

Introduction

Compared with many other countries, the prevalence of asthma in Australian children is high. Asthma represents one of the most common reasons that children utilise health care, particularly through emergency department (ED) visits and hospitalisation. The Australian Burden of Disease study identified asthma as the leading cause of burden of disease and injury among children aged 0 to 14 years in 1996 (Mathers et al. 1999). Asthma is a major health issue for children in Australia.

This chapter brings together data on the prevalence, health service utilisation and management of asthma in Australian children. In some instances data presented in later chapters is re-presented here. However, in discussing the spectrum of asthma in childhood, this chapter applies a more developmentally focused age classification. Where possible, data are presented in four childhood age groups: infants (0 to 1 year), pre-school (2 to 4 years), primary school (5 to 11 years) and secondary school (12 to 18 years).

2.1 Prevalence of asthma in children

The 2001 National Health Survey provides the most recent nationwide data for the prevalence of asthma. From this survey it was estimated that 13.8% of children aged 0 to 17 years in Australia had current asthma defined as those who reported ever being diagnosed with asthma and responded 'Yes' to 'Do you still get asthma?' (ABS 2002a). In addition to this nationwide estimate, the prevalence of asthma has also been measured in a number of state, territory or local population-based surveys in Australia. Data on the prevalence of asthma in children from the National Health Survey and these other studies have been summarised in Tables 2.1 and 2.2.

The surveys have used different definitions to identify asthma and this is likely to influence the resulting prevalence estimates. The definition of current asthma applied in most state government surveys were those who reported being diagnosed with asthma and also reported either having had symptoms of, and/or had taken treatment for, asthma in the preceding year. Using this definition, the estimated prevalence of asthma in children in Western Australia (2004), New South Wales (2001), and South Australia (2003–04) was 14.6% (age 0 to 15 years), 15.7% (age 2 to 12 years) and 18.4% (age 2 to 15 years), respectively (Table 2.2).

The differences in prevalence estimates are also likely to be influenced by the different age ranges of survey participants.

The prevalence of wheeze was higher than the prevalence of asthma in children. The extent to which this higher prevalence of wheeze represented undiagnosed asthma, as opposed to non-asthma, viral-associated wheeze, cannot be ascertained from available data. There is some evidence to suggest that the combination of recent wheeze and airway hyperresponsiveness, an abnormal 'twitchiness' of the airways, identifies a population with more persistent features of asthma that is independent of diagnostic and labelling trends. The prevalence of this syndrome among children in the Belmont area of coastal New South Wales was 11.3% in 2002 (Toelle et al. 2004).

Time trends in the prevalence of asthma among children are illustrated in Figure 3.2 of this report. Evidence from repeated surveys consistently suggests that the prevalence of asthma in children increased in the 1980s and 1990s and has peaked in recent years.

Table 2.1

Prevalence of asthma ever being diagnosed in children, Australia, 1999–2004

Location	Survey	Year	Age range	Rates	95% CI
Ever doctor-diagnosed asthma					
Australia	(1)	2001	0 to 17 years	24.8%	23.7–25.9%
NSW	(2)	2001	2 to 12 years	26.4%	25.4–27.4%
Belmont, NSW	(3)	2002	8 to 11 years	31.0%	27.8–34.3%
SA	(4)	2003–04	2 to 15 years	25.0%	22.6–27.4%
		2002–03	2 to 15 years	23.3%	20.9–25.8%
Melbourne, Vic	(5)	2002	6 to 7 years	25.5%	23.7–27.4%
WA	(6)	2004	0 to 15 years	20.2%	17.2–20.8%
		2001	0 to 12 years	19.7%	17.2–23.3%
Ever had asthma					
ACT	(8)	1999–2001	4 to 6 years	23.5%	22.2–23.8%
Wheeze ever					
Melbourne, Vic	(5)	2002	6 to 7 years	37.1%	34.8–39.5%

Sources: These estimates were obtained from the following surveys and studies: (1) ABS National Health Survey (CURF); (2) NSW Child Health Survey 2001, (Centre for Epidemiology and Research (NSW Department of Health) 2002); (3) Belmont Cohort Study (Toelle et al. 2004); (4) South Australian Monitoring and Surveillance System, Population Research and Outcome Studies Unit, SA Department of Human Services (unpublished data) 2005; (5) International Study on Asthma and Allergies in Childhood (Robertson et al. 2004); (6) Health and Wellbeing Surveillance System, Health Information Centre WA Department of Health (unpublished data) 2005; (7) WA Child Health Survey 2001 (Daly & Roberts 2002); (8) ACT assessment of new primary school entrants (Glasgow et al. 2003).

Table 2.2

Prevalence of current asthma in children, Australia, 1999–2004

Location	Survey	Year	Age range	Rates	95% CI
Ever doctor-diagnosed asthma AND 'Yes' to 'Do you still have/get asthma?'					
Australia	(1)	2001	0 to 17 years	13.8%	12.9–14.7%
Melbourne, Vic	(5)	2002	6 to 7 years	20.0%	18.4–21.8%
Ever doctor-diagnosed asthma AND symptoms of asthma or taken treatment for asthma in last 12 months					
NSW	(2)	2001	2 to 12 years	15.7%	14.7–16.8%
SA	(4)	2003–04	2 to 15 years	18.4%	16.3–20.7%
		2002–03	2 to 15 years	18.0%	15.9–20.4%
WA	(6)	2004	0 to 15 years	14.6%	12.1–17.2%
Does your child have asthma?					
ACT	(7)	1999–2001	4 to 6 years	15.1%	14.4–15.8%
Wheeze or whistling in the chest in last 12 months					
ACT	(7)	1999–2001	4 to 6 years	15.3%	14.6–16.0%
Belmont, NSW	(3)	2002	8 to 11 years	23.7%	20.8–26.8%
Wheeze in last 12 months and airway hyperresponsiveness					
Belmont, NSW	(3)	2002	8 to 11 years	11.3%	8.8–14.3%

Sources: These estimates were obtained from the following surveys and studies: (1) ABS National Health Survey (CURF); (2) NSW Child Health Survey 2001 (Centre for Epidemiology and Research (NSW Department of Health) 2002); (3) Belmont Cohort Study (Toelle et al. 2004); (4) South Australian Monitoring and Surveillance System, Population Research and Outcome Studies Unit, SA Department of Human Services (unpublished data) 2005; (5) International Study on Asthma and Allergies in Childhood (Robertson et al. 2004); (6) Health and Wellbeing Surveillance System, Health Information Centre WA Department of Health (unpublished data) 2005; (7) ACT assessment of new primary school entrants (Glasgow et al. 2003).

International comparisons

The International Study of Asthma and Allergies in Childhood (ISAAC) applied standardised methods and definitions to the measurement of asthma in children. The survey was conducted in 464,000 children aged 13 to 14 years in 155 centres in 56 countries during the early 1990s (ISAAC 1995). There were four Australian centres (Robertson et al. 1998). The prevalence of self-reported wheeze among 13 to 14 year old children in Australia was high compared with most other countries participating in ISAAC (Figure 2.1).

Figure 2.1

World ranking for the percentage of children with self-reported wheeze in the previous 12 month period, age 13 to 14 years



Source: GINA 2004. Copyright Global Initiative for Asthma (GINA). Reproduced with permission.

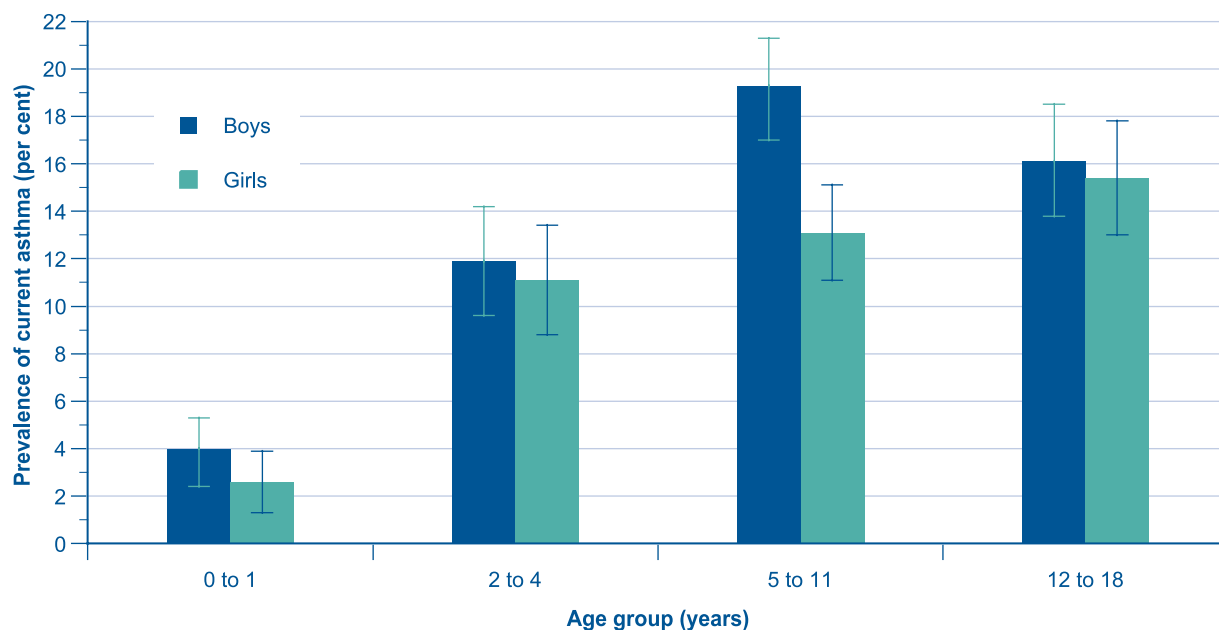
Differentials in the prevalence of current asthma among children

Age and sex

The prevalence of current asthma was substantially higher among primary school-aged boys (5 to 11 years) than girls ($p < 0.001$). However, among infants, pre-school-aged children, and high-school-aged children, there was no difference between boys and girls in the prevalence of asthma (Figure 2.2).

Figure 2.2

Prevalence of current asthma, by age group and sex, children aged 0 to 18 years, Australia, 2001



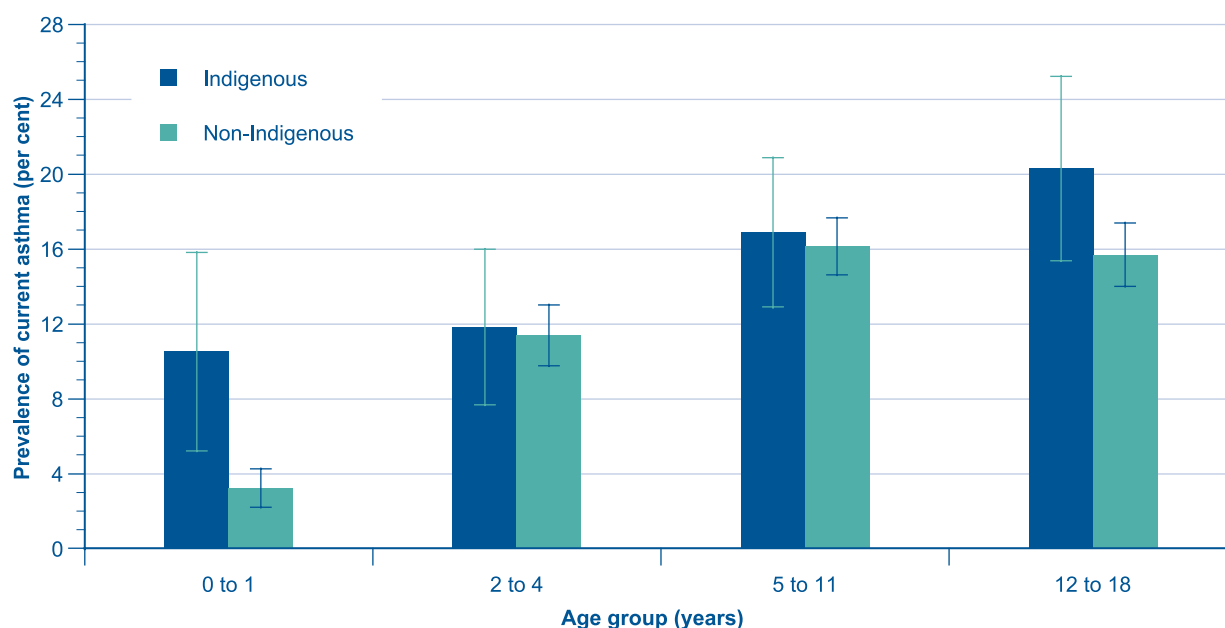
Source: ABS National Health Survey 2001.

Aboriginal and Torres Strait Islander children

Overall, the prevalence of current asthma was higher among Indigenous children (15.8%, Indigenous National Health Survey 2001) than other children (13.8%, National Health Survey 2001). However, this difference was highest among Indigenous infants (Figure 2.3). This is an age at which the diagnosis of asthma is uncertain. Furthermore, the number of Indigenous respondents included in the survey was small. Hence, conclusions on the prevalence of asthma in Indigenous children, based on the Indigenous National Health Survey, need to be treated with some caution.

A number of other surveys have measured the prevalence of asthma in Indigenous children (Table 2.3). These have used various definitions and age groups and have been conducted in a variety of settings. The heterogeneity among the estimates makes it difficult to draw confident conclusions about the prevalence of asthma in Indigenous children, except that most estimates are at least as high as those in other children.

Figure 2.3
Prevalence of current asthma, by age group and Indigenous status, children aged 0 to 18 years, Australia, 2001



Source: ABS National Health Survey 2001.