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, the registrars of marriages, and (so far as regards their registration duties) over the clergymen who celebrate 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 1922 numbered 12,996. This was the third highest number for one year in the history of the State, being 1,902 less than the greatest number previously

recorded—that for 1920. The figures for each of the last twenty years are as follows :—

MARRIAGES IN EACH YEAR, 1903 TO 1922.

Year.	No. of Marriages.	Year.	No. of Marriages.
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
1911 ..	11,088	1921 ..	13,676
1912 ..	11,738	1922 ..	12,996

The marriages in Australia for 1922 numbered 44,731, as against 46,869 in the previous year, 51.552 in 1920, 40,540 in 1919, and 33,141 in 1918. Of the total for 1922, 12,996 took place in Victoria, 17,580 in New South Wales, 5,878 in Queensland, 4,144 in South Australia, 2,446 in Western Australia, 1,674 in Tasmania, and 13 in the Northern Territory.

The large numbers in the years 1919 to 1922 were accounted for by marriages of discharged soldiers, and the relatively small numbers in 1917 and 1918 were attributable to the absence from the State of a large number of marriageable men owing to the war.

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, 1913 TO 1922.

Year.	Marriage Rate.	Year.	Marriage Rate.
1913 ..	8·11	1918 ..	6·43
1914 ..	8·29	1919 ..	7·95
1915 ..	8·96	1920 ..	9·85
1916 ..	8·02	1921 ..	8·90
1917 ..	6·73	1922 ..	8·27

The rates in the other States, New Zealand, and England and Wales in 1922 were as follows :—New South Wales, 8·18; Queensland, 7·51; South Australia, 8·19; Western Australia, 7·21; Tasmania, 7·79; New Zealand, 7·63; and England and Wales, 7·90.

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. The rate for 1922 was considerably lower than the rates for the two preceding years and did not differ much from the rates for the years 1913 and 1914.

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. The resulting proportions for 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	14·3	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.

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 those 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 1922 are shown in combination for various groups in the table which follows :—

AGES OF BRIDEGROOMS AND BRIDES IN COMBINATION IN VICTORIA, 1922.

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.	
16	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2
17	...	2	...	4	2	3	1	1	...	...	...	...	...	...	...	...	...	...	13
18	1	2	8	16	8	7	5	5	...	...	...	...	...	...	...	...	...	...	52
19	2	1	8	13	31	29	26	32	2	...	...	...	...	...	...	...	...	...	144
20	...	4	6	19	28	45	35	70	9	1	...	...	...	...	...	...	...	...	217
21 to 25	..	3	25	78	198	252	312	1,751	501	57	7	2	...	...	...	...	...	...	3,186
25 to 30	...	1	3	28	71	145	184	1,896	1,901	356	58	7	2	...	..	...	...	...	4,652
30 to 35	...	...	1	7	22	29	54	587	963	551	143	31	4	1	...	...	...	...	2,393
35 to 40	..	...	4	1	4	13	17	155	299	288	188	48	15	7	...	...	...	...	1,039
40 to 45	...	...	...	...	1	2	3	37	88	128	130	61	27	6	...	2	...	...	485
45 to 50	...	...	1	...	...	2	...	16	35	50	89	63	46	8	4	2	...	..	316
50 to 55	...	...	...	...	...	1	...	1	13	28	35	35	44	23	2	1	..	...	183
55 to 60	...	...	...	1	...	...	...	1	9	10	13	31	25	29	10	3	1	1	134
60 to 65	...	...	...	..	...	...	...	1	4	4	6	12	26	16	13	13	3	...	98
65 to 70	...	...	...	...	...	...	...	...	...	2	4	4	5	9	9	4	6	3	46
70 to 75	...	...	...	...	...	...	...	...	1	...	...	1	1	8	4	5	2	1	23
75 and over	...	...	...	...	...	...	...	...	...	...	...	1	...	1	3	2	...	6	13
Total Brides	3	13	57	167	365	528	638	4,553	3,825	1,475	673	296	195	108	45	32	12	11	12,996

Although age inequalities among contracting parties were relatively few, they were striking in degree. Thus five men between 45 and 60 married women under 21, while nine women between 35 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, 702 were older and 197 younger than their brides, and 101 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 periods 1881–90 and 1911–20, and the year 1922 :—

PROPORTIONS OF MALES AND FEMALES MARRYING AT DIFFERENT AGES, 1881–90, 1911–20, AND 1922.

Age Group.	Proportion per 1,000 of total.					
	Bridegrooms.			Brides.		
	1881–90.	1911–20.	1922.	1881–90.	1911–20.	1922.
Under 15	...	...	...	·15	·07	·23
15 to 16	...	...	...	1·17	·75	1·00
16 to 17	·03	·16	·15	6·53	3·79	4·39
17 to 18	·29	·62	1·00	20·32	12·65	12·85
18 to 19	1·46	3·81	4·06	42·94	29·53	28·09
19 to 20	5·62	9·53	11·08	65·03	44·34	40·63
20 to 21	15·19	16·82	16·70	73·84	54·41	49·09
21 to 25	321·02	255·25	245·15	432·34	360·34	350·34
25 to 30	365·48	356·68	357·96	223·83	286·34	294·32
30 to 35	134·57	166·37	184·13	62·07	105·01	113·50
35 to 40	58·29	84·52	79·95	29·53	50·44	51·79
40 to 45	32·54	42·03	37·32	17·10	24·21	22·77
45 to 50	24·77	28·21	24·32	12·23	15·13	15·00
50 to 55	18·40	16·55	14·08	6·74	6·60	8·31
55 to 60	11·49	9·65	10·31	3·40	3·29	3·46
60 and over	10·85	9·80	13·85	2·78	3·10	4·23
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 marked alteration in recent periods. Of every 1,000 women who were married during 1922 487 were under 25 years, and 294 were aged 25–30, as against 506 and 286 at corresponding ages in the years 1911 to 1920. 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 1911–1920.

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 1922 the mean

age at marriage of bachelors, 28·63, with that of divorced men, and of widowers—40·16 and 46·25 respectively. The average age of spinsters marrying was 25·93, as against 34·40 for divorced women and 40·33 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
1921	25·92	29·26
1922	26·05	29·31

The mean age of women under 45 who married in 1922 differed very slightly from the average of the previous five years. In Victoria in 1922 the mean marrying age of all brides was 26·84.

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 12,764 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 1922, 90·3 per cent. were born in Australia, 7·7 per cent. in the United Kingdom, and 1·1 per cent. in other British Possessions, and that only small proportions, about 1·4 per cent. of the bridegrooms and ·5 per cent. of the brides, were natives of foreign countries. The numbers born in Aus-

tralia and other countries are shown in the following table for the years 1913 and 1922 :—

BIRTHPLACES OF PERSONS MARRIED, 1913 AND 1922.

Where Born.	Bridegrooms.		Brides.	
	1913.	1922.	1913.	1922.
Australia	9,628	11,493	10,274	11,973
New Zealand	155	116	82	82
England and Wales ...	972	885	644	650
Scotland	213	175	141	134
Ireland	126	102	83	65
Other British Possessions ...	40	48	24	32
Germany	46	21	19	6
Russia	17	24	3	8
Italy	15	19	12	6
United States	30	17	14	8
Other Foreign Countries ...	82	96	28	32
Total	11,324	12,996	11,324	12,996

Marriages in quarters. Victorian experience shows that the Autumn quarter is the most frequently selected season for marrying. In 1922, however, the greatest proportion took place in the Spring, when 3,491 marriages were solemnized, as against 3,378 in the Autumn, 3,131 in the Winter, and 2,996 in the Summer.

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, 1871–1922.

Conjugal Condition.	Percentage of total Marriages.					
	1871–80.	1881–90.	1891–1900.	1901–10.	1911–20.	1922.
Bachelors and Spinsters..	80·59	85·84	87·22	88·46	90·31	89·39
Bachelors and Widows ..	7·10	4·72	4·23	3·66	3·15	3·55
Widowers and Spinsters..	7·75	6·17	6·07	5·70	4·81	5·09
Widowers and Widows ..	4·56	3·27	2·48	2·18	1·73	1·97

Of every 1,000 persons of each sex married in Victoria during 1922, 71 were widowers and 55 were widows, as against 64 and 54 respectively in 1921, 61 and 55 in 1920, 68 and 58 in 1919, and 77 and 57 in 1918.

Divorced persons re-marrying.

The number of divorced persons re-married during 1922 was 361, which was 2·27 per cent. above the number for the preceding year. Of the 124,864 persons married during the last five years, divorced persons numbered 1,449, or 1 in every 86 persons, as compared with 1 in every 112 in the preceding five-year period. The following are the numbers of divorced persons who have re-married since 1917 :—

DIVORCED PERSONS RE-MARRYING, 1918 TO 1922.

Year.	Males.	Females.	Total.
1918	81	78	159
1919	121	151	272
1920	158	146	304
1921	188	165	353
1922	182	179	361

The divorced persons in the State at the census of 1921 numbered 2,313, of whom 1,092 were men and 1,221 women. A comparison of the re-marriages of divorced males and females during 1921 with these numbers shows that, according to the experience of that year, 17·2 per cent. of the males and 13·5 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 a view to 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 1918 to 1922 :—

Year.	Percentage under 21 years of age.	
	Bridegrooms.	Brides.
1918	3·27	13·91
1919	3·14	13·09
1920	2·66	13·46
1921	2·83	14·09
1922	3·29	13·63

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 1921 and 1922, are shown in the following table:—

MARRIAGES IN VARIOUS DENOMINATIONS.

Denomination.	1921.		1922.	
	Number.	Percentage of Total Marriages.	Number.	Percentage of Total Marriages.
Church of England	3,980	29·10	3,771	29·02
Roman Catholic Church... ...	2,356	17·23	2,288	17·60
Presbyterian Church	2,711	19·82	2,548	19·61
Methodist Church	1,918	14·02	1,835	14·12
Congregational Church	993	7·26	889	6·84
Baptist Church	601	4·39	569	4·38
Lutheran Church	50	·37	59	·45
Church of Christ	358	2·62	284	2·19
Salvation Army	48	·35	48	·37
Hebrew	44	·32	42	·32
Other Sects	228	1·67	227	1·75
Registrars of Marriages... ...	389	2·85	436	3·35
Total	13,676	100·00	12,996	100·00

Marriages by Anglican clergymen represented 29·02 per cent. of the total in 1922 as compared with 29·10 per cent. in the previous year, 29·56 per cent. in 1920, 28·78 per cent. in 1919, 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 1922, 3·35 per cent., in 1921, 2·85 per cent., in 1920, 3·01 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 1,590 on 31st December,

1922. 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 ..	398	Ballarat Town Mission..	1
Roman Catholic ..	335	Free Christian ..	2
Presbyterian	302	New Church	1
Methodist	266	Greek Orthodox Church	1
Congregational	72	Unitarian	1
Baptist	83	International Bible Students' Association	1
Church of Christ ..	61		
Lutheran	25	Total Clergymen ..	1,590
Salvation Army ..	27	Lay Registrars of Marriages	25
Latter Day Saints ..	4		
Seventh Day Adventist ..	7		
Catholic Apostolic ..	2		
Australian Church ..	1	Grand Total ..	1,615

BIRTHS.

Number of births.

The number of births registered in Victoria during the year 1922 was 36,288, of which 18,740 were of males and 17,548 of females. This was 695 more than the number recorded for the preceding year. Still-births, which are excluded from both births and deaths, numbered 1,044, and corresponded to a ratio of 2·9 per 100 infants born alive in 1922. There were 1,068 male to every 1,000 female births in 1922, as compared with 1,057 in 1921, 1,062 in 1920, and 1,054 in 1919. The figures for each year since 1902 are as follows :—

BIRTHS IN VICTORIA, 1903 TO 1922

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
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
1911 ..	16,944	16,100	33,044	1921 ..	18,289	17,304	35,593
1912 ..	18,244	17,573	35,817	1922 ..	18,740	17,548	36,288

The births in Australia were fewer by 487 in 1922 than in 1914. The number for 1922 was 137,496, as compared with 136,200 in 1921, 136,407 in 1920, 122,290 in 1919, 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 1922, 36,288 occurred in Victoria, 55,170 in New South Wales, 19,987 in Queensland, 12,001 in South Australia, 8,131 in Western Australia, 5,817 in Tasmania, 70 in the Northern Territory, and 32 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 1922 :—

BIRTH RATES IN VICTORIA PER 1,000 OF POPULATION, 1870 TO 1922.

Year.	Birth Rate.	Year.	Birth Rate.	Year.	Birth Rate.
1870 ..	38·07	1899 ..	26·14	1912 ..	26·38
1875 ..	33·94	1900 ..	25·79	1913 ..	25·77
1880 ..	30·75	1901 ..	25·72	1914 ..	25·37
1885 ..	31·33	1902 ..	25·05	1915 ..	24·45
1890 ..	33·60	1903 ..	24·28	1916 ..	24·20
1891 ..	33·57	1904 ..	24·42	1917 ..	23·40
1892 ..	32·51	1905 ..	24·57	1918 ..	22·19
1893 ..	31·18	1906 ..	24·91	1919 ..	21·46
1894 ..	29·05	1907 ..	25·03	1920 ..	23.95
1895 ..	28·46	1908 ..	24·56	1921 ..	23.15
1896 ..	27·19	1909 ..	24·62	1922 ..	23.10
1897 ..	26·49	1910 ..	24·20		
1898 ..	25·51	1911 ..	25·03		

The births per 1,000 of the population in the other States, New Zealand, and England and Wales in 1922 were as follows :—New South Wales, 25·68; Queensland, 25·53; South Australia, 23·71; Western Australia, 23·96; Tasmania, 27·07; New Zealand, 23·17; and England and Wales, 20·6.

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.

The *Year-Book* of 1920–21 contains on pages 119 to 121, the result of an investigation which was made for the purpose of ascertaining the effect of changes in the age distribution of wives on the relative birth rates in five census years. A table is given showing the number of married women living in various age groups, between 15 and 45, in those years.

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

Birthplaces of parents of legitimate children.

The birth records of children born in wedlock show that, in 1922, 83 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, 80·9 per cent. were born in Victoria ; 88·5 in Australia ; ·7 in New Zealand ; 6·9 in England and Wales ; 1·3 in Scotland ; ·8 in Ireland ; ·3 in other British Possessions ; and 1·5 per cent. in foreign countries. The corresponding percentages for mothers were : Victoria, 81·4 ; Australia, 89·6 ; New Zealand, ·6, England and Wales, 7·1 ; Scotland, 1·3 ; Ireland, ·6; other British Possessions, ·2 ; and foreign countries, ·6.

Chinese and half-caste Chinese births. During the past ten years the births to Chinese parents numbered 47, or 1 in every 6,960 legitimate births, and there were 254 Chinese half-caste births (fathers only Chinese), or 1 in every 1,288 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 1922 were 33·47 and 29·74 years respectively, which were 4·16 and 3·69 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, 1922.

Father.		Mother.	
Age Group.	Proportion per 100 Births.	Age Group.	Proportion per 100 Births.
Under 20	·36	Under 20	2·70
20 to 25	10.00	20 to 25	21·38
25 to 30	25·93	25 to 30	30·95
30 to 35	27·31	30 to 35	24·79
35 to 40	18·23	35 to 40	14·56
40 to 45	10·57	40 to 45	5·23
45 to 50	4·78	45 and over ...	·39
50 and over	2·82		
Total ...	100·00	Total ...	100·00

It will be seen that, on the experience of 1922, 52·3 per cent. of the mothers were between ages 20 and 30, and 39·4 per cent. between ages 30 and 40. The proportions of fathers at these ages were 35·9 and 45·5 per cent. respectively. Of every 1,000 legitimate births, about 27 were due to mothers under 20 years, and 4 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 twelve years :—

BIRTH RATES IN METROPOLITAN, OTHER URBAN, AND RURAL DISTRICTS, 1875 TO 1922.

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
1921	23·80	34·07	18·01	23·15
1922	23·46	34·29	18·27	23·10

Birth rates in country towns. The birth rates in the seven principal country towns are given below for the period 1913-17, 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.
1913-17 ...	24·87	29·66	27·25	27·54	30·67	42·26	37·24
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
1921 ...	24·94	28·58	27·73	22·43	40·42	47·16	37·41
1922 ...	25·70	29·49	28·98	25·66	38·92	45·19	33·85
Average 1918–22	23·63	27·64	27·60	21·56	37·51	45·26	33·74

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

METROPOLITAN BIRTH RATES 1901, 1911, 1920, 1921 AND 1922.

Districts.	Births per 1,000 of the Population.				
	1901.	1911.	1920.	1921.	1922.
Melbourne City	21·15	19·90	20·17	18·84	16·74
Fitzroy City	22·58	24·40	19·00	17·60	17·31
Collingwood City	26·46	23·36	20·99	18·86	18·64
Richmond City	25·51	25·28	26·69	23·43	23·71
Brunswick City	26·71	24·81	24·62	22·49	23·44
Northcote City	24·40	26·00	30·49	29·55	26·75
Prahran City	22·69	23·77	30·57	29·50	26·70
South Melbourne City... ...	22·10	21·71	20·23	17·73	21·07
Port Melbourne City	25·26	24·59	26·03	23·95	21·78
St. Kilda City	18·59	21·10	12·96	12·01	11·33
Brighton City	22·39	22·48	21·60	20·47	18·82
Essendon City	23·77	21·32	23·91	22·12	22·20
Hawthorn City	22·67	20·16	23·09	19·30	19·43
Kew City	21·54	23·43	23·10	21·71	20·66
Footscray City	28·21	30·05	30·04	30·73	27·66
Williamstown City	25·34	24·42	23·75	23·56	26·70
Oakleigh Borough	31·25	33·94	33·16	31·31	29·25
Caulfield City	18·72	20·15	24·67	22·23	24·90
Malvern City	21·98	20·25	16·26	16·85	15·92
Camberwell City	19·17	15·24	20·53	19·77	19·06
Preston Town	26·76	24·06	16·96	22·91	21·22
Coburg City	20·58	22·75	29·85	28·17	26·07
Sandringham Town	...	...	15·65	16·84	14·72
Greater Melbourne :—					
Excluding Births in Institutions	23·03	22·32	22·57	21·20	20·71
Including Births in Institutions	24·85	24·51	25·27	23·80	23·46

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.
1918	333	2
1919	382	5
1920	410	5
1921	408	3
1922	394	8

On the average of the five years 1 mother in every 88 gave birth to twins, and 1 in every 7,363 was delivered of triplets. The proportions for the decennium ended 1917 were 1 in every 94 and 1 in every 9,538 respectively.

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 1922 advantage was taken of these Acts, and of an Act (now repealed) passed in 1903, to legitimate 2,092 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, 165 in 1920, 168 in 1921, and 133 in 1922.

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 1922 were as follows:—Western Australia, 18·8; New South Wales, 13·7; South Australia, 15·5; New Zealand, 24·4; Queensland, 19·4; Victoria, 8·3; and Tasmania, 13·0.

Illegitimate births in Victoria. The number of illegitimate births in Victoria during the year 1922 was 1,600, which gives a proportion of 4·41 to every 100 births registered, as against 4·82 in the previous year, 5·24 in 1920, 5·77 in 1919, 5·84 in 1918, 5·51 in 1917, 5·15 in 1916, 5·75 in 1915, and 5·77 in the period 1910–14.

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 is 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 1922, in the metropolitan area 1 birth in every 15, in other urban districts 1 in 38, and in the rural districts only 1 in 58 were registered as illegitimate. The proportions in 1917–21 were 1 in 13, 1 in 27, and 1 in 48 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 1922.

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	12·22
1913 ..	15,475	8,496	6,979	4,075	3,678	4,137	3,585	11·09
1914 ..	16,503	9,017	7,486	3,953	4,030	4,257	4,263	11·56
1915 ..	15,823	8,860	6,963	3,524	3,788	4,380	4,131	11·05
1916 ..	16,489	8,901	7,588	4,111	4,140	4,509	3,729	11·66
1917 ..	14,555	7,952	6,603	3,430	3,585	3,831	3,709	10·31
1918 ..	15,177	8,079	7,098	3,537	3,563	4,144	3,933	10·66
1919 ..	19,370	10,508	8,862	4,303	5,784	5,469	3,814	13·15
1920 ..	16,832	9,060	7,772	3,998	4,351	4,433	4,050	11·13
1921 ..	16,165	8,662	7,503	4,017	4,031	4,412	3,705	10·51
1922 ..	15,156	8,187	6,969	3,610	3,867	4,084	3,595	9·65
Average 1918–22	16,540	8,899	7,641	3,893	4,319	4,508	3,820	11·00

The number of deaths in 1922 was 15,156, which was 1,264 below the average of the preceding five years, and less by 4,214 than in 1919. The decrease as compared with that year was wholly due to the death rate of 1919 having been abnormally high by reason of an influenza epidemic.

Death rates in Australian States and New Zealand.

The deaths in Australia in 1922 numbered 51,312, as against 54,076 in the preceding year, 56,289 in 1920, 65,930 in 1919, 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 15,156 occurred in Victoria, 19,166 in New South Wales, 7,152 in Queensland, 4,608 in South Australia, 3,167 in Western Australia, 1,997 in Tasmania, 60 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 eleven 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 ..	12·22	10·86	10·96	10·28	11·06	10·73	11·23	8·87
1913 ..	11·09	10·89	10·39	10·82	9·34	10·87	10·78	9·47
1914 ..	11·56	10·11	9·97	10·71	9·41	9·67	10·51	9·31
1915 ..	11·05	10·48	11·00	10·68	9·28	10·11	10·66	9·06
1916 ..	11·66	10·63	11·09	11·73	9·80	10·38	11·04	9·64
1917 ..	10·31	9·56	9·73	10·10	8·97	8·89	9·80	9·58
1918 ..	10·66	9·84	10·39	9·97	9·11	8·84	10·09	14·84
1919 ..	13·15	13·40	12·42	12·01	11·10	10.37	12·82	9·51
1920 ..	11·13	10·32	10·82	10·76	10·14	9.35	10·62	10·27
1921 ..	10·51	9·51	9·34	10·02	10·44	10.30	9·91	8·73
1922 ..	9·65	8·92	9·14	9·10	9·33	9.29	9.21	8.77

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 1921 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	227	3,603	3,198	2,133	839	10,000
New South Wales ..	253	3,812	3,276	1,927	732	10,000
Queensland	268	3,926	3,270	1,846	690	10,000
South Australia ..	236	3,748	3,247	1,922	847	10,000
Western Australia ..	232	3,887	2,949	2,310	622	10,000
Tasmania	263	4,101	2,988	1,840	808	10,000
Australia	246	3,779	3,219	1,993	763	10,000
New Zealand	224	3,795	3,146	2,084	751	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.
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
1921	12·85	12·27	12·30	12·47	15·60	13·16	12·66
1922	11·20	10·91	11·38	10·62	11·80	10·88	11·10

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, in each of the years under review, two States 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 1891-1900, 1902-1911, and 1912-21 :—

DEATH RATES IN CERTAIN AGE GROUPS IN VICTORIA.

Age Group.	Deaths per 1,000 at each Age.		
	1891–1900.	1902–1911.	1912–21.
Males.			
Under 5	39·29	26·73	23·85
5 to 10	3·36	2·16	2·42
10 to 15	2·20	1·87	1·75
15 to 20	3·28	2·72	2·37
20 to 25	4·79	3·51	3·57
25 to 35	6·60	4·75	4·71
35 to 45	9·03	7·81	7·14
45 to 55	15·32	13·48	13·10
55 to 65	32·90	25·38	25·05
65 to 75	62·99	59·04	53·18
75 and upwards	145·05	157·26	157·97
All ages	15·47	13·30	12·57
Females.			
Under 5	34·09	22·35	19·26
5 to 10	3·12	2·03	2·24
10 to 15	2·06	1·78	1·56
15 to 20	3·43	2·80	2·27
20 to 25	4·81	3·59	3·56
25 to 35	6·89	5·01	4·58
35 to 45	8·68	7·16	6·01
45 to 55	12·12	9·96	9·44
55 to 65	23·64	18·80	17·46
65 to 75	45·87	46·71	42·01
75 and upwards	124·33	131·77	136·61
All ages	12·36	10·66	10·35

The figures show that at all ages, excepting between 5 and 10, and 20 and 25, and 75 and over for males, and between 5 and 10, and 75 and over for females, much lower death rates were experienced during the decennium 1912-21 than in the preceding one. Compared with 1902-11, the mortality rate for the period 1912-21 for the two sexes combined was lower by 10 per cent. for the age group 0-10, by 9 per cent. at ages 10-15, by 16 per cent. at 15-20, by 5 per cent. at 25-35, by 12 per cent. at 35-45, and by 4 per cent. at 45-55 and 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 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 1921 and 1922. 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, 1921 AND 1922.

Municipality.	Annual Deaths.			Annual Deaths per 1,000 Residents.		
	1910-12.	1921.	1922.	1910-12	1921.	1922.
Richmond City ...	594	533	512	14·71	12·33	11·80
Port Melbourne City ...	196	161	145	14·56	12·28	11·04
Melbourne City ...	1,469	1,390	1,299	14·44	13·65	12·75
Fitzroy City ...	493	474	454	14·41	13·61	13·01
Collingwood City ...	462	390	354	13·44	11·38	10·31
Brighton City ...	161	225	232	13·02	10·51	10·49
Oakleigh Borough ...	40	83	83	12·90	13·61	13·05
Prahran City ...	587	560	576	12·89	11·13	11·38
South Melbourne City	591	538	491	12·83	11·49	10·47
Williamstown City ...	198	204	190	12·80	10·47	9·59
St. Kilda City ...	326	362	394	12·65	9·33	9·96
Preston Town ...	65	105	114	12·63	10·69	10·65
Footscray City ...	290	377	307	12·15	11·13	8·45
Brunswick City ...	383	466	406	11·75	10·42	8·90
Coburg City ...	111	159	206	11·49	8·61	10·49
Essendon City ...	269	349	315	11·12	9·83	8·63
Hawthorn City ...	265	339	275	10·64	11·60	9·31
Kew City ...	105	167	183	10·47	10·18	10·48
Camberwell City ...	131	240	252	10·21	9·95	9·96
Caulfield City ...	157	328	364	9·68	8·00	8·28
Malvern City ...	151	315	287	9·29	9·56	7·97
Northcote City ...	165	287	270	9·22	9·41	8·56
Sandringham Town ...	...	93	111	...	8·16	9·02
Remainder of Metropolis	218	397	349	9·22	10·44	9·38
Whole Metropolis ...	7,427	8,542	8,169	12·61	10·85	10·14
Remainder of State ...	8,089	7,623	6,987	10·99	10·16	9·13

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, Prahran, and Port Melbourne are examples, and the low rates in comparatively recently settled areas, such as Sandringham, Coburg, Northcote, Malvern, Caulfield, Camberwell, and Kew. In the former group the deaths for 1922 were 12·24 per 1,000 as against 8·98 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 1921, 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 1920–22, the deaths of metropolitan residents were in the ratio of 11·50 per 1,000 of population, as against a ratio of 9·42 for residents of the rest of the State. The apparent difference in favour of the country is 2·08, 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 2·70 among country than among metropolitan residents.

Decrease in Metropolitan death rate.

In Greater Melbourne, in the decade 1913-22, there were 12·31 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 24,956 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 tubercular and certain other diseases for the period 1913-22 with those for the decennium 1892-1901. The following are the rates :—

Cause of Death.	Deaths per 1,000 of Population.		
	1892-1901.	1913-1922.	Decrease in 1913-22.
Pulmonary Tuberculosis ...	1·654	0·806	0·848
Other Tubercular Diseases ...	0·446	0·184	0·262
Typhoid Fever	0·293	0·030	0·263
Scarlet Fever	0·033	0·019	0·014
Measles	0·215	0·042	0·173
Diphtheria	0·196	0·158	0·038
Total	2·837	1·239	1·598

The figures show that the lower death rates from the six above-mentioned diseases in 1913-22 accounted for 46 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 1913-21, and the year 1922 :—

DEATHS PER 1,000 RESIDENTS IN COUNTRY TOWNS.

Town.	Annual Deaths of Residents.			Annual Deaths of Residents per 1,000 of Population.		
	1910–12.	1913–21.	1922.	1910–12.	1913–21.	1922.
Ballarat and Suburbs	639	604	566	15·07	14·83	14·36
Bendigo and Suburbs	690	584	502	17·51	16·19	15·02
Geelong and Suburbs	411	420	383	13·68	12·14	10·52
Castlemaine & Suburbs	92	90	58	13·11	11·99	8·09
Warrnambool ..	95	102	99	13·55	13·49	12·53
Maryborough ..	76	70	42	13·39	13·94	9·08
Stawell	82	63	64	18·60	14·06	14·07

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 1922 were as follows :—

PROPORTION OF DEATHS OF RESIDENTS OF CERTAIN AREAS OCCURRING IN HOSPITALS, 1910-15 AND 1922.

Area.	Percentage of Deaths of Residents occurring in Hospitals.		Area.	Percentage of Deaths of Residents occurring in Hospitals.	
	1910-15.	1922.		1910-15.	1922.
Port Melbourne City...	35·9	30·3	Oakleigh Borough ...	14·6	21.7
Fitzroy City ...	34·5	41·0	Brighton City ...	14·2	15·9
Melbourne City ...	34·4	38·6	Castlemaine ...	13·9	22·4
Collingwood City ...	28·0	29·7	Ballarat	13·9	14·1
Richmond City ...	26·6	29·5	Hawthorn City ...	13·2	13·4
South Melbourne City	26·5	29·5	Malvern City ...	12·8	12·6
Preston Town ...	25·0	21·1	Kew City	12·6	17·5
Northcote City ...	24·4	28·1	Williamstown City ...	12·2	17·4
Brunswick City ...	23·9	25·9	Caulfield City ...	11·7	14·0
Warrnambool ...	23·0	18·2	Camberwell City ...	11·1	13·9
Maryborough ...	22·9	40·5	Sandringham Town...	...	10·8
Footscray City ...	22·6	27·0	Summary :—		
Prahran City ...	21·7	22·7	Greater Melbourne ...	24·6	25·5
Stawell	19·6	15·6	Seven Country Towns ...	16·4	18·3
St. Kilda City ..	18·9	19·0	Remainder of State ...	17·8	21·5
Coburg City ...	18·0	25·2	Whole State ..	20·9	23·3
Bendigo	16·8	21·3			
Essendon City ...	16·5	18·1			
Geelong	16·3	17·8			

Of the total deaths in the State 23·3 per cent. occurred in public hospitals in 1922, as against 24·3 in the previous year and 20·9 in 1910-15. 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 1922, the percentage treated in public hospitals varied from 41·0 for Fitzroy, 38·6 for Melbourne City, 30·3 for Port Melbourne, and 29·7 for Collingwood, to 12.6 for Malvern, and 10·8 for Sandringham. For the metropolitan area the percentage was 25·5 as compared with 20·7 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 23 per cent. that given to people residing elsewhere.

Deaths in public institutions in Greater Melbourne.

In 1922 the deaths in public institutions were 33·6 per cent. of the total in Greater Melbourne, 21·9 per cent. of the total in extra metropolitan districts, and 28·5 per cent. of the total in the State as a whole. The number of deaths in each public institution in the metropolis in 1922 is given in the subjoined table :—

DEATHS IN PUBLIC INSTITUTIONS IN GREATER MELBOURNE, 1922.

Institution.	No. of Deaths.	Institution.	No. of Deaths.
Hospitals—		Other Public Institutions—	
Melbourne	876	Victorian Homes for Aged and Infirm	65
Alfred	262	Benevolent Asylum ...	150
St. Vincent's	169	Convent of the Little Sisters of the Poor	58
Homœopathic	60	Old Colonists' Homes ...	9
Austin	183	Foundling Hospital, Broadmeadows	16
Children's	399	Macleod Military Sanatorium	6
Women's	147	Depôt for Neglected Children	13
Infectious Diseases ...	57	Kew Lunatic Asylum ...	113
Queen Victoria	22	Yarra Bend Lunatic Asylum...	64
Eye and Ear	8	Mont Park Asylum ...	14
Williamstown	15	Receiving House — Mental Hospital	33
Caulfield Military ...	33	The Haven	8
Police	1	Foundling Hospital, East Melbourne	2
Heatherton Sanatorium ...	86	Carlton Refuge	1
		Macleod Military Mental Asylum	2
		Anzac Hostel, Brighton ...	2
Total Hospitals ...	2,318	Total Hospitals and other Institutions	2,874

Of the 2,318 persons who died in public hospitals in Greater Melbourne during 1922, 295 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 1922 numbered 1,935, and, as there were 36,288 births, it follows that of every 100 infants born approximately 5·33 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 1922.

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
1921	7·40	7·11	7·27
1922	5·86	4·77	5·33

On the average of the past five years the infantile death rate for the metropolis was 7·33 per 100 births, which was 29 per cent. below that for the decennium ended 1910, and 45 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 sixteen 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.
1907–11 ..	7·51	8·77	9·48	9·56	8·09	6·03
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
1921.. ..	7·27	7·40	6·77	10·34	7·38	6·90
1922.. ..	5·33	5·86	5·90	6·28	6·14	4·73

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 73 in Melbourne, 78 in Bendigo, 67 in Ballarat, and 71 in Geelong, as against 55 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 1921 and 1922 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.	1921.	1922.		1910-14.	1921.	1922.
Coburg City ..	12·03	9·16	7·44	Oakleigh Borough	7·65	8·37	8·21
Port Melb. City ..	12·00	9·41	6·83	Prahran City ..	7·27	5·18	4·97
Fitzroy City ..	11·24	10·70	7·45	St. Kilda City ..	6·38	5·71	5·73
Richmond City ..	10·23	7·19	6·12	Caulfield City ..	5·87	4·33	3·32
Preston Town ..	10·01	4·92	7·60	Essendon City ..	5·79	6·54	4·35
Collingwood City	9·89	8·26	8·53	Hawthorn City ..	5·72	5·79	3·65
Melbourne City ..	9·22	11·47	7·62	Camberwell City ..	5·58	4·57	4·80
South Melb. City ..	9·05	11·81	6·41	Malvern City ..	5·51	5·97	3·38
Brunswick City ..	8·50	5·84	5·80	Northcote City ..	5·47	5·41	4·25
Footscray City ..	8·11	7·22	4·84	Kew City ..	4·76	4·88	3·96
Williamstown City	8·03	7·03	6·13	Sandringham Town	..	6·98	4·21
Brighton City ..	7·84	5·41	7·14				

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 1922, 55 per cent. occurred in the first month and 68 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 1921, and the numbers for the year 1922, 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, 1917-21 AND 1922.

Age.	Average Annual Deaths of Infants under 1 year of Age.					
	Five Years—1917-21.			Year 1922.		
	Number.	Percentage at each Age.	Number per 100 Births.	Number.	Percentage at each Age.	Number per 100 Births.
Boys.						
Under 1 month	654	50·9	3·78	618	54·7	3·30
1 to 3 months	207	16·1	1·20	153	13·5	·82
3 to 6 ,,	186	14·5	1·07	165	14·6	·88
6 to 12 ,,	238	18·5	1·37	194	17·2	1·03
Total ..	1,285	100·0	7·42	1,130	100·0	6·03
Girls.						
Under 1 month	485	50·5	2·97	447	55·5	2·55
1 to 3 months	148	15·4	·91	107	13·3	·61
3 to 6 ,,	142	14·8	·87	99	12·3	·56
6 to 12 ,,	185	19·3	1·13	152	18·9	·87
Total ..	960	100·0	5·88	805	100·0	4·59

Probable mortality of infants.

The experience of the years 1917-22 shows that, of every 20,000 newly-born boys and girls in equal numbers, 718 boys and 566 girls died within twelve months, and 9,282 of the former and 9,434 of the latter, or 18,716 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 951 more survivors in 1917–22 than in 1891–1900, and 1,248 more than in 1881–1890.

Infantile death rates from certain causes.

An investigation of infantile mortalities would be incomplete if the diseases which have proved fatal in different years were not 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 1911–20, and for the year 1922 :—

INFANTILE DEATH RATES FROM CERTAIN CAUSES, 1891–3, 1901–10, 1911–20, AND 1922.

Cause of Death.	Deaths under 1 year per 1,000 Births in—			
	1891–3.	1901–10.	1911–20.	1922.
Diarrhœal Diseases, all forms	29·66	24·62	16·13	9·95
Wasting Diseases (Marasmus, Atrophy, &c.)	22·24	12·74	13·09	8·79
Prematurity	13·13	14·99	15·17	14·19
Bronchitis, Broncho-pneumonia, Pneumonia	11·37	8·13	6·86	4·11
Convulsions	6·83	3·10	1·63	1·90
Congenital Defects and Malformations ...	3·45	4·86	4·38	2·75
Violence	3·16	2·47	1·07	·66
Whooping Cough	2·60	2·52	1·82	.72
Other causes	24·49	14·46	9·40	10·25
Total, all causes	116·93	87·89	69·55	53·32.

Of every 1,000 infants born 19 died from diarrhœal and wasting diseases in 1922, as against 29 in 1911–20, 37 in 1901–10, and 52 in 1891–3—a decrease of 63 per cent. in 30 years. In 1922 acute bronchitis, broncho-pneumonia and pneumonia were responsible for 4·11 deaths per 1,000 births, as compared with 11·37 in 1891–3—a decline of 63 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 twelve 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 15 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 1918 to 1922, also the principal causes of death.

DEATHS OF INFANTS UNDER ONE MONTH, 1918 TO 1922.

Year.	Melbourne and Suburbs.		Victoria.	
	No. of Deaths.	Deaths per 100 Births.	No. of Deaths.	Deaths per 100 Births.
1918 ..	600	3·63	1,026	3·25
1919 ..	652	3·99	1,163	3·68
1920 ..	733	3·80	1,270	3·51
1921 ..	678	3·67	1,237	3·48
1922 ..	586	3·10	1,065	2·93

DEATHS OF INFANTS UNDER ONE MONTH FROM CERTAIN CAUSES, 1918 TO 1922.

Cause of Death.	Melbourne and Suburbs.					Victoria.				
	1918.	1919.	1920.	1921.	1922.	1918.	1919.	1920.	1921.	1922.
Diarrhœal Diseases (all forms)	17	17	7	11	11	28	32	18	26	22
Wasting Diseases (Marasmus, Atrophy, etc.)	115	103	120	78	81	199	203	228	182	188
Prematurity	271	308	361	322	277	459	537	583	548	485
Bronchitis, Broncho-Pneumonia and Pneumonia ..	24	16	18	23	13	44	29	33	37	19
Convulsions	9	13	11	16	31	21	22	24	37	54
Congenital Defects and Malformations	44	48	65	73	45	80	97	128	123	72
Violence	8	11	16	12	9	12	15	21	18	12
Syphilis	6	4	8	2	2	9	4	8	4	2
Other Causes	106	132	127	141	117	174	224	227	262	211

Legitimate and illegitimate Infantile death rates.

On the average of the past ten years, 165 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 proportion of illegitimate children dying before the age of 1 year is nearly three times that of legitimate children In the year 1922 the mortality rate of legitimate infants was 5·02 per 100 births. The children born out of wedlock during the same year numbered 1,600, and the deaths of illegitimate infants were 195, the death rate being thus 12·19 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 1913–21 and the year 1922 :—

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.	1913-21.	1922.	1904-8.	1913-21.	1922.
Diarrhœal Diseases	19·8	13·7	9·1	72·6	48·5	28·1
Prematurity, Congenital Defects, Marasmus, &c.	30·3	30·9	24·6	52·1	69·2	50·6
Bronchitis, Broncho-pneumonia, Pneumonia	6·9	6·1	3·8	18·6	13·1	11·3
Other causes	18·3	12·8	12·7	58·7	39·4	31·9
Total, all causes	75·3	63·5	50·2	202·0	170·2	121·9

The rates for 1922 show that of every 1,000 children born out of wedlock 28·1 died from diarrhœal diseases within a year as compared with 9·1 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 infantile deaths in Melbourne and suburbs from the two former classes of complaint in each month during the past five years are shown in the appended table :—

INFANTILE DEATHS IN EACH MONTH FROM CERTAIN CAUSES.

Month.	Infantile Deaths in Greater Melbourne in 1918-22 from—					
	Diarrhœal Diseases.			Respiratory Diseases.		
	Males.	Females.	Total.	Males.	Females.	Total.
January	168	121	289	21	16	37
February	114	91	205	17	13	30
March	100	80	180	16	16	32
April	71	66	137	12	11	23
May	48	54	102	31	19	50
June	30	13	43	36	34	70
July	23	17	40	55	40	95
August	17	15	32	57	34	91
September	16	3	19	47	36	83
October	15	8	23	28	24	52
November	42	24	66	24	25	49
December	106	84	190	28	25	53
Total, 1918-22 ..	750	576	1,326	372	293	665

The experience of the last five 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 51 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 7,251 in 1922, as compared with 8,952 in the previous year, 9,431 in 1920, 8,486 in 1919, 7,366 in 1918, 7,302 in 1917, and 9,282 in 1916. The next table gives the pro-

portion of such deaths to the total births in each Australian State and New Zealand for each of the last eleven 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
1921 ..	7·27	6·26	5·42	6·55	7·83	7·80	4·78
1922 ..	5·33	5·36	5·04	4·75	5·56	5·57	4·19

The infantile deaths per 100 births in the Australasian capitals in 1922 were as follows :—Melbourne 5·86, Sydney 5·79, Brisbane 5·89, Adelaide 5·77, Perth 6·00, Hobart 7·19, and Wellington 4·93.

Deaths of children under 5.

In 1922 the deaths of male children under 5 years of age numbered 1,446, and the deaths of female children under that age, 1,050—the former being in the proportion of 17·66 per cent., and the latter of 15·07 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 1922.

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
1921 ..	1,479	213	86	50	45	1,873	21·62
1922 ..	1,130	170	65	47	34	1,446	17·66
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
1921 ..	1,107	183	73	36	57	1,456	19·41
1922 ..	805	123	61	34	27	1,050	15·07

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 1922 and in the two preceding years are shown in the following table :—

AGES AT DEATH IN VICTORIA, 1920 TO 1922.

Ages.	1920.			1921.			1922.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Under 1 ..	1,540	1,133	2,673	1,479	1,107	2,586	1,130	805	1,935
1 to 2	294	258	552	213	183	396	170	123	293
2 ,, 3	118	103	221	86	73	159	65	61	126
3 ,, 4	84	67	151	50	36	86	47	34	81
4 ,, 5	54	64	118	45	57	102	34	27	61
5 ,, 10	194	208	402	174	152	326	146	93	239
10 ,, 15	112	103	215	125	82	207	113	69	182
15 ,, 20	153	119	272	130	151	281	130	117	247
20 ,, 25	195	199	394	201	219	420	176	180	356
25 ,, 30	233	276	509	228	260	488	224	211	435
30 ,, 35	225	264	489	227	274	501	216	257	473
35 ,, 40	262	264	526	302	284	586	252	262	514
40 ,, 45	279	276	555	315	283	598	301	273	574
45 ,, 50	394	297	691	404	298	702	374	291	665
50 ,, 55	495	354	849	498	398	896	492	359	851
55 ,, 60	698	438	1,136	644	446	1,090	644	469	1,113
60 ,, 65	746	487	1,233	777	549	1,326	805	523	1,328
65 ,, 70	626	465	1,091	650	496	1,146	744	545	1,289
70 ,, 75	604	543	1,147	588	531	1,119	590	524	1,114
75 ,, 80	627	677	1,304	568	579	1,147	575	573	1,148
80 ,, 85	553	575	1,128	471	522	993	459	566	1,025
85 ,, 90	384	410	794	350	358	708	345	404	749
90 ,, 95	165	151	316	114	132	246	122	151	273
95 ..	5	10	15	7	9	16	10	19	29
96 ..	5	10	15	7	7	14	9	10	19
97 ..	4	4	8	2	9	11	5	8	13
98 ..	3	7	10	4	3	7	..	9	9
99 ..	4	6	10	1	4	5	1	2	3
100 ..	1	2	3	1	..	1	3	1	4
101 ..	..	2	2	..	1	1	1	..	1
102 ..	1	..	1	..	..	..	4	2	6
103 ..	1	..	1	1	..	1	..	..	..
104 ..	..	..	..	..	..	..	..	1	1
105 ..	1	..	1	..	..	..	..	..	..
Total ..	9,060	7,772	16,832	8,662	7,503	16,165	8,187	6,969	15,156

Of the 48,153 persons who died in Victoria during the last three years, 6,439 were aged 80 years and upwards, and 23—fourteen males and nine females—had attained or passed the age of 100 years.

The highest age at death recorded in the period 1920–22 was 105 years, which was attained by one man. To every 100 female deaths there were 117 male deaths in 1922 as against 115 in the previous year, 117 in 1920, and 119 in 1919.

Death rate from certain diseases.

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.	1918.	1919.	1920.	1921.	1922.
Typhoid Fever	98	32	21	37	46	20
Scarlet Fever	16	28	24	24	12	8
Measles	33	5	17	146	4	1
Whooping Cough	77	47	24	125	63	26
Diphtheria and Croup	122	149	144	183	179	88
Influenza	109	148	2,407	52	88	46
Hydatids	22	21	18	13	14	13
Cancer	833	942	870	908	954	997
Phthisis	855	701	739	658	667	565
Other Tubercular Diseases	182	144	126	145	137	120
Syphilis	51	42	40	46	36	22
Diabetes	107	146	134	126	136	110
Anæmia, Chlorosis, Leucæmia	81	90	93	90	104	85
Simple Meningitis	133	52	42	54	64	68
Cerebro-Spinal Meningitis	..	26	10	10	11	8
Infantile Paralysis	..	15	2	3	3	2
Locomotor Ataxia and other diseases of Spinal Cord	71	88	78	45	52	38
Congestion and Hæmorrhage of the Brain	449	427	438	472	472	433
Epilepsy	35	40	38	31	34	27
Convulsions	76	49	55	45	47	59
Heart Disease (including Endocarditis, Pericarditis, and Angina Pectoris)	1,441	1,400	1,402	1,287	1,267	1,245
Acute and Chronic Bronchitis	348	233	284	273	222	209
Pneumonia and Broncho-pneumonia	834	694	904	801	676	746
Pleurisy	45	32	42	23	35	29
Congestion of Lungs and Pulmonary Apoplexy	63	56	51	84	59	59
Asthma and Pulmonary Emphysema	60	51	49	41	22	32
Enteritis, Gastro-enteritis, and Diarrhœal Diseases	833	504	501	639	657	358
Hernia, Intestinal Obstruction	113	115	111	118	100	107
Diseases of the Stomach (Cancer excepted)	99	83	98	106	79	81

DEATHS PER MILLION FROM CERTAIN CAUSES—*continued.*

Cause of Death.	Deaths per Million of the Population.					
	1908–1912.	1918.	1919.	1920.	1921.	1922.
Cirrhosis and other diseases of the Liver (Cancer excepted) ..	158	112	91	96	99	81
Biliary Calculi	27	32	27	31	25	20
Appendicitis	81	66	61	63	57	67
Simple Peritonitis (non-puerperal)..	35	35	31	28	24	29
Acute and Chronic Nephritis, Uræmia, Bright's Disease	576	586	510	540	516	514
Diseases of the Bladder and Prostate	94	97	88	82	57	55
Calculi of the Urinary System ..	7	6	6	6	8	4
Old Age	1,030	1,002	1,082	1,019	873	873
Suicide	102	72	89	95	95	81
Accidental Violence	531	408	424	451	452	393
Homicide	19	13	18	12	14	15

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 1922. 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	1911 ...	62
1900 ...	67	1912 ...	60
1901 ...	62	1913 ...	69
1902 ...	53	1914 ...	65
1903 ...	71	1915 ...	69
1904 ...	69	1916 ...	61
1905 ...	67	1917 ...	60
1906 ...	67	1918 ...	48
1907 ...	67	1919 ...	44
1908 ..	67	1920 ..	12
1909 ...	68	1921 ...	11
1910 ..	69	1922 ...	8

In 1922 the vaccinations of children were equal to 8 per cent. of the births, as compared with 11 per cent. in the preceding year, 12

per cent. in 1920, 44 per cent. in 1919, 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 1922 only 31 deaths occurred from this cause, and of that number only 8 took place in the last thirty-eight 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 19 per 100,000 in 1922, or by 93 per cent. in the intervening years. The death rate from the disease decreased by 93 per cent. during the same period. The deaths per 100 cases in 1922 were 10·6 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 1890 :—

TYPHOID FEVER IN VICTORIA, 1890 TO 1922.

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
1921	532	34·6	71	4·6	13·3
1922	301	19·1	32	2·0	10·6

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-three years :—

TYPHOID FEVER IN THE METROPOLIS, 1890 TO 1922.

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
1921	119	15·1	29	3·7
1922	80	9·9	11	1·4

The cases of, and deaths from typhoid fever in proportion to population declined by 97 and 96 per cent. respectively in Greater Melbourne between 1890–9 and 1922. 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 five years in five divisions of the State, and their proportions to the respective populations for the period 1910–19 and the years 1921 and 1922, are given in the following table :—

PREVALENCE OF TYPHOID FEVER.

Area.	Reported Cases of Typhoid Fever.					Annual Cases per 10 000 of Population.		
	1918.	1919.	1920.	1921.	1922.	1910–19.	1921.	1922.
Greater Melbourne ..	87	64	128	119	80	4·1	1·5	1·0
Ballarat and Suburbs	11	16	12	52	22	13·4	13·5	5·6
Bendigo and Suburbs	21	11	9	24	38	18·2	7·2	11·4
Geelong and Suburbs	3	5	10	35	7	9·0	9·7	1·9
Rest of the State ..	232	167	274	302	154	8·9	4·7	2·3

The cases in proportion to population were fewer by 76 per cent. in Greater Melbourne, 58 per cent. in Ballarat, 37 per cent. in Bendigo, 79 per cent. in Geelong, and 74 per cent. in the rest of the State in 1922 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 1900-2, 1910–12, and 1920–22, being the years adjoining the censuses of 1901, 1911, and 1921 :—

DEATH RATES FROM TYPHOID FEVER, 1900–2, 1910–12, AND 1920–22.

Age Group.	Deaths per 10,000 of each Sex.					
	Males.			Females.		
	1900–2.	1910–12.	1920–22.	1900–2.	1910–12.	1920–22.
0–15	0·97	0·38	0·12	1·46	0·44	0·28
15–20	2·65	1·76	0·40	2·23	1·22	0·46
20–25	4·39	1·82	0·97	1·84	1·32	0·54
25–35	3·28	1·71	0·41	2·04	0·82	0·38
35–45	2·25	1·26	0·45	1·21	0·68	0·36
45–55	1·95	0·82	0·54	0·93	0·39	0·20
55–65	0·66	0·20	0·42	0·34	0·50	0·16
65 and over ..	..	0·10	0·10	0·23	0·19	0·09
All ages	1·95	1·00	0·37	1·49	0·69	0·32

The experience of the three census periods mentioned shows that the rate for males exceeds that for females by 33 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 1922 the deaths from scarlet fever numbered 13, which corresponded to a rate of 8 per million of the population, as compared with rates of 12 in 1921, 24 in 1920 and 1919, 28 in 1918, 23 in 1917, 21 in 1916, 8 in 1915, slightly over 1 in 1914, and 34 in 1890–2. During 1922 there were 1,972 cases reported, as against 2,816 in the previous year, 2,259 in 1920, 1,763 in 1919,

and 2,572 in 1918. For the five years mentioned the deaths were equal to 1·3 per cent. of the cases. According to the experience of the past ten years the chance of dying from the disease is 84 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 1922 there was only 1 death attributed to this cause, representing a rate of ·6 per million of the population, as compared with rates of 4 in the previous year, 146 in 1920, 17 in 1919, 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 41 deaths referred to whooping cough in 1922, which equalled a rate of 26 per million of the population at all ages, as compared with rates of 63 in the previous year, 125 in 1920, 24 in 1919, 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 26 of the deaths were of infants under 1 year, and, with the exception of 1, all the deaths were of children less than 5 years of of age. On the average of the past ten years the mortality rate from the disease was 26 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 1922 the number of cases was 5,323 as against 9,458 in 1921, and

a yearly average of 5,161 in 1911–20, 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 2·6 per cent. in 1922, 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 1922.

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
1921	9,458	615·2	275	17·9	2·9
1922	5,323	338·8	138	8·8	2·6
		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
1921	3,724	473·2	104	13·2	2·8
1922	2,213	274·6	53	6·6	2·4

Prevalence of diphtheria in different areas. The cases of diphtheria which occurred in five divisions of the State in each of the past five years and their proportions to the respective populations, for the period 1910–19 and the years 1921 and 1922, are given in the subjoined table :—

CASES OF DIPHTHERIA IN DIFFERENT AREAS.

Area.	Reported Cases of Diphtheria.					Annual Cases per 10,000 of Population.		
	1918.	1919.	1920.	1921.	1922.	1910–19.	1921.	1922.
Greater Melbourne ..	3,807	2,350	2,698	3,724	2,213	39·3	47·3	27·5
Ballarat and Suburbs	73	63	330	307	111	24·3	79·7	28·2
Bendigo and Suburbs	299	136	428	521	215	84·6	157·1	64·3
Geelong and Suburbs	314	165	369	405	200	43·4	112·6	54·9
Rest of the State ..	2,075	1,293	2,633	4,501	2,584	25·7	71·6	39·4

In 1922, the cases in each division of the State were considerably fewer 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 1922 numbered 21, being equivalent to a rate of 13 per million of the population, as compared with rates of 14 in the preceding year, 13 in 1920, 18 in 1919, 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 32 per cent. higher among males than females. Hospital returns for the period 1914–22

show that 622 cases of hydatids were treated therein and that 88, or 1 in every 7, ended fatally.

Anæmia, chlorosis, leucæmia.

Anæmia, chlorosis, and leucæmia were responsible for 134 deaths in 1922, which corresponded to a rate of 85 per million of the population, as against rates of 104 in the previous year, 90 in 1920, 93 in 1919, 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 34 persons who died from leucæmia in 1922, 22 were males.

Diabetes.

During 1922 diabetes was responsible for 64 male and 109 female deaths, representing a rate of 110 per million of the population, as compared with rates of 136 in the preceding year, 126 in 1920, 134 in 1919, 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 1900–2, 1910–12, and 1920–22, 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.		
	1900–2.	1910–12.	1920–22.	1900–2.	1910–12.	1920–22.
0–10	·09	·10	·13	·05	·15	·22
10–20	·24	·20	·31	·26	·36	·39
20–30	·17	·64	·48	·36	·30	·53
30–40	·32	·58	·45	·51	·53	·54
40–50	·49	1·11	·95	·42	·78	1·11
50–60	1·38	1·80	2·14	1·42	3·18	2·79
60–70	2·67	5·63	5·19	3·19	8·47	8·02
70–80	4·36	7·34	7·37	5·01	11·54	12·51
80 and over	4·11	7·43	8·42	3·54	6·83	6·02
All Ages ...	·56	1·00	1·03	·60	1·26	1·45

In 1920–22 the female exceeded the male rate for each age group between 40 and 80, the excess for the twenty years of life 60 to 80 amounting to 61 per cent. For all ages combined the rate for females was 41 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 1922 :—

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
1921	70	66	136	8·8
1922	40	33	73	4·6

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.	1880–2.	1890–2.	19 – 2	1910–12.	1920–22.
Males.					
0—15	·34	2·50	1·10	·40	·23
15—20	·07	·64	·34	·24	·30
20—25	...	1·20	·59	·21	·38
25—35	·07	1·50	·79	·17	·27
35—45	...	3·04	1·31	·59	·56
45—55	·24	5·12	3·20	·73	·92
55—65	·24	12·65	5·25	2·38	1·44
65 and upwards	2·36	27·13	17·02	12·27	4·18
All ages	·25	3·94	2·30	1·10	·65
Females.					
0—15	·34	1·86	1·15	·42	·25
15—20	.	·92	·83	·34	·26
20—25	.	1·28	·69	35	·35
25—35	·07	2·35	·89	·22	·45
35—45	·08	4·11	1·86	·30	·46
45—55	...	5·39	2·02	·68	·68
55—65	·62	11·46	5·53	1·61	·91
65 and upwards	3·18	35·22	16·02	12·80	3·86
All ages	·24	3·72	2·13	1·10	·60

Respiratory diseases.

In 1922 the deaths from respiratory diseases numbered 1,878, which represented a rate of 1,195 per million of the population, as compared with rates of 1,141 in the previous year, 1,329 in 1920, 1,430 in 1919, 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, 154 were referred to acute bronchitis, 125 to chronic bronchitis, 50 to bronchitis unspecified, 421 to broncho-pneumonia, 751 to pneumonia, 45 to

pleurisy, and 45 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 47 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.	1880–2.	1890–2.	1900–2.	1910–12.	1920–22.
Males.					
0—15	29·02	28·52	16·53	12·94	10·25
15—20	3·30	2·92	2·70	1·66	1·76
20—25	5·34	4·88	4·85	2·35	2·73
25—35	8·31	6·85	5·94	3·86	3·71
35—45	15·80	13·55	9·49	10·50	8·01
45—55	26·59	25·18	18·04	18·25	15·69
55—65	51·65	56·51	38·37	32·68	30·42
65 and upwards	136·54	141·07	112·38	138·87	112·17
All ages	24·48	24·30	18·66	17·17	14·42
Females.					
0—15	24·18	24·13	13·85	10·50	8·54
15—20	2·02	3·52	2·34	1·56	2·32
20—25	4·23	3·05	3·34	2·48	1·72
25—35	5·72	5·65	3·75	3·55	3·25
35—45	12·53	11·55	7·68	5·85	4·90
45—55	13·63	17·01	11·80	8·28	6·71
55—65	29·15	32·10	27·42	16·64	13·50
65 and upwards	116·12	112·38	86·78	99·81	86·51
All ages	17·08	17·62	13·28	11·81	10·15

The mortality from respiratory diseases at all ages combined was less in the period 1920–22 than in any of the four previous census periods. At each census date the male exceeded the female rate, the average excess for the five census periods being 42 per cent.

Cerebro-spinal, tubercular, and simple meningitis.

Cerebro-spinal meningitis was responsible for 12 deaths in 1922, 17 in 1921, 15 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 1682, and the proportion of these that ended fatally was 50 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, 1913–22.

Year.	Cerebro-spinal Meningitis.		Tubercular Meningitis.		Simple Meningitis.		Total—All Forms of Meningitis.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
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
1921 ..	8	9	42	44	62	37	112	90
1922 ..	9	3	30	28	67	40	106	71

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 1913–22 :—

DEATHS AT DIFFERENT AGES FROM MENINGITIS, 1913–22.

Age Group.	Cerebro-spinal Meningitis.		Tubercular Meningitis.		Simple Meningitis.		Total—All Forms of Meningitis.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 5 ..	135	97	224	191	328	238	687	526
5 to 15 ..	71	56	86	81	74	51	231	188
15 ,, 25 ..	158	52	33	46	38	49	229	147
25 ,, 35 ..	78	26	30	20	29	16	137	62
35 ,, 45 ..	50	24	19	10	36	27	105	61
45 ,, 55 ..	47	27	4	7	46	20	97	54
55 ,, 65 ..	16	12	3	1	17	10	36	23
65 and over	7	7	2	1	20	13	29	21
Total 1913–22	562	301	401	357	588	424	1,551	1,082

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 27, 55, and 56 per cent. respectively of the total deaths from these diseases. Of the 12 persons who succumbed to cerebro-spinal meningitis in 1922, 8 were under 5 and 10 were under 15 years of age. Up to the age of 15 years the incidence of the mortality from this disease in the period 1913–22 was 35 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 1922 locomotor ataxia and other diseases of the spine, excluding infantile paralysis, accounted for 39 male and 21 female deaths, representing a death rate of 38 per million of the population, as compared with rates of 52 in the previous year, 45 in 1920, 78 in 1919, 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 15 persons who died from locomotor ataxia 11 were males.

Infantile paralysis. Mortality returns show that infantile paralysis was responsible for 3 deaths in 1922 as against 4 in the previous year, 4 in 1920, 3 in 1919, 21 in 1918, 6 in 1917, 4 in 1916, 2 in 1915, 9 in 1914, 3 in 1913, and 6 in 1912. Of the 65 persons who died during these eleven years 38 were boys. Seven of the victims were under 1 year of age, and 33 were under 5 years. The cases reported to the Public Health Department in 1922 numbered 23, as compared with 27 in the preceding year, 5 in 1920, 2 in 1919, 303 in 1918, and 32 in 1917.

Heart disease. During 1922 there were 1,522 deaths ascribed to organic heart disease, 44 to pericarditis, 320 to endocarditis and acute myocarditis, and 70 to angina pectoris. The total—1,956—from these causes represented a rate of 1,245 per million of the population, as compared with 1,267 in the previous year, 1,287 in 1920, 1,402 in 1919, 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 1,956 persons who died from these diseases in 1922, only 62, or 3·2 per cent., were under 15 years of age. On the average of the three years 1920 to 1922 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 ..	1.52	1.92	2.04	2.64	5.40	14.52	40.62	112.20	247.10	13.74
Females ..	1.15	1.85	1.53	3.25	5.26	10.73	29.53	85.65	208.17	11·70

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 5 is due to some form of this disease.

Diseases of the digestive system. In 1922 there were 675 male and 575 female deaths from digestive ailments, representing a proportion of 796 per million of the population, as against rates of

1,095 in the previous year, 1,147 in 1920, 978 in 1919, 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 563 deaths, which were equivalent to a rate of 358 per million of population, the corresponding rates in previous periods being 657 in 1921, 639 in 1920, 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 563 deaths from diarrhœal diseases in the year under review, 449, or 80 per cent., were of children under 2 years of age, and 54, or about 10 per cent., were of persons over 65 years of age. There were 42 male and 32 female deaths from cirrhosis of the liver, 51 male and 61 female deaths from other affections of that organ, and 95 male and 73 female deaths from hernia and intestinal obstruction.

Appendicitis. The deaths from appendicitis numbered 105 in 1922, 88 in the previous year, 95 in 1920, 89 in 1919, 94 in 1918, 87 in 1917, 78 in 1916, 102 in 1915, and 103 in 1914, and corresponded to rates of 67, 57, 63, 61, 66, 62, 55, 72, and 72 per million of the population respectively. Hospital records show that during 1922 there were 1,818 cases treated, and that 47, or 2·6 per cent., ended fatally, as compared with fatality rates of 2·2 per cent. in 1921, 2·7 per cent. in 1920, 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 three years, 1920 to 1922 the death rate from appendicitis is approximately 63 per cent. higher among males than females. The mortality rates at various ages for that period were as follows :—

DEATH RATES FROM APPENDICITIS, 1920–22.

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..	0·31	0·87	1·31	0·86	0·74	1·08	0·79	0·85	0·68	0·78
Females	0·30	0·66	0·51	0·59	0·53	0·56	0·40	0·32	0·69	0·48

Diseases of urinary system. In 1922 there were 980 deaths attributed to diseases of the urinary system, which corresponded to a rate of 624 per million of the population, as against rates of 643 in the previous year, 697 in 1920, 645 in 1919, 741 in 1918, 710 in 1917, 705 in 1916, 712 in 1915, 670 in 1914, 724 in 1913, and 700 in 1909–12. Acute and chronic nephritis were responsible for 808 deaths, or 82 per cent., and complaints of the bladder and prostate for 86 deaths, or 9 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 1900–2, 1910–12, and 1920–22 are shown in the following table :—

DEATH RATES FROM DISEASES OF URINARY SYSTEM.

Age Group.	Deaths per 10,000 of each Sex.					
	Males.			Females.		
	1900–2.	1910–12.	1920–22.	1900–2.	1910–12.	1920–22.
0–10	·93	·67	·67	·59	·79	·67
10–20	·45	·73	·53	·82	·71	·52
20–30	1·83	1·72	1·23	1·59	1·61	1·72
30–40	3·55	3·03	2·66	4·21	3·76	2·89
40–50	8·12	9·03	6·23	7·26	7·07	5·27
50–60	17·43	18·95	14·59	11·36	13·81	10·57
60–70	39·62	46·63	38·30	21·49	24·44	22·04
70–80	80·68	96·18	97·19	27·70	38·53	40·26
80 and over	128·48	153·04	167·09	27·15	43·70	54·38
All Ages ...	8·05	9·18	8·04	4·28	5·34	5·13

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 57 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.				
	1918.	1919.	1920.	1921.	1922.	1918.	1919.	1920.	1921.	1922.
0–10 ...	2	5	12	3	6	7	3	6	2	5
10–15 ...	2	2	3	3	2	7	4	6	3	4
15–20 ...	18	22	17	16	20	38	43	33	27	34
20–25 ...	47	58	47	56	44	83	83	67	71	69
25–30 ...	39	77	64	64	59	86	75	76	79	57
30–35 ...	55	80	65	51	53	51	54	55	62	71
35–40 ...	67	72	57	68	47	50	54	45	54	45
40–45 ...	56	65	60	70	55	41	32	42	53	41
45–50 ...	58	68	70	69	42	30	35	26	34	27
50–55 ...	72	65	58	46	49	24	20	21	22	17
55–60 ...	54	67	46	42	43	16	16	15	20	16
60–65 ...	41	31	39	40	35	14	11	13	22	6
65–70 ...	19	17	16	18	20	2	6	6	8	7
70 and over	12	10	16	13	6	3	9	9	9	7
Total ...	542	639	570	559	481	452	445	420	466	406

Death rates from phthisis.

The deaths from phthisis in 1922 numbered 887—481 being of males and 406 of females—and equalled a rate of 565 per million of the population, as compared with rates of 667 in the previous year, 658 in 1920, 739 in 1919, 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 1920, the deaths from this cause were 996, 877 and 1,318 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.					
	1870-2.	1880-2.	1890-2.	1900-2.	1910-12.	1920-22.
Males.						
0 to 15	1·22	1·74	·90	·38	·46	·42
15 " 20	5·71	6·88	5·41	5·06	3·71	2·67
20 " 25	18·75	21·19	18·29	14·35	8·45	7·88
25 " 35	22·21	30·33	23·70	20·31	13·11	9·70
35 " 45	21·83	25·11	28·28	22·07	15·63	12·43
45 " 55	22·24	28·65	31·17	25·05	18·07	13·94
55 " 65	27·86	31·41	36·48	35·75	18·88	13·03
65 and upwards ...	19·56	18·08	25·40	31·07	13·55	8·65
All Ages ...	12·89	15·33	15·73	13·51	8·98	7·11
Females.						
0 to 15	·98	1·76	1·43	·93	·97	·38
15 " 20	12·37	12·50	9·51	8·18	7·62	4·84
20 " 25	19·28	21·00	18·49	12·79	12·68	10·20
25 " 35	22·02	26·56	21·77	18·15	14·03	10·00
35 " 45	21·65	24·06	22·53	17·74	11·51	9·15
45 " 55	19·60	20·72	16·13	14·41	8·18	5·91
55 " 65	10·51	14·26	12·35	12·52	7·47	4·95
65 and upwards ...	12·61	13·12	8·25	8·18	5·29	3·94
All Ages ...	10·62	12·75	11·51	9·72	7·61	5·55

A comparison of the mortalities from pulmonary tuberculosis at the census periods 1910–12 and 1920–22 shows that lower death rates obtained in each age group in 1920–22 than in 1910–12, and that the improvement was greater among females than males. 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 every section of the community

experienced relief from tubercular diseases in 1920–22 as compared with the previous census period.

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 67 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 each of the last twelve years :—

DEATH RATES FROM TUBERCULAR DISEASES IN MELBOURNE, BALLARAT, AND BENDIGO, 1891 TO 1922.

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
1921 ..	8·1	7·0	14·2	1·9	1·3	2·1	10·0	8·3	16·3
1922 ..	6·7	8·1	11·4	1·5	·3	2·7	8·2	8·4	14·1

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 five years in five divisions of the State, and their proportions to the populations of these divisions for the period 1910-19 and the years 1921 and 1922 are given in the subjoined table :—

PHTHISIS IN DIFFERENT AREAS.

Area.	Reported Cases of Pulmonary Tuberculosis.					Annual Cases per 10,000 of Population.		
	1918.	1919.	1920.	1921.	1922.	1910-19.	1921.	1922.
Greater Melbourne ..	982	889	653	878	783	13·9	11·2	9·7
Ballarat and Suburbs	40	28	21	36	31	12·8	9·4	7·9
Bendigo and Suburbs	56	31	21	45	52	18·0	13·6	15·6
Geelong and Suburbs	22	24	16	19	10	7·9	5·2	2·7
Rest of the State ..	380	213	211	324	282	5·8	5·0	4·3
Whole State ..	1,480	1,185	922	1,302	1,158	10·4	8·5	7·4

Phthisis in metropolitan municipalities.

In the *Year-Book* for 1918-19, page 226, a table is given showing the reported cases of phthisis in 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 1922 there were in Victoria 189 deaths from tubercular diseases (excluding phthisis), which corresponded to a rate of 120 per million, as compared with rates of 137 in the previous year, 145 in 1920, 126 in 1919, 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.				
	1880-2.	1890-2.	1900-2.	1910-12.	1920-22.
Males.					
0—15 ...	7·98	10·36	5·64	2·75	2·00
15—20 ...	·81	1·17	1·12	1·12	·83
20—25 ...	1·23	·89	1·77	1·23	1·55
25—35 ...	·66	·84	1·91	1·71	1·61
35—45 ...	·88	·77	1·39	1·38	1·15
45—55 ...	·85	·67	1·64	·82	1·17
55—65 ...	1·07	·78	2·40	1·29	1·06
65 and over	2·36	·56	1·17	·59	1·07
All ages	3·55	4·02	2·99	1·70	1·48
Females.					
0—15 ..	7·28	8·43	5·33	2·12	1·57
15—20 ...	1·30	1·27	1·95	2·34	1·13
20—25 ...	·69	1·23	2·09	2·59	1·73
25—35 ..	·41	·88	1·98	1·81	1·18
35—45 ..	·70	·42	1·77	1·33	·78
45—55 ..	·67	·34	1·01	·93	1·01
55—65 ..	·62	·69	·71	1·11	·70
65 and over	1·19	·64	·71	·29	·86
All ages	3·39	3·58	2·91	1·76	1·21

As compared with the period 1910–12 the proportion of persons under 15 years of age who died from tubercular diseases (excluding

phthisis) during 1920–22 represented a decline of 27 per cent. for males and of 26 per cent. for females.

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 three of those who died in 1922 had been born outside and resident less than one year in Australia, and 14 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.				
	1918.	1919.	1920.	1921.	1922.	1918.	1919.	1920.	1921.	1922.
0–15	2	6	4	7	6	4	4	7	5	2
15–25	..	5	4	7	7	3	4	3	3	3
25–35	7	8	9	7	12	16	13	16	21	14
35–45	35	31	31	33	31	68	42	62	65	75
45–55	108	106	118	111	105	145	160	139	164	173
55–65	240	182	240	243	278	190	202	194	223	224
65–75	159	173	162	185	219	130	134	159	168	164
75–85	91	79	83	84	103	93	84	83	103	97
85 and over ..	23	18	27	18	21	22	24	25	20	32
Total ..	665	608	678	695	782	671	667	688	772	784

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 1922 the average age of those who died from cancer was 62·3 years for males and 60·3 years for females, whilst the corresponding averages for phthisis were 40·8 years for males and 34·0 years for females.

Cancer—Death rates at different ages.

Deaths from cancer in 1922 numbered 1,566, and represented a death rate of 997 per million of the whole population, as compared with rates of 954 in the previous year, 908 in 1920, 870 in 1919, 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, Scotland, and Ireland in 1920 the deaths per million of population from this cause were 1,161, 1,190, and 852 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.			
	1890–2.	1900–2.	1910-12.	1920–22.
Males.				
Under 5 ...	·18	·30	·73	·46
5 to 10 ..	·10	·42	·25	·13
10 „ 15 ...	·11	·20	·16	·14
15 „ 20 ...	·17	·22	·15	·30
20 „ 25 ...	·32	·33	·71	·64
25 „ 35 ...	·81	1·26	·96	·76
35 „ 45 ...	4·29	3·69	3·16	3·31
45 „ 55 ..	14·83	14·14	16·03	13·94
55 „ 65 ...	31·92	36·00	36·36	40·46
65 „ 75 ...	52·75	59·04	74·15	78·21
75 and over	58·55	74·04	88·40	110·12
All ages	6·16	7·52	8·50	9·52
Females.				
Under 5 ...	·09	·26	·19	·39
5 to 10 ...	·10	·04	·10	·17
10 „ 15 ...	·06	..	·27	·05
15 „ 20 ...	·12	·28	·44	·15
20 „ 25 ...	·22	·23	·41	·30
25 „ 35 ...	1·68	1·61	1·39	1·28
35 „ 45 ...	7·43	6·05	7·26	6·61
45 „ 55 ...	18·00	18·13	17·87	19·14
55 „ 65 ...	31·79	33·05	38·03	34·48
65 „ 75 ...	53·96	51·18	61·66	63·05
75 and over	49·55	62·70	86·19	92·86
All ages	5·57	6·64	8·76	9·63

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 1910–12 and 1920–22 it will be seen that there was in the later period a considerable increase in the death rate from cancer.

Seat of cancer.

The following table shows the seat of cancer in persons who died from this disease in 1922 :—

SEAT OF CANCER.

Seat of Disease.	Males.	Females.	Total.
Cancer of the buccal cavity (mouth, &c.)	69	10	79
,, the stomach and liver	339	215	554
,, the peritoneum, the intestines, and the rectum	108	113	221
,, the female genital organs ...	...	137	137
,, the breast	..	141	141
,, the skin	45	31	76
,, other and unspecified organs ...	221	137	358
Total Deaths ...	782	784	1,566

Thirty-five 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 1922, the deaths of 627 men and 745 women were ascribed to senile decay. The deaths at ages 65 and over from all causes during the year numbered 5,683—2,868 of men and 2,815 of women.

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 1922, 474 male and 144 female deaths were attributed to accidents and negligence, which represented a rate of 393 per million of the population. This proportion was 8·6 per cent. below the average rate—430—for the previous five years, and 52 per cent. below the rate —811—for 1890–2. The numbers of deaths from various accidents in 1922 are given in the appended table :—

DEATHS FROM ACCIDENTAL VIOLENCE, 1922.

Nature or Place of Accident.	Males.	Females.	Total.
Poisoning by Food	5	..	5
Snake Bite	3	2	5
Other Acute Poisonings	7	9	16
Burns (including Conflagrations)	36	38	74
Absorption of Poisonous Gases	2	1	3
Accidental Mechanical Suffocation	17	7	24
Suffocation in bed (infants)	8	3	11
Drowning	95	22	117
Firearms	21	..	21
Falls	57	5	62
In Mines and Quarries	..	..	..
Machines	6	..	6
Vehicular Accidents—			
On Railways	42	8	50
Motor Car	43	12	55
Motor Cycle	6	..	6
Motor Lorry	3	1	4
Aeroplane	2	..	2
Bicycle	2	1	3
Tram Car	7	3	10
Vehicle drawn by Horses	26	2	28
Vehicle, Undefined	4	1	5
Injuries by Animals	5	2	7
Effects of Heat	5	3	8
Excessive Cold	1	1	2
Electricity	4	1	5
Lightning	1	..	1
Fractures, Unspecified	23	12	35
Other Violence	43	10	53
Total	474	144	618

On the average of the past three years the female mortality rate from accidents was 32 per cent. 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 age 45. The deaths per 10,000 males at certain ages from drowning and other accidents for the period 1920–22 were as follows :—

DEATH RATES FROM ACCIDENTS—MALES, 1920–22.

—	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 ..	1·92	1·13	1·06	1·11	1·46	1·91	2·43	1·44
Other Accidents ..	3·43	4·34	4·91	5·26	6·05	8·24	14·38	5·91
Total Accidents ..	5·35	5·47	5·97	6·37	7·51	10·15	16·81	7·35

For men aged 20 to 35 the death rate from accidental violence is about one-third of that for men over age 65 and slightly greater than one-half of the rate for those aged 55 to 65.

Occupations of men dying from accidents.

During the year 1922, 341 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, 1922.	Occupation.	Deaths from Accidents, 1922.
Labourer (undefined) ..	70	Wharf labourer, stevedore ..	4
Farmer, grazier	51	Drover	3
Railway employee	24	Electrician	3
Engineering trade	12	Motor trade	3
Clerk	9	Salesman	3
Miner, quarryman ..	9	School teacher	3
Market gardener	8	Soldier	3
Builder, contractor ..	6	Tramway employee ..	3
Carter, carrier, driver ..	6	Book-binder	2
Carpenter	6	Cabinet maker	2
Engine-driver	6	Cook	2
Agent	5	Journalist	2
Butcher	5	Orchardist	2
Painter	5	Rubber worker	2
Storeman	5	Tanner	2
Grocer	4	Others (specified) ..	37
Linesman	4	Unspecified	18
Sawyer, timber-worker ..	4		
Seaman	4		
Traveller	4	Total	341

Of the above 341 deaths 62 were due to drowning.

Suicide. In the year 1922, 106 males and 22 females took their own lives. The deaths represented a rate of 81 per million of the population, as compared with rates of 99 in the preceding year, 95 in 1920, 89 in 1919, 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 one-fourth of that for the latter on the average of the past five years.

Homicide. The deaths ascribed to homicide in 1922 numbered 24, of which 11 were of males and 13 of females. These represented a rate of 15 per million of the population, as against rates of 14 in 1921, 12 in 1920, 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 1922 in the following table :—

DEATH RATES OF MARRIED MOTHERS IN CHILDBED IN AGE GROUPS, 1906–1915 AND 1922.

Age Group.	Married Mothers.			
	Deaths.		Deaths per 1,000 Confinements.	
	1906–15.	1922.	1906–15.	1922.
Under 20 years	23	4	2·71	4·31
20 to 25 „	184	16	2·85	2·18
25 „ 30 „	326	20	3·60	1·88
30 „ 35 „	334	29	4·59	3·41
35 „ 40 „	346	36	6·86	7·21
40 years and over	156	12	6·90	6·23

The experience of the ten years 1906–15 showed 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 seven 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
1921 ..	105	58	163	45·80
1922	91	31	122	33·62

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 41·85 in 1918–22, as compared with 43·5 in 1911–15, 47·2 in 1906–10, and 60·9 in 1901–5.

Puerperal septicæmia.

In 1922 there were 31 deaths of married and unmarried mothers from puerperal septicæmia, which corresponded to a death rate of 8·5 per 10,000 births, as against 16·3 in 1921, 17·1 in 1920, 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, 1907–11 and 1912–16, and for each of the last six 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
1912–16	13·72	18·04	18·51	17·21	18·65	19·62	16·82	16·70
1917	13·09	18·13	19·37	15·74	16·71	18·57	16·56	16·08
1918	11·53	16·42	17·72	15·43	13·88	17·54	15·01	8·60
1919	8·31	11·10	13·58	11·92	10·47	15·21	10·84	12·03
1920	12·82	15·97	16·47	14·27	14·45	17·60	14·95	15·10
1921	12·64	16·43	17·25	14·05	12·99	16·67	15·04	14·61
1922	13·45	16·76	16·39	14·60	14·62	17·78	15.47	15·04
Mean 1918–22	11·75	15·34	16·28	14·05	13·28	16·96	14·26	13·08

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 1918-22 was 14·26 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—14·26—would enable a population to double itself in 49 years, whilst, at the Victorian rate of 11·75 per 1,000 of population, a period of slightly more than 59 years would be required. In England and Wales in 1922 the excess of births over deaths was 7·8 per 1,000 of population.