

Part II: Mortality and morbidity in children

Chapter 3: Mortality overview

Chapter 4: Morbidity overview

Chapter 5: Maternal and infant conditions

Chapter 6: Sudden infant death syndrome

Chapter 7: Injury

Chapter 8: Mental health problems

Chapter 9: Dental disease

Primary goal

- *Reduce the frequency of preventable premature mortality.*

Other relevant goals

- *Reduce the impact of disability.*
- *Reduce the impact of conditions occurring in adulthood, but which have their origins or early manifestations in childhood or adolescence.*
- *Enhance family and social functioning.*

3 Mortality overview

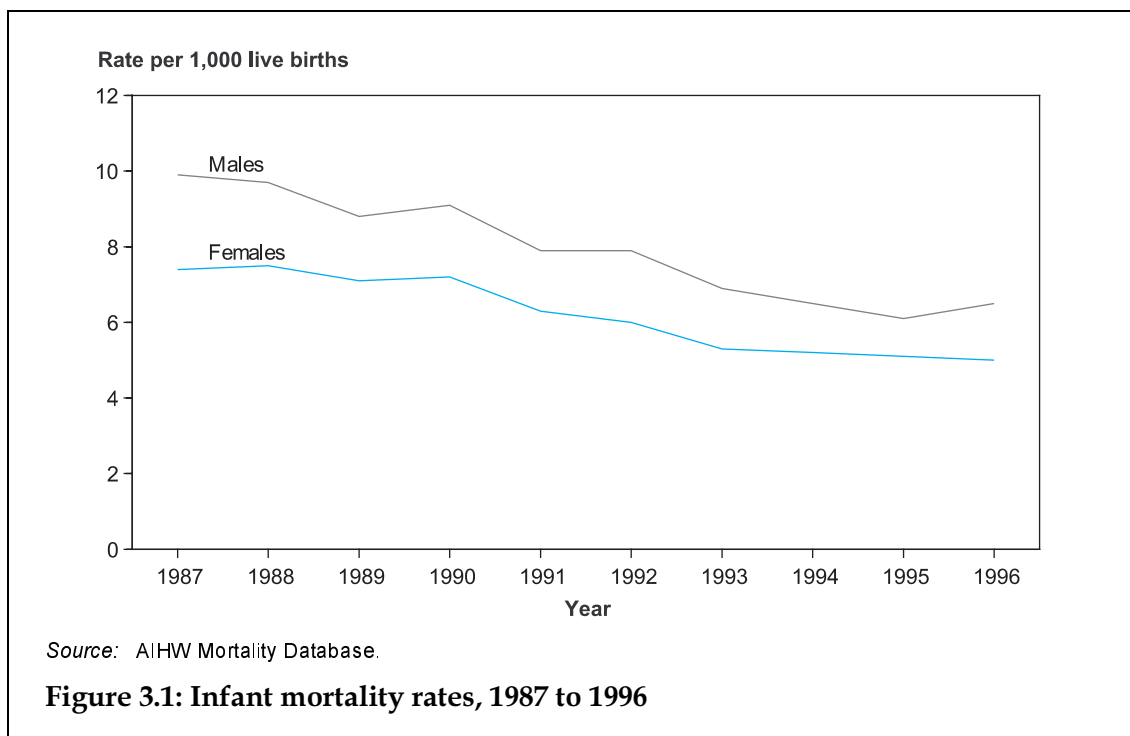
Death rates are one of the most widely used measures of health in a population. For children, infant mortality rates (death rate for children under 1 year) in particular have been widely used as a means of comparing the health of different populations or of monitoring the health of a population over time. Identifying the factors or causes of mortality provides a basis for setting priorities for public health action, providing health services and for research.

This chapter provides an overview on childhood mortality, covering mortality time-trends, age distribution and principal causes of death. Analyses are based on data extracted from the AIHW Mortality Database (see Chapter 1).

In 1996, 2,252 children between the ages of 0 and 14 years died, of whom 1,310 (58%) were males and 942 (42%) were females (ABS 1997d). The majority of these childhood deaths occurred in the first year of life, and of these infant deaths slightly over half (52%) were of babies under 28 days old. Results presented below show an increase in recent foetal (and perinatal) death rates, despite continuing declines in the overall infant mortality rate.

Infant mortality

Infant deaths include deaths up to 1 year of age, which accounted for 65% of childhood deaths in 1996.



- In 1996, 1,460 children died before they were 1 year old, 58% of whom were male and 42% female (ABS 1997d). This corresponds to an infant mortality rate of 5.8 deaths per 1,000 live births compared with 5.9 in 1994. This fall continues the steady downward trend witnessed over the last 10 years
- The decrease results in a low of 5.0 female deaths per 1,000 live births in 1996 and 6.1 male deaths per 1,000 live births in 1995. The male rate increased slightly in 1996 to 6.5 per 1,000 live births.
- The difference between the male and female death rates has also narrowed somewhat during this period.

Table 3.1: Main causes of infant mortality, 1996

Cause of death	Deaths	
	Number	Per cent
Certain conditions originating in the perinatal period	693	47.5
Disorders relating to short gestation and unspecified low birthweight	237	16.2
Hypoxia, birth asphyxia and other respiratory conditions	197	13.5
Congenital abnormalities	372	25.5
Of circulatory system	127	8.7
Of nervous system	55	3.8
Sudden death, cause unknown ^(a)	210	14.4
Other causes	185	12.7
All causes	1,460	100.0

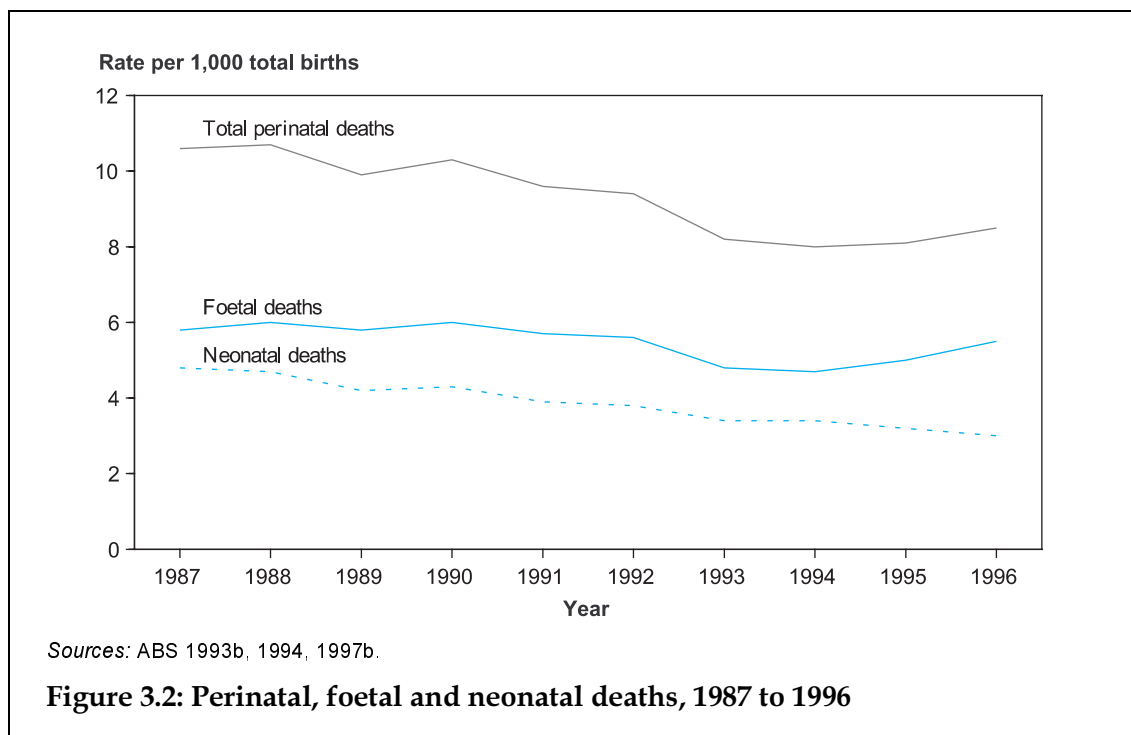
(a) Includes sudden infant death syndrome (SIDS).

Source: ABS 1997b.

- In 1996, the principal causes of death among children under 1 year were certain conditions originating in the perinatal period, accounting for nearly 48% of deaths. Among these, disorders relating to short gestation and unspecified low birthweight caused 16% of all infant deaths; hypoxia, birth asphyxia and other respiratory conditions were responsible for 14% of infant deaths.
- Other leading causes of death were congenital anomalies (26%), and sudden death of unknown cause (14% – almost all classified as sudden infant death syndrome).

Perinatal deaths

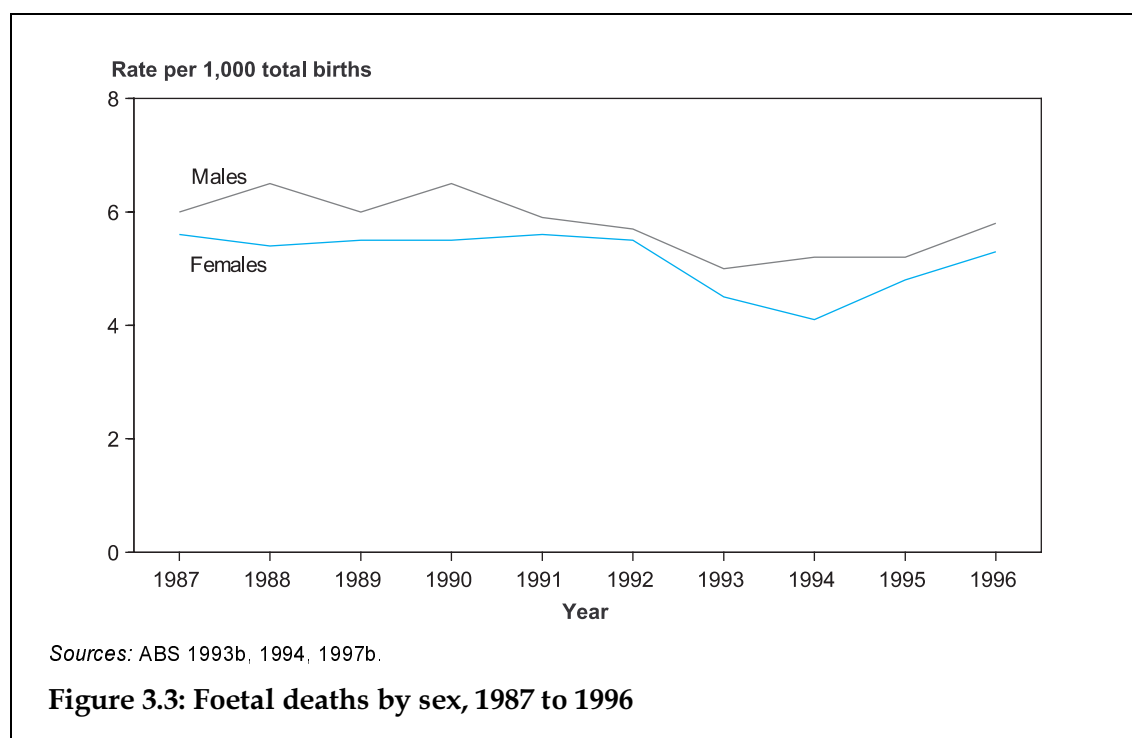
About half of the deaths in the first year occur in the first week of life, and many of those early deaths occur on the first day. Also, foetal deaths (stillbirths) are not included in child death rates. It is therefore useful to look at what are known as perinatal death rates. Perinatal deaths consist of both foetal deaths and neonatal deaths (deaths of infants within the first 28 days of life).



- There were 2,170 perinatal deaths in 1996, resulting in an overall perinatal death rate of 8.5 deaths per 1,000 total births (live births and stillbirths).
- Of the perinatal deaths, 65% were foetal deaths and 35% were neonatal deaths.
- There has been a decline in the total perinatal death rate from 1987 through to 1994, but from this time onwards the rates have increased slightly.

Several conditions are responsible for perinatal deaths. Hypoxia, birth asphyxia and other respiratory conditions caused 29% of all perinatal deaths in 1996, followed by congenital anomalies (18%), and slow foetal growth, foetal malnutrition and immaturity (11%) (ABS 1997b).

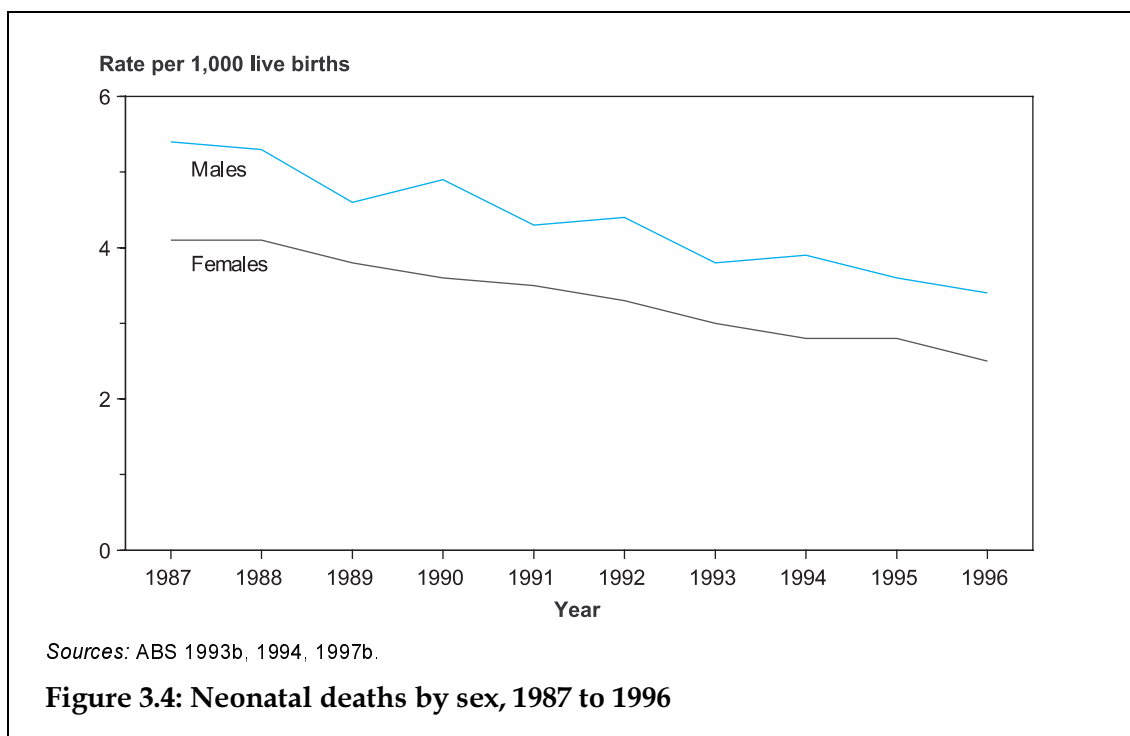
Foetal deaths



- There were 1,411 stillbirths or foetal deaths in 1996 (a foetal death rate of 5.5 per 1,000 total births).
- Both male and female foetal death rates have increased in recent years. The male rate increased to 5.8 deaths per 1,000 births from a low of 4.8 deaths recorded in 1993, while the female rate has moved closer to the male rate, increasing to 5.3 deaths per 1,000 births from the low of 4.1 recorded in 1994.
- During the period 1993 to 1996, the main reasons for the increase in foetal deaths were 'conditions originating in the perinatal period' (169 more foetal deaths in 1996 than in 1993) and 'conditions unrelated to the present pregnancy' (54 more foetal deaths in 1996 than 1993).

The main causes of foetal deaths in 1996 were hypoxia, birth asphyxia and other respiratory conditions (33%). The conditions of pregnancy also contributed to some foetal deaths of which complications of placenta, cord and membranes (36%) were the most prominent (ABS 1997b).

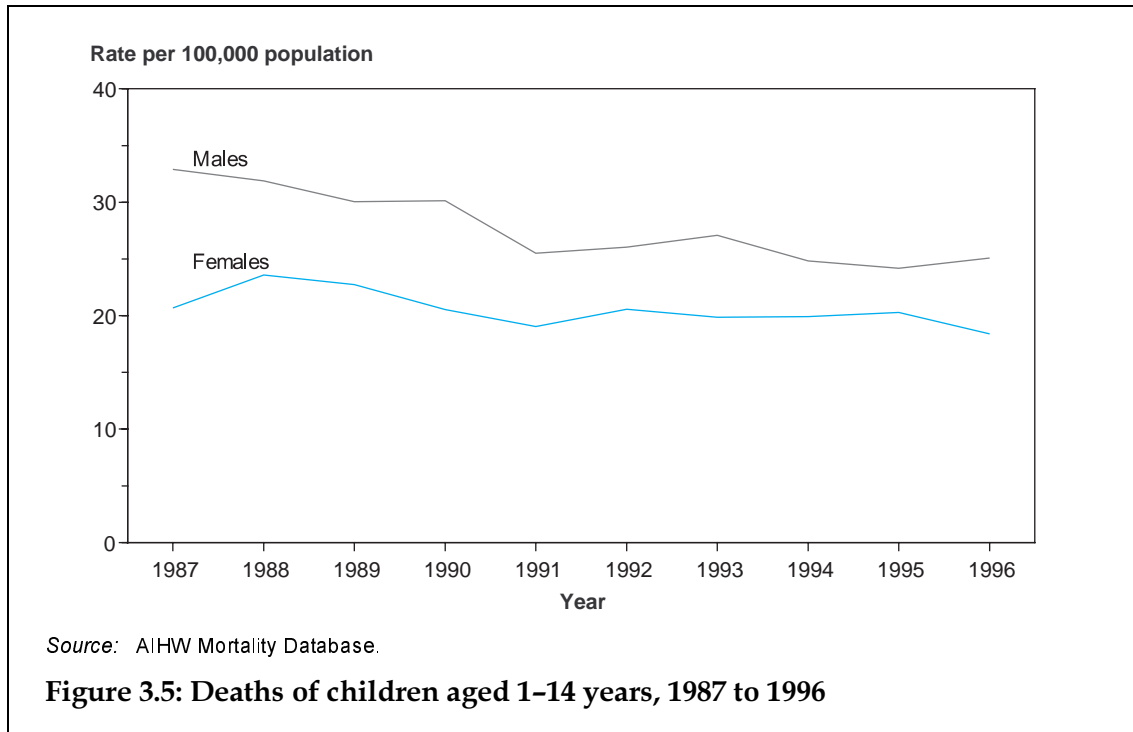
Neonatal deaths



- Babies under 28 days old accounted for 52% of infant deaths in 1996 (a neonatal death rate of 3.0 per 1,000 live births, or 759 deaths).
- The neonatal death rate has shown a continued downward trend from 1988 to 1996. The main reasons for the fall in neonatal death rates between 1992 and 1996 were due to declines in deaths due to congenital anomalies, and hypoxia and birth asphyxia.
- Throughout the period the male death rate remained higher than the female rate.

The main causes of neonatal deaths in 1996 were congenital anomalies (31%), hypoxia, birth asphyxia and other respiratory conditions (20%), and slow foetal growth (14%). Maternal complications of pregnancy also accounted for 25% of neonatal deaths (ABS 1997b).

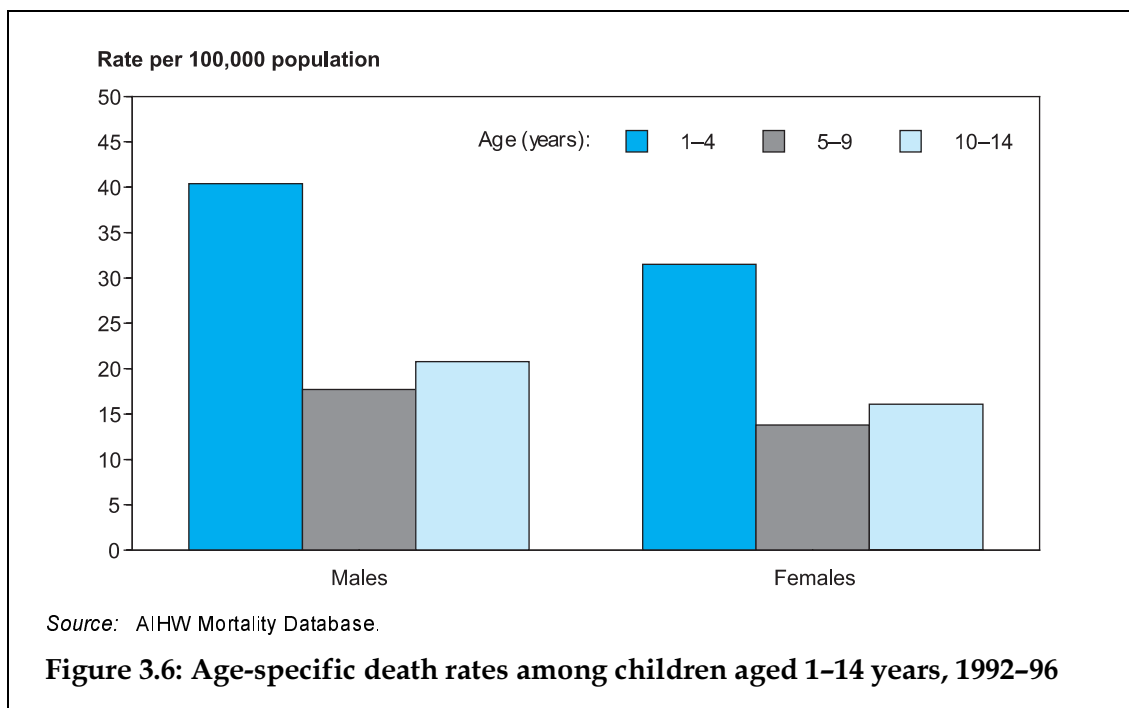
Mortality among children aged 1–14 years



- The death rate for 1–14 year olds generally demonstrates a downward trend among both males and females over the 10-year period.
- The male death rate has remained consistently higher than the female rate during the period.
- The death rate for males in this age group fell 25% between 1987 and 1996, and the female death rate fell 15% during the same period.
- Between 1992 and 1996, the main reasons for the decline in death rates for 1–14 year olds were reductions in deaths due to accidents, poisoning and violence, (particularly deaths from road accidents).

Mortality overview

Figure 3.6 provides more detail on the death rates for specific age groups of children for the period 1992 to 1996.



- The death rates differ across age groups, with the highest rates occurring during the early years of life (age 1-4 years).
- There was a decline in death rates for 5-9 year olds but the rate increased again slightly for both boys and girls.
- Boys experienced higher death rates than girls in all three age groups.

Table 3.2: Main causes of deaths among children aged 1-14 years, 1996

Cause of death	Deaths	
	Number	Per cent
Accidents, poisonings and violence	344	43.4
Motor vehicle traffic accidents	136	17.2
Accidents caused by submersion, suffocation and foreign bodies	86	10.9
Malignant neoplasms	134	16.9
Of lymphatic system and haematopoietic tissue	58	7.3
Congenital abnormalities	77	9.7
Diseases of the nervous system and sense organs	86	10.9
Other causes	151	19.1
All causes	792	100.0

Source: ABS 1997b.

- After the first year of life, injuries (including accidents, poisonings and violence) become the largest single cause of death for children. In 1996, injury was responsible for 43% of deaths.

- Motor vehicle accidents were the main cause of injury deaths, causing over 17% of all deaths to children aged 1–14 years.
- Malignant neoplasms also accounted for 17% of deaths in 1–14 year olds.

Drowning accounted for the greatest number of injury deaths to toddlers and preschoolers (ages 1–4), with road accidents second followed by homicide and burns. The leading causes of injury deaths for children aged 5–9 years were motor vehicle accidents, fire/burns and drowning. For children aged 10–14 years, the major causes of injury-related deaths were motor vehicle accidents and homicide, closely followed by suicide and drowning (AIHW Mortality Database).