VITAL STATISTICS.

Registration of Births, Deaths, and Marriages.

The present official system of compulsory registration of births, deaths, and marriages in Victoria has been in force since 1853, and the registers—framed on the best models—are replete with all necessary information bearing on the family history of the people. The statutory duties under the Registration Acts are performed by the Government Statist, who has control over the local registrars of births and deaths, and (so far as regards their registration duties) over the officiating clergymen and registrars of marriages. Copies of entries certified by him or by the Assistant Government Statist are *primâ facie* evidence in the Courts of Australia of the facts to which they relate. At the head office in Melbourne there is kept for reference a complete collection of all registrations effected since 1st July, 1853, as well as originals or certified copies of all existing church records relating to earlier periods, as far back as 1837.

Applicants for searches or certificates of births, deaths, or marriages should, in applying to the Government Statist, furnish particulars of the date and place of the event; also the names of the parties in the case of a marriage, and the name, age (if a death), and parentage in the case of a birth or death. The fee for a search in the Official Records, or an extract of an entry, is 2s. 6d., and for a certificate, including the cost of search, 7s. 6d. (except where the case appears in the records of the current quarter, when 5s. only is charged). For a search in the early church records, prior to 1st July, 1853, the fee is only 1s., a further sum of 1s. being payable if a certificate is required.

The *Year-Book* for 1916–17 contains on pages 301 to 303 a statement of the law as to marriages and the registration of births and deaths in Victoria.

MARRIAGES.

Marriages.

Marriages in Victoria in 1920 numbered 14,898. This was the highest number for one year in the history of the State, being 2,066 more than the greatest number previously recorded—

that for 1915. The figures for each of the last twenty years are as follows :—

MARRIAGES IN EACH YEAR, 1901 TO 1920.

Year.	No. of Marriages.	Year.	No. of Marriages.
1901 ..	8,406	1911 ..	11,088
1902 ..	8,477	1912 ..	11,738
1903 ..	7,605	1913 ..	11,324
1904 ..	8,210	1914 ..	11,830
1905 ..	8,774	1915 ..	12,832
1906 ..	8,930	1916 ..	11,341
1907 ..	9,575	1917 ..	9,506
1908 ..	9,334	1918 ..	9,156
1909 ..	9,431	1919 ..	11,706
1910 ..	10,240	1920 ..	14,898

The marriages in Australia for 1920 numbered 51,552 as against 40,540 in the previous year, 33,141 in 1918, 33,666 in 1917, and 40,289 in 1916. Of the total for 1920, 14,898 took place in Victoria, 20,154 in New South Wales, 6,667 in Queensland, 4,881 in South Australia, 2,932 in Western Australia, 1,999 in Tasmania, 17 in the Northern Territory, and 4 in the Federal Capital Territory.

The increase in 1920 was due to marriages of discharged soldiers and the relatively small numbers of marriages in 1917 and 1918 were attributable to the absence from the State of a large number of marriageable men owing to the war. In all the States there was a substantial increase in marriages in 1920 as compared with 1919.

Marriage rates.

The ordinary marriage rate—per 1,000 of the total population—like birth and death rates similarly estimated, is somewhat unreliable in comparatively newly settled countries like Australia, especially in earlier periods, but, as it affords a ready and approximate comparison between years not widely separated, the figures relating to Victoria are shown in the following table for the last ten years .—

MARRIAGE RATES, 1911 TO 1920.

Year.	Marriage Rate.	Year.	Marriage Rate.
1911 ..	8·40	1916 ..	8·05
1912 ..	8·65	1917 ..	6·76
1913 ..	8·13	1918 ..	6·46
1914 ..	8·31	1919 ..	7·98
1915 ..	9·00	1920 ..	9·90

The rates in the other States, New Zealand, and England and Wales in 1920 were as follows :—New South Wales, 9·93; Queensland, 9·08; South Australia, 10·33; Western Australia, 8·78; Tasmania, 9·18; New Zealand, 10·32; and England and Wales, 10·05.

The marriage rate for 1920 was the highest recorded in the history of the State. This was mainly due to the marriages of a large number of returned soldiers who had settled down to ordinary civilian life.

Marriages to marriageable men and women.

The marriages in proportion to the population, to the unmarried men and widowers aged 21 to 55, and to the unmarried women and widows aged 18 to 50 in each census year, 1857 to 1911, are given in the following table :—

MARRIAGES PER 1,000 OF POPULATION AND OF SINGLE MEN AND WOMEN, 1857 TO 1911.

Year of Census.	Exclusive of Chinese and Aborigines.						
	Enumerated Population.	Number of Unmarried and Widowed.		Marriages.	Proportion of Marriages per 1,000 of the—		
		Men (aged 21 to 55).	Women (aged 18 to 50).		Population.	Unmarried and Widowed Men (aged 21 to 55).	Unmarried and Widowed Women (aged 18 to 50).
1857 ..	383,668	88,456	18,128	4,465	11·64	50·48	246·30
1861 ..	513,896	98,665	24,009	4,528	8·81	45·89	188·60
1871 ..	712,263	77,078	40,836	4,715	6·62	61·17	115·46
1881 ..	849,438	77,250	75,098	5,732	6·75	74·20	76·33
1891 ..	1,130,463	133,576	113,276	9,007	7·97	67·43	79·51
1901 ..	1,193,340	123,691	137,267	8,468	7·10	68·46	61·69
1911 ..	1,309,950	132,642	158,556	10,984	8·39	82·81	69·28

NOTE.—The figures in this table relate to the twelve months of which the date of census is the central point.

Factors in marriage rates.

An examination of the figures for the seven census periods shows how the crude marriage rate is affected by the proportion of marriageable persons in the community. The maximum marriage rate (per 1,000 of population), which occurred in 1857, was co-incident with the highest proportion of marriageable persons, while the minimum rate—in 1871—was associated with the lowest proportion of such persons. A further examination of the figures shows that the ordinary marriage rate is more directly affected by the proportion of eligible men than by that of eligible women in the population. Thus, the percentage of single women aged 18 to 50 rose from 4·7 in 1857 to 12·1 in 1911, whilst that of single men aged 21 to 55 fell from 23 to 10 in the same period. After allowing for the more

uniform distribution of males and females of marriageable ages in the later years, the decrease in the percentage of marriageable men coincides fairly closely with the decline in the ordinary marriage rate. The female marriage rates show that the chances of a woman marrying were very much smaller at the census dates in 1901 and 1911 than at any earlier period, the proportion entering wedlock each year having fallen from about 1 in 4 in 1857, and nearly 1 in 5 in 1861, to 1 in 16 in 1901, and 1 in 15 in 1911.

Marriages to marriageable persons in metropolis and country.

The extent to which the high crude marriage rates in Greater Melbourne, as compared with the country, are due to variations in age, sex, and conjugal condition may be ascertained by an examination of the results of the census of 1911. The first striking fact disclosed is that, whether the comparison be made for all ages or for marriageable ages only, there is a great preponderance of women over men in the metropolis, whilst in the remainder of the State the men are in excess. In Greater Melbourne there were 55,347 unmarried men aged 21 to 55, as compared with 84,238 unmarried women aged 18 to 50. In the rest of the State the eligible men and women at the corresponding ages numbered 79,925 and 74,318 respectively. It is thus seen that, while there was a surplus of 28,891 marriageable females in the metropolis, there was a deficiency of 5,607 in the country. To obtain definite information regarding the frequency of marriage, the residents of these areas who entered into wedlock were compared with the marriageable population of each sex, and the resulting proportions for the average of the period 1910–12 are shown in the following statement :—

YEARLY MARRIAGES PER 1,000 MARRIAGEABLE PERSONS IN GREATER MELBOURNE AND THE REST OF THE STATE, 1910–12.

District.	Men.	Women.
Melbourne and Suburbs	95·8	66·6
Rest of the State	66·4	68·9

The results show that during the period mentioned the chance of marrying within a year was slightly less for a woman residing in Greater Melbourne than for one living outside that area. On the other hand, the chance of a man marrying was 44 per cent. greater for a metropolitan than for a country resident.

Marriage rate in age groups.

The marriage rates amongst marriageable men and women at different periods of life have been computed for various age groups at each of four census periods, and are shown in the following table :—

MARRIAGES PER 1,000 MARRIAGEABLE MEN AND WOMEN IN AGE GROUPS.

Age Group.	Men.				Women.			
	1881.	1891.	1901.	1911.	1881.	1891.	1901.	1911.
15–21 ..	..	..	..	..	24·6	23·6	18·8	23·3
21–25* ..	57·8	44·3	44·6	55·2	118·8	106·0	87·2	105·6
25–30 ..	114·2	85·9	90·5	118·6	105·7	100·5	84·7	112·1
30–35 ..	82·9	75·2	82·1	101·1	73·1	66·4	57·9	66·0
35–40 ..	56·4	51·1	62·6	72·9	53·8	46·4	37·2	43·0
40–45 ..	30·5	33·4	39·9	44·7	32·5	27·7	22·3	20·7
45–50 ..	21·8	25·9	29·8	34·9	22·1	17·8	14·31	5·5
50 and upwards	10·5	9·1	9·1	12·1	4·9	4·2	2·4	2·6

* In the case of men, 20–25.

In 1911 the proportion of marriages to marriageable men in each age group (except 20–25) was the highest experienced, and that of marriages to marriageable women was greater in every age group except 40–45 than in the preceding census year. It will be noted that in 1911 the highest marriage rate among women obtained at the age period 25-30, whilst in each of the three earlier census years the maximum rate occurred between the ages 21 and 25.

Marriage rates of bachelors, widowers, spinsters, and widows.

The probabilities of bachelors and spinsters marrying and of widowers and widows re-marrying have been obtained by comparing their marriages at specified ages with the respective numbers in the community at these ages at the census of 1911. The marriages per 1,000 of the above-mentioned persons are given in the following table for the year mentioned :—

MARRIAGES PER 1,000 BACHELORS, WIDOWERS, SPINSTERS, AND WIDOWS, 1911.

Age Group.	Marriages to every 1,000—			
	Bachelors.	Widowers.	Spinsters.	Widows.
15–21	..	..	22·3	40·0
21–25*	55·3	64·5	105·3	145·6
25–30	118·8	120·1	111·1	147·6
30–35	99·6	151·2	63·8	80·8
35–40	69·0	113·2	38·9	60·5
40–45	38·1	94·4	16·5	30·7
45–50	27·0	66·8	12·6	17·2
50 and upwards	7·4	16·8	3·7	2·3

* In the case of men, 20–25.

The figures show that the probability of a widower marrying within a year is greater than that of a bachelor of similar age, and further, that the difference in favour of the former is much greater at ages over 30 than at earlier ages. Comparing the marriage rate for widows with that for spinsters it is seen that at every age under 50 the chance of a widow marrying is considerably greater than that of a spinster of the same age. As 76 per cent. of the widowers and 78 per cent. of the widows are over 50 years—a period of life when the chance of re-marrying is small—and the great majority of the bachelors and spinsters are under that age—a period when the probability of marrying is much greater—it was to be expected that the rate for each of the two

former sections would be much lower than that for each of the latter. In proportion to their respective numbers, the marriages of widowers were only slightly more than half as numerous as those of bachelors, and those of widows were only about one-fifth those of spinsters.

Ages of bridegrooms and brides.

The ages of bridegrooms and brides who were married in 1920 are shown in combination for various groups in the table which follows :—

AGES OF BRIDEGROOMS AND BRIDES IN COMBINATION IN VICTORIA, 1920.

Ages of Bridegrooms.	Ages of Brides.																		Total Bridegrooms.
	14.	15.	16.	17.	18.	19.	20.	21 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 and over	
17	...	1	2	2	1	1	...	1	1	...	...	...	...	...	...	...	...	...	9
18	...	...	3	2	14	11	5	10	1	...	...	...	...	...	...	...	...	...	46
19	...	1	7	21	24	34	17	20	3	...	...	...	...	...	...	...	...	...	127
20	...	..	5	13	33	53	41	60	7	2	...	...	...	...	...	...	...	...	214
21 to 25	...	5	12	64	173	331	383	1,953	582	52	7	4	...	...	...	...	...	...	3,566
25 to 30	2	2	5	31	97	171	247	2,199	2,36	378	52	12	3	...	..	...	...	...	5,565
30 to 35	..	...	1	8	23	37	52	695	1,170	622	146	33	8	2	...	...	...	...	2,797
35 to 40	..	1	2	2	6	15	28	183	374	300	232	62	12	3	1		...	...	1,221
40 to 45	...	...	1	1	1	3	4	60	109	147	111	72	24	8	...	...	...	...	541
45 to 50	...	...	..	...	1	2	2	19	37	59	82	56	55	14	3	...	...	...	330
50 to 55	...	...	...	...	...	...	1	4	15	32	27	58	43	18	13	3	1	...	215
55 to 60	...	...	...	...	...	...	...	2	9	16	21	20	25	21	11	3	...	...	128
60 to 65	...	...	...	.	...	...	...	...	2	1	3	9	14	12	8	9	2	1	61
65 to 70	...	...	...	...	...	...	...	...	...	1	3	8	3	4	5	8	7	3	42
70 to 75	...	...	...	...	...	...	...	...	...	1	1	4	1	3	5	3	5	...	23
75 and over	...	...	...	...	...	...	...	...	...	...	...	...	1	4	2	3	2	1	13
Total Brides	2	10	38	144	373	658	780	5,206	4,676	1,611	685	338	189	89	48	29	17	5	14,898

Although age inequalities among contracting parties were relatively few, they were striking in degree. Thus five men between 45 and 50 married women under 21, while seven women between 35 and 40 and four between 40 and 45 were married to men who were under 25 years. The great majority of the parties were, however, of suitable ages. Of every 1,000 men married during the year, 698 were older and 198 younger than their brides, and 104 were of the same age as their partners.

Proportion of marriages at various ages.

The proportions of both sexes marrying in the various age groups are shown in the succeeding table for the averages of the periods 1881–90 and 1901–10, also for the year 1920:—

PROPORTIONS OF MALES AND FEMALES MARRYING AT DIFFERENT AGES, 1881–90, 1901–10, AND 1920.

Age Group.	Proportion per 1,000 of total.					
	Bridegrooms.			Brides.		
	1881–90.	1901–10.	1920.	1881–90.	1901–10.	1920.
Under 15	...	...	...	·15	·14	·13
15 to 16	...	...	...	1·17	1·12	·67
16 to 17	·03	·09	...	6·53	5·16	2·55
17 to 18	·29	·34	·54	20·32	15·58	9·67
18 to 19	1·46	2·09	3·09	42·94	33·31	25·04
19 to 20	5·62	7·02	8·59	65·03	48·67	44·17
20 to 21	15·19	13·67	14·36	73·84	59·41	52·36
21 to 25	321·02	258·64	238·82	432·34	380·91	349·11
25 to 30	365·48	357·07	374·21	223·83	267·78	313·93
30 to 35	134·57	177·13	187·74	62·07	98·54	108·40
35 to 40	58·29	84·06	82·03	29·53	44·37	45·98
40 to 45	32·54	40·87	36·25	17·10	21·19	22·69
45 to 50	24·77	24·05	22·15	12·23	11·00	12·69
50 to 55	18·40	13·33	14·43	6·74	6·29	5·97
55 to 60	11·49	8·05	8·46	3·40	3·13	3·22
60 and over	10·85	13·59	9·33	2·78	3·40	3·42
Total	1,000·00	1,000·00	1,000·00	1,000·00	1,000·00	1,000·00

The age constitution of brides shows a very marked alteration in recent periods. Of every 1,000 women who were married during 1920 484 were under 25 years, and 314 were aged 25–30, as against 544 and 268 at corresponding ages in the years 1901 to 1910. As fertility is considerably less at older than at younger ages, it is evident that, owing to the altered age distribution of wives, the potential births to every 1,000 marriages in the year under review are fewer than to marriages contracted during the period 1901–1910.

Age at marriage.

A high proportion of re-marriages has the effect of increasing the average marrying age of bridegrooms and brides. This is readily seen by comparing for 1920 the mean

age at marriage of bachelors, 28·75, with that of divorced men, and of widowers—37·18 and 45·29 respectively. The average age of spinsters marrying was 25·90, as against 34·53 for divorced women and 38·33 for widows. The average age of men marrying women under 45 and of their brides for certain periods since 1870 is shown in the following table :—

MEAN AGES AT MARRIAGE.

Period.	Average Age of—	
	Brides under 45.	Bridegrooms of Brides under 45.
	Years.	Years.
1870–4	24·13	29·93
1880–4	23·83	28·61
1890–4	24·66	28·66
1900–4	25·44	29·70
1905–9	25·88	29·80
1910	25·88	29·58
1911	25·81	29·46
1912	25·75	29·17
1913	25·66	29·01
1914	25·71	29·01
1915	25·68	28·75
1916	26·07	29·48
1917	26.03	29·69
1918	25·95	29·66
1919	26·14	29·64
1920	26·00	29·21

The mean age of women under 45 who married in 1920 differed very slightly from the average of the previous five years. In Victoria in 1920 the mean marrying age of all brides was 26·67, as compared with 27·16 in England and Wales and 27·11 in New Zealand in 1919. The mean ages of all bridegrooms in these countries for the same years were 29·85, 29·81, and 31·21 years respectively.

Marrying age according to occupation. In the *Year-Book* for 1915–16 a table is given showing the average age at marriage of persons engaged in various occupations. This was based on 42,764 marriages in the period 1907–11, in connexion with which the records gave definite occupations.

Birthplaces of persons marrying. Marriage records show that, of the persons married in Victoria during 1920, 89·7 per cent. were born in Australia, 8·6 per cent. were born in the United Kingdom, and only small proportions, amounting to 1·2 per cent. of the bridegrooms and ·5 per cent. of the brides, were natives of foreign countries.

The numbers born in Australia and other countries are shown in the following table for the years 1913 and 1920 :—

BIRTHPLACES OF PERSONS MARRIED, 1913 AND 1920.

Where Born.	Bridegrooms.		Brides.	
	1913.	1920.	1913.	1920.
Australia	9,628	13,116	10,274	13,602
New Zealand	155	100	82	75
England and Wales ...	972	1,126	644	811
Scotland	213	204	141	225
Ireland	126	121	83	66
Other British Possessions ...	40	49	24	42
Germany	46	22	19	5
Russia	17	23	3	8
Italy	15	16	12	5
United States	30	30	14	15
Other Foreign Countries ...	82	91	28	44
Total	11,324	14,898	11,324	14,898

Marriages in quarters. Victorian experience shows that the Autumn quarter is the most frequently selected season for marrying In 1919 the largest number of marriages took place in the Spring. In 1920, however, the experience was similar to that of years prior to 1919, and the greatest proportion took place in the Autumn, when 4,012 marriages were solemnized, as against 3,902 in the Spring, 3,544 in the Summer, and 3,440 in the Winter,.

Conjugal condition of persons marrying. The following statement shows the percentages of persons in each conjugal condition who have married in different periods since 1870 :—

CONJUGAL CONDITION OF PERSONS MARRYING, 1871-1920.

Conjugal Condition.	Percentage of total Marriages.					
	1871-80.	1881-90.	1891-1900.	1901-10.	1911-19.	1920.
Bachelors and Spinsters..	80·59	85·84	87·22	88·46	90·34	90.08
Bachelors and Widows ..	7·10	4·72	4·23	3·66	3·08	3·81
Widowers and Spinsters..	7·75	6·17	6·07	5·70	4·85	4·41
Widowers and Widows ..	4·56	3·27	2·48	2·18	1·73	1·70

Of every 1,000 persons of each sex married in Victoria during last year, 61 were widowers and 55 were widows, as against 68 and 58 respectively in 1919, and 77 and 57 in 1918.

Divorced persons re-marrying.

The number of divorced persons re-married during 1920 was 304, which was 11·76 per cent. above the number for the preceding year. Of the 113,214 persons married during the last five years, divorced persons numbered 1,155, or 1 in every 98 persons, as compared with 1 in every 120 in the preceding five-year period. The following are the numbers of divorced persons who have re-married since 1915 :—

DIVORCED PERSONS RE-MARRYING, 1916 TO 1920.

Year.	Males.	Females.	Total.
1916	81	111	192
1917	111	117	228
1918	81	78	159
1919	121	151	272
1920	158	146	304

The divorced persons in the State at the census of 1911 numbered 1,240, of whom 575 were men and 665 women. A comparison of the re-marriages of divorced males and females during 1911 with these numbers shows that, according to the experience of that year, 11·5 per cent. of the males and 15·8 per cent. of the females re-marry each year. As these proportions greatly exceed the rates for other sections of the community, it is evident that many divorces are obtained with the view of early re-marriage.

Marriages of minors.

The proportions of bridegrooms and brides under 21 years of age are given in the subjoined table for the years 1916 to 1920 :—

Year.	Percentage under 21 years of age.	
	Bridegrooms.	Brides.
1916	2·65	13·23
1917	2·90	14·06
1918	3·27	13·91
1919	3·14	13·09
1920	2·66	13·46

Marriages in religious denominations.

The numbers and proportions of marriages solemnized according to the rites of the principal religious denominations and of those performed by registrars of marriages for the years 1919 and 1920 are shown in the following table :—

MARRIAGES IN VARIOUS DENOMINATIONS.

Denomination.	1919.		1920.	
	Number.	Percentage of Total Marriages.	Number.	Percentage of Total Marriages.
Church of England	3,369	28·78	4,403	29·56
Roman Catholic Church... ...	1,954	16·69	2,618	17·57
Presbyterian Church	2,186	18·68	2,865	19·23
Methodist Church	1,804	15·41	2,061	13·84
Congregational Church	870	7·43	1,179	7·91
Baptist Church...	549	4·69	687	4·61
Lutheran Church	56	·47	39	·26
Church of Christ	288	2·46	325	2·18
Salvation Army	62	·53	64	·43
Jews	41	·35	38	·26
Other Sects	138	1·18	170	1·14
Registrars of Marriages... ...	389	3·33	449	3·01
Total	11,706	100·00	14,898	100·00

Marriages by Anglican clergymen represented 29·56 per cent. of the total in 1920 as compared with 28·78 per cent. in the previous year, 27·67 per cent. in 1918, 26·08 per cent. in 1917, 25·44 per cent. in 1911 and 21·18 per cent. in the period 1904–8. Excepting the ratios for the Presbyterian and Methodist churches, there were great disparities between the proportion of marriages celebrated according to the rites of each of the principal denominations and the proportionate number of adherents possessed by it in the community.

Civil marriages.

In 1920, 3·01 per cent., in 1919, 3·3 per cent., in 1918, 3·1 per cent., and, in 1914 and 1913, 2·6 per cent. of the total marriages in Victoria were celebrated by lay registrars, as against 1 per cent. in 1909, and about 7 per cent. in the decade ended 1890. The decrease which occurred between the earlier period and 1909 was due to the competition of matrimonial agencies which sprang up about 1894, and the increase since 1909 has probably been due to the *Marriage Act* 1909 (now incorporated in the *Marriage Act* 1915—No. 2691) permitting the removal from the list of registered clergymen of the names of those who make a business of celebrating marriages. The proportion of civil marriages in Victoria is only about one-seventh of the proportions in New Zealand and England and Wales.

Registered clergymen.

The ministers qualified by registration to celebrate marriages in Victoria numbered 1,529 on 31st December,

1920. The numbers of those in each denomination (excepting Jews and Quakers) and of the lay registrars of marriages were as follows :—

REGISTERED MINISTERS OF EACH DENOMINATION.

Denomination.	Number of Registered Ministers.	Denomination.	Number of Registered Ministers.
Church of England ..	379	Australian Church ..	1
Roman Catholic ..	323	Ballarat Town Mission ..	1
Presbyterian	289	Free Christian ..	2
Methodist	257	New Church	1
Congregational	65	Greek Orthodox Church	1
Baptist	87	Unitarian	1
Church of Christ ..	60		
Lutheran	21	Total clergymen ..	1,529
Salvation Army ..	29	Lay Registrars of Marriages	20
Latter Day Saints ..	4		
Seventh Day Adventist ..	6		
Catholic Apostolic ..	2	Grand Total ..	1,549

BIRTHS.

Number of births.

The number of births registered in Victoria during the year 1920 was 36,214, of which 18,648 were of males and 17,566 of females. This was 4,593 above the number recorded for the preceding year, and, with the exception of that for 1914, was the highest number recorded for any year since 1893. Still-births, which are excluded from both births and deaths, numbered 1,115, and corresponded to a ratio of 3·1 per 100 infants born alive in 1920. The ratio for the metropolitan area was 3·4, and that for the remainder of the State 2.7. There were 1,062 male to every 1000 female births in 1920, as compared with 1,054 in 1919, 1,049 in 1918, and 1,089 in 1917. The figures for each year since 1900 are as follows :—

BIRTHS IN VICTORIA, 1901 TO 1920.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1901 ..	15,876	15,132	31,008	1911 ..	16,944	16,100	33,044
1902 ..	15,583	14,878	30,461	1912 ..	18,244	17,573	35,817
1903 ..	15,115	14,454	29,569	1913 ..	18,436	17,542	35,978
1904 ..	15,313	14,450	29,763	1914 ..	18,549	17,676	36,225
1905 ..	15,523	14,584	30,107	1915 ..	17,821	17,189	35,010
1906 ..	15,716	15,128	30,844	1916 ..	17,625	16,614	34,239
1907 ..	15,989	15,380	31,369	1917 ..	17,222	15,813	33,035
1908 ..	16,073	15,028	31,101	1918 ..	16,176	15,425	31,601
1909 ..	16,092	15,457	31,549	1919 ..	16,227	15,394	31,621
1910 ..	16,411	15,026	31,437	1920 ..	18,648	17,566	36,214

The births in Australia were 1,576 fewer in 1920 than in 1914. The number for 1920 was 136,407, as compared with 122,290 in the previous year, 125,739 in 1918, 129,965 in 1917, 131,426 in 1916, 134,871 in 1915, and 137,983 in 1914. Of the total recorded for 1920, 36,214 occurred in Victoria, 53,942 in New South Wales, 20,256 in Queensland, 12,028 in South Australia, 8,149 in Western Australia, 5,740 in Tasmania, 63 in the Northern Territory, and 15 in the Federal Capital Territory.

Birth rates. In young communities, birth rates calculated per 1,000 of the population are to some extent unreliable and misleading. In the earlier periods, when, owing to immigration, the population consists for the most part of men and women at the reproductive period of life, the rates are obviously high. As time proceeds, however, notwithstanding that immigration of reproductive adults may be maintained, the proportion of such adults to the total population must diminish, and with it, of necessity, the birth rate. The following table shows the birth rates in Victoria from 1870 to 1920 :—

BIRTH RATES IN VICTORIA PER 1,000 OF POPULATION, 1870 TO 1920.

Year.	Birth Rate.	Year.	Birth Rate.	Year.	Birth Rate.
1870 ..	38·07	1898 ..	25·51	1910 ..	24·20
1875 ..	33·94	1899 ..	26·14	1911 ..	25·03
1880 ..	30·75	1900 ..	25·79	1912 ..	26·41
1885 ..	31·33	1901 ..	25·72	1913 ..	25·82
1890 ..	33·60	1902 ..	25·05	1914 ..	25·45
1891 ..	33·57	1903 ..	24·28	1915 ..	24·55
1892 ..	32·51	1904 ..	24·42	1916 ..	24·30
1893 ..	31·18	1905 ..	24·57	1917 ..	23·50
1894 ..	29·05	1906 ..	24·91	1918 ..	22·29
1895 ..	28·46	1907 ..	25·03	1919 ..	21·57
1896 ..	27·19	1908 ..	24·56	1920 ..	24.07
1897 ..	26·49	1909 ..	24·62		

The birth rate for 1920 was the highest since 1916. All the States had higher rates in 1920 than in the previous year. The births per 1,000 of the population in the other States, New Zealand, and England and Wales in 1920 were as follows :—New South Wales, 26·59 ; Queensland, 27·58 ; South Australia, 25·45 ; Western Australia, 24·40 ; Tasmania, 26·37 ; New Zealand, 25·36 ; and England and Wales, 25·4. Since 1913 the birth rate has declined by 8·9 per cent. in Australia, but increased by 5·4 per cent. in England and Wales.

The birth rate of a community is almost wholly dependent upon the proportion of wives at the reproductive period of life and their internal age distribution. As these elements, especially the former,

differ widely in certain Australian States, the crude rates of the different States are scarcely comparable. The figures for the census of 1911 showed that in every 1,000 of the population of each State and of the Commonwealth the married women aged 15 to 45 numbered 106·0 in Victoria, 115·4 in New South Wales, 107·2 in Queensland, 109·9 in South Australia, 123·6 in Western Australia, 110·5 in Tasmania, and 111·2 in Australia. In the case of Victoria, the deficiency in the proportion of wives at the ages mentioned was accentuated by their comparatively unfavorable internal age distribution, the proportion at the younger and more fertile ages being smaller than that of any other State. A computation shows that owing to these differences the legitimate births in Victoria to every 1,000 of the population in 1911 were fewer by 3·5 than in New South Wales, by 1·4 than in Queensland, by 1·8 than in South Australia, by 4·2 than in Western Australia, and by 2·5 than in Tasmania, also that they were 2·0 less than in the whole of Australia.

Corrected birth rates per 1,000 wives in Victoria.

An accurate view of the alteration in the fertility of wives is obtained by comparing the ratios of legitimate births to wives at reproductive ages at different periods, and allowing for the difference in their age distribution at each period. The following table shows for Victoria the distribution of married women in six five-year groups in the five census years 1871 to 1911 :—

PROPORTION OF MARRIED WOMEN IN AGE GROUPS TO TOTAL BETWEEN 15 AND 45 IN THE FIVE CENSUS YEARS 1871 TO 1911.

Census Year.	Proportion in each Age Group to Every 1,000 Married Women between 15 and 45.					
	15–20.	20–25.	25–30.	30–35.	35–40.	40–45.
1871 ..	20·3	130·4	211·4	230·7	233·2	174·0
1881 ..	17·3	159·5	204·6	206·0	209·7	202·9
1891 ..	13·5	156·9	275·2	244·1	172·1	138·2
1901 ..	8·1	99·0	198·3	249·6	249·2	195·8
1911 ..	12·4	113·8	206·9	226·6	221·2	219·1

To estimate the effect which the alteration in age distribution had on the birth rate, the proportion in each of the above groups was multiplied by the average natality rate for the group according to a standard table—the standard used for this purpose being the Swedish table of 1891. The sum of the products for each census year represented the number of births which would have occurred in that year per 1,000 married women between 15 and 45 had the fertility of these

women remained unaltered, *i.e.*, the potential births. The year 1871 was used as a basis with which to compare the four subsequent census years, and corrections were applied to the actual births (per 1,000) occurring in those years, so as to make them conform to the age constitution in the first-mentioned year. The correction factors were obtained by taking the number of births per 1,000 married women aged 15–45 which would have occurred in 1871 had the standard natality rates prevailed, and dividing this number by the corresponding number of potential births for 1881, 1891, 1901, and 1911. The above method was applied to find what proportion of the alteration in the ratio of births to married women under 45 was due to causes other than varying age constitution. The last mentioned factor has been taken into account in the computation of the birth rates appearing in column 5 of the subjoined table :—

CORRECTED LEGITIMATE BIRTH RATES.

(1) Census Year.	(2) Married Women between 15 and 45 years of age.	(3) Legitimate Births.	(4) Legitimate Births per 1,000 Married Women 15–45.	(5) Corrected Legitimate Births per 1,000 Married Women 15–45.	(6) Factor for Correction of Rate in Column 4.
1871 ..	88,561	26,805	302·67	..	..
1881 ..	84,831	25,675	302·66	303·14	1·0016
1891 ..	120,700	35,853	297·04	281·98	0·9493
1901 ..	127,858	29,279	229·00	238·75	1·0426
1911 ..	139,398	31,080	222·96	231·50	1·0383

An inspection of the rates in column (5) shows that there was a fall of 7 per cent. in 1891 as compared with 1881, a further serious decline of over 15 per cent. in 1901 as compared with 1891, and a decrease of 3 per cent. in 1911 as compared with 1901, which were not due to variations in the age distribution of the married women between 15 and 45 in the community. A further examination of the corrected legitimate birth rates appearing in this column shows that the births in 1911 to every 1,000 married women of reproductive ages were 71 fewer than in 1881, 50 fewer than in 1891, and 7 fewer than in 1901.

Corrected legitimate birth rates for Victoria.

Legitimate birth rates (per 1,000 of the total population) for widely separated periods do not give a correct indication of the relative fertilities of those periods, unless the number of married women at reproductive ages in proportion to the population and the age constitution of such women have remained unchanged. In order to allow for the disturbance which may have been introduced through variations in these elements it is necessary

that corrections be made in the crude rates. The factor to correct the result of changes in the proportion of married women between 15 and 45 is obtained by comparing the number of such women in the community at the period of observation with the number in a standard population. The method of obtaining the correcting factor for the disturbance due to the second element was explained in a previous paragraph.

The following table shows the crude legitimate birth rates in five census years, the corrections to be applied thereto for the reasons mentioned above, the amended birth rates, and the difference between these and the crude rates. The standard used in the computation of the correction factors was the Victorian population of 1871. Corrected birth rates per 1,000 of the population in the years 1881, 1891, 1901, and 1911 are as follows :—

CORRECTED LEGITIMATE BIRTH RATES PER 1,000 OF POPULATION.

Year.	Enumerated Population.	Legitimate Births.	Legitimate Births per 1,000 of population (crude rates).	Wives aged 15–45, per 1,000 of population.	Correction factor for variations in—		Corrected Birth Rate.	Difference between crude and corrected rates.
					Proportion of wives aged 15–45.	Age distribution of wives aged 15–45.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1871	731,528	26,805	36·64	121·1	..	..	..	..
1881	862,346	25,675	29·77	98·4	1·2307	1·0016	36·69	6·92
1891	1,140,405	35,853	31·44	105·8	1·1446	0·9493	34·39	2·95
1901	1,201,341	29,279	24·37	106·4	1·1382	1·0426	28·77	4·40
1911	1,315,551	31,080	23·63	106·0	1·1425	1·0383	27·89	4·26

An inspection of the crude rates in the fourth column of the above table shows that legitimate births per 1,000 of population apparently declined by 6·87 in 1881, 5·20 in 1891, 12·27 in 1901, and 13·01 in 1911, as compared with the first census date. After making allowance for the disturbing elements known to exist, the apparent decline of 6·87 in 1881 is altered to an increase of ·05 per 1,000, while the decline of 1891 is reduced from 5·20 to 2·25, that of 1901 from 12·27 to 7·87, and that of 1911 from 13·01 to 8·75 per 1,000 as compared with 1871. Between 1891 and 1911 there was a reduction of nearly 19 per cent. in the rate due to other than normal causes.

Births to wives in Australasia and England.

The next table shows the legitimate births per 1,000 married women under 45 (not allowing for their differing age distribution) in each State, New Zealand, and England and Wales in the three census years 1891, 1901, and 1911 :—

LEGITIMATE BIRTHS PER 1,000 MARRIED WOMEN UNDER 45 YEARS OF AGE.

Country.	Legitimate Births per 1,000 Married Women aged 15 to 45.			Decrease per cent. in 20 years.
	1891.	1901.	1911.	
Victoria	297·0	229·0	223·0	24·9
New South Wales ..	298·9	235·6	235·4	21·2
Queensland	315·0	251·0	244·8	22·3
South Australia ..	311·1	235·0	235·9	24·2
Western Australia ..	352·8	244·0	221·8	37·1
Tasmania	315·9	254·6	244·8	22·5
New Zealand ..	279·1	246·1	211·7	24·2
England and Wales ..	268·8	234·2	196·2	27·0

It will be seen from these figures that between 1891 and 1911 there was a pronounced decline in the proportion of legitimate births to married women under 45 years of age in the different States, New Zealand, and England and Wales, varying from 37 per cent. in Western Australia to 27 per cent. in England and Wales, 25 per cent. in Victoria, 24 per cent. in South Australia and New Zealand, and 21 per cent. in New South Wales. Slightly more than one-fourth of the total decline in Victoria during the twenty years was due to the altered age distribution of married women under 45 years of age, and it is probable that this cause was also responsible for a portion of the decrease in each of the other States and New Zealand.

Birthplaces of parents of legitimate children.

The birth records for 1920 show that 81 out of every 100 children were born to Australian parents, and 95 out of every 100 to one or both parents born in Australia. Of the total fathers, 80·4 per cent. were born in Victoria ; 88·0 in Australia ; ·9 in New Zealand ; 7·1 in England and Wales ; 1·4 in Scotland ; ·9 in Ireland ; ·2 in other British Possessions ; and 1·5 per cent. in foreign countries. The corresponding percentages for mothers were : Victoria, 80·8 ; Australia, 88·9 ; New Zealand, ·7, England and Wales, 7·5 ; Scotland, 1·3 ; Ireland, ·7; other British Possessions, ·2 ; and foreign countries, ·7.

Chinese and half-caste Chinese births.

During the past ten years the births to Chinese parents numbered 55, or 1 in every 5,880 legitimate births, and there were 278 Chinese half-caste births (fathers only Chinese), or 1 in every 1,163 legitimate births registered in the same period.

Ages of parents of legitimate children.

The average ages of fathers and mothers of legitimate children whose births were recorded in 1920 were 33·53 and 29·80 years respectively, which were 4·30 and 3·80 years above the average ages of bridegrooms marrying brides under 45 years of age, and of such brides for the same period. The proportions of both parents in various age groups are shown in the following table for the year mentioned :—

PERCENTAGE OF PARENTS IN AGE GROUPS, 1920.

Father.		Mother.	
Age Group.	Proportion per 100 Births.	Age Group.	Proportion per 100 Births.
Under 20	·32	Under 20	2·59
20 to 25	9·55	20 to 25	20·81
25 to 30	26·57	25 to 30	31·87
30 to 35	26·56	30 to 35	24·25
35 to 40	18·61	35 to 40	14·80
40 to 45	10·52	40 to 45	5·22
45 to 50	5·11	45 and over ...	·46
50 and over	2·76		
Total ...	100·00	Total ...	100·00

It will be seen that, on the experience of 1920, 52·7 per cent. of the mothers were between ages 20 and 30, and 39·1 per cent. between ages 30 and 40. The proportions of fathers at these ages were 36·1 and 45·2 per cent. respectively. Of every 1,000 legitimate births, about 26 were due to mothers under 20 years, and 5 to mothers aged 45 years and upwards. The *Year-Book* for 1916–17 contains on page 326 information relating to the ages of mothers of first-born children.

Birth rates in town and country.

The subjoined table shows the number of births per 1,000 of the population in the metropolitan, the other urban, and the rural districts, for 1875 and each subsequent

fifth year, also the averages of the years 1901–5 and 1906–10, and the rates for each of the last ten years :—

BIRTH RATES IN METROPOLITAN, OTHER URBAN, AND RURAL DISTRICTS, 1875 TO 1920.

Year.	Births per 1,000 of the Population.			
	Metropolitan District.	Other Urban Districts.	Rural Districts.	Victoria.
1875	33·63	38·63	31·54	33·94
1880	31·19	34·21	28·72	30·75
1885	34·94	31·87	28·12	31·33
1890	37·71	34·43	28·93	33·60
1895	29·46	34·03	25·49	28·46
1900	24·54	32·29	24·26	25·79
1901–5	24·03	32·14	23·46	24·81
1906–10	23·59	32·47	22·88	24·66
1911	24·51	31·85	22·79	25·03
1912	27·48	33·24	22·46	26·41
1913	27·20	31·77	21·74	25·82
1914	26·82	31·36	21·34	25·45
1915	26·11	30·32	20·18	24·55
1916	25·51	30·56	20·10	24·30
1917	24·45	30·00	19·53	23·50
1918	23·11	28·70	18·49	22·29
1919	22·27	27·67	18·07	21·57
1920	25·58	30·57	19·26	24·07

Birth rates in country towns. The birth rates in the seven principal country towns are given below for the period 1911-15, and for each of the last five years :—

BIRTH RATES IN THE SEVEN PRINCIPAL COUNTRY TOWNS.

Period.	Births per 1,000 of the Population.						
	Ballarat and Suburbs.	Bendigo and Suburbs.	Geelong and Suburbs.	Castlemaine and Suburbs.	Maryborough.	Warrnambool.	Stawell.
1911-15...	25·91	31·89	27·68	29·34	31.41	42·03	38·16
1916 ...	24·16	27·38	27·58	27·40	32·00	41·22	37·87
1917 ...	22·94	27·75	25·33	22·67	29·60	42·03	35·37
1918 ...	21·24	25·91	23·77	21·00	29·90	39·73	32·65
1919 ...	22·04	25·45	26·61	18·43	39·39	45·33	28·80
1920 ...	24·21	28·77	30·93	20·29	38·90	48·88	36·00
Average 1916-20	22·92	27·05	26·84	21·96	33.96	43·44	34·14

The rates for these towns, with the exceptions of Maryborough and Warrnambool, showed a considerable decline in 1916-20 as compared with the rates for the preceding five-year period.

Birth rates in metropolitan municipalities. The birth rates in metropolitan municipalities are shown in the following table :—

METROPOLITAN BIRTH RATES 1901, 1911, 1918, 1919, AND 1920.

Districts.	Births per 1,000 of the Population.				
	1901.	1911.	1918.	1919.	1920.
Melbourne City	21·15	19·90	18·52	16·91	19·28
Fitzroy City	22·58	24·40	22·54	20·49	18·43
Collingwood City	26·46	23·36	16·97	15·82	20·30
Richmond City	25·51	25·28	24·84	23·86	27·50
Brunswick City	26·71	24·81	24·56	22·80	25·85
Northcote City	24·40	26·00	27·99	26·91	31·93
Prahran City	22·69	23·77	25·30	24·47	30·18
South Melbourne City... ...	22·10	21·71	16·76	17·60	19·20
Port Melbourne City	25·26	24·59	19·38	19·77	25·00
St. Kilda City	18·59	21·10	14·56	13·29	13·86
Brighton City	22·39	22·48	18·08	21·11	20·67
Essendon City	23·77	21·32	21·95	20·77	22·48
Hawthorn City	22·67	20·16	18·38	18·31	23·51
Kew City	21·54	23·43	23·14	21·05	23·10
Footscray City	28·21	30·05	31·62	28·76	32·35
Williamstown City	25·34	24·42	21·36	22·35	23·70
Oakleigh Borough	31·25	33·94	29·78	34·30	34·87
Caulfield City	18·72	20·15	24·22	23·47	27·87
Malvern City	21·98	20·25	16·18	16·00	15·35
Camberwell City	19·17	15·24	20·61	16·22	21·49
Preston Shire	26·76	24·06	18·92	17·70	16·43
Coburg Town...	20·58	22·75	24·47	25·27	31·70
Sandringham Town	...	...	13·89	15·39	18·74
Greater Melbourne :—					
Excluding Births in Institutions	23·03	22·32	21·06	20·16	23·03
Including Births in Institutions	24·85	24·51	23·11	22·27	25·58

Twin and triplet births. The numbers of cases of twin and triplet births in Victoria in the past five years were as follows :—

CASES OF TWINS AND TRIPLETS.

Year.	Cases of Twins.	Cases of Triplets.
1916	365	6
1917	372	...
1918	333	2
1919	382	5
1920	410	5

On the average of the five years 1 mother in every 89 gave birth to twins, and 1 in every 9,156 was delivered of triplets. The proportions for the decennium ended 1912 were 1 in every 98 and 1 in every 7,949 respectively. There was one case of quadruplet births in 1917.

Children legitimized. In December, 1912, an Act was passed which provides that children born out of wedlock may be legitimized at any time after the marriage of the parents, on the application of the father, provided there was no lawful impediment to the marriage of the parents at the time of the birth. An amending Act passed in 1916 allowed legitimation to be effected on the application of the mother if the father were absent on war service or had died not more than two years previously. Up to the end of 1920 advantage was taken of these Acts, and of an Act (now repealed) passed in 1903, to legitimate 1,791 children, of whom 14 were registered in 1903, 19 in 1904, 34 in 1905, 43 in 1906, 58 in 1907, 60 in 1908, 51 in 1909, 71 in 1910, 126 in 1911, 106 in 1912, 157 in 1913, 149 in 1914, 141 in 1915, 140 in 1916, 136 in 1917, 162 in 1918, 159 in 1919, and 165 in 1920.

Legitimation Acts are in force in all the States and New Zealand, but there are marked differences in the numbers of legitimations resulting therefrom. Of every 100 children born out of wedlock, the numbers legitimized in the various States and New Zealand during 1920 were as follows:—Western Australia, 13·2; New South Wales, 17·3; South Australia, 12·7; New Zealand, 13·6; Queensland, 14·2; Victoria, 8·7; and Tasmania, 7·5.

Illegitimate births in Victoria. The number of illegitimate births in Victoria during the year 1920 was 1,896, which gives a proportion of 5·24 to every 100 births registered, as against 5·77 in the previous year, 5·84 in 1918, 5·51 in 1917, 5·15 in 1916, 5·75 in 1915, 5·57 in 1914, 6·03 in 1913, 5·72 in 1912, 5·94 in 1911, and 5·59 in 1910.

Illegitimate births to unmarried women in Victoria. While the percentage of illegitimate to total births in Victoria increased from 5·36 in 1891 to 5·94 in 1911, the illegitimate births in proportion to single women were fewer in the later year. It is thus seen that the higher ratio of illegitimate to total births in 1911, as compared with 1891, was not due to greater laxity of morals, but to the smaller number of legitimate births. The proportion of infants born out of wedlock to the unmarried and widowed women between 15 and 45 years of age in Victoria are shown in the subjoined table for the census years 1891, 1901, and 1911, when the conjugal condition of the population was known:—

ILLEGITIMATE BIRTHS PER 1,000 SINGLE WOMEN.

Year.	Single Women aged 15 to 45.	Illegitimate Births.	Illegitimate Births per 1,000 Single Women.
1891	142,443	2,064	14·5
1901	167,760	1,729	10·3
1911	187,488	1,964	10·5

The number of infants born out of wedlock per 1,000 unmarried and widowed women in Victoria was 10·5 in 1911. This was considerably lower than the corresponding figures for most European countries. The proportions ranged from 27·4 in Germany, 24·3 in Sweden, 24·2 in Denmark, 19·4 in Italy, 19·1 in France and 17·8 in Belgium, to 13·4 in Scotland, 8·0 in England, 6·8 in Holland and 3·8 in Ireland.

Illegitimacy in town and country.

A larger proportion of illegitimacy prevails in Melbourne and suburbs than in the other urban and the rural districts of Victoria, the proportion in the country districts being the smallest of all. During the year 1920, in the metropolitan area, 1 birth in every 13, in other urban districts 1 in 27, and in the rural districts only 1 in 47, was registered as illegitimate. The proportions in 1907–12 were 1 in 11, 1 in 21, and 1 in 42 respectively.

DEATHS.

Deaths.

The following return shows the number of deaths—male and female—also the quarters in which they were registered and the proportion per 1,000 of the population since 1899 :—

DEATHS IN EACH QUARTER, 1900 TO 1920.

Period.	Annual Deaths.	Sex.		Quarter of Registration.				Death Rate per 1,000 of the Population.
		Males.	Females.	March.	June.	September.	December.	
1900–4 ..	15,457	8,686	6,771	3,921	3,750	3,992	3,794	12·84
1905–9 ..	14,932	8,296	6,636	3,805	3,539	3,917	3,671	11·93
1910 ..	14,736	8,132	6,604	3,820	3,693	3,661	3,562	11·34
1911 ..	15,217	8,356	6,861	3,519	3,774	4,132	3,792	11·52
1912 ..	16,595	9,077	7,518	4,000	4,199	4,498	3,898	12·23
1913 ..	15,475	8,496	6,979	4,075	3,678	4,137	3,585	11·11
1914 ..	16,503	9,017	7,486	3,953	4,030	4,257	4,263	11·59
1915 ..	15,823	8,860	6,963	3,524	3,788	4,380	4,131	11·10
1916 ..	16,489	8,901	7,588	4,111	4,140	4,509	3,729	11·70
1917 ..	14,555	7,952	6,603	3,430	3,585	3,831	3,709	10·36
1918 ..	15,177	8,079	7,098	3,537	3,563	4,144	3,933	10·70
1919 ..	19,370	10,508	8,862	4,303	5,784	5,469	3,814	13·21
1920 ..	16,832	9,060	7,772	3,998	4,351	4,433	4,050	11·19
Average 1916–20	16,485	8,900	7,585	3,876	4,285	4,477	3,847	11·43

The number of deaths in 1920 was 16,832, which was 549 above the average of the preceding five years, but less by 2,538 than in 1919. The decrease as compared with that year was wholly due to the return to normal conditions consequent upon the influenza epidemic which was then prevalent having died out.

Death rates in Australian States and New Zealand.

The deaths in Australia in 1920 numbered 56,289, as against 65,930 in the preceding year, 50,249 in 1918, 48,029 in 1917, 54,197 in 1916, 52,782 in 1915, and 51,720 in 1914. Of the total deaths in the year under review 16,832 occurred in Victoria, 20,934 in New South Wales, 7,947 in Queensland, 5,083 in South Australia, 3,388 in Western Australia, 2,036 in Tasmania, 63 in the Northern Territory, and 6 in the Federal Capital Territory. The death rates per 1,000 of the population for each of the Australian States and New Zealand are shown in the following statement for the periods 1902–6 and 1907–11, and for each of the last nine years :—

DEATH RATES IN THE AUSTRALIAN STATES AND NEW ZEALAND.

Period.	Victoria.	New South Wales.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.	New Zealand.
1902–6	12·55	10·84	10·92	10·67	12·17	11·04	11·44	9·81
1907–11	11·64	10·20	10·12	9·89	10·47	10·83	10·64	9·77
1912 ..	12·23	10·86	10·96	10·28	11·06	10·73	11·23	8·87
1913 ..	11·11	10·89	10·39	10·82	9·34	10·87	10·78	9·47
1914 ..	11·59	10·11	9·97	10·71	9·41	9·67	10·51	9·31
1915 ..	11·09	10·48	11·00	10·68	9·28	10·11	10·66	9·06
1916 ..	11·70	10·63	11·09	11·73	9·80	10·38	11·04	9·64
1917 ..	10·36	9·56	9·73	10·10	8·97	8·89	9·80	9·58
1918 ..	10·70	9·84	10·39	9·97	9·11	8·84	10·09	14·84
1919 ..	13·21	13·40	12·42	12·01	11·10	10·37	12·82	9·51
1920 ..	11·19	10·32	10·82	10·76	10·14	9·35	10·62	10·27

The rate in Victoria, taking the average of the last five years, was higher than in any other State, but this result was chiefly due to the larger proportion of elderly persons, amongst whom the mortality rate is very high. The comparatively high rate in Australia in 1919 and the abnormal rate in New Zealand in the previous year were due to a heavy mortality from influenza.

Age distribution and crude death rates.

Comparisons of the crude death rates of a country for different periods, or of different countries for the same period, are frequently misleading, as they do not allow for variations in the age distributions of the population. In European countries, the proportion of elderly people, among whom the death rate is heavy, is higher than in the Commonwealth or any of the Australian States, and it is greater in Victoria, and lower in Western Australia, than in any of the other States. The proportions living in various age groups at the census of 1911 in each division of the Commonwealth and New Zealand, and those in 1890 in Sweden—a

country which fairly represents European conditions—are shown in the following table :—

PROPORTIONS LIVING IN FIVE AGE GROUPS IN AUSTRALIAN STATES, NEW ZEALAND, AND SWEDEN.

Country.	Proportion per 10,000 of Population living in the Age Group—					Total.
	Under 1 Year.	1 to 20.	20 to 40.	40 to 60.	60 and over.	
Victoria	235	3,837	3,173	2,020	735	10,000
New South Wales ..	274	3,926	3,358	1,813	629	10,000
Queensland	269	4,083	3,285	1,782	581	10,000
South Australia ..	256	3,901	3,304	1,833	706	10,000
Western Australia ..	266	3,646	3,682	2,004	402	10,000
Tasmania	279	4,243	3,069	1,783	626	10,000
Australia	260	3,914	3,297	1,882	647	10,000
New Zealand	241	3,763	3,600	1,691	705	10,000
Sweden	255	3,980	2,696	1,923	1,146	10,000

The figures show that the characteristic features of Australian populations, as compared with those of European countries, are a large preponderance of persons in the age group 20–40, and a relatively small number aged 60 and over. Among the Australian States, Victoria and Western Australia have, as mentioned previously, the highest and lowest proportions respectively of persons aged 60 years and upwards—a point which should be kept in view when comparing their crude death rates.

Index of mortality.

The differences shown in the preceding table in the age constitutions of the populations of the six States have been taken into account in computing their respective indexes of mortality. The results for each are based upon an age distribution corresponding to that of Sweden in 1890, which has been adopted by statisticians as a standard for this purpose. Mortality indexes for each State for the undermentioned years, as compiled by the Commonwealth Statistician, are as follows :—

INDEX OF MORTALITY FOR THE AUSTRALIAN STATES.

Year.	Index of Mortality.						
	Victoria.	New South Wales.	Queensland.	South Australia.	Western Australia.	Tasmania.	Commonwealth.
1916	14·28	13·48	14·37	14·45	14·15	13·43	13·99
1917	12·81	12·45	12·64	12·65	12·93	11·78	12·63
1918	13·23	12.86	13·94	12·53	13·69	11·70	13.07
1919	15·51	16·48	15.97	14·59	15·50	13·29	15·75
1920	13·72	13·32	14·36	13·49	15·63	12·28	13·65

In four of the last five years the crude death rate was higher in Victoria than in any other Australian State, but the figures in the above table show that one State in 1917, and two States in the other years under review, had a higher index of mortality than Victoria.

Death rates at various ages.

A reliable estimate of the improvement in the health of the community is obtained by comparing the death rates for groups of ages at different periods. Such rates for Victoria are given in the subjoined table for the decennial periods 1881-1890, 1891-1900, and 1902-1911 :—

DEATH RATES IN CERTAIN AGE GROUPS IN VICTORIA.

Age Group.	Deaths per 1,000 at each Age.		
	1881–1890.	1891–1900.	1902–1911.
Males.			
Under 5	44·79	39·29	26·73
5 to 10	4·06	3·36	2·16
10 to 15	2·65	2·20	1·87
15 to 20	4·03	3·28	2·72
20 to 25	6·35	4·79	3·51
25 to 35	7·72	6·60	4·75
35 to 45	11·23	9·03	7·81
45 to 55	19·28	15·32	13·48
55 to 65	33·25	32·90	25·38
65 to 75	61·13	62·99	59·04
75 and upwards	137·18	145·05	157·26
All ages	16·55	15·47	13·30
Females.			
Under 5	39·46	34·09	22·35
5 to 10	3·92	3·12	2·03
10 to 15	2·56	2·06	1·78
15 to 20	4·17	3·43	2·80
20 to 25	5·81	4·81	3·59
25 to 35	7·90	6·89	5·01
35 to 45	10·93	8·68	7·16
45 to 55	14·84	12·12	9·96
55 to 65	23·49	23·64	18·80
65 to 75	50·32	45·87	46·71
75 and upwards	129·00	124·33	131·77
All ages	13·56	12·36	10·66

The figures show that at all ages, excepting 75 and over for males, and 65 and over for females, very much lower death rates were experienced during the decennium 1902-11 than in the preceding one. Compared with 1891-1900, the mortality rate for the period 1902-11 for the two sexes combined was lower by 33 per cent. for the age group 0-10, by 14 per cent. at ages 10-15, by 18 per cent. at 15-20, by 26 per cent. at 20-25, by 27 per cent. at 25-35, by 15 per cent. at 35-45

and 45-55, and by 20 per cent. at 55-65. The rates, up to age 65 and probably to age 75, were comparable, and the marked decrease at successive periods showed that there had been a general improvement in hygienic conditions.

Death rates at various ages in Australian States.

In the next table the annual deaths in Victoria per 1,000 persons of each sex in successive age groups are compared with those in the other Australian States, and in the Commonwealth, for the period 1909-11 :—

ANNUAL DEATH RATES AT VARIOUS AGES IN EACH AUSTRALIAN STATE, 1909–11.

Age Group.	Annual Deaths per 1,000 of Population.						
	Victoria.	New South Wales.	Queensland.	South Australia.	Western Australia.	Tasmania.	Commonwealth.
Males.							
0–5 ..	24·04	23·76	21·53	20·31	26·78	24·05	23·40
5–10 ..	2·01	2·03	2·15	1·90	3·09	2·36	2·13
10–15 ..	1·68	1·75	1·92	1·34	1·84	1·49	1·71
15–20 ..	2·53	2·47	3·14	2·46	2·54	2·63	2·58
20–25 ..	3·14	3·22	4·38	3·05	4·42	3·63	3·43
25–30 ..	3·94	3·74	4·94	3·90	5·07	4·11	4·09
30–35 ..	4·72	4·35	5·42	4·79	5·91	4·44	4·76
35–40 ..	6·30	5·63	7·32	6·90	7·20	6·73	6·34
40–45 ..	7·97	8·13	9·30	7·86	10·64	6·86	8·40
45–50 ..	10·89	10·64	13·55	10·77	14·48	9·00	11·35
50–55 ..	14·63	13·28	17·15	14·91	16·12	13·28	14·49
55–60 ..	20·49	20·41	22·55	18·98	23·98	15·70	20·52
60–65 ..	32·04	27·94	29·16	29·95	30·21	23·33	29·28
65–70 ..	50·53	44·50	50·32	40·11	45·43	36·89	46·25
70–75 ..	76·20	70·60	65·82	59·63	78·10	53·49	70·20
75–80 ..	120·16	108·32	98·99	102·64	116·27	99·52	111·19
80–85 ..	171·92	158·63	152·59	155·53	155·88	158·83	163·58
85 and over	269·56	283·16	231·29	250·80	281·66	355·33	273·85
All ages—Males..	12·82	11·15	11·46	10·79	11·42	10·84	11·60
Females.							
0–5 ..	18·89	20·05	19·08	16·24	21·66	20·91	19·39
5–10 ..	1·94	1·69	2·11	1·46	3·05	1·91	1·89
10–15 ..	1·51	1·34	1·34	1·47	1·86	1·97	1·46
15–20 ..	2·44	2·04	2·20	2·35	2·10	3·48	2·28
20–25 ..	3·46	3·15	3·44	3·45	3·76	4·23	3·40
25–30 ..	4·33	3·92	4·41	5·02	4·52	4·54	4·28
30–35 ..	4·92	4·40	4·68		5·15		4·69
35–40 ..	6·20	5·79	5·90	6·05	6·22	6·47	6·04
40–45 ..	6·58	6·06	6·94		6·62		6·36
45–50 ..	8·22	7·66	7·79	8·04	7·44	7·43	7·87
50–55 ..	9·90	9·98	10·13	9·60	11·58		9·93
55–60 ..	14·49	14·45	13·51	12·88	13·13	14·19	14·12
60–65 ..	21·62	20·67	21·89	19·19	17·72	18·18	20·73
65–70 ..	35·12	37·10	33·48	32·19	34·43	34·43	35·30
70–75 ..	59·07	54·55	50·18	48·98	55·53	52·95	55·22
75–80 ..	97·13	91·45	88·41	83·86	98·36	86·75	92·80
80–85 ..	133·47	133·49	137·58	128·76	130·53	138·35	133·94
85 and over	239·69	211·64	223·23	228·03	190·19	258·01	229·05
All ages—Females	10·17	8·83	8·34	9·20	8·55	9·71	9·23

A comparison shows that for the period 1909-11 the Victorian death rate for males in every age group between 5 and 50 was below that of the Commonwealth. For men aged 50 to 60 the rates were

very similar, but for the five age periods between 60 and 85 they were lower in Australia, as a whole, than in Victoria. Among females, the mortality rates in the State were lower for four and higher for fourteen age periods than those for the corresponding ages in the Commonwealth.

Victorian and English death rates compared.

The death rates of each sex at various ages in Victoria and Australia for the period 1909-11, and in England and Wales for 1906-10, are shown in the table which follows :—

DEATH RATES AT VARIOUS AGES IN VICTORIA, AUSTRALIA, AND ENGLAND.

Age Group.	Annual Deaths per 1,000 of Each Sex.					
	Males.			Females.		
	Victoria. 1909–11.	Australia. 1909–11.	England and Wales. 1906–10.	Victoria. 1909–11.	Australia. 1909–11.	England and Wales. 1906–10.
0–5 ..	24·0	23·4	45·4	18·9	19·4	38·0
5–10 ..	2·0	2·1	3·3	1·9	1·9	3·4
10–15 ..	1·7	1·7	2·0	1·5	1·5	2·1
15–20 ..	2·5	2·6	3·0	2·4	2·3	2·8
20–25 ..	3·1	3·4	4·0	3·5	3·4	3·3
25–35 ..	4·3	4·3	5·3	4·6	4·5	4·5
35–45 ..	7·1	7·3	8·6	6·4	6·2	7·1
45–55 ..	12·5	12·8	15·5	8·9	8·8	12·0
55–65 ..	25·3	25·2	31·2	17·6	17·0	24·3
65–75 ..	62·1	56·2	64·4	45·7	43·6	53·1
75–85 ..	138·2	127·8	137·7	109·1	105·8	119·6
85 and upwards	269·6	273·8	283·0	239·7	229·0	250·9
All ages ..	12·8	11·6	15·6	10·2	9·2	13·8

The low mortality rate at nearly every age in Victoria, by comparison with that in England and Wales, evidences the healthy climate and the favorable social and industrial conditions of the State. A striking feature of the Victorian and Commonwealth mortalities is the light rate among infants and young children. The superiority of the Victorian over the English rate is very pronounced at the age periods 0–5 and 5–10, but it is less marked in the next ten years of life. For the age groups 20-25 and 25-35, the rates for males are lower, while those for females are slightly higher, in Victoria than in England. For each age period after 35, except 75-85 for males, the death rates for both sexes in Victoria are lighter, and at some ages considerably lighter, than in England.

Death rates among metropolitan residents.

The deaths of residents of metropolitan municipalities and their proportions to population are shown in the following table for the period 1910-12 and for the years 1919 and 1920. The method adopted in the compilation of the table is given on pages 338 and 339 of the *Year-Book* for 1916-17:—

DEATH RATES IN METROPOLITAN MUNICIPALITIES, 1910-12, 1919 AND 1920.

Municipality.	Annual Deaths.			Annual Deaths per 1,000 Residents.		
	1910-12.	1919.	1920.	1910-12.	1919.	1920.
Richmond City ...	594	705	510	14·71	17·01	12·22
Port Melbourne City ...	196	193	170	14·56	14·51	12·50
Melbourne City ...	1,469	1,837	1,524	14·44	17·30	14·30
Fitzroy City ...	493	671	504	14·41	18·97	14·14
Collingwood City ...	462	538	406	13·44	15·09	11·35
Brighton City ...	161	227	218	13·02	10·94	10·20
Oakleigh Borough ...	40	91	71	12·90	17·64	13·10
Prahran City ...	587	695	625	12·89	13·97	12·38
South Melbourne City	591	734	578	12·83	15·07	11·78
Williamstown City ...	198	277	246	12·80	14·67	12·81
St. Kilda City ...	326	469	375	12·65	13·55	10·50
Preston Shire ...	65	101	95	12·63	12·33	10·41
Footscray City ...	290	456	427	12·15	14·72	13·68
Brunswick City ...	383	601	485	11·75	17·01	11·70
Coburg Town ...	111	236	181	11·49	15·10	10·97
Essendon City ...	269	438	369	11·12	12·51	10·04
Hawthorn City ...	265	360	302	10·64	12·75	10·62
Kew City ...	105	200	145	10·47	14·57	9·68
Camberwell City ...	131	243	227	10·21	11·95	10·45
Caulfield City ...	157	333	334	9·68	11·10	10·08
Malvern City ...	151	322	304	9·29	10·73	9·37
Northcote City ...	165	338	304	9·22	12·69	10·93
Sandringham Town ...	...	112	92	...	13·37	10.51
Remainder of Metropolis	218	391	351	9·22	14·67	12·20
Whole Metropolis ...	7,427	10,568	8,843	12·61	14·41	11·72
Remainder of State ...	8,089	8,802	7,989	10·99	12·01	10·66

The outstanding features of the above figures are the high death rates prevailing in some of the old centres of population, of which Melbourne City, Fitzroy, Richmond, Collingwood, and Port Melbourne are examples, and the low rates in comparatively recently settled areas, such as Northcote, Malvern, Caulfield, Camberwell, and Kew. In the former group the deaths for 1920 were 13·35 per 1,000 as against 10·10 in the latter. Slight differences in the age distribution of the populations of these two divisions may exist, but they can account for only a small portion of the great disparity in their mortality rates. It would appear that the standard of health, as indicated by death

rates, is much better in the outlying and less densely populated suburbs than in the central and more congested areas of the metropolis.

Metropolitan and country death rates compared.

The ages of the people, as disclosed at the census of 1911, enable a comparison to be made between the death rates prevailing at that time in Greater Melbourne and in the remainder of the State. On the average of the years 1910–12, the deaths of metropolitan residents were in the ratio of 12·61 per 1,000 of population as against a ratio of 10·99 for residents of the rest of the State. The apparent difference in favour of the country is 1·62, but a computation shows that, when allowances are made for the unequal age and sex distribution of the people in these areas, the actual difference is greater—the deaths per 1,000 of population being fewer by 2·55 among country than among metropolitan residents.

Decrease in Metropolitan death rate.

In Greater Melbourne, in the decade 1911–20, there were 12·93 deaths per 1,000 of the population, as compared with 15·76 in the decennium 1892-1901. The reduction in the rate represents a saving of 19,200 lives in the past ten years. Many factors have contributed to this result, but it is probable that the introduction of the sewerage system, the notification of contagious diseases, the improvement in the conditions of labour, the increasing supervision of the manufacture and sale of articles of consumption, the greater proportion of females in the community, and the advance of medical science, have been the main causes of the decline. That the sanitary conditions of the metropolis have greatly improved is evidenced by a comparison of the death rates from typhoid fever and tubercular diseases for the period 1911-20 with those for the decennium 1892-1901. The following are the rates :—

Cause of Death.	Deaths per 1,000 of Population.		
	1892-1901.	1911-1920.	Decrease in 1911-20.
Pulmonary Tuberculosis ...	1·654	0·864	0·790
Other Tubercular Diseases ...	0·446	0·19	0·248
Typhoid Fever	0·293	0·035	0·258
Scarlet Fever	0·033	0·019	0·014
Measles	0·215	0·058	0·157
Diphtheria	0·196	0·184	0·012
Total	2·837	1·358	1·479

The figures show that the lower death rates from the six above-mentioned diseases in 1911-20 accounted for 52 per cent. of the total decline. It is impossible to state which municipalities have contributed most to this result, as their mortality rates from the diseases referred to are not available for the earlier period. A comparison, however, of the general death rates in each, for the periods under review, shows that all divisions of the metropolis have, in varying degrees, shared in the improvement.

Death rates in country towns.

Prior to 1912 the death rates given for the chief country towns were based upon the deaths therein in relation to their respective populations. For reasons which have been given in previous editions of this work that method was discarded and the deaths of residents in proportion to population are now shown instead. Such deaths, and their rates per 1,000 of population, are given in the following statement for the periods 1910-12 and 1913-19, and the year 1920 :—

DEATHS PER 1,000 RESIDENTS IN COUNTRY TOWNS.

Town.	Annual Deaths of Residents.			Annual Deaths of Residents per 1,000 of Population.		
	1910–12.	1913–19.	1920.	1910–12.	1913–19.	1920.
Ballarat and Suburbs	639	616	573	15·07	14·96	14·42
Bendigo and Suburbs	690	590	567	17·51	16·07	16·43
Geelong and Suburbs	411	415	466	13·68	12·04	13·52
Castlemaine & Suburbs	92	92	73	13·11	12·33	9·26
Warrnambool ..	95	97	118	13·55	13·00	14·75
Maryborough ..	76	66	89	13·39	12·89	18·82
Stawell	82	64	66	18·60	14·31	13·89

Residents of different areas dying in hospitals.

An examination of the particulars of residence of persons who have died in the public hospitals of Victoria during recent years reveals interesting and definite information regarding the assistance rendered by these institutions to people in different divisions of the State. For the metropolitan municipalities, the seven principal country towns, and the remainder of the State, the percentages of the total deaths of

residents thereof which occurred in public hospitals during the period 1910-15 and the year 1920 were as follows :—

PROPORTION OF DEATHS OF RESIDENTS OCCURRING IN HOSPITALS, 1910–15 AND 1920.

Area.	Percentage of Deaths of Residents occurring in Hospitals.		Area.	Percentage of Deaths of Residents occurring in Hospitals.	
	1910–15.	1920.		1910–15.	1920.
Port Melbourne City...	35·9	31·8	Oakleigh Borough ...	14·6	26.8
Fitzroy City ...	34·5	38·1	Brighton City ...	14·2	16·5
Melbourne City ...	34·4	38·8	Castlemaine ...	13·9	23·3
Collingwood City ...	28·0	31·5	Ballarat	13·9	14·3
Richmond City ...	26·6	31·8	Hawthorn City ...	13·2	14·9
South Melbourne City	26·5	32·9	Malvern City ...	12·8	11·2
Preston Shire ...	25·0	28·4	Kew City	12·6	13·8
Northcote City ...	24·4	26·0	Williamstown City ...	12·2	17·1
Brunswick City ...	23·9	27·4	Caulfield City ...	11·7	19·8
Warrnambool ...	23·0	22·0	Camberwell City ...	11·1	15·4
Maryborough ...	22·9	20·2	Sandringham Town...	...	22·8
Footscray City ...	22·6	29·3	Summary :—		
Prahran City ...	21·7	25·1	Greater Melbourne ...	24·6	27·7
Stawell	19·6	25·8	Seven Country Towns ...	16·4	18·7
St. Kilda City ...	18·9	24·0	Remainder of State ...	17·8	22·4
Coburg Town ...	18·0	27·6	Whole State ...	20·9	24·8
Bendigo	16·8	22·9			
Essendon City ...	16·5	20·9			
Geelong	16·3	16·1			

Of the total deaths in the State 24·8 per cent. occurred in public hospitals in 1920, as against 29·8 in the previous year and 20·9 in 1910–15. The high proportion in 1919 was due to an outbreak of influenza. The disparities in the proportions for different areas are very significant. Of the total cases of fatal illness which occurred amongst residents of the districts mentioned in 1920, the percentage treated in public hospitals varied from 38·8 for Melbourne City, 38·1 for Fitzroy, 32·9 for South Melbourne, and 31·8 for Port Melbourne, to 13·8 for Kew, and 11·2 for Malvern. For the metropolitan area the percentage was 27·7 as compared with 21·5 for the rest of the State. Taking the proportion for fatal cases as an index of all cases dealt with, it would appear that, relatively to population, the assistance rendered by public hospitals to the residents of Greater Melbourne exceeds by about 29 per cent. that given to people residing elsewhere.

Deaths in public institutions in Greater Melbourne.

In 1920 the deaths in public institutions were 37·7 per cent. of the total in Greater Melbourne, 19·8 per cent. of the total in extra metropolitan districts, and 29·9 per cent. of the total in the State as a whole. The number of deaths in each public institution in the metropolis in 1920 is given in the subjoined table :—

DEATHS IN PUBLIC INSTITUTIONS IN GREATER MELBOURNE, 1920.

Institution.	No. of Deaths.	Institution.	No. of Deaths
Hospitals—		Other Public Institutions—	
Melbourne	932	Victorian Homes for Aged and Infirm	80
Alfred	257	Benevolent Asylum ...	209
St. Vincent's	183	Heatherton Sanatorium ...	80
Homœopathic	121	Convent of the Little Sisters of the Poor	59
Austin	254	Old Colonists' Homes ...	3
Children's	487	Foundling Hospital, Broadmeadows	8
Women's	215	Macleod Military Sanatorium	7
Infectious Diseases ...	190	Depôt for Neglected Children	62
Queen Victoria	17	Kew Lunatic Asylum ...	139
Eye and Ear	10	Yarra Bend Lunatic Asylum...	108
Williamstown	24	Mont Park Asylum ...	8
Military Base	1	Receiving House — Mental Hospital	35
Caulfield Military ...	62	The Haven	31
Police	4	Foundling Hospital, East Melbourne	4
Total Hospitals ...	2,757	Total Hospitals and other Institutions	3,590

Of the 2,757 persons who died in public hospitals in Greater Melbourne during 1920, 324 were residents of places outside the metropolis.

Infantile mortality.

The mortality of children under one year in proportion to births has been considerably less in recent than in earlier periods, but the necessity for reducing the risks to infant health and life, particularly amongst illegitimate children, is still apparent. The deaths of infants in 1920 numbered 2,673, and, as there were 36,214 births, it follows that of every 100 infants born approximately 7·38 died within twelve months. The rates for Melbourne and suburbs, the extra metropolitan area, and the whole

State, for different periods since 1880, are shown in the following table :—

INFANTILE DEATH RATES 1881 TO 1920.

Period.	Deaths under One Year per 100 Births in—		
	Melbourne and Suburbs.	Remainder of the State.	Whole State.
1881–1890	17·14	9·50	12·68
1891–1900	13·36	9·60	11·11
1901–1905	11·26	8·45	9·58
1906–1910	9·47	6·95	8·00
1911	7·82	6·12	6·87
1912	9·02	6·05	7·45
1913	7·63	6·51	7·05
1914	8·45	7·24	7·83
1915	7·99	5·77	6·88
1916	8·56	6·29	7·46
1917	6·55	4·72	5·67
1918	7·09	5·16	6·17
1919	7·87	5·65	6·80
1920	8·41	6·21	7·38

On the average of the past five years the infantile death rate for the metropolis was 7·70 per 100 births, which was 26 per cent. below that for the decennium ended 1910, and 42 per cent. below the rate for the decennium 1891–1900.

Infantile deaths in different areas. The deaths of infants under 1 year of age per 100 births in Greater Melbourne, Ballarat, Bendigo, Geelong, and the rest of the State for each of the past fourteen years were as follows :—

INFANTILE DEATH RATES IN DIFFERENT DIVISIONS OF THE STATE.

Year.	Deaths under One Year per 100 Births.					
	Victoria.	Melbourne and Suburbs.	Ballarat and Suburbs.	Bendigo and Suburbs.	Geelong and Suburbs.	Rest of the State.
1907.. ..	7·26	8·57	8·69	9·03	8·49	5·80
1908.. ..	8·61	9·83	9·52	11·37	10·33	7·12
1909.. ..	7·13	8·39	11·31	9·54	8·94	5·40
1910.. ..	7·69	9·23	10·19	9·44	6·57	6·01
1911.. ..	6·87	7·82	7·70	8·41	6·11	5·82
1912.. ..	7·45	9·02	10·04	8·36	6·73	5·53
1913.. ..	7·05	7·63	8·95	9·10	7·10	6·09
1914.. ..	7·83	8·45	12·31	9·45	8·91	6·58
1915.. ..	6·88	7·99	8·51	7·71	7·04	5·30
1916.. ..	7·46	8·56	7·93	8·16	7·25	5·97
1917.. ..	5·67	6·55	7·01	5·62	4·76	4·49
1918.. ..	6·17	7·09	5·54	5·86	7·16	4·95
1919.. ..	6·80	7·87	6·04	6·78	8·00	5·38
1920.. ..	7·38	8·41	9·04	9·57	6·94	5·72

The prejudicial effect of city surroundings on infant life is evidenced by the mortality being heavier in urban than in country districts. On the average of the past five years the deaths of children under 1 year of age to every 1,000 births were 77 in Melbourne, 72 in Bendigo, 71 in Ballarat, and 68 in Geelong, as against 53 in the rest of the State.

Infantile death rates in metropolitan districts.

In issues of this work prior to 1913 the infantile death rate given for each metropolitan municipality was based upon the deaths therein exclusive of those occurring in public hospitals. This method necessarily understated the mortality for each district, the understatement being greatest in the case of the poorer and more congested areas, which contribute an undue proportion of the hospital cases. In order to ascertain the actual death rate for each area the deaths in hospitals are now allotted to the districts where the deceased had resided. For the period 1910–14 and the years 1919 and 1920 the deaths under 1 year per 100 births for each municipality of Greater Melbourne were as follows :—

INFANTILE DEATH RATES FOR METROPOLITAN MUNICIPALITIES.

Municipality.	Deaths under One Year per 100 Births.			Municipality.	Deaths under One Year per 100 Births.		
	1910-14.	1919.	1920.		1910-14.	1919.	1920.
Coburg Town ..	12·03	13·42	9·75	Oakleigh Borough	7·65	7·34	9·00
Port Melb. City ..	12·00	9·13	10·29	Prahran City ..	7·27	5·83	7·15
Fitzroy City ..	11·24	11·45	13·09	St. Kilda City ..	6·38	6·30	8·08
Richmond City ..	10·23	11·73	7·06	Caulfield City ..	5·87	4·40	4·01
Preston Shire ..	10·01	10·34	14·67	Essendon City ..	5·79	6·19	6·78
Collingwood City	9·89	10·99	9·23	Hawthorn City ..	5·72	6·00	6·73
Melbourne City ..	9·22	8·85	12·66	Camberwell City ..	5·58	4·85	6·21
South Melb. City..	9·05	10·27	11·36	Malvern City ..	5·51	5·21	5·02
Brunswick City ..	8·50	10·10	10·63	Northcote City ..	5·47	8·09	6·87
Footscray City ..	8·11	8·19	9·50	Kew City ..	4·76	3·11	5·78
Williamstown City	8·03	7·35	8·79	Sandringham Town ..		8·53	8·54
Brighton City ..	7·84	3·65	5·20				

It is noticeable that the centres having the lowest infantile death rates are residential areas which are not so thickly populated as nearly all of the other metropolitan districts.

Deaths of infants at different ages.

Of the deaths of infants under 1 year in 1920, 48 per cent. occurred in the first month and 63 per cent. in the first three months of life. The annual deaths at ages under 1 month, from 1 to 3 months, from 3 to 6 months, and from 6 to 12 months, during the five years ended with 1919, and the numbers for the year 1920, are given in the following table, together with the percentage of deaths at each of those age-periods and the proportion of deaths to each 100 births :—

DEATHS OF INFANTS AT DIFFERENT AGES, 1915-19 AND 1920.

Age.	Average Annual Deaths of Infants under 1 year of Age.					
	Five Years—1915-19.			Year 1920.		
	Number.	Percentage at each Age.	Number per 100 Births.	Number.	Percentage at each Age.	Number per 100 Births.
Boys.						
Under 1 month	635	51·1	3·73	737	47·9	3·95
1 to 3 months	202	16·3	1·19	249	16·2	1·34
3 to 6 ,,	171	13·8	1·00	244	15·8	1·31
6 to 12 ,,	234	18·8	1·38	310	20·1	1·66
Total ..	1,242	100·0	7·30	1,540	100·0	8·26
Girls.						
Under 1 month	472	50·0	2·93	533	47·0	3·03
1 to 3 months	144	15·3	·90	174	15·4	·99
3 to 6 ,,	139	14·7	·86	187	16·5	1·07
6 to 12 ,,	189	20·0	1·18	239	21·1	1·36
Total ..	944	100·0	5·87	1,133	100·0	6·45

Probable mortality of infants.

The experience of the years 1915–20 shows that, of every 20,000 newly-born boys and girls in equal numbers, 746 boys and 597 girls died within twelve months, and 9,254 of the former and 9,403 of the latter, or 18,657 of mixed sexes were living at the end of the year. The corresponding numbers surviving the first year in earlier periods were 17,765 in the ten years

1891–1900 and 17,468 in 1881–1890. It is thus seen that of every 20,000 births comprising equal numbers of each sex there were 892 more survivors in 1915–20 than in 1891–1900, and 1,189 more than in 1881–1890.

Infantile death rates from certain causes.

An investigation of infantile mortalities would be incomplete unless the diseases which have proved fatal in different years were ascertained, and their incidence in each period compared. Information of this nature reveals the causes of high death rates, and, when a fairly early period is selected for comparison with recent years, it shows in what direction improvements have taken place. The chief preventable and non-preventable causes of death, grouped under certain headings, are shown in the subjoined table for the periods 1891–3, 1901–10, and 1911–19, and for the year 1920 :—

INFANTILE DEATH RATES FROM CERTAIN CAUSES, 1891–3, 1901–10, 1911–19, AND 1920.

Cause of Death.	Deaths under 1 year per 1,000 Births in—			
	1891-3.	1901-10.	1911-19.	1920.
Diarrhœal Diseases, all forms	29·66	24·62	16.27	14·83
Wasting Diseases (Marasmus, Atrophy, &c.)	22·24	12·74	13·25	11·71
Prematurity	13·13	14·99	14·99	16·76
Bronchitis, Broncho-pneumonia, Pneumonia	11·37	8·13	6·88	6·65
Convulsions	6·83	3·10	1·69	1·11
Congenital Defects and Malformations ...	3·45	4·86	4·30	5·11
Violence	3·16	2·47	1·06	1·19
Whooping Cough	2·60	2·52	1·68	3.09
Other causes	24·49	14·46	8·96	13·36
Total, all causes	116·93	87·89	69·08	73·81

Of every 1,000 infants born 27 died from diarrhœal and wasting diseases in 1920, as against 30 in 1911–19, 37 in 1901–10, and 52 in 1891–3—a decrease of 48 per cent. in 28 years. In 1920 acute bronchitis, broncho-pneumonia and pneumonia were responsible for 6·65 deaths per 1,000 births, as compared with 11·37 in 1891–3—a decline of 42 per cent. between the two periods. Certain causes, which may be regarded as of a non-preventable nature, such as prematurity, congenital defects, and malformations, were responsible for 28 per cent. of the total infantile mortality during the past ten years.

Of the deaths from preventable causes 1 in every 3 is due to diarrhœal diseases, which are responsible for high death rates in December, January, February, March, and April. On the average of the last ten years, of every 1,000 children born 16 died from diarrhœal complaints within a year, a proportion which shows the necessity for further preventive measures in relation to these diseases.

The tables which follow show the number of deaths and the death rate of infants under one month for Melbourne and Suburbs and the whole State for the years 1916 to 1920, also the principal causes of death.

DEATHS OF INFANTS UNDER ONE MONTH, 1916 TO 1920.

Year.	Melbourne and Suburbs.		Victoria.	
	No. of Deaths.	Deaths per 100 Births.	No. of Deaths.	Deaths per 100 Births.
1916 ..	671	3·81	1,141	3·33
1917 ..	557	3·24	998	3·03
1918 ..	600	3·63	1,026	3·25
1919 ..	652	3·99	1,163	3·68
1920 ..	733	3·80	1,270	3·51

DEATHS OF INFANTS UNDER ONE MONTH FROM CERTAIN CAUSES, 1916 TO 1920.

Cause of Death.	Melbourne and Suburbs.					Victoria.				
	1916.	1917.	1918.	1919.	1920.	1916.	1917.	1918.	1919.	1920.
Diarrhœal Diseases (all forms)	16	12	17	17	7	33	26	28	32	18
Wasting Diseases (Marasmus, Atrophy, etc.)	146	89	115	103	120	253	185	199	203	228
Prematurity	276	240	271	308	361	450	424	459	537	583
Bronchitis, Broncho-Pneumonia and Pneumonia ..	26	18	24	16	18	37	27	44	29	33
Convulsions	13	11	9	13	11	33	30	21	22	24
Congenital Defects and Malformations	68	59	44	48	65	112	90	80	97	128
Violence	3	10	8	11	16	10	14	12	15	21
Syphilis	10	8	6	4	8	10	8	9	4	8
Other Causes	113	110	106	132	127	203	194	174	224	227

Legitimate and illegitimate infantile death rates.

On the average of the past eight years, 171 in every 1,000 illegitimate infants died within a year, as against 63 in every 1,000 legitimate children. It is thus seen that the chance of an illegitimate child dying before the age of 1 year is slightly less than three times that of the legitimate infant. In the year 1920 the mortality rate for legitimate infants was 6·63 per 100 births. The children born out of wedlock during the same year numbered 1,896, and the deaths of illegitimate infants were 397, the death rate being thus 20·94 per 100 births. With the view of ascertaining the chief reasons for the marked disproportion in the mortality rates of the two classes the following table has been constructed, showing the deaths from certain causes per 1,000 legitimate and illegitimate births for the periods 1904–8 and 1913–19 and for the year 1920 :—

DEATH RATES OF LEGITIMATE AND ILLEGITIMATE INFANTS FROM CERTAIN CAUSES.

Cause of Death.	Deaths under 1 year per 1,000 Births.					
	Legitimate.			Illegitimate.		
	1904-8.	1913-19.	1920.	1904-8.	1913-19.	1920.
Diarrhœal Diseases	19·8	13·6	12·8	72·6	48·4	50·6
Prematurity, Congenital Defects, Marasmus, &c.	30·3	31·3	30·0	52·1	65·7	98·6
Bronchitis, Broncho-pneumonia, Pneumonia	6·9	6·0	6·1	18·6	12·5	16·9
Other causes	18·3	11·5	17·4	58·7	38·8	43·3
Total all causes	75·3	62·4	66·3	202·0	165·4	209·4

The rates for 1920 show that of every 1,000 children born out of wedlock 50·6 died from diarrhœal diseases within a year as compared with 12·8 deaths per 1,000 legitimate infants from the same cause. Owing to a larger proportion of the former children being deprived of breast food a higher mortality from these diseases might be expected among them than among legitimate infants, but the striking differences in the death rates from this cause and from the chief respiratory diseases indicate considerable neglect in the rearing of illegitimate infants.

Infantile deaths in each month from certain causes.

The influence of temperature on infantile mortality from the chief digestive and respiratory diseases is specially noticeable, whilst on deaths from other causes, particularly those of a developmental character, very little influence is apparent. The deaths in Melbourne and suburbs from the two former classes of complaint in each month during the past ten years are shown in the appended table :—

INFANTILE DEATHS IN EACH MONTH FROM CERTAIN CAUSES.

Month.	Infantile Deaths in Greater Melbourne in 1911–20 from—					
	Diarrhœal Diseases.			Respiratory Diseases.		
	Males.	Females.	Total.	Males.	Females.	Total.
January	359	273	632	46	31	77
February	284	212	496	32	25	57
March	232	203	435	34	27	61
April	173	174	347	38	43	81
May	100	86	186	65	47	112
June	50	49	99	75	75	150
July	37	32	69	139	88	227
August	36	22	58	129	93	222
September	43	24	67	104	74	178
October	46	34	80	66	53	119
November	123	82	205	58	35	93
December	299	213	512	50	38	88
Total, 1911–20 ..	1,782	1,404	3,186	836	629	1,465

The experience of the last ten years shows that of the total infantile deaths in the metropolis from diarrhœal diseases 76 per cent. occur during the five months December to April, and of the deaths from respiratory diseases 53 per cent. occur in the four months June to September.

Infantile mortality in Australasia.

The deaths of infants under 1 year of age in the Commonwealth numbered 9,431 in 1920 as compared with 8,486 in the previous year, 7,366 in 1918, 7,302 in 1917, 9,282 in 1916, and 9,126 in 1915. The next table gives the proportion of such

deaths to the total births in each Australian State and New Zealand for each of the last nine years, and for earlier periods back to 1891 :—

INFANTILE MORTALITY IN AUSTRALASIA.

Period.	Deaths under 1 year per 100 Births.						
	Victoria.	New South Wales.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.
1891–1900 ..	11·11	11·22	10·34	10·54	14·48	9·58	8·38
1902–6 ..	9·38	9·27	8·93	8·21	12·21	9·02	7·29
1907–11 ..	7·51	7·66	6·98	6·56	8·29	7·97	6·85
1912 ..	7·45	7·13	7·16	6·16	8·21	6·66	5·12
1913 ..	7·05	7·83	6·33	7·01	7·00	7·01	5·92
1914 ..	7·83	6·97	6·39	7·60	6·82	7·16	5·14
1915 ..	6·88	6·81	6·40	6·73	6·66	7·22	5·01
1916 ..	7·46	6·78	7·04	7·36	6·63	7·50	5·07
1917 ..	5·67	5·75	5·42	5·37	5·71	5·23	4·82
1918 ..	6·17	5·90	5·69	5·12	5·73	6·08	4·84
1919 ..	6·80	7·23	7·24	6·40	6·13	6·46	4·53
1920 ..	7·38	6·94	6·32	6·73	6·60	6·55	5·06

The infantile deaths per 100 births in the Australasian capitals in 1920 were as follows :—Melbourne 8·41, Sydney 7·42, Brisbane 7·01, Adelaide 7·48, Perth 7·24, Hobart 7·96 and Wellington 7·37.

Deaths of children under 5.

In 1920 the deaths of male children under 5 years of age numbered 2,090, and the deaths of female children under that age, 1,625—the former being in the proportion of 23·01 per cent., and the latter of 20·91 per cent., to the total number of deaths of the respective sexes at all ages. The subjoined table gives the annual number of such deaths in the State at each year of

age, and the proportion of the deaths under five years of age to the deaths at all ages in decennial periods from 1871 to 1910, and in the years 1911 to 1920.

MORTALITY OF CHILDREN UNDER FIVE YEARS.

Period.	Years of Age at Death.					Total under 5 Years.	
	0.	1.	2.	3.	4.	Number.	Proportion Per 100 Deaths at all Ages.
Males.							
1871–1880..	1,783	508	206	148	119	2,764	39·41
1881–1890..	2,158	464	161	114	92	2,989	34·28
1891–1900..	2,050	432	143	93	76	2,794	30·05
1901–1910..	1,504	249	83	59	41	1,936	22·93
1911 ..	1,309	201	71	58	42	1,681	20·12
1912 ..	1,515	266	96	66	51	1,994	21·97
1913 ..	1,419	241	83	55	41	1,839	21·65
1914 ..	1,634	291	110	70	43	2,148	23·82
1915 ..	1,401	200	82	60	46	1,789	20·19
1916 ..	1,403	246	100	77	57	1,883	21·15
1917 ..	1,099	176	71	59	38	1,443	18·15
1918 ..	1,102	188	85	51	52	1,478	18·29
1919 ..	1,208	223	101	63	58	1,653	15.73
1920 ..	1,540	294	118	84	54	2,090	23·01
Females.							
1871–1880..	1,482	482	198	139	106	2,407	46·06
1881–1890..	1,805	423	151	105	84	2,568	39·61
1891–1900..	1,702	385	129	82	68	2,366	33·61
1901–1910..	1,192	217	81	51	40	1,581	23·58
1911 ..	961	149	73	50	41	1,274	18·57
1912 ..	1,154	217	76	57	52	1,556	20·70
1913 ..	1,119	191	67	47	35	1,459	20·91
1914 ..	1,202	235	74	67	46	1,624	21·69
1915 ..	1,009	188	60	64	42	1,363	19·57
1916 ..	1,150	215	81	53	54	1,553	20·47
1917 ..	774	118	64	52	35	1,043	15·80
1918 ..	848	165	69	66	55	1,203	16·95
1919 ..	942	169	73	64	64	1,312	14·80
1920 ..	1,133	258	103	67	64	1,625	20·91

The number of persons of advanced ages was greater in the later than in the earlier years mentioned in the above table, and, as the mortality is very heavy at the older ages, this accounts to some extent for the gradual decrease in the proportion of deaths under the age of 5 years. After making allowance for this, there is still a marked reduction in the mortality under 5 years of age in recent years as compared with that in periods prior to 1901.

Ages at death.

The ages of males and females who died in 1920 and in the two preceding years are shown in the following table :—

AGES AT DEATH IN VICTORIA, 1918 TO 1920.

Ages.	1918.			1919.			1920.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Under 1 ..	1,102	848	1,950	1,208	942	2,150	1,540	1,133	2,673
1 to 2	188	165	353	223	169	392	294	258	552
2 ,, 3	85	69	154	101	73	174	118	103	221
3 ,, 4	51	66	117	63	64	127	84	67	151
4 ,, 5	52	55	107	58	64	122	54	64	118
5 ,, 10	171	152	323	197	170	367	194	208	402
10 ,, 15	104	82	186	129	118	247	112	103	215
15 ,, 20	126	121	247	239	203	442	153	119	272
20 ,, 25	158	213	371	360	364	724	195	199	394
25 ,, 30	156	258	414	587	511	1,098	233	276	509
30 ,, 35	188	246	434	641	488	1,129	225	264	489
35 ,, 40	246	263	509	552	465	1,017	262	264	526
40 ,, 45	280	251	531	515	393	908	279	276	555
45 ,, 50	410	297	707	576	457	1,033	394	297	691
50 ,, 55	540	384	924	684	522	1,206	495	354	849
55 ,, 60	665	452	1,117	697	540	1,237	698	438	1,136
60 ,, 65	697	443	1,140	693	553	1,246	746	487	1,233
65 ,, 70	523	440	963	680	497	1,177	626	465	1,091
70 ,, 75	584	544	1,128	612	508	1,120	604	543	1,147
75 ,, 80	639	640	1,279	650	633	1,283	627	677	1,304
80 ,, 85	596	595	1,191	504	603	1,107	553	575	1,128
85 ,, 90	363	358	721	410	358	768	384	410	794
90 ,, 95	118	118	236	107	129	236	165	151	316
95 ..	8	11	19	9	15	24	5	10	15
96 ..	13	7	20	8	6	14	5	10	15
97 ..	8	7	15	2	7	9	4	4	8
98 ..	6	6	12	1	4	5	3	7	10
99 ..	1	2	3	..	4	4	4	6	10
100 ..	..	1	1	1	1	2	1	2	3
101 ..	..	3	3	1	1	2	..	2	2
102 ..	..	..	..	..	..	..	1	..	1
103 ..	..	1	1	..	..	..	1	..	1
104 ..	..	..	..	..	..	..	..	..	..
105 ..	..	..	..	..	..	..	1	..	1
106 ..	1	..	1	..	..	..	..	..	..
108 ..	..	..	..	..	..	..	..	..	..
Total ..	8,079	7,098	15,177	10,508	8,862	19,370	9,060	7,772	16,832

Of the 51,379 persons who died in Victoria during the last three years, 6,698 were aged 80 years and upwards, and 18—seven males and eleven females—had attained or passed the age of 100 years

The highest age at death recorded in the period 1918–20 was 106 years, which was attained by one man. To every 100 female deaths there were 117 male deaths in 1920 as against 119 in the previous year and 114 in 1918.

Death rate from certain diseases.

The most striking features of the mortality in 1920 were the abnormally high death rate from measles, the comparatively high rate from whooping-cough, and the very low rate from influenza. The death rates from the chief diseases are shown in the appended table for the period 1908–12 and for the last five years :—

DEATHS PER MILLION FROM CERTAIN CAUSES.

Cause of Death.	Deaths per Million of the Population.					
	1908-1912.	1916.	1917.	1918.	1919.	1920.
Typhoid Fever	98	51	45	32	21	37
Scarlet Fever	16	21	23	28	24	24
Measles	33	13	11	5	17	146
Whooping Cough	77	84	51	47	24	125
Diphtheria and Croup	122	189	110	149	144	183
Influenza	109	70	47	148	2,407	52
Hydatids	22	21	14	21	18	13
Cancer	833	921	925	942	870	908
Phthisis	855	743	677	701	739	658
Other Tubercular Diseases	182	136	163	144	126	145
Syphilis	51	36	48	42	40	46
Diabetes	107	128	120	146	134	126
Anæmia, Chlorosis, Leucæmia	81	94	97	90	93	90
Simple Meningitis	133	67	51	52	42	54
Cerebro-Spinal Meningitis	..	231	53	26	10	10
Infantile Paralysis	..	3	4	15	2	3
Locomotor Ataxia and other diseases of Spinal Cord	71	70	58	88	78	45
Congestion and Hæmorrhage of the Brain	449	497	437	427	438	472
Epilepsy	35	54	42	40	38	31
Convulsions	76	55	43	49	55	45
Heart Disease (including Endocarditis, Pericarditis, and Angina Pectoris)	1,441	1,287	1,442	1,400	1,402	1,287
Acute and Chronic Bronchitis	348	313	201	233	284	273
Pneumonia and Broncho-pneumonia	834	767	656	694	904	801
Pleurisy	45	42	40	32	42	23
Congestion of Lungs and Pulmonary Apoplexy	63	82	57	56	51	84
Asthma and Pulmonary Emphysema	60	58	48	51	49	41
Enteritis, Gastro-enteritis, and Diarrhœal Diseases	833	731	408	504	501	639
Hernia, Intestinal Obstruction	113	107	104	115	111	118
Diseases of the Stomach (Cancer excepted)	99	84	83	83	98	106

DEATHS PER MILLION FROM CERTAIN CAUSES—*continued.*

Cause of Death.	Deaths per Million of the Population.					
	1908–1912.	1916.	1917.	1918.	1919.	1920.
Cirrhosis and other diseases of the Liver (Cancer excepted) ..	158	96	110	112	91	96
Biliary Calculi	27	27	27	32	27	31
Appendicitis	81	55	62	66	61	63
Simple Peritonitis (non-puerperal)..	35	33	30	35	31	28
Acute and Chronic Nephritis, Uræmia, Bright's Disease	576	570	568	586	510	540
Diseases of the Bladder and Prostate	94	91	94	97	88	82
Calculi of the Urinary System ..	7	4	5	6	6	6
Old Age	1,030	1,208	1,056	1,002	1,082	1,019
Suicide	102	83	88	72	89	95
Accidental Violence	531	459	417	408	424	451
Homicide	19	14	13	13	18	12

The above and other causes of death are fully dealt with in subsequent paragraphs.

Vaccinations. The proportion of successful vaccinations to every 100 births for the period 1876–1899, and for each year since, is given in the following table A great reduction in the percentage of vaccinations to births is shown for the year 1920. This is due to a large number of persons having taken advantage of the "Conscience Clause" of the Health Act of 1919 which came into operation on 24th March, 1920.

SUCCESSFUL VACCINATIONS PER 100 BIRTHS.

Period.	Vaccinations per 100 births.	Period.	Vaccinations per 100 births.
1876–1899 ...	72	1910 ..	69
1900 ...	67	1911 ...	62
1901 ...	62	1912 ...	60
1902 ...	53	1913 ...	69
1903 ...	71	1914 ...	65
1904 ...	69	1915 ...	69
1905 ...	67	1916 ...	61
1906 ...	67	1917 ...	60
1907 ...	67	1918 ...	48
1908 ...	67	1919 ...	44
1909 ...	68	1920 ...	12

In 1920 the vaccinations of children were equal to 12 per cent. of the births, as compared with 44 per cent. in the preceding year, 64 per cent. in the period 1900–1918, and 72 per cent. in the period 1876–1899.

Small-pox—Deaths from. Persons suffering from small-pox have arrived at Victorian ports on many occasions but, as they were at once quarantined, the disease never spread among the people of the State. During the years 1853 to 1920 only 28 deaths occurred from this cause, and of that number only 5 took place in the last thirty-six years of the period.

Typhoid fever. The reported cases of typhoid fever for the whole State declined from 288 per 100,000 of population in 1895–9 to 53 per 100,000 in 1914–18, and 23 per 100,000 in 1919–20, or by 92 per cent. in the intervening years. The death rate from the disease decreased by 90 per cent. during the same period. The deaths per 100 cases in 1920 were 12·7 as compared with 10·7 in 1914–18. The reported cases of, and deaths from typhoid fever and their proportions to the population, also the percentage of cases that ended fatally, are given in the next table for periods back to 1889 :—

TYPHOID FEVER IN VICTORIA, 1890 TO 1920.

Period.	Annual Cases Reported.		Annual Deaths.		Deaths per 100 reported Cases.
	Number.	Per 100,000 of Population.	Number.	Per 100,000 of Population.	
1890–4	2,932	253·9	381	33·0	13·0
1895–9	3,397	288·4	355	30·1	10·4
1900–4	2,152	178·1	213	17·6	9·9
1905–9	1,569	125·4	135	10·8	8·6
1910	2,124	163·5	139	10·7	6·5
1911	1,303	98·6	95	7·2	7·3
1912	1,122	82·8	98	7·2	8·7
1913	1,127	80·9	95	6·8	8·4
1914	1,195	84·0	106	7·4	8·9
1915	958	67·2	86	6·0	9·0
1916	727	51·6	72	5·1	9·9
1917	511	36·4	64	4·5	12·5
1918	354	25·0	46	3·2	13·0
1919	263	17·9	31	2·1	11·8
1920	433	28·8	55	3·7	12·7

The death rate from typhoid fever for Victoria is only about one-half of that for the Commonwealth.

Typhoid fever in the Metropolis.

The cases of, and deaths from typhoid fever in proportion to population, in Greater Melbourne, are given in the subjoined table for different periods during the past thirty-one years :—

TYPHOID FEVER IN THE METROPOLIS, 1890 TO 1920.

Period.	Annual Cases Reported.		Annual Deaths.	
	Number.	Per 100,000 of Population.	Number.	Per 100,000 of Population.
1890–4	1,645	349·3	205	43·5
1895–9	1,510	327·6	156	33·8
1900–4	701	140·0	74	14·8
1905–9	466	86·7	49	9·1
1910	689	118·5	52	8·9
1911	368	61·9	34	5·7
1912	272	44·3	29	4·7
1913	282	44·1	29	4·5
1914	312	47·1	38	5·7
1915	197	29·0	27	4·0
1916	162	23·5	23	3·3
1917	130	18·5	17	2·4
1918	87	12·2	16	2·2
1919	64	8·7	12	1·6
1920	128	17.0	13	1.7

The cases of, and deaths from typhoid fever in proportion to population declined by 95 and 96 per cent. respectively in Greater Melbourne between 1890–9 and 1920. The introduction and extension of the sewerage system coincide closely with, and in a large measure account for this great improvement.

Prevalence of typhoid fever in different areas.

The number of cases of typhoid fever during each of the last six years in five divisions of the State, and their proportions to the respective populations for the period 1910–19 and the year 1920, are given in the following table :—

PREVALENCE OF TYPHOID FEVER.

Area.	Reported Cases of Typhoid Fever.						Annual Cases per 10,000 of Population.	
	1915.	1916.	1917.	1918.	1919.	1920.	1910–19.	1920.
Greater Melbourne ..	197	162	130	87	64	128	4·1	1·7
Ballarat and Suburbs	79	59	5	11	16	12	13·4	3·0
Bendigo and Suburbs	65	32	31	21	11	9	18·2	2·6
Geelong and Suburbs	10	22	8	3	5	10	9·0	2·9
Rest of the State ..	607	452	337	232	167	274	8·9	4·3

The cases in proportion to population were fewer by 59 per cent. in Greater Melbourne, 78 per cent. in Ballarat, 86 per cent. in Bendigo, 68 per cent. in Geelong, and 52 per cent. in the rest of the State in 1920 than in the period 1910–19.

Death rates from typhoid fever at different ages.

The mortality from typhoid fever is higher at early adult and middle ages than at other periods of life, and higher among males than females. This is shown in the next table, which gives the death rates in age groups for each sex in the years 1890–2, 1900–2, and 1910–12, being the years adjoining the censuses of 1891, 1901, and 1911 :—

DEATH RATES FROM TYPHOID FEVER, 1890–2, 1900–2, AND 1910–12.

Age Group.	Deaths per 10,000 of each Sex.					
	Males.			Females.		
	1890–2.	1900–2.	1910–12.	1890–2.	1900–2.	1910–12.
0–15	2·26	0·97	0·38	2·85	1·46	0·44
15–20	5·21	2·65	1·76	5·85	2·23	1·22
20–25	9·21	4·39	1·82	4·77	1·84	1·32
25–35	6·48	3·28	1·71	3·87	2·04	0·82
35–45	3·60	2·25	1·26	2·03	1·21	0·68
45–55	2·24	1·95	0·82	1·29	0·93	0·39
55–65	1·74	0·66	0·20	1·04	0·34	0·50
65 and over ..	0·99	..	0·10	2·13	0·23	0·19
All ages	4·08	1·95	1·00	3·25	1·49	0·69

The experience of the three census periods mentioned shows that the rate for males exceeds that for females by 29 per cent., and that the heaviest mortality occurs between the ages 15 and 35. It is notable that at each census period there were proportionately fewer deaths of boys than of girls under the age of 15.

Scarlet fever.

In 1920 the deaths from scarlet fever numbered 36, which corresponded to a rate of 24 per million of the population, as compared with rates of 24 in the previous year, 28 in 1918, 23 in 1917, 21 in 1916, 8 in 1915, slightly over 1 in 1914, and 34 in 1890–2. During 1920 there were 2,259 cases reported as against 1,763 in the previous year, 2,572 in 1918, 1,994 in 1917 and 1,566 in

1916. For the five years mentioned the deaths were equal to 1·7 per cent. of the cases. According to the experience of the past ten years the chance of dying from the disease is 78 per cent. greater for females than for males

Measles. Although the mortality from measles has varied very considerably from period to period, there has been no very severe epidemic outbreak since 1898, when 671 deaths resulted from the disease. In 1920 there were 220 deaths attributed to this cause, representing a rate of 146 per million of the population, as compared with rates of 17 in the previous year, 5 in 1918, 11 in 1917, 13 in 1916, 22 in 1915, 74 in 1914, 32 in 1913, and 64 in 1912.

On the average of the five years 1910 to 1914, 47 per cent. of those who died from the disease were under 2 years of age and 75 per cent. were under 5 years. The incidence of mortality at various ages for each sex for the period 1910–14 was as follows :—

Sex.	Annual Deaths from Measles per 10,000 of each Sex aged—									
	0 to 1.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 and over.	All Ages.
Males	4·02	7·41	4·39	2·04	0·97	0·73	0·06	0·03	0·06	0·55
Females	4·34	4·92	2·44	1·96	1·00	0·72	0·06	0·06	0·10	0·46

Whooping cough. There were 188 deaths referred to whooping cough in 1920, which equalled a rate of 125 per million of the population at all ages, as compared with rates of 24 in the previous year, 47 in 1918, 51 in 1917, 84 in 1916, 68 in 1915, 69 in 1914, 71 in 1913, and 115 in 1912. The infantile death rate is more affected than the general rate by this ailment, as it is practically confined to children. In the year under review 112 of the deaths were of infants under 1 year, and, with the exception of 6, all the deaths were of children less than 5 years of age. On the average of the past ten years the mortality rate from the disease was 30 per cent. higher among girls than boys.

Diphtheria. The prevalence of diphtheria throughout the State during the past ten years was the most unsatisfactory feature of the statistics of sickness relating to that period. For the year 1920 the number of cases was 6,458 as against a yearly average

of 5,017 in 1911–19, 1,410 in 1905–9, 1,680 in 1900–4, and 1,584 in 1895–9. On the other hand, a very great reduction took place from period to period in the proportion of cases which ended fatally. The case mortality rate was 4·3 per cent. in 1920 as compared with 4·6 per cent. in 1912–16, 6·3 per cent. in 1905–9, 9·5 per cent. in 1900–4, and 13·9 per cent. in 1895–9.

The appended table shows for the whole State and the metropolis the reported cases of and deaths from diphtheria, and their proportions to the population, also the ratios of deaths to cases for different periods since 1894 :—

DIPHTHERIA IN VICTORIA AND GREATER MELBOURNE, 1895 TO 1920.

Period.	Annual Cases Reported.		Annual Deaths.		Deaths per 100 Cases Reported.
	Number.	Per 100,000 of Population.	Number.	Per 100,000 of Population.	
VICTORIA.					
1895–9	1,584	134·6	221	18·8	13·9
1900–4	1,680	139·0	159	13·2	9·5
1905–9	1,410	112·6	89	7·1	6·3
1910	2,415	185·9	112	8·6	4·6
1911	5,120	387·5	237	17·9	4·6
1912	5,289	390·5	257	19·0	4·9
1913	5,367	385·2	245	17·6	4·6
1914	4,868	342·3	211	14·8	4·3
1915	4,463	313·0	203	14·2	4·5
1916	5,377	381·5	266	18·9	4·9
1917	4,092	291·1	154	11·0	3·8
1918	6,568	463·3	211	14·9	3·2
1919	4,007	273·3	211	14·4	5·3
1920	6,458	429·2	276	18.3	4.3
GREATER MELBOURNE.					
1895–9	748	162·1	113	24·6	15·1
1900–4	686	136·9	58	11·6	8·5
1905–9	758	140·8	46	8·5	6·1
1910	1,655	284·6	74	12·7	4·5
1911	3,035	510·7	130	21·9	4·3
1912	2,451	399·0	130	21·2	5·3
1913	2,412	377·1	122	19·1	5·1
1914	2,164	326·6	116	17·5	5·4
1915	2,527	372·2	134	19·7	5·3
1916	3,214	465·9	173	25·1	5·4
1917	2,424	344·8	92	13·1	3·8
1918	3,807	531·8	125	17·5	3·3
1919	2,350	320·5	112	15·3	4·8
1920	2,698	357·5	117	15·5	4·3

Prevalence of diphtheria in different areas.

The cases of diphtheria which occurred in five divisions of the State in each of the past six years and their proportions to the respective populations, for the period 1910–19 and the year 1920, are given in the subjoined table :—

CASES OF DIPHTHERIA IN DIFFERENT AREAS.

Area.	Reported Cases of Diphtheria.						Annual Cases per 10,000 of Population.	
	1915.	1916.	1917.	1918.	1919.	1920.	1910–19.	1920.
Greater Melbourne ..	2,527	3,214	2,424	3,807	2,350	2,698	39·3	35·8
Ballarat and Suburbs	77	76	31	73	63	330	24·3	83.0
Bendigo and Suburbs	376	165	134	299	136	428	84·6	124·0
Geelong and Suburbs	130	122	148	314	165	369	43·4	107·0
Rest of the State ..	1,353	1,800	1,355	2,075	1,293	2,633	25·7	41·1

The cases in all divisions of the State were much more numerous in 1920 than in the preceding year.

Death rates from diphtheria at various ages.

Of the 533 males and 529 females who died from diphtheria during the five years 1910–14, 883, or 83 per cent., were under 10 years of age. The incidence of mortality for each sex at different ages, for the period mentioned, was as follows :—

DEATH RATES FROM DIPHTHERIA AT DIFFERENT AGES, 1910–14.

Sex.	Annual Deaths from Diphtheria per 10,000 of each Sex aged—									
	0 to 1.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 and over.	All Ages.
Males..	2·92	6·30	5·56	9·90	7·50	5·91	1·76	0·36	0·09	1·57
Females	2·68	5·16	6·27	6·43	8·14	6·84	1·68	0·39	0·11	1·54

Hydatids.

The deaths attributed to hydatids in 1920 numbered 20, being equivalent to a rate of 13 per million of the population, as compared with rates of 18 in the preceding year, 21 in 1918, 14 in 1917, 21 in 1916, 18 in 1915, 22 in 1908–12, and 51 in 1890–2. According to the experience of the past ten years the death rate from this disease is 31 per cent. higher among males than females. Hospital returns for the period 1914–20 show that 507 cases of hydatids were treated therein and that 72, or 1 in every 7, ended fatally.

Anæmia, chlorosis, leucæmia.

Anæmia, chlorosis, and leucæmia were responsible for 135 deaths in 1920, which corresponded to a rate of 90 per million of the population, as against rates of 93 in the previous year, 90 in 1918, 97 in 1917, 94 in 1916, 83 in 1915, 100 in 1914, 76 in 1913 and 81 in 1908–12. Of the 32 persons who died from leucæmia in 1920, 20 were males.

Diabetes.

During 1920 diabetes was responsible for 89 male and 101 female deaths, representing a rate of 126 per million of the population as compared with rates of 134 in the preceding year, 146 in 1918, 120 in 1917, 128 in 1916, 114 in 1915, 119 in 1914, 91 in 1913, and 107 in 1908–12. The deaths from diabetes per 10,000 of each sex in nine age groups for the periods 1890–2, 1900–2, and 1910–12, are shown in the subjoined table :—

DEATHS FROM DIABETES PER 10,000 OF EACH SEX.

Age Group.	Deaths per 10,000 of each Sex.					
	Males.			Females.		
	1890–2.	1900–2.	1910–12.	1890–2.	1900–2.	1910–12.
0–10	·02	·09	·10	·02	·05	·15
10–20	·17	·24	·20	·14	·26	·36
20–30	·29	·17	·64	·14	·36	·30
30–40	·21	·32	·58	·30	·51	·53
40–50	·58	·49	1·11	·49	·42	·78
50–60	1·18	1·38	1·80	1·31	1·42	3·18
60–70	1·49	2·67	5·63	2·49	3·19	8·47
70–80	2·87	4·36	7·34	1·88	5·01	11·54
80 and over	1·65	4·11	7·43	4·44	3·54	6·83
All Ages ...	·40	·56	1·00	·36	·60	1·26

At each age group over 30 the mortality rate from diabetes was considerably higher in 1910–12 than in the previous census period. In 1910–12 the female exceeded the male rate for each age group between 50 and 80, the excess for the twenty years of life 60 to 80 amounting to 54 per cent. For all ages combined the rate for females was 26 per cent. higher than that for males.

Influenza. In the next table are shown the number of deaths and the death rate from influenza in Victoria for each year from 1895 to 1920 :—

DEATHS AND DEATH RATES FROM INFLUENZA.

Year.	Males.	Females.	Persons.	Deaths per 100,000 of Population.
1895	223	199	422	35·8
1896	124	81	205	17·4
1897	103	63	166	14·2
1898	130	131	261	22·3
1899	528	435	963	81·2
1900	99	89	188	15·8
1901	150	145	295	24·5
1902	167	147	314	25·9
1903	68	61	129	10·7
1904	128	129	257	21·3
1905	71	62	133	11·0
1906	121	122	243	19·8
1907	149	127	276	22·1
1908	90	76	166	13·1
1909	61	49	110	8·6
1910	67	52	119	9·2
1911	70	80	150	11·4
1912	80	85	165	12·2
1913	56	38	94	6·7
1914	67	84	151	10·6
1915	45	50	95	6·7
1916	47	51	98	7·0
1917	39	27	66	4·7
1918	98	112	210	14·8
1919	1,969	1,561	3,530	240·7
1920	37	41	78	5·2

Influenza epidemic, 1919. Towards the end of January, 1919, an outbreak of influenza occurred in Melbourne and it rapidly spread throughout the whole metropolitan area. The first wave, which was the most virulent one, reached its greatest height in the second week of February and receded slowly during the subsequent six weeks. It was followed by a second wave of greater magnitude which commenced in the last week of March and attained its maximum height about one month later, after which it receded, though more slowly than the preceding wave. A recrudescence of the disease in a milder form occurred about the middle of July, but it had abated to very small dimensions by the end of September. The disease spread gradually throughout the State and accounted for 3,530 deaths, of which 2,391 occurred in Greater Melbourne, 91 in Ballarat, 87 in Bendigo, 65 in Geelong, and 896 in the rest of the State. To every 10,000 of population the deaths from this cause were 24·1 for the State as a whole, 32·6 in Greater Melbourne, 22·8 in Ballarat, 25·0 in Bendigo, 19·0 in Geelong, and 14·4 in the rest of the State. The

mortality rate from the disease was considerably higher in the industrial than in the residential areas of the metropolis. Further information in regard to the epidemic of 1919 is given in the *Year-Book* for 1918-19, pages 214 to 216.

Influenza. The next table gives the death rate from influenza per 10,000 of each sex in age groups for five census periods, these periods being selected because the age distribution of the people was then accurately known :—

DEATHS FROM INFLUENZA IN VICTORIA PER 10,000 OF EACH SEX.

Age Group.	1870-2.	1880-2.	1890-2.	1900-2.	1910-12.
Males.					
0—15	·69	·34	2·50	1·10	·40
15—20	...	·07	·64	·34	·24
20—25	...	...	1·20	·59	·21
25—35	·05	·07	1·50	·79	·17
35—45	·05	...	3·04	1·31	·59
45—55	·09	·24	5·12	3·20	·73
55—65	·67	·24	12·65	5·25	2·38
65 and upwards	1·09	2·36	27·13	17·02	12·27
All ages	·33	·25	3·94	2·30	1·10
Females.					
0—15	·52	·34	1·86	1·15	·42
15—20	...	...	·92	·83	·34
20—25	...	...	1·28	·69	·35
25—35	·07	·07	2·35	·89	·22
35—45	...	·08	4·11	1·86	·30
45—55	·17	...	5·39	2·02	·68
55—65	·39	·62	11·46	5·53	1·61
65 and upwards	·84	3·18	35·22	16·02	12·80
All ages	·28	·24	3·72	2·13	1·10

The death rate for the period 1910-12 showed a substantial decrease as compared with that for each of the two preceding periods, the rate for 1910-12 being 50 per cent. below that for 1900-2, and nearly 71 per cent. below the rate for 1890-2. It is notable that the decline in the mortality rate from this disease has been associated with very heavy reductions in the death rates from pulmonary tuberculosis and other respiratory diseases.

Respiratory diseases. In 1920 the deaths from respiratory diseases numbered 1,998, which represented a rate of 1,329 per million of the population, as compared with rates of 1,430 in the previous year, 1,160 in 1918, 1,094 in 1917, 1,336 in 1916, 1,368 in 1915, 1,397 in 1914, and 1,279 in 1913. Of the deaths from complaints of this nature in the year under review, 78 were referred to acute bronchitis, 333 to chronic bronchitis, 494 to broncho-pneumonia, 710 to pneumonia, 34 to pleurisy, and 53 to asthma. These six diseases accounted for 85 per cent. of

the total respiratory mortality. The seasonal incidence of the maladies is evidenced by the deaths in June, July, August, and September, which represented nearly 48 per cent. of the total for the whole year. Respiratory diseases are much more fatal at the extremes of life than at middle ages, and among males than females. This is shown in the appended table, which gives for each sex the death rates relating to groups of ages at five census periods :—

DEATHS FROM RESPIRATORY DISEASES PER 10,000 OF EACH SEX.

Age Group.	1870–2.	1880–2.	1890–2.	1900–2.	1910–12.
Males.					
0—15	22·65	29·02	28·52	16·53	12·94
15—20	3·05	3·30	2·92	2·70	1·66
20—25	5·70	5·34	4·88	4·85	2·35
25—35	5·69	8·31	6·85	5·94	3·86
35—45	10·28	15·80	13·55	9·49	10·50
45—55	20·43	26·59	25·18	18·04	18·25
55—65	41·79	51·65	56·51	38·37	32·68
65 and upwards	108·11	136·54	141·07	112·38	138·87
All ages	17·29	24·48	24·30	18·66	17·17
Females.					
0—15	18·50	24·18	24·13	13·85	10·50
15—20	1·88	2·02	3·52	2·34	1·56
20—25	3·54	4·23	3·05	3·34	2·48
25—35	4·51	5·72	5·65	3·75	3·55
35—45	7·94	12·53	11·55	7·68	5·85
45—55	7·87	13·63	17·01	11·80	8·28
55—65	22·97	29·15	32·10	27·42	16·64
65 and upwards	73·10	116·12	112·38	86·78	99·81
All ages	12·63	17·08	17·62	13·28	11·81

Compared with the census period 1900–2, the mortality from respiratory diseases for the period 1910–12 showed a decline in each age group up to 35 for males and 65 for females, the reduction for all ages combined amounting to 8 per cent. in the rate for the former and 11 per cent. in that for the latter. At each census date the male exceeded the female rate, the average excess for the five census periods being nearly 41 per cent.

Cerebro-spinal, tubercular, and simple meningitis.

Cerebro-spinal meningitis was responsible for 15 deaths in 1920, 14 in 1919, 37 in 1918, 75 in 1917, 326 in 1916, and 338 in 1915. The cases reported to the Public Health Department in those years numbered 1,643, and the proportion of these that ended fatally was 49 per cent. The numbers

of deaths from cerebro-spinal, tubercular, and simple meningitis during the last ten years were as follows :—

DEATHS FROM DIFFERENT FORMS OF MENINGITIS, 1911–20.

Year.	Cerebro-spinal Meningitis.		Tubercular Meningitis.		Simple Meningitis.		Total—All Forms of Meningitis.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1911 ..	9	2	41	49	75	51	125	102
1912 ..	4	3	26	44	63	76	93	123
1913 ..	8	4	25	41	85	65	118	110
1914 ..	12	5	42	30	89	63	143	98
1915 ..	239	99	35	35	74	46	348	180
1916 ..	191	135	29	40	56	39	276	214
1917 ..	48	27	56	41	37	35	141	103
1918 ..	28	9	55	40	39	35	122	84
1919 ..	7	7	38	24	33	29	78	60
1920 ..	12	3	49	34	46	35	107	72

Age incidence of different forms of meningitis.

The next table shows the incidence of mortality at various ages from different forms of meningitis for the period 1911–20 :—

DEATHS AT DIFFERENT AGES FROM MENINGITIS, 1911–20.

Age Group.	Cerebro-spinal Meningitis.		Tubercular Meningitis.		Simple Meningitis.		Total—All Forms of Meningitis.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 5 ..	130	94	225	194	343	273	698	561
5 to 15 ..	71	56	88	88	71	57	230	201
15 ,, 25 ..	160	48	30	52	36	48	226	148
25 ,, 35 ..	77	26	27	23	29	20	133	69
35 ,, 45 ..	50	24	18	10	42	28	110	62
45 ,, 55 ..	47	27	5	8	43	22	95	57
55 ,, 65 ..	16	12	2	2	12	9	30	23
65 and over	7	7	1	1	21	17	29	25
Total 1911–20	558	294	396	378	597	474	1,551	1,146

On the average of the last ten years the deaths of children under 5 years of age from cerebro-spinal, tubercular, and simple meningitis represented 26, 54, and 58 per cent. respectively of the total deaths from these diseases. Of the 15 persons who succumbed to cerebro-spinal meningitis in 1920, 10 were under 5 and 14 were under 15 years of age. Up to the age of 15 years the incidence of the mortality from this disease in the period 1911–20 was 34 per cent. higher for males than

females, while for the age group 15 to 45 the rate for the former was about three times that for the latter.

Diseases of the spine. In 1920 locomotor ataxia and other diseases of the spine, excluding infantile paralysis, accounted for 41 male and 26 female deaths, representing a death rate of 45 per million of the population, as compared with rates of 78 in the previous year, 88 in 1918, 58 in 1917, 70 in 1916, 58 in 1915, 75 in 1914, 62 in 1913, and 71 in 1908–12. Of the 18 persons who died from locomotor ataxia 13 were males.

Infantile paralysis. Mortality returns show that infantile paralysis was responsible for 4 deaths in 1920 as against 3 in the previous year, 21 in 1918, 6 in 1917, 4 in 1916, 2 in 1915, 9 in 1914, 3 in 1913, and 6 in 1912. Of the 58 persons who died during these nine years 33 were boys. Six of the victims were under 1 year of age, and 28 were under 5 years. The cases reported to the Public Health Department in 1920 numbered only 5 as compared with 2 in the preceding year, 303 in 1918, and 32 in 1917.

Heart disease. During 1920 there were 1,703 deaths ascribed to organic heart disease, 36 to pericarditis, 152 to acute endocarditis, and 44 to angina pectoris. The total—1,935—from these causes represented a rate of 1,287 per million of the population, as compared with 1,402 in the previous year, 1,400 in 1918, 1,442 in 1917, 1,287 in 1916, 1,134 in 1915, 1,278 in 1914, 1,294 in 1913, and 1,441 in 1908–12. Of the 1,935 persons who died from these diseases in 1920, only 48, or 2·5 per cent., were under 15 years of age. On the average of the three years 1910 to 1912 the deaths from all forms of heart disease per 10,000 of each sex in age groups were as follows :—

DEATH RATES FROM HEART DISEASE AT VARIOUS AGES.

Sex.	Deaths per 10,000 Persons aged—									
	0–15.	15–20.	20–25.	25–35.	35–45.	45–55.	55–65.	65–75.	75 and upwards.	All Ages
Males ..	1.25	1.81	2.35	3.01	6.71	15.53	49.57	127.50	243.44	15.19
Females ..	1.25	1.66	2.08	2.88	7.10	15.63	36.22	107.21	238.36	13·58

The figures indicate that the mortality rate from heart disease is a function of age, and that it attains its maximum at the oldest age. Of the deaths of persons aged 75 and upwards, approximately 1 in 6 is due to some form of this disease.

Diseases of the digestive system. In 1920 there were 906 male and 820 female deaths from digestive ailments, representing a proportion of 1,147 per million of the population, as against rates of

978 in the previous year, 1,030 in 1918, 884 in 1917, 1,206 in 1916, 1,098 in 1915, 1,504 in 1914, 1,220 in 1913, 1,345 in 1912, 1,233 in 1911, and 2,382 in 1890–2. Diarrhœal diseases were responsible for 961 deaths, which were equivalent to a rate of 639 per million of population. the corresponding rates in previous periods being 501 in 1919, 504 in 1918, 408 in 1917, 731 in 1916, 590 in 1915, 941 in 1914, 709 in 1913, 833 in 1908–12, and 1,342 in 1890–2. The age incidence of these diseases shows that they are heaviest at the extremes of life. Of the 961 deaths from diarrhœal diseases in the year under review, 693, or 72 per cent., were of children under 2 years of age, and 121, or about 13 per cent., were of persons over 65 years of age. There were 46 male and 31 female deaths from cirrhosis of the liver, 67 male and 65 female deaths from other affections of that organ, and 90 male and 88 female deaths from hernia and intestinal obstruction.

Appendicitis. The deaths from appendicitis numbered 95 in 1920, 89 in the previous year, 94 in 1918, 87 in 1917, 78 in 1916, 102 in 1915, and 103 in 1914, and corresponded to rates of 63, 61, 66, 62, 55, 72, and 72 per million of the population respectively. Hospital records show that during 1920 there were 1,800 cases treated, and that 48, or 2·7 per cent., ended fatally, as compared with fatality rates of 3·3 per cent. in 1919, 3·0 per cent. in 1918, 2·5 per cent. in 1917, 4·1 per cent. in 1916, 5·3 per cent. in 1915, and 6 per cent. in the period 1908–12. According to the experience of the five years, 1910 to 1914, the death rate from appendicitis is approximately 31 per cent. higher among males than females. The mortality rates at various ages for that period were as follows :—

DEATH RATES FROM APPENDICITIS, 1910–14.

Sex.	Deaths from Appendicitis per 10,000 of each Sex aged—									
	Under 10.	10 to 15.	15 to 20.	20 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 and over.	All Ages.
Males..	0·43	1·00	1·24	1·03	1·01	0·97	0·90	1·38	1·05	0·92
Females	0·42	1·43	0·88	0·71	0·59	0·52	0·85	0·58	0·55	0·70

Diseases of urinary system. In 1920 there were 1,048 deaths attributed to diseases of the urinary system, which corresponded to a rate of 697 per million of the population, as against rates of 645 in the previous year, 741 in 1918, 710 in 1917, 705 in 1916, 712 in 1915, 670 in 1914, 724 in 1913, and 700 in 1909–12. Bright's disease, uræmia, and acute nephritis were responsible for 812 deaths, or 77 per cent., and complaints of the bladder and prostate for 123 deaths, or 12 per cent of the total referred to maladies of the urinary system.

The deaths per 10,000 of each sex in age groups for the periods 1890–2, 1900–2, and 1910–12 are shown in the following table :—

DEATH RATES FROM DISEASES OF URINARY SYSTEM

Age Group.	Deaths per 10,000 of each Sex.					
	Males.			Females.		
	1890–2.	1900–2.	1910–12.	1890–2.	1900–2.	1910–12.
0–10	1·16	·93	·67	·97	·59	·79
10–20	·43	·45	·73	·58	·82	·71
20–30	1·45	1·83	1·72	1·82	1·59	1·61
30–40	3·05	3·55	3·03	4·72	4·21	3·76
40–50	7·36	8·12	9·03	6·63	7·26	7·07
50–60	11·90	17·43	18·95	5·91	11·36	13·81
60–70	27·42	39·62	46·63	9·62	21·49	24·44
70–80	58·98	80·68	96·18	14·62	27·70	38·53
80 and over	74·07	128·48	153·04	22·21	27·15	43·70
All Ages ...	5·25	8·05	9·18	2·84	4·28	5·34

The figures for the latest period show that there is scarcely any difference between the rates for males and females under 50 years of age. For older ages, however, the excess of the male over the female rate is very pronounced, especially at ages 70 and upwards. For all ages the rate for males exceeds that for females by 72 per cent.

Deaths from phthisis at various ages.

The ages and sexes of those who died from pulmonary tuberculosis in each of the last five years are given in the next table :—

DEATHS FROM PULMONARY TUBERCULOSIS AT VARIOUS AGES.

Ages.	Males.					Females.				
	Year.					Year.				
	1916.	1917.	1918.	1919.	1920.	1916.	1917.	1918.	1919.	1920.
0–10 ...	9	2	2	5	12	2	4	7	3	6
10–15 ...	6	2	2	2	3	10	6	7	4	6
15–20 ...	16	21	18	22	17	46	38	38	43	33
20–25 ...	60	51	47	58	47	79	67	83	83	67
25–30 ...	72	41	39	77	64	72	74	86	75	76
30–35 ...	55	58	55	80	65	44	66	51	54	55
35–40 ...	69	70	67	72	57	49	50	50	54	45
40–45 ...	72	60	56	65	60	42	27	41	32	42
45–50 ...	68	63	58	68	70	39	29	30	35	26
50–55 ...	67	58	72	65	58	18	14	24	20	21
55–60 ...	48	50	54	67	46	17	13	16	16	15
60–65 ...	30	40	41	31	39	7	4	14	11	13
65–70 ...	20	16	19	17	16	5	5	2	6	6
70 and over	14	17	12	10	16	11	6	3	9	9
Total ...	606	549	542	639	570	441	403	452	445	420

Death rates from phthisis.

The deaths from phthisis in 1920 numbered 990—570 being of males and 420 of females—and equalled a rate of 658 per million of the population, as compared with rates of 739 in the previous year, 701 in 1918, 677 in 1917, 743 in 1916, 661 in 1915, 724 in 1914, 755 in 1913, 855 in 1908–12, and 1,365 in 1890–2. In England and Scotland in 1919, and in Ireland in 1918, the deaths from this cause were 996, 877 and 1,715 per million of their respective populations. The rates for Victoria are more fully shown in the following table, which gives the mortality per 10,000 of each sex, in age groups, at six census periods :—

DEATH RATES IN VICTORIA FROM PHTHISIS IN AGE GROUPS AT SIX CENSUS PERIODS.

Age Group.	Annual Mortality from Phthisis per 10,000 of each Sex.					
	1860–2.	1870–2.	1880–2.	1890–2.	1900–2.	1910–12.
Males.						
0 to 15	2·55	1·22	1·74	·90	·38	·46
15 " 20	7·72	5·71	6·88	5·41	5·06	3·71
20 " 25	12·23	18·75	21·19	18·29	14·35	8·45
25 " 35	16·53	22·21	30·33	23·70	20·31	13·11
35 " 45	21·63	21·83	25·11	28·28	22·07	15·63
45 " 55	23·14	22·24	28·65	31·17	25·05	18·07
55 " 65	25·63	27·86	31·41	36·48	35·75	18·88
65 and upwards ...	23·20	19·56	18·08	25·40	31·07	13·55
All Ages ...	13·33	12·89	15·33	15·73	13·51	8·98
Females.						
0 to 15	3·70	·98	1·76	1·43	·93	·97
15 " 20	14·07	12·37	12·50	9·51	8·18	7·62
20 " 25	18·95	19·28	21·00	18·49	12·79	12·68
25 " 35	24·76	22·02	26·56	21·77	18·15	14·03
35 " 45	25·62	21·65	24·06	22·53	17·74	11·51
45 " 55	25·01	19·60	20·72	16·13	14·41	8·18
55 " 65	22·59	10·51	14·26	12·35	12·52	7·47
65 and upwards ...	18·03	12·61	13·12	8·25	8·18	5·29
All Ages ...	14·46	10·62	12·75	11·51	9·72	7·61

A comparison of the mortalities from pulmonary tuberculosis at the census periods 1900–2 and 1910–12 shows that, except among boys and girls under 15, lower death rates obtained in each age group in 1910–12 than in 1900–2, and that the improvement was greater among males than females. By combining the death rates from pulmonary tuberculosis, as shown above, with those from other forms of tubercular disease, given in a subsequent page, it appears that the section of the community represented by females aged 15 to 25 was the only one which experienced no relief from tubercular diseases in 1910–12 as compared with the preceding census period. It is probable that this result was

partly due to the increased proportion of females engaged in manufacturing industries. Comparing the number of females aged 15 to 25 employed in factories with the total females of similar age in the community, it is found that between the census of 1901 and that of 1911 there was an increase of 78 per cent. in the proportion exposed to the risk of tubercular infection involved in factory employment.

Tubercular death rates in Melbourne, Ballarat, and Bendigo.

The distribution of tuberculous mortality shows that certain urban centres—particularly Bendigo and suburbs—furnish considerably higher death rates than the rural portions of the State. The tubercular death rate amongst miners is very considerably in excess of that among farmers and graziers, and, as mining occupations predominate in Bendigo and suburbs and farming and grazing occupations in the rural districts the distribution of callings accounts in a large measure for the disparity in the mortality rates from this cause in the divisions of the State referred to. On the average of the past five years the tubercular death rate of Bendigo exceeded the rates of Ballarat and Melbourne by 42 and 77 per cent. respectively. The rates in these localities from phthisis and other tubercular diseases are given in the appended table for the periods 1891–1900, 1901–5, and 1906–10, and for each of the last ten years :—

DEATH RATES FROM TUBERCULAR DISEASES IN MELBOURNE, BALLARAT, AND BENDIGO, 1891 TO 1920.

Period.	Deaths per 10,000 of the Population.								
	Phthisis.			Other Tubercular Diseases.			All Tubercular Diseases.		
	Melbourne and Suburbs.	Ballarat and Suburbs.	Bendigo and Suburbs.	Melbourne and Suburbs.	Ballarat and Suburbs.	Bendigo and Suburbs.	Melbourne and Suburbs.	Ballarat and Suburbs.	Bendigo and Suburbs.
1891–1900 ..	16·7	17·1	24·1	4·7	3·5	4·0	21·4	20·6	28·1
1901–1905 ..	13·9	15·3	22·7	4·2	4·0	4·7	18·1	19·3	27·4
1906–1910 ..	10·8	11·5	21·2	3·0	2·1	2·0	13·8	13·6	23·2
1911 ..	9·9	9·4	19·5	2·6	3·3	2·5	12·5	12·7	22·0
1912 ..	10·0	10·0	17·7	2·0	1·7	2·1	12·0	11·7	19·8
1913 ..	8·8	10·9	20·0	2·2	2·8	2·3	11·0	13·7	22·3
1914 ..	8·9	11·2	11·8	2·0	·9	1·0	10·9	12·1	12·8
1915 ..	7·7	10·2	13·6	1·7	2·1	2·4	9·4	12·3	16·0
1916 ..	8·6	14·3	14·2	1·8	1·5	1·4	10·4	15·8	15·6
1917 ..	7·9	10·9	16·8	2·2	1·7	2·2	10·1	12·6	19·0
1918 ..	8·3	9·2	17·4	1·8	1·3	3·1	10·1	10·5	20·5
1919 ..	8·7	10·8	14·7	1·7	1·0	2·0	10·4	11·8	16·7
1920 ..	7·9	10·6	17·1	1·9	2·0	1·2	9·8	12·6	18·3

Prevalence of phthisis in different areas.

Relatively to population cases of pulmonary tuberculosis are fewer in country districts than in urban areas. The cases reported during each of the past six years in five divisions of the State, and their proportions to the populations of these divisions for the period 1910–19 and the year 1920 are given in the subjoined table :—

PHTHISIS IN DIFFERENT AREAS.

Area.	Reported Cases of Pulmonary Tuberculosis.						Annual Cases per 10,000 of Population.	
	1915.	1916.	1917.	1918.	1919.	1920.	1910–19.	1920.
Greater Melbourne ..	972	1,094	1,052	982	889	653	13·9	8·7
Ballarat and Suburbs	63	77	43	40	28	21	12·8	5·3
Bendigo and Suburbs	59	70	53	56	31	21	18·0	6·1
Geelong and Suburbs	20	37	14	22	24	16	7·9	4·6
Rest of the State ..	395	375	400	380	213	211	5·8	3·3
Whole State ..	1,509	1,653	1,562	1,480	1,185	932	10·4	6·2

Phthisis in metropolitan municipalities.

In the *Year-Book* for 1918–19, page 226, a table is given showing the reported cases of phthisis to every 10,000 of population of each metropolitan municipality. The rates are based on the reports received by the Public Health Department for the two and one-half years ended 30th June, 1911.

Other phases of phthisis.

The results of an investigation of 3,198 cases of pulmonary tuberculosis which occurred in the State during the two and a half years ended June, 1911, are given in the 1913–14 edition of this work. The matters dealt with were the sex and age of the patients, their usual place of residence, the chances of metropolitan and extra metropolitan residents contracting the disease at different ages, the time elapsing from the commencement of the complaint to the date on which medical advice is obtained, and the probability of recovering from the disease. In the issue referred to the medical and economic results of sanatorium treatment of tuberculosis of the lungs in Germany are shown for a series of years.

Tubercular diseases (phthisis excepted).

In 1920 there were in Victoria 218 deaths from tubercular diseases (excluding phthisis), which corresponded to a rate of 145 per million, as compared with rates of 126 in the previous year, 144 in 1918, 163 in 1917, 136 in 1916, 135 in 1915, 140 in 1914, 156 in 1913, 182 in 1908–12, and 379 in 1890–2. The

death rates in various age groups are shown in the following table for five census periods :—

DEATH RATES FROM TUBERCULAR DISEASES (PHTHISIS EXCEPTED) IN AGE GROUPS.

Age Group.	Deaths per 10,000 of each Sex.				
	1870-2.	1880-2.	1890-2.	1900-2.	1910-12.
Males.					
0—15 ...	7·53	7·98	10·36	5·64	2·75
15—20 ...	·64	·81	1·17	1·12	1·12
20—25 ...	1·80	1·23	·89	1·77	1·23
25—35 ...	·70	·66	·84	1·91	1·71
35—45 ...	·77	·88	·77	1·39	1·38
45—55 ...	·95	·85	·67	1·64	·82
55—65 ...	·88	1·07	·78	2·40	1·29
65 and over	1·09	2·36	·56	1·17	·59
All ages	3·46	3·55	4·02	2·99	1·70
Females.					
0—15 ...	5·89	7·28	8·43	5·33	2·12
15—20 ...	·82	1·30	1·27	1·95	2·34
20—25 ...	·52	·69	1·23	2·09	2·59
25—35 ...	·54	·41	·88	1·98	1·81
35—45 ...	1·04	·70	·42	1·77	1·33
45—55 ...	·17	·67	·34	1·01	·93
55—65 ...	·39	·62	·69	·71	1·11
65 and over	1·69	1·19	·64	·71	·29
All ages	3·10	3·39	3·58	2·91	1·76

As compared with the period 1900–2 the proportion of persons under 15 years of age who died from tubercular diseases (excluding

phthisis) during 1910–12 represented a decline of 51 per cent. for males and of 60 per cent. for females. The most important increase occurred in the rate for females aged 15–25.

Tubercular diseases—Deaths of recent arrivals from.

The experience of recent years shows that the tubercular death rate in Victoria is but slightly affected by the arrival from beyond Australia of persons suffering from tubercular diseases. Only four of those who died in 1920 had been born outside and resident less than one year in Australia, and 15 had resided in the continent for a shorter period than five years.

Cancer—Deaths at various ages.

The numbers dying from cancer in different age groups in each of the last five years are given below :—

DEATHS FROM CANCER AT VARIOUS AGES.

Age Group.	Males.					Females.				
	1916.	1917.	1918.	1919.	1920.	1916.	1917.	1918.	1919.	1920.
0-15	5	6	2	6	4	6	10	4	4	7
15-25	5	2	..	5	4	4	6	3	4	3
25-35	15	8	7	8	9	18	24	16	13	16
35-45	25	24	35	31	31	57	84	68	42	62
45-55	121	116	108	106	118	164	121	145	160	139
55-65	184	204	240	182	240	162	168	190	202	194
65-75	163	140	159	173	162	154	154	130	134	159
75-85	94	94	91	79	83	93	101	93	84	83
85 and over ..	15	15	23	18	27	13	23	22	24	25
Total ..	627	609	665	608	678	671	691	671	667	688

The widely different social and economic effects produced by the prevalence of and deaths from the two important diseases—cancer and phthisis—are evidenced by the ages of their victims. For the year 1920 the average age of those who died from cancer was 62·4 years for males and 60·5 years for females, whilst the corresponding averages for phthisis were 41·7 years for males and 34·8 years for females.

Cancer—Death rates at different ages.

Deaths from cancer in 1920 numbered 1,366, and represented a death rate of 908 per million of the whole population, as compared with rates of 870 in the previous year, 942 in 1918, 925 in 1917, 921 in 1916, 812 in 1915, 830 in 1914, 838 in 1913, 833 in 1908–12, and 584 in 1890–2.

In England and Scotland in 1919, and in Ireland in 1918 the deaths per million of population from this cause were 1,145, 1,156, and 870 respectively. Cancer death rates, computed in relation to the general population in earlier and later periods, are not fairly comparable owing to the changed age distribution of the people A more accurate mortality rate is obtained by comparing the deaths with the number of persons in the community of the same sex in age groups. This has been done for four census periods, when the numbers of the people in age groups were accurately known, and the results are given in the appended table :—

DEATH RATES FROM CANCER IN AGE GROUPS.

Age Group.	Deaths from Cancer per 10,000 of each Sex.			
	1880–2.	1890–2.	1900–2.	1910-12.
Males.				
Under 5 ...	·29	·18	·30	·73
5 to 10 ..	·24	·10	·42	·25
10 „ 15 ...	·18	·11	·20	·16
15 „ 20 ...	·07	·17	·22	·15
20 „ 25 ...	·25	·32	·33	·71
25 „ 35 ...	·80	·81	1·26	·96
35 „ 45 ...	4·12	4·29	3·69	3·16
45 „ 55 ...	10·16	14·83	14·14	16·03
55 „ 65 ...	22·01	31·92	36·00	36·36
65 „ 75 ...	34·55	52·75	59·04	74·15
75 and over	45·12	58·55	74·04	88·40
All ages	4·29	6·16	7·52	8·50
Females.				
Under 5 ...	·12	·09	·26	·19
5 to 10 ...	·12	·10	·04	·10
10 „ 15 ...	·06	·06	—	·27
15 „ 20 ...	·26	·12	·28	·44
20 „ 25 ...	·39	·22	·23	·41
25 „ 35 ...	2·65	1·68	1·61	1·39
35 „ 45 ...	7·32	7·43	6·05	7·26
45 „ 55 ...	15·07	18·00	18·13	17·87
55 „ 65 ...	29·35	31·79	33·05	38·03
65 „ 75 ...	32·68	53·96	51·18	61·66
75 and over	27·56	49·55	62·70	86·19
All ages	4·27	5·57	6·64	8·76

Deaths from cancer occur at all age periods, but the rates in the foregoing table show that it is essentially a disease of later life, increasing rapidly in the groups past middle age, and reaching a maximum mortality rate in the oldest age group. From the figures for the periods 1900–2 and 1910–12 it would appear that there was in the

second period a slight but definite increase in the death rate from cancer among persons under 65, and a large increase among persons over that age and, further, that on the whole the increase was much greater among females than males.

Seat of cancer.

The following table shows the seat of cancer in persons who died from this disease in 1920 :—

SEAT OF CANCER.

Seat of Disease.	Males.	Females.	Total.
Cancer of the buccal cavity (mouth, &c.) ..	83	9	92
,, the stomach and liver	293	214	507
,, the peritoneum, the intestines, and the rectum	110	82	192
,, the female genital organs ...	...	130	130
,, the breast	...	100	100
,, the skin	26	19	45
,, other and unspecified organs ...	166	134	300
Total Deaths	678	688	1,366

Thirty-seven per cent. of the persons who died from cancer were affected in the stomach or liver. Of the females who died from the disease one-third were affected in the genital organs or the breast.

Senile decay.

During the year 1920, the deaths of 729 men and 804 women aged 65 years and over were ascribed to senile decay. The deaths at these ages from all causes during the year numbered 5,846—2,984 of men and 2,862 of women. It is thus seen that 26·2 per cent. of the deaths of persons aged 65 years and upwards were due to senile decay. The mortality rates of elderly persons in several age groups have been computed for the period 1910–12, when the numbers of persons within those groups were accurately known. These show that of every 100 persons in the respective age groups there died within a year, from all causes, 4·21 aged 65 to 70, 6·63 aged 70 to 75, 10·71 aged 75 to 80, 16·36 aged 80 to 85, and 27·30 aged 85 and upwards.

Accidental violence.

Death rates from accidental violence have been lower in late years than in earlier periods, a result that is chiefly due to the lighter mortality rate from accidental drowning, the smaller proportion of the population engaged in country occupations, which are generally of a more hazardous nature than those in

towns, and the increasing proportion of females in the community, In 1920 there were 526 male and 152 female deaths attributed to accidents and negligence, which represented a rate of 451 per million of the population. This proportion was 2·5 per cent. above the average rate—440—for the previous five years, but 44 per cent. below the rate —811—for 1890–2. The numbers of deaths from various accidents in 1920 are given in the appended table :—

DEATHS FROM ACCIDENTAL VIOLENCE, 1920.

Nature or Place of Accident.	Males.	Females.	Total.
Poisoning by Food	9	5	14
Snake Bite	4	1	5
Other Acute Poisonings	9	2	11
Burns (including Conflagrations)	34	29	63
Absorption of Poisonous Gases	8	5	13
Suffocation in bed (infants)	12	6	18
Drowning	101	23	124
Firearms	26	6	32
Falls	66	13	79
In Mines and Quarries	12	..	12
Machines	6	..	6
Vehicular Accidents—			
On Railways	42	6	48
Motor Car	21	11	32
Motor Cycle	8	1	9
Motor Lorry	2	..	2
Aeroplane	2	..	2
Bicycle	2	1	3
Tram Car	14	6	20
Vehicle drawn by Horses	29	4	33
Vehicle, Undefined	4	..	4
Injuries by Animals	5	1	6
Effects of Heat	17	15	32
Excessive Cold	6	1	7
Electricity	4	..	4
Lightning	1	..	1
Fractures, Unspecified	18	10	28
Other Violence	64	6	70
Total	526	152	678

On the average of the past three years the female mortality rate from accidents was about one-third of the rate for males.

Fatal accidents among males at different ages.

The mortality rate from accidents is only one-half as great among males aged 15 to 45 as among men over that age. The deaths per 10,000 males at certain ages from

drowning, sunstroke, and other accidents for the period 1909–13 were as follows :—

DEATH RATES FROM ACCIDENTS—MALES, 1909–13.

—	Accidental Deaths per 10,000 Males Aged—							
	15–20.	20–25.	25–35.	35–45.	45–55.	55–65.	65 and over.	15 and upwards.
Drowning ..	1·74	1·19	1·15	1·40	1·89	2·57	3·64	1·72
Sunstroke ..	..	..	·08	·10	·27	·18	·96	·16
Other Accidents ..	3·68	5·19	4·68	5·90	7·51	10·06	16·54	6·56
Total Accidents ..	5·42	6·38	5·91	7·40	9·67	12·81	21·14	8·44

For men aged 20 to 35 the death rate from accidental violence is less than one-third of that for men over age 65 and slightly less than one-half of the rate for those aged 55 to 65. The death rates in the above table agree fairly closely with English experience, which shows that in the period mentioned the average annual number of deaths from accidents per 10,000 males was 5·33 at ages 15–20, 5·71 at 20–25, 6·64 at 25–35, 8·62 at 35–45, 11·12 at 45–55, 13·99 at 55–65, and 18·85 at 65 and upwards.

Occupations of men dying from accidents.

During the year 1920, 384 males aged seventeen years and upwards died from the results of accidents. The numbers for the different occupations were as follows :—

Occupation.	Deaths from Accidents, 1920.	Occupation.	Deaths from Accidents, 1920.
Labourer (undefined) ..	71	Engine-driver	3
Farmer, grazier	56	Fisherman	3
Railway employee	24	Market gardener	3
Miner	16	Plumber	3
Clerk	14	Publican	3
Carter, carrier, driver ..	13	Agent	2
Sawyer, timber-worker ..	8	Brassfinisher	2
Engineer	7	Clergyman	2
Seaman	7	Fireman	2
Wharf labourer, stevedore ..	7	Gardener	2
Blacksmith	5	Saddler	2
Bootmaker	5	Salesman	2
Horse-trainer, jockey ..	5	Shearer	2
Painter	5	Solicitor	2
Soldier	5	Tobacco worker	2
Storeman	5	Tram conductor	2
Manager	4	Traveller	2
Baker	3	Wool worker	2
Builder, contractor ..	3	Others (specified) ..	37
Caretaker	3	Unspecified	34
Carpenter	3		
Electrician	3	Total	384

Of the above 384 deaths 67 were due to drowning.

Suicide. In the year 1920, 116 males and 27 females took their own lives. The deaths represented a rate of 95 per million of the population, as compared with rates of 89 in the preceding year, 72 in 1918, 88 in 1917, 83 in 1916, 105 in 1915, 90 in 1914, 103 in 1913, 102 in 1908–12, and 109 in 1890–2. A much lower rate from suicide obtains among females than males, the rate for the former being about one-third of that for the latter on the average of the past five years.

Homicide. The deaths ascribed to homicide in 1920 numbered 18, of which 7 were of males and 11 of females. These represented a rate of 12 per million of the population, as against rates of 18 in 1919, 13 in 1918 and 1917, 14 in 1916, 17 in 1915, 16 in 1914, 18 in 1913, and 19 in 1908–12.

Deaths of married women in childbed. The death rate of women in childbed varies considerably at different ages, and is less at younger than at older age periods. The number of deaths of married mothers in childbed, and the death rates in various age groups are shown for the decade 1906–15 and the year 1920 in the following table :—

DEATH RATES OF MARRIED MOTHERS IN CHILDBED IN AGE GROUPS, 1906–1915 AND 1920.

Age Group.	Married Mothers.			
	Deaths.		Deaths per 1,000 Confinements.	
	1906–15.	1920.	1906–15.	1920.
Under 20 years	23	7	2·71	7·98
20 to 25 ,, ...	184	33	2·85	4·68
25 ,, 30 ,, ...	326	49	3·60	4·53
30 ,, 35 ,, ...	334	53	4·59	6·45
35 ,, 40 ,, ...	346	31	6·86	6·18
40 years and over	156	21	6·90	10·92

The experience of the ten years 1906–15 shows that for the age period 35 years and upwards the deaths of mothers in childbed were 69 per 10,000 as against 37 per 10,000 for those under 35 years of age. For the same term of years the number of deaths per 1,000 married

women of all ages in first confinements was 5·57, as against an average of 4·04 for other confinements.

Deaths in childbed.

The death rate of women in childbed is usually ascertained by comparing the number of deaths of parturient women with the total number of births. The proportions for each of the last five years, and the averages of previous periods back to 1871 are given below :—

DEATHS OF MOTHERS (MARRIED AND SINGLE) TO EVERY 10,000 CHILDREN BORN ALIVE.

Period.	Number of Mothers who Died Annually of—			Deaths of Mothers to every 10,000 Children Born Alive.
	Puerperal Diseases or Accidents. (Excluding Septicæmia.)	Puerperal Septicæmia.	Total.	
1871–1880 ..	127	46	173	64·38
1881–1890 ..	121	64	185	59·19
1891–1900 ..	117	66	183	56·01
1901–1905 ..	126	58	184	60·92
1906–1910 ..	101	46	147	47·17
1911–1915 ..	96	58	154	43·55
1916 ..	75	55	130	37·97
1917 ..	89	45	134	40·56
1918 ..	64	43	107	33·86
1919 ..	95	39	134	42·38
1920 ..	132	62	194	53·57

In recent periods a marked reduction has taken place in the death rate of women in childbed. The deaths of mothers per 10,000 children born alive were 41·7 in 1916–20, as compared with 43·5 in 1911–15, 47·2 in 1906–10, and 60·9 in 1901–5.

Puerperal septicæmia.

In 1920 there were 62 deaths of married and unmarried mothers from puerperal septicæmia, which corresponded to a death rate of 17·1 per 10,000 births, as against 12·3 in 1919, 13·6 in 1918 and 1917, 16·1 in 1916, 11·4 in 1915, 16·8 in 1914, 18·1 in 1913, 16·0 in 1908–12, and 18·1 in 1901–7.

NATURAL INCREASE.

Natural increase per 1,000 of population in Australasia.

The natural increase, *i.e.*, the excess of births over deaths, per 1,000 of the population, in the various Australian States and New Zealand, for the periods 1902–6 and 1907–11 and for each of the last nine years, is shown in the following table :—

NATURAL INCREASE PER 1,000 OF THE POPULATION, AUSTRALIAN STATES AND NEW ZEALAND.

Period.	Victoria.	New South Wales.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.	New Zealand.
1902–6	12·30	15·76	15·41	13·28	18·04	18·12	14·68	16·94
1907–11	13·05	17·45	17·03	15·54	18·13	18·85	16·01	17·07
1912	14·20	19·00	18·71	18·36	17·76	19·80	17·42	17·61
1913	14·71	17·97	19·84	18·30	20·01	19·16	17·47	16·67
1914	13·85	18·85	19·48	18·62	19·05	20·66	17·54	16·68
1915	13·45	17·85	18·35	16·16	18·67	19·07	16·59	16·27
1916	12·60	17·26	16·82	15·66	17·41	18·10	15·74	16·29
1917	13·14	18·40	19·63	16·11	16·57	18·14	16·71	16·08
1918	11·59	16·68	17·99	15·83	13·74	17·07	15·16	8·60
1919	8·36	11·28	13·81	12·25	10·35	14·75	10·96	12·03
1920	12·88	16·27	16·76	14·69	14·26	17·02	15·12	15·10
Mean 1916–20	11·71	15·98	17·00	14·91	14·47	17·02	14·74	13·62

The smallness of the natural increase in 1919 was very largely due to a heavy mortality rate from influenza in that year. The mean increase in the Australian States for the period 1916-20 was 14·74 per 1,000 of population, which is probably greater than will prevail when the age constitution of the people becomes similar to that of old settled countries. At present the proportion

of elderly people is smaller than in those countries and, partly as a consequence of this, the death rate is lower. It has been shown in a previous paragraph that the Victorian death rates at nearly all periods of life are below those of England and Wales. The Australian annual rate of increase due to excess of births over deaths—14·74—would enable a population to double itself in slightly more than 47 years, whilst at the Victorian rate of 11·71 per 1,000 of population a period of 59 years would be required. In England and Wales in 1920 the excess of births over deaths was 13·0 per 1000 of population.