratory diseases, which occurs in August (figure LII). Seasonal distribution varies greatly in different counties.

But the clearest evidence of the influence of these respiratory complications upon the mortality both of whooping cough and measles is probably to be found in the varying ratio of deaths to notifications at different parts of the year. During the first three months, when respiratory disease is most fatal (figure LII) the mortality curve for both whooping cough and measles rises far above that for notifications, showing that at this season a much larger proportion of cases prove fatal. With the advent of warm weather in May and June the position is reversed; mortality from respiratory disease (figure LII) falling below the yearly average, and the proportion of deaths to cases of whooping cough and measles also becoming relatively low.

The fact that the relationship of deaths to cases throughout the year which might be expected is so clearly manifest in figures VI and VII is perhaps the best justification which can be adduced for showing the notification curves in these figures. For in the cases both of whooping cough and measles only a small proportion of the total attacks is represented by the notifications received during 1921–25, owing to the very limited extent to which compulsory notification was applied to these diseases during this period. The justification of using, e.g. the 56,778 notifications of whooping cough as a sample of the total cases occurring has been carefully considered in consultation with the Ministry of Health, but neither the returns themselves nor the circumstances determining compulsory notification in any particular area suggest that the sample available is seriously

unrepresentative. It is conceivable, for instance, that notification might be adopted under stress of epidemic prevalence, and so apply especially to the period of prevalence. But it appears that, once adopted, it is generally enforced for at least a year, and any twelve months' enforcement will evidently yield a fair contribution towards a representative sample of seasonal prevalence, whereas if fractions of a year are included the period of prevalence may be over—or under—represented. This matter could of course be further tested by tabulating the populations subject to compulsory notification during each month of the five years, but the evidence that the samples dealt with were in each case adequate to indicate seasonal prevalence has appeared sufficiently strong to justify dispensing with this somewhat laborious tabulation. The diseases to which these considerations apply are whooping cough and measles only, all the other notification curves charted in Diagram 4 being based on general compulsory notification throughout the whole five years. It should, however, be mentioned that the summer prevalence of these two diseases is slightly understated in the diagram owing to the fact that in London, whence a considerable proportion of the total notifications are received, they originate mainly with the school medical service, and almost cease during the school holidays. But allowance for this defect in the data can only have the effect of emphasizing the feature in the curves to which attention has been called.

Measles (figure VII) yields a mortality curve very similar to that for whooping cough, but of still greater range and with somewhat later maximum and earlier minimum. Neither of these points, however, corresponds with that for respiratory diseases. The most remarkable feature in the measles curve is its simple nature. During 1841–1910 measles in London presented a definitely compound seasonal curve, with maxima in December and June and minima in February and September —the type of seasonal distribution still described in the most recent English text books. Now, however, the gap between the winter and spring peaks has filled up completely for London, and almost completely for England and Wales (figure XCI) and we are left with a single maximum in April (March in London) and minimum in September, so that the compound yearly curve has become simple. The stages of this change, as recorded for London in the "Weekly Returns," are shown in Diagram 6 (facing page 109), from which it appears that in 1891–95 the February depression was pronounced, but that by 1911–15 its last traces had disappeared. It may also be seen from this diagram that in 1921–5 concentration of mortality on the early months of the year was much greater for London than a few years before, as it is also much greater than for England and Wales (Diagram 4, figure VII). In London moreover the summer depression is now prolonged and of rounded contour, whereas formerly it was of much shorter duration and V-shaped, as it still is for England and Wales.

But while the last trace of the February depression has disappeared from the London records represented in Diagram 6, the case is different with those for England and Wales. In this case some December elevation still remains, both for notifications and deaths. This is obscured in figure VII by interruption of the record at the critical point, between December and January, but it is clearly seen in figure XCI. Here the distribution curve for measles is re-drawn, but from July to June instead of from January to December. This has the effect of displaying the winter rise as a whole, and so of bringing out this interesting feature of it, which appears to be the sole surviving remnant of the former winter wave. Various other figures in Diagram 4 which fail for the same reason as figure VII to display winter distribution clearly have been re-drawn in the same way, as figures LXXXIX–CXIII. Many of these also present a December elevation, but for most of them this seems to be associated with the date of Christmas. In this case, however, infection at Christmas parties, etc., would cause an increase not in December but in January. It might perhaps be supposed that increase would be continuous from December to February but for Christmas, which checks infection by closing the schools. Such an explanation, however, could not account for a depression on the scale of that formerly experienced in London between the December and spring (April–June) peaks, and it seems more reasonable to regard the present December elevation as a remnant of the larger one formerly experienced at the same time of year (in London during 1841–1910 mortality reached its highest point in December). On this hypothesis the cause of the irregularity in figure XCI must be assumed to be the same as that responsible for the much larger winter rise in earlier years, whatever that may have been.

Variability, both in space and time, of the seasonal distribution of measles is no new observation. The subject is dealt with in the Report of the Registrar-General for 1884, where the distribution of deaths during then recent years is shown for London, Paris, Berlin, the eight chief Scotch towns, and three groups of English towns. The result is described as follows :—" The curve usually presents only a single annual wave, the maximum corresponding closely enough with the summer maximum of London. But the winter increase is absent, or almost so ; so that there is only one maximum and one minimum point—not two of each, as in London." And in Prinzing's " Handbuch der medizinischen Statistik " (1906), in addition to statement of similar differences between certain countries (Sweden, Italy, Bavaria), record is made of a remarkable change in the seasonal behaviour of measles in Hamburg during the nineteenth century, which may be compared with that noted for London in the twentieth. During 1838–71 the mortality distribution exhibited a pronounced winter maximum (January 144, February 124, and March 139 per cent.), which for 1872–1900 was converted into a summer maximum

(June 209 per cent.). The conversion here was from winter to summer instead of from summer to winter, as more recently in London, but in both cases the variability of the distribution type is strikingly displayed. And the two-wave type of annual distribution is clearly discernible in a number of the instances quoted both in the Report for 1884 and by Prinzing, as well as in the London experience prior to 1911.

The seasonal distribution of scarlet fever mortality (figure VIII), which varies much in different countries, has undergone quite as striking a change as that of measles, though in this case also the change is unnoted in the most recent text-books, which, presumably, look to the most recent official publications for their information on such subjects. In 1861–1910 the London curve showed an autumn elevation and spring depression, much reduced in the curve for 1891–1910 (*loc. cit.*). Now, however, for England and Wales and London alike, the distribution is almost reversed, the minimum having shifted from March and April to August and September, and the maximum from October and November to January. Thus while the extraordinary fall in mortality recorded in Table 6 was converting this disease from a deadly to a very mild infection its seasonal distribution was also changing ; and the question arises to what extent these two changes in the natural history of the disease are related. In the first two seasonal curves available for comparison (London, 1840–79, Annual Summary 1880, and London 1861–90, Annual Summary 1890) the autumn maximum was 160 per cent. of average. In 1891–1910 it did not quite reach 130 per cent., and in 1921–25 figure VIII shows that there is no longer an autumn maximum at all. It would be impossible to measure the correlation of the two changes without much laborious tabulation of the London records in the Weekly Return, and even if this were carried out we should still be ignorant to what extent the reduction of mortality shown in Table 6 represents a decline in virulence and to what extent a decline in prevalence.

The relation of the notifications curve to that for deaths is puzzling in the case of scarlet fever. Both attain the yearly minimum in the same month, August (when, owing to holiday closure of schools the chances of classroom infection are least) but whereas October is the last month of increasing notifications, increase of deaths continues until January, and until May the proportion of deaths remains much higher than that of notifications. It follows that so far as the deaths of any month can be related to the notifications of the same month, as suggested by the common minimum for both in August, fatality is higher in the first than in the second half of the year. But if the interval between infection and death is considerably greater (e.g. as a consequence of acute nephritis) at other times of the year than it seems to be in summer, the relation of the two curves in figure VIII can be explained without assuming the seasonal variation in fatality otherwise implied.

Diphtheria (figures IX and XC) has undergone very much the same change as scarlet fever, a sharp peak in January being now substituted in its mortality curve for a sustained elevation during the last three months of the year (*loc. cit.*), and the change in this case also applying to London, for which alone the earlier records are available. The summer trough in July is also now deeper than the earlier trough in June, so that the range of variation is greatly increased.

The notifications curve is related to that for deaths in a manner generally resembling that applying to scarlet fever. In both cases the year starts with mortality much more above the yearly mean than occurrence. As the summer minimum approaches, mortality declines more than occurrence, so that its minimum is relatively lower than that for notifications. Thereafter increase of cases precedes that of deaths, and for both diseases the curve of cases is sustained at a high level during autumn, but in winter rapid increase of deaths restores matters to the starting point. The autumn prolongation of diphtheria prevalence is better seen in figure XC, which shows that from October to February inclusive this remains at a moderately high and uniform level, while at the same time the deaths curve is fluctuating widely, daily notifications during these months varying between 154 in December and 169 in January, whereas during the same period daily deaths varied from 8·39 in October to 14·0 in January (Table LX). The fatality in each month, per 1000 cases notified in the same month, increased during this period from 51·8 in October, the lowest rate for the twelve months, to 82·8 in January, the highest, the average for the whole twelve months being 67·9.

It is obvious that such differences as this can only be usefully discussed in the light of experience of the clinical features of the diseases in question, as manifested at different times of the year. It must suffice here, therefore, to place the facts, as returned to the Registrar-General, on record in Diagram 4, and leave the discussion of the relationship of seasonal mortality to seasonal prevalence to those qualified by special knowledge to undertake it.

No other cause dealt with shows the same degree of seasonal variation as influenza (figure X). Its curve is of the respiratory type—a simple swing from February maximum to August minimum, but greatly increased in range, the death-rate in February being nearly three times the yearly average. It is natural, of course, that the mortality distribution should be of this type, since during 1921–25 two-thirds (66·5 per cent.) of the deaths classed to influenza were returned as contributed to by respiratory disease; but even if there were no exceptions to this rule it could scarcely explain a winter concentration of mortality greater than that of respiratory disease in general or of any single respiratory disease, of which acute bronchitis, with 198 per cent. of yearly average mortality in February (figure LV) provides the nearest approach to the influenza curve. This

seems at least to suggest that the primary infection in influenza, as well as its secondary accompaniments, finds the conditions of winter especially to its liking. This yearly swing must, of course, be entirely independent of the 33-week period which has been described in this disease, as the effect of the latter, if operating alone, would be to distribute the mortality equally over all seasons of the year when a series of years is considered as a whole.

The curve for erysipelas (figure XI) may be compared with those for scarlet fever (figure VIII), puerperal sepsis (figure LXXV), and cellulitis (figure LXXVIII). All these streptococcal diseases (including scarlet fever in this group on the ground that even if its primary cause is not a streptococcus, at all events death very commonly results from secondary streptococcal invasion) display a somewhat similar distribution, a simple yearly swing with sharply marked summer depression; but some other diseases, not of streptococcal origin, such as diphtheria (figure IX), conform much more closely to this type than certain streptococcal diseases, septicæmia (figure XVIII) and infective osteomyelitis (figure LXXIX). And it must be noted that, except in detail, this streptococcal type of distribution conforms with the all causes and respiratory types of distribution already discussed. All that can be said at present therefore is that the streptococcus appears to be most deadly under the wintry conditions which promote the activity of other causes of death. And the change noted above in the distribution of scarlet fever mortality has to be borne in mind. We cannot expect to arrive at conclusions on such matters on the basis of a mere five years' experience.

Acute poliomyelitis (figure XII) presents an entirely different type of curve from any yet considered, except typhoid fever, which it resembles in displaying an autumn elevation, though in its case this is much more accentuated. The only other distribution in Diagram 4, which resembles these is that for diseases of the digestive system (figure LVII), and this can be seen to be compounded of two distributions, neither of which resembles typhoid and poliomyelitis—those for diarrhœa (figure LXIV) and for digestive diseases other than diarrhœa (figure LX). As already seen, however, scarlet fever and diphtheria till recently belonged to this group. It is interesting to speculate, but unfortunately impossible to ascertain, whether, when scarlet fever did so, other and definitely streptococcal diseases behaved in the same way. The relation of the notification to the mortality curve for this disease, as also for encephalitis lethargica (figure XIII) is of much interest. In both cases the former may be described as a caricature of the latter, closely reproducing its features, but with great accession of emphasis. The reproduction is less perfect for poliomyelitis than for encephalitis, in the case of which the resemblance in type is remarkable. There is plainly no evidence here of protracted illness before death, but a strong

suggestion, as for typhoid fever, that when the disease is most prevalent it is least fatal. But the same need for caution in drawing this conclusion applies, though possibly in less degree, to poliomyelitis and encephalitis as to typhoid.

Encephalitis lethargica (figure XIII) presents a strongly marked seasonal curve of mortality with a sharp maximum in May and a sustained minimum in August to December. This appears to be an almost distinctive distribution, the nearest approach to which is furnished by meningococcal meningitis (figure XIV). The sharp contrast of its seasonal behaviour with that both of influenza and of acute poliomyelitis, all three diseases being of strongly developed seasonal periodicity, seems a strong point against the suggestion of its identity with either.

Meningococcal meningitis (figure XIV) displays, like measles, a strongly marked April mortality maximum. There is, as already noted, considerable resemblance to encephalitis lethargica, and on the other hand meningitis of unstated origin (figure XXIX) also sufficiently resembles it to suggest that many of the deaths allocated to this heading may be of meningococcal origin.

The distribution of notifications is in close general conformity with that of deaths and shows little evidence of interval between onset and death, but the basis of facts is so small—about one notification and one death daily on average for the five years—that it is impossible to attach significance to the discrepancies of detail displayed. As the number of notifications during the five years was 1,855 and that of deaths 1,718, it seems that few recoveries are experienced. (*See* Table XXI.)

Rickets (figure XXIII) merely displays a somewhat exaggerated example of the all causes type of distribution. This, of course, is just what is to be expected in the case of a disease generally leading to death through respiratory complications (see page 92).

Respiratory tuberculosis (figure XV) also conforms to the respiratory type, mortality increasing with cold. But in none of the respiratory diseases figured is this fluctuation so little developed. The range of variation is less, indeed, for phthisis than for all causes jointly.

The otherwise smooth curve of mortality change from the September minimum to the February maximum is curiously interrupted towards the close of the year, mortality being scarcely higher in December than in November. This feature is best seen in figure XCIII.

Tuberculosis of the nervous system and of the intestines and peritoneum (figures XVI and XVII) generally resemble phthisis in distribution. The absence of any tendency to summer increase in figure XVII may be noted, as in quite recent years there was still evidence that some deaths from summer diarrhœa were ascribed to tuberculous peritonitis.

The curve for septicæmia (figure XVIII) bears some general resemblance to those for other streptococcal diseases already

considered; but the basis of fact is small, about 1½ deaths per day, and the curve too irregular to inspire much confidence.

Mortality from cancer (figure XIX) varies singularly little throughout the year, and this feature applies also, in greater or less degree, to the curves for non-malignant tumours (see figures XX, XXXVI, LXXII and LXXIII). There is no suggestion here of death from respiratory complications, and it would appear that when a tumour kills, it kills at its own time and in its own way.

The curve for rheumatic fever (figure XXI) is in no way remarkable, as the fluctuation shown is of the same type as for the general death-rate, but much less in degree. No distinctive feature, therefore, emerges. This statement applies also to rheumatoid and osteo-arthritis (figure XXII), but here the degree of fluctuation is greater. These are deaths of old people (Table 17) and their seasonal distribution is generally similar to that of deaths ascribed to old age (figure LXXXIII). In both cases it may be surmised that the respiratory distribution displayed is due to immediate determination of death by respiratory causes.

The curve for diabetes (figure XXIV) is very similar, but here, perhaps, wider fluctuation might have been expected. For not only do the chief secondary invaders in this disease, the bacillus tuberculosis and streptococcus, display the same distribution, but winter increases the demand for fuel in the form of carbohydrates and fats.

Figure XCIV brings out the fact that diabetes resembles a number of other causes in displaying a December elevation followed by a January depression. In some cases (diseases of the heart and digestive organs, etc.), there seems to be reason for associating this feature with the festivities of Christmas, and this explanation may apply to diabetes also, for at no other time of year can the temptation to dietetic and other indiscretions be so great. If this be indeed the explanation it is interesting to note how rapid is the succession of the fatal consequence, as these deaths must be supposed to be concentrated upon the last week of the year.

Pernicious anæmia (figure XXV) and exophthalmic goitre (figure XXVI) show merely a general tendency to follow the winter rise and summer fall common to most causes of death. Leukæmia (figure XXVII), on the other hand, though the numbers are small (1·4 deaths per day), and irregularities accordingly considerable, shows an absence of major fluctuation which may perhaps resemble the same feature in the case of tumours if it implies in both cases that the date of death is determined as a rule by the progress of the primary disease.

Diseases of the nervous system in general (figure XXVIII) and cerebral hæmorrhage (figure XXXI) in particular, which forms more than half of their total, display the respiratory type of distribution to a very similar, but appreciably smaller, degree

than the all causes curve. The meningitis (of unstated origin) curve (figure XXIX) may perhaps be said to give the impression of being the general nervous diseases curve modified by an extra portion of meningococcal meningitis (figure XIV) and to resemble the latter more than it does tuberculous meningitis (figure XVI).

The curves for cerebral hæmorrhage, cerebral softening and disseminated sclerosis all display a December elevation followed by a January depression, as may best be seen in figures XCV, XCVII and XCVIII. It seems very possible that the explanation of this feature invoked for diabetes may apply to cerebral hæmorrhage and softening also, the excitement fatigue and over indulgence of Christmas determining the onset of a fatal hæmorrhage in a few persons with vascular disease subjecting them to this risk.

As cases of tabes dorsalis (figure XXX)are generally terminated by some other malady, it is only natural that its curve should show general resemblance to that for total mortality. This statement, indeed, applies, in greater or less degree, to all the other nervous diseases dealt with except cerebral tumour, which has already been noted as conforming to the rule of even distribution applying to cancer and tumours generally.

The curve for heart disease in general (figure XL) is strikingly akin to that for all causes, which it so largely helps to determine. It seems evident therefore, that, as might be expected, respiratory complications here also play an important part. But the resemblance is less in figure XCIX, which brings out the fact, easily overlooked in figure XL, that the winter rise has a well-marked double peak, the December maximum being followed by a considerable depression in January. The curves for various forms of heart disease, figures XCVI, C, CI and CIII, show that this December elevation is especially marked for aortic valve and myocardial disease, while the curve for mitral valve disease shows no sign of it. The numbers involved are so large—aortic disease 14,639, mitral disease 44,563, and myocardial disease other than fatty 72,136—that significance must be attached to these pronounced differences. As in the similar case of gastric and duodenal ulcer and hernia (figures CV – CVII) the incidence of Christmas in December seems adequate to provide an explanation, which may apply to the 7,710 deaths from angina pectoris (figure XCVI) as well as to the numerically more important forms of heart disease mentioned. Christmas is, of course, a season of excitement and over-indulgence in food and drink when even sufferers from recognised heart disease may be tempted by the spirit of good fellowship into taking undue risks. And so we find that it is just those forms of heart disease most associated with sudden deaths—aortic disease, angina pectoris and the heart muscle degenerations often dependent on coronary artery disease—which most display this peculiarity. The depth of the January notch, indeed, suggests that for many persons

whose days are in any case numbered by advanced disease death during the last week of December rather than in January is determined by imprudence at Christmas, but it is not necessary to assume that all the extra December deaths are of invalids. Some may be of persons in apparent good health but in reality suffering from unrecognised heart disease who subject their hearts to special strain at Christmas.

Infective endocarditis (figure XLII) presents a distribution entirely different from that of heart disease in general. There is no sign of winter increase, August and September returning the highest rates. But the main feature in this case is conformity to the tumour type of even distribution throughout the year. The reason suggested for the latter may apply also to infective endocarditis—that death is determined by the progress of the malady rather than by respiratory or other complications influenced by season.

Aneurysm and arterio-sclerosis both display the December elevation and January depression (best seen in figures CIV and CX) noted in the forms of heart disease just discussed. For arterio-sclerosis the number of deaths is so large, 76,476, or almost 42 daily, and the distribution curve otherwise so regular, that the mind is left in little doubt as to the real significance of this peculiarity in the curve, especially in view of the fact that it appears also in the very similar curves for cerebral hæmorrhage and cerebral softening (figures XCV and XCVII) which of course originate in vascular disease. The January depression applies to the returns for arterio-sclerosis both with and without record of cerebral vascular lesion (code nos. 91 *b*(1) and 91 *b*(2), figures CXII and CXIII), but is much more pronounced for the former. Indeed, it applies far more to deaths certified "arterio-sclerosis, cerebral hæmorrhage," etc., than to those simply ascribed to cerebral hæmorrhage, etc. (figure XCV), but why this should be so, and why the January notch should appear at all in the distribution of deaths from arterial disease without special cerebral localisation, are points for the consideration of the clinician rather than of the statistician. The curve for arterio-sclerosis in general (figures L and CIV) and especially for that without cerebral lesion, resembles that for old age (figure LXXXIII), both conforming to the respiratory type rather more than the all causes curve (figure I) does, which they otherwise closely resemble. There is other evidence than this that the type of death which is ascribed to old age by one practitioner is often ascribed to arterio-sclerosis by another—"a man is as old as his arteries"—and the extent to which old people are killed off by the severe weather of winter is a familiar feature of the returns.

The January depression in the curve for aneurysm (figure CX) is of a less convincing nature, as this curve, though based on 5,134 deaths, or almost three per day, is irregular compared with that for arterio-sclerosis. But as its chief irregularity takes the shape of a feature common to so many other forms of circulatory disease it seems not improbable that here also the influence of Christmas is in some way manifested.

Nearly all the respiratory diseases represented in Diagram 4 conform in greater or less degree to the respiratory type (figure LII) already discussed in connexion with the death-rate from all causes. Its wide swing is common to them all except pleurisy (figure LI), with a February maximum for all (*i.e.*, other than pleurisy) except lobar pneumonia (figure LIV, March maximum) and an August minimum for all, except asthma (figure LXII, July minimum). The latter exception may perhaps be associated with excitation of the disease by pollens in the early summer, leading to death a few weeks later. If so, it furnishes confirmatory evidence of the conclusion reached, on totally different grounds, on page 82 as to the genuine nature of the ascription of most of these deaths to asthma. The curve for acute bronchitis (figure LV) forms the most extreme example of the type, its characteristics being exceeded only in the case of that for influenza (figure X). The February maximum is less pronounced for chronic bronchitis (figure LVI) but reappears in full vigour in that for broncho-pneumonia (figure LVIII), which, so far as seasonal distribution is concerned, is more akin to bronchitis than to lobar pneumonia. This latter (figure LIV) differs from the other respiratory diseases illustrated in presenting a definite March maximum along with the August minimum, and in displaying much less range of variation. In both these respects undefined pneumonia (figure LIX) resembles lobar rather than broncho-pneumonia, the seasonal distribution thus confirming much other evidence that " pneumonia " generally means lobar pneumonia.

The distribution of mortality from lobar pneumonia is better seen in figure CIX than in figure LIV. It declines during January and February to an extent which, in view of the number of deaths involved, 46,112, or over 25 daily, can hardly be without significance, but only to rise again to the highest point for the year in March, rapid fall not setting in till May. It, therefore, appears that the danger period for this disease is winter and spring rather than winter alone. But this may vary from time to time with weather conditions, and it is possible that the details of winter distribution in figure CIX are not typical, being related to weather conditions during 1921–25 which may not be repeated. If the five years are examined separately we find that December furnished most deaths in three of them, 1921, 1923 and 1925, and March in one only, 1924, while April came first in 1922. But in 1924 the number for December was little more than half that for March. Many quinquennia may pass before another occurs containing no January maximum, and all that figure CIX can at present be taken to show is the distribution of mortality from lobar pneumonia under the weather conditions of 1921–25.

The curve for pleurisy (figure LI) has been resolved into those for its two components, empyema and other pleurisy. The relation of these to each other is interesting. Broadly speaking empyema follows the course of sero-fibrinous pleurisy

at an interval of about one month, suggesting that the most rapidly fatal cases are those where death is due not to sepsis but to the mechanical consequences of a copious effusion. However this may be, it is also of interest to note the striking resemblance between these two extremely irregular curves, which suggests that features which might well be regarded as purely fortuitous may in reality represent real characteristics of seasonal distribution.

The curve for diseases of the digestive system (figure LVII) is so dominated by that for diarrhœa (mainly of infants)—see figure LXIV—that figure LX has been prepared to show the distribution when these deaths are excluded. This shows on the whole little seasonal variation, its main feature being a fairly sharp rise in December, best seen in figure CII. This curve seems to suggest Christmas rather as contributory to, than as wholly responsible for the December maximum, since adjoining months are also above the mean. But the inculpatory evidence is much stronger for some of the separate causes concerned, especially gastric and duodenal ulcer. Figure CVI, shows that for the latter the December peak of 25 per cent. above the yearly average is practically confined to that month, and that it is followed by records for the two following months actually below the average. The latter feature may perhaps be explained, as in the similar cases of aortic and myocardial disease (figures C and CIII), by the assumption that a number of persons with ulcers near the point of perforation or hæmorrhage determine for themselves death in late December by dietary or other indiscretions at Christmas, and so reduce the number of advanced cases available to furnish deaths during the immediately succeeding months. It will be possible in the future to test this explanation of the facts by tabulating these deaths by day of occurrence, but at present this cannot be done ; and this indictment of Christmas can therefore only be regarded for the time being as an unverified hypothesis.

The curve for gastric ulcer (figure CV) is very similar to that for duodenal, but the winter rise, though applying specially to December, includes also January and February. Hernia (figure CVII) records a similar winter excess specially incident on December, suggesting that in a number of cases strangulation is determined by indiscretion at Christmas, possibly in the form of unusual muscular effort, if the local consequences of over-eating and over-drinking can be disregarded in this connexion.

Mortality is at its highest in or about December also for two other digestive system diseases figured in Diagram 4, intestinal obstruction and cirrhosis of the liver (figures LXVII and LXVIII), but while, in view of the facts just considered, this may also be significant of the influence of Christmas, the excess is in both cases too small to permit of any definite inference to this effect. The absence of any evidence of such influence in the case of appendicitis (figure LXV) may be noted. Distribution here,

as also in the main in figures LXVII and LXVIII, is of what has been referred to as the " tumour type," and as for cancer, etc., may be explained as a consequence of these conditions killing direct, and not by way of secondary invasions influenced by meteorological conditions. It is natural that the distribution of cirrhosis of the liver should show no evidence of influence by that of tuberculosis (figures XV–XVII) notwithstanding the frequent association of the two diseases, for figure LXVIII really stands for cirrhosis without mention of tuberculosis, deaths ascribed to both causes jointly being classed to tuberculosis.

Both acute and chronic nephritis (figures LXIX and LXX) yield curves similar to that for heart disease, sufferers from these maladies being presumably affected by weather in a somewhat similar manner. All the urinary diseases charted (figures LXIX–LXXII) show a very definite depression of the mortality curve during summer, the time of year when elimination by the skin is most active. And in each case the point of lowest mortality is reached in July or earlier, whereas the curve for all causes resembles that for respiratory disease in exhibiting an August minimum.

Figures LXXIV to LXXVI have been included in Diagram 4 in order to make it comprehensive, but as the relation of season to puerperal mortality was more fully discussed in the Review for 1923 than is possible here, and on a more satisfactory basis (the proportion of maternal deaths to live births) than that employed in Diagram 4, which takes no account of seasonal changes of the birth-rate, nothing need now be added on this subject.

Mortality from senile gangrene (figure LXXVII) is evidently much influenced by season, varying as it has done from 29 per cent. above the yearly mean in March to 26 below it in September. This may indicate that contraction of the local blood-vessels by cold plays a part in determining the onset of this condition.

Cellulitis (figures LXXVIII and CVIII) has already been noted as more or less resembling other streptococcal diseases in distribution, but figure CVIII shows a well-marked December peak followed by a January depression, which, if it proves persistent in future records, will call for explanation.

The curves for congenital debility and for premature birth (figures LXXX and LXXXI) both display much increase of mortality in cold weather, as is only to be expected in view of the importance of suitable warmth in the treatment of premature infants. In each case the summer minimum, like that for urinary diseases, occurs in July. As these deaths occur for the most part during the first few weeks of life, they would be better considered, like those from puerperal causes, in relation to births ; but the main features of the curves would remain unaltered by this treatment, and they have, therefore, been included for the sake

of completeness. At the other extreme of life also the same association is very clearly discernible for " old age " (figure LXXXIII), many deaths ascribed to which are doubtless determined by causes originating in weather conditions which earlier in the same lives would have had no such fatal effect. Here the August minimum characteristic of respiratory disease is clearly marked.

Deaths from Violence.—In a few cases these bear an interesting relation to season. Figure LXXXIV shows that suicide is most frequent for both sexes in spring and early summer, with a maximum in June. It seems hard to imagine why desire to leave the world should be greatest when it is at its loveliest, with prospects of continued pleasant weather ahead, but this is a problem for the psychologist.

Figures LXXXVI and CXI bring out the influence of clothing upon mortality from burns in an interesting manner. This very considerable mortality (8,087 deaths, or between 4 and 5 daily, during 1921–25) affects females more than males on account of the nature of their clothing. In 1925 there were 724 deaths of males, and 863 of females, from accidental burns and scalds. But from burns not specifically ascribed to clothing (though in many of these cases also, as those of falling into the fire, the nature of the clothing must have affected the result) there were 642 deaths of males and only 561 of females, leaving 82 deaths of males and 302 of females ascribed to clothing (Table 22). It is natural therefore that mortality from burns should be more seasonal for females, rising during the period of domestic fires. This feature is particularly well brought out by figure CXI, which shows the result of dressing little girls in cotton wool at Christmas parties.

Figure LXXXVII shows the distribution of deaths from accidental drowning, which has already been considered on pages 78–81.

That of deaths certified as due to suicide by drowning (Table LX) proves on examination not to differ very greatly from that of suicide in general. There is somewhat more seasonal concentration, and the peak for the year (19 per cent. excess of average) is reached in May in 1921–25 instead of June (see figure LXXXIV). Thus it appears that season is not entirely without influence upon method of suicide.

But in addition to the deaths, 835 in 1925, definitely ascribed to suicide by drowning, there are also many others, 745 in 1925, for which the distinction between suicide and accident cannot be made. In some cases even death by drowning is not established, the verdict showing merely that a dead body was found in the sea, on the shore, etc. For the two years 1924 and 1925 the distribution of these deaths (" found "—" drowned," " on shore," etc. ; Table 22) closely resembles that for suicide by drowning or otherwise, but with rather more seasonal variation, so it

seems likely that the great bulk are suicides, with a possible small admixture of accidental drownings, whilst bathing or otherwise. The seasonal variation of the bathing deaths is so great that any considerable admixture with suicides would involve a distribution showing much more variation than for the latter, whereas the records show only a little more (27 per cent. maximum excess as against 19 for suicide by drowning).

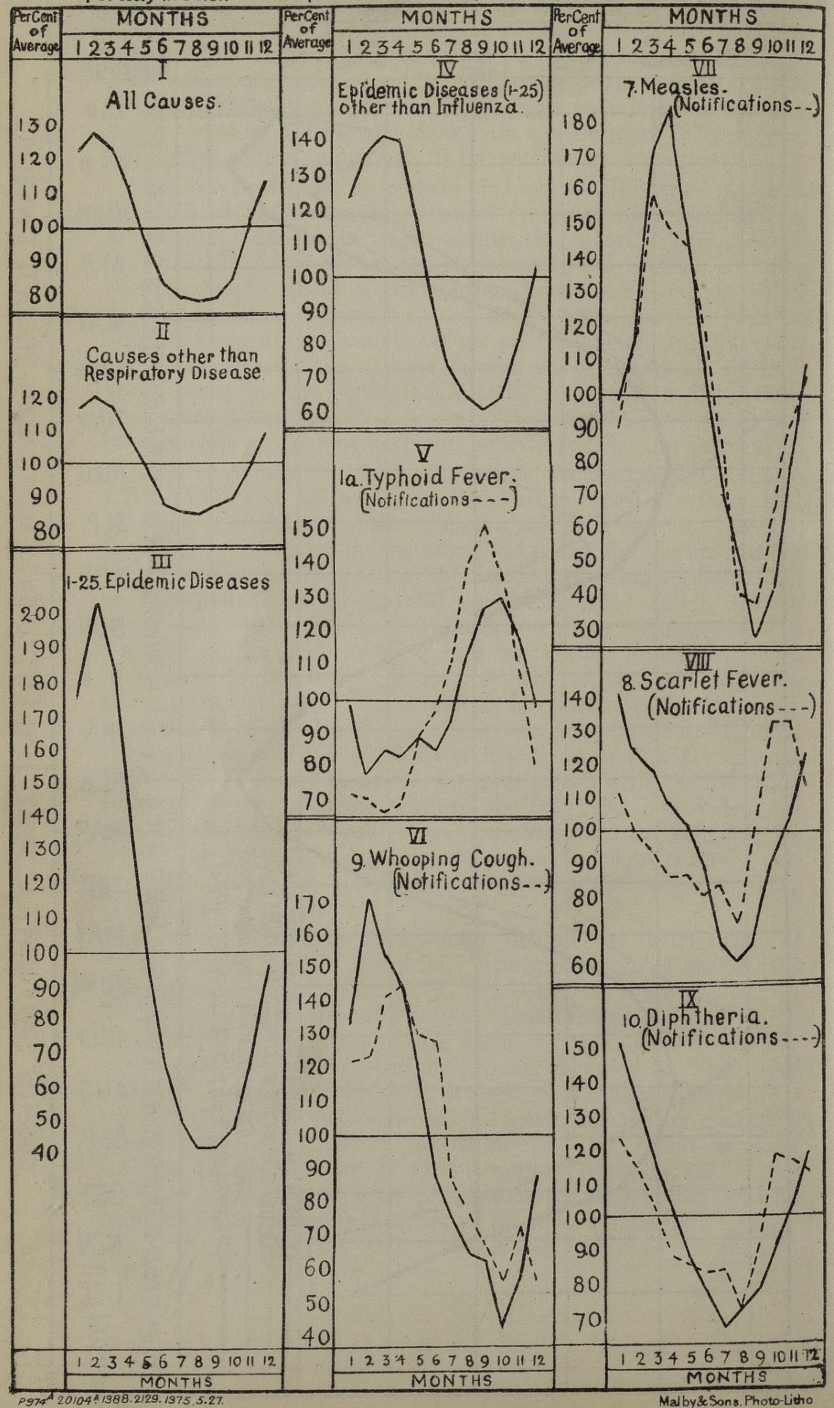
For a considerable proportion (551 out of 1617, or 34 per cent. in 1925) of deaths from accidental drowning no information is forthcoming except of their accidental nature. These, when tested for 1924 and 1925 in the same way as the " found " or open verdict deaths, yield a distribution much more suggestive of genuine accident, excess for each of the three months June to August being approximately 60 per cent. Though this excess is far below that for the bathing deaths, which nearly all occur in these three months (figure LXXXVII) it is sufficiently greater than that for suicide by drowning to suggest that these are mainly cases of genuine accident, as indicated by the verdict.

The distribution of deaths from accidental fall (figures LXXXVIII and XCII) shows considerable excess in winter, best seen in figure XCII. This excess, which is greater for females, is probably explained by the advanced age of the victims, 22 per cent. of males and 56 per cent. of females dying from accidental fall in 1925 being over 75 years of age (Table 22). Death in such cases often results from confinement to bed as a consequence of fracture of the neck of the femur by a very minor degree of violence. As the danger of confinement to bed in such cases arises from the liability to bronchitis or other respiratory disease involved, it is natural that deaths from fall should occur most during those months when mortality from respiratory disease is greatest. This hypothesis, in association with the recorded special liability of old women to this risk, provides an explanation for the greater seasonal variation for females, by whom the August respiratory minimum is very definitely displayed. (Does the July increase for males reflect holiday climbing risks ?)

Figure LXXXV gives a rough idea of the distribution of deaths caused by motor vehicles. The great bulk of the deaths represented are so caused, 72 per cent. or more in 1925—Table 22. And as it seems unlikely that railway injuries, which account for 11 per cent. of the whole in 1925, occur especially in the summer months—the bulk, being returned as " run over on line, " are more probably associated with the fogs of winter—the probability is that seasonal variation for motor deaths is greater than that shown in figure LXXXV. And as road surfaces in summer are in safer condition than in winter the effect of congestion due to pleasure traffic in summer (chiefly August and September) becomes all the more striking.

DIAGRAM 3. SEASONAL DISTRIBUTION OF MORTALITY IN RELATION TO TEMPERATURE, 1921-1925.

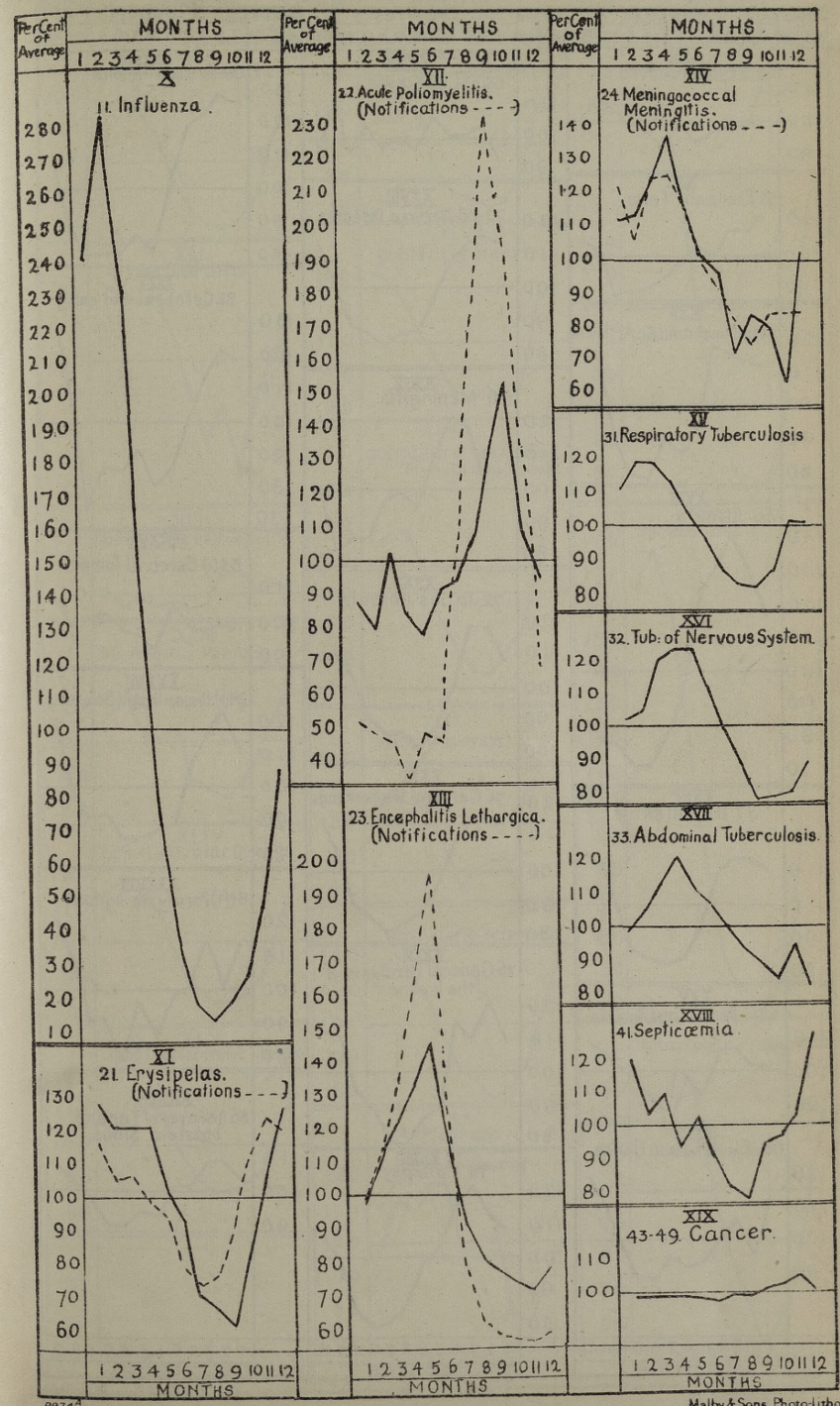
Diagram 4. Seasonal Distribution of Mortality from Various Causes, 1921-25.
Deaths per day in each Month per cent of Deaths per day throughout the Year.



P974 A 20104 A 1388. 2/29. 1975. 5.27.

Malby & Sons. Photo-Litho

Diagram 4 (cont.)



P974 A

Malby & Sons Photo-Litho

Diagram 4. (cont).

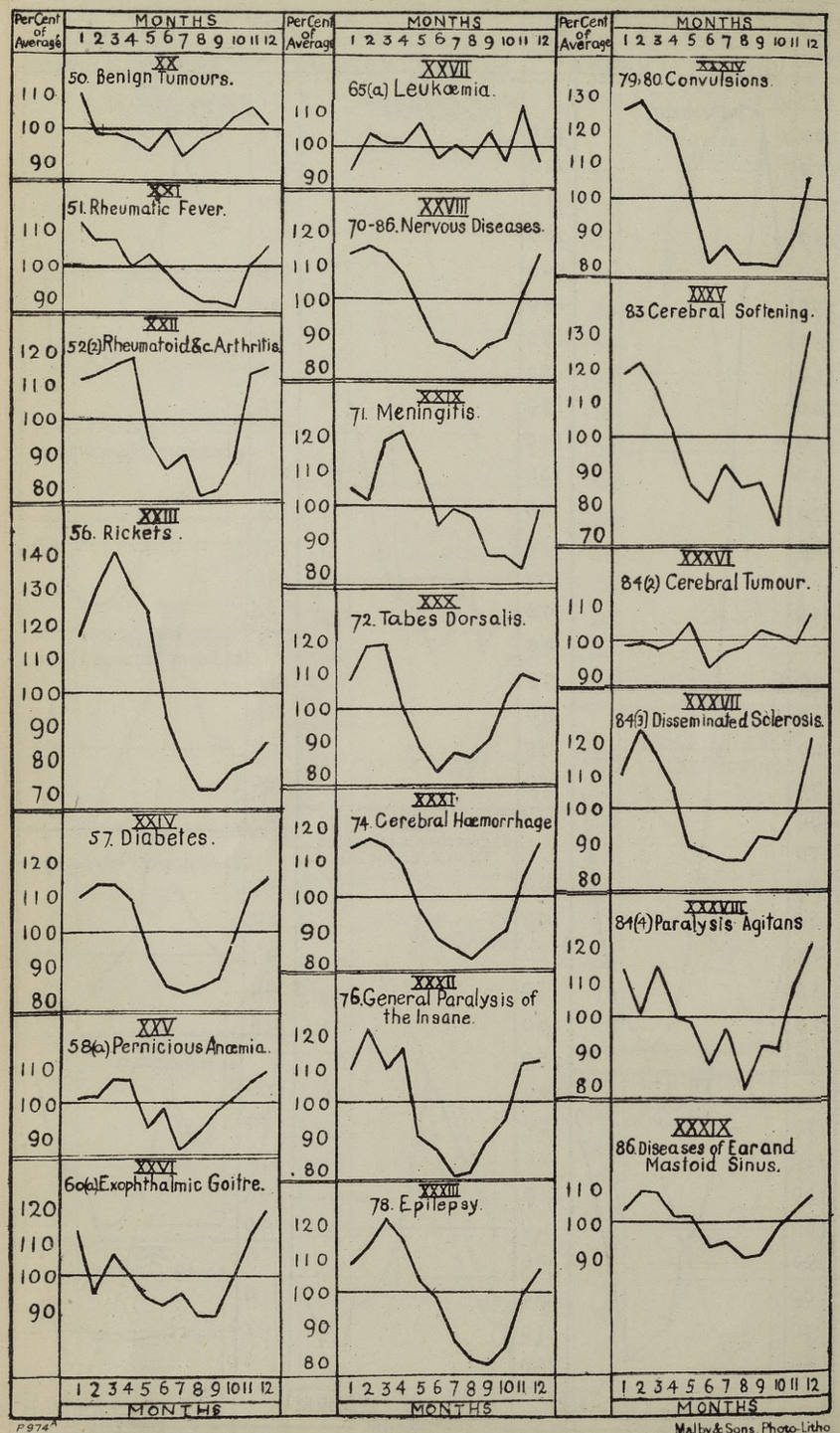


Diagram 4. (cont)

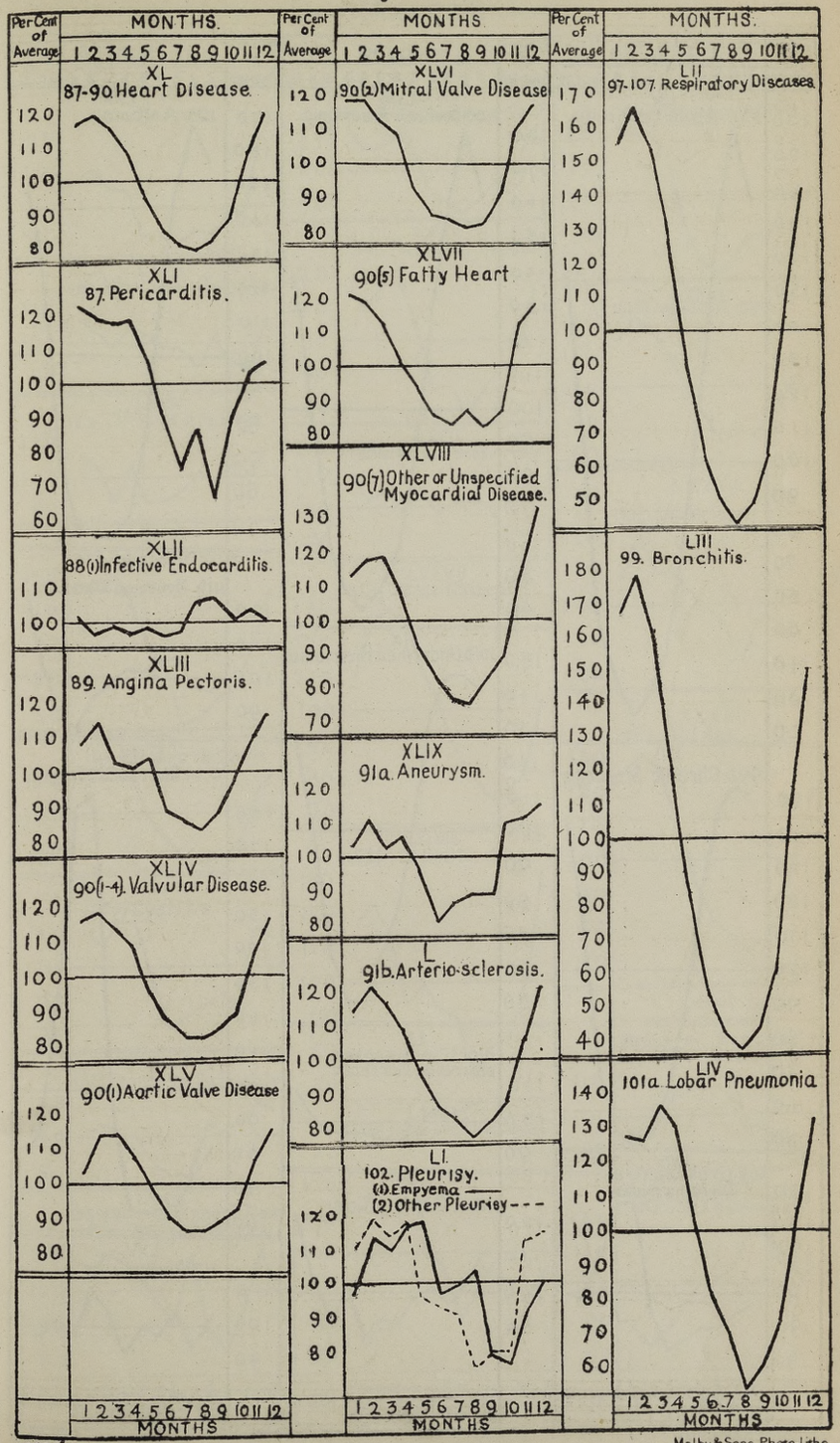


Diagram 4. (cont.)

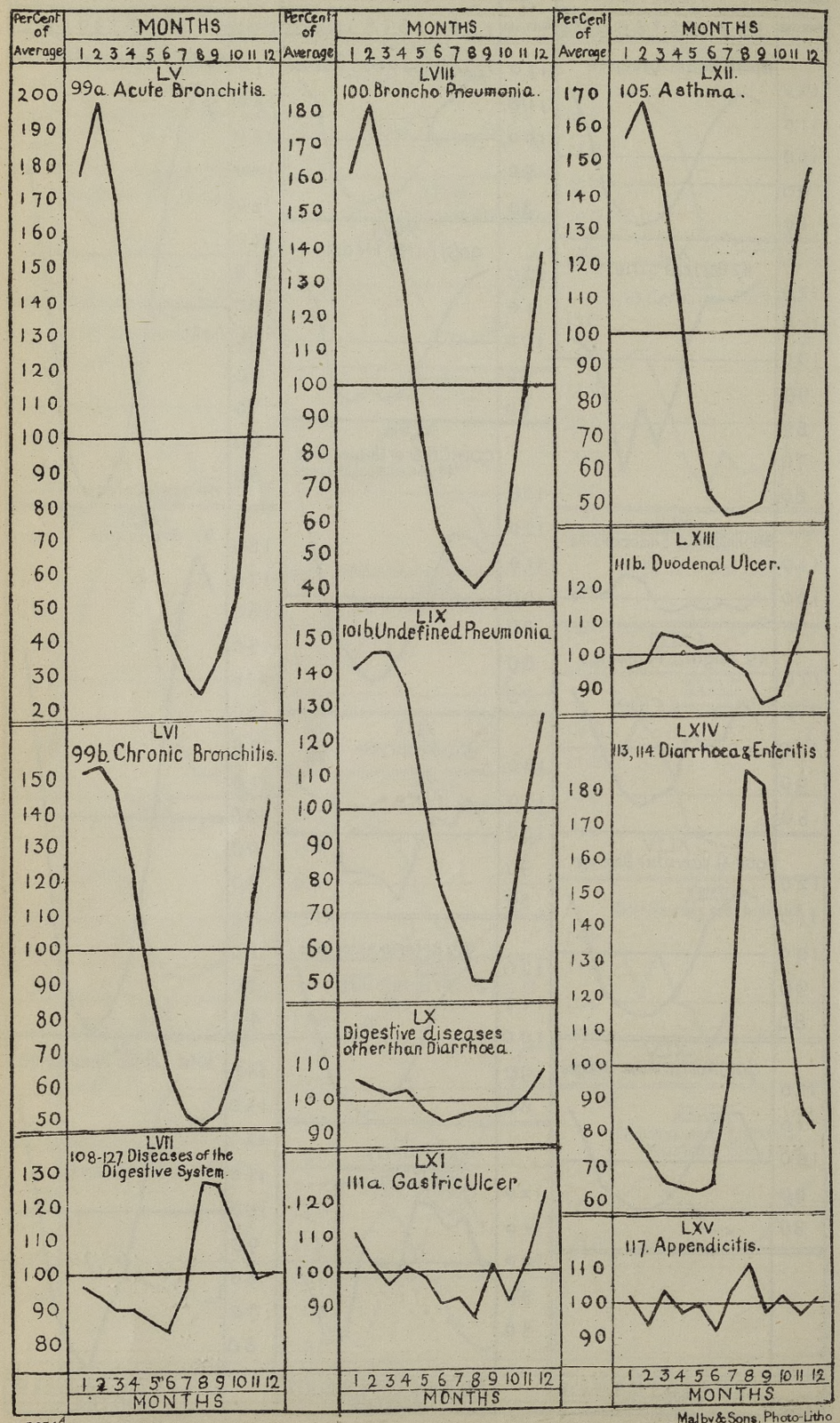


Diagram 4. (cont.).

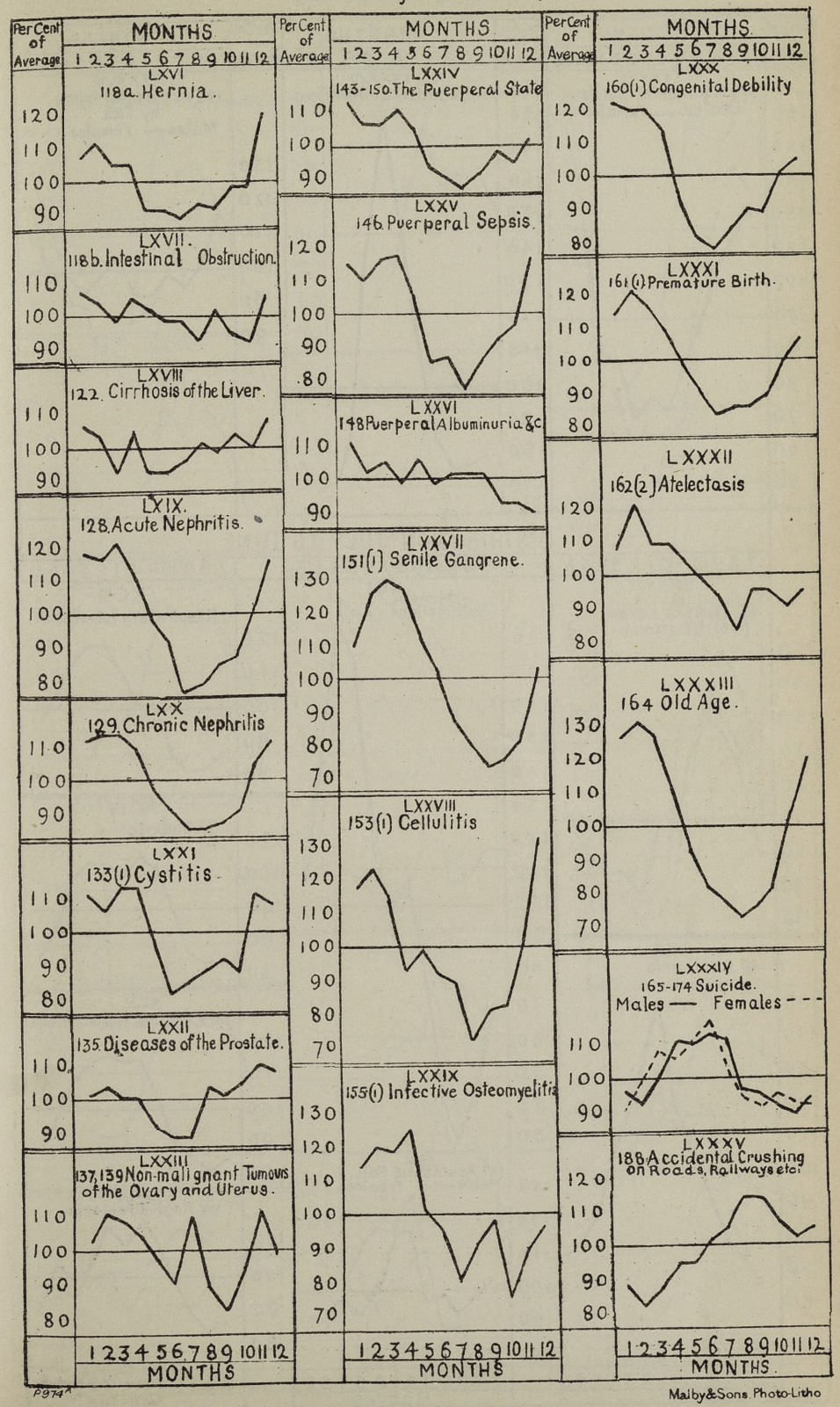
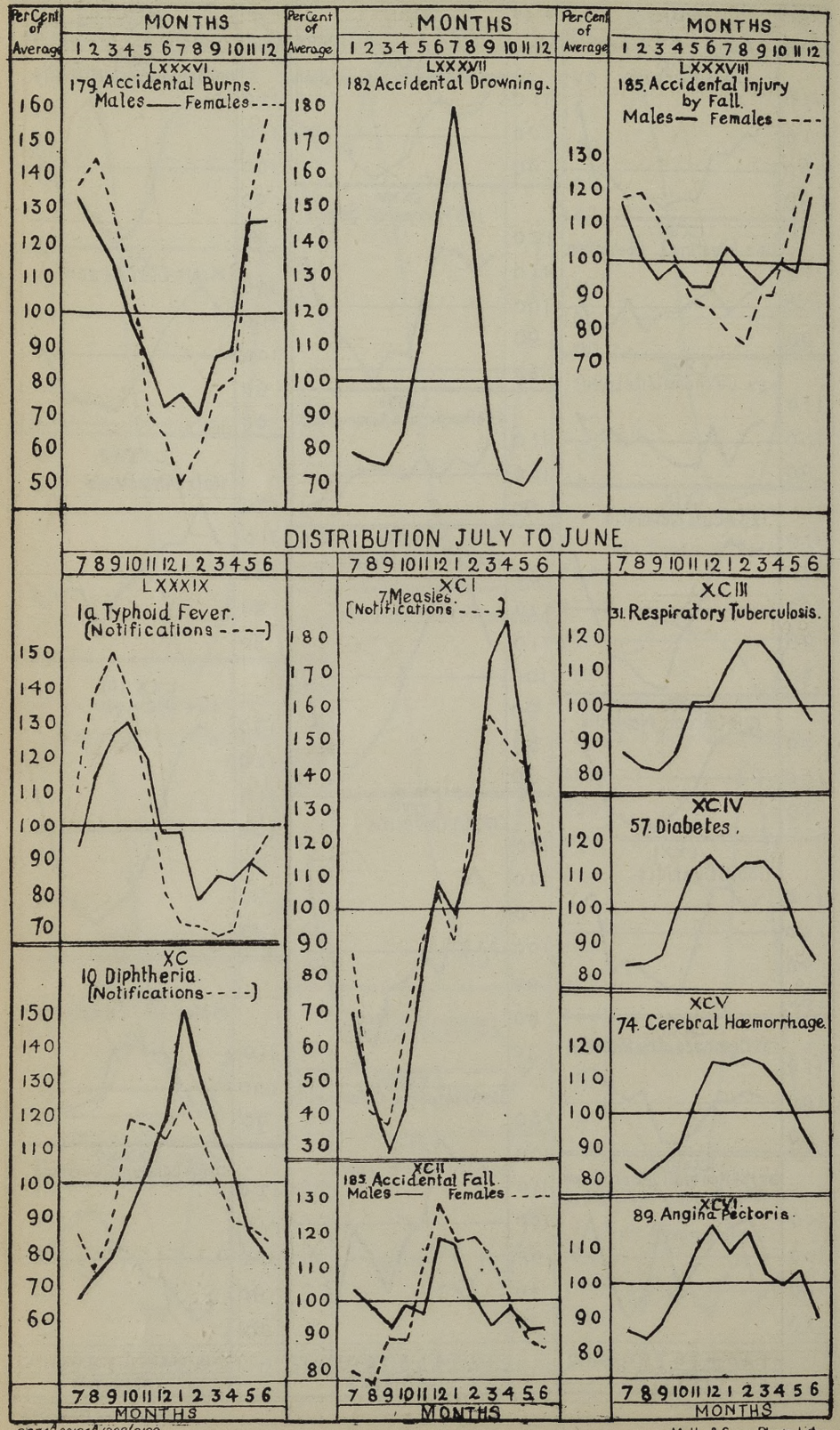


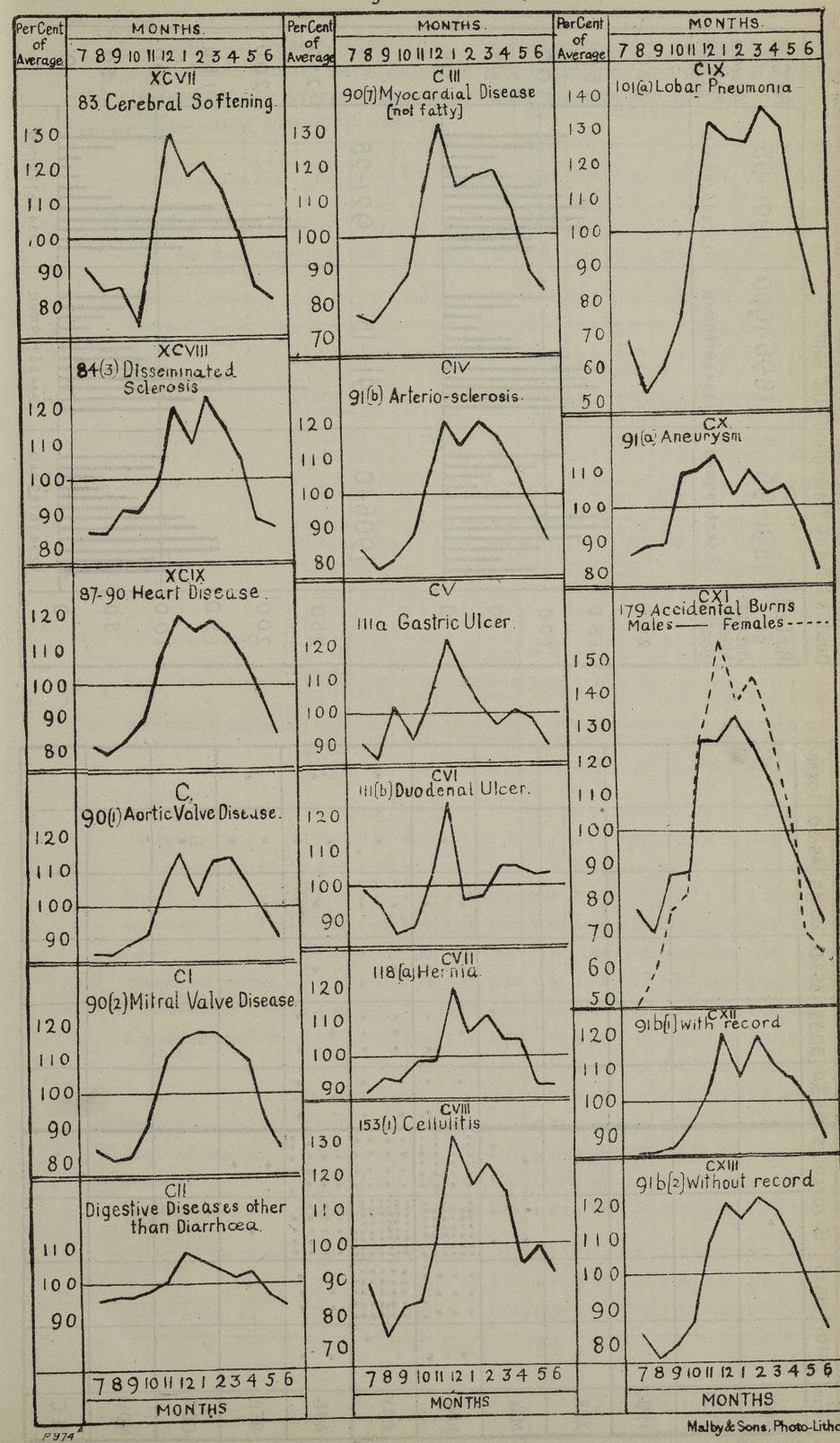
Diagram 4. (cont:).



P 974 20104 1388/2129.

Malby & Sons, Photo-Litho

Diagram 4. (cont:).



Malby & Sons, Photo-Litho

DIAGRAM 5. ENGLAND & WALES. DEATHS FROM DROWNING WHILST BATHING, MALES 1924 AND 1925.

AGE GROUP.	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50 & UP.
JAN.			•							
FEB.										
MAR.										
APR.	•	•		•						
MAY			• • • •	• • • •						
JUNE	• • • •	• • • • • • • •	• • • • • • • • • • • •	• • • • • • • • • • • •	• • • •	• • • •	• • • •	• • • •	•	
JULY	• • • •	• • • • • • • •	• • • • • • • • • • • •	• • • • • • • • • • • •	• • • •	• • • • • •	• • • •	• • • •	• •	• •
AUG.	• • • •	• • • • • •	• • • • • • • • • • • •	• • • • • • • • • • • •	• • • •	• • • •	• •	• • • •	• • • •	• •
SEP.			•	• •				• • • •	• • • •	• •
OCT.									•	
NOV.										
DEC.										

P.974A

Malby & Sons, Photo-Litho

Diagram 6. Change in Seasonal Distribution of Mortality from Measles, London 1891-95 — 1921-25. Deaths per day in each Month per cent of Deaths per day throughout the year.

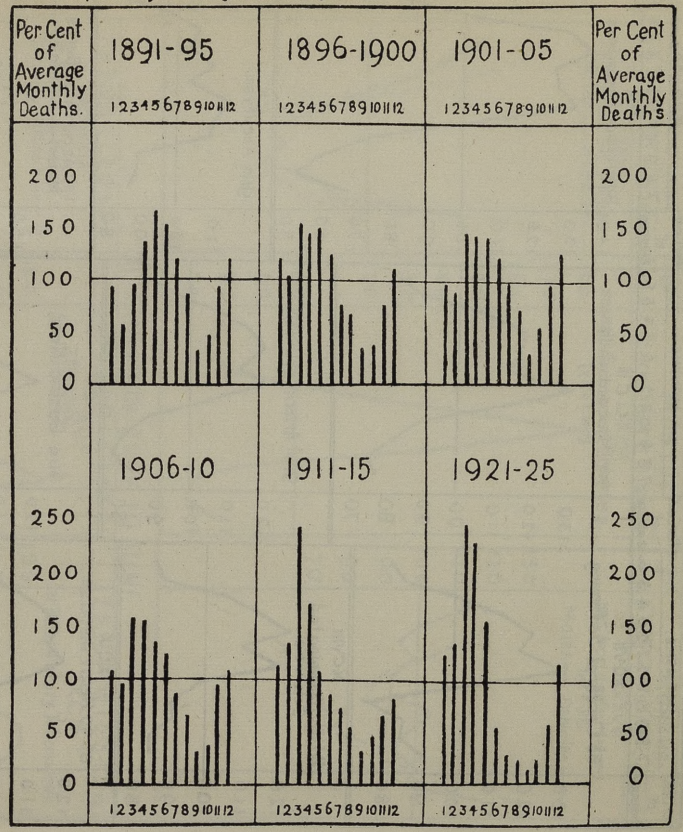


Table LX.—England and Wales, 1921–1925. Average number of Deaths per day from certain Causes during each Month of the year and, in the case of certain Notifiable Diseases, the average number of Notifications per day (*the figures as to Notifications being shown in italics*).

Fig. No. in Diagram 4.		Cause. (With International List No.).	1921–1925.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
I		All Causes	1281	1566	1633	1573	1432	1228	1077	1022	1001	1027	1085	1290	1457
II		Causes other than Diseases of the Respiratory System.	1064	1230	1274	1241	1157	1034	942	914	907	922	948	1064	1153
III	1–25	Epidemic Diseases ..	85·8	151	174	156	119	83·4	57·7	41·8	36·0	35·7	40·7	56·5	82·5
IV		Epidemic Diseases other than Influenza.	47·0	58·1	63·9	66·9	66·0	55·6	43·8	34·8	30·7	28·8	30·1	38·5	48·6
V and LXXXIX	1a	Typhoid fever	1·24 *8·15*	1·22 *5·80*	0·97 *5·74*	1·06 *5·40*	1·04 *5·64*	1·10 *7·19*	1·06 *7·88*	1·17 *8·97*	1·40 *11·3*	1·57 *12·3*	1·61 *11·3*	1·47 *9·06*	1·22 *6·48*
VII and XCI	7	Measles	12·8 *222*	12·7 *199*	15·1 *284*	22·0 *351*	23·7 *331*	19·0 *319*	13·7 *263*	8·90 *193*	6·23 *91·8*	3·75 *83·1*	5·43 *144*	9·98 *199*	13·8 *234*
VIII	8	Scarlet fever	3·04 *277*	4·32 *307*	3·79 *277*	3·57 *259*	3·33 *239*	3·08 *242*	2·67 *226*	2·10 *234*	1·95 *201*	2·08 *280*	2·78 *371*	3·12 *372*	3·75 *317*
VI	9	Whooping cough.. ..	13·8 *31·1*	18·3 *37·8*	23·5 *38·1*	21·3 *43·7*	20·0 *45·0*	16·3 *40·3*	12·3 *39·9*	10·3 *26·7*	8·97 *24·1*	8·68 *20·8*	6·04 *17·7*	8·15 *22·8*	12·1 *17·8*
IX and XC	10	Diphtheria	9·23 *136*	14·0 *169*	12·5 *157*	10·7 *137*	9·47 *121*	8·00 *117*	7·17 *113*	6·13 *116*	6·70 *100*	7·23 *125*	8·39 *162*	9·62 *159*	11·0 *154*
X	11	Influenza	38·7	93·2	110	89·2	53·1	27·8	13·9	7·04	5·30	6·95	10·6	18·0	33·9
XI	21	Erysipelas	1·96 *36·5*	2·49 *42·4*	2·40 *38·5*	2·40 *38·7*	2·42 *36·3*	1·97 *34·1*	1·77 *28·7*	1·41 *26·9*	1·30 *28·2*	1·22 *33·3*	1·64 *41·2*	2·09 *45·2*	2·47 *43·9*
XII	22	Acute poliomyelitis ..	0·40 *1·41*	0·35 *0·73*	0·32 *0·67*	0·41 *0·65*	0·34 *0·49*	0·31 *0·69*	0·37 *0·65*	0·38 *1·41*	0·43 *2·46*	0·53 *3·29*	0·61 *2·78*	0·43 *1·89*	0·38 *0·97*
XIII	23	Encephalitis lethargica ..	2·40 *5·81*	2·32 *5·70*	2·72 *6·60*	2·92 *7·79*	3·19 *9·50*	3·50 *11·4*	2·80 *7·22*	2·19 *4·55*	1·95 *3·64*	1·85 *3·36*	1·77 *3·30*	1·73 *3·24*	1·90 *3·44*
XIV	24	Meningococcal meningitis	0·94 *1·02*	1·05 *1·23*	1·06 *1·08*	1·16 *1·26*	1·29 *1·28*	1·08 *1·17*	0·96 *1·01*	0·90 *0·94*	0·68 *0·84*	0·79 *0·77*	0·75 *0·86*	0·59 *0·86*	0·96 *0·86*
—	29	Tetanus	0·43	0·29	0·37	0·39	0·42	0·48	0·35	0·46	0·52	0·49	0·45	0·42	0·50
		Tuberculosis :—													
XV and XCIII	31	Respiratory system ..	90·2	99·7	107	100	102	94·1	86·2	78·8	74·7	74·4	78·2	91·3	91·4
XVI	32	Nervous system ..	8·82	9·01	9·27	10·6	10·9	10·9	9·95	8·71	7·76	6·77	6·97	7·17	7·83
XVII	33	Intestines and peritoneum	5·22	5·12	5·50	5·87	6·33	5·76	5·60	5·25	4·86	4·71	4·41	4·98	4·34
—	38	Syphilis	3·91	4·40	4·43	4·45	4·40	3·90	3·25	3·83	3·28	3·55	3·75	3·83	3·91
XVIII	41	Septicæmia	1·52	1·82	1·56	1·65	1·42	1·56	1·39	1·25	1·18	1·45	1·48	1·57	1·94
XIX	43–49	Cancer	134	133	133	133	132	131	130	132	132	135	137	141	136
XX	50	Tumours not returned as malignant	1·92	2·12	1·90	1·91	1·86	1·81	1·92	1·78	1·86	1·91	2·00	2·06	1·95
XXI	51	Rheumatic fever ..	4·80	5·39	5·23	5·23	4·79	4·97	4·69	4·53	4·32	4·27	4·25	4·85	5·11
XXII	52 (2)	Rheumatoid and osteo-arthritis.	5·01	5·61	5·69	5·78	5·86	4·73	4·26	4·47	3·92	3·95	4·37	5·71	5·84
XXIII	56	Rickets	1·29	1·51	1·69	1·82	1·68	1·60	1·19	1·03	0·93	0·93	0·99	1·02	1·10
XXIV and XCIV	57	Diabetes	11·8	13·0	13·5	13·4	12·7	11·0	9·93	9·81	9·94	10·2	11·8	13·2	13·7
XXV	58 (a)	Pernicious anæmia ..	6·86	6·99	7·03	7·34	7·31	6·40	6·71	5·95	6·28	6·71	6·95	7·24	7·48
XXVI	60 (a)	Exophthalmic goitre ..	1·77	2·00	1·68	1·87	1·77	1·66	1·63	1·68	1·55	1·55	1·76	1·99	2·08
XXVII	65 (a)	Leukæmia	1·37	1·28	1·43	1·38	1·38	1·46	1·32	1·37	1·31	1·43	1·30	1·53	1·30
—	65 (b)	Lymphadenoma	1·05	1·27	1·14	1·07	1·05	0·90	1·09	1·08	0·76	0·90	1·21	1·06	1·08
XXVIII	70–86	Diseases of the nervous system.	131	149	152	150	143	128	115	114	110	114	117	134	148
XXIX	71	Meningitis	5·73	6·00	5·84	6·80	6·99	6·37	5·38	5·68	5·57	4·89	4·89	4·71	5·61
XXX	72	Tabes dorsalis	2·02	2·19	2·38	2·41	2·03	1·79	1·64	1·76	1·74	1·84	2·10	2·23	2·19

Table LX—*continued.*—England and Wales, 1921–1925. Average number of Deaths per day from certain Causes during each Month of the year.

Fig. No. in Diagram 4.		Cause. (With International List No.).	1921–1925.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
XXXI and XCV	74	Cerebral hæmorrhage apoplexy, &c.	72·9	83·0	84·5	83·1	78·9	70·3	64·3	62·1	59·9	62·7	65·8	76·9	84·0
XXXII	76	General paralysis of the insane.	4·40	4·84	5·37	4·82	5·09	3·95	3·77	3·46	3·54	3·91	4·17	4·93	4·98
XXXIII	78	Epilepsy	6·00	6·45	6·85	7·33	6·93	6·26	5·85	5·23	4·92	4·78	5·12	5·93	6·42
XXXIV	79–80	Convulsions	11·1	14·0	14·2	13·7	13·2	11·3	8·97	9·48	9·12	9·11	8·85	9·75	11·8
XXXV & XCVII	83	Cerebral softening ..	2·09	2·49	2·54	2·39	2·13	1·80	1·72	1·92	1·77	1·79	1·54	2·25	2·74
XXXVI	84 (2)	Cerebral tumour ..	2·85	2·83	2·85	2·77	2·83	2·99	2·61	2·77	2·81	2·93	2·92	2·83	3·08
XXXVII & XCVIII	84 (3)	Disseminated sclerosis ..	1·92	2·11	2·38	2·21	2·03	1·68	1·65	1·63	1·63	1·77	1·75	1·90	2·32
XXXVIII	84 (4)	Paralysis agitans ..	2·19	2·50	2·22	2·52	2·19	2·16	1·89	2·12	1·72	2·02	1·97	2·38	2·65
XXXIX	86	Diseases of the ear and mastoid sinus.	3·20	3·33	3·48	3·45	3·27	3·28	2·98	3·01	2·88	2·91	3·14	3·29	3·43
XL and XCIX	87–90	Heart disease	162	188	192	188	175	153	138	132	130	134	144	175	194
XLI	87	Pericarditis	0·95	1·17	1·13	1·12	1·13	1·02	0·86	0·71	0·83	0·63	0·85	0·99	1·01
XLII	88 (1)	Infective endocarditis ..	2·96	3·01	2·86	2·94	2·84	2·90	2·85	2·86	3·10	3·15	2·96	3·06	2·97
XLIII and XCVI	89	Angina pectoris	4·22	4·59	4·84	4·33	4·21	4·39	3·75	3·61	3·54	3·71	4·13	4·65	4·95
XLIV	90 (1–4)	Valvular disease	68·9	79·9	81·2	78·8	74·9	65·3	59·9	57·3	56·6	58·3	61·7	73·5	80·6
XLV and C	90 (1)	Aortic valve disease ..	8·02	8·26	9·07	9·14	8·59	7·94	7·21	6·88	6·93	7·16	7·37	8·50	9·23
XLVI and CI	90 (2)	Mitral valve disease ..	24·4	28·8	28·7	27·6	26·5	22·8	20·8	20·4	19·8	20·1	22·3	26·9	28·5
XLVII	90 (5)	Fatty heart	7·39	8·91	8·81	8·30	7·46	6·91	6·34	6·11	6·41	6·15	6·40	8·37	8·64
XLVIII and CIII	90 (7)	Other myocardial disease	39·5	45·1	46·1	46·8	42·7	36·3	32·6	30·5	29·8	32·3	35·0	44·8	52·5
XLIX and CX	91 (a)	Aneurysm	2·81	2·90	3·11	2·90	2·97	2·69	2·29	2·43	2·50	2·49	3·10	3·11	3·24
L and CIV	91 (b)	Arterio-sclerosis	41·9	47·6	50·8	48·6	45·6	40·6	35·9	35·0	32·6	34·4	37·0	44·6	50·5
CXII	91(b)1	Arterio-sclerosis with cerebral vascular lesion.	13·6	14·6	16·2	14·9	14·5	13·7	12·1	11·5	11·5	11·8	12·7	13·9	16·3
CXIII	91 (b)2	Arterio-sclerosis without record of cerebral vascular lesion.	28·3	32·9	34·6	33·7	31·2	26·9	23·7	23·5	21·1	22·7	24·3	30·7	34·2
LII	97–107	Diseases of the respiratory system.	216	335	359	332	274	194	135	108	93	105	136	225	304
LIII	99	Bronchitis	98·3	163	175	159	118	82·5	53·4	41·4	36·8	43·3	58·6	107	147
LV	99 (a)	Acute	25·9	45·8	51·2	43·7	32·1	19·6	11·1	8·18	6·50	9·32	13·7	28·9	41·5
LVI	99 (b)	Chronic	30·7	46·7	47·3	45·0	37·2	26·7	19·8	15·8	15·1	16·1	21·0	34·6	44·6
LVIII	100	Broncho-pneumonia ..	53·7	87·0	97·6	84·4	68·7	46·9	31·9	25·1	21·9	24·6	32·4	52·0	74·9
LIV and CIX	101 (a)	Lobar pneumonia ..	25·3	32·2	32·0	34·5	32·8	26·4	20·6	17·4	13·4	15·4	18·7	26·8	33·4
LIX	101 (b)	Pneumonia (not otherwise described).	22·4	31·8	32·7	32·6	30·4	23·5	17·4	14·1	11·3	11·4	14·7	21·2	28·7
LI	102 (1)	Empyema	1·27	1·23	1·45	1·40	1·49	1·50	1·25	1·26	1·32	0·99	0·97	1·15	1·27
LI	102 (2)	Other pleurisy	2·16	2·39	2·56	2·46	2·55	2·08	2·00	1·97	1·63	1·72	1·72	2·43	2·49
LXII	105	Asthma	5·38	8·45	9·06	7·83	6·25	4·01	2·85	2·45	2·53	2·71	3·76	6·87	8·00
LVII	108–127	Diseases of the digestive system.	77·2	75·1	72·3	69·6	69·3	66·3	64·8	74·2	98·0	97·1	86·1	76·2	77·0
LX and CII		Digestive diseases other than diarrhœa.	50·6	53·4	52·4	51·7	52·0	49·3	47·6	48·2	48·6	48·8	49·2	50·9	55·2
—	111	Ulcer of the stomach or duodenum.	7·95	8·46	8·03	7·92	8·09	7·94	7·51	7·44	7·03	7·69	7·21	8·21	9·83
LXI and CV	111 (a)	Ulcer of the stomach ..	5·59	6·21	5·74	5·44	5·63	5·53	5·10	5·12	4·81	5·68	5·14	5·80	6·90
LXIII and CVI	111 (b)	Ulcer of the duodenum ..	2·35	2·25	2·28	2·48	2·47	2·41	2·41	2·32	2·23	2·01	2·06	2·41	2·93
—	112 (1)	Gastritis	5·60	6·45	6·16	6·09	5·81	5·15	5·00	5·06	5·49	5·29	5·25	5·68	5·83

Table LX—*continued.*—England and Wales, 1921–1925. Average number of Deaths per day from certain Causes during each Month of the year.

Fig. No. in Diagram 4.		Cause. (With International List No.).	1921–1925.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
LXIV	113–114	Diarrhœa and enteritis	26·6	21·7	19·9	17·8	17·3	17·0	17·2	25·9	49·4	48·3	37·0	25·3	21·7
LXV	117	Appendicitis	7·61	7·74	7·19	7·86	7·39	7·55	7·03	7·84	8·43	7·35	7·79	7·33	7·72
LXVI and CVII	118 (a)	Hernia	4·76	5·08	5·32	4·99	5·01	4·35	4·35	4·23	4·42	4·36	4·65	4·65	5·71
LXVII	118 (b)	Intestinal obstruction ..	6·88	7·39	7·26	6·82	7·20	6·92	6·72	6·72	6·37	7·04	6·44	6·35	7·37
LXVIII	122	Cirrhosis of the liver ..	5·05	5·34	5·23	4·68	5·29	4·71	4·68	4·83	5·12	5·00	5·23	5·03	5·47
—	123	Biliary calculi	2·78	2·59	2·66	2·85	3·15	2·55	2·79	2·79	2·70	2·69	2·66	2·96	2·92
LXIX	128	Acute nephritis	3·85	4·54	4·50	4·66	4·25	3·72	3·53	2·94	3·05	3·26	3·36	3·92	4·48
LXX	129	Chronic nephritis ..	30·4	34·0	34·8	34·6	33·0	30·0	27·6	25·7	25·8	26·5	27·7	31·9	33·9
LXXI	133 (1)	Cystitis	2·57	2·85	2·74	2·94	2·92	2·51	2·11	2·21	2·30	2·37	2·26	2·86	2·77
LXXII	135	Diseases of the prostate	6·40	6·49	6·59	6·39	6·42	5·88	5·70	5·72	6·59	6·45	6·69	7·02	6·88
LXXIII	137 & 139	Non-malignant tumours of the ovaries and uterus.	1·78	1·83	1·98	1·94	1·86	1·72	1·61	1·95	1·58	1·46	1·69	1·99	1·76
LXXIV	143–150	The Puerperal state ..	8·18	9·25	8·72	8·67	9·05	8·61	7·71	7·39	7·11	7·45	8·11	7·79	8·38
—	144	Puerperal hæmorrhage ..	1·12	1·31	1·03	1·07	1·15	1·31	1·22	1·06	1·00	1·08	1·20	0·95	1·08
—	145	Other accidents of childbirth.	0·90	0·99	1·09	0·99	0·87	0·95	0·89	0·76	0·70	0·87	1·06	0·82	0·81
LXXV	146	Puerperal sepsis	2·94	3·37	3·22	3·41	3·45	3·10	2·49	2·54	2·25	2·52	2·72	2·85	3·41
—	147	Phlegmasia alba dolens, &c.	·758	·832	·936	·761	·960	·774	·747	·574	·626	·580	·755	·787	·781
LXXVI	148	Puerperal albuminuria ..	1·48	1·64	1·52	1·55	1·47	1·57	1·46	1·50	1·50	1·49	1·37	1·37	1·33
LXXVII	151 (1)	Senile gangrene	3·11	3·38	3·86	4·01	3·93	3·45	3·14	2·75	2·48	2·29	2·35	2·52	3·19
—	152	Carbuncle, boil	0·90	0·92	0·91	1·02	0·95	0·92	0·81	0·74	0·88	0·84	0·85	0·83	1·09
LXXVIII and CVIII	153 (1)	Cellulitis	1·32	1·55	1·62	1·52	1·24	1·31	1·22	1·18	0·96	1·08	1·10	1·33	1·74
LXXIX	155 (1)	Infective osteomyelitis ..	1·20	1·37	1·44	1·43	1·50	1·21	1·14	0·96	1·10	1·17	0·90	1·08	1·16
LXXX	160 (1)	Congenital debility ..	13·1	16·0	15·7	15·7	14·8	12·2	10·8	10·2	11·0	11·8	11·6	13·2	13·7
LXXXI	161 (1)	Premature birth ..	38·7	44·3	46·7	45·0	42·0	38·1	35·4	32·5	33·4	33·2	34·6	38·6	41·2
LXXXII	162 (2)	Atelectasis	3·27	3·52	3·96	3·55	3·58	3·40	3·23	3·05	2·75	3·14	3·11	2·95	3·11
LXXXIII	164	Old age .. P.	72·5	91·7	95·1	91·5	80·9	67·7	59·1	56·7	53·0	55·4	58·4	74·9	86·7
		,, .. M.	29·7	38·1	39·2	38·2	32·6	27·1	23·7	23·4	21·9	22·6	24·0	30·9	35·7
		,, .. F.	42·7	53·6	55·9	53·3	48·3	40·5	35·5	33·2	31·2	32·9	34·4	44·0	51·0
LXXXIV	165–174	Suicide (All forms) P.	10·6	10·0	10·0	10·9	11·7	11·7	12·1	11·6	10·2	10·1	9·91	9·57	9·89
		,, M.	7·66	7·34	7·01	7·66	8·50	8·43	8·62	8·53	7·45	7·31	7·08	6·82	7·15
		,, F.	2·98	2·68	2·96	3·23	3·17	3·31	3·49	3·06	2·79	2·75	2·83	2·75	2·74
—	169	,, By drowning ..	2·34	2·13	2·30	2·32	2·70	2·79	2·67	2·48	2·21	1·96	2·33	2·00	2·21
LXXXVI and CXI	179	Accidental burns (Conflagration excepted) P.	4·43	5·99	6·01	5·40	4·59	3·41	2·99	2·70	2·84	3·59	3·75	5·67	6·32
		,, M.	1·96	2·60	2·43	2·24	1·92	1·68	1·41	1·50	1·38	1·70	1·73	2·46	2·47
		,, F.	2·47	3·39	3·59	3·16	2·67	1·72	1·58	1·21	1·46	1·89	2·03	3·21	3·85
LXXXVII	182	Accidental drowning ..	4·55	3·61	3·54	3·36	3·81	4·97	6·80	8·19	6·41	3·97	3·21	3·15	3·46
LXXXVIII and XCII	185	,, fall .. P.	7·54	8·86	8·26	7·69	7·43	6·81	6·72	6·95	6·55	6·89	7·13	7·92	9·31
		,, ,, .. M.	4·03	4·72	4·09	3·78	3·96	3·70	3·71	4·15	3·89	3·74	3·99	3·85	4·78
		,, ,, .. F.	3·51	4·15	4·17	3·91	3·47	3·11	3·01	2·80	2·66	3·15	3·14	4·07	4·53
LXXXV	188	"Other crushing" (mainly Motors).	11·0	9·69	9·14	9·59	10·4	10·4	11·2	11·5	12·5	12·4	11·8	11·2	11·6

P. = Persons. M. = Males. F. = Females.

POPULATION.

The total population of England and Wales as at the 30th June, 1925, has been estimated at 38,890,000 persons, 18,602,000 being males and 20,288,000 females.

The method adopted in arriving at these figures consists of taking the 1921 census population as a starting point, adding the births and immigrants and deducting the deaths and emigrants between the date of the census and the 30th June, 1925. The correctness of the current estimate depends, therefore, on the accuracy of the post-censal records of movement. Of these, only the portion relating to the natural increase, that is the excess of births over deaths, can be accepted unreservedly; the system of registration in this country is regarded as providing a very complete record of births and deaths, and errors in the registered numbers must be of an insignificant order in relation to population figures. But the same cannot be said of the migration element of the movement. Information regarding permanent migrants (*i.e.*, persons changing their permanent residence) between this country and places outside Europe, and also statistics of passenger traffic to and from the United Kingdom are collected by the Board of Trade. The movement of aliens is separately dealt with by the Home Office, and from the various War Departments changes in the disposition of non-civilians are available. On the other hand, there is no record of the movement between England and Wales and the other countries of the United Kingdom, and allowance has to be made for this in computing an estimate on the data gathered from the records which are available.

Such error as there may be in the population estimate is practically wholly attributable to migration, and it is one which will tend to grow in degree as the date of the preceding census becomes more remote. If the success which attended the estimation of the national populations of the last intercensal period as judged by the 1921 census is repeated, the error will be of a negligible order.

Age Distribution.—The analysis of the sex population totals into their respective age components which is shown in Table LXI, has been derived from the corresponding 1924 distribution by the survivorship method used in recent years; this, briefly, consists of (1) obtaining the year's deaths arising from the population at each age in 1924, and treating the survivors as the population at the next higher age in 1925, (2) completing the table by the addition of the population aged 0–1, represented by the survivors at the middle of 1925 of the births occurring between the middle of 1924 and the middle of 1925, and (3) adjusting the results of these two operations in respect of migrants in accordance with such age statistics as are available in respect of them.

The average ages of the mid-1925 population according to the estimated age distribution are 30·5 and 32·0 for males and females respectively, as compared with averages of 29·9 and 31·2 at the last census, representing increases in the average age of 0·6 and 0·8 during the four years. Between 1911 and 1921 the average ages increased by 1·9 and 2·1 respectively.

Table LXI.—England and Wales.—Estimated Age Distribution of the Population—Mid-1925.

Age Group.	Persons.	Males.	Females.
All ages	38,890,000	18,602,000	20,288,000
0—	680,963	345,589	335,374
1—	676,525	342,062	334,463
2—	686,886	347,222	339,664
3—	735,679	372,294	363,385
4—	741,689	375,613	366,076
0—	3,521,742	1,782,780	1,738,962
5—	3,112,630	1,571,794	1,540,836
10—	3,540,590	1,774,799	1,765,791
15—	3,614,192	1,811,497	1,802,695
20—	3,370,764	1,643,260	1,727,504
25—	3,029,231	1,374,946	1,654,285
30—	2,900,988	1,315,775	1,585,213
35—	2,684,438	1,231,617	1,452,821
40—	2,692,311	1,248,414	1,443,897
45—	2,457,798	1,159,412	1,298,386
50—	2,264,954	1,086,977	1,177,977
55—	1,769,604	847,941	921,663
60—	1,462,682	688,229	774,453
65—	1,036,735	474,233	562,502
70—	740,093	323,450	416,643
75—	409,704	165,014	244,690
80—	201,617	75,359	126,258
85 & upwards	79,927	26,503	53,424

Local Populations.—As for the country as a whole, so for individual boroughs, urban districts and rural districts, the mid-year estimate of population is obtained by estimating the post-censal natural movement and migration and modifying the 1921 figure in respect of such estimate. It was pointed out in the 1921 Statistical Review that the populations as enumerated at the census were not always appropriate for use with vital statistics owing to the presence in seaside and holiday resorts of large numbers of temporary visitors; special steps were taken to measure the amount of temporary inflation in each area and to disperse it so as to correspond more nearly to a residence distribution. For a fuller account of the processes involved, reference may be made to the Statistical Review for 1921, in which will also be found the basic populations of each area on which the succeeding years' estimates have been founded.

In framing a basis for the estimation of the local changes in population two primary conditions have to be satisfied.

(*a*) The net aggregate of the local increases and decreases must correspond to the more reliably calculated change in the total national population.

(*b*) The method must be capable of impartial application to all areas alike.

So far as the natural movement by births and deaths is concerned, details are known precisely in respect of each area, and the use of the local registration returns automatically ensures compliance with both conditions. With regard to the balance of the movement summed up in the term migration, there is, however, a complete absence of direct record. With an exception perhaps in the case of certain aliens, changes of residence are not subject to official notification here, as they are in some foreign countries, and all knowledge of the movement is limited to such inference as can be drawn from other records, like housing, rating returns, registers of electors, etc., in which the effect of migration may be expected to be reflected. Of these the electoral register is the only one regularly available in respect of every urban and rural area of the country and, therefore, satisfying condition (*b*), and the increases or decreases in the numbers of local government electors have been adopted as the criteria in assessing the incidence of local migration.

But it has to be borne in mind that changes in the register are not all attributable to migration; the mere attainment of franchise age of the existing population, so far as this is not counterbalanced by the deaths of persons already on the register, affects the electorate and falls with varying weight in areas of different age constitution. The incidence of this natural growth factor can be and has been estimated approximately by means of the census age classifications of local populations, and some allowance for it has been incorporated in the estimation formula. Again, persons admitted to the franchise are restricted to certain classes above the ages of 21 and 30 in the case of males and females respectively, numbering only about 40 per cent. of the total population, and the assumption has to be made that movements within the franchise qualifications correspond to similar movements in the whole population. Finally, electoral registration can only take place after six* months' residence in an area, and such migration change as is reflected is that of a period at least six months prior to the period to which the records relate. Notwithstanding these defects it is reasonable on the whole to suppose that any marked migration in either direction will sooner or later make its impression on the electoral record, though on account of the indirectness of the evidence, the factor cannot be accorded the same weight in the estimation formula as that given to the direct records of births and deaths.

* See note on page 143.

The 1925 mid-year populations actually adopted were obtained by assuming that the net rate of population increase in each area was

$$A + x\,(B - C) - y$$

where A = the ascertained local rate of natural increase, mid 1921–mid 1925, B = the local rate of electoral increase, Autumn Register 1921–Autumn Register 1925, C = expected rate of natural growth of the electorate in the same period, and x and y are constants applicable to all areas, their determination being governed by the considerations (*a*) that the increases and decreases produced by the formula should aggregate to the increase estimated for the country as a whole, and (*b*) that the range of variations should, in the absence of any evidence to the contrary, be roughly similar in extent to the range of variations in previous periods. The factors A and B were ascertained for each urban and rural district, but C was calculated only for county boroughs individually, and for the urban and rural aggregates of each county, the value of C for an aggregate being adopted for each of the areas comprised in the aggregate. Full weight was thus given to the local natural increase while for migration the most suitable value of x appeared to be about $\frac{1}{2}$, y being the complementary adjustment required to ensure compliance with condition (*a*) just referred to.

An exception to the basis thus described was, however, made in the case of the Administrative County of London and its constituent Boroughs, in respect of which population estimates had been made earlier in the year for the purposes of the Equalization of Rates Act, 1894. For the whole County the estimate was not very different from that which would have resulted from the use of the above formula, but, in the distribution of the County population among the Metropolitan Boroughs, use was also made of certain housing returns provided by the Local Authorities under the said Act, and these estimates have been retained unaltered in the present Review.

Non-Civilian Population:—It will be observed in the tables in which the estimated local populations are given (Table 14 of Part I and Table E of Part II) that the local deaths and death-rates refer to civilians only and in conjunction with these a civilian population should preferably be used instead of a total population containing a number of non-civilians. In the majority of areas, however, the two populations may be regarded as sufficiently identical, and no special measures have been regarded as necessary in respect of them, but in a few areas in which the non-civilians were proportionally numerous estimates of civilian populations have been provided in addition to total populations and are shown in footnotes appended to the tables.

Institutions:—The populations of Hospitals, Infirmaries, Asylums, etc., remain credited to the areas of enumeration, notwithstanding that some persons so included may, on a strict residence classification, more properly be assigned elsewhere.

Table LXII.—Estimated Civilian Population by Sex and Age in the middle of the Year 1925.

(Figures given to the nearest hundred.)

		All Ages.	0—	5—	15—	25—	35—	45—	55—	65—	75 and upwards.
All areas :—											
England and Wales	M	18,431,0	1,782,8	3,346,6	3,362,7	2,641,9	2,455,0	2,241,3	1,536,2	797,7	266,9
	F	20,288,0	1,739,0	3,306,6	3,530,2	3,239,5	2,896,7	2,476,4	1,696,1	979,1	424,4
North ..	M	6,292,8	615,1	1,139,7	1,184,2	928,4	853,2	764,4	499,8	241,8	66,3
	F	6,773,1	603,0	1,131,0	1,209,2	1,098,0	978,4	819,4	540,4	289,5	104,2
Midlands..	M	5,892,6	566,3	1,080,7	1,084,0	826,7	776,9	705,4	491,3	265,4	96,0
	F	6,408,1	551,3	1,066,0	1,112,3	1,002,5	902,1	770,9	534,1	320,6	148,2
South ..	M	4,884,0	464,4	869,7	839,1	684,9	647,7	612,0	440,3	238,1	87,8
	F	5,744,8	451,4	855,9	963,6	925,0	833,9	733,6	520,8	312,9	147,7
Wales ..	M	1,372,5	137,2	256,5	261,3	204,9	178,8	159,8	104,8	52,4	16,8
	F	1,362,0	133,2	253,7	245,1	214,0	182,3	152,5	100,8	56,1	24,3
London ..	M	2,125,4	212,4	373,3	379,4	318,5	284,8	263,2	178,5	88,1	27,1
	F	2,476,6	206,8	373,1	444,8	419,8	356,8	305,1	204,6	115,3	50,3
County Boroughs	M	6,154,7	611,1	1,121,1	1,132,0	912,3	839,4	752,3	485,6	234,1	66,7
	F	6,819,6	599,0	1,119,1	1,231,1	1,110,7	983,9	821,2	541,3	296,3	117,0
North ..	M	3,306,9	328,0	599,0	617,9	494,5	454,4	407,8	257,1	118,2	29,9
	F	3,618,7	322,2	597,9	656,8	594,1	527,7	437,1	282,4	148,3	52,2
Midlands..	M	1,946,1	195,0	359,5	359,9	286,1	262,6	233,3	151,6	75,6	22,5
	F	2,155,1	191,0	359,5	395,4	349,4	305,3	253,8	167,6	94,0	39,0
South ..	M	616,4	59,7	111,3	99,6	85,4	84,1	78,5	55,7	30,5	11,6
	F	761,5	58,3	110,4	124,3	119,8	112,5	99,3	71,4	43,8	21,7
Wales ..	M	285,3	28,4	51,3	54,6	46,3	38,2	32,8	21,2	9,8	2,7
	F	284,3	27,4	51,3	54,6	47,4	38,4	31,0	19,9	10,2	4,1
Other Urban Districts	M	6,272,7	597,9	1,152,5	1,139,5	899,2	847,7	767,3	516,2	264,8	87,6
	F	6,971,7	581,5	1,139,5	1,216,1	1,111,8	1,005,0	856,4	581,4	335,0	145,0
North ..	M	2,112,6	202,2	380,4	394,9	312,4	289,1	258,0	169,8	83,1	22,6
	F	2,276,0	197,9	378,4	401,3	368,6	330,2	278,9	185,5	99,8	35,4
Midlands..	M	2,305,2	218,7	427,7	422,0	326,8	310,9	279,5	187,6	97,9	34,1
	F	2,570,6	212,4	421,9	455,0	408,0	369,4	312,2	210,2	124,3	57,2
South ..	M	1,182,0	107,5	214,7	194,5	159,4	159,3	151,5	109,9	61,1	24,2
	F	1,458,9	104,0	210,4	238,1	230,0	216,2	191,9	139,5	86,4	42,4
Wales ..	M	672,8	69,5	129,7	128,1	100,5	88,4	78,3	48,9	22,7	6,7
	F	666,3	67,3	128,8	121,7	105,2	89,2	73,4	46,2	24,5	10,0
Rural Districts	M	3,889,3	361,6	699,7	717,6	514,9	484,6	458,7	355,9	210,7	85,5
	F	4,020,0	351,6	674,9	638,2	597,2	551,0	493,7	368,8	232,5	112,1
North ..	M	873,3	84,9	160,3	171,3	121,5	109,6	98,5	72,9	40,5	13,8
	F	878,4	82,9	154,7	151,1	135,3	120,5	103,4	72,5	41,4	16,6
Midlands	M	1,641,4	152,6	293,5	302,1	213,8	203,4	192,7	152,1	91,9	39,4
	F	1,682,4	147,9	284,6	261,9	245,1	227,4	204,9	156,3	102,3	52,0
South ..	M	960,2	84,8	170,4	165,7	121,6	119,5	118,7	96,2	58,4	24,9
	F	1,047,8	82,3	162,0	156,4	155,4	148,4	137,3	105,3	67,4	33,3
Wales ..	M	414,3	39,3	75,5	78,5	58,1	52,1	48,8	34,7	19,9	7,4
	F	411,4	38,5	73,6	68,8	61,4	54,7	48,1	34,7	21,4	10,2

Local Age Distributions, 1925.—Sex and age distributions have been prepared for the large aggregates shown in Table LXII. The populations at ages under five were obtained by the survivorship method (*see* page 112), and for later ages the total populations estimated by the formula given in the preceding section were distributed in accordance with the census age and sex distribution of the unit, the resulting figures being thereafter modified to allow for the change between 1921 and 1925 of the age distribution of the total population of the country.

United Kingdom and Irish Free State.—The populations of each of the countries of the United Kingdom and of the Irish Free State as estimated by their respective Registrars-General, are shown for each year from 1886 in Table A on page 2 (Part II).

MARRIAGES.

The marriages registered in England and Wales during the year 1925 numbered 295,689, corresponding to a rate of 15·2 persons married per 1,000 of the population of all ages and conditions. The number so registered is 727, or 0·25 per cent. less than the number registered in 1924, and represents a decrease of 0·1 in the proportion married per 1,000 population. This comparatively small change, following as it does an equally small increase recorded last year, tends to show that the phenomenal wave associated with the years immediately preceding and following the termination of the war, during which the proportion married rose from the record minimum of 13·8 per 1,000 population in 1917 to the unprecedentedly high figure of 20·2 in 1920, has subsided and given place once more to the more stable conditions of normal peace years.

The preference for the third quarter of the year noticeable in the records since the beginning of the present century was maintained in 1925, the marriages in this period being rather more than 30 per cent. of the total. The rate for the first quarter, representing less than 16 per cent. of the year's marriages, similarly retained its customary place in being lower than that of either of the later quarters.

From the following table which compares the marriages in a series of past periods with the relative marriageable population of each sex it will be seen that the marriage-rates of men and women after falling steadily from 1871 to 1911 showed in 1921 an increase from 50·8 to 60·4 per 1,000 in the case of men, a jump of 19 per cent., as compared with one from 42·5 to 45·8 or a rise of about 8 per cent. in the case of women. These exceptionally high rates have not, of course, been maintained, and are down in 1925 to 53·3 and 40·9 per 1,000 unmarried men and women respectively. But if, as is suggested, the violent fluctuations of the past few years have ceased and given place to a more stable period, it appears to be one in which the frequency of marriage in relation to the opportunities for marriage will be

found to be higher than in the previous years of the present century. The latter statement is of course, based upon the experience of bachelors and widowers since they are in the minority and their numbers accordingly determine the marriageability of the present population.

Table LXIII.—England and Wales. Annual Number of Marriages of Men and Women per 1,000 Marriageable Population of each Sex aged 15 and over, 1871–1925.

NOTE.—The annual numbers of marriages have been taken as the average of the three years about each Census prior to 1921. During the 1921 period the marriage-rates were changing rapidly and it has been deemed preferable to show the rates for this period by individual years.

Year.	Bachelors, Widowers, Spinsters and Widows.	Bachelors and Widowers.	Spinsters and Widows.
1871	57·2	62·3	52·9
1881	51·5	56·0	47·6
1891	49·8	54·6	45·7
1901	48·7	53·5	44·7
1911	46·3	50·8	42·5
1920	61·7	71·5	54·7
1921	52·1	60·4	45·8
1922	48·2	55·8	42·5
1923	46·6	53·9	41·1
1924	46·6	53·6	41·2
1925	46·2	53·2	40·9

Marriage-rates by ages which should provide an even more exact statement of the incidence and intensity of marriage are shown in Table LXIV. In connexion with this table, however, it is necessary to state that the ascertainment of age rates, in years other than those in which the distribution of the population by sex, marital condition and age is definitely known by means of a census enumeration, involves a degree of estimation of population detail in which the margin of error may be not insignificant, owing to the absence of a complete record of the movements between the single, married and widowed sections of the population. Nevertheless, no study of the marriage tendencies in a population can proceed without reference to these factors, and the possibility of the crude rates being made the basis of erroneous inferences justifies the inclusion of the following series of age rates, though those relating to the current inter-censal period must be regarded as provisional approximations to be confirmed or amended in accordance with changes shown by the next census analysis.

Table LXIV.—England and Wales. Annual Marriage-rate per 1,000 Bachelors, Widowers, Spinsters, and Widows respectively at each of several Age Periods, 1871–1925.

NOTE.—The annual numbers of marriages have been taken as the average of the three years about each Census prior to 1921. During the 1921 period, the marriage-rates were changing rapidly and it has been deemed preferable to show the rates for this period by individual years.

Year.	Annual marriage-rate per 1,000 in each age group.						Marriage rate per 1,000 population over 15 in each class.	Ratio to corresponding rate for 1921.	Marriage rate which would have resulted had the 1921 age rates been in operation.	Ratio of actual marriage rate (Col. 8) to rate in previous column (10).
	15—	20—	25—	35—	45—	55 and over.				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
				BACHELORS.						
1871	6·0	122·4	119·3	43·3	15·3	3·2	61·7	987	62·3	990
1881	4·6	106·8	112·4	40·5	14·3	3·0	55·7	891	62·4	893
1891	3·1	94·7	122·4	43·4	15·2	3·5	54·8	877	63·8	859
1901	2·5	85·9	123·7	44·2	14·6	3·3	54·7	875	66·6	821
1911	2·2	74·8	120·6	44·4	14·9	3·9	52·6	842	69·2	760
1920	4·0	110·2	191·4	73·6	22·9	5·8	73·8	1,181	—	—
1921	3·4	94·4	161·1	61·6	19·7	5·5	62·5	1,000	62·5	1,000
1922	2·9	85·5	156·5	58·7	18·7	5·3	58·1	930	61·7	942
1923	2·6	82·7	155·8	57·1	17·2	4·7	56·3	901	61·1	921
1924	2·5	80·5	160·2	57·1	17·2	4·9	56·0	896	60·7	923
1925	2·4	78·5	163·2	57·6	17·0	5·4	55·7	891	60·6	919
				WIDOWERS.						
1871	11·5	229·0	288·5	181·5	88·3	15·9	65·8	1,475	56·0	1,175
1881	30·6	192·9	246·5	157·8	76·9	16·0	58·2	1,305	56·0	1,039
1891	14·1	153·4	231·7	151·1	74·7	15·5	53·4	1,197	53·7	994
1901	—	132·6	201·7	134·1	65·3	13·5	44·4	996	51·0	871
1911	—	121·6	171·2	117·9	59·4	12·7	36·9	827	47·4	778
1920	—	231·8	314·1	195·4	88·7	17·8	55·0	1,233	—	—
1921	14·3	163·7	229·3	155·2	73·5	15·8	44·6	1,000	44·6	1,000
1922	—	136·0	204·7	140·5	65·7	14·3	39·3	881	43·7	899
1923	27·8	139·5	199·9	135·1	63·3	14·1	37·3	834	42·7	874
1924	—	119·6	195·6	132·3	64·4	14·1	36·5	821	42·1	869
1925	—	125·4	181·8	129·3	63·6	14·8	35·8	803	41·5	863
				SPINSTERS.						
1871	26·8	133·7	85·9	30·4	11·9	1·7	63·1	1,164	55·8	1,131
1881	21·5	121·9	80·6	26·3	10·4	1·6	56·9	1,050	55·8	1,020
1891	16·2	112·4	85·7	26·4	10·3	1·7	54·4	1,004	57·1	953
1901	12·9	104·9	88·6	25·3	9·1	1·5	53·0	978	58·6	904
1911	11·2	97·7	91·1	24·4	8·5	1·8	50·6	934	58·0	872
1920	16·0	134·1	117·3	30·3	10·2	2·1	63·1	1,164	—	—
1921	14·8	114·4	100·0	25·6	8·9	2·0	54·2	1,000	54·2	1,000
1922	13·2	108·2	96·6	24·0	8·1	1·8	50·9	939	53·8	946
1923	12·5	108·2	93·6	23·1	7·8	2·0	49·8	919	53·5	931
1924	12·4	109·8	94·9	22·8	8·0	1·8	50·1	924	53·3	940
1925	12·7	110·4	94·1	22·9	7·9	2·1	50·0	923	53·1	942
				WIDOWS.						
1871	55·4	170·5	125·5	55·7	20·8	2·6	21·1	1,172	19·6	1,077
1881	56·6	155·3	114·5	50·2	18·6	2·6	18·2	1,011	18·5	984
1891	49·3	150·4	114·3	50·3	17·8	2·4	16·3	906	16·8	970
1901	54·9	140·7	115·9	48·9	15·6	2·1	14·4	800	15·6	923
1911	30·0	151·2	114·1	48·9	15·6	2·1	12·5	694	13·6	919
1920	62·9	322·6	159·7	59·1	20·7	2·9	24·3	1,350	—	—
1921	36·1	191·4	120·3	50·6	17·6	2·5	18·0	1,000	18·0	1,000
1922	38·8	145·1	98·9	43·3	15·7	2·3	14·5	808	17·0	853
1923	13·0	143·4	86·2	37·7	14·9	2·2	12·5	694	16·3	767
1924	14·3	143·1	79·7	36·9	15·0	2·3	11·9	661	15·9	748
1925	46·2	123·9	69·8	33·6	14·8	2·4	10·9	606	15·5	703

It will be observed from the last column of Table LXIV, which compares the actual marriages of each year with a standard number, viz., those expected according to the age rates of 1921 and which makes allowance, therefore, for the changing age constitution of the unmarried population, that of the four sections distinguished, in the case of bachelors, widowers and widows, the frequency of marriage has declined during the year, while that of spinsters shows a slight increase. The only significant change is, however, that recorded in respect of widows where the fall is not inconsiderable and continues a decline which has been noted over several preceding years. Compared with 1921, the bachelor, widower and spinster frequencies are down by about 8, 14 and 6 per cent. respectively, but in the case of the widow the drop is nearly 30 per cent., the present position in respect of the latter being very much lower than it has been during the past 50 years.

The maintenance of the marriage-rate of young spinsters at a point well in excess of those for the pre-war years 1901–1914, in spite of their diminished opportunities for marriage through the loss of eligible partners during the war, continues to be a feature of present conditions; between 20 and 25 the rate is higher than it was in 1911 or 1901, and between 25 and 35, though a slight decrease is shown in comparison with last year, the rate is considerably higher than in any of the pre-war years shown in the table.

With bachelors also the feature of the present year's analysis is the continued increase in the rate at ages between 25 and 35 at which practically one half of the marriages of this class take place; below age 25, on the other hand, the rates which have fallen continuously since 1920, show a further decline.

In respect of widowers and widows the decline is greatest at the younger ages (with minor exceptions where the numbers are too small to be accepted as a basis of comparison) and only at ages over 55 is a small increase shown. But, notwithstanding the rather greater decline in the rates of the widowed sections, re-marriages continue to be much more frequent than first marriages in equivalent sections of either the male or female population. At every age period where the data are sufficient to provide reliable comparisons, the 1925 rates for widowers and widows are, with one exception, higher than those for the single, but much more so in the case of males. The exception is to be seen in the female age group 25–35, where the widow rate is 69·8 per 1,000, as compared with the spinster rate of 94·1, thus repeating the experience of the last two years which were the first in which the rate of remarriage of either sex at any age group has been lower than the corresponding rate of first marriage. In this connexion attention may perhaps be called to the misleading nature of the comparison suggested by the aggregate marriages per 1,000 population shown in column 8 of Table LXIV; owing to the concentration of the single population at the younger ages where

marriages are numerous, and the widowed population at the later ages where they are few, the aggregate rate for the single of each sex appears to be vastly in excess of that of the widowed, whereas if allowance be made for the difference in their age constitutions, the position is reversed, and is now as strongly in favour of the widowed.

Table LXV.—England and Wales: Proportions of First Marriages and Remarriages in 1,000 Marriages, 1918–1925.

Year.	Men.		Women.		Bachelors who married.		Widowers who married.	
	Bachelors.	Widowers.	Spinsters.	Widows.	Spinsters.	Widows.	Spinsters.	Widows.
1918 ..	901	99	894	106	837	64	57	42
1919 ..	897	103	875	125	816	81	59	44
1920 ..	907	93	894	106	839	68	55	38
1921 ..	911	89	909	91	855	56	54	35
1922 ..	913	87	920	80	866	47	54	33
1923 ..	915	85	929	71	875	40	54	31
1924 ..	916	84	932	68	880	36	53	31
1925 ..	916	84	937	63	884	32	53	31

Tables LXVI and LXVII continue the series shown in previous issues of the Review classifying the marriages of the year by age, the former giving the mean ages of the persons married in each of the possible combinations and the latter extending the analysis into a number of age groups.

Table LXVI.—England and Wales: Mean Ages at Marriage, 1896–1925.

Males.

Year.	All Bridegrooms.	All Bachelor Bridegrooms.	All Widower Bridegrooms.	Bachelors with Spinsters.	Bachelors with Widows.	Widowers with Spinsters.	Widowers with Widows.
1896–1900 ..	28·38	26·63	44·73	26·35	34·12	41·74	49·72
1901–05 ..	28·52	26·90	45·08	26·62	34·09	42·28	49·88
1906–10 ..	28·76	27·19	45·71	26·93	34·70	42·95	50·64
1911–15 ..	29·01	27·49	46·62	27·18	35·73	43·80	51·37
1916–20 ..	29·77	27·92	46·84	27·42	34·78	44·42	50·25
1921–25 ..	29·18	27·47	47·37	27·08	35·73	44·67	51·87
1911 ..	29·03	27·46	46·42	27·19	35·19	43·49	51·46
1912 ..	29·12	27·56	46·77	27·27	35·75	43·96	51·67
1913 ..	29·11	27·56	46·65	27·25	35·68	43·91	51·35
1914 ..	28·94	27·40	46·66	27·05	35·90	43·79	51·39
1915 ..	28·87	27·49	46·61	27·12	36·15	43·86	50·98
1916 ..	29·70	27·93	47·32	27·47	36·20	44·79	51·07
1917 ..	30·04	28·04	47·71	27·52	35·63	45·22	51·23
1918 ..	30·08	28·14	47·74	27·59	35·43	45·38	50·88
1919 ..	29·81	27·99	45·72	27·46	33·36	43·40	48·85
1920 ..	29·20	27·51	45·73	27·04	33·28	43·31	49·24
1921 ..	29·19	27·48	46·60	27·03	34·35	44·06	50·57
1922 ..	29·21	27·54	46·91	27·12	35·24	44·31	51·20
1923 ..	29·15	27·46	47·34	27·09	35·64	44·60	51·98
1924 ..	29·16	27·45	47·72	27·08	36·31	44·95	52·39
1925 ..	29·17	27·42	48·29	27·07	37·13	45·43	53·19

Females.

Year.	All Brides.	All Spinster Brides.	All Widow Brides.	Spinsters with Bachelors.	Spinsters with Widowers.	Widows with Bachelors.	Widows with Widowers.
1896–1900 ..	26·21	25·14	40·70	24·62	32·64	35·96	44·99
1901–05 ..	26·36	25·37	40·37	24·88	32·99	35·76	45·09
1906–10 ..	26·59	25·63	41·06	25·14	33·63	36·51	45·82
1911–15 ..	26·77	25·75	41·65	25·27	34·23	37·40	46·57
1916–20 ..	27·14	25·81	38·66	25·24	34·30	34·73	44·74
1921–25 ..	26·69	25·57	40·83	25·00	34·79	36·43	46·48
1911 ..	26·80	25·81	41·74	25·32	34·13	37·01	46·63
1912 ..	26·84	25·85	41·89	25·36	34·25	37·44	46·69
1913 ..	26·80	25·78	41·57	25·29	34·23	37·22	46·59
1914 ..	26·68	25·61	41·64	25·12	34·28	37·53	46·57
1915 ..	26·75	25·71	41·42	25·28	34·28	37·78	46·39
1916 ..	27·17	25·91	40·73	25·36	34·58	36·79	45·85
1917 ..	27·27	25·89	39·66	25·28	34·54	35·40	45·48
1918 ..	27·29	25·92	38·84	25·33	34·59	34·82	44·86
1919 ..	27·16	25·81	36·69	25·24	33·77	33·07	43·36
1920 ..	26·79	25·54	37·36	24·99	34·02	33·56	44·14
1921 ..	26·73	25·52	38·83	24·95	34·40	34·83	45·26
1922 ..	26·71	25·57	39·93	25·02	34·53	35·81	45·87
1923 ..	26·66	25·57	40·94	25·01	34·74	36·35	46·66
1924 ..	26·67	25·59	41·69	25·02	34·95	37·19	46·89
1925 ..	26·66	25·59	42·74	25·00	35·34	37·95	47·70

Table LXVII.—England and Wales: Marriages of Bachelors, Spinsters, Widowers and Widows at Various Ages per 1,000 Marriages at All Ages, 1886–1925.

Period.	All Ages.	Under 18 Years.	18–	19–	20–	Under 21 Years.	21–	25–	30–	35–	40–	45–	50–	55 and up.	Age not stated.
						Bachelors.									
1886–90..	1,000	0	4	20	47	71	424	309	96	33	13	6	3	2	43
1891–95..	1,000	0	3	17	43	63	415	333	108	37	14	6	3	2	19
1896–1900	1,000	0	3	15	39	57	411	346	110	39	15	6	3	2	11
1901–05..	1,000	0	3	13	35	51	390	360	122	41	16	7	3	2	8
1906–10..	1,000	0	3	11	30	44	370	372	132	46	17	8	3	2	6
1911–15..	1,000	0	3	12	28	43	350	373	139	53	21	9	4	3	5
1916–20..	1,000	1	6	13	27	47	332	354	144	62	30	15	6	4	6
1921–25..	1,000	1	4	13	30	48	355	360	133	53	24	12	5	5	5
1921 ..	1,000	1	4	15	33	53	350	356	136	55	24	12	5	4	5
1922 ..	1,000	1	4	14	30	49	349	361	136	54	24	12	5	5	5
1923 ..	1,000	1	4	13	29	47	358	359	133	53	24	12	5	4	5
1924 ..	1,000	1	4	13	27	45	361	361	132	51	23	11	6	5	5
1925 ..	1,000	0	4	12	28	44	360	367	129	50	23	11	6	5	5
						Spinsters.									
1886–90..	1,000	9	37	72	97	215	417	219	62	23	10	5	2	1	46
1891–95..	1,000	7	31	66	94	198	425	241	70	25	11	5	2	1	22
1896–1900	1,000	6	27	59	89	181	434	253	74	26	11	5	2	1	13
1901–05..	1,000	5	23	53	82	163	428	272	79	28	12	5	2	1	10
1906–10..	1,000	5	21	48	75	149	420	284	87	30	12	6	2	2	8
1911–15..	1,000	6	23	47	70	146	402	292	94	34	14	7	3	2	6
1916–20..	1,000	6	23	48	72	149	402	275	94	39	17	9	4	3	8
1921–25..	1,000	7	25	51	72	155	411	280	87	32	14	8	4	3	6
1921 ..	1,000	7	27	54	76	164	406	274	86	33	15	8	4	3	7
1922 ..	1,000	7	26	51	73	157	404	282	88	33	15	8	3	3	7
1923 ..	1,000	7	25	49	72	153	412	279	87	33	14	8	4	3	7
1924 ..	1,000	7	25	49	70	151	414	281	87	32	14	8	4	3	6
1925 ..	1,000	8	25	49	70	152	413	281	86	32	14	8	4	4	6

Period.	All Ages.	Under 21 Years.	21–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70 and up.	Age not stated.
						Widowers.								
1886–90..	1,000	0	13	81	133	151	139	120	94	70	53	27	15	104
1891–95..	1,000	0	12	76	132	153	148	126	106	74	55	29	18	71
1896–1900	1,000	0	10	73	131	158	150	136	109	84	56	30	19	44
1901–05..	1,000	0	10	68	130	155	152	136	116	83	62	32	20	36
1906–10..	1,000	0	8	61	123	153	152	141	119	90	62	37	24	30
1911–15..	1,000	0	7	53	109	151	150	146	125	97	68	41	30	23
1916–20..	1,000	0	7	54	105	138	151	155	130	101	70	39	26	24
1921–25..	1,000	0	8	55	109	137	135	136	126	104	79	51	36	24
1921 ..	1,000	0	8	61	116	142	143	138	120	99	73	46	31	23
1922 ..	1,000	0	8	55	115	142	138	139	121	102	74	48	34	24
1923 ..	1,000	0	8	55	110	140	133	136	124	102	80	51	37	24
1924 ..	1,000	0	7	54	107	129	134	135	132	104	82	52	40	24
1925 ..	1,000	0	8	50	98	128	127	132	133	113	87	58	41	25
						Widows.								
1886–90..	1,000	1	30	119	164	173	145	117	73	46	26	10	3	93
1891–95..	1,000	1	27	115	170	177	157	119	78	47	29	10	4	66
1896–1900	1,000	1	26	113	175	188	157	127	81	50	28	11	3	40
1901–05..	1,000	1	28	122	182	190	158	118	78	47	29	11	4	32
1906–10..	1,000	1	23	106	177	192	160	129	82	52	30	14	6	28
1911–15..	1,000	1	21	98	167	193	171	135	85	51	32	16	11	19
1916–20..	1,000	3	67	189	191	162	126	98	64	41	24	13	6	16
1921–25..	1,000	1	25	134	200	182	138	109	77	52	33	19	11	19
1921 ..	1,000	1	37	179	222	178	122	93	62	42	25	15	8	16
1922 ..	1,000	1	25	148	212	185	135	102	72	49	29	16	8	18
1923 ..	1,000	1	23	125	200	182	140	113	79	53	34	19	12	19
1924 ..	1,000	1	20	104	188	185	150	123	83	56	37	20	14	19
1925 ..	1,000	1	17	89	170	180	152	126	98	65	44	24	13	21

Marriages of Minors.—Of the males married during the year, 12,011, or 4·06 per cent., were under the age of 21, and of the females 42,063, or 14·23 per cent., as compared with 4·04 per cent., and 14·03 per cent. last year respectively. Females, who have always greatly outnumbered the males in this class—in the present year the ratio is about 3½ to 1—naturally show the highest rates and the greatest changes in the rate; they formed 18·8 per 1,000 of the unmarried females aged 15–21 in 1911, were 26·6 in 1920, and are now 20·0, while the corresponding rates for males were 5·5, 8·8 and 5·6 per 1,000 respectively; both the rapid post-war rise and the subsequent heavy decline in the rate generally follows the experience of adults, but while the adult marriage-rate is slightly lower than it was in 1924, in the case of minors, the female rate shows a small improvement, while the male rate has remained stationary.

Comparative figures are shown in Table LXIX for the period back to 1901, before which the age group 15–21 was not identified in the population returns; an indication of the trend of youthful marriage-rates in earlier periods may be gained from the general age analyses in Table LXIV.

The number of males and females marrying under age and also at six other groups of ages, with distinction of the marital condition of the parties, is shown for each registration county in Table N, on page 73 of Part II. From these figures and those of

Table LXVIII.—England and Wales: Minors Married per 1,000 Marriages at all Ages, 1876–1925.

Year.	Husbands.	Wives.	Year.	Husbands.	Wives.
1876–80 ..	77·8	217·0	1914 ..	41·6	142·5
1881–85 ..	73·0	215·0	1915 ..	34·8	129·8
1886–90 ..	63·2	200·2	1916 ..	36·2	129·1
1891–95 ..	56·2	182·6	1917 ..	41·7	134·2
1896–1900..	51·2	168·0	1918 ..	42 6	129·0
1901–05 ..	46·3	153·1	1919 ..	43 7	129·4
1906–10 ..	40·3	139·4	1920 ..	46·8	142·9
1911–15 ..	39·2	136·6	1921 ..	48·2	149·2
1916–20 ..	42·6	133·3	1922 ..	44·4	144·4
1921–25 ..	43·3	143·9	1923 ..	42·5	142·9
1912 ..	39·2	135·4	1924 ..	40·4	140·3
1913 ..	42·1	143·8	1925 ..	40·6	142·3

Tables LXX and LXXIII it appears that local customs with regard to early marriage are little changed from those of pre-war years. The four geographical sections* into which the country has been divided for the purpose of this Review occupy approximately the same relative positions in 1925 as they did in 1921, which was itself similar in this respect to 1911; for males the rate is highest in the North and lowest in Wales; Welsh females, on the other hand, occupy the highest position

* The composition of the four sections is shown on page 6.

Table LXIX.—England and Wales : Annual Marriage-rate per 1,000 Unmarried and Widowed Persons in the age group 15–21 at each period 1901 to 1925.

Year.	Males.		Females.	
	Rate.	Ratio to 1921.	Rate.	Ratio to 1921.
1901	6·7	87	21·6	92
1911	5·5	71	18·8	80
1920	8·8	114	26·6	114
1921	7·7	100	23·4	100
1922	6·4	83	20·9	89
1923	5·9	77	20·0	85
1924	5·6	73	19·8	85
1925	5·6	73	20·0	85

in the table and are thus in direct contrast to the male experience, while in the South the sex experiences coincide, placing this section lowest in the case of females, and lowest but one—though not significantly different from the lowest—in the case of males.

Table LXX.—Marriage-rate of Minors per 1,000 Marriageable Population aged 15–21 in Geographical Sections of the Country, 1921 and 1925.

	Males.				Females.			
	Rate per 1,000 Marriageable Population 15–21.		Ratio of local rate to England and Wales rate.		Rate per 1,000 Marriageable Population 15–21.		Ratio of local rate to England and Wales rate.	
	1921.	1925.	1921.	1925.	1921.	1925.	1921.	1925.
England and Wales.	7·7	5·6	1,000	1,000	23·4	20·0	1,000	1,000
North	9·3	6·4	1,208	1,143	26·1	21·4	1,115	1,071
Midlands ..	7·5	5·4	974	964	22·1	19·0	944	948
South (including London)	6·1	5·0	792	903	20·8	18·6	889	929
Wales ..	6·7	4·7	870	835	26·7	23·5	1,141	1,173
London ..	7·8	6·0	1,013	1,066	22·2	17·8	949	889

In individual counties the highest proportions of persons marrying under age are found, generally speaking, in mining and industrial areas.

The 1925 ratio per 1,000 marriageable population between 15 and 21 is greatest in Durham, where it is 50 per cent. in excess of that for the whole country, followed by Nottingham, the East Riding of Yorkshire, Glamorgan, the somewhat exceptional agricultural county of Lincoln, and the West Riding of Yorkshire. On the other hand, in residential and agricultural counties, the figures are normally well below the mean, the lowest generally being those recorded for the southern counties of England and the northern counties in Wales.

Table LXXI.—Marriage-rate per 1,000 Marriageable Population aged 15 and over in Geographical Sections of the Country, 1921 and 1925.

	Males.				Females.			
	Rate per 1,000 Marriageable Population 15 and over.		Ratio of local rate to England and Wales rate.		Rate per 1,000 Marriageable Population 15 and over.		Ratio of local rate to England and Wales rate.	
	1921.	1925.	1921.	1925.	1921.	1925.	1921.	1925.
England and Wales.	60·4	53·3	1,000	1,000	45·8	40·9	1,000	1,000
North ..	61·6	52·7	1,020	989	48·7	42·1	1,063	1,029
Midlands ..	60·1	54·1	995	1,017	46·1	42·0	1,007	1,028
South (including London)	62·2	55·9	1,030	1,050	41·8	37·9	913	927
Wales ..	49·5	43·3	820	814	49·5	43·8	1,081	1,073
London ..	71·7	62·3	1,187	1,170	46·5	40·8	1,015	998

Fluctuations of the general Marriage-rate in different Sections of the Country.—Comparison of the general marriage-rates in the four geographical sections of the country referred to on page 125 is made in Table LXXI, and an analysis of recent rates in Registration Counties is shown in Table LXXIII. The determination of marriage-rates for localities is not wholly satisfactory for several reasons. In a large proportion of cases the district of registration is the district of residence of only one of the parties and in some cases of neither. This difficulty, however, is probably of less moment in comparisons between large sections of the country than between smaller adjacent localities. Again, it has only been possible till now to tabulate marriages by registration areas, while the available estimates of population for years other than census years refer to administrative areas. The populations upon which the rates for such years are based have, therefore, to be derived from the estimated populations of the corresponding aggregates of administrative counties and county boroughs on the assumption of a ratio between the population of the registration and administrative areas. Any error so introduced is, however, probably small and not likely to have any appreciable effect upon the rates quoted.

As with the marriages under full age the incidence of the general marriage-rate of 1925 in the several geographical sections is little different from that of previous years, though the variations from the mean for the country as a whole are not quite so great as they are for minors shown in the previous table. The contrast between the position of males and females of Wales continues to be a feature of this analysis, for, though their rates are not dissimilar in themselves, the female rate is much higher, and the male rate considerably lower than either of the corresponding sex rates in any of the English sections.

Table LXXII.—Marriages of each year in Geographical Sections of the Country : 1914–1925.

	North.	Midlands.	South.	Wales.	England and Wales.
1914 ..	100,926	87,695	85,728	20,052	294,401
1915 ..	115,694	109,844	113,868	21,479	360,885
1916 ..	90,287	84,895	87,322	17,342	279,846
1917 ..	83,151	78,761	80,356	16,587	258,855
1918 ..	92,381	87,798	89,928	17,056	287,163
1919 ..	125,863	111,180	107,971	24,397	369,411
1920 ..	136,443	114,942	102,930	25,667	379,982
1921 ..	110,864	97,218	91,831	20,939	320,852
1922 ..	101,335	91,657	86,610	19,922	299,524
1923 ..	99,640	89,483	83,152	20,133	292,408
1924 ..	100,400	92,035	84,252	19,729	296,416
1925 ..	99,301	92,172	84,882	19,334	295,689

Table LXXIII gives the marriage-rate per 1,000 marriageable population in each registration county in 1921 and 1925, and the ratio in each case of the local rate to that of the whole country ; the distribution generally corresponds to that shown by the similar comparison in respect of marriages under 21 referred to on a previous page, the rates being normally above the average in mining and industrial areas and below it in the rural counties.

Buildings in which Marriages may be Solemnized.—At the end of the year 1925 the numbers of churches or chapels of the Established Church and of the Church in Wales and of registered buildings in which marriages could be legally solemnized, were as follows :—

Established Church and Church in Wales	16,275
All other religious denominations ..	18,848
Total	35,123

The increase upon the numbers at the end of the previous year was :—Established Church and Church in Wales 26, other religious denominations 122. The number of these buildings belonging to the various denominations is shown for each registration county in Table Q.

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, 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, 1925, and the number of buildings registered for the solemnization of marriages are shown in Table LXXIV.

Table LXXIII.—Marriage-rate per 1,000 marriageable Population —all marriages and marriages of minors separately—in Registration Counties, 1921 and 1925.

Area.	All Marriages.				Minors.			
	Persons married per 1,000 marriageable population of the age of 15 and over.		Ratio to England and Wales rate.		Persons married per 1,000 marriageable population 15–21.		Ratio to England and Wales rate.	
	1921	1925	1921	1925	1921	1925	1921	1925
England and Wales ..	**52·1**	**46·2**	**1,000**	**1,000**	**15·6**	**12·7**	**1,000**	**1,000**
North	**54·4**	**46·8**	**1,044**	**1,013**	**17·7**	**13·8**	**1,135**	**1,087**
Cheshire	48·3	42·8	927	926	13·2	10·1	846	795
Lancashire	54·1	46·3	1,038	1,002	15·0	11·5	962	906
Yorkshire, West Riding	56·3	49·3	1,081	1,067	19·1	15·3	1,224	1,205
,, East Riding	56·1	49·4	1,077	1,069	19·7	15·9	1,263	1,252
,, North Riding	47·3	43·4	908	939	18·5	14·7	1,186	1,157
Durham	60·7	49·0	1,165	1,061	25·1	19·0	1,609	1,496
Northumberland ..	52·7	44·7	1,012	968	19·3	15·0	1,237	1,181
Cumberland	46·9	39·1	900	846	17·3	13·8	1,109	1,087
Westmorland	43·4	36·6	833	792	10·7	12·0	686	945
Midlands	**52·2**	**47·3**	**1,002**	**1,024**	**14·8**	**12·1**	**949**	**953**
Middlesex	50·2	45·6	964	987	11·8	10·4	756	819
Hertfordshire	44·7	40·1	858	868	12·2	9·7	782	764
Buckinghamshire ..	45·2	40·6	868	879	10·5	10·4	673	819
Oxfordshire	44·8	41·6	860	900	10·8	10·7	692	843
Northamptonshire ..	53·7	46·6	1,031	1,009	14·2	11·1	910	874
Huntingdonshire ..	54·9	46·1	1,054	998	18·0	12·4	1,154	976
Bedfordshire	50·7	42·6	973	922	14·2	10·7	910	843
Cambridgeshire ..	49·6	44·5	952	963	15·6	14·4	1,000	1,134
Essex	53·5	48·3	1,027	1,045	12·3	10·5	788	827
Suffolk	48·7	42·2	935	913	14·7	10·8	942	850
Norfolk	49·6	44·5	952	963	14·3	12·5	917	984
Gloucestershire ..	49·8	43·4	956	939	11·0	7·9	705	622
Herefordshire	42·7	35·9	820	777	8·5	10·2	545	803
Shropshire	45·7	41·0	877	887	10·7	10·1	686	795
Staffordshire	57·0	50·4	1,094	1,091	17·9	13·3	1,147	1,047
Worcestershire	49·2	45·5	944	985	13·6	10·2	872	803
Warwickshire	50·7	51·9	973	1,123	14·0	11·9	897	937
Leicestershire	58·9	49·9	1,131	1,080	17·5	13·3	1,122	1,047
Rutlandshire	39·4	37·0	756	801	6·2	9·8	397	772
Lincolnshire	54·3	46·4	1,042	1,004	19·4	15·5	1,244	1,220
Nottinghamshire ..	58·0	53·1	1,113	1,149	22·4	17·8	1,436	1,402
Derbyshire	56·9	51·8	1,092	1,121	18·2	15·0	1,167	1,181
South (including London)	**50·0**	**45·2**	**960**	**978**	**13·6**	**11·9**	**872**	**937**
London	56·4	49·3	1,083	1,067	15·5	12·2	994	961
Surrey	43·9	41·0	843	887	10·4	10·4	667	819
Kent	45·9	42·8	881	926	13·5	12·3	865	969
Sussex	39·4	38·3	756	829	11·5	12·1	737	953
Hampshire	48·5	45·5	931	985	13·7	13·9	878	1,094
Berkshire	46·1	42·5	885	920	11·8	9·7	756	764
Wiltshire	50·8	42·8	975	926	12·2	9·3	782	732
Dorsetshire	46·0	43·9	883	950	11·8	13·1	756	1,031
Devonshire	46·7	44·0	896	952	13·1	12·0	840	945
Cornwall	41·5	39·2	797	848	11·9	13·1	763	1,031
Somersetshire	46·0	39·5	883	855	11·0	8·3	705	654
Wales	**49·5**	**43·6**	**950**	**944**	**16·4**	**13·5**	**1,051**	**1,063**
Monmouthshire ..	53·8	46·7	1,033	1,011	18·5	14·6	1,186	1,150
Glamorganshire ..	56·6	48·2	1,086	1,043	19·8	15·8	1,269	1,244
Carmarthenshire ..	46·5	40·2	893	870	15·8	12·8	1,013	1,008
Pembrokeshire	43·3	38·5	831	833	12·2	9·7	782	764
Cardiganshire	29·6	27·3	568	591	5·7	5·9	365	465
Brecknockshire ..	46·0	39·9	883	864	11·8	10·4	756	819
Radnorshire	36·0	40·3	691	872	8·7	15·0	558	1,181
Montgomeryshire ..	38·9	33·7	747	729	8·7	8·3	558	654
Flintshire	40·8	44·6	783	965	8·5	11·4	545	898
Denbighshire	43·1	39·9	827	864	11·2	9·5	718	748
Merionethshire	34·4	30·5	660	660	6·9	5·3	442	417
Carnarvonshire ..	36·9	36·7	708	794	8·2	7·5	526	591
Anglesey	33·4	29·0	641	628	7·4	5·1	474	402

Table LXXIV.

Denomination.	Buildings certified to the Registrar-General as meeting-places for Religious Worship.	Buildings registered for the Solemnization of Marriages.*
Roman Catholics	1,647	1,561
Wesleyan Methodists	7,596	4,522
Congregationalists	3,380	3,104
Baptists	3,175	2,869
Primitive Methodists	4,270	2,092
United Methodist Church	1,956	1,298
Calvinistic Methodists	1,332	1,047
Presbyterians	443	445
Unitarians	183	198
New Church	56	59
Catholic Apostolic Church	62	48
Countess of Huntingdon's Connexion	45	40
Salvation Army	1,205	236
Society of Friends	408	†
Jews	250	†
Other Denominations	3,389	1,329
All Denominations	‡29,397	18,848

* 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 decrease in this figure as compared with that for last year is due to a special revision of the register as a result of which 989 certified buildings were found to be disused and have accordingly been deleted from the register.

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 1925, the number of such buildings which had been brought under the operation of the Act, and so remained, was 5,424 out of the total of 18,848. The numbers of these buildings, and the denominations to which they belonged, were as follows :—

2,247 Wesleyan Methodists.
785 Congregationalists.
853 Primitive Methodists.
557 Baptists.
473 United Methodist Church.
134 Calvinistic Methodists.
375 Other Denominations and Unsectarian.

5,424 All Denominations.

Divorces and Remarriages of Divorced Persons. — The annual numbers of marriages dissolved or annulled are shown in Table O of Part II and again in the table below in terms of the persons involved, for each of the past twelve years and the preceding quinquennia back to 1876–80.

During the year 1925, 2,563 divorces and 42 annulments were obtained, the number of persons involved being twice these figures, or a total of 2,605 of each sex. The total is 14·0 per cent. above the 1924 figure, but is less than three-quarters of the record figure of 3,522, involving 7,044 persons, established in 1921 as the result of a greatly stimulated increase in divorce proceedings which followed the termination of the war.

From Table LXXV it will be seen that the number of persons who on remarriage described themselves as divorced has also increased though at a much smaller rate than the divorces themselves. The tendency for these remarriages to lag behind the divorces which enabled them to take place has been remarked before, and is to be expected having regard to the time interval which must elapse between divorce and subsequent remarriage. The figures of recent years afford a particular illustration of this tendency, for though the divorces rose rapidly to a maximum in 1921 and dropped suddenly in 1922, the remarriages continued to increase to 1922, the first fall being shown a year later. And whereas prior to the war, the numbers of divorced males and females remarrying were about equal, there is now considerable male excess. But it must be borne in mind that these numbers may understate the facts, owing to misdescription of status in the registers.

Table LXXV.—England and Wales : Annual Number of Persons Divorced, and of Divorced Persons who Remarried, 1876–1925.

Period.	Number of Persons Divorced.	Annual Number of Divorced Persons who remarried.							
		Total.	Men.	Women.	Divorced men marrying spinsters.	Divorced men marrying widows.	Divorced men and women inter-marrying.	Divorced women marrying bachelors.	Divorced women marrying widowers.
1876–80 .. (Average)	554	104	56	48	42	12	4	31	15
1881–85 .. (Average)	671	128	68	60	53	12	6	42	15
1886–90 .. (Average)	707	169	80	89	65	11	8	65	20
1891–95 .. (Average)	744	214	110	104	89	15	12	75	23
1896–1900 .. (Average)	980	345	172	173	138	24	20	126	37
1901–05 .. (Average)	1,126	509	262	247	205	38	38	181	47
1906–10 .. (Average)	1,247	693	356	337	276	53	54	253	57
1911–15 .. (Average)	1,312	820	411	409	330	50	62	309	69
1916–20 .. (Average)	3,115	1,264	683	581	525	127	62	439	111
1921–25 .. (Average)	5,467	3,050	1,708	1,342	1,316	295	194	976	269
1914..	1,712	911	439	472	356	49	68	352	86
1915..	1,360	852	434	418	352	59	46	311	84
1916..	1,908	920	466	454	364	76	52	336	92
1917..	1,956	791	429	362	350	62	34	268	77
1918..	2,222	885	495	390	390	81	48	288	78
1919..	3,308	1,352	708	644	538	142	56	510	106
1920..	6,180	2,370	1,314	1,056	981	272	122	795	200
1921..	7,044	2,878	1,592	1,286	1,182	330	160	939	267
1922..	5,176	3,374	1,913	1,461	1,457	360	192	1,062	303
1923..	5,334	3,008	1,679	1,329	1,307	279	186	1,002	234
1924..	4,572	2,903	1,627	1,276	1,267	275	170	931	260
1925..	5,210	3,088	1,729	1,359	1,367	229	266	944	282

In Table P are given certain particulars concerning the marriages in respect of which suits for dissolution or annulment were commenced during the year.

It will be seen from this Table that of the 3,057 suits commenced in the current year the most frequent duration of marriage at the date of commencement of the proceedings is from 5–10 years with an average of 192 for each of those years of duration, but the maximum is not of particular significance, for this period only accounts for 31 per cent. of the cases, there being 17 per cent. of shorter duration, while in 52 per cent. the marriages have subsisted for 10 years or more. More than 40 per cent. of the marriages in question were childless, and in a further 33 per cent. there was one child only.

BIRTHS.

The births registered during 1925 numbered 710,582 corresponding to a birth-rate of 18·3 per 1,000 of the population living.

The number of births is 19,351 less than those of 1924, a diminution of 2·7 per cent., while the rate for the year is, as was that of last year in its turn, the lowest on record, with the exception of the worst of the war years, viz., 1917 and 1918, during which it was unusually depressed. The decline since 1920, in which a rate of 25·5 per 1,000 was recorded and which, it will be remembered, marked the climax of the temporary spurt in the birth-rate which immediately followed demobilization, has thus been uninterrupted and inasmuch as the fall during the past year is not inconsiderable and has been again succeeded by an equally significant decrease in 1926, it is more than ordinarily difficult to assign limits to the decline and to discern when and where the trough of the present depression is likely to be reached.

The birth-rate in this country attained its highest values during the period 1865–1880, when it exceeded 35 per 1,000 population, and from that time it diminished by gradual and practically continuous stages to 23·8 in 1914; it is now 18·3 per 1,000, little more than half the maximum figure of 36·3 recorded in 1876, and having regard to current economic and industrial conditions appears likely to remain unprecedentedly low in relation to all earlier periods for which we have reliable records.

The crude birth-rate, or ratio of births to population of all ages, is the appropriate form of statement when the object in view is to record the net result of the various factors governing reproduction—proportionate number of potential mothers, the number of those who are married, their age and fertility in relation to age, etc. It sums up the effects of all the influences governing the rate at which the community is reproducing itself and is, therefore, in conjunction with the corresponding form of mortality statement, the crude death-rate, the appropriate means of measuring natural increase. The number of births in the country, however, depends mainly upon the number of married women at

the reproductive ages, and as they form less than one-eighth of the total population the variation of their numbers and ages over a period of time may be different from that of the whole population, in which case the crude birth-rates would form a very imperfect measure of the changes in fertility, *i.e.*, of the rate of reproduction in proportion to the opportunity of reproduction. In the absence of any knowledge of the constitution of the general population the crude rate is often used as an index of fertility, but always on the implied assumption of a fixed proportion of potential mothers, an assumption which may only reasonably be made in respect of short periods of adjacent years.

In order to exclude the effect of varying population constitution and so obtain a truer statement of fertility change, the method of standardization, based upon the 1921 Census experience and used in 1922-24, has been continued to cover the experience of 1925. It consists in (1) adopting the fertility curve or fertility ratios shown in Table LXXVI as a standard, (2) applying them age by age to the appropriate women in the population in question—for the years subsequent to 1921 estimates of such women have been made for the purpose—and so obtaining a standard number of births, the numbers which would have occurred had the standard birth-rates been operating, and (3) calculating the ratio of the actual births recorded to the standard or expected number which can then be used as an index, comparing in an integral form the actual experience of each period or year with a common standard and, therefore, with one another.

The sources from which the standard fertility rates of Table LXXVI have been obtained were described in the Statistical Review for 1922, and the only feature which need be noted here is, that when the standard rates are applied to the 1921 Census population they produce the number of births registered in 1921 so that the experience of that year automatically forms the basis of the comparison with other years.

Table LXXVI.—England and Wales.—Legitimate and Illegitimate Natality by Age of Mother, 1921.

Age last birthday.	Legitimate Births per 1,000 Married Women.	Illegitimate Births per 1,000 Spinsters and Widows.
15–	447	7·65
20–	359	15·14
25–	268	8·71
30–	197	0·78
35–	131	—
40–45	32	—

Standardized comparisons are given in the last column of Table LXXVII both for census years prior to 1921 and for individual years of the present inter-censal period and the results are contrasted in that table with the more familiar and more

approximate comparisons given by the cruder birth-rates, whether calculated per 1,000 total population or per 1,000 married women between ages 15 and 45. Thus, in 1871, 1,504 legitimate births were recorded for every 1,000 that would have occurred under the standard fertility rates, the 1921 experience being in the aggregate only two-thirds of that of 50 years ago. From that time the rates diminished steadily and progressively as shown by the comparative figures, which are 1,481, 1,382, 1,250, and 1,102 at successive ten-year intervals between 1881 and 1911. Since 1921 the even more rapid drop, commented upon in dealing with the crude rates, is shown by the successive comparative figures of 909, 877, 835 and 805 in respect of the years 1922 to 1925. A noteworthy and somewhat unexpected feature brought

Table LXXVII.—England and Wales.—Birth-rates and Fertility, 1871–1925.

Legitimate Births.	Births per 1,000 Total Population.	Ratio to 1921.	Births per 1,000 Married Women, 15-45.	Ratio to 1921.	Ratio of Actual Births to those which would have occurred had the Standard* age rates been operating.
1871 (1870–72) ..	33·3	1,556	292·5	1,659	1,504
1881 (1880–82) ..	32·3	1,509	286·0	1,622	1,481
1891 (1890–92) ..	29·4	1,374	263·8	1,496	1,382
1901 (1900–02) ..	27·5	1,285	235·5	1,336	1,250
1911 (1910–12) ..	23·4	1,093	197·4	1,120	1,102
1921	**21·4**	**1,000**	**176·3**	**1,000**	**1,000**
1922	19·5	911	160·7	912	909
1923	18·9	883	155·3	881	877
1924	18·1	846	148·4	842	835
1925	17·5	818	143·5	814	805

Illegitimate Births.	Births per 1,000 Total Population.	Ratio to 1921.	Births per 1,000 Unmarried Women, 15-45.	Ratio to 1921.	Ratio of Actual Births to those which would have occurred had the Standard* age rates been operating.
1871 (1870–72) ..	1·96	1,922	17·0	2,152	2,051
1881 (1880–82) ..	1·65	1,618	14·1	1,785	1,688
1891 (1890–92) ..	1·31	1,284	10·5	1,329	1,247
1901 (1900–02) ..	1·12	1,098	8·5	1,076	1,008
1911 (1910–12) ..	1·03	1,010	7·9	1,000	968
1921	**1·02**	**1,000**	**7·9**	**1,000**	**1,000**
1922	0·89	873	7·0	886	937
1923	0·82	804	6·5	823	863
1924	0·78	765	6·2	785	826
1925	0·74	725	5·9	747	790

All Births.	Births per 1,000 Total Population.	Ratio to 1921.	—	—	Ratio of Actual Births to those which would have occurred had the Standard* age rates been operating.
1871 (1870–72) ..	35·3	1,576	—	—	1,527
1881 (1880–82) ..	34·0	1,518	—	—	1,490
1891 (1890–92) ..	30·7	1,371	—	—	1,376
1901 (1900–02) ..	28·6	1,277	—	—	1,238
1911 (1910–12) ..	24·4	1,089	—	—	1,095
1921	**22·4**	**1,000**	—	—	**1,000**
1922	20·4	911	—	—	910
1923	19·7	879	—	—	876
1924	18·8	839	—	—	834
1925	18·3	817	—	—	804

* For Standard age rates *see* Table LXXVI.

out in Table LXXVII is that both for the legitimate and illegitimate birth comparisons, the crude birth-rates based upon the total population have in the period prior to 1921 generally provided a better index to the changes in fertility than what has always been assumed to be a better method of comparison, that which relates the births to the married or single women of child-bearing ages alone. The effect of the changes in the proportion of these women in the total population has been partially neutralized by their increase in age and the elimination of one of the variables only, has worsened rather than improved the comparisons.

Illegitimate Births.—The births registered during 1925 include 28,896 of illegitimate children, a fall of 1,400 from the number in 1924, coincident with the decrease of 19,351 in total births. Illegitimate births have thus decreased by 4·6 per cent., while legitimate births have decreased by 2·7 per cent. As a result of these changes, the proportion of illegitimate to total births, which had risen from a minimum of 3·95 per cent. in 1901–1905 to 6·26 per cent. in 1918, in consequence of the great reduction in legitimate without any corresponding reduction in illegitimate births before 1918, and a definite increase in their number in that year (Table B), has now declined to 4·07 per cent.

In addition to the crude rate comparison an attempt has been made to allow for the age incidence of the potential mothers in respect of illegitimate as well as legitimate births. The standard age factors employed are, as described in the 1922 Review, of less authority than those in respect of legitimate fertility, and serve mainly to complete the tables on the lines followed and already described for married women.

Birth-rates of Different Parts of the Country.—The birth-rates, total and illegitimate, of individual administrative areas tabulated in Table E are summarized in Table LXXVIII.

The method employed in earlier paragraphs for comparing the fertility of England and Wales in different years by the use of a standard fertility curve applies equally well of course to the comparison of fertility in different sections of the population of which the sex, age and marital condition constitution is known, and the crude rate comparisons are supplemented in this table by the addition of a series of figures in which variations in birth-rates due solely to differences in the age and marital condition proportions of the several populations have been, as far as possible, eliminated.

The first three columns of Table LXXVIII show for each of the specified divisions of the country the crude birth-rate of 1921, the ratio of the crude rate to that of the country as a whole, and the corresponding ratio obtained by the use of the standard fertility rates of Table LXXVI, in conjunction with the census populations of that year. For later years local populations analysed by age and marital condition are not available, and an approximate correction to the crude rate comparison of 1925 shown in col. 5 has been made as follows :—The difference between cols. 2 and 3 has been regarded as a measure of the variation due

to the constitution of the population and in the form of a factor, viz., col. 3÷col. 2, has been applied to the crude 1925 birth ratio to obtain the corrected ratio shown in col. 6. The implied assumption that the constitutions of the local populations remain in constant relation to one another could not be maintained over a long period of time, but for the years of an inter-censal period

Table LXXVIII.—England and Wales and Sections* of the Country.—Birth-rates, 1921 and 1925.

	1921.			1925.		
	Birth-rate per 1,000 Total Population.	Ratio to Rate for England and Wales. (Crude Rates.)	Ratio of Actual Births to those which would have occurred had the Standard† age rates been operating.	Birth-rate per 1,000 Total Population.	Ratio to Rate for England and Wales. (Crude Rates.)	Ratio Corrected to Exclude Variations due to Differing Age and Marital Condition Incidence.‡
	(1)	(2)	(3)	(4)	(5)	(6)
All Births—						
England and Wales	**22·4**	**1,000**	**1,000**	**18·3**	**1,000**	**1,000**
London	22·1	987	957	17·9	978	948
County Boroughs	23·5	1,049	1,004	19·0	1,038	993
Other Urban Districts ..	22·1	987	978	17·8	973	964
Rural Districts	21·4	955	1,060	18·0	984	1,092
Northern Counties	23·7	1,058	1,025	19·2	1,049	1,016
County Boroughs	24·0	1,071	1,026	19·4	1,060	1,015
Other Urban Districts ..	23·1	1,031	996	18·5	1,011	977
Rural Districts	23·7	1,058	1,099	20·0	1,093	1,135
Midland Counties	22·2	991	999	18·2	995	1,003
County Boroughs	23·6	1,054	1,000	18·9	1,033	980
Other Urban Districts ..	21·6	964	964	17·6	962	962
Rural Districts	21·2	946	1,054	18·0	984	1,096
Southern Counties (including London).	20·4	911	941	16·8	918	948
County Boroughs	19·8	884	887	16·9	923	926
Other Urban Districts ..	18·9	844	898	15·6	852	907
Rural Districts	19·1	853	994	16·0	874	1,018
Wales	25·0	1,116	1,099	20·1	1,098	1,081
County Boroughs	24·9	1,112	1,035	20·4	1,115	1,038
Other Urban Districts ..	26·7	1,192	1,101	20·6	1,126	1,040
Rural Districts	22·6	1,009	1,143	19·0	1,038	1,176
Illegitimate Births—						
England and Wales	**1·02**	**1,000**	**1,000**	**0·74**	**1,000**	**1,000**
London	0·89	873	788	0·71	959	866
County Boroughs	1·09	1,069	1,034	0·77	1,041	1,007
Other Urban Districts ..	0·96	941	944	0·68	919	922
Rural Districts	1·07	1,049	1,197	0·81	1,095	1,249
Northern Counties	1·12	1,098	1,091	0·79	1,068	1,061
County Boroughs	1·15	1,127	1,091	0·83	1,122	1,086
Other Urban Districts ..	1·04	1,020	1,030	0·70	946	955
Rural Districts	1·17	1,147	1,257	0·90	1,216	1,333
Midland Counties	1·00	980	992	0·72	973	985
County Boroughs	1·04	1,020	975	0·70	946	904
Other Urban Districts ..	0·91	892	869	0·66	892	869
Rural Districts	1·07	1,049	1,234	0·81	1,095	1,288
Southern Counties (including London).	0·92	902	877	0·71	959	932
County Boroughs	1·04	1,020	1,030	0·78	1,054	1,064
Other Urban Districts ..	0·91	892	864	0·69	932	903
Rural Districts	0·92	902	1,029	0·69	932	1,063
Wales	1·03	1,010	1,108	0·74	1,000	1,097
County Boroughs	0·77	755	751	0·61	824	820
Other Urban Districts ..	1·02	1,000	1,134	0·68	919	1,042
Rural Districts	1·22	1,196	1,320	0·92	1,243	1,372

* For constitution of Geographical Sections of the Country *see* page 6.
† For Standard age rates *see* Table LXXVI.
‡ Col. (6) has been obtained by multiplying col. (5) by the correcting factor referred to in the text, viz., col. 3÷col. 2.

corrected ratios obtained in this way will probably provide a truer picture of the incidence of fertility than that shown by the unadjusted crude rates.

For 1925 the diminution in births has been common throughout all of the areas and sections shown in the table ; the fall has been greatest in Wales and in the North, where the rates themselves were relatively high, and least in the South (excluding London), where it was already at its lowest. Variations in the amount of the fall have, in consequence, narrowed the differences between the several geographical divisions, but they have not disturbed their order ; this has been maintained with great constancy year after year, as shown in the following table, which states the birth-rate of each section as a percentage of that of the whole country for each year from 1916 onwards.

Table LXXIX.—Birth-rate of Different Sections of the Country per cent. of that of England and Wales, 1916–25.

——	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.	1925.
North ..	102	104	106	105	103	106	104	104	106	105
Midlands..	100	98	98	97	100	99	100	99	99	99
South ..	96	94	90	93	96	91	94	94	92	92
Wales ..	111	115	122	112	105	112	107	110	112	110

But the chief interest in Table LXXVIII lies in the contrast it brings out between comparisons based on the crude rates and those shown by the more accurate method attempted in col. 6. Taking each of the four geographical units as a whole, it will be seen that while they retain the same relative position in respect of total births, by the completer comparison now introduced, the fluctuations are not nearly so great as would appear from the crude rates. Thus in the North and Wales where the crude rates show excesses of 4·9 and 9·8 per cent. over the mean the later method reduces them to 1·6 and 8·1 per cent. respectively, while in the Midlands the small deficiency of 0·5 per cent. is converted to an excess of 0·3 per cent. On the other hand, in the South, which is below normal, the deficiency is cut down by the new method from 8·2 to 5·2 per cent. If, however, the areas be examined from the point of view of urbanization, the change is a more remarkable one. By the crude rates the births in rural districts were below normal, whereas from the more accurate point of view of fertility they are now shown to be the most productive of all areas, not only for the country as a whole, but for each of the geographical sections. The county boroughs on the other hand, which are above average by the crude rates are transferred to a subnormal position, and London is similarly over favoured by a comparison limited to the crude rates alone. In Wales the fertility of 1925 apparently decreases progressively with urbanization, but in the other areas while the rural districts have the highest rates, the positions of the large and small towns are reversed, the latter showing the rather more unfavourable positions.

The extent of illegitimacy in different classes of area and parts of the country may be gathered from the lower half of Table LXXVIII. The distribution is much the same as that of all births, though the fluctuations are considerably wider throughout; the highest rates occur in the rural districts, except in the South, when it is slightly exceeded in the county boroughs, but whereas for all births the rural aggregate rate is 9·2 per cent. above the mean, for illegitimate only it is 24·9 per cent. above; London, on the other hand, is 13·4 per cent. below the mean in regard to illegitimacy as compared with 5·2 per cent. for all births. The table confirms generally the view expressed in earlier reports, when only crude rate comparisons were available, that such rates understated the position in rural districts and overstated it in the South.

Sex Proportions at Birth.—Births of males in England and Wales in 1925 numbered 363,167, and those of females 347,415; the proportion of male to female births was 1,045, 1,049, and 1,045 to 1,000 for legitimate, illegitimate, and total births respectively. The corresponding proportions for total births in each year from 1884 onwards and in groups of years since the commencement of registration are shown in Table C (Part II); the extreme range during the preceding 50 years was from 1,032 per 1,000 in 1898 to 1,060 in 1919. During this period the highest ratio recorded prior to the war was 1,043 in 1875. From 1919 the male excess fell continuously to 1923, rose slightly in 1924 and has again declined in 1925; all the figures of recent years are well in excess of the pre-war level.

The extent to which different classes of area or portions of the country contribute to the preponderance of male births is shown in Table LXXX.

Table LXXX.—Male Births per 1,000 Female Births, 1925.

———	England and Wales.	North.	Midlands.	South.	Wales.
All Areas	1,045	1,042	1,043	1,054	1,047
London	1,054	—	—	1,054	—
County Boroughs ..	1,038	1,039	1,034	1,046	1,034
Other Urban Districts	1,045	1,043	1,042	1,055	1,041
Rural Districts ..	1,055	1,048	1,055	1,056	1,066

Amongst the towns, both large and small, the 1925 masculinity proportions are highest in the South and lowest in Wales and in the Midlands, whereas in rural areas the Welsh proportion is considerably in excess of those of the English sections. It will be observed that all the divisions follow the more frequent rule in experiencing an increasing degree of masculinity with decreasing urbanization, the only exception in the above table being the case of London, most urban of all areas, where the ratio is in excess of those for county boroughs and also of those of most of

the smaller towns; there is however much variability in the relative experience in this matter and the figures of a single year afford no reliable guide to the ascertainment of any characteristic differences.

NATURAL INCREASE.

In 1925 the excess of births over deaths registered in England and Wales was 237,741, as compared with 256,698 in 1924, 313,346 in 1923, and 293,344 in 1922.

It will be observed from Table LXXXI that but for a slight waviness, the death-rates of the past few years have remained at an approximately constant level while the birth-rate has been continuously declining, and it is to the influence of the latter that current changes in the natural increment are primarily due.

Table LXXXI.—England and Wales. Natural Increase of Population per 1,000 living, 1876-1925.

———	Mean Annual Birth-rate per 1,000 living.	Mean Annual Death-rate per 1,000 living.	Mean Annual Rate of Increase by excess of Births over Deaths per 1,000 living.
1876—1880.. ..	35·3	20·8	14·5
1881—1885.. ..	33·5	19·4	14·1
1886—1890.. ..	31·4	18·9	12·5
1891—1895.. ..	30·5	18·7	11·8
1896—1900.. ..	29·3	17·7	11·6
1901—1905.. ..	28·2	16·0	12·2
1906—1910.. ..	26·3	14·7	11·6
1911—1915.. ..	23·6	14·3*	9·3
1916—1920.. ..	20·1	14·4*	5·7
1921—1925.. ..	19·9	12·2	7·7
1906..	27·2	15·5	11·7
1907..	26·5	15·1	11·4
1908..	26·7	14·8	11·9
1909..	25·8	14·6	11·2
1910..	25·1	13·5	11·6
1911..	24·4	14·6	9·8
1912..	24·0	13·4	10·6
1913..	24·1	13·8	10·3
1914..	23·8	14·0	9·8
1915..	21·8	15·7*	6·1
1916..	21·0	14·3*	6·7
1917..	17·8	14·2*	3·6
1918..	17·7	17·3*	0·4
1919..	18·5	14·0*	4·5
1920..	25·5	12·4*	13·1
1921..	22·4	12·1	10·3
1922..	20·4	12·8	7·6
1923..	19·7	11·6	8·1
1924..	18·8	12·2	6·6
1925..	18·3	12·2	6·1

*For the years 1915 to 1920 inclusive the figures upon which these rates are based relate to civilians only.

Table LXXXII shows for 1925 the rate of natural increase in various sections of the country, representing the combined effect of the several sectional birth and death-rates already discussed.

Table LXXXII.—Natural Increase per 1,000 living, 1925.

——	England and Wales.	North.	Midlands.	South.	Wales.
All Areas	6·1	6·1	6·6	5·0	7·9
London	6·0	—	—	6·0	—
County Boroughs ..	6·0	5·8	6·7	4·5	8·1
Other Urban Districts	6·0	5·8	6·6	4·0	8·8
Rural Districts ..	6·2	8·2	6·4	4·5	6·2

UNITED KINGDOM AND IRISH FREE STATE.

Population.—The first complete census of the United Kingdom was taken in 1821, when the population numbered 20,893,584 persons; during the 100 years 1821–1921 this number has increased by about 126 per cent., the sum of the final census figures for Great Britain and of the estimated population of Ireland in June, 1921, amounting to 47,263,196. The populations of the several portions of the United Kingdom for each census year from 1821 and for individual years from 1886 are set out in Table A of Part II.

Table LXXXIII.—United Kingdom and Irish Free State. Vital Statistics 1915–1924 and 1925.

——	United Kingdom and Irish Free State.	England and Wales.	Scotland.	Northern Ireland.	Irish Free State.
Estimated Population in the middle of the year 1925 *(in thousands).*					
Males	23,075	18,602	2,353	608	1,512
Females	24,950	20,288	2,540	649	1,473
Persons	48,025	38,890	4,893	1,257	2,985
Marriages.					
1925	349,664	295,689	32,473	7,682	13,820
Persons married per 1,000 living :—					
1915–1924 ..	16·0	16·7	15·1	13·0	10·2
1925	14·6	15·2	13·3	12·2	9·3

Table LXXXIII—*cont.*

Births.					
1925	904,474	710,582	104,137	27,686	62,069
Per 1,000 living :—					
1915–1924 ..	20·7	20·4	23·1	22·9	20·5
1925	18·8	18·3	21·3	22·0	20·8
Deaths.					
1925	601,782	472,841	65,507	19,784	43,650
Per 1,000 living :—					
1915–1924 ..	14·2	13·7*	14·8	17·1	15·9
1925	12·5	12·2	13·4	15·7	14·6
Deaths of Infants under 1 year.					
1925	69,353	53,316	9,430	2,391	4,216
Per 1,000 births :—					
1915-1924 ..	88	87	99	91	77
1925	77	75	91	86	68

*For the years 1915–1920 inclusive the figures on which this rate is based relate to civilians only.

Marriages.—The marriages during the year 1925 numbered 349,664, corresponding to a rate of 14·6 persons married per 1,000 of the total population. This rate was equal to the corresponding rate in 1924, and 1·4 per 1,000 below the average rate in the ten years 1915–1924.

Births.—The births registered in the year 1925 numbered 904,474, and were in the proportion of 18·8 per 1,000 of the total population. This rate was 0·5 per 1,000 below the corresponding rate in 1924, and 1·9 per 1,000 below the average in the ten years 1915–1924.

Deaths.—The deaths registered in the year 1925 numbered 601,782, and were in the proportion of 12·5 per 1,000 of the total population. This rate was 0·2 per 1,000 below the corresponding rate in 1924, and 1·7 per 1,000 below the average in the ten years 1915–1924.

Infant Mortality.—The deaths of infants under one year of age during the year 1925 numbered 69,353 and were equivalent to a rate of 77 per 1,000 registered births against 78 in 1924 and an average rate of 88 in the ten years 1915–1924.

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 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,

Northern Ireland and the Irish Free State. 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 1925 this register was increased by the addition of 117 entries of birth and 1,642 entries of death.

REGISTRATION OF BIRTHS, DEATHS AND MARRIAGES.

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 1925 by 1,774,801, this addition raising the total of names in the indexes, which at the end of 1925 embraced a period of 88½ years, to 149,220,967 (Table S).

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

Table LXXXIV.

Years.	Total Searches.	Gratuitous Searches.	Searches paid for by Fees.	Certificates Issued.	Amount Received.
					£ s. d.
1866 (52 weeks)	12,135	—	12,135	10,017	1,860 15 6
1875 (52 weeks)	26,356	—	26,356	20,282	3,879 15 6
1885 (52 weeks)	36,450	—	36,450	27,682	5,317 13 6
1895 (52 weeks)	53,289	—	53,289	35,727	7,200 12 6
1905 (52 weeks)	65,142	—	65,142	50,310	9,611 9 0
1906 (52 weeks)	64,340	—	64,340	49,429	9,458 6 0
1907 (52 weeks)	69,249	—	69,249	53,058	10,194 9 0
1908 (53 weeks)	72,370	—	72,370	54,870	10,550 8 0
1909 (52 weeks)	132,169	58,626*	73,543	54,674	10,568 8 0
1910 (52 weeks)	126,716	51,347	75,369	57,019	10,939 5 6
1911 (52 weeks)	140,496	65,491	75,005	56,347	10,875 6 0
1912 (52 weeks)	149,752	69,151	80,601	61,143	11,752 6 0
1913 (52 weeks)	150,540	71,225†	79,315	60,356	11,613 19 0
1914 (53 weeks)	188,040	104,593	83,447	65,817	12,482 11 6
1915 (52 weeks)	202,939	118,788	84,151	69,746	13,007 10 0
1916 (52 weeks)	303,334	197,669	105,665	88,265	16,379 17 0
1917 (52 weeks)	272,199	177,403	94,796	80,374	14,859 14 0
1918 (52 weeks)	255,462	146,504	108,958	90,898	16,889 0 0
1919 (52 weeks)	301,913	170,670	131,243	107,067	20,017 14 6
1920 (53 weeks)	284,194	149,447	134,747	108,684	20,415 0 0
1921 (52 weeks)	258,461	131,167	127,294	99,911	18,949 10 6
1922 (52 weeks)	263,047	143,088	119,959	90,400	19,028 12 6
1923 (52 weeks)	269,822	144,118	125,704	93,701	20,875 16 0
1924 (52 weeks)	337,521	178,990	158,531	121,890	27,109 15 0
1925 (53 weeks)	479,746	330,755‡	148,991	115,378	25,610 2 6

* Including some searches made in 1908.

† In addition, there were 91,917 gratuitous searches made for National Insurance Audit purposes.

‡ In addition there were 9,035 gratuitous searches made for other public purposes.

registers and records are deposited in this Office under statute or other arrangement. A revised list of these various registers and records will be found on pages 149–155 of this Review. Searches may be made in any of these registers, and certificates obtained on payment of the prescribed fees.

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

The 330,755 gratuitous searches during 1925 comprise 90,840 searches made in the Birth Records for the purpose of verifying the ages of persons claiming old-age pensions, 17,047 searches in the Census Records of 1861 etc. for the same purpose, 47,722 made to assist dependents of men of H.M. Forces to produce evidence of marriage and of the births of children in connexion with claims to Naval and Military Pensions, Separation Allowances, etc., and to verify the ages of certain classes of youths and men in connexion with service in the Army, Navy, and Air Force, and 175,146 for verification purposes in connexion with claims to Widows' and Orphans' Pensions under the Widows' Orphans' and Old Age Contributory Pensions Act, 1925. In addition to the 330,755 above mentioned 9,035 searches were made for other public purposes.

Offences against the Registration Acts.—In 1925 nine persons, on prosecution by order of the Registrar-General, were convicted of offences in connexion with registration. The offences for which convictions were obtained were as under :—

(*a*) For failing to register a birth 2

(*b*) Giving false information when registering a birth or death 4

(*c*) For using as true a falsified Certificate of birth or death 3

In addition to the above cases proceedings were taken and convictions obtained by the Director of Public Prosecutions in cases reported through the Registrar-General, the offences being those of false registration and making false declarations when giving notice of marriage.

PARLIAMENTARY AND LOCAL GOVERNMENT ELECTORS.

In Tables T and U of Part II of the Statistical Review, 1925, are shown the numbers of males and females on the Register of Electors compiled under the Representation of the People Act, 1918, in respect of the qualifying period of six months* ending on the 15th June, 1925.

* The 6 months qualifying period in the Representation of the People Act, 1918, has now been reduced to 3 months by the Economy (Miscellaneous Provisions) Act, 1926, with effect from 1927 inclusive.

The particulars have been taken from statements furnished to the Registrar-General by the Registration Officers of the several areas, or in the case of a University forming the whole or part of a University constituency, by the Chancellor, Registrar or other officer dealing with Parliamentary registration.

The expressions "Parliamentary electors," "Local Government electors," and "persons on absent voters list," have in the tables the same meaning as in the Act. The expression "men registered for business premises qualification," means men who are qualified to be registered as occupiers of business premises and are not resident in the qualifying premises.

The Registration Officers were instructed to enter in the statements from which the Return has been compiled the total number of names on the Register without any deduction in respect of persons who are registered in more than one Parliamentary or Local Government constituency, and further, to take care to secure that the names of "out voters" (that is, persons whose names appear twice in the Register, by reason of a claim under Rule 24 of the First Schedule to the 1918 Act) should be counted once only.

Table T refers to Parliamentary electors, and shows for each Parliamentary constituency in England and Wales, including the University constituencies, the number of males and females on the Register, and also the numbers registered in respect of business premises qualifications and the numbers on the absent voters list.

Table U refers to Local Government electors, and shows the numbers of each sex registered in respect of every sanitary area, i.e., County Borough, Metropolitan Borough, Municipal Borough, Urban District and Rural District in England and Wales.

The totals of the Autumn 1925 Registers are shown in the following summary in conjunction with the figures of previous Autumn Registers made since the passing of the 1918 Act.

England and Wales.

Register	Parliamentary Register (including University Constituencies).					Local Government Register.		
	Persons.	Males.	Females.	Men registered for business premises qualification (included in Cols. *b and c*).	Persons on Absent Voters List (included in Cols. *b–d*).	Persons.	Males.	Females.
a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*h*
Autmn								
1918	17,222,983	10,281,054	6,941,929	159,013	3,362,028	13,930,130	6,998,665	6,931,465
1919	17,465,638	10,234,887	7,230,751	205,461	1,157,061	14,361,123	7,176,019	7,185,104
1920	17,584,552	10,176,750	7,407,802	203,471	254,866	14,712,453	7,364,912	7,347,541
1921	17,795,784	10,237,344	7,558,440	194,737	185,227	15,019,348	7,527,861	7,491,487
1922	18,001,692	10,312,248	7,689,444	199,904	162,901	15,322,625	7,700,108	7,622,517
1923	18,388,833	10,498,179	7,890,654	208,694	151,953	15,691,962	7,873,461	7,818,501
1924	18,806,842	10,719,922	8,086,920	211,257	165,564	16,015,033	8,007,384	8,007,649
1925	19,167,275	10,897,545	8,269,730	217,509	167,406	16,345,290	8,157,607	8,187,683

It will be observed that the female electorate on the Parliamentary Register and both male and female on the Local Government Register have steadily increased with the increase in population since the passing of the 1918 Act. The male Parliamentary electorate has increased since 1920, but prior to that year decreases were shown, due, as explained at greater length in the 1921 report, to a special provision of the 1918 Act under which members of the fighting forces were exceptionally placed upon the register at the age of 19 instead of the normal age of 21. The consequence of this was that in the two years after demobilisation, the normal number of new entrants was diminished by the earlier registrations at a younger age and the residue was less than the lapses by death, etc.

Including a certain amount of plural representation in the case of those persons registered in more than one constituency by reason of their possessing the necessary residence or business qualification, or being entitled to be registered in respect of a University constituency, the total Parliamentary electorate of 19,167,275 represents 49·3 per cent. of the estimated total population, or 58·6 per cent. of the male and 40·8 per cent. of the female population; in the case of the rather more restricted Local Government franchise, the numbers are somewhat less and the proportions correspondingly lower, the total electorate being 42·0 per cent. of the whole population, or 43·9 per cent., and 40·4 per cent. in the case of males and females separately.

Of the total of the Parliamentary Registers, the bulk, viz., 19,115,918, represents the aggregate voting strength in the 509 geographical constituencies into which England and Wales is divided, the balance of 51,357 representing the five University constituencies. Eleven of the Boroughs, and three University constituencies, however, each return two members, so that the total representation in Parliament is by 528 members, 520 in respect of the geographical divisions, with an average electorate of 36,761 per member and eight in respect of the Universities, with an average electorate of 6,420.

MISCELLANEOUS.

Other tables appearing in Part II. of the Statistical Review which have not formed the subject of special comment in the foregoing pages are as follows:—

Table R, showing the balance inward or outward of passenger movement into and out of the United Kingdom for each of the years from 1906–1925.

Table W, showing the Area, Population, Births and Deaths in British Islands other than Great Britain and Ireland from 1902–1925

Table X, showing the Population, Births, Deaths, Infant Mortality, Marriages and corresponding rates for the year 1925 in the several portions of the British Dominions :—

The Commonwealth of Australia.

Canada.

New Zealand.

South Africa.

Table Y, showing the 1921 Census Populations, and the intercensal rate of increase or decrease of the several Dominions, Colonies and Protectorates (including mandated territories) in the British Empire.

Table Z, showing the latest Census Populations and intercensal rates of increase or decrease in various Foreign Countries.

Table AA, showing the changes which have taken place in the boundaries of Administrative and Poor Law Areas in England and Wales during 1925.

Table BB, showing the changes which have taken place in the boundaries of Administrative Areas in England and Wales during 1925, with enumerated population by sex and age (1921) of the transferred areas.

METEOROLOGY OF THE YEAR 1925.*

The outstanding meteorological features of 1925, a normal year in most respects, were the abnormally dry and sunny weather of June, a wet May and the wintry conditions during November and December. Other noteworthy features were the two brief hot spells in July between the 11th and 14th and between the 21st and 25th, the dryness of March and the wet weather of February.

Over England and Wales as a whole, the mean temperature for the year and the total duration of sunshine were normal and precipitation 8 per cent. above normal.

January was a mild and stormy month and wet in the southern districts, small areas in the extreme south of Sussex, Hampshire and Devonshire experiencing more than twice the normal precipitation. Winds were predominantly southerly to south-westerly. As a result of the heavy rains which fell from 23rd December, 1924 to 2nd January, 1925, serious floods occurred in the Thames Valley during the first week. Dense fog occurred in the London area on January 10th–12th. *February* was mild and extremely wet with a prevalence of high winds and gales, but on the whole the month was less windy than January. The weather of *March* was characterised by persistent northerly winds

* Furnished by the Director of the Meteorological Office.

accompanied by showers of snow, sleet and hail. At most stations the highest temperatures of the month occurred during an interval of westerly winds and fair weather between the 13th and 19th. The mean temperature for the month as a whole did not differ much from the normal, whilst sunshine was deficient in most districts, particularly in central and eastern England. The month, as a whole, was dry, less than 25 per cent. of the normal being recorded in some southern districts. *April* was showery, cool and rather wet, but with many bright periods, the mean daily duration of sunshine being above normal in the western districts generally. Local thunderstorms were of frequent occurrence during the last week, especially in the south-east. High winds and gales occurred widely on the 15th and 16th. Cool and cloudy weather with local thunderstorms and considerable rain at times prevailed generally during the early days of *May*. On the 10th a ridge of high pressure spread in from the Atlantic, temperature rose to between 70° F. and 80° F. in many parts of England and more than 13 hours of sunshine were recorded on several days in the south-eastern and eastern districts. The spell of fine weather only lasted about a week, however, and the weather became again unsettled, thundery and very wet, monthly aggregates of rainfall being well above normal. The month as a whole was moderately warm except in the south-west where it was rather cool. *June* was noteworthy because of its ideal summer weather, its sunniness and exceptional dryness. At several stations all previous June records for sunniness and dryness were exceeded and at some stations June, 1925, was the driest month on record. During the warm spell from the 9th to the 12th the temperature exceeded 85° F. at many stations and reached 88° F. at Camden Square (London) on the 11th. *July* on the whole, was wet in southern districts, but elsewhere precipitation was generally below normal. Sunshine was deficient in the southern and eastern districts. Two brief hot spells occurred between the 11th and 14th and between the 21st and 25th, a maximum of 92° F., the highest temperature experienced in the British Isles during the year, being recorded at Hunstanton (Norfolk) on the 22nd. Severe thunderstorms occurred on the 22nd extensive damage being done by hailstones in the Woolwich and Plumstead districts of London. With the exception of a spell of fair to fine weather between the 14th and 19th the weather of *August* was mainly dull and unsettled. It was relatively dry in many parts of England and Wales but wet in southern England. *September* was a cold and windy month with frequent north-westerly winds and rainfall above average. Although there were many bright periods, sunshine on the whole was deficient. Quiet, fair and warmer weather set in on the 26th and continued until the end of the month. Apart from some rather cold weather just before the middle of the month, *October* was predominantly mild ; the first half of the month was dry and sunny with local mist and fog, the second half unsettled, cloudy and wet. After a mild and unsettled week,

dry cold and sunny weather with much fog and some frosts prevailed during *November*, the last week being of a decidedly wintry character with much snow, but with considerable bright periods. Dense fog occurred in London on the 14th. The cold spell which formed the main feature of the weather of November continued with short breaks from about the 5th to 8th and about the 17th during the greater part of *December*. Snow and sleet fell on several days during the month. At Garforth on the 6th and at Bungay (Flixton) on the 16th the screen minimum temperature fell to 9° F., the lowest screen temperature recorded during the year in England and Wales. Mild, rainy and showery weather set in on the 26th and continued until the end of the year.

Further information.—Tables relating to meteorological elements are given in Part I (Tables 29–31). A description of the weather of each month appears in the Quarterly Return of the Registrar-General and a summary of the observations at Greenwich for each month of the year appears in Table XIV of the Return for the fourth quarter.

Charts showing the distribution of pressure, temperature, sunshine and rainfall for the year, together with summaries of the observations at numerous stations will be found in the Annual Summary of the Monthly Weather Report issued by the Meteorological Office.

A list of the publications of the Meteorological Office will be found in "List M" issued by H.M. Stationery Office.

REGISTERS AND RECORDS
OF WHICH
THE ORIGINALS OR CERTIFIED COPIES ARE DEPOSITED IN THE CUSTODY OF THE REGISTRAR-GENERAL.

GENERAL REGISTER OFFICE, SOMERSET HOUSE, LONDON, W.C.2.

Searches can be made, and Certificates are issued, daily between the hours of 9.30 a.m. and 4 p.m. (Saturdays 9.30 a.m. and 1 p.m.), on payment of the Statutory Fees. The Office is closed on Sundays, Christmas Day, Good Friday, and Public Holidays.

A "General Search" means a Search in the Indexes during any number of successive hours not exceeding six, without stating the object of the Search; and a "Particular Search" means a Search in the Indexes over any period not exceeding five years, for any given Entry. (37 & 38 Vict., c. 88, s. 42.)

The Statutory Fees are:—

	£	s.	d.
For a General Search (6 & 7 Will. IV., c. 86, s. 37) ..	1	0	0
* ,, Particular Search ,, ,, ,, ,, ..	0	1	0
,, Certified Copy ,, ,, ,, ,, ..	0	2	6
Inland Revenue Stamp (54 & 55 Vict., c. 39, s. 64) ..	0	0	1

I.—REGISTERS AND RECORDS OF WHICH CERTIFIED COPIES UNDER SEAL ARE ISSUED PURSUANT TO VARIOUS ACTS OF PARLIAMENT.

By the Act 6 & 7 Will. IV., c. 86, s. 38, *every Certificate sealed or stamped with the Seal of the General Register Office is to be received as evidence of the Birth, Death, or Marriage to which the same relates, without any further or other proof of the Entry.*

1. Records made pursuant to Registration Acts, 1836–74:—

(*a*) CERTIFIED COPIES OF REGISTERS OF BIRTHS AND DEATHS registered in ENGLAND and WALES on and after 1st July, 1837.

(*b*) CERTIFIED COPIES OF REGISTERS OF MARRIAGES registered in ENGLAND and WALES on and after 1st July, 1837, after Solemnization in Churches of the Church of England, in Registered Roman Catholic and Dissenting Places of Worship, and in District Register Offices; also amongst Quakers and Jews.

The General Indexes of Births, Deaths, and Marriages are completed about Nine to Twelve Months after the Dates of Registration. Unindexed Registers which are in the Office may, however, be searched under special conditions.

1A. Adoption of Children Act, 1926. Adopted Children Register.

2. Register of Births and Deaths at Sea ("Marine Register Book"):—

(*a*) Certificates of BIRTHS OF ENGLISH CHILDREN and of DEATHS OF ENGLISH SUBJECTS on board BRITISH VESSELS, sent to the Registrar-General by Captains, Commanding Officers, or Masters, from 1st July 1837 to 31st December 1874 (6 & 7 Will. IV., c. 86, ss. 21 and 26).

(*b*) Returns of BIRTHS AND DEATHS on board BRITISH VESSELS, and also on board other than British Vessels carrying passengers to or from any Port in the United Kingdom, received by the Registrar-General from the Registrar General of Shipping and Seamen since 1st January 1875 (37 & 38 Vict., c. 88, s. 37; 57 & 58 Vict., c. 60, ss. 254 and 339).

* Where the application is made by post and the search is conducted by the Staff of the General Register Office, the particular search fee is 2s. 6d.

(*c*) Returns of BIRTHS AND DEATHS on board H.M. Ships since 1st July 1837 (6 & 7 Will. IV., c. 86, ss. 21 and 26 ; 37 & 38 Vict., c. 88, s. 37.)

These Returns relate chiefly to persons of English Nationality, but they include also Entries relating to Persons of other than English, Scotch, or Irish Nationality.

2A. Records of Deaths in the War (Royal Navy).

3. Non-Parochial Registers and Records :—

(*a*) Registers and Records of Births and Baptisms, Deaths, and Burials, and (in some few instances only) of Marriages, kept by the GENERAL BODIES and CONGREGATIONS of NONCONFORMISTS in ENGLAND and WALES. This is a large series of Records and extends from 1642 to 1858.

(*b*) Register kept at DR. WILLIAMS' LIBRARY, Red Cross Street, consisting of (1) a Register of Births relating to Protestant Dissenters of the Three Denominations throughout the country, commenced 1742 and continued up to 31st December, 1837 ; (2) Seventeen Registers of Births, Baptisms, and Burials, deposited in Dr. Williams' Library by the representatives of deceased Ministers of Congregations in London, Kingston-on-Thames, Chalfont-St.-Giles, Hinckley, Romsey, Northampton, and Mortlake, and extending from 1698 to 1833.

(*c*) Register of Births and Baptisms kept by the WESLEYAN METHODISTS (independently of their Congregational Registers) at their METROPOLITAN REGISTRY in Paternoster Row. *This Registry was established in* 1818, *but the entries date back to* 1773 *and extend down to* 1838.

(*d*) Registers of Births, Marriages, and Burials kept by the SOCIETY OF FRIENDS (QUAKERS) throughout England and Wales. *These Records extend over the years* 1640 *to* 1837, *but in a few exceptional cases the dates go back to* 1578 *and onwards to* 1840.

(*e*) Registers of Births, Baptisms, Marriages, Deaths, and Burials, kept by FRENCH and other FOREIGN PROTESTANT CHURCHES in England, from 1567 to 1857.

(*f*) Registers kept at GREENWICH HOSPITAL, of Marriages between 1724 and 1754, of Baptisms between 1720 and 1856, and of Burials between 1705 and 1857.

(*g*) Registers kept at CHELSEA HOSPITAL, of Marriages between 1691 and 1765, of Baptisms between 1691 and 1812, and of Burials between 1692 and 1856.

(*h*) Registers kept at the FOUNDLING HOSPITAL, of Marriages, in 1754, of Baptisms between 1741 and 1838 and of Burials between 1741 and 1759.

(*i*) Registers of Burials kept at BUNHILL FIELDS BURIAL GROUND from 1713 to 1854.

(*k*) Registers of Burials kept at the CEMETERIES at Liverpool, Leeds, Ecclesall, and Walworth from 1819 to 1838.

By the Acts 3 & 4 *Vict., c.* 92, *and* 21 *Vict., c.* 25, *Extracts from these Registers, stamped with the Seal of the General Register Office, are receivable in evidence in all civil cases. Search in these Records, which are unindexed, cannot be undertaken unless the precise Register, or the name and locality of the Chapel at which the Register was formerly kept, be stated. The Fee for searching is* 1/- *per Volume for each name sought for.*

4. Army Returns :—

(*a*) CHAPLAINS' RETURNS :—

1. Registers of Births, Baptisms, Marriages, Deaths and Burials kept by Army Chaplains at Stations Abroad. This series of Returns, dating from 1796, was closed in 1880, on the Registration of Births, &c. (Army) Act, 1879, coming into operation.

(*b*) REGIMENTAL REGISTERS :—

1. Original Registers of Births, Baptisms, Marriages, and (in a few instances only) of Deaths kept in various Regiments of His Majesty's Land Forces (Officers, Soldiers, and their Families) AT HOME and on FOREIGN STATIONS, from 1790.
2. Original Registers of Births, Deaths, and Marriages kept under the Registration of Births, &c. (Army) Act, 1879 (which came into operation on the 1st January, 1881), by Regiments and other Units of His Majesty's Land Forces (Officers, Soldiers, and their Families) while on Service OUT OF THE UNITED KINGDOM.

(*c*) CERTIFIED COPIES, Extracts rendered half-yearly from REGIMENTAL REGISTERS (*b*) 2 above referred to.

(*d*) RECORDS OF DEATHS in the SOUTH AFRICAN WAR (1899–1901)—Imperial Army only.

(*e*) RECORDS OF DEATHS in the WAR OF 1914–1920, and of certain MARRIAGES (1914–25).

(*f*) GARRISON AND STATION REGISTERS :—

1. Original Registers of Births, Baptisms, Marriages and Burials kept by Army Chaplains in the IONIAN ISLANDS between 1816 and 1864.
2. Original Registers of Births, Baptisms, Marriages, and Burials kept by Army Chaplains in the IONIAN ISLANDS, the KINGDOM OF NAPLES, and ELSEWHERE, between 1809 and 1863. *These Registers relate to both Military and Civilians, the former being mostly also included in the Original Registers above referred to* (*f*.1).
3. Original Register of Baptisms and Marriages at ST. JEAN DE LUZ and TOULOUSE (France) in 1813–14, and of a Marriage at VERA (Spain) in 1813.
4. Original Register of Births, Baptisms, and Marriages at ANTWERP and other places in DUTCH BRABANT in 1810–15.
5. Original Register of Births and Baptisms in or near VALENCIENNES (France) in 1809–18, and of two Marriages in 1817.
6. Original Register of Baptisms, Births, Burials, and Marriages at OSTEND, MARTINIQUE and TRINIDAD in 1812–16.
7. Original Register of Baptisms, Marriages and Burials in GUADALOUPE and NORTH AMERICA, 1813–15.
8. Original Register of Baptisms, Marriages, and Burials in MADEIRA, 1814.
9. Original Registers of Baptisms, Marriages, and Burials in the Garrisons of HALIFAX, N.S. (1823–1906), QUEBEC (1813–71) and TORONTO (1847, 1866–9), KINGSTON U.C. (1793–1870), and 3 Letter and Memoranda Books.

10. Original Registers of Baptisms, Marriages, and Burials in the Garrison of ST. LUCIA, 1898–1905.

11. Original Registers of Deaths, and Burials in BARBADOS (Windward and Leeward Islands Command) 1804–1906.

12. Original Registers of Marriages in the Garrisons of EGYPT, 1886–1924.

13. Original Register of Births and Baptisms in the Garrisons of CORK, 1886–1910, 1913–14, 1921.

14. Original Register of Births, Baptisms, and Deaths in the Garrisons of WALMER, 1860–69.

15. Original Register of Births and Baptisms in the Garrisons of LANDGUARD FORT, SUFFOLK, 1761–1871 : Deaths, 1761–1852.

16. Original Register of Births and Baptisms in the Garrisons of WEEDON, NORTHANTS, 1845–79.

Certified Copies of all the above-mentioned Army Returns, whether relating to periods prior to the Act of 1879 *coming into operation, or subsequent thereto, are given under Seal in pursuance of Section* 3 *of that Act. Regulations for putting the Act into force were issued by Army General Order on* 1*st January,* 1881.

5. British Subjects Abroad :—

(*a*) Registers of Marriages of British Subjects in Foreign Countries, solemnized since July, 1849, by BRITISH CONSULS or other MARRIAGE OFFICERS, under the provisions of 12 & 13 Vict., c. 68, and 55 and 56 Vict., c. 23. These are Certified Copies, but there are also some Duplicate Original Registers.

(*b*) Register of Marriages solemnized in a Chapel belonging to the RUSSIA COMPANY at Moscow between 1826 and 1858 (21 & 22 Vict., c. 46).

(*c*) Register of Marriages solemnized in the British Chapel at LISBON between 1822 and 1859 (22 & 23 Vict., c. 64).

(*d*) Register of Marriages solemnized in the Chapel at MORRE VELHO, in Brazil, between 1851 and 1867 (30 & 31 Vict., c. 93).

6. Ionian Islands :—

(*a*) Registers of Marriages of BRITISH SUBJECTS solemnized between 1861 and 1864, under the provisions of 23 and 24 Vict., c. 86. *That Act was repealed in* 1864 (27 *&* 28 *Vict., c.* 77) *on the relinquishment of the Protectorate by Great Britain.*

See also under ARMY RETURNS, and also under " 5, Ionian Islands " on page 155.

7. Certified Places of Worship :—

(*a*) Register of Buildings Certified to the Registrar-General as Places of Meeting for Religious Worship, under the provisions of 15 & 16 Vict., c. 36, and 18 & 19 Vict., c. 81.

(*b*) Verified Returns of Places Certified to Registrars of Dioceses and Archdeaconries and to Clerks of the Peace, and registered or recorded as Places of Meeting for Religious Worship, under the provisions of 19 & 20 Vict., c. 119.

8. Burial Grounds :—

(*a*) RECORDS OF GRAVES OR GRAVESTONES REMOVED UNDER CORPORATION ACTS :—

1. Manchester (Platt Chapel).
2. Stainforth, near Doncaster (East Lane Unitarian).
3. Sheffield (Attercliffe Wesleyan Methodist).
4. Bristol (Ridgeway Jewish Cemetery).

II.—REGISTERS AND RECORDS DEPOSITED WITH THE REGISTRAR-GENERAL FOR SAFE CUSTODY, BUT HAVING NO STATUTORY AUTHORITY, AND WHEREOF CERTIFIED COPIES ARE NOT GIVEN UNDER SEAL BUT ARE AUTHENTICATED BY SIGNATURE ONLY.

1. " The Fleet Registers."—REGISTERS AND RECORDS OF BAPTISMS AND MARRIAGES PERFORMED AT THE UNDERMENTIONED PLACES :—

(*a*) FLEET PRISON (1674–1756). Marriages and Baptisms.

(*b*) THE MINT AND KING'S BENCH PRISON (1713–1735). Marriages and Baptisms.

(*c*) MAY FAIR CHAPEL (1728–1754). Marriages. [Three additional volumes of these Registers are in the Church of St. George, Hanover Square ; they contain Marriages from February 1735, to March, 1754, and Baptisms from 1740 to 1753.]

These Records were transferred from the Bishop of London's Registry under the provisions of 3 & 4 *Vict., c.* 92, *s.* 20.

2. Miscellaneous Home Registers and Records :—

(*a*) REGISTERS OF BAPTISMS, BURIALS, and MARRIAGES not included in the Report of either of the Non-Parochial Registers Commissions, but which have from time to time since the passing of the Act 21 & 22 Vict., c. 25, been received at the General Register Office.

(*b*) Records of Births, Baptisms, Marriages, and Deaths kept at the CHAPELS ROYAL, ST. JAMES'S, WHITEHALL, and WINDSOR between 1647 and 1709. *These were transferred from the Bishop of London's Registry, under the provisions of* 3 *&* 4 *Vict., c.* 92, *s.* 20.

(*c*) Licences for Marriages received from the CHAPEL ROYAL, WHITEHALL (1687–1807).

(*d*) Registers of Baptisms and Burials received from GREENWICH HOSPITAL (1848–1864).

(*e*) Registers of Births and Baptisms received from the BRITISH LYING-IN HOSPITAL, ENDELL STREET (1749–1868) ; also Registers of Patients received into Hospital (1749–1868).

(*f*) Register of Births received from LUNDY ISLAND. Eleven entries only (1865–1869).

3. His Majesty's Ships :—

(*a*) Register of MARRIAGES of British Subjects, performed on board His Majesty's ships by Captains or Chaplains thereof. *Entries ranging from* 1842 *to* 1879 *were received from the Bishop of London's Registry, pursuant to directions given by the Admiralty in February,* 1880 ; *they consist partly of signed documents, and partly of extracts from Ships' Logs. A few similar Returns were forwarded direct to the Registrar-General between* 1880 *and* 1889.

(*b*) Deaths of Officers and Men of the ROYAL NAVY reported by the ADMIRALTY.

3A. Deaths at Sea (and one Birth) in 1924 reported by Irish Free State.

4. Miscellaneous Foreign Registers and Records :—

(*a*) Registers of Births, Baptisms, Marriages, Deaths, and Burials (1809–1853) of British Subjects in FOREIGN COUNTRIES reported by BRITISH CONSULS and CHAPLAINS prior to Act 12 & 13 Vict., c. 68 and Foreign Office Ordinance of 1849 ; and some informal Records subsequent thereto.

(*b*) Certified Copies of Registers of Births and Deaths of British Subjects in FOREIGN COUNTRIES kept by BRITISH CONSULS SINCE 7th November, 1849, and at BRITISH LEGATIONS since 19th July, 1859, in accordance with Instructional Circulars issued from the Foreign Office. There are also a few duplicate Original Registers relating to the foregoing.

(*c*) Records of Births Registered by BRITISH OFFICIALS ABROAD and certain FOREIGN GOVERNMENTS, from 1831.

(*d*) Records of Marriages solemnized by BRITISH OFFICIALS ABROAD, and a few from certain FOREIGN GOVERNMENTS, from 1826. (This series includes some Returns relating to British soldiers during the war period.)

(*e*) Records of Deaths of British Subjects in FOREIGN COUNTRIES registered by various FOREIGN AUTHORITIES since 1800, and received through the Foreign Office. *These Returns are for the most part in the vernacular, and relate principally to Deaths registered by Officials of the Governments of those Countries in which the Code Napoleon forms the basis of the Common Law.* (This series includes some Returns relating to British soldiers during the war period.)

(*f*) Original Registers, and Certified Copies of Registers, of Births Baptisms, Deaths, Burials, and Marriages, from various ENGLISH CHURCHES ABROAD, and from certain ENGLISH CHAPLAINS attached to LEGATIONS, namely :—

Antwerp	(Baptisms and Marrs.)	1817–1852
Baku		from 1916
Boulogne	(British Episcopal Church)	1815–1896
	(Upper Town Church)	1831–1869
Calais	(St. George's Church)	1817–1878
Canton	(Marrs. only)	1865–1913
Chefoo	do.	from 1897
Chi Nan Fu (Shantung)	do.	from 1912
Coi Hieng (Funing)	do.	1914
Dresden	(Births and Deaths only)	1817–1866
Florence	(Marrs. only)	1840–1855 and 1865–1871
Foochoo	do.	from 1900
Ghent	do.	1849–1850
Gottenburg	do.	1845–1892
Hakodati	do.	1891–1902
Hangchow	do.	1881–1906
Hanover		1838–1859
Havre		1817–1863
Honan	(Marrs. only)	from 1911
Kotse	do.	1891–1895
Leghorn		1707–1824
Mukden	(Marrs. only)	1910–1911
Nagasaki	do.	1892–1903
Naples		1817–1822
Newchang	(Marrs. only)	1902–1912
Ningpo	do.	1898–1913
Oporto		1814–1874
Osaka	(Marrs. only)	1892–1895
Paris		1784–1789
Peking	(Marrs. only)	1911–1913
Petrograd		from 1818
Rome	(Marrs. only)	1872–1889
Rotterdam	(Baptisms and Marrs. only)	1708–1794
Shanghai	(Cathedral) (Marrs. only)	from 1852
	(St. Andrew's Church) (Marrs. only)	from 1907
Shanhaikwan	do.	1905–1913
Tientsin	do.	1893–1914
Tokio	do.	1892–1903
Turin	do.	1858–1864
Vera Cruz	(Births and Deaths only)	1858–1867
Yokohama	(Marrs. only)	1887–1907

(*g*) Original Records formerly kept at the BRITISH EMBASSY AT PARIS.—Births and Baptisms, 1801–1869 (including a few Baptisms at Rouen and Chantilly). Burials, 1815–1869 Marriages, 1801–1890.

(*h*) Original Registers from the BRITISH LEGATION AT THE HAGUE.—Births; 1627–1894, Deaths, 1859–1907 ; Marriages, 1627–1889.

(*i*) Original Registers from the BRITISH LEGATION AT BRUSSELS.—Marriages, 1816–1890.

5. Ionian Islands :—

(*a*) Registers of BIRTHS AND BAPTISMS from 1818–1864, Registers of DEATHS AND BURIALS from 1836–1864, and MARRIAGE CERTIFICATES from 1818–1859. These Returns include both Military and Civilians, but the Military are also included in Army Returns (*f*)1 and 2.

(*b*) Registers of BIRTHS AND DEATHS from 1862 to 1864, kept in pursuance of a Proclamation, issued by the Lord High Commissioner, dated 15th March, 1862.

These Documents were received into the Public Record Office from the Colonial Office in 1864, *and were transferred to the Registrar-General's custody by direction of the Secretary of State for the Colonies, in July,* 1870.

(*c*) Register of BAPTISMS, MARRIAGES, and BURIALS. Church of England, Zante, 1849–1858.

6. Protectorates, &c., in Africa and Asia :—

(*a*) Certified Copies of Registers of Births and Deaths from the following African Protectorates : British Central Africa (Nyasaland), from 1904 ; East Africa Protectorate, and Somaliland, from 1905.

(*b*) Certified Copies of Births, Deaths, and Marriages registered in Uganda, 1905–18.

(*c*) Certified Copies of Births, Deaths, and Marriages of British Subjects in Sarawak, from 1910.

(*d*) Certified Copies of Births, Deaths and Marriages of British Subjects domiciled in the United Kingdom but resident in the Soudan, from 1906.

(*e*) Iraq. Births, Deaths and Marriages, from 1915.

(*f*) Some Returns of Births and Deaths (from 1923) by Political Agents of Indian States.

N.B.—It must be remembered with reference to the Records in the foregoing List that the outside dates over which they extend are given, and that in many cases the Records for the intermediate periods are more or less incomplete or wanting.

Printed by H.M.S.O. Press, Harrow.

MINISTRY OF HEALTH.

SEVENTH ANNUAL REPORT FOR 1925-26. [Cmd. 2724.] Price 3*s.* 6*d.* (3*s.* 9*d.*)

The Report deals with Public Health, Local Government and Finance, Poor Law and National Health Insurance Administration.

"ON THE STATE OF THE PUBLIC HEALTH." By Sir George Newman, K.C.B., M.D., D.C.L., F.R.C.P. This is the Annual Report for 1920 of the Chief Medical Officer of the Ministry of Health. (1921.) Price 1*s.* 6*d.* (1*s.* 8*d.*)

Do.	do.	for 1922	..	2*s.* 6*d.* (2*s.* 8½*d.*)
Do.	do.	for 1923	..	3*s.* 0*d.* (3*s.* 3*d.*)
Do.	do.	for 1924	..	3*s.* 6*d.* (3*s.* 9½*d.*)
Do.	do.	for 1925	..	3*s.* 0*d.* (3*s.* 3½*d.*)

SCOTTISH BOARD OF HEALTH.

SEVENTH ANNUAL REPORT FOR 1925. [Cmd. 2674.] Price 5*s.* 6*d.* (5*s.* 10½*d.*)

REGISTRAR-GENERAL FOR SCOTLAND.

Seventy-First Annual Report for 1925. Price 10*s.* 6*d.* (10*s.* 10*d.*)

CENSUS OF SCOTLAND, 1921.

REPORT ON THE THIRTEENTH DECENNIAL CENSUS :—

VOL. I.

Part.

City of

1. Edinburgh. Price 4*s.* (4*s.* 2*d.*)
2. Glasgow. Price 5*s.* (5*s.* 2*d.*)
3. Dundee. Price 3*s.* 6*d.* (3*s.* 7½*d.*)
4. Aberdeen. Price 4*s.* (4*s.* 2*d.*)

County of

5. Aberdeen. Price 9*s.* (9*s.* 2½*d.*)
6. Argyll. Price 7*s.* (7*s.* 2½*d.*)
7. Ayr. Price 10*s.* (10*s.* 2½*d.*)
8. Banff. Price 6*s.* (6*s.* 2*d.*)
9. Berwick. Price 4*s.* 6*d.* (4*s.* 8*d.*)
10. Bute. Price 4*s.* (4*s.* 1½*d.*)
11. Caithness. Price 4*s.* 6*d.* (4*s.* 8*d.*)
12. Clackmannan. Price 5*s.* (5*s.* 2*d.*)
13. Dumbarton. Price 7*s.* (7*s.* 2*d.*)
14. Dumfries. Price 7*s.* (7*s.* 2½*d.*)
15. East Lothian. Price 5*s.* (5*s.* 2*d.*)
16. Fife. Price 14*s.* (14*s.* 3*d.*)
17. Forfar. Price 8*s.* (8*s.* 2½*d.*)
18. Inverness. Price 7*s.* (7*s.* 2½*d.*)
19. Kincardine. Price 4*s.* 6*s.* (4*s.* 8*d.*)

VOL. I.

Part.

County of

20. Kinross. Price 3*s.* 6*d.* (3*s.* 7½*d.*)
21. Kirkcudbright. Price 5*s.* (5*s.* 2*d.*)
22. Lanark. Price 13*s.* 6*d.* (13*s.* 9*d.*)
23. Midlothian. Price 7*s.* (7*s.* 2*d.*)
24. Moray. Price 5*s.* (5*s.* 2*d.*)
25. Nairn. Price 3*s.* (3*s.* 1½*d.*)
26. Orkney. Price 4*s.* (4*s.* 2*d.*)
27. Peebles. Price 3*s.* 6*d.* (3*s.* 7½*d.*)
28. Perth. Price 9*s.* (9*s.* 2½*d.*)
29. Renfrew. Price 10*s.* (10*s.* 2½*d.*)
30. Ross and Cromarty. Price 6*s.* 6*d.* (6*s.* 8*d.*)
31. Roxburgh. Price 5*s.* (5*s.* 2*d.*)
32. Selkirk. Price 3*s.* 6*d.* (3*s.* 8*d.*)
33. Shetland. Price 4*s.* (4*s.* 2*d.*)
34. Stirling. Price 7*s.* (7*s.* 2½*d.*)
35. Sutherland. Price 3*s.* 6*d.* (3*s.* 8*d.*)
36. West Lothian. Price 5*s.* 6*d.* (5*s.* 7½*d.*)
37. Wigtown. Price 4*s.* (4*s.* 1½*d.*)

VOL. II.—Ages of the Population; with Charts. Conjugal Condition of Persons aged 15 and over. Orphanhood (children under 15), Birthplaces, Gaelic Speaking Population and Housing Conditions, 1924. Price 20*s.* (20*s.* 3½*d.*)

VOL. III.—Occupations and Industries of Persons of Twelve Years of Age and Upwards, 1924. Price 30*s.* (30*s.* 9*d.*)

VOL. IV.—Dependent Children, 1924. Price 4*s.* (4*s.* 1½*d.*)

May be purchased through any Bookseller or directly from the Sale Offices of H.M. STATIONERY OFFICE *at the Addresses shown on the front cover.* (*All prices are net and those in parentheses include postage.*)

REGISTRAR-GENERAL FOR ENGLAND AND WALES.

THE REGISTRAR-GENERAL'S STATISTICAL REVIEW, 1925, consisting of—

Tables, Part I. Medical. Price 15*s.* (15*s.* 5*d.*)
Tables, Part II. Civil. Price 5*s.* (5*s.* 2*d.*)
Text. Price 5*s.* (Postage extra)

Similar Volumes are available for the years 1921, 1922, 1923, and 1924.

These volumes replace the Annual Report of the Registrar-General from 1838 *to* 1920.

Official List.

Part I.—Issued Annually. List, for each Registration District, of Registration Officers and their deputies with their addresses and the sub-districts which they serve. Indexes, &c. Contains also the Annual Addenda to Part III of the List. The Volume for 1927 is now on sale price 2*s.* (2*s.* 5*d.*)

Part III.—1926. List of Certified Places of Worship, showing those Registered for Marriages, and indicating also those Registered Buildings in which the provisions of the Marriage Act, 1898, have been adopted. Price 6*s.* (6*s.* 11½*d.*) This List is published quinquennially. An Addenda thereto is published each intervening year, in Part I of the List.

Births, Deaths, and Marriages.

ABSTRACT of Arrangements respecting REGISTRATION OF BIRTHS, DEATHS, AND MARRIAGES in Great Britain, Ireland, and the British Dominions beyond the Seas. (1916.) Price 6*d.* (8*d.*)

MARRIAGE ACT, 1898. Rules and Regulations for the guidance of Authorized Persons and of the Trustees or other Governing Bodies of Registered Buildings in which Marriages may be Solemnized without the presence of a Registrar. (1919.) Price 6*d.* (8*d.*)

Manual of the International List of Causes of Death as adopted for use in England and Wales, Scotland and Northern Ireland. Price 2*s.* 0*d.* (2*s.* 4*d.*)

GUIDE TO CURRENT OFFICIAL STATISTICS.

(*Prepared by the Permanent Consultative Committee on Official Statistics.*)

FIRST ISSUE (1922)	..	1*s.* (1*s.* 2½*d.*)
VOLUME TWO (1923)	..	1*s.* (1*s.* 4*d.*)
VOLUME THREE (1924)	..	1*s.* (1*s.* 3½*d.*)
VOLUME FOUR (1925)	..	1*s.* (1*s.* 3½*d.*)
VOLUME FIVE (1926)	..	(*In the press.*)

These issues of the Guide provide a systematic survey of the statistics contained in official publications issued since the beginning of 1922. The Guide consists of a List of Publications (grouped under the Departments severally responsible), and an alphabetical Subject Index, which not only refers the enquirer to the appropriate volumes in the List, but also supplies details as to the mode and degree of analysis of the statistics contained therein.

The second volume includes an appendix dealing broadly with selected publications of permanent statistical interest issued mainly since 1900.

Whilst the Guide is based upon official publications containing statistics, it constitutes, in effect, a general work of reference to most of the activities of Government Departments.

May be purchased through any Bookseller or directly from the Sale Offices of H.M. STATIONERY OFFICE *at the Addresses shown on the front cover.* (*All prices are net and those in parentheses include postage.*)