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CHAPTER 8

VITAL STATISTICS

The tables in this chapter are confined to the principal characteristics of vital statistics for Australia and relate, in the main, to the year 1969 for marriages and 1968 for births, deaths, and infant deaths. Comparisons have been restricted, in general, to the individual years 1965 to 1969 and the five-year periods 1941-45 to 1961-65, while age data have been shown in five-year groups. Comparisons over longer periods, together with more detailed figures such as single age particulars and cross-classifications of various characteristics, will be found in the annual bulletins, *Demography* and *Causes of Death*. Current information is published in the *Monthly Review of Business Statistics*, the *Quarterly Summary of Australian Statistics*, and a mimeographed series issued at intervals throughout the year on population and vital statistics.

For years before 1967 the statistics of births, deaths and marriages exclude particulars of full-blood Aborigines. Differences between the statistics now published and those formerly published which implied the exclusion of Aboriginal vital events cannot be taken as reliable statistics of births, deaths, or marriages among full-blood Aborigines, because in many areas no satisfactory administrative or other basis existed for distinguishing vital events among full-blood Aborigines from those among part-Aborigines or the rest of the population.

Vital statistics for certain countries of the world are set out in International Vital Statistics at the end of this chapter.

Provisions for registration and compilation of statistics

In Australia vital statistics are compiled from information supplied for the registration of births, deaths, and marriages. Each State and Territory has an independent system of registration. Provisions for the civil registration of births, deaths, and marriages have been in force in Tasmania from 1839, in Western Australia from 1841, in South Australia from 1842, in Victoria from 1853, and in New South Wales and Queensland (then part of New South Wales) from 1856. Registration in the Territories is administered by the Commonwealth Government, registration having been taken over from South Australia in 1911 in respect of the Northern Territory and from New South Wales in 1930 in respect of the Australian Capital Territory. The authority responsible for the registration of births, deaths, and marriages occurring within his particular State or Territory is the Registrar-General (the Government Statist in Victoria) or the Principal Registrar.

Information concerning a birth is required to be supplied within 28 days in the Australian Capital Territory and the Northern Territory, and 60 days in the States. For the registration of a death the period allowed is 8 days in Tasmania, 14 days in South Australia, Western Australia, Australian Capital Territory, and Northern Territory, 21 days in Victoria, and 30 days in New South Wales and Queensland.

The *Marriage Act* 1961-1966 came into operation on 1 September 1963, placing the marriage laws of all States, the mainland Territories and Norfolk Island on a uniform basis. Provision is made for the celebration of marriage by ministers of religion registered with the Registrar of Ministers of Religion appointed in each State and Territory by the Attorney-General, and by certain civil officers. In all cases the authorised celebrant is required to register particulars of the parties married with the appropriate registering authority in each State or Territory. The celebrant is requested to register a marriage as soon as practicable and in any case not later than fourteen days after the marriage.

Information is required in all States and Territories concerning what have been commonly known as 'stillbirths'. These are excluded from all the tables of births and deaths in this chapter and are included only in the special tables of stillbirths shown on page 175. The statistics of stillbirths shown relate to those, in several States, of at least seven months gestation or, in other States and the two Territories, the approximate equivalent of twenty-eight weeks. The statistics relate to periods up to the end of 1968. Compulsory registration was introduced in Western Australia in 1908, the Australian Capital Territory in 1930, New South Wales in 1935, South Australia in 1937, the Northern Territory in 1949, Victoria in 1953, Queensland in 1959 and Tasmania in 1967.

The data for the compilation of vital statistics are obtained from registry records and dispatched, through the Statistical Office in each State and Territory, to the Commonwealth Statistician. The compilation and publication of vital statistics for Australia is one of the functions of the Commonwealth Statistician. The Deputy Commonwealth Statisticians compile and publish statistics relating to their respective States.

Marriages

Numbers of marriages and crude marriage rates

The numbers of marriages registered in each State and Territory in five-year periods from 1941-45 to 1961-65, and for each of the years 1965 to 1969, and crude marriage rates for the same periods are shown in the following tables. Annual averages for each five-year period from 1861 to 1950 were published in Year Book No. 39, page 575.

MARRIAGES(a): STATES AND TERRITORIES, 1941 TO 1969

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Annual average—									
1941-45 . . .	28,506	19,450	10,563	6,517	4,668	2,097	71	109	71,981
1946-50 . . .	30,162	20,453	10,666	6,581	5,205	2,529	114	181	75,891
1951-55 . . .	28,483	20,007	10,171	6,290	5,232	2,539	146	234	73,102
1956-60 . . .	28,432	20,422	10,254	6,517	5,145	2,573	190	321	73,854
1961-65 . . .	31,788	23,262	11,437	7,514	5,768	2,700	248	533	83,250
Annual total—									
1965 . . .	35,176	26,421	12,967	8,680	6,448	2,888	296	670	93,546
1966 . . .	35,575	27,089	13,325	9,051	7,001	2,946	312	747	96,046
1967 . . .	37,077	28,004	13,634	9,434	7,430	3,213	325	883	100,000
1968 . . .	39,213	29,724	14,860	9,652	8,086	3,426	419	965	106,345
1969 . . .	41,286	30,860	15,669	10,599	8,993	3,532	413	1,118	112,470

(a) Excludes particulars of full-blood Aborigines before 1967.

CRUDE MARRIAGE RATES(a): STATES AND TERRITORIES, 1941 TO 1969

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Average annual rate—									
1941-45 . . .	9.97	9.86	10.04	10.61	9.74	8.61	7.2	7.6	9.94
1946-50 . . .	9.90	9.72	9.41	9.87	10.01	9.56	9.4	9.4	9.77
1951-55 . . .	8.41	8.34	7.91	8.11	8.44	8.35	9.1	8.2	8.29
1956-60 . . .	7.70	7.50	7.14	7.26	7.36	7.69	8.6	7.5	7.50
1961-65 . . .	7.86	7.64	7.27	7.42	7.43	7.49	8.1	7.3	7.63
Annual rate—									
1965 . . .	8.43	8.35	7.94	8.16	7.91	7.85	8.4	7.6	8.25
1966 . . .	8.40	8.41	8.01	8.29	8.36	7.93	8.3	7.7	8.31
1967 . . .	8.60	8.55	8.01	8.49	8.47	8.53	5.5	8.5	8.46
1968 . . .	8.94	8.93	8.57	8.57	8.89	8.96	6.5	8.6	8.83
1969 . . .	9.22	9.11	8.86	9.26	9.49	9.09	6.1	9.1	9.14

(a) Number of marriages per 1,000 of mean population. Excludes particulars of full-blood Aborigines before 1967.

NOTE. In some instances rates are based on too few marriages to warrant calculation to the second decimal place.

The crude marriage rates for Australia and the more populous countries of the world are shown for the latest available year in International Vital Statistics at the end of this chapter.

Previous marital status

The following table shows the relative marital status of bridegrooms and brides in 1969.

**MARITAL STATUS OF BRIDEGROOMS AND BRIDES
AUSTRALIA, 1969**

<i>Previous Marital status of bridegrooms</i>	<i>Previous Marital status of brides</i>			<i>Total bride- grooms</i>
	<i>Spinsters</i>	<i>Widows</i>	<i>Divorced</i>	
Bachelors . . .	97,644	1,191	3,401	102,236
Widowers . . .	913	1,672	840	3,425
Divorced . . .	3,629	843	2,337	6,809
Total brides . . .	102,186	3,706	6,578	112,470

Age and marital status at marriage

Particulars of age at marriage in age groups, and previous marital status, of bridegrooms and brides in 1969 are given hereunder. There were 16,046 males under 21 years of age married during 1969, while the corresponding number of females was 47,090. At the other extreme there were 1,123 bridegrooms and 578 brides in the age group 65 years and over.

**AGE AND PREVIOUS MARITAL STATUS OF BRIDEGROOMS AND BRIDES
AUSTRALIA, 1969**

<i>Age at marriage (years)</i>	<i>Bridegrooms</i>			<i>Total</i>	<i>Brides</i>			<i>Total</i>
	<i>Bachelors</i>	<i>Widowers</i>	<i>Divorced</i>		<i>Spinsters</i>	<i>Widows</i>	<i>Divorced</i>	
Under 20 . . .	7,873	..	..	7,873	31,579	6	7	31,592
20-24 . . .	61,134	16	147	61,297	56,907	114	603	57,624
25-29 . . .	22,847	80	1,018	23,945	9,372	210	1,334	10,916
30-34 . . .	5,761	119	1,254	7,134	2,257	238	1,238	3,733
35-39 . . .	2,214	160	1,085	3,459	834	302	962	2,098
40-44 . . .	1,182	284	1,089	2,555	469	431	935	1,835
45-49 . . .	590	419	922	1,931	310	575	693	1,578
50-54 . . .	278	457	571	1,306	168	552	452	1,172
55-59 . . .	170	537	390	1,097	120	473	216	809
60-64 . . .	82	463	205	750	80	365	90	535
65 and over . . .	105	890	128	1,123	90	440	48	578
Total . . .	102,236	3,425	6,809	112,470	102,186	3,706	6,578	112,470

The relative ages of bridegrooms and brides in 1969 are shown below in age groups of five years.

RELATIVE AGES OF BRIDEGROOMS AND BRIDES: AUSTRALIA, 1969

<i>Age of bride- groom (years)</i>	<i>Age of bride (years)</i>								<i>Total bride- grooms</i>
	<i>Under 15</i>	<i>15-19</i>	<i>20-24</i>	<i>25-29</i>	<i>30-34</i>	<i>35-39</i>	<i>40-44</i>	<i>45 and over</i>	
Under 20 . . .	4	6,506	1,316	43	4	..	..	..	7,873
20-24 . . .	2	21,336	37,565	2,169	179	33	8	5	61,297
25-29 . . .	1	3,226	14,976	4,785	754	140	47	16	23,945
30-34 . . .	..	383	2,840	2,328	1,060	332	135	56	7,134
35-39 . . .	..	86	626	970	833	512	261	171	3,459
40-44 . . .	..	31	186	398	536	521	501	382	2,555
45-49 . . .	..	10	81	145	239	331	440	685	1,931
50-54 . . .	..	2	23	47	76	131	237	790	1,306
55-59 . . .	..	5	7	20	35	64	141	825	1,097
60-64 . . .	..	..	4	8	10	24	38	666	750
65 and over . . .	..	..	..	3	7	10	27	1,076	1,123
Total brides . . .	7	31,585	57,624	10,916	3,733	2,098	1,835	4,672	112,470

The average age at marriage of brides and bridegrooms has declined during recent years. The average ages, in years, of brides for each of the five years to 1969 were: 1965, 24.09; 1966, 24.02; 1967, 24.03; 1968, 23.90; and 1969, 23.84. The average ages, in years, of bridegrooms were: 1965, 27.24; 1966, 27.10; 1967, 27.01; 1968, 26.76; and 1969, 26.63. The difference in the average age at marriage between brides and bridegrooms is generally about three years, the difference in 1969 being 2.79 years.

Countries of birth of persons marrying

The following table shows the relative countries of birth of bridegrooms and brides married in 1969.

RELATIVE COUNTRIES OF BIRTH OF BRIDEGROOMS AND BRIDES AUSTRALIA, 1969

Country of birth of bridegroom	Country of birth of bride										Total bridegrooms	
	Australia	New Zealand	United Kingdom and Ireland	Germany	Greece	Italy	Malta	Netherlands	Yugoslavia	Other European		Other and unspecified
Australia	74,199	370	4,825	1,069	69	251	206	780	65	467	939	83,240
New Zealand	802	120	89	14	1	4	2	9	1	19	21	1,082
United Kingdom and Ireland	6,680	105	2,253	174	13	53	50	127	14	113	233	9,815
Germany	1,390	20	195	368	9	17	11	39	16	139	58	2,262
Greece	215	3	25	15	2,269	12	6	4	9	17	101	2,676
Italy	986	11	121	49	18	2,035	22	32	30	52	53	3,409
Malta	334	..	48	14	4	7	476	6	2	4	10	905
Netherlands	1,122	9	177	47	2	12	4	280	6	34	49	1,742
Yugoslavia	337	9	55	53	23	55	6	14	826	56	27	1,461
Other European	1,124	28	198	192	18	26	9	40	36	753	118	2,542
Other and unspecified	1,660	41	226	80	75	31	14	44	11	90	1,064	3,336
Total brides	88,849	716	8,212	2,075	2,501	2,503	806	1,375	1,016	1,744	2,673	112,470

Celebration of marriages

Under the provisions of the *Marriage Act 1961-1966* marriages may be celebrated either by ministers of religion who are registered for that purpose with the Registrars of Ministers of Religion in each State or Territory, or by certain civil officers, in most cases district registrars. Most of the marriages are celebrated by ministers of religion. The registered ministers in 1969 belonged to more than fifty different religious denominations. The figures for 1969 are shown in the following table.

MARRIAGES BY AUTHORISED CELEBRANTS: STATES AND TERRITORIES, 1969

Category of authorised celebrant	Australia									Proportion of total	
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	No.		
Registered Ministers of recognised religious denominations—											
Church of England	12,662	7,142	3,999	2,289	2,754	1,483	48	270	30,647	27.25	
Roman Catholic	11,630	9,070	4,418	2,171	2,436	759	113	366	30,963	27.53	
Methodist	4,451	3,269	2,151	2,645	975	444	19	41	13,995	12.44	
Presbyterian	3,847	4,767	2,247	415	523	148	36	104	12,087	10.75	
Orthodox	1,224	1,374	123	176	82	12	19	21	3,031	2.69	
Baptist	672	516	334	246	110	90	4	16	1,988	1.77	
Lutheran	189	316	409	624	46	8	10	17	1,619	1.44	
Churches of Christ	172	588	131	321	162	25	..	18	1,417	1.26	
Congregational	334	383	141	347	109	52	27	4	1,397	1.24	
Salvation Army	147	153	102	49	48	25	2	2	528	0.47	
Other	695	732	307	162	175	71	4	13	2,159	1.92	
Other authorised celebrants—											
Ministers of religion	99	174	23	26	43	1	..	1	367	0.33	
Civil officers	5,164	2,376	1,284	1,128	1,530	414	131	245	12,272	10.91	
Grand total	41,286	30,860	15,669	10,599	8,993	3,532	413	1,118	112,470	100.00	
Proportion of total (per cent)—											
Ministers of religion	87.49	92.30	91.81	89.36	82.99	88.28	68.28	78.09	89.09	..	
Civil officers	12.51	7.70	8.19	10.64	17.01	11.72	31.72	21.91	10.91	..	

Divorce

The number of dissolutions of marriage, nullities of marriage and judicial separations was 10,789 in 1968 and 10,979 in 1969. Further information may be found in the chapter Public Justice.

BIRTHS, DEATHS AND MARRIAGES: AUSTRALIA 1870 TO 1969

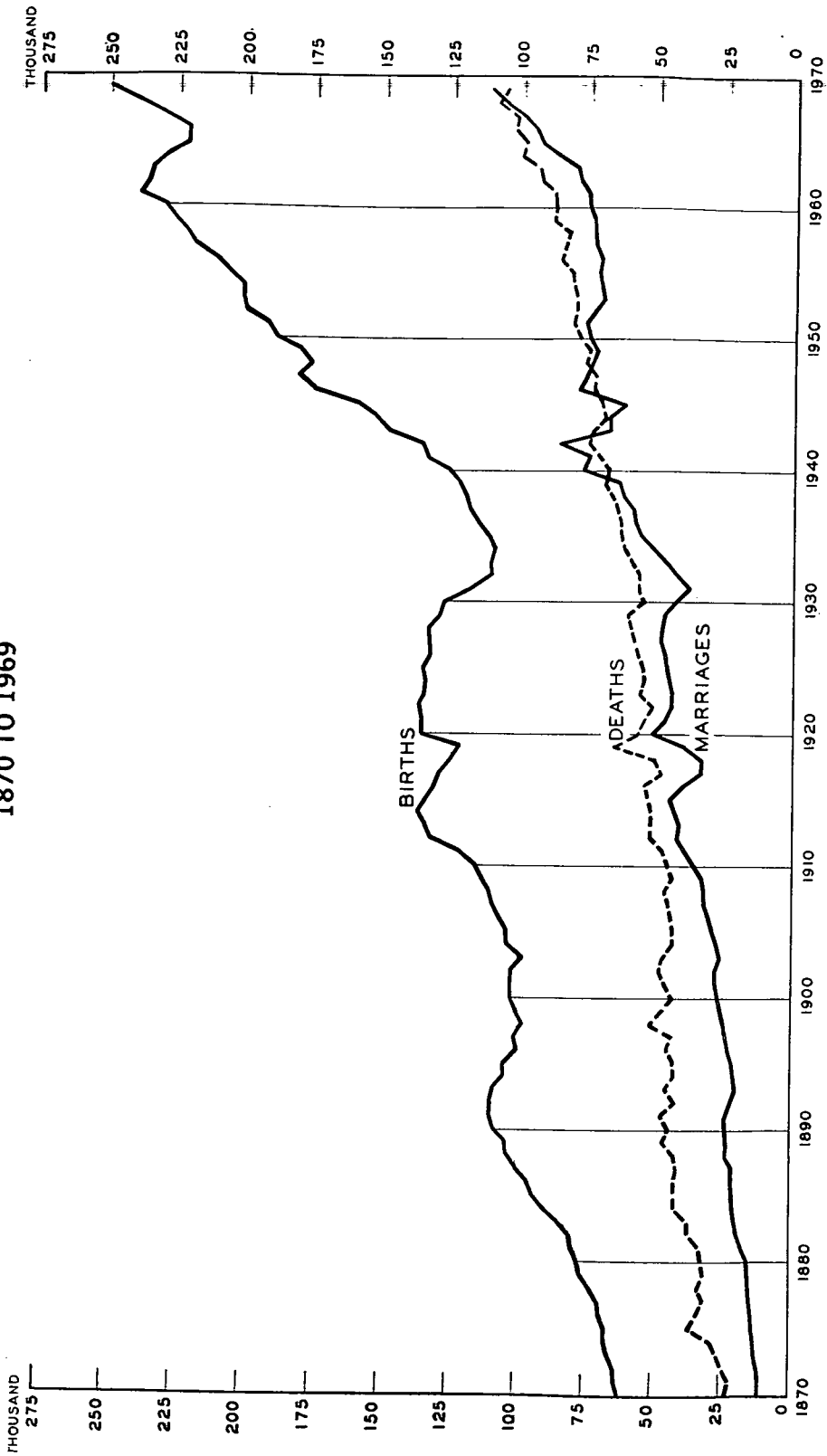


PLATE 18

Births and Fertility

Natural increase of a population has been defined as the excess of births over deaths, and the relation between fertility and mortality determines the rate of reproduction or replacement of the population.

Number of live births

There are various methods of measuring the fertility of the population by relating the number of births to the numbers of the population. In each the basic data are, of course, the numbers of live births. Statistics of live births registered in Australia between 1941 and 1969 are contained in the following table which shows the average annual number of live births in each State and Territory for each five-year period from 1941 to 1965 and the total number of live births for each year from 1965 to 1969. Corresponding figures for each five-year period from 1861 to 1950 were published in Year Book No. 39, page 583.

LIVE BIRTHS(a): STATES AND TERRITORIES, 1941 TO 1969

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Annual average—									
1941-45 .	56,583	38,002	23,431	12,546	10,409	5,418	113	384	146,886
1946-50 .	68,856	47,372	28,003	16,270	13,130	7,064	289	734	181,718
1951-55 .	73,737	53,770	30,983	18,045	15,724	7,774	468	922	201,423
1956-60 .	79,613	61,279	34,171	19,977	16,922	8,517	694	1,286	222,459
1961-65 .	82,896	65,193	35,357	21,377	16,861	8,439	897	1,932	232,952
Annual total—									
1965 .	78,069	63,550	33,551	20,891	16,186	7,535	914	2,158	222,854
1966 .	77,758	64,008	32,843	20,319	17,007	7,401	972	2,318	222,626
1967 .	78,841	65,485	34,692	20,386	18,023	7,547	1,921	2,401	229,296
1968 .	81,696	70,228	35,190	21,207	19,541	8,317	2,084	2,643	240,906
1969 .	86,036	71,035	36,576	21,977	20,754	8,445	2,274	3,079	250,176

(a) Excludes particulars of full-blood Aborigines before 1967.

Crude birth rates

The oldest and most popular method of measuring fertility is to relate the number of births to the total population, which gives the crude birth rate. The crude birth rate measures the rate per thousand persons (irrespective of age or sex) at which the population has added to its numbers by way of births during a given period. Other methods of measuring fertility are shown on pages 167 and 169. Crude birth rates for each five-year period from 1941 to 1965 and for each year from 1965 to 1969 are set out below for each State and Territory.

CRUDE BIRTH RATES(a): STATES AND TERRITORIES, 1941 TO 1969

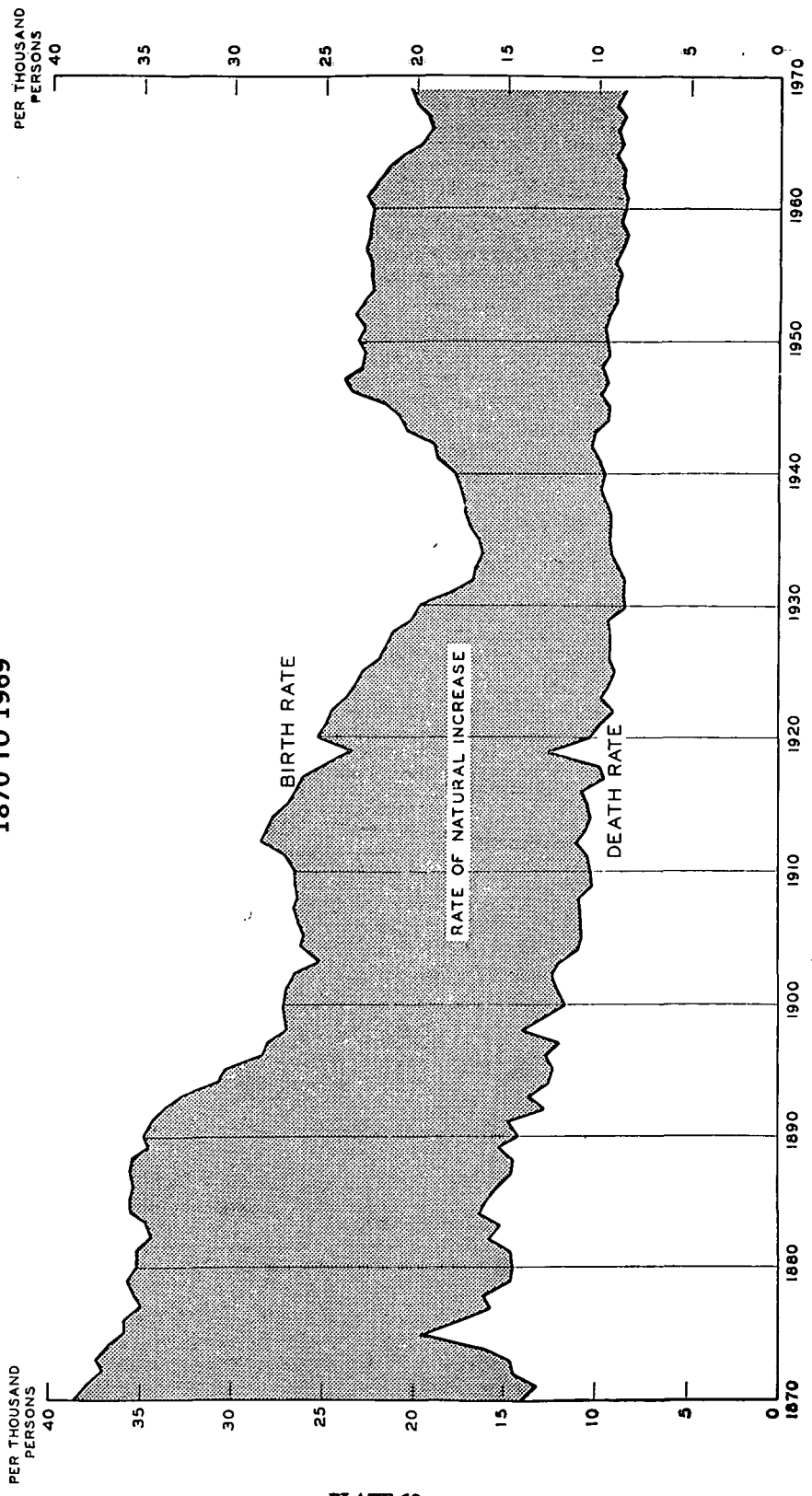
Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Average annual rates—									
1941-45 .	19.79	19.27	22.28	20.43	21.72	22.23	11.4	26.8	20.28
1946-50 .	22.60	22.51	24.69	24.41	25.24	26.71	23.8	37.9	23.39
1951-55 .	21.78	22.42	24.11	23.25	25.37	25.58	29.4	32.22	22.86
1956-60 .	21.55	22.52	23.80	22.27	24.20	25.45	31.49	30.10	22.59
1961-65 .	20.49	21.42	22.49	21.11	21.71	23.41	29.30	26.31	21.34
Annual rates—									
1965 .	18.71	20.08	20.54	19.63	19.85	20.48	25.8	24.4	19.65
1966 .	18.35	19.87	19.74	18.62	20.31	19.92	25.9	24.0	19.27
1967 .	18.30	19.98	20.38	18.34	20.55	20.04	32.3	23.1	19.40
1968 .	18.62	21.10	20.30	18.84	21.47	21.76	32.4	23.4	20.00
1969 .	19.21	20.97	20.67	19.19	21.91	21.73	33.3	25.2	20.33

(a) Number of births per 1,000 of mean population. Excludes particulars of full-blood Aborigines before 1967.

NOTE. In some instances rates are based on too few births to warrant calculation to the second decimal place.

RATES OF BIRTHS, DEATHS AND NATURAL INCREASE: AUSTRALIA

1870 TO 1969



NOTE: EXCLUDES PARTICULARS OF FULL-BLOOD ABORIGINES BEFORE 1927

PLATE 19

The birth rates in the table above are based on *live births registered in the respective States and Territories*. Some confinements, however, take place in States other than the State in which the mother usually resides, particularly in areas near State borders. The variations thus caused in the birth rates for the States and Territories by referring the birth registrations to the mother's usual residence are shown by the following corrected rates for 1968—New South Wales, 18.66; Victoria, 21.08; Queensland, 20.23; South Australia, 18.79; Western Australia, 21.50; Tasmania, 21.80; Northern Territory, 33.01; and Australian Capital Territory, 23.04.

A graph showing the birth rate for each year from 1870 to 1969 is shown on page 165. The crude birth rates of Australia and the more populous countries of the world for the latest available year are shown in International Vital Statistics at the end of this chapter.

Masculinity of live births

The masculinity of live births, i.e., the number of males born for every 100 female births, has remained fairly stable for Australia at about 105. But when the number of births for which masculinity is being calculated is small (for example, totals for smaller States) considerable variation is shown. The averages for the ten years 1951–60 were as follows: New South Wales, 105.38; Victoria, 105.50; Queensland, 105.80; South Australia, 104.89; Western Australia, 105.25; Tasmania, 104.96; Northern Territory, 107.16; Australian Capital Territory, 108.77; Australia, 105.43. The following table shows the figures for Australia for each ten-year period from 1901 to 1960 and for each of the years 1967 to 1969.

MASCULINITY(a) OF LIVE BIRTHS REGISTERED: AUSTRALIA, 1901 TO 1969

	1901–10	1911–20	1921–30	1931–40	1941–50	1951–60	1967	1968	1969
Total births	105.22	105.27	105.55	105.12	105.38	105.43	105.43	105.41	105.22
Ex-nuptial births	104.08	105.25	105.16	105.36	105.34	103.99	106.16	104.21	

(a) Number of males born for every 100 female births. Excludes particulars of full-blood Aborigines before 1967.

Fertility rates

The principal demographic factors affecting the level of crude birth rates are the proportion of women of child-bearing age in the population and the proportion of such women who are married. These factors may vary considerably at different periods and for different countries, and a population with a high proportion of married women of child-bearing age will have a higher crude birth rate than one with a low proportion, although the fertilities of the two populations may be identical. In order to compare fertilities, births are sometimes related to the number of women of child-bearing age or, alternatively, nuptial births are related to the number of married women of child-bearing age. Thus births are related to potential mothers, giving the fertility rate.

The following table sets out for certain periods, commencing with 1880–82, the number of births per thousand of mean population, the number of births per thousand women of child-bearing age and the number of nuptial births per thousand married women of child-bearing age. For purposes of this table the child-bearing age has been taken to be fifteen to forty-four years inclusive, but births to mothers who were stated to be under fifteen or over forty-four years have been included in the compilations.

CRUDE BIRTH RATES AND FERTILITY RATES: AUSTRALIA, 1880-82 TO 1965-67(a)

Period	Average annual rates			Index Nos (Base: 1880–82 = 100)		
	Fertility rates			Fertility rates		
	Crude birth rate(b)	Births per 1,000 women aged 15–44 years	Nuptial births per 1,000 married women aged 15–44 years	Crude birth rate(b)	Births per 1,000 women aged 15–44 years	Nuptial births per 1,000 married women aged 15–44 years
1880–82	35.3	170	321	100	100	100
1890–92	34.5	159	332	98	94	103
1900–02	27.2	117	235	77	69	73
1910–12	27.2	117	236	77	69	74
1920–22	25.0	107	197	71	63	61
1932–34	16.7	71	131	47	42	41
1946–48	23.6	104	160	67	61	50
1953–55	22.7	109	149	64	64	46
1960–62	22.5	112	154	64	66	48
1965–67	19.5	95	132	55	56	41

(a) Excludes particulars of full-blood Aborigines before 1965–67. (b) Number of births per 1,000 of mean population.

The table above shows how increasing proportions both of women of child-bearing age and of married women of child-bearing age inflate the crude birth rate. Thus, while the nuptial birth rate for married women increased by only 22 per cent over the period 1932-34 to 1946-48, the crude birth rate rose by 41 per cent owing principally to the greatly increased number of marriages during that period.

Age-specific birth rates

So long as customary ages at marriage do not change drastically the main demographic factor affecting the number of births is the age composition of the potential mothers in the population. Within the child-bearing group the fertility of women of different ages varies considerably, and a clearer view of the fertility of the population can be obtained from an examination of what are known as its age-specific birth rates, that is the number of births to women of specified ages per thousand women of those particular ages.

Age-specific birth rates are more commonly expressed in age groups than in single ages. In the following table such rates are shown in five-year age groups for Australia for the period 1941 to 1968. A graph on the following page shows the age-specific birth rates for each year during the period 1921 to 1968.

AGE-SPECIFIC BIRTH RATES(a): AUSTRALIA, 1941 TO 1968

Age group (years)	1941	1946	1951	1956	1961	1966	1967	1968
15-19 . . .	24.27	26.13	38.62	42.99	47.35	48.89	48.37	48.88
20-24 . . .	121.02	151.07	177.23	210.87	225.81	173.07	170.76	173.64
25-29 . . .	143.46	183.18	185.32	203.04	221.21	183.88	184.97	190.80
30-34 . . .	104.94	131.72	123.10	123.52	131.11	105.12	102.77	103.30
35-39 . . .	57.82	78.29	65.03	64.20	63.38	50.62	47.85	46.74
40-44 . . .	19.61	24.57	21.02	19.74	19.17	14.16	13.49	12.89
45-49 . . .	1.67	2.10	1.61	1.58	1.41	1.04	1.09	1.05

(a) Number of births per 1,000 of women in each age group. Excludes particulars of full-blood Aborigines before 1967.

Gross and net reproduction rates for females

A single measure of reproduction, known as the gross reproduction rate, is obtained by adding together the specific fertility rates for each age in the child-bearing group. This measure indicates the number of female children who would be born on an average to women living right through the child-bearing period, if the conditions on which the rate is based continue. The rate is unaffected by the age composition of the potential mothers, and consequently it shows more clearly than the crude birth rate the reproductive propensity of the population. It is, however, an imperfect measure of reproduction because it does not take into account the females who fail to live from birth to the end of the reproductive period. A more accurate measure of this nature is obtained by multiplying the specific fertility rates by the number of females in the corresponding age group of the stationary or life table population and summing the products. Allowance is thus made for the effect of mortality and the result is known as the net reproduction rate. The net reproduction rate indicates the average number of female children who would be born to women during their lifetime if they were subject at each age to the fertility and mortality rates on which the calculation is based. A constant net reproduction rate of unity indicates that the population will ultimately become stationary. If it continues greater than unity, the population will ultimately increase; if less than unity it will ultimately decrease. The following table should be read in the light of the comment which follows it and of the index of marriage fertility, page 169.

GROSS AND NET REPRODUCTION RATES(a): AUSTRALIA, 1881 TO 1968

Year	Gross reproduction rate	Net reproduction rate	Year	Gross reproduction rate	Net reproduction rate
1881(b)	2.65	(c)1.88	1951.	1.486	(h)1.428
1891(b)	2.30	(c)1.73	1954.	1.559	(i)1.499
1901(b)	1.74	(d)1.39	1961.	1.728	(j)1.672
1911.	1.693	(e)1.395	1964.	1.529	(j)1.480
1921.	1.516	(f)1.317	1965.	1.447	(j)1.400
1931.	1.144	(g)1.043	1966.	1.400	(j)1.355
1941.	1.152	(g)1.092	1967.	1.387	(j)1.342
1947.	1.494	(h)1.416	1968.	1.406	(j)1.360

(a) Excludes particulars of full-blood Aborigines before 1967. (b) Approximate only. (c) 1881-1890 mortality experience used. (d) 1891-1900 mortality experience used. (e) 1901-1910 mortality experience used. (f) 1920-1922 mortality experience used. (g) 1932-1934 mortality experience used. (h) 1946-1948 mortality experience used. (i) 1953-1955 mortality experience used. (j) 1960-1962 mortality experience used.

BIRTH RATES, BY AGE OF MOTHER: AUSTRALIA

1921 TO 1968
(NUMBER OF BIRTHS PER 1,000 OF FEMALE POPULATION IN EACH AGE GROUP)

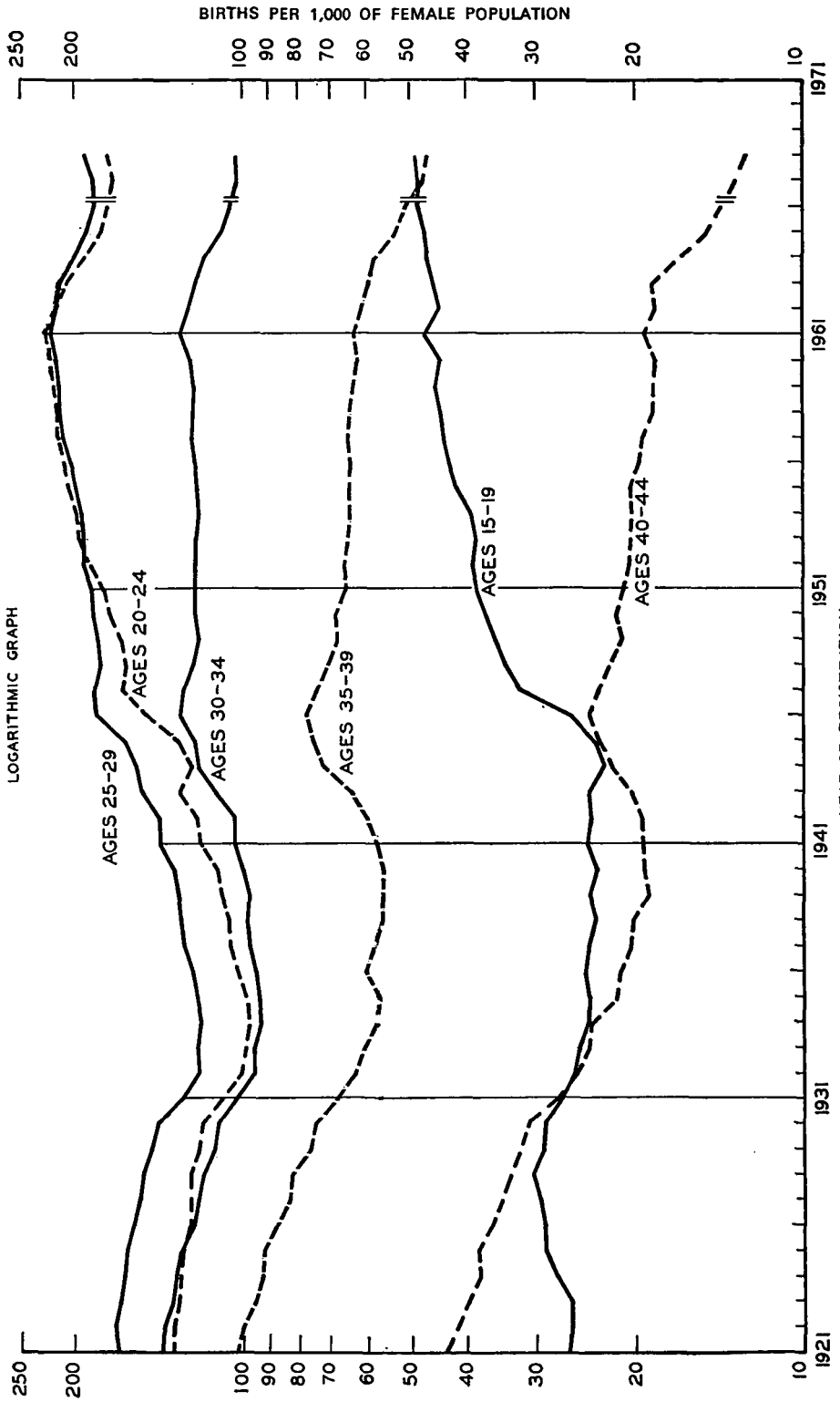


PLATE 20

Note. (1) The vertical scale is logarithmic, and the curves rise and fall according to the rate of increase and decrease; actual numbers are indicated by the scale.
(2) There is a break in continuity between 1966 and 1967. From 1967 the figures include Aborigines. Prior to 1967 the figures include Aborigines identified as those of full-blood Aborigines were excluded.

It is not strictly correct to assume, as in the calculations of the rates above, that a particular age-specific fertility rate can be applied to a hypothetical group of women reaching that age, without taking into account previous fertility and marriage experience. Reproduction rates are therefore unreliable when birth and marriage rates have been changing. The indexes of marriage fertility shown on the next page are also of doubtful reliability in similar circumstances.

In the following table a comparison is given of the gross and net reproduction rates recorded for various countries in the period 1954 to 1968. These represent the latest available international comparisons. The registration of vital events has not been fully established in many countries and consequently details for the calculation of reproduction rates for those countries are not available. In order that the table should be as representative as possible some countries have been included even though the gross reproduction rate is the only figure available.

GROSS AND NET REPRODUCTION RATES: VARIOUS COUNTRIES

Country	Period	Reproduction rate		Country	Period	Reproduction rate	
		Gross	Net			Gross	Net
Venezuela	1963	3.04	2.69	Norway	1965	1.41	1.37
Mauritius	1966	2.70	2.34	France	1966	1.35	1.32
Malaya	1960	2.9	..	Australia	1968	1.41	1.36
Ceylon	1961	2.5	..	England and Wales	1966	1.33	1.29
Thailand	1954	2.26	1.70	Belgium	1965	1.33	1.28
Chile	1964	2.16	1.83	Yugoslavia	1965	1.32	..
Ireland, Republic of	1966	1.86	1.81	Czechoslovakia	1964	1.22	1.17
New Zealand	1965	1.62	1.67	Germany—			
Canada	1966	1.37	1.33	Federal Rep.	1965	1.22	1.17
United States of				Democratic Rep.	1965	1.22	1.16
America	1966	1.33	1.29	Sweden	1966	1.15	1.13
Netherlands	1965	1.48	1.43	Switzerland	1965	1.23	1.19
Portugal	1964	1.52	1.35	Japan	1965	1.04	1.01
Scotland	1966	1.40	1.35	Hungary	1966	0.91	0.86

In comparing the reproduction rates of the countries shown allowance should be made for any differences in years, as the rates for any one country from year to year are affected by variations in the incidence of marriage, as well as the stationary or life table population used.

Fertility of marriages

More satisfactory estimates of the fertility of marriages may be made by relating nuptial births in each year to the marriages from which they could have resulted. Births to women of a certain number of years duration of marriage are related to the number of marriages taking place that number of years previously and the resulting rates are added to give a total for all durations. The table below sets out this index of current fertility per marriage in respect of births in the individual years shown.

FERTILITY OF MARRIAGES(a): AUSTRALIA, 1957 TO 1968

Year	Nuptial births per marriage	Year	Nuptial births per marriage	Year	Nuptial births per marriage
1957	2.69	1961	2.84	1965	2.42
1958	2.69	1962	2.78	1966	2.32
1959	2.73	1963	2.72	1967	2.31
1960	2.76	1964	2.58	1968	2.09

(a) Excludes particulars of full-blood Aborigines before 1967. For 1967, births of full-blood Aborigines resulting from tribal marriages have also been excluded, as particulars of tribal marriages are not available.

See text at top of this page.

The figure for a particular year gives the estimated number of children which a marriage would produce according to the fertility conditions of that year.

Births are omitted from the calculation if the marriage did not take place in Australia. Births which occur overseas to Australian marriages cannot be included and hence some understatement is present. Furthermore the results do not take account of the previous reproductive history of a marriage or of age at marriage.

Ex-nuptial live births

The variations in the proportions of ex-nuptial live births as between the individual States and Territories for 1968 and for Australia at intervals from 1901 to 1968 are shown in the following tables.

**EX-NUPTIAL LIVE BIRTHS
NUMBER AND PROPORTION, STATES AND TERRITORIES, 1968**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Number	6,622	4,166	3,756	1,558	2,014	657	312	86	19,171
Proportion of total births %	8.11	5.93	10.67	7.35	10.31	7.90	14.97	3.25	7.96

**EX-NUPTIAL LIVE BIRTHS: NUMBERS, PROPORTION AND RATES(a)
AUSTRALIA, 1901 TO 1968**

	<i>Annual average</i>						1964	1965	1966	1967	1968
	1901-10	1911-20	1921-30	1931-40	1941-50	1951-60					
Number	6,498	6,836	6,238	5,133	6,780	9,013	14,925	15,531	16,541	17,734	19,171
Rates(b)	1.60	1.39	1.04	0.76	0.90	0.97	1.34	1.37	1.43	1.50	1.59
Proportion of total births %	6.05	5.22	4.66	4.40	4.13	4.25	6.51	6.97	7.43	7.73	7.96

(a) Excludes particulars of full-blood Aborigines before 1967. (b) Number of ex-nuptial births per 1,000 of mean population.

A further measure of ex-nuptiality is obtained by calculating the number of ex-nuptial births per thousand of the single, widowed and divorced female population aged from 15 to 44 years. On this basis, the number of ex-nuptial births per 1,000 unmarried women of ages 15 to 44 is as follows: 1880-82, 14.49; 1890-92, 15.93; 1900-02, 13.30; 1910-12, 12.53; 1920-22, 10.50; 1932-34, 6.91; 1946-48, 11.45; 1953-55, 14.45; 1960-62, 18.49; and 1965-67, 20.96. Particulars of full-blood Aborigines are excluded throughout. Ex-nuptial births to married women, which are not recorded separately, are included in these figures and it is not possible to determine to what extent they influence the trend shown.

Legitimations

Under the provisions of the Commonwealth *Marriage Act* 1961-1966, which came into operation on 1 September 1963, a child whose parents were not married to each other at the time of its birth becomes legitimised on the subsequent marriage of its parents. The legitimisation takes place whether or not there was a legal impediment to the marriage of the parents at the time of the child's birth and whether or not the child was still living at the time of the marriage, or in the case of a child born before 1 September 1963, at that date. Prior to the introduction of this Act, legitimations took place under Acts passed in the several States to legitimise children born before the marriage of their parents, provided that no legal impediment to the marriage existed at the time of birth. On registration in accordance with the provisions of the Legitimation Acts, any child who came within the scope of their purposes, born before or after the passing thereof, was deemed to be legitimate from birth by the post-natal union of its parents and entitled to the status of offspring born in wedlock. The number of children legitimised in Australia during 1968 was 3,167.

Multiple births

Because the current Australian birth statistics are based only on those confinements which resulted in a live-born child, the number of confinements for multiple births for Australia is understated—firstly, because in cases where all children of a multiple birth are stillborn the confinement is excluded, and secondly, because some cases of multiple births in which only one child was live born are registered as single births.

Number of confinements

The following table shows the number of confinements resulting in one or more live births and the number of live births. The figures exclude cases where the births were of stillborn children only.

LIVE BIRTHS AND CONFINEMENTS: STATES AND TERRITORIES, 1968

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
LIVE BIRTHS									
Single births.	80,012	68,771	34,449	20,823	19,137	8,137	2,035	2,593	235,957
Twins . . .	1,661	1,442	722	375	398	177	42	50	4,867
Triplets . . .	19	15	14	9	6	3	3	..	69
Quadruplets . . .	4	..	..	..	..	..	4	..	8
Quintuplets . . .	..	..	5	..	..	..	..	..	5
Males . . .	41,897	36,145	17,876	10,949	10,070	4,288	1,050	1,352	123,627
Females . . .	39,799	34,083	17,314	10,258	9,471	4,029	1,034	1,291	117,279
Total . . .	81,696	70,228	35,190	21,207	19,541	8,317	2,084	2,643	240,906

STILLBIRTHS ASSOCIATED WITH MULTIPLE BIRTHS INCLUDED ABOVE

Twins . . .	31	18	16	1	8	1	2	..	77
Triplets . . .	2	..	1	..	..	..	..	..	3

CONFINEMENTS RESULTING IN BIRTHS SHOWN ABOVE

Nuptial . . .	74,309	65,383	31,102	19,465	17,348	7,576	1,750	2,532	219,465
Ex-nuptial . . .	6,557	4,123	3,722	1,549	1,994	651	309	86	18,991
Total . . .	80,866	69,506	34,824	21,014	19,342	8,227	2,059	2,618	238,456

NOTE. Owing to the registration procedure adopted in some States, it is possible that in some cases where one child only of a multiple pregnancy was liveborn, the confinement has been treated as a single birth. However, the numbers of multiple births are not significantly affected. See also page 173.

Multiple births recorded on this basis during 1968 comprised 2,472 cases of twins, 24 cases of triplets, two cases of quadruplets and one case of quintuplets, the resulting number of live born and stillborn children respectively 4,867 and 77 for twins, 69 and 3 for triplets, 8 live born children for quadruplets and 5 liveborn children for quintuplets. This represents an average of 10.37 recorded cases of twins and 0.10 recorded cases of triplets per 1,000 confinements or, alternatively, mothers of twins represented 1 in every 96 mothers and mothers of triplets 1 in every 9,936. Total cases of multiple births represented 10.47 per 1,000 confinements or 1 in every 95 mothers. The proportion of mothers of multiple births to total mothers does not vary greatly from year to year.

Confinements—ages of parents

The relative ages of the parents of children whose births were registered in 1968 have been tabulated separately for male and female births, multiple births being distinguished from single births. For confinements and for multiple births, the relative ages of parents are shown in *Demography*, Bulletin No. 85. In the following table the relative ages of parents are shown in five-year groups.

CONFINEMENTS, BY RELATIVE AGES OF PARENTS: AUSTRALIA, 1968

Age of father (years)	Age of mother (years)									Total
	Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45 and over	Not stated	
Under 20	3	3,134	627	14	1	..	..	..	..	3,779
20-24	1	12,148	30,673	2,535	120	17	3	..	1	45,498
25-29	4	2,289	35,798	33,192	2,670	219	33	1	3	74,209
30-34	1	424	7,980	25,378	15,131	1,458	118	3	4	50,497
35-39	..	86	1,340	6,591	11,955	6,775	600	16	..	27,606
40-44	..	18	340	1,480	3,433	5,083	2,042	70	..	12,466
45-49	2	10	93	301	671	1,384	1,172	139	..	3,772
50-54	1	5	41	106	163	311	357	77	..	1,061
55-59	..	2	26	33	68	112	85	24	..	350
60-64	..	1	10	6	21	35	29	8	..	110
65 and over(a)	..	3	28	21	18	22	12	7	6	117
Total nuptial	12	18,120	77,199	69,657	34,251	15,416	4,451	345	14	219,465
Total ex-nuptial	121	7,169	6,157	2,700	1,473	954	377	29	11	18,991
Total	133	25,289	83,356	72,357	35,724	16,370	4,828	374	25	238,456

(a) Includes sixty-five confinements in which the age of the father was not stated.

Confinements—countries of birth of parents

The following table shows the countries of birth of parents of children whose births from nuptial confinements were registered during 1968.

NUPTIAL CONFINEMENTS, BY RELATIVE COUNTRIES OF BIRTH OF PARENTS
AUSTRALIA, 1968

Country of birth of father	Country of birth of mother									Total fathers		
	Australia	New Zealand	United Kingdom and Ireland	Germany	Greece	Italy	Malta	Netherlands	Yugoslavia		Other European	Other and unspecified
Australia	145,787	657	6,821	1,073	116	378	288	1,084	82	659	1,188	158,133
New Zealand	718	322	96	11	1	3	..	6	..	7	23	1,187
United Kingdom and Ireland	8,294	130	8,109	146	6	28	56	137	11	149	332	17,398
Germany	1,504	24	248	947	12	23	23	73	31	139	81	3,105
Greece	375	..	29	14	7,763	16	7	13	16	16	131	8,380
Italy	1,928	14	174	99	42	9,072	49	62	67	135	118	11,760
Malta	552	2	103	23	2	14	1,757	28	2	12	30	2,525
Netherlands	1,654	22	223	66	4	12	18	1,488	5	47	71	3,610
Yugoslavia	612	10	90	157	90	114	21	34	2,070	96	31	3,325
Other European	1,689	24	284	371	63	49	13	79	98	1,796	172	4,638
Other and unspecified	1,819	38	339	69	189	63	25	81	16	105	2,660	5,404
Total mothers	164,932	1,243	16,516	2,976	8,288	9,772	2,257	3,085	2,398	3,161	4,837	219,465

Confinements—age, duration of marriage and issue of mothers

The total number of nuptial confinements resulting in live births in 1968 was 219,465, comprising 217,155 single births, 2,287 cases of twins, 20 cases of triplets, two cases of quadruplets, and one case of quintuplets. The following tables relating to previous issue exclude the issue of former marriages and stillborn children. On the other hand, they include in some States children by the same father who were born to the mother prior to the marriage. Children born at the present confinement are included in the total issue shown.

The following table shows that in 1968 the duration of marriage of mothers of nuptial children ranged from less than one year to over 25 years and that the average family increased fairly regularly with the duration of marriage. The average issue of married mothers who bore children in 1968 was 2.34, compared with 2.38 in 1967, 2.42 in 1966, 2.48 in 1965, and 2.56 in 1964.

NUPTIAL CONFINEMENTS BY DURATION OF MARRIAGE, AND AVERAGE ISSUE OF MOTHERS: AUSTRALIA, 1968

<i>Duration of marriage</i>	<i>Total nuptial confinements</i>	<i>Average issue of mother</i>	<i>Duration of marriage</i>	<i>Total nuptial confinements</i>	<i>Average issue of mother</i>
Under 1 year	32,299	1.03	15 years	2,055	5.05
1 year	25,589	1.25	16 "	1,791	5.26
2 years	28,091	1.59	17 "	1,409	5.50
3 "	25,622	1.89	18 "	1,096	5.78
4 "	20,879	2.19	19 "	843	6.07
5 "	16,849	2.52	20 "	617	6.22
6 "	13,328	2.82	21 "	458	6.24
7 "	11,051	3.11	22 "	305	6.83
8 "	8,853	3.38	23 "	177	7.20
9 "	7,048	3.62	24 "	112	7.22
10 "	5,622	3.84	25 years and over	133	7.90
11 "	4,758	4.09	Not stated	571	3.83
12 "	4,133	4.35			
13 "	3,243	4.55			
14 "	2,533	4.85			
			Total	219,465	2.34

A classification of mothers by age and previous issue is given for 1968 in the following table.

**NUPTIAL CONFINEMENTS, BY AGE OF MOTHER AND PREVIOUS ISSUE
AUSTRALIA, 1968**

<i>Previous issue</i>	<i>Age of mother (years)</i>						<i>45 and over</i>	<i>Total married mothers</i>
	<i>Under 20</i>	<i>20-24</i>	<i>25-29</i>	<i>30-34</i>	<i>35-39</i>	<i>40-44</i>		
0	14,732	40,980	18,820	4,700	1,622	445	(a)42	81,341
1	3,083	25,800	23,749	7,623	2,352	468	(b)25	63,100
2	291	7,974	16,440	9,017	3,016	646	(c)39	37,423
3	23	1,976	6,910	6,457	2,820	667	(c)45	18,898
4	3	382	2,456	3,266	2,057	639	39	8,842
5 . . . . .	..	68	849	1,676	1,399	536	40	4,568
6 . . . . .	..	17	285	816	832	330	(c)34	2,314
7 . . . . .	..	1	103	367	563	247	(c)29	1,310
8 . . . . .	..	1	33	174	306	183	20	717
9 . . . . .	..	..	10	97	218	108	21	454
10 and over . . . . .	..	..	2	58	231	182	(d)25	(e)498
Total married mothers	18,132	77,199	69,657	34,251	15,416	4,451	(f)359	219,465

(a) Includes three confinements for which the age of mother was not stated. (b) Includes five confinements for which the age of mother was not stated. (c) Includes one confinement for which age of mother was not stated. (d) Includes two confinements for which age of mother was not stated. (e) Includes two confinements for which the previous issue was not stated. (f) Includes fourteen confinements for which the age of mother was not stated.

Multiple births—previous issue of mothers

Of married mothers of twins in 1968, 681 had no previous issue either living or dead, 651 had one child previously, 417 had two previous issue, 241 three, 123 four, 83 five, 28 six, 27 seven, 16 eight, 8 nine, 6 ten, 2 eleven, 2 twelve, and 2 thirteen. Of the 20 cases of nuptial triplets, two cases of quadruplets and one case of quintuplets registered during 1968, 4 mothers had no previous issue, 7 had one, 6 had two, 2 had three, 2 had four, 1 had five, and 1 had six previous issue.

Nuptial first births

The following table shows the number of nuptial first births classified by grouped ages of mothers and grouped durations of marriage of mothers.

**NUPTIAL FIRST BIRTHS, BY AGE OF MOTHER AND DURATION OF MARRIAGE
AUSTRALIA, 1968**

Duration of marriage	Age of mother (years)							Not stated	Total
	Under 20	20-24	25-29	30-34	35-39	40-44	45 and over		
Under 8 months	10,842	8,619	1,199	308	148	55	1	..	21,172
8 months	352	1,021	299	91	27	12	..	..	1,802
9 " "	488	2,035	616	174	71	15	..	..	3,399
10 " "	468	1,696	545	166	64	8	..	1	2,948
11 " "	387	1,428	451	119	47	7	..	..	2,439
<i>Total under 1 year</i>	<i>12,537</i>	<i>14,799</i>	<i>3,110</i>	<i>858</i>	<i>357</i>	<i>97</i>	<i>1</i>	<i>1</i>	<i>31,760</i>
1 year and under 2 years	1,792	12,489	3,809	1,046	347	82	9	..	19,574
2 years " " 3 "	294	8,269	3,498	604	179	66	3	..	12,914
3 " " " 4 "	41	3,735	3,154	403	122	43	5	..	7,503
4 " " " 5 "	7	1,186	2,305	327	86	17	2	..	3,930
5 " " " 10 "	..	476	2,869	1,061	265	48	6	..	4,725
10 " " " 15 "	..	1	65	370	176	35	2	..	649
15 years and over	..	..	2	21	84	55	11	..	173
Not stated	61	25	8	10	6	2	..	1	113
Total	14,732	40,980	18,820	4,700	1,622	445	39	3	81,341

The following table provides a comparison between the numbers of nuptial first births and subsequent births in periods since 1911 and shows also the proportion of first to total nuptial confinements.

**NUPTIAL FIRST BIRTHS AND SUBSEQUENT BIRTHS^(a)
AUSTRALIA, 1911 TO 1968**

Period	Nuptial confinements			Proportion of first to total nuptial confinements (per cent)
	First births	Other births	Total	
Annual average—				
1911-20	33,595	88,997	122,592	27.40
1921-30	38,120	88,086	126,206	30.20
1931-40	39,243	71,136	110,379	35.55
1941-50	58,818	96,994	155,812	37.75
1951-60	64,379	136,264	200,643	32.09
Annual total—				
1964	68,586	143,437	212,023	32.35
1965	70,197	134,941	205,138	34.22
1966	73,462	130,499	203,961	36.02
1967	76,127	133,302	209,429	36.35
1968	81,341	138,124	219,465	37.06

(a) Excludes particulars of full-blood Aborigines before 1967.

Stillbirths

Interstate comparisons of the figures and rates in the following tables are affected by the differences in the definitions of stillbirths adopted by the various States, and only the trends in the rates for the States should be compared. For various reasons, the registration of stillbirths is not as complete as for live births and deaths; particulars for the Territories and the smaller States are more affected by this than are those for the larger States. Stillbirth registration was not compulsory in Tasmania until 1967. The figures shown in the tables represent those stillbirths voluntarily registered during the year.

STILLBIRTHS(a): STATES AND TERRITORIES, 1936 TO 1968

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Annual average—									
1936-40	1,409	854	n.a.	(b)274	234	144	n.a.	5	n.a.
1941-45	1,478	966	(c)657	324	248	143	n.a.	9	cd3,825
1946-50	1,405	949	626	368	274	161	n.a.	12	(d)3,795
1951-55	1,239	849	581	290	271	139	8	16	3,393
1956-60	1,253	839	558	274	235	109	6	19	3,293
1961-65	1,104	794	468	264	194	87	17	18	2,946
Annual total—									
1964	1,003	771	402	252	170	69	13	15	2,695
1965	947	747	391	256	181	89	15	23	2,649
1966	964	762	405	237	168	111	11	31	2,689
1967	863	797	372	211	188	83	(e)49	24	2,587
1968	806	734	365	217	183	79	(f)39	26	2,449

(a) Excludes particulars of full-blood Aborigines before 1967. (b) Three years 1938-40. (c) Figures for Queensland are not available for 1941. (d) Excludes Northern Territory. (e) Includes 25 foetal deaths occurring in remote localities for which the period of gestation was not stated. The Registration Ordinance requires registration of any foetal death of at least twenty weeks gestation. (f) Includes 13 foetal deaths.

The incidence of stillbirths in each State and Territory as measured by the rate per 1,000 of all births, both live and still, is as follows.

PROPORTION OF STILLBIRTHS(a)(b): STATES AND TERRITORIES, 1936 TO 1968

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Average annual rate—									
1936-40	28.7	27.4	n.a.	(c)27.5	25.7	28.7	n.a.	22.2	n.a.
1941-45	25.5	24.8	(d)26.8	25.2	23.3	25.7	n.a.	22.9	de25.25
1946-50	20.0	19.6	21.9	22.1	20.5	22.3	n.a.	16.3	(e)20.46
1951-55	16.5	15.5	18.4	15.8	17.0	17.5	17.2	17.1	16.57
1956-60	15.5	13.5	16.1	13.5	13.7	12.6	8.6	14.3	14.59
1961-65	13.1	12.0	13.1	12.2	11.4	10.2	18.4	9.3	12.49
Annual rate—									
1964	12.3	11.7	11.4	11.9	10.1	8.3	(f)	(f)	11.62
1965	12.0	11.6	11.5	12.1	11.1	11.7	(f)	10.5	11.75
1966	12.2	11.8	12.2	11.5	9.8	14.8	(f)	13.2	11.93
1967	10.8	12.0	10.6	10.2	10.3	10.9	24.9	9.9	11.16
1968	9.8	10.3	10.3	10.1	9.3	9.4	18.4	9.7	10.11

(a) Numbers of stillbirths per 1,000 of all births (live and still). (b) Excludes particulars of full-blood Aborigines before 1967. (c) Three years 1938-40. (d) Figures for Queensland are not available for 1941. (e) Excludes Northern Territory. (f) Less than twenty events; rates not calculated.

NOTE. Because of the smallness of the numbers of stillbirths occurring in the Australian Capital Territory and the Northern Territory the rates for these Territories (i.e. the number per thousand live births and stillbirths) are subject to considerable fluctuation.

Mortality

Number of deaths

The following tables show the number of deaths, male and female, registered in each State and Territory during 1969. Stillbirths, although registered as both births and deaths in some States are excluded from the death statistics published herein.

DEATHS, SEXES: STATES AND TERRITORIES, 1969

Sex	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Males	22,607	15,860	9,184	5,207	4,313	1,876	295	344	59,686
Females	18,058	13,116	6,602	4,130	3,037	1,433	190	244	46,810
Persons	40,665	28,976	15,786	9,337	7,350	3,309	485	588	106,496

A summary of the number of deaths in each State and Territory from 1941 to 1969 is given in the following table. Annual averages for each five-year period from 1861 to 1950 were published in Year Book No. 39, page 597.

DEATHS(a): STATES AND TERRITORIES, 1941 TO 1969

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Annual average—									
1941-45(b)	27,807	20,964	9,715	6,303	4,724	2,488	64	71	72,136
1946-50(b)	29,552	21,827	10,357	6,507	4,802	2,459	76	103	75,683
1951-55	32,135	22,900	11,187	7,182	5,263	2,576	109	131	81,483
1956-60	34,002	24,254	12,008	7,732	5,523	2,668	117	184	86,488
1961-65	37,514	26,569	13,570	8,388	6,043	2,939	152	290	95,465
Annual total—									
1965	38,949	28,031	14,114	8,788	6,274	3,043	161	355	99,715
1966	40,546	28,673	14,861	9,323	6,772	3,159	154	441	103,929
1967	39,613	28,373	14,736	9,071	6,779	3,228	527	376	102,703
1968	41,803	29,967	16,078	9,916	7,468	3,284	543	488	109,547
1969	40,665	28,976	15,786	9,337	7,350	3,309	485	588	106,496

(a) Excludes particulars of full-blood Aborigines before 1967. (b) Excludes deaths of defence personnel and of internees and prisoners of war from overseas for the period September 1939 to June 1947.

Crude death rates

The commonest method of measuring the mortality rate is to relate the number of deaths for a given period to the mean population for that period, thus obtaining the crude death rate. This rate for a given period measures the number per thousand of population by which the population is depleted through deaths during that period.

CRUDE DEATH RATES(a): STATES AND TERRITORIES, 1941 TO 1969

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Average annual rate—									
1941-45(b)	9.73	10.63	9.24	10.26	9.86	10.21	6.4	5.0	9.96
1946-50(b)	9.70	10.37	9.13	9.76	9.23	9.30	6.3	5.3	9.74
1951-55	9.49	9.55	8.71	9.25	8.49	8.48	6.9	4.58	9.25
1956-60	9.20	8.91	8.36	8.62	7.90	7.97	5.32	4.31	8.78
1961-65	9.27	8.73	8.63	8.28	7.78	8.15	4.95	3.94	8.75
Annual rate—									
1965	9.33	8.86	8.64	8.26	7.70	8.27	4.6	4.0	8.79
1966	9.57	8.90	8.93	8.54	8.09	8.50	4.1	4.6	8.99
1967	9.19	8.66	8.65	8.16	7.73	8.57	8.8	3.6	8.69
1968	9.53	9.01	9.27	8.81	8.21	8.59	8.4	4.3	9.10
1969—									
Males	10.05	9.33	10.25	9.05	8.95	9.57	6.0	5.4	9.63
Females	8.09	7.77	7.56	7.25	6.53	7.44	6.1	4.1	7.66
Persons	9.08	8.55	8.92	8.15	7.76	8.51	7.1	4.8	8.65

(a) Number of deaths per 1,000 of mean population. Excludes particulars of full-blood Aborigines before 1967. (b) Excludes deaths of defence personnel, etc., from September 1939 to June 1947.

NOTE. Crude death rates (i.e. the number of deaths per thousand of mean population) are affected by the particular age and sex composition of the population. In the Australian Capital Territory and the Northern Territory the population at risk in the higher ages is lower proportionately than in other States, largely as a result of the rapid increases of the population in the lower ages. In some instances rates are based on too few deaths to warrant calculation to the second decimal place.

A graph showing the crude death rate for each year from 1870 to 1969 will be found on page 165.

Standardised death rates

The death rates quoted on page 176 are crude rates, i.e. they simply show the number of deaths per thousand of mean population without taking into consideration differences in the sex and age composition of the population. Other conditions being equal, however, the crude death rate of a community will be low if it contains a large proportion of young people (not infants), and conversely it will be relatively high if the population includes a large proportion of elderly people. The foregoing table of crude death rates, therefore, does not indicate comparative incidence of mortality either as between States in the same year or in any one State over a period of years. In order to obtain a comparison of mortality rates on a uniform basis as far as sex and age constitution are concerned, 'standardised' death rates may be computed. For a description of the method used, and a table showing standardised death rates as compared with crude death rates as at Census dates from 1921 to 1966 see Year Book No. 55, page 184.

True death rates

The main objections to standardised death rates are that the choice of a standard population is arbitrary and that the standardised rates have little value except for comparative purposes, and even then variation of the standard population may make appreciable differences. However, a correct measurement of the mortality of the population can be obtained from life tables. A life table represents the number of survivors at each age from a group of newly-born children who are subject to given mortality conditions, and from such a table the complete expectation of life at birth can be calculated. The reciprocal of this figure is known as the true death rate, since, if the complete expectation of life of a person at birth is fifty years, say, then each person will on the average die fifty years after birth, so that in a stationary population one person in fifty or twenty per thousand, will die each year. The true death rate for a given period is unaffected by the particular age distribution of that period and is determined solely by the mortality experience of the period as manifested in the rate of survival from each year of age to the next. The table below sets out true death rates for the periods covered by Australian life tables together with estimates for recent years based on abridged life tables calculated by the Commonwealth Statistician. These estimates are subject to revision when the Australian life tables 1965-1967 become available.

TRUE DEATH RATES: AUSTRALIA
1881-90 TO 1967(a)

Period	True death rate	
	Males(b)	Females(c)
1881-90 . . .	21.19	19.67
1891-1900 . . .	19.58	18.26
1901-10 . . .	18.12	17.00
1920-22 . . .	16.91	15.80
1932-34 . . .	15.75	14.89
1946-48 . . .	15.14	14.16
1953-55 . . .	14.89	13.75
1960-62 . . .	14.72	13.48
1964(d) . . .	14.84	13.55
1965(d) . . .	14.77	13.48
1966(d) . . .	14.80	13.51
1967(d) . . .	14.76	13.43
1968(d) . . .	14.83	13.50

(a) Excludes particulars of full-blood Aborigines before 1967. (b) Number of deaths per 1,000 males in stationary population. (c) Number of deaths per 1,000 females in stationary population. (d) Based on abridged life tables calculated by the Commonwealth Statistician. These tables are based on estimates of population by age, adjusted to take into account the 1966 census.

The crude death rates and the true death rates of Australia and the more populous countries of the world for the latest available year are shown in the table in International Vital Statistics at the end of this chapter.

Australian Life Tables

Life Tables prior to 1961. It has been the practice at each census from 1911 onwards to prepare Life Tables representative of the mortality experience of Australia. The mortality of the Australian population for the thirty years from 1881 to 1910 inclusive was investigated in 1911 by the Commonwealth Statistician. Tables were compiled for each State and for Australia as a whole in respect of each sex for each of the decennial periods 1881-90, 1891-1900 and 1901-10. These compilations furnished a comprehensive view of Australian mortality in respect of sex, time, and geographical distribution, and practically superseded all Life Tables prepared in Australia prior to 1911. In addition, mortality tables based on the experience for the whole of Australia for the ten years 1901-10 were prepared and published. At the census of 1921 Life Tables were prepared by the Commonwealth Statistician from the recorded census population and the deaths in the three years 1920 to 1922. In 1933, 1947 and 1954, Life Tables based on the census population and the deaths in the years 1932 to 1934, 1946 to 1948 and 1953 to 1955 respectively were compiled by the Commonwealth Actuary.

Life Tables of census of 1961. On the occasion of the 1961 Census the eighth Life Tables in the series were compiled by the Commonwealth Actuary. These were based on the population recorded at the census, adjusted to allow for variation in the net movement into Australia over the years 1960 to 1962, and deaths during these years. Full particulars of the data used, the method of construction and the tabulation of these Life Tables will be found in the report of the Commonwealth Actuary, which was published by the Commonwealth Statistician in 1966. This report also appears in Volume VIII of the detailed tables of the 1961 census. The main features of the tables, including comparisons with earlier Australian tables, are set out in the Year Book No. 55, pages 186 and 187. The table most frequently used by the general reader is that relating to expectation of life, and is published below.

COMPLETE EXPECTATION OF LIFE (e_x^0) AT SELECTED AGES

Age (x)	Males				Females			
	1901-10	1946-48	1953-55	1960-62	1901-10	1946-48	1953-55	1960-62
0	55.20	66.07	67.14	67.92	58.84	70.63	72.75	74.18
10	53.53	59.04	59.53	59.93	56.38	63.11	64.78	65.92
20	44.74	49.64	50.10	50.40	47.52	53.47	55.06	56.16
30	36.52	40.40	40.90	41.12	39.33	44.08	45.43	46.49
40	28.56	31.23	31.65	31.84	31.47	34.91	35.99	36.99
50	21.16	22.67	22.92	23.13	23.69	26.14	27.03	27.92
60	14.35	15.36	15.47	15.60	16.20	18.11	18.78	19.51
70	8.67	9.55	9.59	9.77	9.96	11.14	11.62	12.19
80	4.96	5.36	5.47	5.57	5.73	6.02	6.30	6.68

NOTE. e_x^0 = complete expectation of life at specified ages.

The progress towards lower mortality rates for both males and females has continued over the past sixty years or more. For example, the probability of a child born in 1961 dying in one year is less than one-quarter of the probability of death in one year attached to the child who was born sixty years ago. Even at advanced ages, the reductions which have occurred in mortality rates as compared with sixty years ago are very substantial. With the exception of males of ages forty to forty-seven and ages sixty-two to sixty-six lower mortality rates were experienced by males and females during 1960 to 1962 than for the period 1953 to 1955.

There is evidence that female longevity continues to increase at a faster rate than male longevity. It would seem that the risks associated with child-bearing for females are out-weighed by the greater accident propensity of younger males and the more rapid deterioration of health of older males.

An improvement has occurred in male mortality from accidents of all types, although there is some indication that for females the accident rates have deteriorated slightly. The rates for females are, nevertheless, still substantially below the corresponding rates for males.

Age distribution at death

Age at death is recorded for statistical purposes in days for the first week of life, in weeks for the first four weeks, in months for the first year and in completed years of life thereafter. These ages are usually combined in groups for publication, the most common being weeks for the first four weeks, months or groups of months for the first year, single years of age for the first five years, and thereafter the five-year groups 5-9 years, 10-14 years, etc. A summary in this form for the year 1968 is given for Australia in the following table.

DEATHS, BY AGE AT DEATH AND SEX: AUSTRALIA, 1968

Age at death				Age at death			
	Males	Fe- males	Per- sons		Males	Fe- males	Per- sons
Under 1 week	1,650	1,168	2,818	5-9 years	290	216	506
1 week and under 2 weeks	89	57	146	10-14 "	291	142	433
2 weeks and under 3 weeks	31	39	70	15-19 "	797	293	1,090
3 weeks and under 4 weeks	33	39	72	20-24 "	909	277	1,186
<i>Total under 4 weeks</i>	<i>1,803</i>	<i>1,303</i>	<i>3,106</i>	25-29 "	584	234	818
4 weeks and under 3 months	240	168	408	30-34 "	592	341	933
3 months and under 6 months	220	174	394	35-39 "	907	544	1,451
6 months and under 12 months	189	186	375	40-44 "	1,512	892	2,404
<i>Total under 1 year</i>	<i>2,452</i>	<i>1,831</i>	<i>4,283</i>	45-49 "	2,267	1,322	3,589
1 year	168	155	323	50-54 "	3,397	1,831	5,228
2 years	119	95	214	55-59 "	5,020	2,485	7,505
3 "	85	72	157	60-64 "	6,565	3,209	9,774
4 "	75	64	139	65-69 "	7,464	4,404	11,868
<i>Total under 5 years</i>	<i>2,899</i>	<i>2,217</i>	<i>5,116</i>	70-74 "	7,895	6,026	13,921
				75-79 "	8,282	7,896	16,178
				80-84 "	6,452	7,643	14,095
				85 years and over	4,930	8,510	13,440
				Age not stated	8	4	12
				<i>Total all ages</i>	<i>61,061</i>	<i>48,486</i>	<i>109,547</i>

There are different mortality rates at various stages of life, and the actual number of deaths in any period is related to the numbers living at the respective stages. Changes in the number of deaths from one period to another are associated with changes in the rate of mortality in the various age groups and by the changed proportions of persons living in the different groups. The combined effect of various influences, i.e. the steady decline in the rate of mortality, the long term decline in the birth-rate, and the effects of past and present migration on the age distribution of the population, is shown in the following table, which shows the proportion of deaths in various age groups in ten-year periods from 1901 to 1960 and for the year 1968.

PROPORTION OF DEATHS IN EACH AGE GROUP: AUSTRALIA, 1901 TO 1968(a)

(Per cent)

Age at death (years)							1968		
	1901-10	1911-20	1921-30	1931-40	1941-50	1951-60	Males	Females	Persons
Under 1 year	20.51	16.66	13.09	7.40	6.79	5.59	4.02	3.78	3.91
1-4	6.45	6.09	4.51	2.56	1.71	1.33	0.73	0.80	0.76
5-14	3.71	3.47	3.00	2.29	1.34	1.04	0.95	0.74	0.86
15-24	6.22	5.10	4.33	3.61	2.09	1.71	2.79	1.18	2.08
25-34	7.31	7.40	5.92	4.49	2.87	2.30	1.93	1.19	1.60
35-44	8.39	8.02	7.72	6.25	4.52	4.00	3.96	2.96	3.52
45-54	9.29	10.34	9.99	10.34	9.15	8.29	9.28	6.50	8.05
55-64	9.74	12.12	14.82	15.11	16.67	15.81	18.97	11.74	15.77
65-74	13.39	13.51	17.85	22.53	23.09	25.47	25.15	21.51	23.54
75 and over	14.99	17.29	18.77	25.42	31.77	34.46	32.22	49.61	39.91
<i>Total</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>

(a) Excludes particulars of full-blood Aborigines before 1967.

A table showing these proportions for males and females separately for the period 1901 to 1950 was published in Year Book No. 39, page 614.

Age-specific death rates

In previous issues of the Year Book, average annual age-specific death rates, i.e. the average number of deaths per 1,000 of population in each age group, were given for each State and Australia for the periods 1932-1934, 1946-1948, 1953-1955, 1960-1962, and 1965-1967 (see Year Books, No. 37, pp. 778-9, No. 39, pp. 615-6, No. 44, pp. 640-1, No. 52, p. 253, and No. 55, p. 189). These rates were based on the age distribution of the population at the relevant censuses.

Age-specific death rates for the year 1968 are shown in the following table.

AGE-SPECIFIC DEATH RATES^(a): STATES, 1968

Age group (years)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
MALES							
Under 1 ^(b)	20.7	16.1	23.0	18.1	23.4	17.7	19.8
1-4	0.9	0.8	1.1	0.9	1.2	1.2	0.9
5-9	0.5	0.4	0.4	0.4	0.7	0.5	0.5
10-14	0.5	0.5	0.6	0.5	0.5	0.4	0.5
15-19	1.4	1.3	1.8	1.2	1.5	2.4	1.5
20-24	1.9	1.6	1.9	1.4	2.1	2.0	1.8
25-29	1.4	1.2	1.4	1.2	1.9	2.1	1.4
30-34	1.4	1.4	1.9	1.1	2.3	2.4	1.6
35-39	2.6	2.0	2.7	2.1	2.1	2.0	2.4
40-44	3.9	3.4	4.3	3.6	3.2	3.6	3.7
45-49	6.6	5.6	6.5	5.8	5.2	6.6	6.1
50-54	10.9	10.4	11.1	9.4	9.7	9.3	10.5
55-59	18.2	16.5	17.6	16.5	16.6	15.4	17.3
60-64	29.6	28.4	28.4	28.4	26.4	26.0	28.6
65-69	46.2	44.4	40.7	45.2	43.1	44.9	44.5
70-74	68.4	68.1	60.7	69.8	67.6	63.1	67.2
75-79	104.6	107.4	99.0	102.5	99.2	114.3	104.0
80-84	160.8	170.9	140.7	152.4	154.4	176.8	159.3
85 and over	274.2	281.1	253.8	268.3	286.0	284.4	272.4
FEMALES							
Under 1 ^(b)	16.5	12.6	17.6	14.3	17.1	16.6	15.6
1-4	0.8	0.7	1.0	0.8	1.1	1.1	0.9
5-9	0.4	0.3	0.4	0.3	0.3	0.2	0.4
10-14	0.3	0.2	0.3	0.1	0.2	0.2	0.3
15-19	0.6	0.5	0.8	0.5	0.6	0.5	0.6
20-24	0.5	0.6	0.6	0.6	0.7	0.8	0.6
25-29	0.7	0.6	0.6	0.5	0.4	0.7	0.6
30-34	1.1	0.7	1.1	0.7	1.2	1.0	1.0
35-39	1.6	1.3	1.8	1.5	1.1	1.2	1.5
40-44	2.5	2.1	2.7	2.1	2.1	2.0	2.4
45-49	3.9	3.5	4.3	2.8	3.6	3.0	3.7
50-54	6.2	5.4	6.6	4.3	4.5	4.5	5.7
55-59	9.6	8.0	8.1	8.4	8.5	9.1	8.7
60-64	13.9	14.4	13.0	13.0	12.7	13.7	13.8
65-69	22.8	22.5	20.8	23.1	21.6	22.5	22.4
70-74	37.8	35.9	34.1	34.7	38.1	36.9	36.5
75-79	66.5	63.0	63.0	61.8	64.0	63.6	64.5
80-84	113.0	111.4	97.6	99.4	100.7	114.9	108.4
85 and over	229.3	228.3	222.8	212.7	218.5	171.3	223.9

(a) Number of deaths per 1,000 of population in each age group at 30 June 1968. Includes particulars of Aborigines.
 (b) Infant deaths per 1,000 live births registered.

AGE-SPECIFIC DEATH RATES(a): AUSTRALIA, 1910-12 TO 1968

Age group (years)	1910-12 (b)	1920-22 (b)	1932-34 (b)	1946-48 (b)	1953-55 (b)	1960-62 (b)	1965-67 (b)(c)	1968(d)
MALES								
Under 1(e)	79.2	70.1	46.0	31.7	25.2	22.4	20.3	19.8
1-4	7.4	7.1	4.1	2.0	1.7	1.2	1.0	0.9
5-9	2.3	2.0	1.5	0.9	0.7	0.5	0.4	0.5
10-14	1.7	1.6	1.2	0.8	0.6	0.5	0.5	0.5
15-19	2.5	2.3	1.8	1.4	1.5	1.2	1.3	1.5
20-24	3.6	3.1	2.4	1.7	1.8	1.6	1.7	1.8
25-29	4.4	3.7	2.5	1.7	1.7	1.5	1.5	1.4
30-34	5.2	4.2	2.9	2.0	1.8	1.7	1.6	1.6
35-39	6.7	5.4	3.9	2.7	2.4	2.3	2.4	2.4
40-44	8.5	6.9	5.2	4.1	3.6	3.7	3.8	3.7
45-49	11.6	9.8	7.8	6.9	6.0	6.0	6.1	6.1
50-54	15.2	13.1	11.5	11.3	10.4	10.0	10.4	10.6
55-59	21.9	18.9	17.5	17.7	16.9	16.6	16.9	17.3
60-64	31.0	28.7	26.4	27.4	26.6	26.4	27.5	28.6
65-69	46.9	42.9	40.2	42.5	41.3	41.7	43.5	44.5
70-74	71.1	64.6	61.2	63.4	64.6	63.0	66.7	67.2
75-79	113.4	105.8	98.5	100.0	98.2	94.6	99.6	104.0
80-84	172.5	162.7	158.2	148.9	145.9	142.4	145.7	159.3
85 and over	281.0	284.0	252.5	257.4	250.6	243.4	240.7	272.4
FEMALES								
Under 1(e)	63.7	54.5	36.7	25.0	19.9	17.6	15.8	15.6
1-4	6.8	6.2	3.5	1.7	1.4	1.0	0.8	0.9
5-9	2.1	1.8	1.2	0.6	0.5	0.4	0.3	0.4
10-14	1.6	1.3	0.9	0.5	0.4	0.3	0.3	0.3
15-19	2.2	1.9	1.4	0.7	0.6	0.5	0.5	0.6
20-24	3.5	2.8	2.1	1.1	0.7	0.6	0.6	0.6
25-29	4.3	3.6	2.6	1.5	0.8	0.7	0.7	0.6
30-34	4.7	4.1	2.9	1.8	1.1	1.0	1.0	1.0
35-39	6.0	5.0	3.8	2.4	1.7	1.5	1.5	1.5
40-44	6.4	5.5	4.3	3.3	2.6	2.3	2.3	2.4
45-49	8.0	6.8	6.1	4.9	4.2	3.7	3.8	3.7
50-54	10.9	9.3	8.6	7.6	6.4	5.5	5.8	5.7
55-59	15.0	12.8	11.5	10.5	9.2	8.1	8.6	8.7
60-64	21.4	19.1	18.0	16.5	14.8	13.3	13.5	13.8
65-69	35.7	31.2	29.3	26.2	23.9	22.1	21.8	22.4
70-74	56.5	50.3	46.9	45.7	40.8	37.0	37.2	36.5
75-79	95.3	86.9	77.0	75.3	69.5	63.1	62.4	64.5
80-84	147.4	139.6	126.8	123.0	117.1	105.5	107.7	108.4
85 and over	243.5	247.5	227.4	223.2	214.0	210.3	197.4	224.0

(a) Number of deaths per 1,000 of population of the same age group and sex. The populations used in the calculation of these rates are based on census populations at 3 April 1911, 4 April 1921 and 30 June 1933, 1947, 1954, 1961 and 1966, and the estimated population at 30 June 1968. (b) Average annual rate per 1,000 of census population, based on deaths in the three year period, i.e. census year and the years preceding and following it. Full-blood Aborigines are excluded. (c) For purposes of comparison with earlier periods for which full-blood Aborigines are excluded, and because published figures for 1965 and 1966 exclude Aborigines, the figures for the 1967 component have been adjusted to exclude full-blood Aborigines. (d) Includes Aborigines. (e) Infant deaths per 1,000 live births registered.

Infant deaths and death rates—States and Territories

The next table shows for each State and Territory for the period 1941 to 1969, the number of deaths under one year of age and the rates of infant mortality under one year. Rates for Australia and the more populous countries of the world for the latest available year are shown in the table International Vital Statistics at the end of this Chapter.

INFANT MORTALITY UNDER ONE YEAR(a): STATES AND TERRITORIES, 1941 TO 1969

<i>Period</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Annual average—									
1941-45	2,034	1,311	804	413	347	213	7	7	5,136
1946-50	1,990	1,129	770	431	370	187	11	14	4,902
1951-55	1,852	1,113	730	407	384	184	17	14	4,701
1956-60	1,770	1,205	717	410	362	176	25	18	4,683
1961-65	1,685	1,168	696	407	350	156	28	34	4,524
Annual total—									
1965	1,492	1,109	598	385	351	125	23	34	4,117
1966	1,490	1,116	581	356	329	108	19	46	4,045
1967	1,452	1,101	678	346	313	130	122	44	4,187
1968	1,525	1,010	716	345	398	143	101	45	4,283
1969	1,625	1,066	691	347	453	139	103	58	4,482
Annual average rate(b)—									
1941-45	35.9	34.5	34.3	32.9	33.3	39.3	61.7	18.7	34.97
1946-50	28.9	23.8	27.5	26.5	28.1	26.5	37.4	19.9	26.98
1951-55	25.1	20.7	23.6	22.6	24.4	23.7	36.3	15.4	23.34
1956-60	22.2	19.7	21.0	20.5	21.4	20.6	36.0	13.7	21.05
1961-65	20.3	17.9	19.7	19.0	20.8	18.5	31.2	17.6	19.42
Annual rate(b)—									
1965	19.1	17.5	17.8	18.4	21.7	16.6	25.2	15.8	18.47
1966	19.2	17.4	17.7	17.5	19.3	14.6	(c)	19.8	18.17
1967	18.4	16.8	19.5	17.0	17.4	17.2	63.5	18.3	18.26
1968	18.7	14.4	20.3	16.3	20.4	17.2	48.5	17.0	17.78
1969	18.9	15.0	18.9	15.8	21.8	16.5	48.3	18.8	17.92

(a) Excludes particulars of full-blood Aborigines before 1967. (b) Number of deaths of children aged under one year per 1,000 live births registered. (c) Less than twenty events; rate not calculated.

Because of the smallness of the numbers of these deaths occurring in the Australian Capital Territory and the Northern Territory, the rates for these Territories (i.e. number of such deaths per thousand live births) are subject to considerable fluctuation.

Infant deaths and death rates—Australia

The fact that out of 588,365 male infants born from 1964 to 1968, 12,066 (20.51 per 1,000) died during the first year of life, while of 556,466 female infants only 8,933 (16.05 per 1,000) died during the first year, accords with the universal experience that during the first few years of life the higher death rate of male infants tends to counteract the excess of male births. Stillbirths, for which masculinity is also higher, are not included in any of the tables relating to deaths.

As shown by the following table, the disparity is greater during the first four weeks of life, termed the neonatal period, than during the remainder of the first year of life, or the post-neonatal period.

INFANT DEATHS AND MORTALITY RATES(a): AUSTRALIA

Period	Age at death											Total under one year		
	Days		Total under one week	Weeks			Total under four weeks	Months						
	Under 1	1-6		1	2	3		1-2 (b)	3-5	6-8	9-11	Males	Females	Persons
Annual average—														
1941-45	1,580	1,269	2,849	332	189	132	3,502	497	460	375	302	2,921	2,215	5,136
1946-50	1,717	1,297	3,014	259	138	103	3,514	404	415	318	251	2,808	2,094	4,902
1951-55	1,631	1,250	2,881	237	109	86	3,313	396	431	316	245	2,683	2,018	4,701
1956-60	1,737	1,195	2,932	221	116	84	3,353	398	457	271	204	2,662	2,021	4,683
1961-65	1,709	1,187	2,896	191	102	71	3,260	426	417	245	176	2,596	1,928	4,524
Annual total—														
1965	1,544	1,067	2,611	164	103	69	2,947	372	389	244	165	2,357	1,760	4,117
1966	1,511	1,107	2,618	165	77	67	2,927	362	394	213	149	2,328	1,717	4,045
1967	1,572	1,144	2,716	169	91	77	3,053	385	390	215	144	2,421	1,766	4,187
1968	1,768	1,050	2,818	146	70	72	3,106	408	394	221	154	2,452	1,831	4,283
1969														
Annual average rate(c)—														
1941-45	10.75	8.64	19.39	2.27	1.29	0.90	23.85	3.38	3.13	2.55	2.06	38.80	30.93	34.97
1946-50	9.45	7.14	16.59	1.43	0.76	0.56	19.34	2.22	2.29	1.75	1.38	30.08	23.70	26.98
1951-55	8.09	6.20	14.29	1.18	0.54	0.43	16.44	1.97	2.14	1.57	1.22	25.99	20.56	23.34
1956-60	7.81	5.37	13.18	0.99	0.52	0.38	15.07	1.79	2.56	1.22	0.92	23.29	18.69	21.05
1961-65	7.34	5.09	12.43	0.82	0.44	0.30	13.99	1.83	1.79	1.05	0.76	21.67	17.03	19.42
Annual rate(c)—														
1965	6.93	4.79	11.72	0.73	0.46	0.31	13.22	1.67	1.75	1.09	0.74	20.59	16.24	18.47
1966	6.79	4.97	11.76	0.74	0.35	0.30	13.15	1.62	1.77	0.96	0.67	20.33	15.88	18.17
1967	6.85	4.99	11.84	0.74	0.40	0.33	13.31	1.68	1.70	0.94	0.63	20.57	15.82	18.26
1968	7.34	4.36	11.70	0.60	0.29	0.30	12.89	1.69	1.64	0.92	0.64	19.83	15.61	17.78
1969														

(a) Excludes particulars of full-blood Aborigines before 1967. (b) Age four weeks and under three months.
(c) Number of deaths of children aged under one year per 1,000 live births registered.

Plate 21, on page 184 shows infant mortality rates for each year from 1910 to 1968.

Causes of death

The classification of causes of death adopted for Australia by the Commonwealth Bureau of Census and Statistics at the inception of its mortality statistics in 1907 was that introduced by the International Institute of Statistics in 1893, reviewed by that Institute in 1899, and revised by an International Commission in 1900. This classification became known as the International List of Causes of Death, and further international revisions in 1909 (Second), 1920 (Third), 1929 (Fourth), 1938 (Fifth), 1948 (Sixth), 1955 (Seventh) and 1965 (Eighth), were successively adopted for use in Australian statistics.

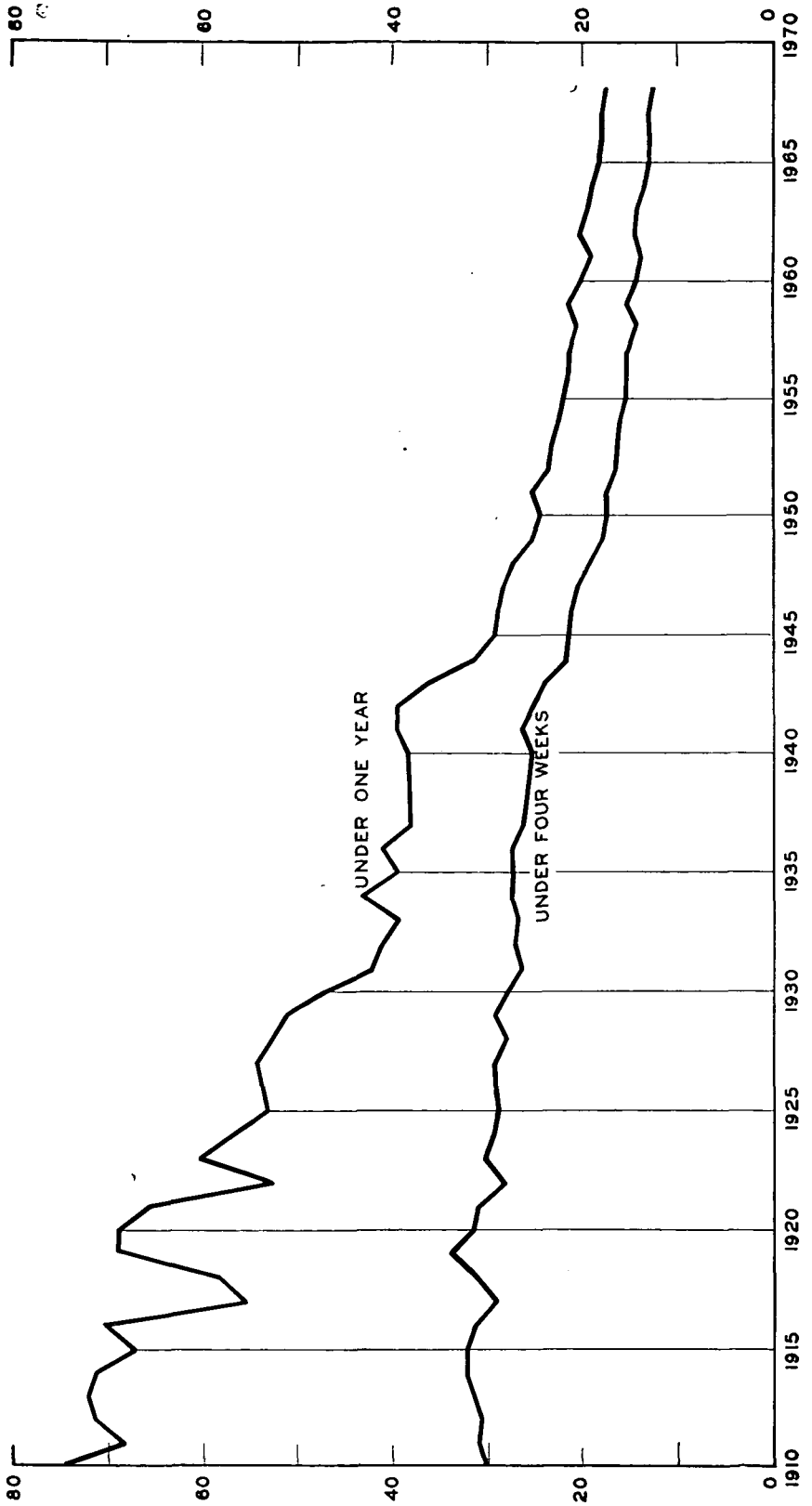
For 1968, the causes of death are classified according to the Eighth (1965) Revision of the International Classification of Diseases. This is the first year in which the Eighth Revision has been used in Australia and hence cause of death figures for 1968 and subsequent years will not be comparable, for some causes, with figures for 1967 and earlier years.

In order to facilitate the concise presentation of cause of death statistics, the present International Classification provides two special lists of causes for tabulation—the Intermediate List of 150 causes and the Abbreviated List of 50 causes. The latter has been used as the base of the cause of death tabulations for 1968 which follow. Some categories have been sub-divided to show additional particulars of interest in Australian statistics. Table A shows the total number of males and females who died, the death rates per million of mean population, and the percentage of total deaths. Table B shows deaths for males and females, classified by age groups.

INFANT MORTALITY RATES: AUSTRALIA

1910 TO 1968

(INFANT DEATHS PER 1,000 LIVE BIRTHS)



NOTE: EXCLUDES PARTICULARS OF FULL-BLOOD ABORIGINES BEFORE 1967

A. CAUSES OF DEATH: NUMBERS, PROPORTIONS AND CRUDE RATES(a), MALES AND FEMALES, AUSTRALIA, 1968

ABBREVIATED LIST OF 50 CAUSES WITH CERTAIN SUB-DIVISIONS

Cause of death	ICD numbers	Males		Females			
		Number of deaths	Percentage of total	Crude rates(a)	Number of deaths	Percentage of total	Crude rates(a)
B 1 Cholera	000	..	..	..	..	..	(c)
B 2 Typhoid fever	001	..	..	..	1	..	(b)
B 3 Bacillary dysentery and amoebiasis	004, 006	6	(b)	1	9	(b)	2
B 4 Enteritis and other diarrhoeal diseases	008, 009	154	0.3	25	167	0.3	28
B 5 Tuberculosis of respiratory system	010-012	137	0.2	23	39	0.1	7
B 6 Other tuberculosis, including late effects	013-019	44	0.1	7	23	0.1	4
B 7 Plague	020	..	..	..	..	..	..
B 8 Diphtheria	032	..	..	..	..	..	..
B 9 Whooping cough	033	3	(b)	1	1	(b)	(c)
B10 Streptococcal sore throat and scarlet fever	034	..	..	..	2	(b)	(c)
B11 Meningococcal infection	036	13	(b)	2	10	(b)	2
B12 Acute poliomyelitis	040-043	..	..	..	..	..	..
B13 Smallpox	050	..	..	..	..	..	..
B14 Measles	055	6	(b)	1	9	(b)	2
B15 Typhus and other rickettsioses	080-083	1	(b)	(c)	..	..	..
B16 Malaria	084	..	..	..	..	..	..
B17 Syphilis and its sequelae	090-097	27	(b)	5	8	(b)	1
B18 All other infective and parasitic diseases	Remainder of 000-136	156	0.3	26	153	0.3	26
B19 Malignant neoplasms of—							
Digestive organs	150-159	3,125	5.1	515	2,663	5.5	445
Lung	162	2,516	4.1	415	377	0.8	63
Skin	172, 173	282	0.5	47	177	0.4	30
Breast	174	19	(b)	3	1,427	2.9	239
Genital organs	180-187	1,015	1.7	167	1,124	2.3	188
Urinary organs	188, 189	513	0.8	85	253	0.5	42
Leukaemia and aleukaemia	204-207	399	0.7	66	315	0.7	53
Other malignant and lymphatic neoplasms	Remainder of 140-209	1,693	2.8	279	1,220	2.5	204
B20 Benign neoplasms and neoplasms of unspecified nature	210-239	86	0.1	14	88	0.2	15
B21 Diabetes mellitus	250	856	1.4	141	1,099	2.3	184
B22 Avitaminoses and other nutritional deficiency	260-269	46	0.1	8	44	0.1	7
B23 Anaemias	280-285	111	0.2	18	170	0.4	28
B24 Meningitis	320	51	0.1	8	44	0.1	7
B25 Active rheumatic fever	390-392	12	(b)	2	9	(b)	2
B26 Chronic rheumatic heart disease	393-398	444	0.7	73	552	1.1	92
B27 Hypertensive disease	400-404	794	1.3	131	1,072	2.2	179
B28 Ischaemic heart disease	410-414	20,342	33.3	3,354	13,069	27.0	2,186
B29 Other forms of heart disease	420-429	2,238	3.7	369	2,801	5.8	469
B30 Cerebrovascular disease	430-438	6,653	10.9	1,097	8,711	18.0	1,457
B31 Influenza	470-474	152	0.3	25	171	0.4	29
B32 Pneumonia	480-486	1,573	2.6	259	1,379	2.8	231
B33 Bronchitis, emphysema and asthma	490-493	2,884	4.7	476	718	1.5	120
B34 Peptic ulcer	531-533	427	0.7	70	176	0.4	29
B35 Appendicitis	540-543	41	0.1	7	22	0.1	4
B36 Intestinal obstruction and hernia	550-553, 560	191	0.3	32	182	0.4	30
B37 Cirrhosis of liver	571	504	0.8	83	193	0.4	32
B38 Nephritis and nephrosis	580-584	450	0.7	74	372	0.8	62
B39 Hyperplasia of prostate	600	271	0.4	45	..	..	..
B40 Abortion	640-645	..	..	..	10	(b)	2
B41 Other complications of pregnancy, childbirth and the puerperium. Delivery without mention of complication	630-639, 650-678	..	..	..	58	0.1	10
B42 Congenital anomalies	740-759	633	1.0	104	577	1.2	97
B43 Birth injury, difficult labour and other anoxic and hypoxic conditions	764-768, 772, 776	488	0.8	81	317	0.7	53
B44 Other causes of perinatal mortality	Remainder of 760-779	894	1.5	147	659	1.4	110
B45 Symptoms and ill-defined conditions	780-796	269	0.4	44	386	0.8	65

For footnotes see end of table next page.

A. CAUSES OF DEATH: NUMBERS, PROPORTIONS AND CRUDE RATES(a), MALES AND FEMALES, AUSTRALIA, 1968—continued

ABBREVIATED LIST OF 50 CAUSES WITH CERTAIN SUB-DIVISIONS—continued

Cause of death	Males			Females			Crude rates(a)	
	ICD numbers	Number of deaths	Percentage of total	Number of deaths	Percentage of total	Crude rates(a)		
B46	Arteriosclerosis	440	1,131	1.9	187	1,443	3.0	241
	Other diseases of circulatory system	441-448, 450-458	944	1.6	156	715	1.5	120
	Other diseases of respiratory system	460-466, 500-508, 510-519	469	0.8	77	328	0.7	55
	All other diseases	Remainder of 240-738	2,237	3.7	369	2,472	5.1	414
BE47	Motor vehicle accidents	E810-E823	2,605	4.3	430	850	1.8	142
BE48	All other accidents	E800-E807, E825-E949	1,889	3.1	312	1,155	2.4	193
BE49	Suicide and self-inflicted injuries	E950-E959	1,022	1.7	169	505	1.0	85
BE50	All other external causes	E960-E999	245	0.4	40	161	0.3	27
All causes			61,061	100.0	10,068	48,486	100.0	8,110

(a) Number of deaths per million of estimated mean population. (b) Less than 0.05. (c) Less than 0.5.

B CAUSES OF DEATH: MALES AND FEMALES IN AGE GROUPS, AUSTRALIA 1968

ABBREVIATED LIST OF 50 CAUSES (BASED ON THE EIGHTH REVISION OF THE INTERNATIONAL LIST)

Cause of death(a)	Sex	Number of deaths in age groups (years)										75 plus	Not stated	Total
		0	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74				
B 2 Typhoid fever	F	..	..	..	..	..	..	..	..	1	..	..	..	1
B 3 Bacillary dysentery and amoebiasis	M	1	1	..	..	..	..	1	..	3	..	..	..	6
	F	..	4	..	..	..	..	1	1	1	..	..	..	9
B 4 Enteritis and other diarrhoeal diseases	M	53	36	2	..	..	2	6	6	20	29	..	..	154
	F	46	33	7	2	1	5	5	7	16	45	..	..	167
B 5 Tuberculosis of respiratory system	M	..	..	..	..	2	9	20	28	41	37	..	..	137
	F	..	1	..	..	2	3	1	6	9	17	..	..	39
B 6 Other tuberculosis, including late effects	M	..	3	..	1	1	1	4	8	14	12	..	..	44
	F	2	1	2	..	..	1	3	4	6	4	..	..	23
B 9 Whooping cough	M	2	1	..	..	..	..	..	..	..	..	..	..	3
	F	..	..	..	..	1	..	..	..	..	..	..	..	1
B10 Streptococcal sore throat and scarlet fever	F	..	1	..	..	..	1	..	..	..	..	..	..	2
B11 Meningococcal infection	M	2	3	..	2	..	2	1	1	1	1	..	..	13
	F	6	2	1	..	..	..	..	1	..	..	..	..	10
B14 Measles	M	3	1	1	..	..	1	..	..	..	..	..	..	6
	F	..	5	2	..	..	..	..	..	..	2	..	..	9
B15 Typhus and other rickettsioses	M	..	..	..	..	..	1	..	..	..	..	..	..	1
B17 Syphilis and its sequelae	M	1	..	..	..	..	..	3	6	9	8	..	..	27
	F	2	..	..	..	..	..	2	1	2	1	..	..	8
B18 All other infective and parasitic diseases	M	40	15	12	8	6	8	18	13	18	18	..	..	156
	F	33	5	11	6	9	16	7	15	20	31	..	..	153
B19 Malignant neoplasms of:														
Digestive organs	M	..	..	2	6	21	108	306	715	980	987	..	..	3,125
	F	..	..	1	3	27	81	238	450	761	1,102	..	..	2,663
Lung	M	..	..	..	2	5	65	288	809	911	436	..	..	2,516
	F	..	..	..	..	1	17	64	107	94	94	..	..	377
Skin	M	..	..	..	5	12	25	52	73	64	51	..	..	282
	F	..	..	..	2	16	23	26	25	29	56	..	..	177
Breast	M	..	..	..	..	..	..	5	2	9	3	..	..	19
	F	..	..	..	1	23	106	315	334	292	356	..	..	1,427
Genital organs	M	..	1	..	10	18	8	19	85	291	583	..	..	1,015
	F	..	1	..	5	23	85	239	283	247	241	..	..	1,124
Urinary organs	M	1	4	2	1	5	5	44	128	170	153	..	..	513
	F	1	4	2	1	5	5	24	48	65	103	..	..	253
Leukaemia and aleukaemia	M	1	20	48	27	19	17	39	60	95	73	..	..	399
	F	1	11	29	13	9	24	36	36	78	78	..	..	315
Other malignant and lymphatic neoplasms	M	2	25	50	40	43	116	278	455	387	297	..	..	1,693
	F	2	25	31	33	34	62	155	279	258	341	..	..	1,220
B20 Benign neoplasms and neoplasms of unspecified nature	M	4	1	4	1	1	8	12	22	21	12	..	..	86
	F	..	2	2	2	7	8	11	12	24	20	..	..	88
B21 Diabetes mellitus	M	1	..	6	3	12	31	71	138	281	313	..	..	856
	F	..	1	1	4	2	21	34	137	357	542	..	..	1,099
B22 Avitaminoses and other nutritional deficiency	M	7	4	1	1	..	2	1	8	10	12	..	..	46
	F	4	3	1	..	..	3	..	2	8	23	..	..	44

For footnote see end of table next page.

B. CAUSES OF DEATH: MALES AND FEMALES IN AGE GROUPS, AUSTRALIA 1968—*continued*
 ABBREVIATED LIST OF 50 CAUSES (BASED ON THE EIGHTH REVISION OF THE INTERNATIONAL LIST)—*continued*

Cause of death(a)	Sex	Number of deaths in age groups (years)										75 plus	Not stated	Total
		0	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74				
B23 Anaemias	M	3	..	3	3	..	4	8	11	24	55	..	111	
	F	..	2	7	4	4	3	2	14	33	101	..	170	
B24 Meningitis	M	23	6	3	1	..	3	5	4	3	3	..	51	
	F	19	5	4	..	..	2	..	7	1	6	..	44
B25 Active rheumatic fever	M	..	1	1	3	..	3	1	1	1	1	..	12	
	F	..	1	2	..	..	..	1	1	3	1	..	9
B26 Chronic rheumatic heart disease	M	..	..	1	12	17	48	61	120	101	84	..	444
	F	..	..	6	6	10	36	84	122	131	157	..	552
B27 Hypertensive disease	M	..	..	..	..	5	38	70	154	219	307	1	794
	F	..	..	..	..	6	32	50	98	238	648	..	1,072
B28 Ischaemic heart disease	M	..	..	..	8	40	547	2,159	4,971	6,129	6,487	1	20,342
	F	..	..	..	..	19	119	504	1,641	3,641	7,145	..	13,069
B29 Other forms of heart disease	M	10	6	4	16	12	41	91	242	491	1,325	..	2,238	
	F	4	4	10	11	13	41	56	145	433	2,084	..	2,801	
B30 Cerebrovascular disease	M	3	2	8	15	37	138	402	1,002	1,834	3,212	..	6,653	
	F	4	2	5	14	31	130	378	765	1,909	5,473	..	8,711	
B31 Influenza	M	5	4	..	2	3	4	4	11	35	84	..	152	
	F	3	2	2	3	5	4	6	6	28	112	..	171	
B32 Pneumonia	M	208	25	14	10	11	43	97	152	282	731	..	1,573	
	F	152	30	14	13	11	33	52	72	135	867	..	1,379	
B33 Bronchitis, emphysema and asthma	M	4	8	14	22	20	48	155	542	941	1,130	..	2,884	
	F	4	5	11	8	7	38	62	130	174	279	..	718	
B34 Peptic ulcer	M	1	1	..	3	4	17	50	86	121	144	..	427	
	F	..	..	..	..	2	8	16	24	40	86	..	176
B35 Appendicitis	M	..	1	3	2	3	..	4	10	7	11	..	41	
	F	..	1	2	2	2	..	3	2	2	8	..	22	
B36 Intestinal obstruction and hernia	M	32	2	..	3	1	5	7	30	34	77	..	191	
	F	11	1	2	4	1	3	13	14	31	102	..	182	
B37 Cirrhosis of liver	M	..	3	2	..	12	58	153	141	93	42	..	504	
	F	4	2	..	4	4	24	47	54	36	18	..	193	
B38 Nephritis and nephrosis	M	..	2	2	12	16	37	60	85	113	123	..	450	
	F	2	1	3	2	11	42	51	82	83	95	..	372	
B39 Hyperplasia of prostate	M	..	..	..	..	..	..	2	10	50	209	..	271
B40 Abortion	F	..	..	..	5	4	1	..	..	..	..	..	10
B41 Other complications of pregnancy, childbirth and the puerperium. Delivery without mention of complication	F	..	..	..	25	19	13	1	..	..	..	..	58
B42 Congenital anomalies	M	428	47	44	35	17	11	18	16	11	6	..	633	
	F	388	49	46	16	12	13	11	19	12	11	..	577	
B43 Birth injury, difficult labour and other anoxic and hypoxic conditions	M	488	..	..	..	..	..	..	..	..	..	..	488
	F	317	..	..	..	..	..	..	..	..	..	..	317
B44 Other causes of perinatal mortality	M	893	..	..	..	1	..	..	..	..	..	..	894
	F	658	1	..	..	..	..	..	..	..	..	..	659
B45 Symptoms and ill-defined conditions	M	32	2	2	5	13	11	20	19	37	127	1	269	
	F	18	4	..	4	3	19	13	14	56	253	2	386	
B46 { Arteriosclerosis	M	..	..	..	..	1	2	11	57	184	876	..	1,131
	F	..	..	..	..	..	2	4	19	150	1,268	..	1,443
{ Other diseases of circulatory system	M	2	..	1	6	5	17	52	180	338	343	..	944	
	F	..	..	..	4	8	18	28	81	168	408	..	715
{ Other diseases of respiratory system	M	61	16	7	10	4	16	37	60	97	161	..	469	
	F	46	13	3	4	7	9	24	30	59	133	..	328	
{ All other diseases	M	51	33	45	84	51	140	291	430	459	651	2	2,237	
	F	43	37	40	58	55	140	281	333	500	984	1	2,472	
BE47 Motor vehicle accidents	M	7	60	141	945	372	295	271	243	159	112	..	2,605	
	F	3	48	62	216	71	85	88	89	108	79	1	850	
BE48 All other accidents	M	80	109	149	267	198	213	231	213	157	272	..	1,889	
	F	48	72	43	32	16	25	61	72	139	647	..	1,155	
BE49 Suicide and self-inflicted injuries	M	..	..	7	112	148	215	196	195	92	55	2	1,022
	F	3	..	..	40	80	102	128	91	44	20	..	505
BE50 All other external causes	M	3	4	2	23	40	56	40	43	22	11	1	245	
	F	10	7	6	23	18	33	28	20	9	7	..	161	
All Causes	M	2,452	447	581	1,706	1,176	2,419	5,664	11,585	15,359	19,664	8	61,061	
	F	1,831	386	358	570	575	1,436	3,153	5,694	10,430	24,049	4	48,486	

(a) In 1968, there were no male deaths recorded in the following categories: B1, Cholera (000); B2, Typhoid fever (001); B7, Plague (020); B8, Diphtheria (032); B10, Streptococcal sore throat and scarlet fever (034); B12, Acute poliomyelitis (040-043); B13, Smallpox (050); B16, Malaria (084). No female deaths were recorded in the following categories: B1; B7; B8; B12; B13; B15, Typhus and other rickettsioses (080-083); B16.

Causes of death—children under one year

Causes of death of children under one year of age should be considered in relation to age at death, because the emphasis on various causes changes rapidly as age at death varies. A summary for 1968 of deaths of children under one year of age, classified according to principal causes of death and age at death, is given in the following table.

**DEATHS OF CHILDREN UNDER ONE YEAR OF AGE, BY CAUSE OF DEATH:
AUSTRALIA, 1968**

Inter- national Classi- fication of Diseases number	Cause of death	Age at death										Total under one year				
		Days			Weeks			Months								
		Under 1	1-6	one week	1	2	3	Total under four weeks	1-2 (a)	3-5	6-11					
760	Chronic circulatory and genito- urinary diseases in mother . . .	18	12	30	..	..	..	30	..	..	..	30	..	..	..	30
761	Other maternal conditions un- related to pregnancy . . .	69	28	97	2	..	..	99	1	1	1	102	..	..	..	102
762	Toxaemias of pregnancy . . .	59	54	113	2	2	..	117	..	..	..	117	..	..	..	117
763	Maternal ante-and intrapartum infection . . .	21	5	26	1	..	..	27	..	..	..	27	..	..	..	27
764-768	Difficult labour . . .	97	72	169	3	1	..	173	1	..	..	174	..	..	..	174
769	Other complications of pregnancy and childbirth . . .	313	123	436	10	3	2	451	..	..	..	451	..	..	..	451
770	Conditions of placenta . . .	177	84	261	7	2	..	270	..	..	..	270	..	..	..	270
771	Conditions of umbilical cord . . .	17	8	25	..	..	..	25	..	..	..	25	..	..	..	25
772, 773	Birth injury without mention of cause . . .	35	37	72	5	2	1	80	3	1	1	85	..	..	..	85
774, 775	Haemolytic disease of newborn . . .	68	32	100	..	..	1	101	1	..	..	104	..	..	..	104
776	Anoxic and hypoxic conditions not elsewhere classified . . .	304	227	531	9	4	..	544	6	1	..	551	..	..	..	551
777	Immaturity unqualified . . .	280	71	351	5	..	..	356	1	..	..	357	..	..	..	357
778, 779	Other conditions of newborn . . .	22	33	55	5	2	..	62	1	..	..	63	..	..	..	63
740-759	Congenital anomalies . . .	227	190	417	49	31	35	532	113	92	79	816	..	..	..	816
000-136	Infections . . .	5	9	14	16	6	9	45	37	43	66	191	..	..	..	191
480-486	Pneumonia . . .	13	27	40	16	9	11	76	113	100	71	360	..	..	..	360
(b)	Other diseases . . .	37	36	73	11	7	11	102	94	107	106	409	..	..	..	409
E911-E913	Inhalation or ingestion of food or other object causing obstruction or suffocation, and accidental mechanical suffocation . . .	..	1	1	4	..	1	6	30	36	16	88	..	..	..	88
(c)	Other external causes . . .	6	1	7	1	1	1	10	7	13	33	63	..	..	..	63
	All Causes . . .	1,768	1,050	2,818	146	70	72	3,106	408	394	375	4,283				

(a) Age four weeks and under 3 months.

(b) 140-474, 490-738, 780-796.

(c) E800-E910, E914-E999

Deaths from certain important causes

In the preceding tables, particulars have been given for each of the causes of death comprising the Abbreviated Classification according to the Eighth Revision of the International List. Certain important causes are treated in detail hereunder. The Abbreviated Classification numbers used in tables A and B (pages 185 and 187) are indicated in parentheses for each cause or group of causes.

All forms of tuberculosis (B5, B6). The reduction in mortality from tuberculosis is shown by the decline in the crude death rate from tubercular diseases, which fell from 49 per 100,000 of mean population in 1931 to 18 in 1951, and to 2 in 1968. The reductions in the younger age groups are much greater. In making these comparisons, consideration of the effect of the change in basis from the Fifth to the Sixth Revision of the International List is particularly important.

Malignant neoplasms, including neoplasms of lymphatic and haematopoietic tissues (B19). Deaths classified under this heading according to the Sixth, Seventh and Eighth Revisions of the International List (used in Australia for deaths registered since 1950) are not directly comparable in total with those on the Fifth Revision basis (see Year Book No. 39, p. 628).

The most common sites of malignant neoplasms causing death in 1968 were as follows: digestive organs (males, 3,125; females, 2,663); lung (males, 2,516; females, 377); genital organs (males, 1,015; females, 1,124); breast (males, 19; females, 1,427); urinary organs (males, 513; females, 253); leukaemia and aleukaemia (males, 399; females, 315).

The ages of males and females who died from malignant neoplasms in 1968 are given below, together with figures for 1931, 1941, 1951 and 1961. The increase in the number of deaths from malignant neoplasms in the years since 1931 is due principally to the increase in the number of people in the higher age groups, at which ages the risks of cancer are much greater. While the total population increased by about 84 per cent between 1931 and 1968, the number of people aged 55 years and over increased by about 134 per cent. The increase in the number of deaths in the lower age groups from 1951 is due partly to the inclusion of neoplasms of lymphatic and haematopoietic tissues, and it is probable also that part of the increased number of deaths from cancer recorded in recent years has been due to improved diagnosis and certification on the part of the medical profession.

**DEATHS FROM MALIGNANT NEOPLASMS(a), BY AGE GROUP AND SEX
AUSTRALIA, 1931 TO 1968(b)**

Age group (years)	Males					Females				
	1931	1941	1951(a)	1961(a)	1968(a)	1931	1941	1951(a)	1961(a)	1968(a)
Under 15	25	21	91	130	156	23	25	71	114	108
15-29	43	49	103	109	144	38	45	76	84	96
30-44	196	176	275	380	414	326	344	387	481	498
45-54	410	465	584	823	1,031	548	685	692	847	1,097
55-64	868	983	1,334	1,699	2,327	744	926	1,180	1,207	1,562
65 and over	1,942	2,561	3,128	4,239	5,490	1,426	2,198	2,698	3,575	4,195
Not stated . . . . .	..	..	..	..	..	..	..	..	1	..
Total	3,484	4,255	5,515	7,380	9,562	3,105	4,223	5,104	6,309	7,556

(a) Includes neoplasms of lymphatic and haematopoietic tissues prior to 1967.

(b) Excludes particulars of full-blood Aborigines

The death rates from malignant neoplasms have continued to rise over recent years. The rates are crude death rates representing the number of deaths from malignant neoplasms per 100,000 of mean population and do not take account of changes in the age constitution of the population, and to a substantial extent they reflect the increasing age of the population rather than the true change in mortality from malignant neoplasms (see previous paragraph). In 1931 the rate for Australia was 101 (males, 105; females, 97); in 1941 it was 119 (males, 119; females, 120); and in 1951 it had risen to 126 (males, 130; females, 122). Figures for 1961 gave a rate of 130 (males, 139; females, 121), and for 1968 a rate of 142 (males, 158; females, 126).

Death rates from malignant neoplasms per 100,000 of mean population for Australia and for various other countries are as follows: Brazil, 94; Israel, 110; Japan, 113; Poland, 129; Canada and South Africa (white population), 137; Australia, 142; United States of America, 157; Italy, 168; Netherlands, 190; France, 204; England and Wales, 228; Scotland, 234. The rates are for the latest available year in each case.

Maternal causes (B40, B41). It was shown in Year Book No. 39, page 634, that the changes introduced with the Sixth Revision of the International List did not significantly affect the comparability of the total number of deaths from maternal causes. The Seventh Revision, introduced in 1958, and the Eighth Revision in 1968, did not affect comparability. The death rate from these causes has fallen rapidly during recent years and in 1968 the rate of 0.3 per 1,000 live births, compared with a rate of 6 per 1,000 in 1936. The 68 deaths in 1968 are equivalent to a death rate of 1.14 per 100,000 females. The death rate may be expressed in other terms by stating that for every 3,543 babies born alive in 1968 one woman died from maternal causes. The death rate per 1,000 live births from maternal causes in various countries for the latest available year is as follows: Sweden, 0.1; Denmark, Canada, United Kingdom and New Zealand, 0.2; Australia, Netherlands, Norway, France, Finland and United States of America, 0.3; Switzerland, 0.4; Italy and Japan, 0.7.

Causes of infant mortality. See paragraphs devoted to causes of infant deaths on pages 187-8.

Diseases of the circulatory system (B25-B30, part B46).

This class is the largest among causes of death, representing 56 per cent of total deaths in 1968. The following table shows the number of deaths and death rates per 100,000 of mean population from diseases of the circulatory system for the years 1950-68. Comparability of the figures is not affected by the various revisions of the International Classification of Diseases.

**DEATHS AND DEATH RATES(a) FROM DISEASES OF THE CIRCULATORY SYSTEM
BY SEX, AUSTRALIA, 1950 TO 1968**

Year	Cerebrovascular disease			Heart disease				Other diseases of circulatory system				Total				
	Number		Rate(a)	Number		Rate(a)		Number		Rate(a)		Number		Rate(a)		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	
1950	4,035	5,351	98	132	14,687	10,256	356	253	1,736	1,802	42	44	20,458	17,409	499	429
1955	4,811	6,224	103	137	16,382	11,303	352	249	1,843	1,886	40	42	23,036	19,413	495	427
1960	5,183	6,659	100	131	18,654	13,173	359	259	2,068	1,970	40	39	25,905	21,802	499	429
1965	5,809	7,835	101	139	21,843	15,546	381	275	2,029	2,071	35	37	29,681	25,452	517	450
1968	6,653	8,711	110	146	23,520	17,193	388	288	2,385	2,468	39	41	32,558	28,372	537	475

(a) Per 100,000 of mean population.

Accidents, poisonings and violence (BE47 to BE50). Deaths in this class are classified according to external cause and not according to nature of injury. The classification provides sub-groups for accidents, including adverse reactions to prophylactic inoculations, therapeutic misadventures and late effects of accidental injury; suicide; homicide and injuries purposely inflicted by other persons; injuries undetermined whether accidentally or purposely inflicted; and injury resulting from operations of war, including delayed effects.

The following table, showing the death rates in the main sub-groups per 100,000 of mean population, indicates that the death rate from violence is between two and three times as great for males as for females. The low level of the rates and proportions for the years 1941-45 is due largely to the exclusion of deaths of defence personnel from accidents, suicide and homicide, though the rates have been based on total mean population (including defence personnel). A further contributing factor is the decrease during this period in the number of automobile accidents. From July 1947 deaths of defence personnel from accidents, etc. have again been included.

ACCIDENTS, POISONINGS, AND VIOLENCE: DEATH RATES(a), BY SEX
AUSTRALIA, 1936 TO 1968(b)

Period	Death rate from—										All violence, proportion per 10,000 deaths	
	Motor vehicle accidents		Suicide		Homicide(c)		Other violence(d)		Total violence			
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1936-40	32	8	17	5	2	1	55	20	105	34	980	399
1941-45	19	5	11	5	1	1	48	21	79	31	730	348
1946-50	30	6	14	5	1	1	46	21	91	33	844	383
1951-55	38	9	15	5	2	1	44	22	99	37	964	453
1956-60	37	11	17	6	2	1	38	20	93	39	957	495
1961-65	38	13	19	9	2	1	34	19	93	42	954	550
1966	41	15	17	11	2	1	32	19	92	46	933	572
1967	42	15	19	11	2	1	35	20	97	47	1,008	611
1968	43	14	17	8	2	1	33	20	95	45	943	551

(a) Number of deaths per 100,000 of mean population. (b) Excludes particulars of full-blood Aborigines before 1967. (c) Includes deaths from injury purposely inflicted by other persons (not in war) and legal intervention. (d) Includes deaths from injury undetermined whether accidentally or purposely inflicted.

In 1968 the total number of deaths from *accidental causes (BE47, BE48)* was 6,499 (4,494 males and 2,005 females). Over half of the accidental deaths were the result of transport accidents. Of these, the numbers attributable to the major causes, and the percentages of the total accidental deaths in each case, were as follows: Motor vehicle traffic accidents, 3,377 (51.96 per cent); motor vehicle non-traffic accidents, 78 (1.20 per cent); other road vehicle accidents, 46 (0.71 per cent); railway accidents, 87 (1.34 per cent); water transport accidents, 90 (1.38 per cent); aircraft accidents, 41 (0.63 per cent); a total of 3,719 (57.22 per cent). Other important causes were accidental falls, 1,186 (18.25 per cent); accidental drowning, 382 (5.88 per cent); accidents caused by fires and flames, 232 (3.57 per cent); and accidental poisonings, 153 (2.35 per cent).

Deaths from *suicide (BE49)* in 1968 numbered 1,527 (males, 1,022; females, 505). Poisoning, other than by gases, was used in 626 cases (41.00 percent of total deaths by suicide). Other important modes adopted, together with the numbers and relevant percentages, were as follows: firearms and explosives, 353 (23.12 per cent); poisoning by gases, 229 (15.00 per cent); hanging or strangulation, 153 (10.02 per cent); submersion (drowning), 80 (5.24 per cent); other and unspecified modes, 86 (5.63 per cent). Of the 1,022 males who committed suicide, 329 (32.19 per cent) used firearms or explosives. For females the most common mode was poisoning (other than by gases). This was used in 325 cases (64.36 per cent).

Of the 406 deaths recorded in 1968 to all other external causes (*BE50*), there were 190 deaths from homicide and injury purposely inflicted by other persons, 1 death from legal execution, 212 deaths from injury undetermined whether accidentally or purposely inflicted (of which 100 were due to poisoning other than by gases) and 3 deaths from late effects of injury due to operations of war.

Vital statistics of External Territories

The following table shows, for the year 1968, the number of marriages, births and deaths registered in the External Territories under the control of Australia. More detailed information will be found in a series of tables in *Demography*, Bulletin No. 86.

EXTERNAL TERRITORIES: VITAL STATISTICS, 1968

Territory	Marriages	Births	Deaths
Christmas Island(a)	3	26	14
Cocos (Keeling) Islands(a)	..	2	..
Norfolk Island(a)	10	27	12
Territory of Papua and New Guinea(b)	294	1,108	111

(a) Total population. (b) Non-indigenous population only.

International vital statistics

In the following table vital statistics rates for certain countries are shown. Crude marriage, birth, and death rates represent the number of 'events' reported for the year stated per 1,000 of the population. Infant mortality rates are the number of deaths which occurred under one year of age per 1,000 live births. The true death rates (reciprocals of the expectation of life at birth) have been computed from the life tables for the respective countries as published in the United Nations *Demographic Yearbook*, 1968 (see explanation of true death rates, page 177).

In many instances the rates shown in the following table are estimates and the results of sample surveys only. Reference should be made to the detailed comments contained in the United Nations *Demographic Yearbook*, 1968 (see particularly Technical Notes on Statistical Tables and footnotes to the tables). The countries are arranged in the same order as in the table on pages 157-58 of the Population chapter.

VITAL STATISTICS RATES: CERTAIN COUNTRIES—LATEST AVAILABLE YEAR

(Source: United Nations *Demographic Yearbook*, 1968)

Country	Rates(a)					True death rates(b)		
	Year	Marriage	Birth	Death	Infant mortality	Year	Male	Female
Africa—								
United Arab Republic	1968	8.7	38.2	16.2	(c)83.2	1960	19.4	18.6
South Africa—								
Asian population	1966	8.3	31.9	7.3	(d)50.8	1959-61	17.3	16.8
Coloured population	1966	6.1	43.6	14.9	(d)128.8	1959-61	20.2	18.4
White population	1966	10.0	(c)22.9	(c)9.0	(d)24.6	1959-61	15.4	14.0
Morocco(e)	1962	n.a.	46.1	18.7	149	1962	21.3	
Upper Volta(e)	1960-61	n.a.	53	35	182	1960-61	31.2	32.2
Southern Rhodesia (d)(e)	1962	n.a.	48.1	14.0	(f)122	1962	20.0	
Ivory Coast(d)(e)	1961	n.a.	56.1	33.3	n.a.	1957-58	28.6	
Zambia(d)	1963	n.a.	51.4	19.6	(g)259	1963	25.0	
Senegal(d)	1960-61	n.a.	43.3	16.7	92.9	1957	27.0	
Dahomey(d)(e)	1961	n.a.	54.0	26.0	109.6	1961	26.8	
Central African Republic(d)(e)	1959-60	n.a.	48	30	190	1959-60	30.3	27.8
North America—								
United States of America	1968	10.3	17.4	9.6	21.7	1967	14.9	13.5
Mexico	1960-65	(h)7.0	(d)44-45	(d)10-11	(c)63.1	1959-61	17.4	16.6
Canada	1968	8.4	17.7	7.4	(c)22.0	1960-62	14.6	13.5
Guatemala	1960-65	(i)3.5	(d)46-48	(d)18-20	(i)91.5	1963-65	20.7	20.1
Haiti(d)	1960-65	n.a.	45-50	20-24	n.a.	1950	30.7	
El Salvador	1960-65	(c)3.3	(d)47-49	(d)14-16	(c)63.1	1960-61	17.7	16.6
Puerto Rico	1968	9.6	25.1	5.6	(c)30.8	1959-61	14.9	13.9
Jamaica	1960-65	(c)4.1	(d)39-40	(d)8-9	(f)35.4	1959-61	16.0	15.0
Costa Rica	1960-65	(c)5.6	(d)44-46	(d)8-9	(f)69.9	1962-64	16.2	15.4
South America—								
Brazil(d)	1960-65	n.a.	41-43	10-12	n.a.	1940-50	25.4	22.0
Argentina	1967	6.8	22.3	8.8	58.3	1960-65	15.7	14.4
Colombia(d)	1960-65	(c)4.3	41-44	12-14	(c)78.3	1950-52	22.6	21.8
Peru(d)	1960-65	(c)3.3	44-45	12-14	(c)61.9	1960-65	19.0	18.0
Venezuela(d)	1960-65	(c)5.6	46-48	9-10	(c)45.5	1961	15.1	
Chile	1967	7.1	28.4	9.5	99.9	1952	20.1	18.6
Bolivia(d)	1960-65	(f)5.6	43-45	20-22	(f)75.7	1949-51	20.1	20.1

For footnotes see next page.

VITAL STATISTICS RATES: CERTAIN COUNTRIES—LATEST AVAILABLE
YEAR—continued

Country	Rates(a)					True death rates(b)		
	Year	Marriage	Birth	Death	Infant mortality	Year	Male	Female
Asia—								
China (mainland)(d)	1957	n.a.	34	11	n.a.	n.a.	n.a.	n.a.
India(d)	1951-61	n.a.	41.7	22.8	139	1951-60	23.9	24.7
Indonesia	1962	10.6	(d)43.0	(d)21.4	(j)125	1960	21.1	21.1
Pakistan(d)	1965	n.a.	49	18	(k)142	1962	18.6	20.5
Japan	1967	9.5	19.4	6.8	15.0	1966	14.6	13.6
Thailand	1966	(j)3.6	(d)(f)46.0	(d)(f)12.9	33.5	1960	18.7	17.0
Korea, Republic of(d)	1955-60	(j)12.0	44.7	16.0	(j)58.0	1955-60	19.6	18.6
China, Republic of (Taiwan)	1968	7.6	29.3	5.5	(c)(m)20.6	1965	15.2	14.2
Ceylon	1967	(i)5.9	31.6	8.2	(j)53.2	1962	16.2	16.3
West Malaysia (Malaya)	1967	1.0	35.2	7.5	(i)47.9	1965	16.0	15.6
Hong Kong	1968	n.a.	21.8	5.0	22.3	1968	15.0	13.6
Israel	1968	8.2	25.6	6.7	(c)25.9	(n)1967	14.2	13.6
Jordan	1959-63	(c)5.4	47	16	(c)30.6	1959-63	19.0	19.2
Singapore	1968	6.3	23.7	5.5	(c)24.8	n.a.	n.a.	n.a.
Europe—								
Germany, Federal Republic of	1968	7.3	19.7	11.9	(c)22.8	1964-66	14.8	13.6
United Kingdom of Great Britain and Northern Ireland	1968	(c)8.0	17.1	11.9	18.8	1963-65	14.7	13.5
Ireland	1968	(c)8.0	16.9	11.9	18.3	1965-67	14.6	13.4
England and Wales	1968	7.5	22.1	10.6	24.0	1965-67	14.7	13.6
Northern Ireland	1968	8.4	18.3	12.2	20.8	1967	14.8	13.6
Scotland	1968	7.1	17.3	9.9	(c)32.8	1960-62	14.9	13.8
Italy	1968	7.2	16.8	11.0	20.4	1966	14.7	13.3
France	1968	7.1	20.5	8.7	32.0	1960	14.9	13.9
Spain	1968	8.0	16.3	7.6	(c)38.1	1963-65	14.8	13.7
Poland	1968	8.4	18.9	8.6	(c)61.4	1961-62	16.0	15.2
Yugoslavia	1967	8.0	27.4	9.3	46.6	1963	15.3	14.2
Romania	1967	8.4	15.1	10.1	22.9	1966	14.9	13.6
Czechoslovakia	1968	9.2	18.6	8.2	(c)13.4	1966	14.1	13.1
Netherlands	1968	9.5	15.1	10.9	(c)37.0	1964	14.9	13.9
Hungary	1968	7.2	14.9	12.6	(c)23.4	1959-63	14.8	13.6
Belgium	1968	8.1	20.5	10.0	(c)59.2	1959-62	16.5	15.1
Portugal	1968	7.8	18.2	8.3	34.4	1960-62	14.8	14.1
Greece	1968	8.9	16.9	8.6	28.2	1960-62	14.7	14.0
Bulgaria	1968	6.5	14.3	10.4	(c)12.9	1961-65	14.0	13.2
Sweden	1968	7.6	17.1	13.0	25.5	1967	15.0	13.6
Austria	1968	7.4	17.4	9.4	(c)17.5	1938-63	14.6	13.5
Switzerland	1967	8.5	16.8	9.9	15.8	1965-66	14.3	13.4
Denmark	1968	8.6	16.0	9.6	14.0	1961-65	15.3	13.8
Finland	1968	(c)7.7	17.7	9.7	(i)14.6	1961-65	14.1	13.2
Norway	1968	6.5	20.9	11.3	(c)24.4	1960-62	14.7	13.9
Ireland	1968	7.8	35.6	8.0	(j)86.8	1963-64	15.7	15.2
Albania	1968							
Oceania—								
Australia	1968	8.8	20.0	9.1	17.8	1960-62	14.7	13.5
New Zealand	1968	8.7	22.6	8.9	18.7	1960-62	14.6	13.6
U.S.S.R.—								
Union of Soviet Socialist Republics	1968	8.9	17.3	7.7	26.5	1966-67	14.3	

(a) Crude marriage, birth and death rates, i.e. number of marriages, births and deaths per 1,000 of population. Infant mortality—number of deaths of children under one year of age per 1,000 live births. (b) Number of deaths per 1,000 males and 1,000 females respectively in stationary population (see explanation on page 177). (c) 1967. (d) Estimated. (e) African population only. (f) 1954. (g) 1950. (h) 1968. (i) 1966. (j) 1965. (k) 1962-65. (l) 1964. (m) Excludes live born infants dying before registration of birth. (n) Jewish population.