

4 Health and determinants in population groups

This chapter presents the major health and illness issues for a number of population groups, with an emphasis on the health status and the factors affecting the health of specific populations. These issues are generally reported using such standard measures as morbidity, mortality, hospitalisations and the impact of socioeconomic status on levels of health. An important aspect of such a report is the inclusion of underlying determinants of ill health, although the reporting of a number of the social and behavioural factors is limited by the lack of reliable national data.

The section on the health of men and women aged 25 and over draws heavily on recent work in estimating the burden of disease and injury, as measured by years of life lost due to premature mortality and the equivalent years of healthy life that are lost due to disability. The burden of disease project is discussed in chapter 2.

4.1 Mothers and babies

Fertility

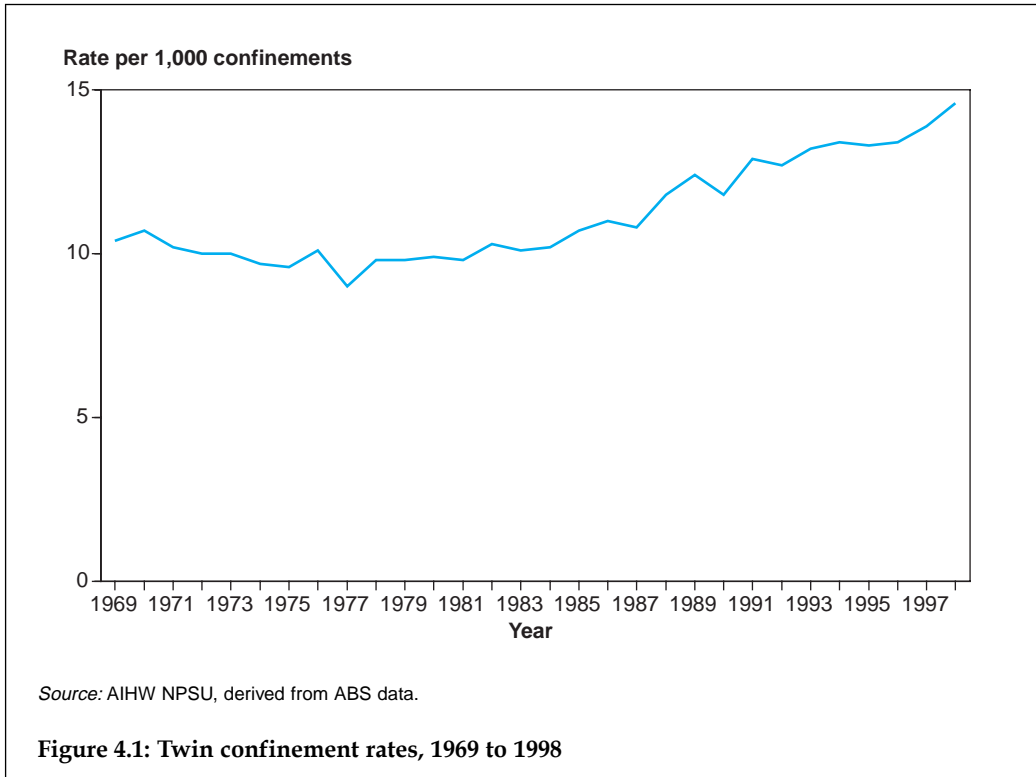
There were 249,616 live births registered in Australia in 1998 (ABS 1999d), 0.9% fewer than in 1997, and 9.7% fewer than the peak annual registration of 276,362 live births in 1972. After declining to 223,129 in 1979, the annual number of births gradually increased to 264,151 in 1992 and has since declined again each year.

The crude birth rate relates the number of live births in any one year to the total population size. This rate declined from 21.7 per 1,000 people in 1971 to 14.9 per 1,000 in 1991, and then to 13.3 per 1,000 in 1998.

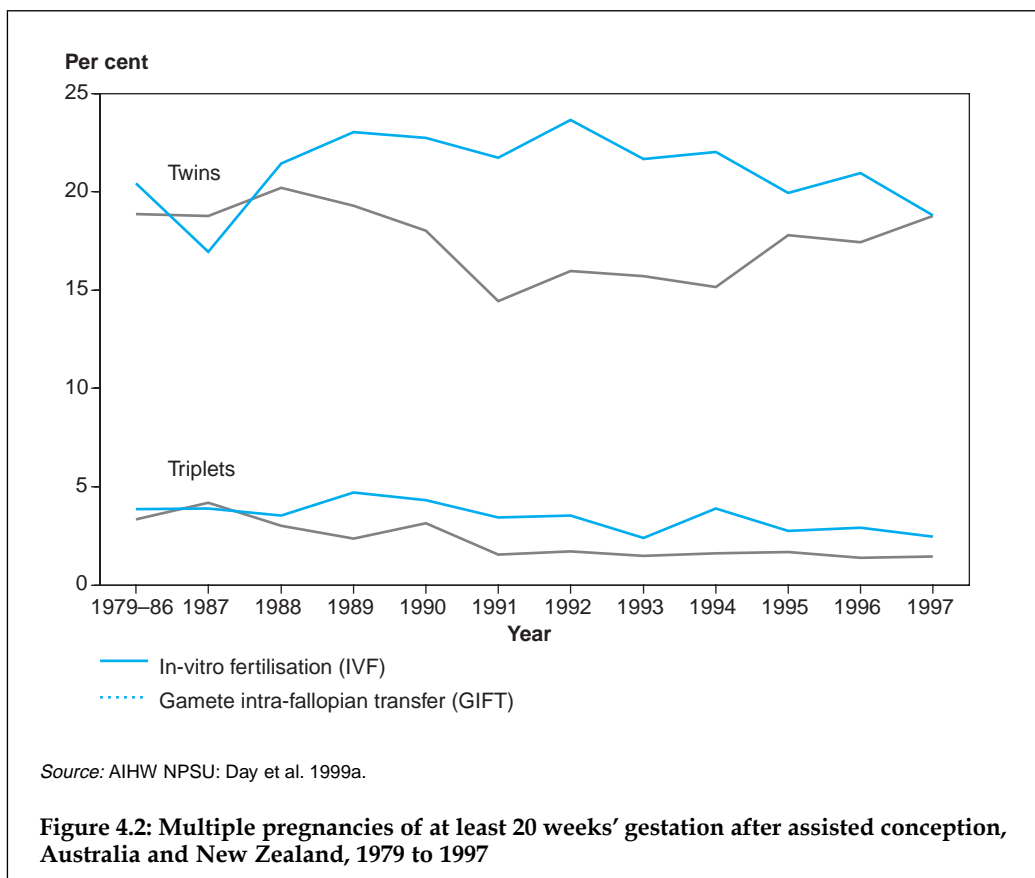
Age-specific birth rates express the number of women in selected 5-year age groups giving birth in a year as a proportion of the number of women of the same age group in the population. Recent trends in these rates have differed with age. For teenagers of 15–19 years, the birth rate increased slightly each year from 20.3 live births per 1,000 women in 1988 to 22.1 live births per 1,000 in 1991 and then decreased annually to 18.5 per 1,000 women in 1998, an historical low. The birth rates for women in their twenties declined to their lowest levels ever in 1998, down to 60.0 per 1,000 for women aged 20–24 years and 111.2 per 1,000 for women aged 25–29 years. Age-specific birth rates for older women have generally increased in recent years, reflecting the trend for some women to defer child-bearing until their thirties, or even later. Women aged 30–34 years had their lowest birth rates in the mid-1970s, those aged 35–39 in the late 1970s, and those aged 40–44 in the mid-1980s (Table S2, page 366). Since then, the birth rates of women aged 35–39 years and 40–44 years steadily increased to 45.7 and 8.0 per 1,000 women, respectively, in 1998.

Multiple births

Twin confinements have increased since the mid-1970s, and reached their highest rate ever in Australia in 1998 when there were 14.6 twin confinements per 1,000. In 1998, there were 3,592 twin confinements among a total of 245,898 confinements (Figure 4.1). There were 98 confinements of triplets and higher order multiple births in 1998. Because multiple births increase with advancing maternal age up to the late thirties, rates of multiple births are influenced by changes in maternal age distribution. The increasing use of assisted conception (in-vitro fertilisation and related techniques) to treat infertile couples has also contributed to the higher rates of multiple births since the early 1980s.



In 1997, assisted conception accounted for 14% of twin confinements in Australia and 36% of triplets. Among the more than 22,000 pregnancies resulting in births using assisted conception since it began in Australia in 1979, twins occurred in 18.6%, triplets in 2.4%, and other multiple births in 0.1%. These multiple births usually follow transfer of more than one embryo into the uterus, or more than one egg into the fallopian tube, in the course of the various treatment procedures. In the past decade, the policy of reducing the number of embryos or eggs transferred during assisted conception has been partly effective in reducing the incidence of multiple births (Figure 4.2) (AIHW NPSU & Fertility Society of Australia 1999). An unknown proportion of other multiple births occurs after fertility drugs are used independently of assisted conception.



Termination of pregnancy

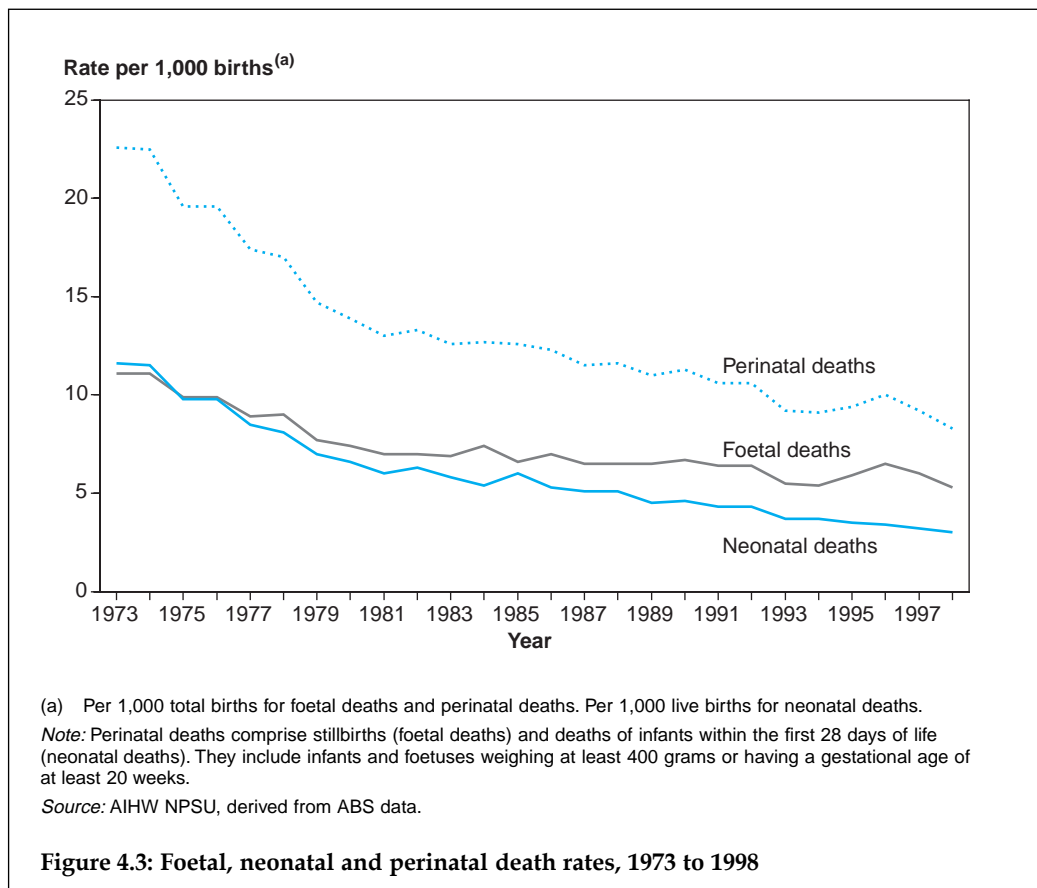
National information on fertility patterns and induced abortions is lacking because only South Australia and the Northern Territory (and Western Australia since mid-1998) collect population-based data on induced abortions. In South Australia in 1997, there were 5,605 induced abortions and 18,394 confinements; thus almost 1 in 4 (23.4%) of the 23,999 pregnancies (excluding miscarriages) resulted in abortions (Chan et al. 1999). More than half (54.4%) of all teenage pregnancies were terminated.

Maternal mortality

Maternal deaths occur infrequently in Australia. In the early 1990s, maternal mortality was reported to have declined to 10.9 per 100,000 confinements, the lowest level ever recorded (NHMRC 1998). Deaths from pregnancy complications accounted for about one-third of all maternal deaths, deaths from other pre-existing diseases for 1 in 4 maternal deaths, and other pregnancy-related deaths, where the pregnancy was unlikely to have contributed significantly to the death, accounted for about 4 in 10 maternal deaths. The main causes of maternal death include pulmonary embolism, amniotic fluid embolism, complications associated with hypertension in pregnancy, cardiovascular disease, and motor vehicle accidents.

Perinatal mortality

The perinatal death rate declined markedly in the last two decades, decreasing to 8.3 deaths per 1,000 total births in 1998, the lowest rate ever achieved (ABS 1999e) (Figure 4.3). Foetal deaths (5.3 per 1,000 total births) accounted for 63.9% of perinatal deaths, and neonatal deaths (3.0 per 1,000 live births) for 36.1%. The perinatal death rate for males (8.9 per 1,000 total births) was higher than for females (7.8 per 1,000 total births).



Birthweight

A key indicator of the health of babies born in Australia is the proportion having a birthweight of less than 2,500 grams. These low-birthweight babies have a greater risk of dying, require a longer period of hospitalisation after birth, and are more likely to develop significant disabilities. In 1997, there were 16,800 babies of low birthweight, 6.6% of all births (AIHW NPSU: Day et al. 1999a), an increase on the 6.3% of babies with low birthweight in the early 1990s. This change is at least partly attributable to an increase in the number of multiple births. Low birthweight is more common in the Northern Territory due to the relatively high proportion of Indigenous births. Of 8,151 births to Indigenous mothers nationally in 1997, 13.1% were low birthweight.

Type of delivery

Obstetric intervention may be needed if complications arise during pregnancy or labour, although there is debate about the most appropriate rate of intervention. Caesarean birth rates have increased markedly in the last few decades (AIHW NPSU 1993). In 1997, 20.3% of deliveries were by caesarean section, the highest proportion ever recorded in Australia (Table 4.1) (AIHW NPSU: Day et al. 1999a), slightly higher than the proportion recorded in 1996 (19.5%). In 1997, South Australia (23.5%) had the highest proportion of deliveries by caesarean section and New South Wales (18.2%) had the lowest. Indigenous mothers had a slightly lower proportion of deliveries by caesarean section (18.2%) than all mothers. There was also considerable variation among the States and Territories in the rates of forceps deliveries and the use of vacuum extraction (Table 4.1).

Table 4.1: Type of delivery, States and Territories, 1997

	NSW	Vic	Qld	WA	SA	Tas ^(a)	ACT	NT	Aust
	(number)								
Total confinements	86,920	61,311	47,278	24,856	18,394	5,378	4,708	3,525	252,370
	(per cent)								
Spontaneous vertex	70.4	66.3	68.1	63.3	62.5	68.3	65.4	73.1	67.6
Forceps	5.8	9.7	4.9	4.8	9.3	7.3	7.9	4.7	6.8
Vacuum extraction	4.5	2.9	4.4	9.4	4.0	2.9	5.0	—	4.5
Vaginal breech	1.1	0.9	0.6	0.5	0.7	0.6	1.0	1.4	0.8
Caesarean section	18.2	20.2	22.0	22.0	23.5	20.9	20.2	20.8	20.3
Other/unknown	—	—	0.1	—	—	—	0.4	—	—

(a) Data for Tasmania incomplete.

Source: AIHW NPSU: Day et al. 1999a.

Congenital malformations

All States and Territories notify fetuses and infants with major congenital malformations to a national monitoring system (AIHW NPSU: Hurst et al. 1999). In 1996, the malformation rate was highest in the musculoskeletal system (47.1 per 10,000 births), malformations of the heart and circulatory system (48.4), genital malformations (26.6), and chromosomal abnormalities (22.8). The major individual congenital malformations are shown in Table 4.2 (page 184).

Anencephalus, spina bifida and encephalocele are serious malformations of the brain and spine, known collectively as neural tube defects, which often result in death or major disability and handicap. In 1996, the reported malformation rate for neural tube defects among births and terminations of pregnancy was 10.6 per 10,000 births, although this may be an understatement. A randomised controlled trial by the Medical Research Council in the United Kingdom has shown that supplements of the vitamin folic acid are effective in preventing recurrence of these neural tube defects (Medical Research Council Vitamin Study Research Group 1991). Other studies indicate that supplements of folic acid also prevent many first occurrences of neural tube defects, and possibly some other birth defects. The National Health and Medical Research Council has recommended folic acid supplementation for women likely to become

Table 4.2: Selected congenital malformations, Australia, 1996

ICD-9 code	Congenital malformation	Number	Rate per 10,000 births
740	Anencephalus	42	1.6
741	Spina bifida	77	3.0
742.3	Hydrocephalus	84	3.3
745.1	Transposition of great vessels	94	3.7
745.4	Ventricular septal defect	480	18.7
749	Cleft lip and/or cleft palate	382	14.9
750.3	Tracheo-oesophageal fistula, oesophageal atresia and stenosis	64	2.5
751.2	Atresia and stenosis of large intestine, rectum and anus	82	3.2
752.6	Hypospadias	604	23.5
753.0	Renal agenesis and dysgenesis	106	4.1
754.3	Congenital dislocation of hip	469	18.2
756.6	Diaphragmatic hernia	76	3.0
758.0	Down syndrome	312	12.1

Source: AIHW NPSU: Hurst et al. 1999.

pregnant and for those with a close family history of neural tube defects, stressing the importance of commencing the supplementation before conception and continuing it for the first 3 months of pregnancy (NHMRC 1993).

4.2 Children and young people

The majority of children and young people in Australia are healthy. They have low rates of death, hospitalisation and reported illness compared with other age groups. However, some groups of young Australians do not share this good health, most notably Aboriginal and Torres Strait Islander peoples. Also, many young Australians have to face important health issues during this period of life including injury, mental health problems and asthma. In addition, factors such as diet, physical activity and drug use will affect the health of the young person not only in childhood, adolescence and young adulthood, but also later in life.

For the purposes of monitoring the health and wellbeing of this age group, recent national work in relation to child and youth health has defined children as those aged 0–14 years and young people as those aged 12–24 years. The overlap is intentional, reflecting the fact that the transition from childhood to adulthood is a gradual process, which does not occur at the same age for all individuals.

The overview of child and youth health given here is based on a comprehensive analysis using currently available data. However, it is important to note that there are gaps and deficiencies in the data which require attention.