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CHAPTER 9

# 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 1966 for marriages and 1965 for births, deaths and infant deaths. Comparisons have been restricted, in general, to the individual years 1962 to 1966 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 bulletin, *Demography*. Commencing with the year 1963 a separate annual bulletin *Causes of Death* has been published. This contains the detailed tables based on the International Statistical Classification of Diseases, Injuries and Causes of Death which were formerly published in *Demography*. Current information is published in the *Monthly Review of Business Statistics*, the *Quarterly Summary of Australian Statistics* and the *Australian Demographic Review* (a mimeographed series issued at intervals throughout the year on population and vital statistics).

Figures of births and deaths for Australia are exclusive throughout of full-blood Aborigines.\*

Vital statistics for the principal 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 in respect of the Northern Territory from South Australia in 1911 and in respect of the Australian Capital Territory from New South Wales in 1930. 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, 42 days in South Australia, and 60 days in other States. For the registration of a death the period allowed is 8 days in Tasmania, 10 days in South Australia, 14 days in 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 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.

The registration of stillbirths is compulsory in all the States and Territories except Tasmania. Western Australia in 1908 was the first State to introduce compulsory registration, followed by the Australian Capital Territory in 1930, New South Wales in 1935, South Australia in 1937, the Northern Territory in 1949, Victoria in 1953, and Queensland in 1959. Stillbirths are entered in both the birth and death registers in New South Wales and Western Australia, in the birth register in the Australian Capital Territory and the Northern Territory, and in separate stillbirth registers in Victoria, South Australia and Tasmania. Stillbirths are not entered in a register in Queensland but the papers are kept for a period of at least ten years. In this chapter stillbirths have been excluded from all tables of births and deaths and are shown only in those specially relating to stillbirths.

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

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\* *See* Appendix for results of *Constitution Alteration (Aboriginals)* 1967 Referendum.

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 1962 to 1966, 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. A graph showing the number of marriages in each year from 1870 to 1966 appears on plate 18 opposite.

MARRIAGES: STATES AND TERRITORIES, 1941 TO 1966

| 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— | | | | | | | | | |
| 1962 . . | 30,360 | 22,393 | 10,642 | 7,021 | 5,466 | 2,485 | 243 | 480 | 79,090 |
| 1963 . . | 30,999 | 22,061 | 11,431 | 7,302 | 5,755 | 2,579 | 260 | 529 | 80,916 |
| 1964 . . | 32,633 | 24,169 | 11,752 | 7,765 | 6,023 | 2,869 | 233 | 569 | 86,013 |
| 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 |

CRUDE MARRIAGE RATES(a): STATES AND TERRITORIES, 1941 TO 1966

| 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 20 | 8.29 |
| 1956–60 . | 7.70 | 7.50 | 7.14 | 7.26 | 7.36 | 7.69 | 8.63 | 7.51 | 7.50 |
| 1961–65(b) . | 7.85 | 7.64 | 7.27 | 7.41 | 7.42 | 7.49 | 8.13 | 7.25 | 7.62 |
| Annual rate— | | | | | | | | | |
| 1962(b) . | 7.62 | 7.51 | 6.90 | 7.13 | 7.23 | 6.99 | 8.6 | 7.3 | 7.39 |
| 1963(b) . | 7.66 | 7.26 | 7.29 | 7.25 | 7.40 | 7.15 | 8.6 | 7.2 | 7.42 |
| 1964(b) . | 7.95 | 7.79 | 7.35 | 7.51 | 7.56 | 7.87 | 7.1 | 7.1 | 7.74 |
| 1965(b) . | 8.43 | 8.35 | 7.95 | 8.16 | 7.92 | 7.85 | 8.4 | 7.6 | 8.25 |
| 1966 . | 8.40 | 8.42 | 8.02 | 8.30 | 8.37 | 7.93 | 8.4 | 7.7 | 8.32 |

(a) Number of marriages per 1,000 of mean population. (b) Recalculated from population figures revised in accordance with preliminary results of the census of 30 June 1966.

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.

# BIRTHS, DEATHS AND MARRIAGES
## AUSTRALIA, 1870 TO 1966



PLATE 18
213
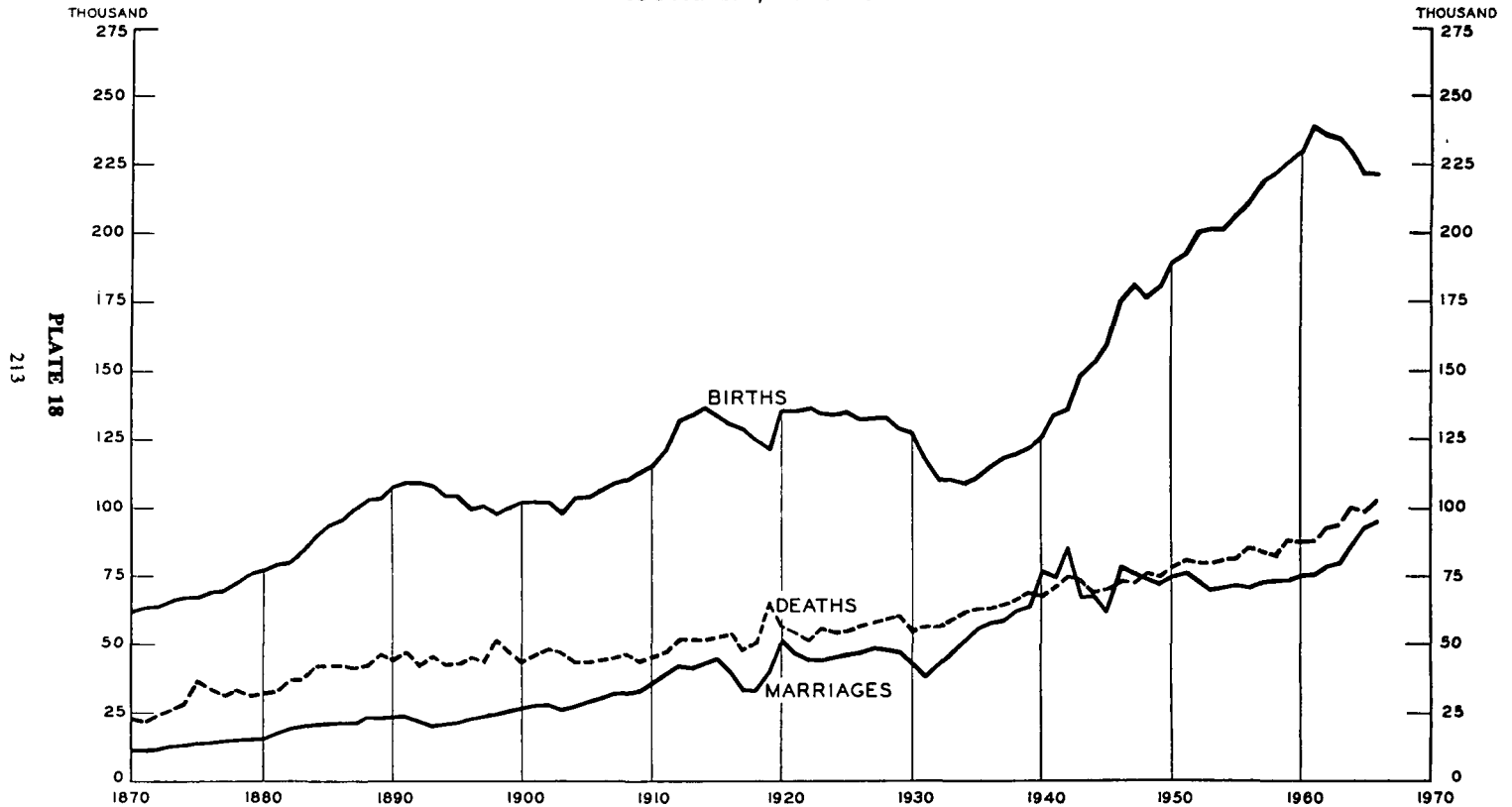
**Marriage rates based on marriageable population**

As the marriage rates in some international tabulations are based on the unmarried population aged 15 years and over, the corresponding rates have been calculated for Australia for the nine census periods to 1960–62. The period in each case comprises the census year with the year immediately preceding and the year immediately following, and the figures are as follows.

### PERSONS MARRYING PER 1,000 OF UNMARRIED POPULATION: AUSTRALIA 1880-82 TO 1960-62

| Period | Rate(a) | Period | Rate(a) |
|--------|---------|--------|---------|
| 1880–82 . | 48.63 | 1932–34 . | 42.88 |
| 1890–92 . | 44.04 | 1946–48 . | 71.24 |
| 1900–02 . | 42.14 | 1953–55 . | 65.32 |
| 1910–12 . | 50.12 | 1960–62 . | 62.27 |
| 1920–22 . | 55.97 | | |

(a) Average annual number of persons who married per 1,000 unmarried persons, including widowed and divorced, aged 15 years and over.

**Age and marital status at marriage**

Particulars of age at marriage in age groups, and previous marital status, of bridegrooms and brides in 1966 are given hereunder. There were 14,148 males under 21 years of age married during 1966, while the corresponding number of females was 41,285. At the other extreme there were 1,073 bridegrooms and 576 brides in the age group 65 years and over.

### AGE AND MARITAL STATUS OF BRIDEGROOMS AND BRIDES AUSTRALIA, 1966(a)

| Age at marriage (years) | Bridegrooms | | | | Brides | | | |
|---|---|---|---|---|---|---|---|---|
| | Bach-elors | Wid-owers | Divorced | Total | Spinsters | Widows | Divorced | Total |
| Under 20 . | 7,917 | 1 | .. | 7,918 | 28,882 | 7 | 6 | 28,895 |
| 20–24 . . | 46,683 | 20 | 81 | 46,784 | 45,780 | 88 | 360 | 46,228 |
| 25–29 . . | 22,060 | 74 | 682 | 22,816 | 8,145 | 167 | 1,049 | 9,361 |
| 30–34 . . | 5,771 | 127 | 990 | 6,888 | 2,061 | 220 | 1,050 | 3,331 |
| 35–39 . . | 2,459 | 193 | 1,049 | 3,701 | 932 | 288 | 972 | 2,192 |
| 40–44 . . | 1,169 | 252 | 897 | 2,318 | 512 | 384 | 815 | 1,711 |
| 45–49 . . | 511 | 338 | 727 | 1,576 | 315 | 523 | 626 | 1,464 |
| 50–54 . . | 303 | 468 | 534 | 1,305 | 194 | 462 | 397 | 1,053 |
| 55–59 . . | 170 | 461 | 316 | 947 | 123 | 403 | 204 | 730 |
| 60–64 . . | 95 | 437 | 188 | 720 | 91 | 327 | 87 | 505 |
| 65 and over . | 101 | 838 | 134 | 1,073 | 75 | 440 | 61 | 576 |
| Total . | 87,239 | 3,209 | 5,598 | 96,046 | 87,110 | 3,309 | 5,627 | 96,046 |

(a) Corresponding particulars for 1965 are published in *Demography*, Bulletin No. 83, 1965 and in *Australian Demographic Review* No. 227, *Marriages 1965.*

In the following table the proportional distribution of bridegrooms and brides according to previous marital status is shown in five year-periods from 1936–40 to 1961–65 and for each of the years 1962 to 1966.

## MARITAL STATUS OF BRIDEGROOMS AND BRIDES: PROPORTIONAL DISTRIBUTION, AUSTRALIA, 1936 TO 1966

### (Per cent)

| Period | Bridegrooms | | | | Brides | | | |
|---|---|---|---|---|---|---|---|---|
| | Bach-elors | Wid-owers | Divorced | Total | Spinsters | Widows | Divorced | Total |
| 1936–40 . . | 92.59 | 4.82 | 2.59 | 100.00 | 93.94 | 3.38 | 2.68 | 100 00 |
| 1941–45 . . | 91.44 | 4.77 | 3.79 | 100 00 | 92.11 | 3.93 | 3 96 | 100 00 |
| 1946–50 . . | 88.82 | 4.74 | 6.44 | 100 00 | 88.71 | 4.74 | 6 55 | 100 00 |
| 1951–55 . . | 88.77 | 4.63 | 6 60 | 100 00 | 88.04 | 4.81 | 7.15 | 100 00 |
| 1956–60 . . | 89.86 | 4.18 | 5 96 | 100.00 | 88.80 | 4.47 | 6.73 | 100 00 |
| 1961–65 . . | 90.55 | 3.68 | 5.77 | 100.00 | 90.04 | 3.87 | 6.09 | 100.00 |
| 1962 . . | 90 18 | 3.87 | 5.95 | 100 00 | 89.58 | 4.04 | 6.38 | 100 00 |
| 1963 . . | 90 53 | 3.77 | 5.70 | 100 00 | 90.01 | 3.85 | 6.14 | 100 00 |
| 1964 . . | 90.78 | 3.53 | 5.69 | 100.00 | 90.30 | 3.74 | 5 96 | 100 00 |
| 1965 . . | 91.01 | 3.35 | 5 64 | 100.00 | 90.70 | 3.49 | 5 81 | 100 00 |
| 1966 . . | 90.83 | 3.34 | 5.83 | 100.00 | 90.69 | 3.45 | 5.86 | 100.00 |

The relative ages of bridegrooms and brides in 1966 are shown below in age groups of five years.

### RELATIVE AGES OF BRIDEGROOMS AND BRIDES: AUSTRALIA, 1966(a)

| Age of bridegroom (years) | Total bride-grooms | Age of bride (years) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Under 15 | 15–19 | 20–24 | 25–29 | 30–34 | 35–39 | 40–44 | 45 and over |
| Under 20 . | 7,918 | 3 | 6,621 | 1,254 | 33 | 7 | .. | .. | . |
| 20–24 . . | 46,784 | 5 | 17,750 | 27,240 | 1,615 | 136 | 30 | 6 | 2 |
| 25–29 . . | 22,816 | .. | 3,845 | 14,013 | 4,129 | 609 | 173 | 32 | 15 |
| 30–34 . . | 6,888 | .. | 528 | 2,689 | 2,170 | 974 | 348 | 126 | 53 |
| 35–39 . . | 3,701 | .. | 112 | 738 | 924 | 848 | 590 | 327 | 162 |
| 40–44 . . | 2,318 | .. | 23 | 196 | 320 | 449 | 527 | 436 | 367 |
| 45–49 . . | 1,576 | .. | 4 | 58 | 106 | 180 | 295 | 271 | 562 |
| 50–54 . . | 1,305 | .. | 2 | 23 | 41 | 85 | 135 | 236 | 783 |
| 55–59 . | 947 | .. | 1 | 13 | 14 | 25 | 62 | 125 | 707 |
| 60–64 | 720 | .. | 1 | 3 | 5 | 14 | 22 | 41 | 634 |
| 65 and over | 1,073 | .. | .. | 1 | 4 | 4 | 10 | 11 | 1,043 |
| Total brides | 96,046 | 8 | 28,887 | 46,228 | 9,361 | 3,331 | 2,192 | 1,711 | 4,328 |

(a) Corresponding particulars for 1965 are published in *Demography*, Bulletin No. 83 1965 and in *Australian Demographic Review* No. 227, *Marriages 1965*.

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 1966 were: 1962. 24 68; 1963, 24.42; 1964, 24.31; 1965, 24.09; and 1966, 24.02. The average ages, in years, of bridegrooms were: 1962, 28.03; 1963, 27.76; 1964, 27 58; 1965. 27 24 ;and 1966, 27.10. The difference in the average age at marriage between brides and bridegrooms is generally just over three years, the difference in 1966 being 3.08 years.

**Previous marital status**

The following table shows the relative marital status of bridegrooms and brides in 1966.

## MARITAL STATUS OF BRIDEGROOMS AND BRIDES
### AUSTRALIA, 1966

| Marital status of bridegrooms | Total bride- grooms | Marital status of brides | | |
|---|---|---|---|---|
| | | Spinsters | Widows | Divorced |
| Bachelors   .    .    . | 87,239 | 83,164 | 1,118 | 2,957 |
| Widowers   .    .    . | 3,209 | 975 | 1,451 | 783 |
| Divorced   .    .    . | 5,598 | 2,971 | 740 | 1,887 |
| Total brides    . | 96,046 | 87,110 | 3,309 | 5,627 |

**Countries of birth of persons marrying**

The following table shows the relative countries of birth of bridegrooms and brides married in 1966.

## RELATIVE COUNTRIES OF BIRTH OF BRIDEGROOMS AND BRIDES
### AUSTRALIA, 1966(a)

| Country of birth of bridegroom | Country of birth of bride | | | | | | | | | | | Total bride- grooms |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Austra- lia | New Zeal- and | United King- dom and Ireland | Ger- many | Greece | Italy | Nether- lands | Malta | Yugo- slavia | Other Euro- pean | Other and un specified | |
| Australia.    . | 63,934 | 247 | 3,904 | 799 | 46 | 172 | 593 | 137 | 59 | 426 | 625 | 70,942 |
| New Zealand   . | 612 | 47 | 47 | 5 | 1 | .. | 6 | 3 | .. | 11 | 10 | 742 |
| United Kingdom and Ireland   . | 5,140 | 65 | 1,716 | 130 | 8 | 16 | 100 | 32 | 3 | 70 | 148 | 7,428 |
| Germany    . | 900 | 22 | 150 | 325 | 11 | 12 | 41 | 11 | 17 | 94 | 41 | 1,624 |
| Greece   .    . | 147 | 5 | 17 | 8 | 3,701 | 7 | 4 | 3 | 6 | 8 | 76 | 3,982 |
| Italy    .    . | 773 | 8 | 91 | 62 | 19 | 2,160 | 32 | 22 | 32 | 50 | 38 | 3,287 |
| Netherlands   . | 902 | 9 | 128 | 50 | .. | 8 | 317 | 10 | 2 | 26 | 29 | 1,481 |
| Malta    .    . | 229 | 1 | 52 | 12 | 6 | 3 | 10 | 548 | 1 | 6 | 13 | 881 |
| Yugoslavia    . | 317 | 5 | 34 | 90 | 48 | 64 | 13 | 10 | 502 | 71 | 24 | 1,178 |
| Other European | 971 | 23 | 159 | 220 | 34 | 22 | 38 | 10 | 53 | 765 | 80 | 2,375 |
| Other and un- specified    . | 1,076 | 17 | 152 | 43 | 88 | 15 | 29 | 10 | 8 | 44 | 644 | 2,126 |
| Total brides | 75,001 | 449 | 6,450 | 1,744 | 3,962 | 2,479 | 1,183 | 796 | 683 | 1,571 | 1,728 | 96,046 |

(a) Corresponding particulars for 1965 are published    *Demography*, Bulletin No. 83, 1965 and in *Australian Demographic Review* No. 227, *Marriages 1965*.

**Occupation of bridegrooms**

The distribution of the 96,046 bridegrooms for 1966 among classes of occupations was as follows: craftsmen, 31,978; administrative and clerical workers, 13,006; labourers, 11,187; rural and mining workers, 8,186; professional and technical workers, 10,108; workers in transport and communication, 6,853; service, sport, and other workers, 7,009; sales workers, 5,930; persons not in the work force, 1,789.

**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: hat purpose with the Registrar 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 1964 belonged to more than fifty different denominations, some of which, however, have only very few adherents. The categories 'Ministers of Other recognised denominations' and 'Other

ministers' combine ministers of some of these denominations. The figures for 1966 are shown in the following table.

## MARRIAGES IN EACH DENOMINATION: STATES AND TERRITORIES, 1966(a)

| Category of celebrant | N.S.W. | Vic. | Qld | S.A. | W.A. | Tas. | N.T. | A.C.T. | Australia No. | Australia Proportion of total |
|---|---|---|---|---|---|---|---|---|---|---|
| **Ministers of religion—** | | | | | | | | | | |
| **Recognised denominations—** | | | | | | | | | | |
| Church of England | 11,327 | 6,079 | 3,448 | 1,894 | 2,235 | 1,097 | 48 | 192 | 26,320 | 27.4 |
| Roman Catholic | 9,882 | 7,631 | 3,644 | 1,814 | 1,851 | 652 | 88 | 246 | 25,808 | 26.9 |
| Methodist | 3,162 | 2,909 | 1,911 | 2,258 | 817 | 416 | 34 | 28 | 11,535 | 12.0 |
| Presbyterian | 3,195 | 4,097 | 1,931 | 358 | 392 | 141 | 4 | 48 | 10,166 | 10.6 |
| Orthodox | 1,544 | 1,761 | 111 | 259 | 63 | 18 | 25 | 18 | 3,799 | 4.0 |
| Baptist | 567 | 435 | 232 | 201 | 101 | 79 | .. | 7 | 1,622 | 1.7 |
| Lutheran | 148 | 268 | 373 | 495 | 35 | 7 | 12 | 18 | 1,356 | 1.4 |
| Congregational | 277 | 360 | 112 | 319 | 105 | 47 | 46 | 4 | 1,270 | 1.3 |
| Churches of Christ | 143 | 457 | 105 | 276 | 132 | 19 | .. | 14 | 1,146 | 1.2 |
| Salvation Army | 147 | 130 | 89 | 62 | 43 | 17 | 1 | 1 | 490 | 0.5 |
| Jewry | 124 | 188 | 2 | 3 | 15 | .. | .. | .. | 332 | 0.3 |
| Seventh-day Adventist | 114 | 83 | 71 | 32 | 32 | 11 | .. | .. | 343 | 0.3 |
| Christian Brethren | 40 | 41 | 28 | 6 | 11 | 31 | .. | 1 | 158 | 0.2 |
| Jehovah's Witnesses | 54 | 35 | 35 | 10 | 19 | 4 | .. | 1 | 158 | 0.2 |
| Church of Jesus Christ of Latter Day Saints. | 44 | 40 | 21 | 17 | 14 | 7 | .. | 2 | 145 | 0.1 |
| Assemblies of God | 25 | 12 | 43 | 13 | .. | 1 | .. | .. | 94 | 0.1 |
| Other recognised denominations | 120 | 128 | 94 | 49 | 114 | 24 | 4 | 2 | 535 | 0.6 |
| Other ministers | 98 | 274 | 16 | 9 | 16 | .. | .. | .. | 413 | 0.4 |
| **Total, ministers** | 31,011 | 24,928 | 12,266 | 8,075 | 5,995 | 2,571 | 262 | 582 | 85,690 | 89.2 |
| Civil officers | 4,564 | 2,161 | 1,059 | 976 | 1,006 | 375 | 50 | 165 | 10,356 | 10.8 |
| **Grand total** | 35,575 | 27,089 | 13,325 | 9,051 | 7,001 | 2,946 | 312 | 747 | 96,046 | 100.0 |
| **Proportion of total (per cent)—** | | | | | | | | | | |
| Ministers of religion | 87.17 | 92.02 | 92.05 | 89.22 | 85.63 | 87.27 | 83.97 | 77.91 | 89.2 | .. |
| Civil officers | 12.83 | 7.98 | 7.95 | 10.78 | 14.37 | 12.73 | 16.03 | 22.09 | 10.8 | .. |

(a) Corresponding particulars for 1965 are published in *Demography*, Bulletin No. 83, 1965 and in *Australian Demographic Review* No. 227, *Marriages 1965*.

## Divorce

The number of dissolutions of marriage, nullities of marriage and judicial separations was 8,534 in 1965 and 9,921 in 1966. Further information may be found in the chapter Public Justice.

## Fertility and reproduction

Natural increase has been a significant element of increase in the population of Australia for many years. The level of natural increase depends on 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 and confinements

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. The number of live births registered in Australia during 1965 is shown in the following table. The table shows also the number of confinements resulting in one or more live births. The figures exclude cases where the births were of still-born children only.

## LIVE BIRTHS AND CONFINEMENTS: STATES AND TERRITORIES, 1965

| | N.S.W. | Vic. | Qld | S.A. | W.A. | Tas. | N.T. | A.C.T. | Aust. |
|---|---|---|---|---|---|---|---|---|---|

### LIVE BIRTHS

| | N.S.W. | Vic. | Qld | S.A. | W.A. | Tas. | N.T. | A.C.T. | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| Single births | 76,324 | 62,248 | 32,817 | 20,432 | 15,845 | 7,403 | 904 | 2,136 | 218,109 |
| Twins . | 1,724 | 1,266 | 722 | 441 | 338 | 126 | 10 | 22 | 4,649 |
| Triplets . | 21 | 36 | 12 | 18 | 3 | 6 | .. | .. | 96 |
| Males . | 40,219 | 32,494 | 17,250 | 10,778 | 8,280 | 3,876 | 454 | 1,115 | 114,466 |
| Females . | 37,850 | 31,056 | 16,301 | 10,113 | 7,906 | 3,659 | 460 | 1,043 | 108,388 |
| Total | 78,069 | 63,550 | 33,551 | 20,891 | 16,186 | 7,535 | 914 | 2,158 | 222,854 |

### STILLBIRTHS ASSOCIATED WITH MULTIPLE BIRTHS INCLUDED ABOVE

| | N.S.W. | Vic. | Qld | S.A. | W.A. | Tas. | N.T. | A.C.T. | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| Twins . | 46 | 12 | 14 | 5 | 14 | 2 | .. | .. | 93 |

### CONFINEMENTS RESULTING IN BIRTHS SHOWN ABOVE

| | N.S.W. | Vic. | Qld | S.A. | W.A. | Tas. | N.T. | A.C.T. | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| Nuptial . | 71,574 | 59,681 | 30,029 | 19,365 | 14,594 | 7,003 | 807 | 2,085 | 205,138 |
| Ex-nuptial . | 5,642 | 3,218 | 3,160 | 1,296 | 1,428 | 466 | 102 | 62 | 15,374 |
| Total | 77,216 | 62,899 | 33,189 | 20,661 | 16,022 | 7,469 | 909 | 2,147 | 220,512 |

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 live-born, the confinement has been treated as a single birth. However, the numbers of multiple births are not significantly affected. *See also* page 226.

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 1962 to 1966 are given in the following table. Corresponding figures for each five-year period from 1861 to 1950 were published in Year Book No. 39, page 583.

## LIVE BIRTHS: STATES AND TERRITORIES, 1941 TO 1966

| 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— | | | | | | | | | |
| 1962 . | 85,439 | 65,890 | 35,690 | 21,361 | 17,064 | 8,894 | 924 | 1,819 | 237,081 |
| 1963 . | 84,065 | 65,649 | 35,934 | 21,367 | 17,290 | 8,530 | 859 | 1,995 | 235,689 |
| 1964 . | 80,518 | 64,990 | 34,972 | 20,866 | 16,685 | 8,252 | 911 | 1,955 | 229,149 |
| 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 |

**Crude birth rates**

The oldest and most popular method of measuring fertility is to relate the number of births to the total population, thus obtaining 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 221, 223-4. Crude birth rates for each five-year period from 1941 to 1965 and for each year from 1962 to 1966 for each State and Territory are set out below.

CRUDE BIRTH RATES(a): STATES AND TERRITORIES, 1941 TO 1966

| 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(b) | 20.52 | 21.45 | 22.53 | 21.16 | 21.76 | 23.44 | 29.70 | 26.57 | 21.38 |
| Annual rates— | | | | | | | | | |
| 1962(b) . | 21.44 | 22.09 | 23.15 | 21.68 | 22.58 | 25.01 | 32.8 | 27.5 | 22.16 |
| 1963(b) . | 20.77 | 21.59 | 22.92 | 21.21 | 22.24 | 23.66 | 28.5 | 27.2 | 21.62 |
| 1964(b) . | 19.61 | 20.94 | 21.86 | 20.18 | 20.94 | 22.64 | 27.7 | 24.3 | 20.61 |
| 1965(b) . | 18.72 | 20.09 | 20.56 | 19.65 | 19.87 | 20.49 | 26.0 | 24.4 | 19.66 |
| 1966 . | 18.37 | 19.88 | 19.77 | 18.64 | 20.33 | 19.93 | 26.1 | 24.0 | 19.28 |

(a) Number of births per 1,000 of mean population. (b) Recalculated from population figures revised in accordance with preliminary results of the census of 30 June 1966.

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

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 1965—New South Wales, 18.68; Victoria, 19.77; Queensland, 20.82; South Australia, 19.77; Western Australia, 20.09; Tasmania, 20.42; Northern Territory, 27.7; and Australian Capital Territory, 23 8. *See* Year Book No. 47 (p. 339) for the effect of the variations in the availability of hospital facilities on the birth rate in the Australian Capital Territory and in the neighbouring town of Queanbeyan in New South Wales.

A graph showing the birth rate for each year from 1870 to 1966 will be found over the page. 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.
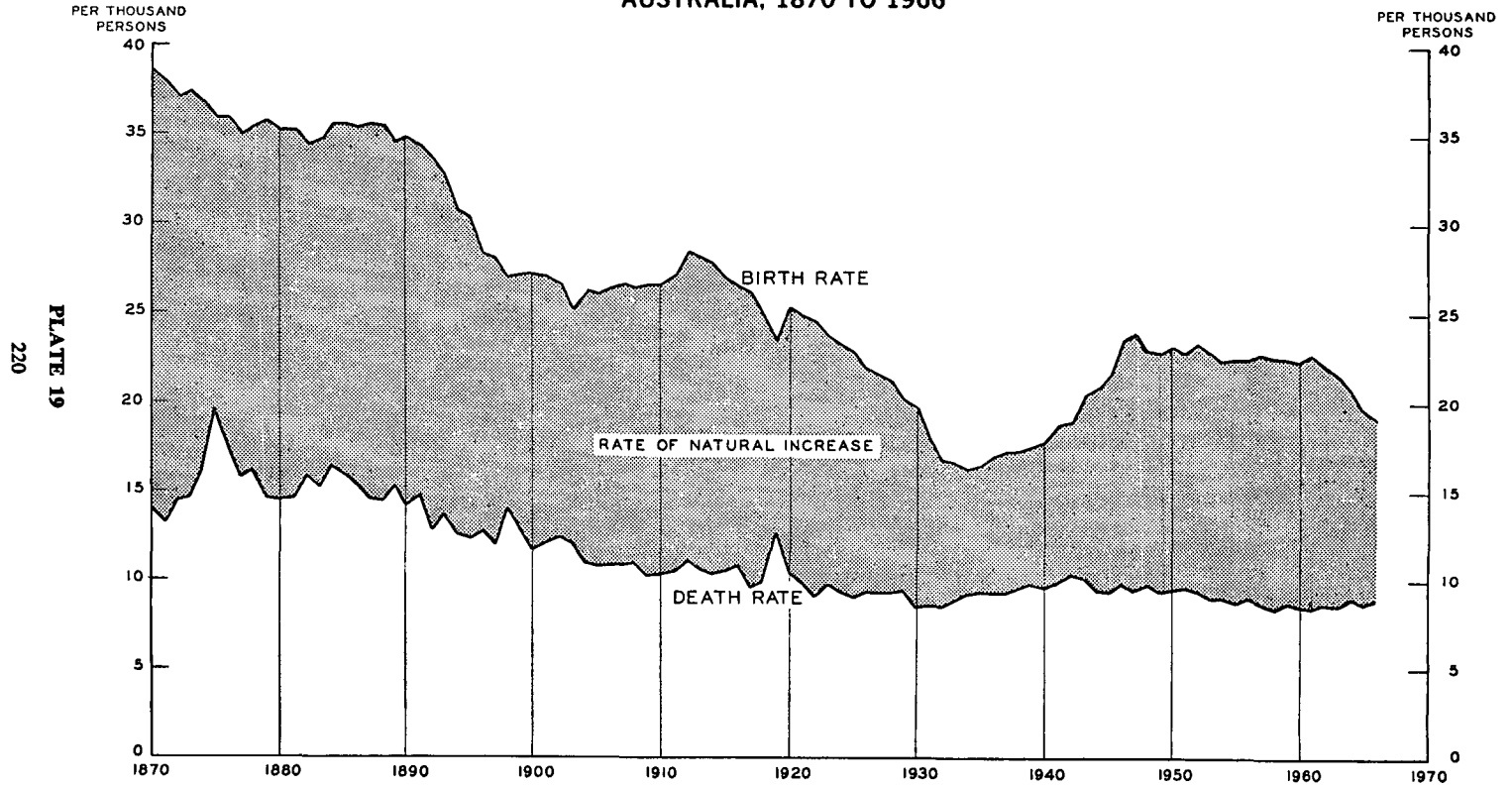
**Fertility rates**

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 higher proportion of married women of child-bearing age will have a much 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.

# RATES OF BIRTHS, DEATHS AND NATURAL INCREASE

## AUSTRALIA, 1870 TO 1966



PER THOUSAND
PERSONS

PER THOUSAND
PERSONS

BIRTH RATE

RATE OF NATURAL INCREASE

DEATH RATE

PLATE 19

220

## CRUDE BIRTH RATES AND FERTILITY RATES: AUSTRALIA, 1880-82 TO 1960-62

| Period | Average annual rates | | | Index nos. (Base: 1880–82 = 100) | | |
|---|---|---|---|---|---|---|
| | | Fertility rates | | | Fertility rates | |
| | Crude birth rate(a) | Births per 1,000 women aged 15–44 years | Nuptial births per 1,000 married women aged 15–44 years | Crude birth rate(a) | 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 |

(a) 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 1965. A graph showing the age-specific birth rates for each year during the period 1941 to 1965 appears on the following page.

### AGE-SPECIFIC BIRTH RATES:(a) AUSTRALIA, 1941 TO 1965

| Age group (years) | 1941 | 1946 | 1951 | 1956 | 1961 | 1963 | 1964 | 1965 |
|---|---|---|---|---|---|---|---|---|
| 15–19 . . | 24.30 | 26.30 | 38.33 | 43.09 | 47.37 | 46.04 | 46.74 | 47.35 |
| 20–24 . . | 121.26 | 151.86 | 177.86 | 210.10 | 225.21 | 207.03 | 189.92 | 179.10 |
| 25–29 . . | 145.07 | 184.59 | 185.23 | 203.15 | 220.16 | 210.86 | 197.88 | 187.90 |
| 30–34 . . | 103.24 | 133.62 | 122.31 | 123.58 | 131.31 | 123.21 | 118.44 | 109.10 |
| 35–39 . . | 58.11 | 76.66 | 65.92 | 64.22 | 63.22 | 59.81 | 58.39 | 53.16 |
| 40–44 . . | 19.30 | 24.47 | 20.51 | 19.72 | 19.16 | 18.41 | 16.50 | 14.85 |
| 45–49 . . | 1.67 | 2.06 | 1.61 | 1.57 | 1.42 | 1.11 | 1.16 | 1.12 |

(a) Number of births per 1,000 women in each age group. Rates for dates subsequent to 1961 are based on the age distribution at the census of 30 June 1961 (adjusted only for 'not stated' ages) and on subsequent births, recorded ages at death and recorded ages of migrants.

### 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 un-affected by the age composition of the potential mothers, and consequently it shows more clearly

# BIRTH RATES, BY AGE OF MOTHER

## AUSTRALIA, 1941 TO 1965

### (NUMBER OF BIRTHS PER 1,000 OF FEMALE POPULATION IN EACH AGE GROUP)



RATIO GRAPH

AGES 25-29

AGES 20-24

AGES 30-34

AGES 35-39

AGES 15-19

AGES 40-44

BIRTHS PER 1,000 OF FEMALE POPULATION

YEAR OF REGISTRATION
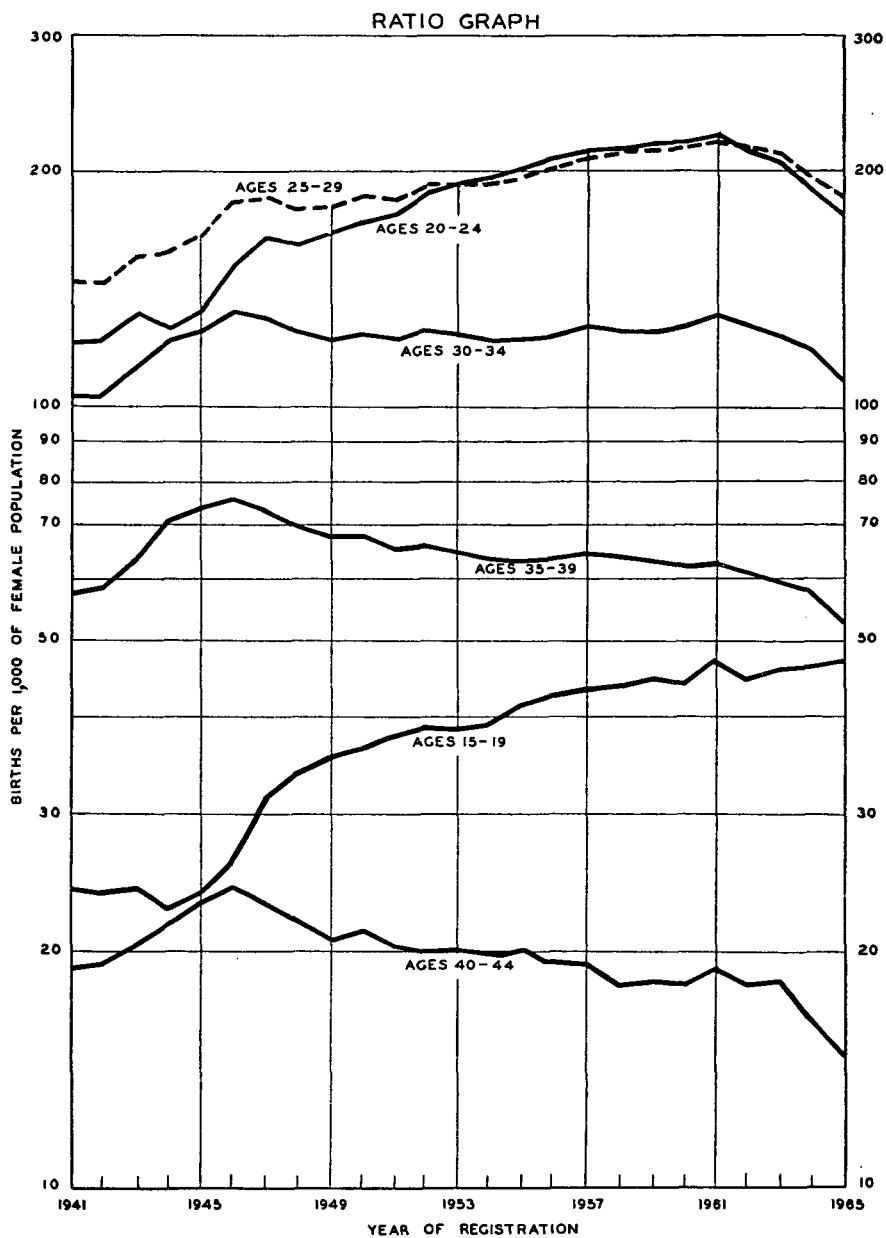
NOTE. THE VERTICAL SCALE IS LOGARITHMIC, AND THE CURVES RISE AND FALL ACCORDING TO
THE RATE OF INCREASE OR DECREASE; ACTUAL NUMBERS ARE INDICATED BY THE SCALE.

PLATE 20

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 were 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 224.

GROSS AND NET REPRODUCTION RATES: AUSTRALIA, 1881 TO 1965

| Year | Gross reproduction rate | Net reproduction rate | Year | Gross reproduction rate | Net reproduction rate |
|---|---|---|---|---|---|
| 1881(a) . | 2.65 | (b) 1.88 | 1951 . . | 1.485 | (g) 1.409 |
| 1891(a) . | 2.30 | (b) 1.73 | 1954 . . | 1.558 | (h) 1.497 |
| 1901(a) . | 1.74 | (c) 1.39 | 1960 . . | 1.677 | (i) 1 623 |
| 1911 . . | 1.705 | (d) 1.421 | 1961 . . | 1.724 | (i) 1.668 |
| 1921 . . | 1.511 | (e) 1.313 | 1962 . . | 1 659 | (i) 1.605 |
| 1931 . . | 1.141 | (f) 1.039 | 1963 . . | 1.620 | (i) 1.567 |
| 1941 . . | 1.154 | (f) 1.053 | 1964 . . | 1.525 | (i) 1 475 |
| 1947 . . | 1.493 | (g) 1.416 | 1965 . . | 1.442 | (i) 1.395 |

(a) Approximate only.    (b) 1881–1890 mortality experience used.    (c) 1891–1900 mortality experience used.    (d) 1901–1910 mortality experience used.    (e) 1920–1922 mortality experience used.    (f) 1932–1934 mortality experience used.    (g) 1946–1948 mortality experience used.    (h) 1953–1955 mortality experience used.    (i) 1960–1962 mortality experience used.

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 1965. 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 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 | .. | Australia(a) . . | 1965 | 1.44 | 1.40 |
| Mauritius . . | 1964 | 2.94 | 2.54 | Norway . . | 1963 | 1.42 | 1.38 |
| Malaya . . . | 1960 | 2.9 | .. | France . . | 1964 | 1.42 | 1.37 |
| Ceylon . . . | 1961 | 2.5 | .. | England and Wales | 1963 | 1.39 | 1.34 |
| Thailand . . | 1954 | 2.26 | 1.70 | Belgium . . | 1963 | 1.30 | 1.25 |
| Chile . . . | 1964 | 2.16 | 1 83 | Yugoslavia . | 1963 | 1.29 | 1.06 |
| Ireland, Republic of | 1963 | 1.90 | 1 74 | Czechoslovakia . | 1963 | 1.22 | 1.18 |
| New Zealand . . | 1964 | 1.83 | 1.77 | Germany— | | | |
| Canada . . . | 1964 | 1.72 | 1.66 | Federal Rep. . | 1963 | 1.22 | 1.17 |
| United States of | | | | Democratic Rep. | 1960 | 1.16 | 1.06 |
| America . | 1963 | 1.62 | 1.56 | Sweden . . | 1964 | 1.21 | 1.18 |
| Netherlands . . | 1964 | 1.55 | 1.50 | Switzerland . . | 1962 | 1 20 | 1.16 |
| Portugal . . | 1960 | 1.52 | 1.33 | Japan . . . | 1963 | 0 96 | 0.92 |
| Scotland . . | 1964 | 1.49 | 1.44 | Hungary . . | 1964 | 0.87 | 0.81 |

(a) Excludes full-blood Aborigines.

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 confinements in each year to the marriages from which they could have resulted. Confinements of women of a certain number of years duration of marriage are related to the number of marriages taking place that number of years previously. The table below sets out this index of current fertility per marriage in respect of confinements in the individual years shown.

**FERTILITY OF MARRIAGES: AUSTRALIA, 1951 TO 1965**

| Year | Nuptial confine- ments per marriage | Year | Nuptial confine- ments per marriage | Year | Nuptial confine- ments per marriage |
|---|---|---|---|---|---|
| 1951 . | 2.55 | 1956 . | 2.76 | 1961 . | 3.05 |
| 1952 . | 2.63 | 1957 . | 2.87 | 1962 . | 2.98 |
| 1953 . | 2.66 | 1958 . | 2.88 | 1963 . | 2.92 |
| 1954 . | 2.66 | 1959 . | 2.93 | 1964 . | 2.78 |
| 1955 . | 2.71 | 1960 . | 2.96 | 1965 . | 2.62 |

*See* text following first table on page 223.

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. The figures for 1949 and subsequent years present a somewhat inflated index, as many of the births which have been used to calculate the index relate to marriages of immigrants which took place overseas and consequently are not included in Australian marriage records. Partial investigation suggests that this factor probably overstated the index by very little in 1949, but that the overstatement in recent years has been about 8 per cent.

**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 1964 to 1966.

**MASCULINITY(a) OF LIVE BIRTHS REGISTERED: AUSTRALIA, 1901 TO 1966**

|  | 1901-10 | 1911-20 | 1921-30 | 1931-40 | 1941-50 | 1951-60 | 1964 | 1965 | 1966 |
|---|---|---|---|---|---|---|---|---|---|
| Total births . . | 105 22 | 105.27 | 105.55 | 105.12 | 105.38 | 105.43 | 106.28 | 105.61 | 105.95 |
| Ex-nuptial births . | 104.08 | 105.25 | 105.16 | 105.36 | 105.34 | 103.99 | 106.00 | 107.47 | 103.91 |

(a) Number of males born for every 100 female births.

**Ex-nuptial live births**

The variations in the proportions of ex-nuptial live births as between the individual States and Territories for 1965 and for Australia at intervals from 1901 to 1965 are shown in the following table.

## EX-NUPTIAL LIVE BIRTHS
### NUMBER AND PROPORTION, STATES AND TERRITORIES, 1965

|  | N.S.W. | Vic. | Qld | S.A. | W.A. | Tas. | N.T. | A.C.T. | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| Number . . | 5,700 | 3,245 | 3,202 | 1,310 | 1,439 | 471 | 102 | 62 | 15,531 |
| Proportion of total births % | 7.30 | 5.11 | 9.54 | 6.27 | 8.89 | 6.25 | 11.16 | 2.87 | 6.97 |

## EX-NUPTIAL LIVE BIRTHS: NUMBER AND PROPORTION
### AUSTRALIA, 1901 TO 1965

|  | Annual average | | | | | | 1961 | 1962 | 1963 | 1964 | 1965 |
|---|---|---|---|---|---|---|---|---|---|---|---|
|  | 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 | 12,269 | 12,813 | 13,454 | 14,925 | 15,531 |
| Proportion of total births % . | 6.05 | 5.22 | 4.66 | 4.40 | 4.13 | 4.25 | 5.11 | 5.40 | 5.71 | 6.51 | 6.97 |

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; and 1960–62, 18.49. 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. The following table shows the relative ratios of ex-nuptial and nuptial births to the total population for periods from 1901.

### CRUDE EX-NUPTIAL, NUPTIAL, AND TOTAL BIRTH RATES(a)
### AUSTRALIA, 1901 TO 1965

| Birth rate | Annual average | | | | | | 1963 | 1964 | 1965 |
|---|---|---|---|---|---|---|---|---|---|
|  | 1901–10 | 1911–20 | 1921–30 | 1931–40 | 1941–50 | 1951–60 |  |  |  |
| Ex-nuptial. . | 1.60 | 1.39 | 1.04 | 0.76 | 0.90 | 0.97 | 1.23 | 1.34 | 1.37 |
| Nuptial . . | 24.91 | 25.18 | 21.40 | 16.47 | 20.99 | 21.75 | 20.38 | 19.27 | 18.29 |
| Total . | 26.51 | 26.57 | 22.44 | 17.23 | 21.89 | 22.72 | 21.62 | 20.61 | 19.66 |

(a) Number of births per 1,000 of mean population.

## 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 legitimation 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 1965 was 2,923.

### 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 still-born 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.

Multiple births recorded on this basis during 1965 comprised 2,371 cases of twins and 32 cases of triplets, the resultant numbers of live-born and still-born children being respectively 4,649 and 93 for twins, 96 and 0 for triplets. This represents an average of 10.75 recorded cases of twins and 0 15 recorded cases of triplets per 1,000 confinements or, alternatively, mothers of twins represented 1 in every 93 mothers and mothers of triplets 1 in every 6,891. Total cases of multiple births represented 10.90 per 1,000 confinements or 1 in every 92 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 1965 have been tabulated separately for male and female births, multiple births being distinguished from single births. For total births and for multiple births, the relative ages of parents are shown in *Demography*, Bulletin No. 83. In the following table the relative ages of parents are shown in five-year groups.

**CONFINEMENTS, BY RELATIVE AGES OF PARENTS: AUSTRALIA, 1965**

| Age of father (years) and type of birth | Total | Age of mother (years) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Under 15 | 15–19 | 20–24 | 25–29 | 30–34 | 35–39 | 40–44 | 45 and over | Not stated |
| Under 20 . . . | 3,557 | 1 | 3,027 | 513 | 13 | 2 | 1 | .. | .. | .. |
| 20–24 . . . | 38,049 | .. | 11,257 | 24,504 | 2,163 | 102 | 20 | 2 | 1 | .. |
| 25–29 . . . | 65,576 | .. | 2,518 | 31,518 | 28,798 | 2,473 | 247 | 22 | .. | .. |
| 30–34 . . . | 48,625 | .. | 425 | 7,609 | 23,586 | 15,069 | 1,793 | 140 | 3 | .. |
| 35–39 . . . | 30,704 | .. | 98 | 1,678 | 6,930 | 12,691 | 8,490 | 793 | 24 | .. |
| 40–44 . . . | 12,921 | .. | 17 | 290 | 1,291 | 3,388 | 5,518 | 2,362 | 53 | 2 |
| 45–49 . . . | 3,976 | .. | 5 | 79 | 243 | 674 | 1,490 | 1,347 | 138 | .. |
| 50–54 . . . | 1,273 | .. | 1 | 30 | 76 | 200 | 441 | 436 | 89 | .. |
| 55–59 . . . | 324 | .. | .. | 9 | 23 | 50 | 102 | 117 | 23 | .. |
| 60–64 . . . | 87 | .. | 1 | 2 | 9 | 19 | 33 | 18 | 5 | .. |
| 65 and over(a) . . | 46 | .. | .. | 2 | 2 | 9 | 15 | 17 | 1 | .. |
| Mothers of nuptial children — Single . | 202,894 | 1 | 17,241 | 65,654 | 62,412 | 34,209 | 17,855 | 5,186 | 334 | 2 |
| Twins . | 2,214 | .. | 108 | 575 | 713 | 460 | 288 | 67 | 3 | .. |
| Triplets . | 30 | .. | .. | 5 | 9 | 8 | 7 | 1 | .. | .. |
| Total . | 205,138 | 1 | 17,349 | 66,234 | 63,134 | 34,677 | 18,150 | 5,254 | 337 | 2 |
| Mothers of ex-nuptial children — Single . | 15,215 | 104 | 5,811 | 4,428 | 2,115 | 1,404 | 993 | 330 | 21 | 9 |
| Twins . | 157 | .. | 32 | 52 | 32 | 22 | 15 | 3 | .. | 1 |
| Triplets . | 2 | .. | .. | 2 | .. | .. | .. | .. | .. | .. |
| Total . | 15,374 | 104 | 5,843 | 4,482 | 2,147 | 1,426 | 1,008 | 333 | 21 | 10 |
| Total mothers — Single . | 218,109 | 105 | 23,052 | 70,082 | 64,527 | 35,613 | 18,848 | 5,516 | 355 | 11 |
| Twins . | 2,371 | .. | 140 | 627 | 745 | 482 | 303 | 70 | 3 | 1 |
| Triplets . | 32 | .. | .. | 7 | 9 | 8 | 7 | 1 | .. | .. |
| Total . | 220,512 | 105 | 23,192 | 70,716 | 65,281 | 36,103 | 19,158 | 5,587 | 358 | 12 |

(a) Includes two fathers, age '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 1965.

## NUPTIAL CONFINEMENTS, BY RELATIVE COUNTRIES OF BIRTH OF PARENTS AUSTRALIA, 1965

| Country of birth of father | Country of birth of mother | | | | | | | | | | | Total fathers |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Aus-tralia | New Zeal-and | United King-dom and Ireland | Ger-many | Greece | Italy | Malta | Nether-lands | Yugo-slavia | Other Euro-pean | Other and un-specified | |
| Australia | 141,864 | 531 | 5,379 | 657 | 124 | 282 | 211 | 791 | 88 | 476 | 1,027 | 151,430 |
| New Zealand | 534 | 201 | 70 | 3 | .. | 3 | .. | 3 | 1 | 4 | 14 | 833 |
| United King-dom and Ireland | 6,722 | 83 | 6,870 | 115 | 9 | 21 | 57 | 92 | 7 | 132 | 273 | 14,381 |
| Germany | 929 | 15 | 157 | 1,071 | 11 | 19 | 16 | 69 | 26 | 147 | 45 | 2,505 |
| Greece | 354 | 2 | 25 | 22 | 6,026 | 11 | 3 | 7 | 16 | 19 | 87 | 6,572 |
| Italy | 1,825 | 10 | 129 | 69 | 31 | 9,065 | 40 | 61 | 82 | 87 | 87 | 11,486 |
| Malta | 440 | 1 | 79 | 17 | 2 | 10 | 1,684 | 23 | 5 | 8 | 24 | 2,293 |
| Netherlands | 1,417 | 11 | 154 | 59 | 7 | 3 | 13 | 1,861 | 2 | 37 | 96 | 3,660 |
| Yugoslavia | 466 | 8 | 62 | 120 | 87 | 111 | 18 | 51 | 1,463 | 114 | 26 | 2.526 |
| Other European | 1,657 | 24 | 264 | 342 | 67 | 60 | 24 | 85 | 102 | 2,229 | 154 | 5,008 |
| Other and un-specified | 1,619 | 29 | 307 | 53 | 184 | 54 | 31 | 96 | 11 | 75 | 1,985 | 4,444 |
| Total mothers | 157,827 | 915 | 13,496 | 2,528 | 6,548 | 9,639 | 2,097 | 3,139 | 1,803 | 3,328 | 3,818 | 205,138 |

### Confinements—occupations of fathers

In the 205,138 cases where nuptial confinements resulted in one or more live births, the classes of occupations of the fathers were distributed as follows: craftsmen, 66,509; rural and mining workers, 24,959; administrative and clerical workers, 27,552; labourers, 22,227; workers in transport and communication, 18,130; professional and technical workers, 19,738; sales workers, 12,844; service, sport and other workers, 12,527; persons not in the work force, 652.

### Confinements—age, duration of marriage and issue of mothers

The total number of nuptial confinements resulting in live births in 1965 was 205,138, comprising 202,894 single births, 2,214 cases of twins and 30 cases of triplets. The following tables relating to previous issue exclude the issue of former marriages and still-born 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 1965 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 1965 was 2.48, compared with 2.56 in 1964, 2.60 in 1963, 2.61 in 1962 and 2.60 in 1961.

## NUPTIAL CONFINEMENTS, BY DURATION OF MARRIAGE AND ISSUE OF MOTHERS: AUSTRALIA, 1965

| Duration of marriage | Total married mothers | Total issue | Average issue | Duration of marriage | Total married mothers | Total issue | Average issue |
|---|---|---|---|---|---|---|---|
| Under 1 year | 31,144 | 31,826 | 1.02 | 15 years | 2,527 | 12,819 | 5.07 |
| 1 year | 23,760 | 30,435 | 1.28 | 16 ,, | 1,985 | 10,276 | 5.18 |
| 2 years | 24,233 | 40,932 | 1.69 | 17 ,, | 1,710 | 9,392 | 5 49 |
| 3 ,, | 21,481 | 43,357 | 2.02 | 18 ,, | 1,350 | 7,626 | 5 65 |
| 4 ,, | 18,050 | 42,471 | 2 35 | 19 ,, | 889 | 5,250 | 5.91 |
| 5 ,, | 15,142 | 40,265 | 2 66 | 20 ,, | 614 | 3,734 | 6 08 |
| 6 ,, | 12,461 | 36,860 | 2.96 | 21 ,, | 409 | 2,630 | 6 43 |
| 7 ,, | 10,344 | 33,236 | 3.21 | 22 ,, | 332 | 2,267 | 6 83 |
| 8 ,, | 8,715 | 30,131 | 3 46 | 23 ,, | 235 | 1,577 | 6.71 |
| 9 ,, | 7,483 | 27,774 | 3 71 | 24 ,, | 119 | 941 | 7.91 |
| 10 ,, | 6,113 | 23,867 | 3 90 | 25 years and over | 147 | 1,103 | 7.50 |
| 11 ,, | 5,012 | 20,989 | 4 19 | | | | |
| 12 ,, | 4,174 | 18,487 | 4.43 | | | | |
| 13 ,, | 3,610 | 16,489 | 4 57 | | | | |
| 14 ,, | 3,099 | 14,982 | 4.83 | Total | 205,138 | 509,716 | 2.48 |

The following table shows the average number of children born to mothers of different ages.

### NUPTIAL CONFINEMENTS: AVERAGE ISSUE OF MOTHERS BY AGE, AUSTRALIA, 1911 TO 1965

| Period | Average issue of mothers aged— | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Under 20 years | 20–24 years | 25–29 years | 30–34 years | 35–39 years | 40–44 years | 45 years and over | All ages |
| 1911–20 . . | 1.21 | 1.75 | 2.61 | 3.74 | 5.11 | 6.69 | 8.16 | 3.25 |
| 1921–30 . . | 1.20 | 1.71 | 2.46 | 3.48 | 4.80 | 6.27 | 7.74 | 3.04 |
| 1931–40 . . | 1.20 | 1.68 | 2.30 | 3.19 | 4.41 | 5.89 | 7.40 | 2.71 |
| 1941–50 . . | 1.17 | 1.56 | 2.15 | 2.85 | 3.67 | 4.79 | 6.19 | 2.37 |
| 1951–60 . . | 1.23 | 1.71 | 2.42 | 3.12 | 3.84 | 4.63 | 5.57 | 2.51 |
| 1965 . . | 1.21 | 1.71 | 2.48 | 3.36 | 4.13 | 4.80 | 5.54 | 2.48 |

A classification of mothers by age and previous issue is given for 1965 in the following table.

### NUPTIAL CONFINEMENTS, BY AGE OF MOTHER AND PREVIOUS ISSUE AUSTRALIA, 1965

| Previous issue | Age of mother (years) | | | | | | | Total married mothers |
|---|---|---|---|---|---|---|---|---|
| | Under 20 | 20–24 | 25–29 | 30–34 | 35–39 | 40–44 | 45 and over | |
| 0 . . . | 14,068 | 33,641 | 15,615 | 4,519 | 1,822 | 502 | (a) 30 | 70,197 |
| 1 . . . | 2,966 | 22,093 | 20,498 | 7,293 | 2,549 | 553 | 23 | 55,975 |
| 2 . . . | 294 | 7,789 | 15,483 | 8,876 | 3,578 | 778 | (a) 38 | 36,836 |
| 3 . . . | 22 | 2,079 | 7,187 | 6,667 | 3,482 | 862 | 52 | 20,351 |
| 4 . . . | . . | 498 | 2,803 | 3,610 | 2,604 | 769 | 45 | 10,329 |
| 5 . . . | . . | 108 | 1,015 | 1,878 | 1,717 | 609 | 30 | 5,357 |
| 6 . . . | . . | 21 | 359 | 949 | 1,020 | 388 | 33 | 2,770 |
| 7 . . . | . . | 5 | 127 | 481 | 587 | 315 | 30 | 1,545 |
| 8 . . . | . . | . . | 36 | 240 | 358 | 172 | 21 | 827 |
| 9 . . . | . . | . . | 9 | 87 | 221 | 123 | 15 | 455 |
| 10 and over . | . . | . . | 2 | 77 | 212 | 183 | 22 | 496 |
| Total married mothers . | 17,350 | 66,234 | 63,134 | 34,677 | 18,150 | 5,254 | (b) 339 | 205,138 |

(a) Includes 1, age not stated.    (b) Includes 2, age not stated.

### Multiple births—previous issue of mothers

Of married mothers of twins in 1965, 628 had no previous issue either living or deceased, 559 had one child previously, 428 had two previous issue, 264 three, 142 four, 89 five, 46 six, 16 seven, 19 eight, 9 nine, 4 ten, 5 eleven, 4 twelve, and 1 fourteen. Of the 30 cases of nuptial triplets registered during 1965, 6 mothers had no previous issue, 10 had one, 4 had two, 6 had three, 1 had four, 1 had five, and 2 had seven previous issue.

### Nuptial first births

The following table shows the interval between marriage and first birth for periods since 1911. In cases of multiple births, the first live-born child only is enumerated.

## NUPTIAL FIRST BIRTHS, BY DURATION OF MARRIAGE
### AUSTRALIA, 1911 TO 1965

| Duration of marriage | Annual average | | | | | 1964 | 1965 |
|---|---|---|---|---|---|---|---|
| | 1911–20 | 1921–30 | 1931–40 | 1941–50 | 1951–60 | | |

### NUMBER OF NUPTIAL FIRST BIRTHS

| Duration of marriage | 1911–20 | 1921–30 | 1931–40 | 1941–50 | 1951–60 | 1964 | 1965 |
|---|---|---|---|---|---|---|---|
| Under 8 months | 9,312 | 10,351 | 10,677 | 8,822 | 11,796 | 18,343 | 19,358 |
| 8 months | 1,562 | 1,530 | 1,417 | 2,104 | 2,144 | 2,007 | 1,875 |
| 9 ,, | 3,517 | 3,253 | 2,668 | 4,298 | 4,673 | 3,983 | 3,856 |
| 10 ,, | 2,877 | 2,907 | 2,202 | 3,447 | 3,947 | 3,301 | 3,060 |
| 11 ,, | 2,018 | 2,152 | 1,836 | 2,896 | 3,287 | 2,803 | 2,634 |
| *Total under 1 year* | *19,286* | *20,193* | *18,800* | *21,567* | *25,847* | *30,437* | *30,783* |
| 1 year and under 2 years | 8,563 | 10,133 | 10,595 | 17,762 | 18,463 | 17,547 | 17,567 |
| 2 years ,, ,, 3 ,, | 2,626 | 3,369 | 4,319 | 8,028 | 7,937 | 8,201 | 9,161 |
| 3 ,, ,, ,, 4 ,, | 1,230 | 1,743 | 2,214 | 4,361 | 4,373 | 4,429 | 4,809 |
| 4 ,, ,, ,, 5 ,, | 700 | 941 | 1,205 | 2,569 | 2,632 | 2,623 | 2,739 |
| 5 ,, ,, ,, 10 ,, | 980 | 1,446 | 1,766 | 3,936 | 4,262 | 4,342 | 4,177 |
| 10 ,, ,, ,, 15 ,, | 168 | 240 | 289 | 501 | 721 | 794 | 766 |
| 15 years and over | 42 | 55 | 55 | 94 | 144 | 213 | 195 |
| **Total** | **33,595** | **38,120** | **39,243** | **58,818** | **64,379** | **68,586** | **70,197** |

### PROPORTION OF TOTAL NUPTIAL FIRST BIRTHS
#### (Per cent)

| Duration of marriage | 1911–20 | 1921–30 | 1931–40 | 1941–50 | 1951–60 | 1964 | 1965 |
|---|---|---|---|---|---|---|---|
| Under 8 months | 27.72 | 27.15 | 27.21 | 15.00 | 18.32 | 26.74 | 27.58 |
| 8 months | 4.65 | 4.01 | 3.61 | 3.58 | 3.33 | 2.93 | 2.67 |
| 9 ,, | 10.47 | 8.53 | 6.80 | 7.31 | 7.26 | 5.81 | 5.49 |
| 10 ,, | 8.56 | 7.63 | 5.61 | 5.86 | 6.13 | 4.81 | 4.36 |
| 11 ,, | 6.01 | 5.65 | 4.68 | 4.92 | 5.11 | 4.09 | 3.75 |
| *Total under 1 year* | *57.41* | *52.97* | *47.91* | *36.67* | *40.15* | *44.38* | *43.85* |
| 1 year and under 2 years | 25.49 | 26.58 | 27.00 | 30.20 | 28.68 | 25.58 | 25.03 |
| 2 years ,, ,, 3 ,, | 7.82 | 8.84 | 11.01 | 13.65 | 12.33 | 11.96 | 13.05 |
| 3 ,, ,, ,, 4 ,, | 3.66 | 4.57 | 5.64 | 7.41 | 6.79 | 6.46 | 6.85 |
| 4 ,, ,, ,, 5 ,, | 2.08 | 2.47 | 3 07 | 4.37 | 4.09 | 3.82 | 3.90 |
| 5 ,, ,, ,, 10 ,, | 2.92 | 3.79 | 4.50 | 6.69 | 6.62 | 6.33 | 5.95 |
| 10 ,, ,, ,, 15 ,, | 0.50 | 0.63 | 0.73 | 0.85 | 1.12 | 1.16 | 1.09 |
| 15 years and over | 0.12 | 0.15 | 0.14 | 0.16 | 0.22 | 0.31 | 0.28 |
| **Total** | **100.00** | **100.00** | **100.00** | **100.00** | **100.00** | **100.00** | **100.00** |

In 1965 the masculinity of nuptial first births was 105.58 and of total births 105.61.

A summary showing grouped ages and grouped durations of marriage of mothers of nuptial first-born children is given in the following table.

## NUPTIAL FIRST BIRTHS, BY AGE OF MOTHER AND DURATION OF MARRIAGE
### AUSTRALIA, 1965

| Duration of marriage | Age of mother (years) | | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | Under 20 | 20–24 | 25–29 | 30–34 | 35–39 | 40–44 | 45 and over | Not stated | |
| | NUMBER OF NUPTIAL FIRST BIRTHS | | | | | | | | |
| Under 8 months . . | 10,432 | 7,334 | 1,075 | 304 | 167 | 44 | 2 | .. | 19,358 |
| 8 months . . . | 379 | 1,030 | 344 | 77 | 43 | 2 | .. | .. | 1,875 |
| 9 ,, . . . | 556 | 2,279 | 723 | 206 | 80 | 12 | .. | .. | 3,856 |
| 10 ,, . . . | 408 | 1,855 | 551 | 167 | 62 | 16 | 1 | .. | 3,060 |
| 11 ,, . . . | 351 | 1,554 | 501 | 155 | 56 | 17 | .. | .. | 2,634 |
| *Total under 1 year* . | *12,126* | *14,052* | *3,194* | *909* | *408* | *91* | *3* | *..* | *30,783* |
| 1 year and under 2 years. | 1,646 | 10,754 | 3,715 | 954 | 390 | 105 | 3 | .. | 17,567 |
| 2 years ,, ,, 3 ,, . | 256 | 5,409 | 2,735 | 516 | 181 | 61 | 3 | .. | 9,161 |
| 3 ,, ,, ,, 4 ,, . | 35 | 2,271 | 1,991 | 361 | 113 | 35 | 2 | 1 | 4,809 |
| 4 ,, ,, ,, 5 ,, . | 4 | 800 | 1,503 | 286 | 109 | 35 | 2 | .. | 2,739 |
| 5 ,, ,, ,, 10 ,, . | 1 | 354 | 2,396 | 1,043 | 296 | 77 | 10 | .. | 4,177 |
| 10 ,, ,, ,, 15 ,, . | .. | 1 | 81 | 423 | 217 | 42 | 2 | .. | 766 |
| 15 years and over . . | .. | .. | .. | 27 | 108 | 56 | 4 | .. | 195 |
| Total . . . | 14,068 | 33,641 | 15,615 | 4,519 | 1,822 | 502 | 29 | 1 | 70,197 |

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
### AUSTRALIA, 1911 TO 1965

| 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— | | | | |
| 1961 . . . | 70,177 | 155,105 | 225,282 | 31.15 |
| 1962 . . . | 68,310 | 153,547 | 221,857 | 30 79 |
| 1963 . . . | 69,130 | 150,713 | 219,843 | 31 45 |
| 1964 . . . | 68,586 | 143,437 | 212,023 | 32.35 |
| 1965 . . . | 70,197 | 134,941 | 205,138 | 34.22 |

## Still-births

Interstate comparisons of the figures and rates in the following tables are affected by the differences in the definitions of still-births adopted by the various States, and only the trends in the rates for the States should be compared. For various reasons, the registration of still-births 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. Still-birth registration is not compulsory in Tasmania. The figures shown represent those still-births voluntarily registered during the year.

## STILL-BIRTHS: STATES AND TERRITORIES, 1936 TO 1965

| Period | N.S.W. | Vic. | Qld | S.A. | W.A. | Tas. | N.T. | A.C.T. | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| Annual average— | | | | | | | | | |
| 1936–40 . . | 1,409 | 854 | (a) | (b) 274 | 234 | 144 | (a) | 5 | (a) |
| 1941–45 . . | 1,478 | 966 | (c) 657 | 324 | 248 | 143 | (a) | 9 | de 3,825 |
| 1946–50 . . | 1,405 | 949 | 626 | 368 | 274 | 161 | (a) | 12 | (e)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— | | | | | | | | | |
| 1961 . . | 1,306 | 885 | 553 | 272 | 240 | 111 | 17 | 19 | 3,403 |
| 1962 . . | 1,099 | 775 | 520 | 278 | 203 | 102 | 9 | 20 | 3,006 |
| 1963 . . | 1,163 | 792 | 476 | 262 | 178 | 63 | 30 | 14 | 2,978 |
| 1964 . . | 1,003 | 771 | 402 | 252 | 170 | 69 | 13 | 15 | 2,695 |
| 1965 . . | 947 | 747 | 391 | 256 | 181 | 89 | 15 | 23 | 2,649 |

(a) Not available.     (b) Three years 1938–40.     (c) Four years 1942–45.     (d) Excludes Queensland for 1941.     (e) Excludes Northern Territory.

The incidence of still-births 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 STILL-BIRTHS(a): STATES AND TERRITORIES, 1936 TO 1965

| 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 | (b) | (c)27.5 | 25.7 | 28.7 | (b) | 22.2 | (b) |
| 1941–45 . | 25.5 | 24.8 | d 26.8 | 25.2 | 23.3 | 25.7 | (b) | 22.9 | ef25.25 |
| 1946–50 . | 20.0 | 19.6 | 21.9 | 22.1 | 20.5 | 22.3 | (b) | 16.3 | f 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— | | | | | | | | | |
| 1961 . . | 14.9 | 13.3 | 14.9 | 12 0 | 13.9 | 12.2 | (g) | (g) | 13.98 |
| 1962 . . | 12.7 | 11.6 | 14.4 | 12 8 | 11 8 | 11.3 | (g) | 10.9 | 12.52 |
| 1963 . . | 13.6 | 11.9 | 13.1 | 12.1 | 10.2 | 7.3 | 33.7 | (g) | 12.48 |
| 1964 . . | 12.3 | 11.7 | 11.4 | 11.9 | 10.1 | 8.3 | (g) | (g) | 11.62 |
| 1965 . . | 12.0 | 11.6 | 11.5 | 12 1 | 11.1 | 11.7 | (g) | 10 5 | 11.75 |

(a) Numbers of still-births per 1,000 of all births (live and still).     (b) Not available.     (c) Three years 1938–40.     (d) Four years 1942–45.     (e) Excludes Queensland for 1941.     (f) Excludes Northern Territory.     (g) Less than twenty events: rates not calculated.

NOTE. Because of the smallness of the numbers of still-births occurring in the Australian Capital Territory and the Northern Territory the rates for these Territories (i.e. the number per thousand live births and still-births) 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 1966. Still-births, although registered as both births and deaths in some States, are excluded from the death statistics published herein.

## DEATHS, SEXES: STATES AND TERRITORIES, 1966

| Sex | N.S.W. | Vic. | Qld | S.A. | W.A. | Tas. | N.T. | A.C.T. | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| Males . . | 22,454 | 15,569 | 8,531 | 5,215 | 3,922 | 1,726 | 114 | 265 | 57,796 |
| Females . . | 18,092 | 13,104 | 6,330 | 4,108 | 2,850 | 1,433 | 40 | 176 | 46,133 |
| Persons . | 40,546 | 28,673 | 14,861 | 9,323 | 6,772 | 3,159 | 154 | 441 | 103,929 |

A summary of the number of deaths in each State and Territory from 1941 to 1966 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: STATES AND TERRITORIES, 1941 TO 1966

| Period | N.S.W. | Vic. | Qld | S.A. | W.A. | Tas. | N.T. | A.C.T. | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| Annual average— | | | | | | | | | |
| 1941–45(a) . | 27,807 | 20,964 | 9,715 | 6,303 | 4,724 | 2,488 | 64 | 71 | 72,136 |
| 1946–50(a) . | 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— | | | | | | | | | |
| 1962 . . | 36,861 | 25,847 | 13,182 | 8,232 | 5,810 | 2,870 | 144 | 217 | 93,163 |
| 1963 . . | 37,226 | 26,920 | 13,275 | 8,201 | 5,976 | 2,818 | 161 | 317 | 94,894 |
| 1964 . . | 39,487 | 27,548 | 14,523 | 8,906 | 6,429 | 3,174 | 164 | 363 | 100,594 |
| 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 |

(a) Excludes deaths of defence personnel and of internees and prisoners of war from overseas for the period September 1939 to June 1947.

A graph showing the number of deaths in each year from 1870 to 1966 will be found on page 213.

### 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 1966

| 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(c) . | 9.27 | 8.72 | 8.63 | 8.29 | 7.78 | 8.15 | 4.98 | 3.89 | 8.75 |
| Annual rate— | | | | | | | | | |
| 1962(c) . . | 9.25 | 8.66 | 8.55 | 8.35 | 7.69 | 8.07 | 5.1 | 3.3 | 8.71 |
| 1963(c) . . | 9.20 | 8.85 | 8.47 | 8.14 | 7.69 | 7.82 | 5.3 | 4.3 | 8.70 |
| 1964(c) . . | 9.62 | 8.87 | 9.08 | 8.61 | 8.07 | 8.71 | 5.0 | 4.5 | 9.05 |
| 1965(c) . . | 9.34 | 8.86 | 8.65 | 8.27 | 7.70 | 8.27 | 4.6 | 4.0 | 8.80 |
| 1966— | | | | | | | | | |
| Males . . | 10.57 | 9.65 | 10.13 | 9.52 | 9.20 | 9.21 | 5.3 | 5.3 | 9.94 |
| Females . | 8.57 | 8.16 | 7.73 | 7.57 | 6.95 | 7.79 | 2.5 | 3.8 | 8.03 |
| Persons . . | 9.58 | 8.91 | 8.94 | 8.55 | 8.10 | 8.51 | 4.1 | 4.6 | 9.00 |

(a) Number of deaths per 1,000 of mean population.    (b) Excludes deaths of defence personnel, etc., from September 1939 to June 1947.    (c) Recalculated from population figures revised in accordance with preliminary results of the census of 30 June 1966.

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 1966 will be found on page 220.

**Standardised death rates**

The death rates quoted on page 232 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. These are computed by selecting a particular distribution of age and sex as a standard, and then calculating what would have been the general death rate if the death rates for each sex and in each age group had been as recorded, but the age and sex distribution had been the same as in the standard population. For the standardised rates which follow, the standard population compiled by the International Institute of Statistics has been used. This standard is based upon the age distribution according to sex of nineteen European countries at their censuses nearest to the year 1900. An examination of the age distribution of deaths and the resultant age-specific death rates is made on pages 237–8.

**Comparison of crude and standardised death rates**

The relative incidence of mortality as between individual States and as between the years 1921, 1933, 1947, 1954, and 1961 is illustrated in the following statement of crude and 'standardised' death rates. These years have been chosen for comparison because the census data give essential information as to sexes and ages of the State populations. Crude death rates are shown to indicate the degree to which they disguise the true position.

CRUDE AND STANDARDISED DEATH RATES: STATES, 1921 TO 1961

| Particulars | N.S.W. | Vic. | Qld | S.A. | W.A. | Tas. | Aust. |
|---|---|---|---|---|---|---|---|
| Crude death rate(a)— | | | | | | | |
| 1921 . . . | 9.50 | 10.52 | 9.37 | 10.02 | 10.42 | 10.30 | 9.91 |
| 1933 . . . | 8.58 | 9.59 | 8.84 | 8.44 | 8.64 | 9.60 | 8.92 |
| 1947 . . . | 9.53 | 10.44 | 9.15 | 9.61 | 9.39 | 9.17 | 9.69 |
| 1954 . . . | 9.46 | 9.20 | 8.63 | 9.01 | 8.38 | 8.67 | 9.10 |
| 1961 . . . | 8.95 | 8.37 | 8.41 | 8.06 | 7.77 | 7.89 | 8.47 |
| Standardised death rate(b)— | | | | | | | |
| 1921 . . . | 10.35 | 10.79 | 10.24 | 10.38 | 11.88 | 10.83 | 10.58 |
| 1933 . . . | 8.52 | 8.74 | 9.10 | 7.66 | 8.74 | 8.86 | 8.62 |
| 1947 . . . | 7.44 | 7.31 | 7.47 | 6.77 | 7.28 | 7.21 | 7.34 |
| 1954 . . . | 7.24 | 6.63 | 6.80 | 6.52 | 6.71 | 7.02 | 6.90 |
| 1961 . . . | 6.56 | 6.12 | 6.26 | 5.90 | 6.02 | 6.19 | 6.27 |

(a) Total deaths per 1,000 of mean population.        (b) See explanation of standardised death rates above.

The comparisons above relate to individual years in which a census of population was taken and should not be used as the basis for general conclusions as to changes in incidence of mortality for other than those years.

**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 complete expectation of life at birth and true death rates for the periods covered by Australian life tables.

<h3 align="center">COMPLETE EXPECTATION OF LIVE AT BIRTH AND<br>TRUE DEATH RATES: AUSTRALIA, 1881-90 TO 1965</h3>

| Period | Complete expectation of life at birth (years) | | True death rate | |
|---|---|---|---|---|
| | Males | Females | Males(a) | Females(b) |
| 1881–90 . . | 47.20 | 50.84 | 21.19 | 19 67 |
| 1891–1900 . . | 51.06 | 54.76 | 19.58 | 18 26 |
| 1901–10 . . | 55.20 | 58.84 | 18.12 | 17.00 |
| 1920–22 . . | 59.15 | 63.31 | 16.91 | 15.80 |
| 1932–34 . . | 63.48 | 67.14 | 15.75 | 14 89 |
| 1946–48 . . | 66 07 | 70.63 | 15.14 | 14.16 |
| 1953–55 . . | 67.14 | 72.75 | 14.89 | 13.75 |
| 1960–62 . . | 67 92 | 74.18 | 14.72 | 13 48 |
| 1963(c) . . | 67 8 | 74.1 | 14.73 | 13.50 |
| 1964(c) . . | 67.4 | 73.7 | 14.84 | 13 55 |
| 1965(c) . . | 67.7 | 74.1 | 14.77 | 13.50 |

(a) Number of deaths per 1,000 males in stationary population.　　(b) Number of deaths per 1,000 females in stationary population.　　(c) Based on abridged life tables calculated by the Commonwealth Statistician. These tables are based on estimates of population by age brought forward from the 1961 census adjusted to take into account the 1966 census field count and are subject to revision when the 1966 census population by age results become available.

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, monetary 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 will also appear 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 following summary tables.

# AUSTRALIAN COMPARATIVE LIFE TABLES

## RATES OF MORTALITY ($q_x$) AT REPRESENTATIVE AGES

| Age (x) | 1901–10 | 1920–22 | 1932–34 | 1946–48 | 1953–55 | 1960–62 |
|---|---|---|---|---|---|---|
| MALES | | | | | | |
| 0 . . . | .09510 | .07132 | .04543 | .03199 | .02521 | .02239 |
| 10 . . . | .00179 | .00156 | .00119 | .00072 | .00056 | .00041 |
| 20 . . . | .00370 | .00284 | .00219 | .00169 | .00186 | .00173 |
| 30 . . . | .00519 | .00390 | .00271 | .00186 | .00170 | .00157 |
| 40 . . . | .00816 | .00617 | .00460 | .00337 | .00297 | .00300 |
| 50 . . . | .01395 | .01158 | .00966 | .00919 | .00819 | .00804 |
| 60 . . . | .02584 | .02407 | .02216 | .00278 | .02221 | .02176 |
| 70 . . . | .06162 | .05290 | .05082 | .05256 | .05315 | .05177 |
| 80 . . . | .13795 | .13340 | .12659 | .12011 | .11958 | .11617 |
| FEMALES | | | | | | |
| 0 . . . | .07953 | .05568 | .03642 | .02519 | .01989 | .01757 |
| 10 . . . | .00159 | .00127 | .00087 | .00050 | .00035 | .00028 |
| 20 . . . | .00329 | .00252 | .00183 | .00091 | .00064 | .00060 |
| 30 . . . | .00519 | .00387 | .00279 | .00165 | .00096 | .00082 |
| 40 . . . | .00718 | .00524 | .00402 | .00284 | .00217 | .00187 |
| 50 . . . | .00956 | .00808 | .00744 | .00641 | .00530 | .00464 |
| 60 . . . | .01920 | .01571 | .01466 | .01360 | .01203 | .01074 |
| 70 . . . | .04777 | .04090 | .03802 | .03607 | .03250 | .02933 |
| 80 . . . | .11333 | .11230 | .10106 | .10027 | .09314 | .08507 |

$q_x$ = probability of dying within one year at specified ages.

## RATES OF MORTALITY FOR ONE PERIOD AS A PROPORTION OF THE RATES FOR THE PRECEDING PERIOD

| Age | Males | | | | Females | | | |
|---|---|---|---|---|---|---|---|---|
| | 1932–34 / 1920–22 | 1946–48 / 1932–34 | 1953–55 / 1946–48 | 1960–62 / 1953–55 | 1932–34 / 1920–22 | 1946–48 / 1932–34 | 1953–55 / 1946–48 | 1960–62 / 1953–55 |
| 0 . . . | .64 | .70 | .79 | .89 | .65 | .69 | .79 | .88 |
| 10 . . . | .76 | .61 | .78 | .73 | .69 | .57 | .70 | .80 |
| 20 . . . | .77 | .77 | 1.10 | .93 | .73 | .50 | .70 | .94 |
| 30 . . . | .69 | .69 | .91 | .92 | .72 | .59 | .58 | .85 |
| 40 . . . | .75 | .73 | .88 | 1.01 | .77 | .71 | .76 | .86 |
| 50 . . . | .83 | .95 | .89 | .98 | .92 | .86 | .83 | .88 |
| 60 . . . | .92 | 1.03 | .97 | .98 | .93 | .93 | .88 | .89 |
| 70 . . . | .96 | 1.03 | 1.01 | .97 | .93 | .95 | .90 | .90 |
| 80 . . . | .95 | .95 | 1.00 | .97 | .90 | .99 | .93 | .91 |

## RATES OF MORTALITY AS A PROPORTION OF THE RATES
## FOR THE PERIOD 1901-1910

| Age | Males | | | | Females | | | |
|---|---|---|---|---|---|---|---|---|
| | 1932-34 / 1901-10 | 1946-48 / 1901-10 | 1953-55 / 1901-10 | 1960-62 / 1901-10 | 1932-34 / 1901-10 | 1946-48 / 1901-10 | 1953-55 / 1901-10 | 1960-62 / 1901-10 |
| 0 . . . | .48 | .34 | .27 | .24 | .46 | .32 | .25 | .22 |
| 10 . . . | .66 | .40 | .31 | .23 | .55 | .31 | .22 | .18 |
| 20 . . . | .59 | .46 | .50 | .47 | .56 | .28 | .19 | .18 |
| 30 . . . | .52 | .36 | .33 | .30 | .54 | .32 | .18 | .16 |
| 40 . . . | .56 | .41 | .36 | .37 | .56 | .40 | .30 | .26 |
| 50 . . . | .69 | .66 | .59 | .58 | .78 | .67 | .55 | .49 |
| 60 . . . | .86 | .88 | .86 | .84 | .76 | .71 | .63 | .56 |
| 70 . . . | .82 | .85 | .86 | .84 | .80 | .76 | .68 | .61 |
| 80 . . . | .92 | .87 | .87 | .84 | .89 | .88 | .82 | .75 |

## NUMBER OF SURVIVORS $(l_x)$ AT SELECTED AGES OUT OF 100,000 BIRTHS

| Age $(x)$ | Males | | | | Females | | | |
|---|---|---|---|---|---|---|---|---|
| | 1901-10 | 1946-48 | 1953-55 | 1960-62 | 1901-10 | 1946-48 | 1953-55 | 1960-62 |
| 0 . . . | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| 10 . . . | 86,622 | 95,619 | 96,488 | 97,062 | 88,395 | 96,549 | 97,228 | 97,664 |
| 20 . . . | 84,493 | 94,562 | 95,460 | 96,215 | 86,459 | 95,953 | 96,774 | 97,278 |
| 30 . . . | 80,844 | 92,967 | 93,801 | 94,726 | 82,909 | 94,740 | 96,055 | 96,649 |
| 40 . . . | 75,887 | 90,823 | 90,861 | 92,859 | 78,001 | 92,758 | 94,715 | 95,481 |
| 50 . . . | 68,221 | 85,946 | 87,553 | 88,473 | 71,945 | 89,011 | 91,573 | 92,713 |
| 60 . . . | 56,782 | 74,251 | 76,256 | 77,456 | 63,247 | 81,257 | 84,665 | 86,537 |
| 70 . . . | 38,275 | 52,230 | 54,054 | 54,944 | 46,793 | 65,398 | 69,613 | 72,505 |
| 80 . . . | 14,330 | 22,785 | 23,658 | 24,669 | 21,356 | 35,401 | 39,633 | 43,453 |
| 90 . . . | 1,652 | 3,144 | 3,507 | 3,800 | 3,566 | 6,556 | 8,087 | 10,005 |

## COMPLETE EXPECTATION OF LIFE $(^\circ e_x)$ 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 |

$l_x$ = number surviving at specified ages out of 100,000 births.    $^\circ e_x$ = complete expectation of life at specified ages.

As indicated in the foregoing tables, 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 improve at a faster rate than male longevity. It would seem that the risks associated with child-bearing for females are far outweighed by the greater accident propensity of younger males and the more rapid deterioration of health, presumably due to business and other pressures, of older males.

An improvement has occurred in male mortality from accidents of all types. Even though there is some indication that for females the accident rates have deteriorated slightly, the rates 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 1965 is given for Australia in the following table.

### DEATHS, BY AGE AT DEATH AND SEX: AUSTRALIA, 1965

| Age at death | Males | Fe-males | Per-sons | Age at death | Males | Fe-males | Per-sons |
|---|---|---|---|---|---|---|---|
| Under 1 week . . | 1,504 | 1,107 | 2,611 | 5- 9 years . . | 249 | 184 | 433 |
| 1 week and under 2 weeks . | 98 | 66 | 164 | 10-14 ,, . | 276 | 153 | 429 |
| 2 weeks and under 3 weeks . | 55 | 48 | 103 | 15-19 ,, . | 686 | 264 | 950 |
| 3 weeks and under 4 weeks . | 47 | 22 | 69 | 20-24 ,, . | 681 | 244 | 925 |
| | | | | 25-29 ,, . | 548 | 264 | 812 |
| | | | | 30-34 ,, . | 589 | 328 | 917 |
| *Total under 4 weeks* . | *1,704* | *1,243* | *2,947* | 35-39 ,, . | 998 | 584 | 1,582 |
| | | | | 40-44 ,, . | 1,465 | 866 | 2,331 |
| 4 weeks and under 3 months | 229 | 143 | 372 | 45-49 ,, . | 1,999 | 1,286 | 3,285 |
| 3 months and under 6 months | 230 | 159 | 389 | 50-54 ,, . | 3,480 | 1,760 | 5,240 |
| 6 months and under 12 months | 194 | 215 | 409 | 55-59 ,, . | 4,507 | 2,184 | 6,691 |
| | | | | 60-64 ,, . | 5,748 | 2,894 | 8,642 |
| *Total under 1 year* . | *2,357* | *1,760* | *4,117* | 65-69 ,, . | 6,731 | 4,157 | 10,888 |
| | | | | 70-74 ,, . | 7,659 | 5,987 | 13,646 |
| 1 year . . . | 205 | 165 | 370 | 75-79 ,, . | 7,714 | 6,988 | 14,702 |
| 2 years . . . | 120 | 86 | 206 | 80-84 ,, . | 5,289 | 6,650 | 11,939 |
| 3 ,, . . . | 112 | 86 | 198 | 85 years and over . | 4,263 | 6,984 | 11,247 |
| 4 ,, . . . | 78 | 67 | 145 | Age not stated . | 16 | 4 | 20 |
| *Total under 5 years* . | *2,872* | *2,164* | *5,036* | **Total all ages** . | **55,770** | **43,945** | **99,715** |

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 1965.

### PROPORTION OF DEATHS IN EACH AGE GROUP: AUSTRALIA, 1901 TO 1964
(Per cent)

| Period | Age at death (years) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Under 1 | 1-4 | 5-19 | 20-39 | 40-59 | 60-64 | 65 and over | Unspeci-fied | Total |
| 1901-10 . | 20.51 | 6.45 | 6.37 | 14.99 | 17.99 | 5.31 | 28.26 | 0.12 | 100.00 |
| 1911-20 . | 16.66 | 6.09 | 5.49 | 14.44 | 20.32 | 6.19 | 30.68 | 0.13 | 100.00 |
| 1921-30 . | 13.10 | 4.51 | 4.85 | 12.12 | 20.55 | 8.26 | 36.53 | 0.08 | 100.00 |
| 1931-40 . | 7.40 | 2.56 | 3.83 | 9.36 | 20.54 | 8.36 | 47.92 | 0.03 | 100.00 |
| 1941-50 . | 6.79 | 1.71 | 2.26 | 6.01 | 19.04 | 9.33 | 54.84 | 0.02 | 100.00 |
| 1951-60 . | 5.59 | 1.33 | 1.80 | 4.90 | 17.27 | 9.18 | 59.90 | 0.03 | 100.00 |
| 1965— | | | | | | | | | |
| Males . | 4.23 | 0.92 | 2.17 | 5.05 | 20.53 | 10.31 | 56.76 | 0.03 | 100.00 |
| Females . | 4.00 | 0.92 | 1.37 | 3.23 | 13.87 | 6.59 | 70.01 | 0.01 | 100.00 |
| Persons . | 4.13 | 0.92 | 1.82 | 4.25 | 17.60 | 8.66 | 62.60 | 0.02 | 100 00 |

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 were given for each State and Australia for the periods 1932–1934, 1946–1948, 1953–1955, and 1960–1962 (*see* Year Books, No. 37, pp. 778–9, No. 39, pp. 615–6, No. 44, pp. 640–1, and No. 52, p. 253). These rates were based on the age distribution of the population at the relevant censuses.

Intercensal estimates of the age distribution of the population are available for Australia and for the larger States. The following table shows age-specific death rates, i.e. the average number of deaths per 1,000 of population in each age group, for Australia for the year 1965, for males and females.

**AGE-SPECIFIC DEATH RATES(a), BY SEX: AUSTRALIA, 1965**

| Age group (years) | Males | Females | Age group (years) | Males | Females |
|---|---|---|---|---|---|
| Under 1(b) . | 20.6 | 16.2 | 45–49 . . | 6.1 | 4.0 |
| 1– 4 . . | 1.1 | 0.9 | 50–54 . . | 10.8 | 5.6 |
| 5– 9 . . | 0.4 | 0.3 | 55–59 . . | 16.8 | 8.5 |
| 10–14 . . | 0.5 | 0.3 | 60–64 . . | 27.6 | 13.5 |
| 15–19 . . | 1.3 | 0.5 | 65–69 . . | 42.9 | 21.7 |
| 20–24 . . | 1.6 | 0.6 | 70–74 . . | 66.2 | 37.3 |
| 25–29 . . | 1.5 | 0.8 | 75–79 . . | 99.0 | 62.1 |
| 30–34 . . | 1.7 | 1.0 | 80–84 . . | 143.0 | 109.4 |
| 35–39 . . | 2.5 | 1.6 | 85 and over . | 258.4 | 214.2 |
| 40–44 . . | 3.7 | 2.3 | | | |

(a) Average number of deaths per 1,000 of mid-year population in each age group estimated in respect of 30 June 1965.  (b) Infant deaths per 1,000 live births registered.

**Infant deaths and death rates—States and Territories**

Compared with other countries, Australia occupies a favourable position in respect of infant mortality. In 1965, only a few countries recorded a lower rate than Australia. Rates for Australia and the more populous countries of the world for the latest available year are shown in the table in International Vital Statistics, pages 254–5. The next tables show, for each State and Territory for the period 1941 to 1966, the number of deaths under one year of age and the rates of infant mortality under one year, and for the period 1936 to 1965 the rates under four weeks, and four weeks and under one year.

**INFANT MORTALITY UNDER ONE YEAR: STATES AND TERRITORIES, 1941 TO 1966**

| Period | N.S.W. | Vic. | Qld | S.A. | W.A. | Tas. | N.T. | A.C.T. | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| 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— | | | | | | | | | |
| 1962 . . | 1,825 | 1,219 | 754 | 409 | 380 | 184 | 37 | 32 | 4,840 |
| 1963 . . | 1,673 | 1,242 | 722 | 399 | 353 | 153 | 27 | 38 | 4,607 |
| 1964 . . | 1,634 | 1,098 | 673 | 397 | 328 | 166 | 30 | 41 | 4,367 |
| 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 |
| Annual average rate(a)— | | | | | | | | | |
| 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(a)— | | | | | | | | | |
| 1962 . . | 21.4 | 18.5 | 21.1 | 19.1 | 22.3 | 20.7 | 40.0 | 17.6 | 20.41 |
| 1963 . . | 19 9 | 18.9 | 20.1 | 18.7 | 20.4 | 17.9 | 31.4 | 19.0 | 19.55 |
| 1964 . . | 20 3 | 16.9 | 19.2 | 19 0 | 19.7 | 20.1 | 32.9 | 21.0 | 19.06 |
| 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 | (b) | 19 8 | 18 17 |

(a) Number of deaths of children aged under one year per 1,000 live births registered.  (b) Less than twenty events; rates not calculated.

## INFANT MORTALITY RATES(*a*)—UNDER FOUR WEEKS
### STATES AND TERRITORIES, 1936 TO 1965

| Period | N.S.W. | Vic. | Qld | S.A. | W.A. | Tas. | N.T. | A.C.T. | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| Average annual rate— | | | | | | | | | |
| 1936–40. | 27.6 | 25.9 | 26.1 | 21.6 | 22.6 | 29.6 | (*b*) | (*b*) | 26.19 |
| 1941–45. | 24.3 | 24.3 | 24.3 | 20.9 | 20.6 | 27.1 | 35.3 | 12.5 | 23.85 |
| 1946–50. | 20.5 | 17.6 | 19.9 | 18.4 | 19.5 | 19.3 | 21.4 | 15.8 | 19.34 |
| 1951–55. | 17.3 | 15.2 | 17.1 | 14.9 | 17.3 | 16.3 | 19.6 | 11.3 | 16.45 |
| 1956–60. | 16.0 | 14.5 | 15.1 | 13.7 | 15.0 | 13.3 | 24.2 | 9.6 | 15.07 |
| 1961–65. | 14.5 | 13.6 | 14.2 | 13.0 | 14.1 | 12.6 | 19.4 | 12.6 | 13.99 |
| Annual rate— | | | | | | | | | |
| 1961 | 14.9 | 13.5 | 14.8 | 13.0 | 12.8 | 11.9 | (*b*) | (*b*) | 14.01 |
| 1962 | 15.5 | 14.2 | 15.0 | 13.4 | 14.5 | 14.1 | (*b*) | 11.5 | 14.71 |
| 1963 | 14.1 | 14.9 | 14.8 | 12.9 | 14.9 | 12.1 | (*b*) | 13.5 | 14.32 |
| 1964 | 14.3 | 12.9 | 13.5 | 13.3 | 13.0 | 13.8 | 25.2 | 15.3 | 13.64 |
| 1965 | 13.9 | 12.7 | 12.5 | 12.6 | 15.2 | 11.0 | (*b*) | 11.6 | 13.22 |

(*a*) Number of deaths of children aged under four weeks per 1,000 live births registered. (*b*) Less than twenty events; rates not calculated.

## INFANT MORTALITY RATES(*a*)—FOUR WEEKS AND UNDER ONE YEAR
### STATES AND TERRITORIES, 1936 TO 1965

| Period | N.S.W. | Vic. | Qld | S.A. | W.A. | Tas. | N.T. | A.C.T. | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| Average annual rate— | | | | | | | | | |
| 1936–40. | 13.5 | 11.7 | 10.6 | 11.5 | 17.1 | 11.7 | (*b*) | (*b*) | 12.62 |
| 1941–45. | 11.6 | 10.2 | 10.0 | 12.1 | 12.7 | 12.2 | (*b*) | (*b*) | 11.12 |
| 1946–50. | 8.4 | 6.3 | 7.5 | 8.1 | 8.6 | 7.2 | 15.9 | (*b*) | 7.64 |
| 1951–55. | 7.8 | 5.5 | 6.5 | 7.6 | 7.1 | 7.3 | 16.7 | (*b*) | 6.89 |
| 1956–60. | 6.2 | 5.2 | 5.8 | 6.8 | 6.4 | 7.3 | 11.8 | 4.0 | 5.98 |
| 1961–65. | 5.8 | 4.3 | 5.5 | 6.0 | 6.7 | 5.9 | 11.4 | 5.2 | 5.43 |
| Annual rate— | | | | | | | | | |
| 1961 | 6.0 | 4.3 | 5.2 | 7.0 | 6.9 | 4.9 | (*b*) | (*b*) | 5.53 |
| 1962 | 5.9 | 4.3 | 6.1 | 5.7 | 7.8 | 6.6 | (*b*) | (*b*) | 5.70 |
| 1963 | 5.8 | 4.0 | 5.3 | 5.8 | 5.6 | 5.9 | (*b*) | (*b*) | 5.23 |
| 1964 | 6.0 | 4.0 | 5.7 | 5.8 | 6.7 | 6.3 | (*b*) | (*b*) | 5.42 |
| 1965 | 5.2 | 4.8 | 5.3 | 5.8 | 6.5 | 5.6 | (*b*) | (*b*) | 5.25 |

(*a*) Number of deaths of children aged four weeks and under one year per 1,000 live births registered. (*b*) Less than twenty events; rates 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 598,886 male infants born from 1961 to 1965, 12,981 (21.68 per 1,000) died during the first year of life, while of 565,873 female infants only 9,639 (17.03 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. Still-births 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, BY SEX: AUSTRALIA, 1936 TO 1965

| Period | Number of deaths | | | | | | Rates(a) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Neonatal— under four weeks | | Post-neonatal— four weeks and under one year | | Total under one year | | Neonatal— under four weeks | | Post-neonatal— four weeks and under one year | | Total under one year | |
| | Males | Females | Males | Females | Males | Females | Males | Females | Males | Females | Males | Females |
| | ANNUAL AVERAGES | | | | | | AVERAGE ANNUAL RATES | | | | | |
| 1936–40 | 1,816 | 1,353 | 863 | 663 | 2,679 | 2,016 | 29.30 | 22.93 | 13.93 | 11.23 | 43.23 | 34.16 |
| 1941–45 | 2,007 | 1,495 | 914 | 720 | 2,921 | 2,215 | 26.66 | 20.88 | 12.14 | 10 05 | 38 80 | 30.93 |
| 1946–50 | 2,024 | 1,490 | 784 | 604 | 2,808 | 2,094 | 21.68 | 16.86 | 8.40 | 6.84 | 30.08 | 23.70 |
| 1951–55 | 1,907 | 1,406 | 776 | 612 | 2,683 | 2,018 | 18.47 | 14.32 | 7.52 | 6 24 | 25.99 | 20.56 |
| 1956–60 | 1,921 | 1,432 | 741 | 589 | 2,662 | 2,021 | 16 81 | 13.24 | 6.48 | 5 45 | 23.29 | 18 69 |
| 1961–65 | 1,887 | 1,373 | 709 | 555 | 2,596 | 1,928 | 15.75 | 12.13 | 5.92 | 4.90 | 21.67 | 17.03 |
| | ANNUAL TOTALS | | | | | | ANNUAL RATES | | | | | |
| 1961 | 1,951 | 1,410 | 739 | 589 | 2,690 | 1,999 | 15.85 | 12.06 | 6.00 | 5.04 | 21.85 | 17.10 |
| 1962 | 2,038 | 1,451 | 752 | 599 | 2,790 | 2,050 | 16.69 | 12 62 | 6.16 | 5.21 | 22 85 | 17.83 |
| 1963 | 1,946 | 1,429 | 690 | 542 | 2,636 | 1,971 | 16.06 | 12.48 | 5.70 | 4 73 | 21.76 | 17.21 |
| 1964 | 1,795 | 1,331 | 713 | 528 | 2,508 | 1,859 | 15.20 | 11.98 | 6 04 | 4 75 | 21 24 | 16.73 |
| 1965 | 1,704 | 1,243 | 653 | 517 | 2,357 | 1,760 | 14.89 | 11.47 | 5.70 | 4.77 | 20.59 | 16.24 |

(a) Number of deaths per 1,000 male or female live births registered.

From the following table, showing particulars of infant deaths in the first four weeks of life, or the neonatal period, it will be seen that for both males and females the risk of death is very much greater during the first day of life than subsequently.

## INFANT DEATHS AND MORTALITY RATES—UNDER FOUR WEEKS, BY SEX AUSTRALIA, 1936 TO 1965

| Period | Number of deaths | | | | | | Rates(a) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Early neonatal | | | | Late neonatal— one week and under four weeks | | Early neonatal | | | | Late neonatal— one week and under four weeks | |
| | Under one day | | One day and under one week | | | | Under one day | | One day and under one week | | | |
| | Males | Females | Males | Females | Males | Females | Males | Females | Males | Females | Males | Females |
| | ANNUAL AVERAGES | | | | | | AVERAGE ANNUAL RATES | | | | | |
| 1936–40 | (b) | (b) | c 1,496 | c 1,120 | 320 | 233 | (b) | (b) | c24.13 | c18.99 | 5.17 | 3.94 |
| 1941–45 | 906 | 674 | 728 | 541 | 373 | 280 | 12 03 | 9.42 | 9.67 | 7.55 | 4.96 | 3.91 |
| 1946–50 | 986 | 731 | 758 | 539 | 280 | 220 | 10 56 | 8.28 | 8.12 | 6.09 | 3.00 | 2.49 |
| 1951–55 | 918 | 713 | 742 | 508 | 247 | 185 | 8 88 | 7.26 | 7.19 | 5 17 | 2.40 | 1.89 |
| 1956–60 | 972 | 765 | 705 | 490 | 244 | 177 | 8 50 | 7 07 | 6.17 | 4.53 | 2.13 | 1.64 |
| 1961–65 | 986 | 723 | 691 | 496 | 210 | 154 | 8.23 | 6.39 | 5.77 | 4.38 | 1.75 | 1.36 |
| | ANNUAL TOTALS | | | | | | ANNUAL RATES | | | | | |
| 1961 | 976 | 744 | 739 | 490 | 236 | 176 | 7.93 | 6.36 | 6.00 | 4.19 | 1.92 | 1.51 |
| 1962 | 1,080 | 733 | 719 | 548 | 239 | 170 | 8.84 | 6.38 | 5.89 | 4.76 | 1.96 | 1.48 |
| 1963 | 1,043 | 765 | 691 | 509 | 212 | 155 | 8.61 | 6.68 | 5.70 | 4 44 | 1.75 | 1.36 |
| 1964 | 940 | 719 | 691 | 479 | 164 | 133 | 7.96 | 6 47 | 5.85 | 4.31 | 1.39 | 1.20 |
| 1965 | 889 | 655 | 615 | 452 | 200 | 136 | 7.77 | 6.04 | 5.37 | 4.17 | 1.75 | 1.25 |

(a) Number of deaths per 1,000 male or female live births registered.      (b) Not available.      (c) Includes under one day.

A graph showing infant mortality rates for each year from 1910 to 1966 will be found on the opposite page.

# INFANT MORTALITY RATES: AUSTRALIA, 1910-1966
## (INFANT DEATHS PER 1,000 LIVE BIRTHS)



UNDER ONE YEAR

UNDER FOUR WEEKS

PLATE 21

241
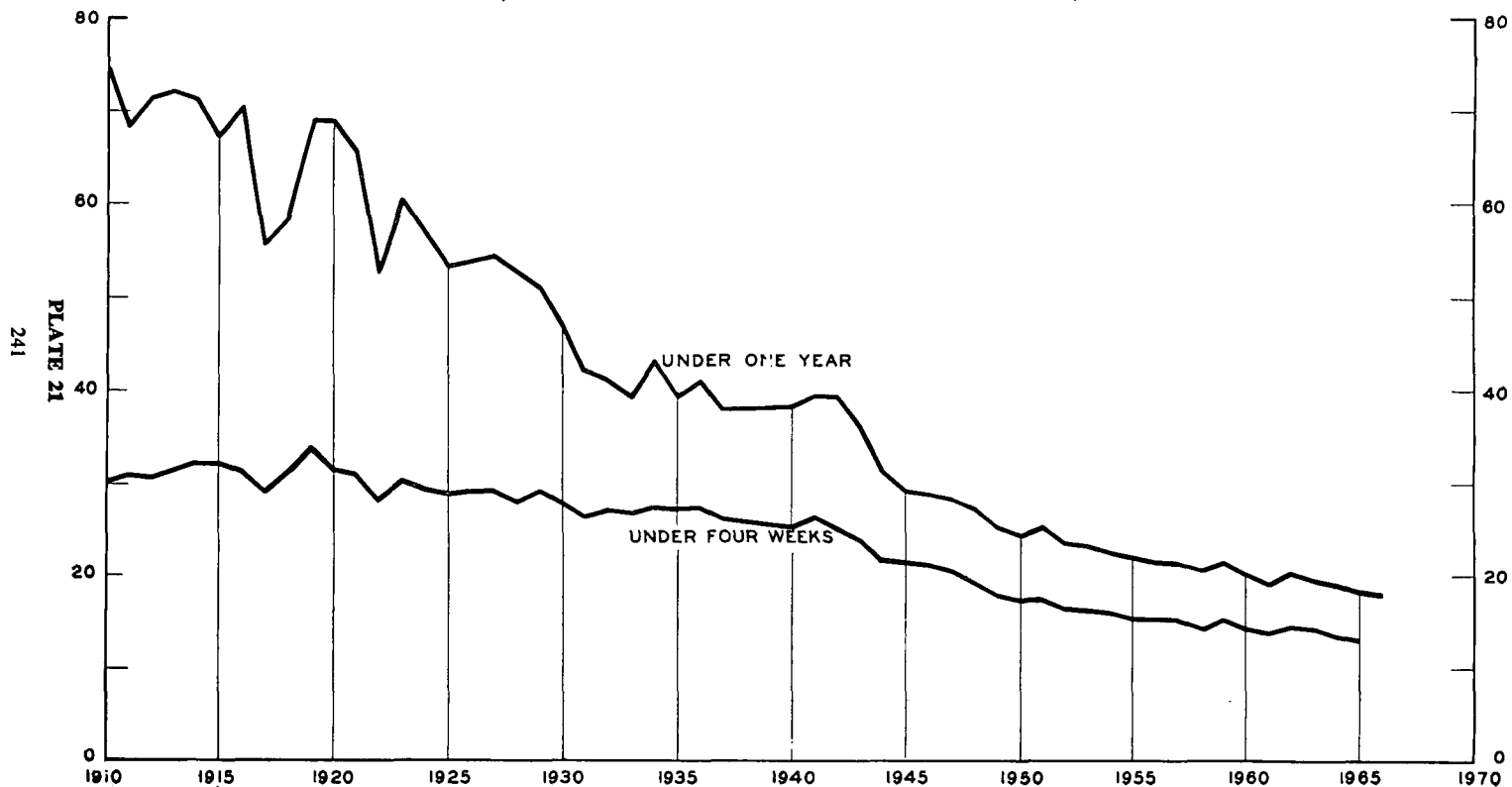
**Causes of death—children under one year**

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 1965 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, 1965

| Inter-national Classi-fication of Diseases number | Cause of death | Age at death | | | | | | | | | | Total under one year |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days | | Total under one week | Weeks | | | Months | | | | |
| | | Un-der 1 | 1–6 | | 1 | 2 | 3 | 1–2 (a) | 3–5 | 6–8 | 9–11 | |
| | Causes mainly of prenatal and natal origin — | | | | | | | | | | | |
| 750–759 | Congenital malformations . | 166 | 176 | 342 | 57 | 41 | 25 | 128 | 97 | 48 | 27 | 765 |
| 760, 761 | Birth injury . . . . | 312 | 204 | 516 | 22 | 3 | 1 | 1 | .. | 1 | .. | 544 |
| 762 | Postnatal asphyxia and atelec-tasis . | 306 | 192 | 498 | 13 | 6 | 3 | 3 | 6 | 1 | 2 | 532 |
| 769 | Attributed to certain diseases of the mother . . . | 44 | 36 | 80 | 2 | .. | .. | .. | 1 | .. | .. | 83 |
| 770 | Erythroblastosis . . | 61 | 30 | 91 | 1 | 1 | .. | 1 | .. | .. | 1 | 95 |
| 771 | Haemorrhagic disease of new-born . . . . | 15 | 24 | 39 | 5 | 1 | 1 | 1 | .. | .. | .. | 47 |
| 773 | Ill-defined diseases peculiar to early infancy . | 116 | 108 | 224 | 7 | 4 | 2 | 9 | 5 | 4 | 5 | 260 |
| 774, 776 | Immaturity alone, or with men-tion of any other subsidiary condition . . . . | 475 | 215 | 690 | 10 | 4 | 2 | 4 | .. | .. | .. | 710 |
| | *Total* . . . . | *1,495* | *985* | *2,480* | *117* | *60* | *34* | *147* | *109* | *54* | *35* | *3,036* |
| | Causes mainly of postnatal origin— | | | | | | | | | | | |
| 571, 764 | Gastro-enteritis (including diarrhoea of newborn) . | .. | .. | .. | 4 | 5 | 6 | 17 | 27 | 31 | 28 | 118 |
| (b) | Pneumonia and bronchitis | 12 | 39 | 51 | 13 | 15 | 13 | 83 | 123 | 71 | 37 | 406 |
| (c) | Septicaemia, skin and sub-cutaneous tissue infections, sepsis of newborn . | .. | 9 | 9 | 9 | 7 | 4 | 7 | 2 | 2 | 2 | 42 |
| 057, 340 | Meningococcal infections and non-meningococcal meningitis | .. | 1 | 1 | 3 | 4 | 2 | 15 | 5 | 7 | 9 | 46 |
| (d) | Causes classified as infective or mainly infective in origin not specified above . | 2 | 2 | 4 | 2 | 2 | 2 | 27 | 22 | 20 | 12 | 91 |
| E921–E925 | Accidental mechanical suffoca-tion from vomit, food, foreign body or in bed and cradle | .. | 5 | 5 | 2 | 4 | 3 | 21 | 39 | 10 | 9 | 93 |
| E926, E980–E985 | Lack of care, neglect, infant-icide . . . . | 3 | 3 | 6 | .. | .. | .. | 2 | 2 | 3 | 1 | 14 |
| (e) | Other accidents, poisonings and violence . . . | 1 | .. | 1 | 1 | .. | .. | 5 | 8 | 6 | 12 | 33 |
| | *Total* . . . . | *18* | *59* | *77* | *34* | *37* | *30* | *177* | *228* | *150* | *110* | *843* |
| 140–239 | Neoplasms . . . . | 1 | 2 | 3 | 1 | .. | 2 | 1 | 5 | 5 | 2 | 19 |
| Residual | Other causes remaining . . | 30 | 21 | 51 | 12 | 6 | 3 | 47 | 47 | 35 | 18 | 219 |
| | **All causes** . . . | **1,544** | **1,067** | **2,611** | **164** | **103** | **69** | **372** | **389** | **244** | **165** | **4,117** |

(a) Age four weeks and under three months.    (b) 490–493, 500–502, 763.    (c) 053,690–698, 765–768. (d) 001–052, 054–056, 058–138, 391–393, 470–483, 518 519.    (e) E800–E920, E927–E979, F990–E999.

The following table summarises the detail contained in the previous table, and, in addition, shows the proportions of deaths from the various causes in each of the periods—under one week, one week and under one month, one month and under one year, and total under one year.

## DEATHS OF CHILDREN UNDER ONE YEAR OF AGE, BY CAUSE OF DEATH
## NUMBERS AND PROPORTIONS, AUSTRALIA, 1965

| Inter-national Classi-fication of Diseases number | Cause of death | Age at death | | | | | | | Total under one year | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Under one week | | One week and under one month | | One month and under one year | | | | |
| | | Num-ber | Per cent | Num-ber | Per cent | Num-ber | Per cent | | Num-ber | Per cent |
| | Causes mainly of prenatal and natal origin— | | | | | | | | | |
| 750–759 | Congenital malformations . | 342 | 13.1 | 123 | 36.6 | 300 | 25 6 | | 765 | 18 6 |
| 760, 761 | Birth injury . . . . | 516 | 19.8 | 26 | 7.7 | 2 | 0.2 | | 544 | 13.2 |
| 762 | Postnatal asphyxia and atelec-tasis . . . . | 498 | 19.1 | 22 | 6.5 | 12 | 1.0 | | 532 | 12.9 |
| 769 | Attributed to certain diseases of the mother . . . . | 80 | 3.1 | 2 | 0 6 | 1 | 0.1 | | 83 | 2 0 |
| 770 | Erythroblastosis . . . | 91 | 3.5 | 2 | 0.6 | 2 | 0.2 | | 95 | 2.3 |
| 771 | Haemorrhagic disease of new-born . . . . . | 39 | 1.5 | 7 | 2.1 | 1 | 0.1 | | 47 | 1.1 |
| 773 | Ill-defined diseases peculiar to early infancy . . . | 224 | 8.6 | 13 | 3.9 | 23 | 2.0 | | 260 | 6.3 |
| 774, 776 | Immaturity alone, or with men-tion of any subsidiary condi-tion . . . . . | 690 | 26.4 | 16 | 4.8 | 4 | 0.3 | | 710 | 17.2 |
| | Total . . . . . | 2,480 | 95.0 | 211 | 62.8 | 345 | 29.5 | | 3,036 | 73.7 |
| | Causes mainly of postnatal origin— | | | | | | | | | |
| 571, 764 | Gastro-enteritis (including diarrhoea of newborn) . | .. | .. | 15 | 4.5 | 103 | 8.8 | | 118 | 2.9 |
| (a) | Pneumonia and bronchitis . | 51 | 2 0 | 41 | 12 2 | 314 | 26 8 | | 406 | 9.9 |
| | Other . . . . . | 26 | 1.0 | 45 | 13.4 | 248 | 21.2 | | 319 | 7.7 |
| | Total . . . . | 77 | 2.9 | 101 | 30.1 | 665 | 56.8 | | 843 | 20.5 |
| 140–239, residual | Neoplasms and other causes remaining . . . | 54 | 2.1 | 24 | 7.1 | 160 | 13.7 | | 238 | 5 8 |
| | All causes . . . | 2,611 | 100.0 | 336 | 100.0 | 1,170 | 100.0 | | 4,117 | 100.0 |

(a) 490–493, 500–502, 763.

### 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), and 1955 (Seventh), were successively adopted for use in Australian statistics.

The Sixth Revision of the International Statistical Classification of Diseases, Injuries and Causes of Death was used in Australia for deaths registered in 1950 to 1957. The Seventh Revision has been used for deaths registered in 1958 and subsequent years. The Sixth Revision, for the first time in connection with the International Classification, laid down rules for a uniform method of selecting the main cause to be tabulated if more than one cause is stated on the death certificate. These rules were maintained in the Seventh Revision, which was concerned mainly with certain essential changes and amendment of errors and inconsistencies in the previous classification. Prior to 1950 the rules adopted in Australia for the selection of the cause of death to be tabulated were those laid down in the United States Manual of Joint Causes of Death, first published in 1914 and revised to conform to successive revisions of the International List.

The adoption of the new method introduced with the Sixth Revision and maintained in the Seventh marked a fundamental change in Australian cause of death statistics, emphasis now being placed on the underlying cause of death as indicated by the certifying practitioner. This change in principle affects the comparability of the statistics for 1950 and subsequent years with those for earlier years. A complete detailed classification of causes of death for Australia for 1950 according to both the Fifth and Sixth Revisions was shown in *Demography*, Bulletin No. 68, 1950.

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 1965 which follow. Some categories have been sub-divided to show additional particulars of interest in Australian statistics. Tables A and B show deaths of males and females, respectively, in age groups, and Table C shows the total numbers of males and females who died, the death rates per million of mean population, and the percentage of total deaths.

## A. DEATHS OF MALES, BY CAUSE OF DEATH AND AGE GROUP: AUSTRALIA, 1965

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

| Cause of death(a) | Detailed list numbers | Age groups (years) | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | 0 | 1–4 | 5–14 | 15–24 | 25–34 | 35–44 | 45–54 | 55–64 | 65 and over | Total |
| B 1 Tuberculosis of respiratory system . . . . | 001–008 | .. | .. | .. | .. | .. | 11 | 33 | 43 | 130 | 217 |
| B 2 Tuberculosis, other forms | 010–019 | .. | 1 | .. | .. | .. | 1 | 2 | 1 | 4 | 9 |
| B 3 Syphilis and its sequelae . | 020–029 | .. | .. | .. | .. | .. | 1 | 2 | 17 | 36 | 56 |
| B 6 Dysentery, all forms . | 045–048 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 |
| B 8 Diphtheria . . . | 055 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 |
| B 9 Whooping cough . . | 056 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| B10 Meningococcal infections . | 057 | 2 | 7 | 2 | .. | 1 | .. | .. | .. | .. | 12 |
| B14 Measles . . . . | 085 | 3 | 2 | .. | .. | .. | .. | .. | .. | 1 | 6 |
| B17 All other diseases classified as infective and parasitic . | (b) | 25 | 10 | 9 | 5 | 3 | 12 | 18 | 15 | 29 | 126 |
| Malignant neoplasms of— Digestive organs and peritoneum . . | 150–159 | .. | 1 | 4 | 7 | 24 | 107 | 296 | 597 | 1,789 | 2,825 |
| Lung . . . | 162, 163 | .. | .. | 1 | .. | 10 | 55 | 246 | 672 | 1,115 | 2,099 |
| Breast . . . | 170 | .. | .. | .. | .. | .. | .. | 2 | 2 | 7 | 11 |
| B18 Genital organs . . | 171–179 | .. | 1 | .. | 8 | 12 | 12 | 16 | 81 | 797 | 927 |
| Urinary organs . . | 180, 181 | 2 | 4 | 1 | .. | 4 | 19 | 49 | 101 | 287 | 467 |
| Leukaemia and aleukaemia . . . | 204 | 1 | 23 | 40 | 38 | 23 | 21 | 56 | 53 | 142 | 397 |
| Other malignant and lymphatic neoplasms . | (c) | 4 | 25 | 40 | 50 | 57 | 136 | 274 | 383 | 643 | 1,612 |
| B19 Benign neoplasms and neoplasms of unspecified nature . . . | 210–239 | 2 | 2 | 5 | 2 | 3 | 3 | 19 | 21 | 28 | 85 |
| B20 Diabetes mellitus . . | 260 | 1 | .. | 1 | 2 | 6 | 22 | 56 | 118 | 374 | 580 |
| B21 Anaemias . . . | 290–293 | 1 | 4 | 4 | 2 | 1 | 3 | 8 | 14 | 91 | 128 |
| B22 Vascular lesions affecting central nervous system . | 330–334 | 2 | 1 | 5 | 16 | 33 | 126 | 360 | 912 | (d) 4,354 | 5,809 |
| B23 Non-meningococcal meningitis . . . | 340 | 25 | 8 | 3 | .. | 2 | 5 | 3 | 5 | 5 | 56 |
| B24 Rheumatic fever . . | 400–402 | .. | .. | 3 | 3 | 1 | 3 | 2 | .. | .. | 12 |
| B25 Chronic rheumatic heart disease . . . . | 410–416 | .. | .. | 1 | 13 | 8 | 43 | 55 | 94 | 101 | 315 |
| B26 Arteriosclerotic heart disease . . | 420 | .. | .. | 1 | 5 | 30 | 553 | 2,005 | 4,253 | (d)10,405 | 17,252 |
| Degenerative heart disease | 421, 422 | 4 | .. | 1 | 5 | 18 | 44 | 122 | 231 | (d) 1,679 | 2,104 |
| B27 Other diseases of heart . | 430–434 | 4 | 2 | 5 | 2 | 11 | 21 | 80 | 183 | 1,290 | 1,598 |
| B28 Hypertension with heart disease . . . | 440–443 | .. | .. | .. | 1 | 4 | 15 | 41 | 101 | 412 | 574 |
| B29 Hypertension without mention of heart . . . | 444–447 | .. | .. | .. | 2 | 6 | 23 | 63 | 65 | 200 | 359 |
| B30 Influenza . . . . | 480–483 | 4 | 2 | 2 | .. | 2 | 6 | 16 | 6 | 43 | 81 |
| B31 Pneumonia . . . | 490–493 | 181 | 56 | 17 | 23 | 12 | 42 | 97 | 197 | (d) 1,278 | 1,903 |
| B32 Bronchitis . . . | 500–502 | 13 | 8 | 2 | 2 | 2 | 18 | 96 | 369 | 1,378 | 1,888 |
| B33 Ulcer of stomach and duodenum . . . | 540, 541 | .. | .. | .. | .. | 5 | 22 | 63 | 93 | 247 | 430 |
| B34 Appendicitis . . . | 550–553 | .. | 4 | 2 | 1 | 4 | 5 | 7 | 10 | 23 | 56 |
| B35 Intestinal obstruction and hernia . . . . | 560, 561, 570 | 26 | 4 | 2 | 1 | .. | 8 | 13 | 35 | 134 | 223 |
| B36 Gastritis, duodenitis, enteritis, and colitis except diarrhoea of the newborn | 543, 571, 572 | 62 | 40 | 10 | 1 | .. | 4 | 12 | 25 | 85 | 239 |
| B37 Cirrhosis of liver . . | 581 | 1 | 2 | .. | 1 | 7 | 34 | 94 | 100 | 107 | 346 |
| B38 Nephritis and nephrosis . | 590–594 | 2 | 3 | 7 | 18 | 23 | 45 | 69 | 106 | 209 | 482 |
| B39 Hyperplasia of prostate . | 610 | .. | .. | .. | .. | .. | .. | .. | 21 | (d) 336 | 357 |
| B41 Congenital malformations | 750–759 | 411 | 37 | 26 | 30 | 16 | 15 | 21 | 20 | 16 | 592 |
| B42 Birth injuries, postnatal asphyxia and atelectasis . | 760–762 | 630 | .. | .. | .. | .. | .. | .. | .. | .. | 630 |
| B43 Infections of the newborn . | 763–768 | 86 | .. | .. | .. | .. | .. | .. | .. | .. | 86 |

For footnotes *see* following page.

## A. DEATHS OF MALES, BY CAUSE OF DEATH AND AGE GROUP
## AUSTRALIA, 1965—continued

ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SEVENTH REVISION OF THE INTERNATIONAL LIST)—continued

| Cause of death(a) | Detailed list numbers | Age groups (years) | | | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 1–4 | 5–14 | 15–24 | 25–34 | 35–44 | 45–54 | 55-64 | 65 and over | |
| B44 Other diseases peculiar to early infancy, and immaturity unqualified . | 769–776 | 687 | .. | .. | .. | .. | .. | .. | .. | .. | 687 |
| B45 Senility without mention of psychosis, ill-defined and unknown causes . | 780–795 | 9 | 3 | .. | 4 | 4 | 11 | 14 | 25 | (e) 159 | 229 |
| B46 General arteriosclerosis.. | 450 | .. | .. | .. | .. | .. | .. | 13 | 52 | (d) 913 | 978 |
| Other diseases of circulatory system | 451–468 | .. | 1 | .. | 4 | 9 | 21 | 51 | 130 | 464 | 680 |
| Other diseases of respiratory system | { 470–475, 510–527 } | 40 | 18 | 6 | 6 | 7 | 8 | 46 | 111 | 339 | 581 |
| All other diseases . | Residual | 53 | 44 | 53 | 64 | 61 | 171 | 301 | 382 | 1,124 | 2,253 |
| BE47 Motor vehicle accidents . | E810–E835 | 6 | 73 | 122 | 715 | 332 | 291 | 267 | 252 | 305 | 2,363 |
| BE48 All other accidents { | E800–E802, E840–E962 | 67 | 124 | 139 | 231 | 202 | 265 | 240 | 193 | (e) 419 | 1,880 |
| BE49 Suicide and self-inflicted injury { | E963, E970– E979 | .. | .. | 5 | 100 | 169 | 239 | 238 | 162 | (f) 162 | 1,075 |
| BE50 Homicide and operations of war  .. { | E964, E965, E980–E999 | 2 | 4 | 6 | 5 | 25 | 22 | 12 | 4 | 12 | 92 |
| All causes  .  . | .. | 2,357 | 515 | 525 | 1,367 | 1,137 | 2,463 | 5,479 | 10,255 | (g)31,656 | 55,770 |

(a) No male deaths were recorded in the following categories in 1965: B4, Typhoid fever (040); B5, Cholera (043); B7, Scarlet fever and streptococcal sore throat (050, 051); B11, Plague (058); B12, Acute poliomyelitis (080); B13, Smallpox (084); B15, Typhus and other rickettsial diseases (100-108); B16, Malaria (110-117).   (b) 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086 096, 120-138.   (c) All causes, 140 205 not shown above. (d) Includes 1, age 'not stated'.   (e) Includes 3, age 'not stated'.   (f) Includes 4, age 'not stated'.   (g) Includes 16, age 'not stated'.

## B. DEATHS OF FEMALES, BY CAUSE OF DEATH AND AGE GROUP: AUSTRALIA, 1965

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

| Cause of death(a) | Detailed list numbers | Age groups (years) | | | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 1–4 | 5–14 | 15–24 | 25–34 | 35–44 | 45–54 | 55–64 | 65 and over | |
| B 1 Tuberculosis of respiratory system . | 001–008 | .. | 1 | 1 | .. | 4 | 6 | 12 | 16 | 19 | 59 |
| B 2 Tuberculosis, other forms | 010–019 | .. | 1 | .. | .. | 1 | 2 | .. | 1 | 4 | 9 |
| B 3 Syphilis and its sequelae . | 020–029 | .. | .. | .. | 1 | .. | .. | 5 | 9 | 5 | 21 |
| B 6 Dysentery, all forms | 045–048 | 1 | .. | .. | .. | .. | 1 | .. | 3 | .. | 5 |
| B 7 Scarlet fever and streptococcal sore throat . | 050, 051 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 |
| B 8 Diphtheria . . . | 055 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 |
| B 9 Whooping cough | 056 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 3 |
| B10 Meningococcal infections | 057 | 6 | 3 | .. | .. | 1 | 1 | .. | 1 | 2 | 14 |
| B14 Measles | 085 | 1 | 10 | 2 | .. | .. | .. | .. | 1 | .. | 14 |
| B17 All other diseases classified as infective and parasitic | (b) | 10 | 10 | 9 | 8 | 6 | 9 | 9 | 14 | 38 | 113 |
| B18 Malignant neoplasms of— Digestive organs and peritoneum | 150–159 | 1 | 1 | .. | 2 | 27 | 83 | 218 | 402 | 1,824 | 2,558 |
| Lung | 162, 163 | .. | .. | .. | .. | 1 | 14 | 50 | 65 | 166 | 296 |
| Breast | 170 | .. | .. | .. | 2 | 24 | 113 | 247 | 284 | 604 | 1,274 |
| Genital organs . | 171–179 | .. | 2 | 2 | 6 | 13 | 91 | 204 | 252 | 477 | 1,047 |
| Urinary organs . | 180, 181 | .. | 5 | 2 | 1 | 1 | 5 | 22 | 38 | 147 | 221 |
| Leukaemia and aleukaemia | 204 | 2 | 23 | 29 | 12 | 14 | 18 | 27 | 32 | 101 | 258 |
| Other malignant and lymphatic neoplasms . | (c) | 2 | 16 | 33 | 30 | 40 | 88 | 155 | 203 | 572 | 1,139 |
| B19 Benign neoplasms and neoplasms of unspecified nature . | 210–239 | 5 | .. | 3 | 4 | 2 | 13 | 20 | 21 | 32 | 100 |
| B20 Diabetes mellitus . . | 260 | .. | 1 | 3 | 2 | 8 | 10 | 38 | 145 | 685 | 892 |
| B21 Anaemias . . . | 290–293 | 1 | 7 | 4 | 2 | .. | 2 | 8 | 15 | 125 | 164 |

For footnotes see following page.

## B. DEATHS OF FEMALES, BY CAUSE OF DEATH AND AGE GROUP
### AUSTRALIA, 1965—continued
#### ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SEVENTH REVISION OF THE INTERNATIONAL LIST)—continued

| Cause of death(a) | Detailed list numbers | Age groups (years) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 1–4 | 5–14 | 15–24 | 25–34 | 35–44 | 45–54 | 55–64 | 65 and over | Total |
| B22 Vascular lesions affecting central nervous system | 330–334 | 1 | .. | 1 | 10 | 32 | 131 | 431 | 718 | (d) 6,511 | 7,835 |
| B23 Non-meningococcal meningitis | 340 | 13 | 7 | 4 | 2 | .. | .. | 3 | 6 | 6 | 41 |
| B24 Rheumatic fever | 400–402 | .. | 1 | 3 | 2 | .. | .. | .. | .. | .. | 6 |
| B25 Chronic rheumatic heart disease | 410–416 | .. | .. | 1 | 9 | 16 | 43 | 84 | 126 | 205 | 484 |
| B26 { Arteriosclerotic heart disease | 420 | .. | .. | .. | 1 | 9 | 117 | 458 | 1,327 | (d) 8,276 | 10,188 |
| Degenerative heart disease | 421, 422 | 2 | 1 | .. | 4 | 4 | 17 | 56 | 102 | 2,196 | 2,382 |
| B27 Other diseases of heart | 430–434 | 3 | 2 | 3 | 7 | 6 | 23 | 39 | 112 | 1,484 | 1,679 |
| B28 Hypertension with heart disease | 440–443 | .. | .. | .. | .. | 2 | 13 | 39 | 64 | 695 | 813 |
| B29 Hypertension without mention of heart | 444–447 | .. | .. | .. | 2 | 1 | 13 | 34 | 52 | 277 | 379 |
| B30 Influenza | 480–483 | 9 | 2 | 2 | 2 | 2 | .. | 2 | 3 | 39 | 61 |
| B31 Pneumonia | 490–493 | 110 | 46 | 19 | 9 | 16 | 37 | 51 | 75 | 1,104 | 1,467 |
| B32 Bronchitis | 500–502 | 9 | 13 | 2 | 3 | 7 | 7 | 24 | 51 | 242 | 358 |
| B33 Ulcer of stomach and duodenum | 540, 541 | 1 | 1 | 1 | 2 | 8 | 7 | 23 | 26 | 120 | 189 |
| B34 Appendicitis | 550–553 | .. | 1 | 2 | 2 | 1 | 2 | .. | 1 | 6 | 15 |
| B35 Intestinal obstruction and hernia | 560, 561, 570 | 17 | .. | .. | 1 | 2 | 8 | 12 | 18 | 200 | 258 |
| B36 Gastritis, duodenitis, enteritis and colitis, except diarrhoea of the newborn | 543, 571, 572 | 45 | 27 | 3 | 4 | 3 | 6 | 5 | 16 | 114 | 223 |
| B37 Cirrhosis of liver | 581 | 3 | .. | 2 | 3 | 8 | 20 | 43 | 43 | 79 | 201 |
| B38 Nephritis and nephrosis | 590–594 | 2 | 1 | 11 | 7 | 15 | 40 | 66 | 75 | 209 | 426 |
| B40 Complications of pregnancy, childbirth and the puerperium | { 640–652, 670–689 } | .. | .. | .. | 27 | 25 | 20 | 2 | .. | .. | 74 |
| B41 Congenital malformations | 750–759 | 354 | 53 | 38 | 26 | 15 | 15 | 14 | 17 | 17 | 549 |
| B42 Birth injuries, post-natal asphyxia and atelectasis | 760–762 | 446 | .. | .. | .. | .. | .. | .. | .. | .. | 446 |
| B43 Infections of the newborn | 763–768 | 55 | .. | .. | .. | .. | .. | .. | .. | .. | 55 |
| B44 Other diseases peculiar to early infancy, and immaturity unqualified | 769–776 | 514 | 1 | .. | .. | .. | .. | .. | .. | .. | 515 |
| B45 Senility without mention of psychosis, ill-defined and unknown causes | 780–795 | 2 | 3 | 1 | 3 | 5 | 3 | 4 | 10 | 259 | 290 |
| B46 { General arteriosclerosis | 450 | .. | .. | .. | .. | .. | .. | 6 | 18 | 1,218 | 1,242 |
| Other diseases of circulatory system | 451–468 | 1 | .. | 3 | 5 | 14 | 21 | 21 | 58 | 321 | 444 |
| Other diseases of respiratory system | { 470–475, 510–527 } | 36 | 17 | 5 | 6 | 3 | 10 | 14 | 30 | 173 | 294 |
| All other diseases | Residual | 40 | 38 | 31 | 45 | 71 | 167 | 272 | 344 | 1,269 | 2,277 |
| BE47 Motor vehicle accidents | E810–E835 | 10 | 42 | 60 | 170 | 56 | 70 | 98 | 94 | 200 | 800 |
| BE48 All other accidents | { E800–E802, E840–E962 } | 49 | 62 | 47 | 19 | 25 | 65 | 81 | 75 | (d) 654 | 1,077 |
| BE49 Suicide and self-inflicted injury | { E963, F970– E979 } | .. | .. | .. | 57 | 92 | 123 | 136 | 113 | (d) 89 | 610 |
| BE50 Homicide and operations of war | { E964, E965, E980–E999 } | 6 | 5 | 9 | 10 | 12 | 16 | 13 | 2 | 5 | 78 |
| All causes | .. | 1,760 | 404 | 337 | 508 | 592 | 1,450 | 3,046 | 5,078 | (e) 30,770 | 43,945 |

(a) No female deaths were recorded in the following categories in 1965: B4. Typhoid fever (040); B5 Cholera (043); B11, Plague (058); B12, Acute poliomyelitis (080); B13, Smallpox (084); B15, Typhus and other rickettsial diseases (100-108); B16, Malaria (110-117).   (b) 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138.   (c) All causes, 140-205 not shown above.   (d) Includes 1, age 'not stated'.   (e) Includes 4, age 'not stated'.

## C. DEATHS, BY CAUSE OF DEATH AND SEX
## NUMBERS AND RATES, AUSTRALIA, 1965
### ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SEVENTH REVISION OF THE INTERNATIONAL LIST)

| Cause of death | Detailed list numbers | Number of deaths | | | Rate per 1,000,000 of mean population | Percentage of total deaths |
|---|---|---|---|---|---|---|
| | | Males | Females | Persons | | |
| B 1 Tuberculosis of respiratory system | 001–008 | 217 | 59 | 276 | 24 | 0.28 |
| B 2 Tuberculosis, other forms | 010–019 | 9 | 9 | 18 | 2 | 0 02 |
| B 3 Syphilis and its sequelae | 020–029 | 56 | 21 | 77 | 7 | 0.08 |
| B 4 Typhoid fever | 040 | .. | .. | .. | .. | .. |
| B 5 Cholera | 043 | .. | .. | .. | .. | .. |
| B 6 Dysentery, all forms | 045–048 | 1 | 5 | 6 | 1 | 0.01 |
| B 7 Scarlet fever and streptococcal sore throat | 050, 051 | .. | 1 | 1 | (a) | 0 00 |
| B 8 Diphtheria | 055 | 1 | 1 | 2 | (a) | 0 00 |
| B 9 Whooping cough | 056 | 1 | 3 | 4 | (a) | 0 00 |
| B10 Meningococcal infections | 057 | 12 | 14 | 26 | 2 | 0.03 |
| B11 Plague | 058 | .. | .. | .. | .. | .. |
| B12 Acute poliomyelitis | 080 | .. | .. | .. | .. | .. |
| B13 Smallpox | 084 | .. | .. | .. | .. | .. |
| B14 Measles | 085 | 6 | 14 | 20 | 2 | 0.02 |
| B15 Typhus and other rickettsial diseases | 100–108 | .. | .. | .. | .. | .. |
| B16 Malaria | 110–117 | .. | .. | .. | .. | .. |
| B17 All other diseases classified as infective and parasitic | (b) | 126 | 113 | 239 | 21 | 0.24 |
| B18 Malignant neoplasms of— | | | | | | |
|    Digestive organs and peritoneum | 150–159 | 2,825 | 2,558 | 5,383 | 475 | 5 40 |
|    Lung | 162, 163 | 2,099 | 296 | 2,395 | 211 | 2 40 |
|    Breast | 170 | 11 | 1,274 | 1,285 | 113 | 1 29 |
|    Genital organs | 171–179 | 927 | 1,047 | 1,974 | 174 | 1.98 |
|    Urinary organs | 180, 181 | 467 | 221 | 688 | 61 | 0 69 |
|    Leukaemia and aleukaemia | 204 | 397 | 258 | 655 | 58 | 0.66 |
|    Other malignant and lymphatic neoplasms | (c) | 1,612 | 1,139 | 2,751 | 243 | 2 76 |
| B19 Benign and unspecified neoplasms | 210–239 | 85 | 100 | 185 | 16 | 0.19 |
| B20 Diabetes mellitus | 260 | 580 | 892 | 1,472 | 130 | 1.48 |
| B21 Anaemias | 290–293 | 128 | 164 | 292 | 26 | 0 29 |
| B22 Vascular lesions affecting central nervous system | 330–334 | 5,809 | 7,835 | 13,644 | 1,204 | 13.68 |
| B23 Non-meningococcal meningitis | 340 | 56 | 41 | 97 | 9 | 0.10 |
| B24 Rheumatic fever | 400–402 | 12 | 6 | 18 | 2 | 0 02 |
| B25 Chronic rheumatic heart disease | 410–416 | 315 | 484 | 799 | 71 | 0 80 |
| B26 Arteriosclerotic heart disease | 420 | 17,252 | 10,188 | 27,440 | 2,421 | 27.52 |
|    Degenerative heart disease | 421, 422 | 2,104 | 2,382 | 4,486 | 396 | 4.50 |
| B27 Other diseases of heart | 430–434 | 1,598 | 1,679 | 3,277 | 289 | 3.29 |
| B28 Hypertension with heart disease | 440–443 | 574 | 813 | 1,387 | 122 | 1.39 |
| B29 Hypertension without mention of heart | 444–447 | 359 | 379 | 738 | 65 | 0 74 |
| B30 Influenza | 480–483 | 81 | 61 | 142 | 13 | 0.14 |
| B31 Pneumonia | 490–493 | 1,903 | 1,467 | 3,370 | 297 | 3 38 |
| B32 Bronchitis | 500–502 | 1,888 | 358 | 2,246 | 198 | 2 25 |
| B33 Ulcer of stomach and duodenum | 540, 541 | 430 | 189 | 619 | 55 | 0 62 |
| B34 Appendicitis | 550–553 | 56 | 15 | 71 | 6 | 0 07 |
| B35 Intestinal obstruction and hernia | 560, 561, 570 | 223 | 258 | 481 | 42 | 0.48 |
| B36 Gastritis, duodenitis, enteritis and colitis, except diarrhoea of the newborn | 543, 571, 572 | 239 | 223 | 462 | 41 | 0 46 |
| B37 Cirrhosis of liver | 581 | 346 | 201 | 547 | 48 | 0 55 |
| B38 Nephritis and nephrosis | 590–594 | 482 | 426 | 908 | 80 | 0 91 |
| B39 Hyperplasia of prostate | 610 | 357 | .. | 357 | 32 | 0 36 |
| B40 Complications of pregnancy, child-birth and the puerperium | 640–652 670–689 | .. | 74 | 74 | 7 | 0.07 |
| B41 Congenital malformations | 750–759 | 592 | 549 | 1,141 | 101 | 1.14 |
| B42 Birth injuries, post-natal aspyhxia and atelectasis | 760–762 | 630 | 446 | 1,076 | 95 | 1 08 |
| B43 Infections of the newborn | 763–768 | 86 | 55 | 141 | 12 | 0.14 |
| B44 Other diseases peculiar to early infancy, and immaturity unqualified | 769–776 | 687 | 515 | 1,202 | 106 | 1.21 |
| B45 Senility without mention of psychosis, ill-defined and unknown causes | 780–795 | 229 | 290 | 519 | 46 | 0 52 |
| B46 General arteriosclerosis | 450 | 978 | 1,242 | 2,220 | 196 | 2 23 |
|    Other diseases of circulatory system | 451–468 | 680 | 444 | 1,124 | 99 | 1 13 |
|    Other diseases of respiratory system | 470–475 510–527 | 581 | 294 | 875 | 77 | 0 88 |
|    All other diseases | Residual | 2,253 | 2,277 | 4,530 | 400 | 4 54 |
| BE47 Motor vehicle accidents | E810–E835 | 2,363 | 800 | 3,163 | 279 | 3 17 |
| BE48 All other accidents | E800–E802 E840–E962 | 1,880 | 1,077 | 2,957 | 261 | 2 97 |
| BE49 Suicide and self-inflicted injury | E963, E970–E979 | 1,075 | 610 | 1,685 | 149 | 1 69 |
| BE50 Homicide and operations of war | E964, E965 E980–E999 | 92 | 78 | 170 | 15 | 0.17 |
| All causes | .. | 55,770 | 43,945 | 99,715 | 8,798 | 100.00 |

(a) Less than 0.5.    (b) 030–039, 041, 042, 044, 049, 052–054, 059–074, 081–083, 086–096, 120–138.
(c) 140 -148, 160, 161, 164, 165, 190–203, 205.

**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 Seventh Revision of the International List. Certain important causes are treated in detail hereunder. The Abbreviated Classification numbers used in tables A to C (pages 244–7) are indicated in parentheses for each cause or group of causes.

*All forms of tuberculosis (B1, B2).* In comparing any of the figures for 1950 and subsequent years with those for 1949 and earlier years, consideration should be given to the effect of the change in basis from the Fifth to the Sixth Revision of the International List. This was discussed in Year Book No. 39, page 626. The following table shows the age groups of males and females who were classified as dying from tuberculosis in 1965, together with figures for 1931, 1941, 1951 and 1961.

### DEATHS FROM TUBERCULOSIS (ALL FORMS), BY AGE GROUP AND SEX
### AUSTRALIA, 1931 TO 1965

| Age group (years) | Males | | | | | Females | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1931 | 1941 | 1951 | 1961 | 1965 | 1931 | 1941 | 1951 | 1961 | 1965 |
| 0–14  .    .    . | 90 | 63 | 23 | 5 | 1 | 81 | 54 | 35 | 1 | 3 |
| 15–29  .    .    . | 294 | 162 | 46 | 2 | .. | 487 | 275 | 68 | .. | 3 |
| 30–44  .    .    . | 585 | 428 | 135 | 25 | 12 | 422 | 319 | 142 | 20 | 10 |
| 45–64  .    .    . | 674 | 793 | 570 | 128 | 79 | 252 | 251 | 126 | 41 | 29 |
| 65 and over .    . | 193 | 279 | 306 | 175 | 134 | 89 | 110 | 86 | 50 | 23 |
| Not stated   .    . | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. |
| Total     .    . | 1,836 | 1,725 | 1,080 | 335 | 226 | 1,331 | 1,009 | 458 | 112 | 68 |

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 3 in 1965. The reductions in the younger age groups are much greater, as can be seen from the table above. In making these comparisons, consideration of the effect of the change in basis from the Fifth to the Sixth Revision of the International List (*see* above) is particularly important.

Of the more developed countries, those with the lowest death rates from tuberculosis per 100,000 of population are: Netherlands, 1.9; Australia, 2.6; Denmark, 3.0; Canada, 3.5; Israel, 3.5; New Zealand, 3.7; and United States of America, 4.3. Rates for selected countries in each continent are:

Africa—South Africa (white population), 6.0; United Arab Republic, 18.1.

North America—Dominican Republic, 15.5; Mexico, 25.1; Guatemala, 31.1.

South America—Argentine, 19.9; Peru, 54.1; Brazil, 82.3.

Asia—Japan, 23.6; India, 82.7; Philippines, 79.6.

Europe—England and Wales, 5.3; Scotland, 7.2; Italy, 14.7; France, 15.6; Poland, 41.1.

*Malignant neoplasms, including neoplasms of lymphatic and haematopoietic tissues (B18).* Deaths classified under this heading according to the Sixth and Seventh 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).

A summary regarding seat of disease for 1965 is given below.

**DEATHS FROM MALIGNANT NEOPLASMS AND NEOPLASMS OF LYMPHATIC AND HAEMATOPOIETIC TISSUES, BY SEAT OF DISEASE AND SEX: AUSTRALIA, 1965**

| Seat of disease | Males | Females | Persons |
|---|---|---|---|
| Malignant neoplasms— | | | |
| Buccal cavity and pharynx . . . . . | 199 | 78 | 277 |
| Digestive organs and peritoneum— | | | |
| Oesophagus . . . . . . . | 208 | 109 | 317 |
| Stomach . . . . . . . | 889 | 611 | 1,500 |
| Small intestine . . . . . . | 15 | 22 | 37 |
| Large intestine . . . . . . | 723 | 968 | 1,691 |
| Other . . . . . . . . | 990 | 848 | 1,838 |
| Respiratory system . . . . . . | 2,240 | 334 | 2,574 |
| Breast . . . . . . . . | 11 | 1,274 | 1,285 |
| Uterus . . . . . . . . | .. | 596 | 596 |
| Other female genital organs . . . . | .. | 451 | 451 |
| Male genital organs . . . . . . | 927 | .. | 927 |
| Urinary organs . . . . . . | 467 | 221 | 688 |
| Skin . . . . . . . . | 264 | 172 | 436 |
| Other and unspecified organs . . . . | 615 | 541 | 1,156 |
| *Total, malignant neoplasms* . . . . | *7,548* | *6,225* | *13,773* |
| Neoplasms of lymphatic and haematopoietic tissues— | | | |
| Lymphosarcoma and reticulosarcoma . . | 207 | 151 | 358 |
| Hodgkin's disease . . . . . . | 84 | 61 | 145 |
| Other forms of lymphoma (reticulosis) . . | 38 | 29 | 67 |
| Multiple myeloma (plasmocytoma) . . . | 64 | 66 | 130 |
| Leukaemia and aleukaemia . . . . | 397 | 258 | 655 |
| Mycosis fungoides . . . . . . | .. | 3 | 3 |
| *Total, neoplasms of lymphatic and haematopoietic tissues* . . . . . . . | *790* | *568* | *1,358* |
| **Grand total** . . . . . . | **8,338** | **6,793** | **15,131** |

The ages of males and females who died from malignant neoplasms in 1965 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 75 per cent between 1931 and 1965, the number of people aged 55 years and over increased by about 118 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 1965**

| Age group (years) | Males | | | | | Females | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1931 | 1941 | 1951 (a) | 1961 (a) | 1965 (a) | 1931 | 1941 | 1951 (a) | 1961 (a) | 1965 (a) |
| Under 15 . . | 25 | 21 | 91 | 130 | 147 | 23 | 25 | 71 | 114 | 118 |
| 15–29 . . . | 43 | 49 | 103 | 109 | 152 | 38 | 45 | 76 | 84 | 104 |
| 30–44 . . . | 196 | 176 | 275 | 380 | 431 | 326 | 344 | 387 | 481 | 481 |
| 45–54 . . . | 410 | 465 | 584 | 823 | 939 | 548 | 685 | 692 | 847 | 923 |
| 55–64 . . . | 868 | 983 | 1,334 | 1,699 | 1,889 | 744 | 926 | 1,180 | 1.207 | 1,276 |
| 65 and over . . | 1,942 | 2,561 | 3,128 | 4,239 | 4,780 | 1,426 | 2,198 | 2,698 | 3,575 | 3,891 |
| Not stated . . | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| Total . . | 3,484 | 4,255 | 5,515 | 7,380 | 8,338 | 3,105 | 4,223 | 5,104 | 6,309 | 6,793 |

(a) Includes neoplasms of lymphatic and haematopoietic tissues.

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 1965 a rate of 133 (males, 146; females, 121).

Death rates from malignant neoplasms per 100,000 of mean population for Australia and for various other countries are as follows: Brazil, 94; Israel, 100; Japan, 108; Poland, 112; Canada, 133; Australia, 133; South Africa (white population), 134; United States of America, 151; Italy, 159; Netherlands, 182; France, 204; England and Wales, 221; Scotland, 226. The rates are for the latest available year in each case.

*Diseases of the heart (B25 to B28).* The number of deaths classified to diseases of the heart in 1965 was 37,389 (21,843 males and 15,546 females). This class is the largest among causes of death, the rate having increased from 112 per 100,000 of mean population in 1911-15 to 330 in 1965. The increase in the number of deaths recorded from heart diseases has been particularly pronounced during the past twenty years. The rapid increase in mortality is partly a reflection of the ageing of the population, but the figures have been influenced mainly by improved diagnosis and certification by medical practitioners.

The death rates from heart diseases for various years from 1931 were as follows: 1931, 159 (males, 178; females, 142); 1941, 269 (males, 306; females, 231); 1951, 314 (males, 367; females, 259); 1961, 304 (males, 356; females, 250); and 1965, 330 (males, 383; females, 276). Deaths from heart diseases in 1965 represented 37 per cent of the total deaths.

*Puerperal causes (B40).* 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 puerperal causes. The Seventh Revision, introduced in 1958, did not affect comparability. The death rate from these causes has fallen rapidly during recent years and in 1965 the rate was 0.3 per 1,000 live births, compared with a rate of 6 per 1,000 in 1936. The 74 deaths in 1965 correspond to a death rate of 1.32 per 100,000 females. The death rate may be expressed in other terms by stating that for every 3,012 babies born alive in 1965 one woman died from puerperal causes. The death rate per 1,000 live births from puerperal causes in various countries for the latest available year is as follows: Norway, 0.2; Australia, Canada, Denmark, France, Netherlands, New Zealand, Sweden, Switzerland, United Kingdom and United States, 0.3; Finland, 0.4; Italy, 0.9; and Japan, 1.0.

*Causes of infant mortality. See* paragraphs devoted to causes of infant deaths on pages 242-3.

*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; 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 1965

| Period | Death rate from— | | | | | | | | | | | | All violence, proportion per 10,000 deaths | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Accidents(b) | | | Suicide | | | Homicide(c) | | | Total violence | | | | | |
| | M. | F. | P. | M. | F. | P. | M. | F. | P. | M. | F. | P. | M. | F. | P. |
| 1936–40 . | 86 | 28 | 58 | 17 | 5 | 11 | 2 | 1 | 1 | 105 | 34 | 70 | 979 | 399 | 724 |
| 1941–45 . | 67 | 26 | 46 | 11 | 4 | 8 | 1 | 1 | 1 | 79 | 31 | 55 | 730 | 348 | 558 |
| 1946–50 . | 76 | 27 | 51 | 14 | 5 | 10 | 1 | 1 | 1 | 91 | 33 | 62 | 844 | 383 | 640 |
| 1951–55 . | 82 | 31 | 57 | 15 | 5 | 10 | 2 | 1 | 1 | 99 | 37 | 68 | 964 | 453 | 740 |
| 1956–60 . | 75 | 32 | 53 | 16 | 6 | 11 | 2 | 1 | 2 | 93 | 39 | 66 | 957 | 495 | 754 |
| 1961–65 . | 72 | 32 | 52 | 19 | 9 | 14 | 2 | 1 | 1 | 93 | 43 | 68 | 954 | 550 | 777 |
| 1961 . . | 72 | 30 | 52 | 17 | 7 | 12 | 2 | 1 | 1 | 91 | 38 | 65 | 966 | 514 | 769 |
| 1962 . . | 71 | 33 | 52 | 19 | 9 | 14 | 2 | 1 | 2 | 92 | 43 | 68 | 952 | 559 | 780 |
| 1963 . . | 69 | 29 | 49 | 21 | 11 | 16 | 2 | 1 | 1 | 92 | 41 | 66 | 944 | 529 | 762 |
| 1964 . . | 73 | 34 | 53 | 19 | 10 | 15 | 2 | 1 | 2 | 94 | 45 | 70 | 939 | 561 | 772 |
| 1965 . . | 74 | 33 | 54 | 19 | 11 | 15 | 1 | 1 | 1 | 95 | 46 | 70 | 970 | 584 | 800 |

(a) Number of deaths per 100,000 of mean population.     (b) Includes 'open verdict'.     (c) Includes late effects of injuries due to operations of war.

In 1965 the total number of deaths from *accidental causes* (*BE47, BE48*) was 6,120 (4,243 males and 1,877 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, 3,083 (50.38 per cent); motor vehicle non-traffic accidents, 80 (1.31 per cent); other road vehicle accidents, 46 (0.75 per cent); railway accidents, 92 (1.50 per cent); water transport accidents, 86 (1.41 per cent); aircraft accidents, 18 (0.29 per cent); a total of 3,405 (55.64 per cent). Other important causes were accidental falls, 1,005 (16.42 per cent); accidental drowning, 378 (6.18 per cent); and accidents caused by fire and explosion of combustible material, 226 (3.69 per cent).

Deaths from *suicide* (*BE49*) in 1965 numbered 1,685 (males, 1,075; females, 610). Poisoning, other than by gases, was used in 759 cases (45.04 per cent of total deaths by suicide). Other important modes adopted, together with the numbers and relevant percentages, were as follows: firearms and explosives, 331 (19.64 per cent); poisoning by gases, 239 (14.78 per cent); hanging or strangulation, 173 (10.27 per cent); submersion (drowning), 66 (3.92 per cent); other and unspecified modes, 117 (6.35 per cent). Of the 1,075 males who committed suicide, 304 (28.28 per cent) used firearms or explosives. For females the most common mode was poisoning (other than by gases). This was used in 405 cases (66.39 per cent). The following table shows the age of persons who committed suicide in 1965.

### PERSONS WHO COMMITTED SUICIDE, BY AGE GROUP AND SEX
#### AUSTRALIA, 1965

| Age group (years) | Males | Females | Persons | Age group (years) | Males | Females | Persons |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10–14 . . | 5 | .. | 5 | 60–64 . . | 69 | 49 | 118 |
| 15–19 . . | 30 | 20 | 50 | 65–69 . . | 69 | 40 | 109 |
| 20–24 . . | 70 | 37 | 107 | 70–74 . . | 48 | 27 | 75 |
| 25–29 . . | 81 | 43 | 124 | 75–79 . . | 29 | 15 | 44 |
| 30–34 . . | 88 | 49 | 137 | 80–84 . . | 11 | 4 | 15 |
| 35–39 . . | 115 | 57 | 172 | 85 and over . | 1 | 2 | 3 |
| 40–44 . . | 124 | 66 | 190 | Not stated . | 4 | 1 | 5 |
| 45–49 . . | 108 | 72 | 180 | | | | |
| 50–54 . . | 130 | 64 | 194 | | | | |
| 55–59 . . | 93 | 64 | 157 | Total deaths . | 1,075 | 610 | 1,685 |

Of the 170 deaths recorded in 1965 from *homicide and operations of war (BE50)* there were 162 deaths from homicide and injury purposely inflicted by other persons (not in war), of which assault by firearms and explosives caused 57, assault by cutting and piercing instruments 36, and assault by other means 69. Deaths from injury resulting from the operations of war numbered 7 but all were deaths from late effects of such injuries.

**Age at death and average issue of deceased married males and females**

*Demography*, Bulletin No. 83, contains a number of tables showing, in combination with the issue, the age at marriage, age at death and occupation of married (including widowed or divorced) persons who died in Australia in 1965. Deaths of married males in 1965 numbered 43,454, and those of married females, 35,745. The tables which follow deal, however, with only 42,903 males and 35,541 females, the information regarding issue in the remaining 755 cases being incomplete. The total number of children in the families of the 42,903 males was 123,258 and of the 35,541 females, 108,993. The average number of children is shown for various age groups in the following table.

**AVERAGE ISSUE: DECEASED MARRIED(a) MALES AND FEMALES, BY AGE AT DEATH, AUSTRALIA, 1931 TO 1965**

| Age at death (years) | Average issue | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Males | | | | | Females | | | | |
| | 1931 | 1941 | 1951 | 1961 | 1965 | 1931 | 1941 | 1951 | 1961 | 1965 |
| Under 20 . . | 0.75 | .. | 0.43 | 0.33 | 0.70 | 0.66 | 0.79 | 0.83 | 0.75 | 0.38 |
| 20–24 . . . | 0.81 | 0.73 | 0.96 | 0.93 | 0.92 | 1.13 | 0.95 | 0.86 | 1.12 | 1.02 |
| 25–29 . . . | 1.33 | 1.12 | 1.29 | 1.56 | 1.70 | 1.81 | 1.45 | 1.61 | 2.00 | 1.84 |
| 30–34 . . . | 1.79 | 1.76 | 1.79 | 2.23 | 2.29 | 2.34 | 1.91 | 1.98 | 2.37 | 2.53 |
| 35–39 . . . | 2.13 | 2.11 | 2.12 | 2.37 | 2.56 | 2.89 | 2.30 | 2.49 | 2.47 | 2.69 |
| 40–44 . . . | 2.77 | 2.49 | 2.30 | 2.44 | 2.78 | 3.29 | 2.77 | 2.39 | 2.44 | 2.67 |
| 45–49 . . . | 3.10 | 2.68 | 2.51 | 2.49 | 2.70 | 3.55 | 2.93 | 2.59 | 2.38 | 2.51 |
| 50–54 . . . | 3.46 | 2.96 | 2.56 | 2.46 | 2.55 | 3.60 | 3.29 | 2.76 | 2.43 | 2.41 |
| 55–59 . . . | 3.69 | 3.28 | 2.71 | 2.45 | 2.53 | 4.01 | 3.55 | 2.50 | 2.50 | 2.49 |
| 60–64 . . . | 4.02 | 3.55 | 3.07 | 2.58 | 2.58 | 4.21 | 3.79 | 3.29 | 2.69 | 2.60 |
| 65–69 . . . | 4.41 | 3.73 | 3.25 | 2.77 | 2.63 | 4.82 | 4.01 | 3.63 | 3.04 | 2.73 |
| 70–74 . . . | 5.06 | 4.17 | 3.58 | 3.00 | 2.82 | 5.41 | 4.29 | 3.64 | 3.30 | 2.95 |
| 75–79 . . . | 5.65 | 4.56 | 3.83 | 3.31 | 3.11 | 6.02 | 4.85 | 3.96 | 3.44 | 3.25 |
| 80–84 . . . | 6.17 | 4.93 | 4.30 | 3.62 | 3.26 | 6.26 | 5.39 | 4.19 | 3.58 | 3.46 |
| 85–89 . . . | 6.59 | 5.70 | 4.63 | 3.94 | 3.65 | 6.57 | 5.85 | 4.68 | 3.78 | 3.57 |
| 90–94 . . . | 6.94 | 6.57 | 5.06 | 4.39 | 4.06 | 6.73 | 6.11 | 5.08 | 3.99 | 3.84 |
| 95–99 . . . | 6.69 | 7.04 | 5.78 | 4.76 | 4.13 | 7.10 | 6.34 | 5.76 | 4.51 | 3.97 |
| 100 and over . | 7.00 | 8.69 | 5.71 | 5.38 | 4.88 | 8.20 | 6.73 | 7.72 | 4.63 | 4.14 |
| Age not stated . | 5.00 | .. | 8.00 | .. | .. | 5.00 | .. | 5.50 | 5.00 | 1.50 |
| All ages . | 4.44 | 3.91 | 3.39 | 2.98 | 2.87 | 4.72 | 4.22 | 3.68 | 3.22 | 3.07 |

(a) Includes widowed or divorced.

**Age at marriage of deceased males and females, and issue**

The following table shows the average issue of males and females according to the age at marriage of the deceased parent.

## AVERAGE ISSUE: DECEASED MALES AND FEMALES, BY AGE AT MARRIAGE
### AUSTRALIA, 1931 TO 1965

| Age at marriage (years)(a) | Average issue | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Males | | | | | Females | | | | |
| | 1931 | 1941 | 1951 | 1961 | 1965 | 1931 | 1941 | 1951 | 1961 | 1965 |
| Under 15 | .. | .. | .. | .. | .. | 6.36 | 7.80 | 4.88 | 4.45 | 6.83 |
| 15–19 | 6.15 | 5.40 | 4.63 | 4.11 | 4.00 | 6.79 | 6.10 | 5.41 | 4.74 | 4.54 |
| 20–24 | 5.56 | 4.89 | 4.23 | 3.65 | 3.55 | 5.23 | 4.80 | 4.28 | 3.77 | 3.53 |
| 25–29 | 4.70 | 4.21 | 3.65 | 3.16 | 3.02 | 3.79 | 3.51 | 3.14 | 2.85 | 2.70 |
| 30–34 | 3.96 | 3.41 | 3.00 | 2.64 | 2.47 | 2.42 | 2.35 | 2.23 | 1.98 | 1.88 |
| 35–39 | 3.14 | 2.80 | 2.45 | 2.11 | 1.96 | 1.40 | 1.26 | 1.16 | 1.14 | 1.08 |
| 40–44 | 2.36 | 2.01 | 1.69 | 1.49 | 1.33 | 0.39 | 0.35 | 0.36 | 0.31 | 0.28 |
| 45–49 | 1.96 | 1.52 | 1.33 | 1.11 | 0.99 | 0.12 | 0.01 | 0.07 | 0.06 | 0.12 |
| 50–54 | 1.60 | 1.05 | 0.80 | 0.71 | 0.60 | .. | .. | .. | .. | .. |
| 55–59 | 0.95 | 0.79 | 0.49 | 0.25 | 0.38 | .. | .. | .. | .. | .. |
| 60–64 | 0.63 | 0.29 | 0.24 | 0.25 | 0.22 | .. | .. | .. | .. | .. |
| 65 and over | 0.18 | 0.01 | 0.29 | 0.24 | 0.16 | .. | .. | .. | .. | .. |
| Age not stated | 3.64 | 2.95 | 2.81 | 2.40 | 2.40 | 3.96 | 2.45 | 3.17 | 2.44 | 2.38 |
| All ages | 4.44 | 3.91 | 3.39 | 2.98 | 2.87 | 4.72 | 4.22 | 3.68 | 3.22 | 3.07 |

(a) In cases where the deceased was married more than once this represents age at first marriage.

## Vital statistics of external territories

The following table shows, for the year 1965, 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. 83.

### EXTERNAL TERRITORIES: VITAL STATISTICS, 1965

| Territory | Marriages | Births | Deaths |
|---|---|---|---|
| Christmas Island(a) | 4 | 65 | 6 |
| Cocos (Keeling) Islands(a) | .. | .. | .. |
| Norfolk Island(a) | 6 | 17 | 15 |
| Papua(b) | 97 | 450 | 31 |
| Trust Territory of New Guinea(b) | 136 | 561 | 80 |
| Trust Territory of Nauru(a) | 30 | 245 | 42 |

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

## International vital statistics

In the following table vital statistics rates for selected 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*, 1965 (*see* explanation of true death rates, pages 233–4).

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*, 1965 (*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 208–9 of the Population chapter.

## VITAL STATISTICS RATES: SELECTED COUNTRIES—LATEST AVAILABLE YEAR

(*Source:* United Nations *Demographic Yearbook*, 1965)

| Country | Year | Rates(a) Marriage | Birth | Death | Infant mortality | Year | True death rates (b) Male | Female |
|---|---|---|---|---|---|---|---|---|
| **Africa—** | | | | | | | | |
| **South Africa—** | | | | | | | | |
| Asian population | 1964 | (c) 13.7 | 33.3 | 7.4 | 50.5 | 1950–52 | 17.9 | 18.3 |
| Coloured population | 1964 | (c) 5.8 | 46.6 | 14.8 | 115.7 | 1950–52 | 22.3 | 20.9 |
| White population | 1965 | (c) 9.1 | 22.6 | 9.0 | (d) 33.6 | 1950–52 | 15.5 | 14.3 |
| Congo, Democratic Republic of(g) | 1955–57 | (e) | (f)43 | (f)20 | (f) 104 | 1950–52 | 26.6 | 25.0 |
| Morocco | 1962 | (e) | (f)46.1 | (f)18.7 | (f) 149 | 1960 | 20.2 | |
| Upper Volta(f) | 1960–61 | (e) | 50 | 32 | 182 | 1960–61 | 31.2 | 32.2 |
| Southern Rhodesia(f)(g) | 1961 | .. | 48.1 | 14.0 | (h) 122 | 1961 | 20.0 | |
| Ivory Coast(f) | 1961 | (e) | 56 1 | 33.3 | .. | .. | (e) | (e) |
| Zambia(f)(g) | 1962–63 | (e) | 51.4 | 19.6 | (i) 259 | 1962–63 | 25.0 | |
| Guinea(f) | 1955 | (e) | 62 | 40 | 216 | 1955 | 38.5 | 35.7 |
| Senegal(f) | 1960–61 | (e) | 43.3 | 16.7 | 92.9 | .. | (e) | (e) |
| Dahomey(f) | 1961 | (e) | 54.0 | 26.0 | 110.5 | 1961 | 26.8 | |
| Central African Republic(f)(g) | 1959–60 | (e) | 48 | 30 | 190 | 1959–60 | 30.3 | 27.8 |
| **North America—** | | | | | | | | |
| United States of America | 1965 | 9.2 | 19.4 | 9.4 | 24.7 | 1964 | 14.9 | 13.6 |
| Mexico | 1965 | 7.0 | 45.3 | 9.5 | (d) 64.5 | 1956 | 18.1 | 17.3 |
| Canada | 1965 | 7.3 | 21 4 | 7 5 | (d) 24.7 | 1960–62 | 14.6 | 13.5 |
| Haiti(f) | 1959–61 | (e) | 45–50 | 20–25 | (e) | 1950 | 30.7 | |
| Guatemala | 1965 | 3.7 | 43.5 | 16.8 | 94.6 | 1949–51 | 22.8 | 23.0 |
| El Salvador | 1965 | 3.5 | 46 5 | 10.5 | 71.1 | 1951–61 | 22.4 | 21.1 |
| Puerto Rico | 1965 | 10 2 | 30 2 | 6.6 | 42.0 | 1959–61 | 14.9 | 13.9 |
| Jamaica | 1965 | 4 5 | 39.4 | 7.9 | 36.7 | 1960 | 15.9 | 14.9 |
| Costa Rica | 1964 | 5.8 | 40.8 | 8.8 | 86.4 | 1949–51 | 18.3 | 17.5 |
| **South America—** | | | | | | | | |
| Brazil | 1959–61 | (e) | f 40–43 | f 11–13 | (e) | 1940–50 | 25.4 | 22.0 |
| Argentine | 1964 | 6.5 | 21 8 | 8 3 | 60.2 | 1959–61 | 15 8 | 14.5 |
| Columbia | 1959–61 | (d) 5.0 | f 43–46 | f 14–17 | (d) 83.3 | 1950–52 | 22.6 | 21.8 |
| Peru(j) | 1959–61 | (d) 4.5 | f 43–45 | f 14–15 | (d) 83.5 | 1961 | 20.0 | |
| Venezuela(j) | 1959–61 | (d) 5 6 | f 47–50 | (f)9–12 | (c) 47.9 | .. | (e) | (e) |
| Chile | 1964 | 7.2 | 32 8 | 11 2 | 114.2 | 1952 | 20.1 | 18.6 |
| Bolivia | 1959–61 | (k) 3.2 | f 43–45 | f 21–23 | (f)(l)86.0 | 1949–51 | 20.1 | 20.1 |
| **Asia—** | | | | | | | | |
| China (mainland)(f) | 1957 | (e) | 34 | 11 | (e) | .. | (e) | (e) |
| India | 1963–64 | (e) | (f)38.4 | (f)12.9 | f m 139 | 1951–60 | 23.9 | 24.7 |
| Indonesia | 1962 | 10.6 | (f)43 0 | f 21.4 | (f) 125 | .. | (e) | (e) |
| Pakistan(f) | 1962 | (e) | 43–46 | 16–17 | (e) | .. | (e) | (e) |
| Japan | 1965 | 9.7 | 18.6 | 7.1 | 18.5 | 1964 | 14.8 | 13.7 |
| Thailand | 1956 | (c) 2.2 | (f)42 | (f)20 | (c) 37.9 | 1947–48 | 20.5 | 19.3 |
| Korea, Republic of(f) | 1955–60 | (e) | 44.7 | 16.0 | (e) | 1955–60 | 19.6 | 18.6 |
| Burma | 1955 | (e) | (f)50 | (f)35 | fn195–300 | 1954 | 24.5 | 22.8 |
| **China, Republic of (Formosa)** | 1965 | 7.4 | (o) 32.7 | (o) 5.5 | (d)(o)23.9 | 1959–60 | 16.3 | 15.2 |
| Malaya | 1964 | (c) 1.0 | 39.1 | 8.1 | (c) 56.7 | 1956–58 | 17.9 | 17.2 |
| Cambodia(f) | 1958–59 | (e) | 41 4 | 19.7 | 127 | 1958–59 | 22.6 | 23.1 |
| Hong Kong | 1965 | (e) | 26 9 | 4.6 | 23.7 | 1961 | 15.7 | 14.2 |
| Israel(p) | 1964 | 7.8 | 22.4 | 6.2 | 23.9 | 1964 | 14.2 | 13.7 |
| **Europe—** | | | | | | | | |
| Germany, Federal Republic of | 1965 | 8.3 | 17.9 | 11.2 | 23.8 | 1963–64 | 14.9 | 13.7 |
| United Kingdom of Great Britain and Northern Ireland | 1965 | 7.7 | 18.4 | 11.5 | 19.6 | .. | (e) | (e) |
| England and Wales | 1965 | 7.7 | 18 1 | 11.5 | 19.0 | 1961–63 | 14.7 | 13.5 |
| Northern Ireland | 1965 | 7 1 | 23.1 | 10.6 | 25.1 | 1962–64 | 14.7 | 13.7 |
| Scotland | 1965 | 7.8 | 19 4 | 12 1 | 23.1 | 1964 | 15 0 | 13.7 |
| Italy | 1965 | 7.7 | 19 2 | 10.0 | 35.6 | 1954–57 | 15 2 | 14.3 |
| France | 1965 | 7.1 | 17 6 | 11.1 | 22.0 | 1964 | 14.7 | 13.3 |
| Spain | 1965 | 7.2 | 21.3 | 8.7 | 37.2 | 1960 | 14.9 | 13.9 |

*See* footnotes on following page.

## VITAL STATISTICS RATES: SELECTED COUNTRIES—LATEST AVAILABLE YEAR—*continued*

| Country | Year | Rates(a) | | | | Year | True death rates (b) | |
|---|---|---|---|---|---|---|---|---|
| | | Mar-riage | Birth | Death | Infant mor-tality | | Male | Female |
| Europe—*continued* | | | | | | | | |
| Poland | 1965 | 6 4 | 17.3 | 7.4 | 41.7 | 1960–61 | 15 4 | 14.2 |
| Yugoslavia | 1965 | 8 9 | 20 9 | 8 7 | 71 5 | 1961–62 | 16 0 | 15.2 |
| Romania | 1965 | 8 6 | 14 6 | 8 6 | 44 1 | 1963 | 15 3 | 14.2 |
| Czechoslovakia | 1965 | 7 9 | (q) 16 4 | (q) 10 0 | (q) 25.3 | 1963 | 14 8 | 13.6 |
| Netherlands | 1965 | 8 8 | 19 9 | 8 0 | 14 4 | 1956–60 | 14 0 | 13 4 |
| Hungary | 1965 | 8 8 | 13 1 | 10 7 | 38 8 | 1959–60 | 15.3 | 14 4 |
| Belgium | 1965 | 7 0 | 16 4 | 12 1 | 24.1 | 1959–63 | 14 8 | 13.6 |
| Portugal | 1965 | 8 2 | 22 8 | 10 3 | 64 9 | 1959–62 | 16.5 | 15.1 |
| Bulgaria | 1965 | 8 1 | 15 4 | 8 0 | 31 5 | 1960–62 | 14.7 | 14.0 |
| Sweden | 1965 | 7 8 | 15 9 | 10.1 | 12.4 | 1962 | 14 0 | 13.3 |
| Austria | 1965 | 7 8 | 17 9 | 13 | 28 8 | 1959–61 | 15.2 | 13.8 |
| Switzerland | 1965 | 7 6 | 18 7 | 9.3 | (d) 19 | 1959–61 | 14.4 | 13.4 |
| Denmark | 1965 | 8 5 | 18 0 | 10 1 | (d) 18.7 | 1962–63 | 14 2 | 13.4 |
| Finland | 1965 | 7 8 | 17 0 | 9 7 | 17.4 | 1956–60 | 15 4 | 14.0 |
| Norway | 1965 | 6 8 | 17.5 | 9 1 | (d) 16.8 | 1956–60 | 14.0 | 13.2 |
| Ireland | 1965 | 5.8 | 22.2 | 11.5 | 25.3 | 1960–62 | 14.7 | 13.9 |
| Oceania— | | | | | | | | |
| Australia | 1966 | 8.3 | 19.3 | 9 0 | 18.2 | 1960–62 | 14.7 | 13.5 |
| New Zealand | 1965 | 8.2 | 22.8 | 8.7 | 19.5 | 1960–62 | 14.6 | 13.6 |
| U.S.S.R.— | | | | | | | | |
| Union of Soviet Socialist Republics | 1965 | (d) 8.5 | 18.5 | 7.3 | 28 | 1962–63 | 15.4 | 13.7 |

(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 pp. 233-4.) (c) 1963. (d) 1964. (e) Not available. (f) Estimated. (g) African population only. (h) 1954. (i) 1950. (j) Excluding Indian jungle population. (k) 1965. (l) 1957. (m) 1951–1961. (n) 1952. (o) Excludes live born infants dying before registration of birth. (p) Jewish population. (q) Includes some premature infants dying within 24 hours of birth.