A Picture of Australia's Children

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Foreword

A Picture of Australia's Children is the third national statistical report the Australian Institute of Health and Welfare has produced on the health, development and wellbeing of Australia's children aged 0–14 years. The AIHW has played a leading role in the monitoring and reporting of children's services, child protection, and children's health and wellbeing since 1996.

When the Institute first began reporting on Australia's children there was little national focus on the health and wellbeing of children. Today, the landscape is quite different. Childhood, particularly early childhood, has become a key priority for governments and non-government organisations across Australia. This is in response to a raised awareness about the impact on children of the rapid social change in Australia over recent decades, as well as compelling evidence about the importance of the early years in ensuring the best possible outcomes for our children later in life.

We are pleased to bring together a wide variety of data in this report, including information about individual, family and societal factors that influence the health and wellbeing of children. New topics include: exposure to environmental tobacco smoke, homelessness, literacy and numeracy, children as victims of violence, neighbourhood safety, and parental health and disability.

The key message from this report is clear—most children in Australia are faring well but there are still significant areas of concern. Aboriginal and Torres Strait Islander children and children from lower socioeconomic backgrounds continue to experience worse health, poorer developmental outcomes and generally reduced wellbeing when compared to other Australian children. In addition, a number of lifestyle risk factors and chronic conditions that have shown to be debilitating for the adult population are creeping in to children's lives as well. Overweight and obesity and mental health problems are two such examples. Incidentally, these are the two areas where we have the least amount of data to report. As one of its main aims, this publication also seeks to show the way ahead by highlighting the importance of having nationally consistent data to monitor these and other emerging morbidities in the future.

Production of this report was assisted by funding from the Australian Government Department of Health and Ageing. I would also like to thank members of the Picture of Australia's Children advisory group who contributed their expert advice in the development of this report and the key national indicators of child health, development and wellbeing.

Richard Madden

Director

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Executive summary

Childhood sets the foundation for future health and wellbeing. Biological, social, family and community, and economic influences during childhood impact on children's physical, emotional and mental health and affect their education, employment, and behavioural development.

This report presents the latest available data on key national indicators of health, development and wellbeing of Australian children aged 0–14 years. This is the third report about children produced by the AIHW. In keeping with the new emphasis on a whole-of-government, cross-sectoral approach to effective policy towards early intervention and prevention, this report has been broadened to look at a wider set of influences on children's health, development and wellbeing, including learning and education and the role of family and community.

Children of Australia

- There were approximately 3.9 million children aged 0–14 years in Australia in 2003 and these children made up 20% of the total Australian population. Over the years, the share of children in the total population has been declining: in 1923, children made up over 30% of the total population, while it is projected that the child population will make up approximately 19% of the total population by 2006 and 18% by 2011.
- According to 2001 census figures, Indigenous children comprised 4.5% of the total child population. Overseas-born children constituted 5.8% of all Australian children aged 0–14 years.

How healthy are Australia's children?

- The infant mortality rate in Australia halved over the last two decades, from 9.6 per 1,000 live births in 1983 to 4.8 in 2003. Based on current age-specific mortality rates, infants born today are expected to live to an average age of 77.8 years for males and 82.8 years for females.
- Over the last two decades, mortality among children aged 1–14 years has also declined by over 50%. Most deaths to children occur in the early childhood period of 1–4 years of age, and this group has also experienced a 45% decline in the death rate between 1983 and 2003.
- A major contributing factor for falling mortality during infancy is the declining rate of deaths from SIDS. Between 1983 and 2003, SIDS deaths declined by 84%, but in 2003, SIDS was still responsible for 17% of infant deaths in the post-neonatal period.
- Injury and poisoning was the major cause of death among children aged 1–14 years, accounting for 40% of all deaths to children in 2003. However, between 1983 and 2003, the child death rate from injury and poisoning declined by about 60%.
- Chronic conditions such as asthma, diabetes and cancer contribute significantly to the disease burden among children in Australia. In 2001, an estimate of 527,000 children aged 0–14 years had asthma as a long-term condition, a prevalence rate of 13.2%.
- In 2000–01, the average annual rate of new cases of Type 1 diabetes was around 20 per 100,000 among children aged 0–14 years.
- Between 1982 and 2001, the age standardised incidence rate of cancer for children aged 0–14 years increased by an average of 0.6% per year. The overall five-year survival from leukaemia increased significantly from 62.4% to 69.7% between 1982–86 and 1992–97.

- In 2003, there were approximately 320,000 children with a disability in Australia, accounting for 8% of the total child population aged 0–14 years. Slightly over half these children had a severe or profound core activity restriction.
- A study conducted in 1998 among 4,500 children indicated that 14% of children aged 4–14 years had mental health problems.

Although most Australian children are healthy, there are sub-groups for whom additional health gains can still be achieved.

- Less advantaged socioeconomic backgrounds have an adverse effect on children's health and wellbeing. Infants from the least advantaged socioeconomic areas are twice as likely as those from the least disadvantaged areas to die before they reach their first birthday.
- Aboriginal and Torres Strait Islander children have poorer health and wellbeing than other Australian children but data limitations hinder exact comparisons. While infant mortality has improved between 1993 and 2003 decreasing by approximately 3.3% per year, Indigenous Australian children had worse outcomes against most indicators.

How well are we promoting healthy child development?

Although the incidence of vaccine-preventable diseases in Australia has been reduced since the introduction of immunisation, these diseases remain a serious concern. Vaccine coverage needs to exceed 90% to achieve and maintain the level of community immunity necessary to interrupt ongoing transmission of vaccine-preventable diseases.

- In 2004, the proportion of children aged 2 who were fully vaccinated was 92%. Near 100% immunisation coverage is expected for children at school entry age, but only 84% of the children aged 6 years were fully immunised in 2004.
- The rates of immunisation at 12 months of age among Indigenous Australian children were a little lower than for other Australian children, but there was no difference in rates between Indigenous and other Australian children at 24 months of age.

Breastfeeding in the first 4–6 months of life is considered to protect infants against a number of acute and chronic conditions including diarrhoea, respiratory infection, otitis media, SIDS, diabetes and asthma.

- Most infants aged 0–3 years receive breast milk at some stage of infancy. There are no national data on exclusive breastfeeding of Australian infants. However, the ABS 2001 National Health Survey provides information on the proportion of infants fully breastfed. In 2001, approximately 54% of babies were fully breastfed at 3 months of age or less, compared with around 32% of infants by 6 months of age or less.
- Breastfeeding data for Indigenous babies from the WA Child Health Survey indicated that 53% of the Indigenous infants aged less than 6 months were exclusively breastfed.

Good oral health throughout infancy and childhood contributes to better dental health in adulthood, resulting in less decay and reduced loss of natural teeth. Great improvements in the oral health of Australian children have been observed where the public water supply has been fluoridated.

- Despite the evidence of the benefits of water fluoridation, significant areas of Queensland, and to a lesser extent Victoria, do not fluoridate water.
- Between 1990 and 2000, the mean number of decayed teeth decreased among children aged 6 years from 2.1 to 1.7 and for children aged 12 years from 1.4 to less than 1. However, in more recent years this decline appears to have ceased and there are signs of decay experience among children increasing.

What factors can affect children adversely?

This report presents data on a number of influences that have a bearing on outcomes for children: low birthweight, maternal smoking during pregnancy, exposure to environmental tobacco smoke, overweight and obesity and tobacco and alcohol use by children.

- Approximately 6% of Australian babies were born weighing less than 2,500 grams at birth. Low birthweight is more common in babies born to families of low socioeconomic status and to Indigenous mothers.
- Tobacco smoking in pregnancy is a major risk factor for low infant birthweight. Data from NSW, WA, SA and the ACT indicate that overall 18% of women smoked during pregnancy. According to the 2001 WA Aboriginal Child Health Survey, mothers of 47% of Indigenous children had smoked tobacco during pregnancy.
- The proportion of households with young children where a household member smoked inside the house decreased from 31% in 1995 to 20% in 2001. Nevertheless, this meant that nearly 1 in 5 Australian households with children aged 0–14 years had a person smoking inside the home.
- While the majority of children aged 2–14 years were of acceptable weight, a relatively high proportion of boys (18%) and girls (22%) were overweight or obese. South Australian data for 2000–01 indicated that socioeconomically disadvantaged children from both metropolitan and non-metropolitan areas were more likely to be overweight or obese.
- A survey of secondary-school students in Australia found that the prevalence of tobacco smoking among students aged 12–14 years had fallen from 17% in 1984 to 9% in 2002. Nevertheless, this still meant that 1 in 11 children in 2002 had smoked tobacco in the week prior to the survey.
- The same survey showed that 5% of children aged 12–14 years had participated in risky drinking in the 2 weeks prior to the survey. This figure remained relatively constant over the period 1984 to 2002.

How safe and secure are Australia's children?

It is important for children's development that they grow up in safe and secure homes and environments, and that they are protected from abuse and victimisation.

- There was a significant reduction in childhood deaths from injury over the period 1982–2003. However, injury and poisoning remains the major cause of death and disability among Australian children.
- Indigenous children have a higher average injury mortality rate than other Australian children. For instance, the average annual injury mortality rate among Indigenous infants in 2001–03 was 56 per 100,000 infants while the corresponding rate for other Australian infants was 18.2 per 100,000.
- The rate of children on care and protection orders increased by 47% between 1997 and 2003. However, this increase needs to be interpreted with caution as the trends in such data are heavily influenced by changes in policies and practices within the child protection system. There was no difference in 2003 between the rates of boys and girls on care and protection orders.
- The rate of child protection substantiations for Indigenous children aged 0–14 years in 2002–03 was 22.9 per 1,000 children, compared to 7.2 per 1,000 for other Australian children. The rate of Indigenous children on care and protection orders at June 2002 was 23.4 per 1,000 and for other Australian children this was 4.6 per 1,000.
- In 2003, police recorded over 12,000 children as victims of all types of assault. The largest group of children subjected to assault was boys aged 10–14 years.
- The rate of reported sexual assault against girls aged 10–14 years was five times higher than that recorded for boys: 475 per 100,000 for girls compared with 88 per 100,000 for boys.
- In 2002–03, 51,860 children aged 15 years or less accompanied a parent or guardian seeking assistance from the major program response to homelessness, SAAP. Of these children, 44% were under 5 years of age.

How well are Australia's children learning and developing?

Participation in early childhood education programs such as preschools or centre-based programs have short and long-term positive effects on children's intellectual development and school completion. Success in school is associated with future life success; failure to successfully complete schooling increases the likelihood of poor employment prospects, low income, welfare dependency, delinquent behaviour, drug abuse and crime.

- In 2002, approximately 59% of children aged 4 years participated in preschool. A further 25% of 4 year old children attended long day care centres, many of which offer educational preschool programs.
- Participation in preschool programs varied by region of residence and Indigenous status. In 2001, the preschool participation rate for children was 58% in Major Cities and 43% in very remote regions. Indigenous children's participation in preschool programs was 46% compared with 57% participation by other Australian children.
- The majority of students (88% boys and 92% girls) met the national benchmarks for reading, writing and numeracy in 2001. From 1999 to 2001 the rates of girls meeting the benchmarks were consistently higher than those of boys. The rates for Years 3 and 5 Indigenous students were consistently lower than the national rates.
- The detention rate for young people aged 10–14 years in juvenile justice detention centres declined from 9.5 per 100,000 in 1990 to 6.2 per 100,000 in 2003. Boys were 5 times more likely than girls to be detained. During the period from 2000 to 2002, Indigenous children between 10 and 14 years of age were detained at about 30 times the rate of other Australian children.

What kind of families and communities do Australia's children live in?

The family and community environment and socioeconomic circumstances in which children are growing up, have an effect on children's educational, psycho-social and criminal outcomes. Neighbourhoods, along with individual circumstances, can also play a major role in shaping children's behaviour. Neighbourhoods where social cohesion is low may increase the vulnerability of families and children, while neighbourhoods with stronger community connectedness may provide a safe and secure environment to families and children.

The school and community contexts in which children live also have a considerable influence over their health, development and wellbeing. These contexts, along with family, set foundations for learning, behaviour and health over the course of their lives.

- In 2003, 72% of Australian children lived in intact families and nearly 20% of children lived in lone parent families. A further 5% were in blended families and 3% in step families. A small proportion of children (less than 1%) lived with grand parents.
- The majority of parents reported high levels of family cohesion, but the proportion of families reporting good to excellent family cohesion was lower in lone parent (87%) and blended families (88%), compared with original parent families (93%). Family cohesion was reported to be lower in low income families compared to high income families.
- In 2002–03, 22% of children aged 0–14 years lived in low income households. The proportion of children in one-parent households with incomes in the lowest quintile was more than twice that of children in couple households (43% compared with 17%).

- The rate of children who are placed in out-of-home care rose from 3 per 1,000 children in 1997 to 5 per 1,000 in 2004.
- In 1998, 17% of children aged 0–14 years lived with a parent who had a disability. Of these children living with a parent with a disability, approximately 90% lived with a parent whose main disabling condition was a physical condition and about 11% with a parent whose main condition was mental or behavioural disorder.
- Most Australian children are growing up in families that felt safe in their neighbourhood. In 2002, 90% of Australian householders said they felt safe in their neighbourhood.
- Most families with young children in Australia had good family and social support networks and were able to get support in time of crisis, could ask for small favours and had regular contact with family and friends.

Future directions

As one of its main aims, this publication seeks to show the way ahead by highlighting the importance of having nationally consistent data for future monitoring of Australian children's health, development and wellbeing. While there are a wealth of data to measure many aspects of Australian children's health and wellbeing, there are a number of important indicator and data gaps.

- Currently there are no system performance indicators specific to children that will help assess the impact of existing systems on health and wellbeing outcomes for children and their families.
- Identification of Indigenous status varies considerably in many existing data collections. This has restricted the analysis and presentation of data presented in this report.
- There are a lack of data for monitoring outcomes for population sub-groups such as children from culturally and linguistically diverse backgrounds and those living in geographically isolated areas.
- There are a lack of recent national data on a number of key areas of concern: mental health, overweight and obesity and physical activity.

This report has described work in progress to address these issues and additional data developments relevant to children.

Indicator summary

Indicator domain	Favourable trend	No trend	Unfavourable trend	No comparable/ trend data
Infant mortality rate	✓			
Infant deaths from SIDS	✓			
Mortality rate among children aged 1–14 years	✓			
Prevalence of asthma				✓
Incidence of Type 1 diabetes				✓
Incidence of cancer			✓	
Five-year survival rate for leukaemia	✓			
Children with severe/profound activity restriction				✓
Mental health of children				✓
Infants & children fully vaccinated at ages 1,2 & 6	✓			
Exclusive breastfeeding of infants				✓
Dental health of children			✓	
Proportion of low birthweight babies		✓		
Women smoking during pregnancy				✓
Children exposed to household tobacco smoking	✓			
Proportion of children overweight or obese				✓
Tobacco use among children	✓			
Alcohol misuse among children		✓		
Death rate from all types of injury	✓			
Hospitalisation for all types of injury		✓		
Child protection substantiations				✓
Children on care and protection orders			✓	
Rate of assault				✓
Children in homeless families				✓
Children attending preschools				✓
Children meeting literacy and numeracy benchmarks				✓
Children in juvenile justice facilities	✓			
Family cohesion				✓
Children in families where no parent is employed	✓			
Children in out-of-home care			✓	
Children living with parents whose health is fair/poor				✓
Children living with parents with a disability and/ chronic illness				✓
Children living in neighbourhoods perceived to be unsafe				✓
Families ability to get social support in time of crisis				✓

Note: Trends are based on time series data for seven years or more.

Part I

Background information

1 Introduction

This is the third national statistical report on the health and wellbeing of Australia's children aged 0–14 years. This report differs somewhat from the previous two as the focus has been widened to include factors influencing children's overall wellbeing. Previous reports have identified that children's wellbeing is broader than the status of good health; however, the scarcity of data prevented reporting on such issues as children's learning, safety and security, and social interactions. Although the data in these areas are still scanty, this report attempts to provide a snapshot of early learning and education, safety and security, crime, victimisation and social capital, as new additions to the information presented in previous reports.

Childhood, particularly early childhood, has become a key priority for governments and non-government organisations across Australia. This is in response to emerging issues of concern for Australia's children in the context of rapid social change, as well as compelling evidence about the importance of the early years for laying the foundations for children's later competence and physical wellbeing, and about the types of early interventions proving beneficial for positively influencing child outcomes. The biological, social, community, family and economic influences on children are important predictors of health, educational, psycho-social, behavioural and criminal outcomes (Zubrick et al. 2000a; Prior et al. 2000). This recognition has prompted the Australian Government decision to work towards a National Agenda for Early Childhood which seeks to bring together everyone working on child-related areas to develop a 'road map' to achieve the best outcomes for children.

The main areas that have become the focus of the National Agenda are:

- healthy young families—improved care during pregnancy and the postnatal period, promotion of health behaviours, early recognition of children with, or at risk of having, ill-health, and effective early intervention;
- early learning and care—access to quality early learning and care services, support for parents and other primary carers such as a child's first teacher, successful transitions to school, coherent approach to care, education and family support, and early identification of and intervention for children at risk of developmental and behavioural problems;
- supporting families and parents—improved access to family support services, such as parenting education programs and relationship support, which assist parents to provide an optimal home environment for children; family assistance including income support and child care to assist parents achieve a work/family balance; and improved access to quality assured parenting information; and
- child-friendly communities—fostering flexible and responsive services at the local level, creating better links and coordination among community services, reducing levels of family violence, assessment of risks to children in communities, and community provision of children's activity, play and learning opportunities.

Central to the National Agenda is the capacity to be able to monitor regularly over time how Australia's children are faring, and how certain population groups, such as Indigenous children and children from rural and regional Australia, are faring by comparison (ACCAP 2004). Several Australian states and territories have also begun to commission reports monitoring the progress of children within their jurisdiction (Centre for Epidemiology and Research 2002; NSW and Qld Commissions for Children and Young People 2004; Qld Commission for Children and Young People 2004; Tennant et al. 2003).

As there are a number of major areas such as education, health and welfare services, both at local and national level, aiming to improve children's health, development and wellbeing, the National Agenda is intended to work together for a common goal. This will minimise any duplication of effort and therefore resources can be directed more efficiently.

In keeping with this new emphasis on a whole-of-government, cross-sectoral approach to childhood policy, the AIHW has broadened its reporting framework in this area to encompass a wider set of influences on childhood development, health and wellbeing. This work has been guided by an Advisory Committee comprising key experts and jurisdictional representatives, the Australian Government Taskforce on Child Development, and the Australian Council for Children and Parenting (ACCAP).

Key national indicators

The key national indicators on the health, development and wellbeing of Australia's children presented in this report are built upon an earlier set developed by the AIHW in collaboration with an expert committee. This initial set was based on a conceptual framework for the organisation of national child health information. The framework consisted of three broad groups of indicators of child health: health status, risk and protective factors, and the delivery of health services and interventions.

The framework was endorsed by the AIHW advisory committee, discussed at a workshop convened by the AIHW in 1998 and subsequently endorsed by the Australian Health Ministers' Advisory Council. While this original framework was primarily focused on health, subsequent indicator development and national monitoring of the wellbeing of children undertaken by the Institute has progressively broadened. The new indicator framework follows an ecological approach where the importance of parents, families and the physical and social environment has been well recognised.

This report aims to encompass reporting on the wider social, community and economic contexts in which children in Australia are growing up and how these influences affect outcomes for children. This approach is consistent with the international research literature and the shift in government policy towards early intervention and prevention. Recent research findings have emphasised the importance of early childhood exposures (such as family environment, social interaction, and education) in shaping children's health, development and wellbeing later in life (for a summary of this research, see Waters et al. 2002; McCain & Mustard 2002).

The development of national indicators for Australia's children has been guided by an advisory group of key experts in the areas of child health, development and wellbeing (see AIHW 2004a for further details). In addition, the indicators were discussed at a workshop hosted by the Australian Council for Children and Parenting (ACCAP), in March 2004. This workshop brought together a variety of leading academic experts, and government and non-government stakeholders, to consider a national reporting framework for Australia's children. The key national indicators selected for this report have also been influenced by international indicator development in Europe (European Union Community Health 2002), in Canada (Canadian Council On Social Development 2002), and in America (Federal Interagency Forum on Child and Family Statistics 2003), as well as indicator development within Australia (Waters et al. 2002; Zubrick et al. 2000a).

Report structure

The key national indicators of children's health, development and wellbeing that have emerged out of the consultative process outlined above have formed the basis for this report. The key indicators are organised around answering questions vital to assessing the health and wellbeing of Australia's children, such as:

- How healthy are Australia's children?
- How well are we promoting healthy child development?
- What factors can affect children adversely?
- How safe and secure are Australia's children?
- How well are Australia's children learning and developing?
- What kind of families and communities do Australia's children live in?

While the majority of Australian children are faring well, as evidenced by the decline in mortality rates over the last two decades, not all are doing so well. Hence it is important for any national report to provide information on how wellbeing varies for children from rural and regional Australia, children from different socioeconomic backgrounds and Indigenous children. Where possible, this information has been included in *A Picture of Australia's Children*.

Data issues

Although the aim of this report is to bring together national data, there were a number of key indicators for which no national data were available or the available data were outdated. There were also many key indicator areas relating to Australian Indigenous children where national data were lacking. In these instances, this report used most recent available data from jurisdictional collections. For example, NSW Child Health Survey data were used for the indicator on breastfeeding and WA Child Health Survey data were used to report against a number of indicators for Indigenous children.

For comparison between population groups, wherever possible, rates are adjusted for age using direct standardisation in which age-specific rates are multiplied against a constant population (the Australian 2001 Population Standard unless otherwise specified). Indirect standardisation was used to estimate the death rates for Australian Indigenous children. Average death rates for the Australian 2001 Population Standard were applied to the number of Indigenous children from Queensland, Western Australia, South Australia and the Northern Territory to obtain the expected number of deaths for Indigenous children. This effectively removes the influence of age structure on the summary rate that is described as the age-standardised rate.

The observed value of a rate may vary due to chance even where there is no variation in the underlying value of the rate. Therefore, where indicators include a comparison between time periods, geographical locations, socioeconomic groups or Indigenous and other Australian people, a 95% confidence interval is calculated. The 95% confidence interval provides a probability that the difference is not due to chance. Where the confidence intervals do not overlap, there is at least 95% confidence that the change in a rate is greater than that which could be explained by chance. Where the intervals do overlap, then there is not a 95% confidence that changes in the rate are due to chance.

The 95% confidence intervals in this report were calculated using a method for obtaining approximate confidence intervals for a weighted sum of Poisson parameters developed by Dobson et al. (1991).

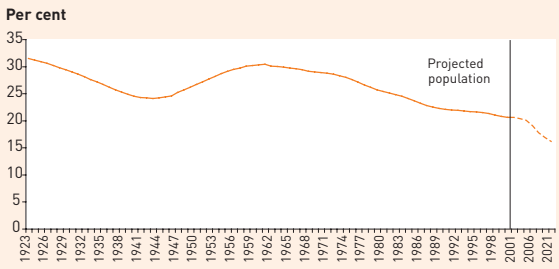
2 An overview of the Australian child population

This chapter describes the child population of Australia including its size, its distribution among states & territories and regions, and its cultural diversity. The status of the population provides a context for exploring many issues influencing children's health, development and wellbeing. The size and composition of the child population is important for policy making and planning for various services required by children including schools, child care and health and welfare services. In addition to children's own characteristics, parents' demographic and socioeconomic characteristics also have an important impact on the health and wellbeing of children. Parental influences on the lives of Australia's children will be discussed in Part III of this report.

Child population

The child population as defined in this publication includes children aged 0–14 years. The Australian Bureau of Statistics (ABS) estimated the child population as at 30 June 2003 was approximately 3.9 million (20% of the total Australian population). Although the number of children has been increasing each year, the child population as a proportion of the total population has been declining. A decade ago the child population in Australia represented 22% of the total population. Since the early 1920s, with the exception of baby-boom years, the child population as a proportion of the total population has steadily declined (Figure 2.1)—reflecting changing fertility patterns over the period.

Figure 2.1: Children as a proportion of the total Australian population, 1923–2023



Source: ABS various years (a), ABS 2004a.

During the early 1920s in Australia, the total fertility rate (TFR) (defined as the average number of babies that a woman could expect to bear during her lifetime, if she experienced current age-specific fertility rates throughout her reproductive life) was 3.1 births per woman. The TFR fell to low levels during the Great Depression of the 1930s, reaching its lowest point of 2.1 babies per woman in 1934. The TFR rose rapidly following World War II, reaching a peak of 3.5 babies per woman at the height of the baby boom in 1961. Since then Australian fertility rates have declined for a variety of reasons including the availability of the oral contraceptive pill, laws making abortion more available, late age of child bearing and women choosing not to have children altogether (ABS 2003a). In 2002, the total fertility rate was 1.75 births per woman.

ABS population projections indicate further reductions in the relative size of the child population are likely to occur in the future, making the child population an even smaller proportion of the total population compared to the persons aged 65 years and over (ABS 2004a). Since children are very much dependent on adults—the economically productive sector of the population—for their needs, the population share of children has important implications for planning. While the child dependency ratio (the ratio of children aged 0–14 years to the working age population aged 15–64 years) has been declining, the proportion of dependants aged over 65 years has been increasing as the baby boomers move into older age. This will have implications for the future child population as more resources are increasingly committed to the ageing population.

Characteristics of Australian children

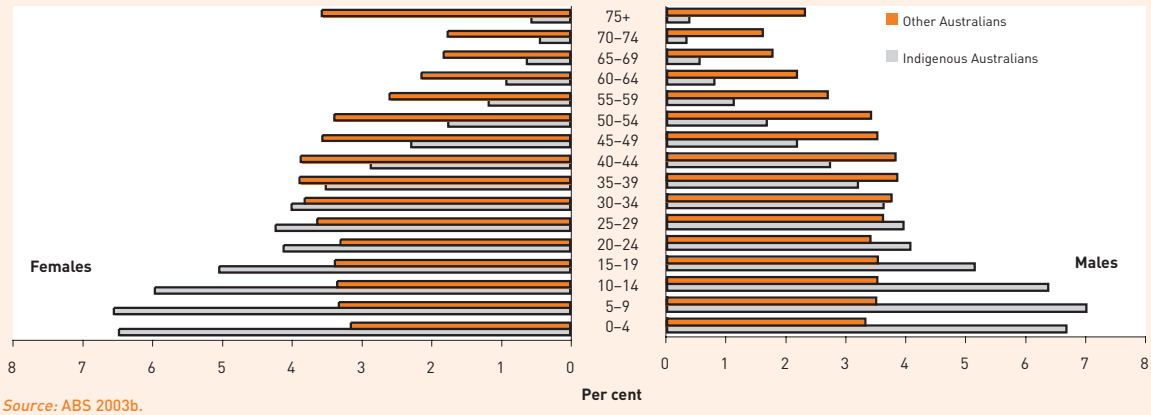
Age and sex

In 2003, there were 2 million boys compared to 1.9 million girls in the Australian child population, a sex ratio of 105 boys per 100 girls. Infants (those aged less than 12 months) accounted for 6% of the child population.

The age and sex distribution of the Australian population also highlights the declining child population (Figure 2.2). This decline, as explained above, is a reflection of a falling birth rate and a trend towards a later age of child bearing in Australia. The population pyramid, therefore, shows a bulge towards the middle with a reasonably large proportion of people in the older age groups.

In contrast to the age structure of the total population, the Indigenous population in Australia has a much younger age structure (Figure 2.2). In 2001, Indigenous children aged 0–14 years accounted for 39% of the Indigenous Australian population. This reflects the higher birth rate that prevails among the Indigenous population and also the higher levels of mortality at all ages. For this reason, any comparisons made between the Indigenous and other Australian populations need to be age standardised to a selected standard population to control for the effect of differing age structures.

Figure 2.2: Indigenous and other Australian populations, by age and sex, 2001



Source: ABS 2003b.

Table 2.1: Residence area of Australian children[(a)] aged 0–14 years, 2003 (per cent)

State/territory	Number of children	Per cent of Australian child population	Share of state/territory population (per cent)
New South Wales	1,331,831	33.5	19.9
Victoria	959,215	24.1	19.5
Queensland	791,290	19.9	20.8
Western Australia	398,612	10.0	20.4
South Australia	287,926	7.2	18.9
Tasmania	97,354	2.4	20.4
Australian Capital Territory	64,092	1.6	19.8
Northern Territory	50,414	1.3	25.4
Australia	**3,981,538**	**100.0**	**20.0**

(a) Estimated resident population.

Source: ABS 2003b.

State and territory of residence

- One-third of all Australian children lived in New South Wales, almost a quarter in Victoria and 20% in Queensland. Nearly 78% of all children lived in these three states. Just over 1% of Australia's children lived in the Northern Territory.
- In 2003, except for the Northern Territory, the share of the child population aged 0–14 years in every jurisdiction was about one-fifth of its total population. In the Northern Territory, just over a quarter of the population were children aged 0–14 years. This is related to the large Aboriginal and Torres Strait Islander population in the Northern Territory, as the Indigenous population has a younger age structure than the total population (Table 2.1).

Geographical location

Geographical location in this report refers to the ASGC (Australian Standard Geographical Classification) Remoteness Areas classification released by the ABS in 2001. ASGC Remoteness can be interpreted as 'access to a range of services, some of which are available in smaller and others in larger centres: the remoteness of a location can thus be measured in terms of how far one has to travel to centres of various sizes' (DHAC & GISCA 2001).

- In 2003, 64% of Australian children lived in Major Cities, 22% in Inner Regional areas and 11% in Outer Regional areas. Children living in Remote or Very Remote areas accounted for approximately 3% of the child population (Table 2.2).
- Over half of the Northern Territory child population (51%) lived in Remote or Very Remote areas.

Table 2.2: Distribution of children aged 0–14 years across ASGC remoteness categories, 2003 (per cent)

Remoteness category	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Major Cities	69.4	70.9	49.9	66.8	68.5	. .	99.8	. .	63.5
Inner Regional	21.9	23.4	26.8	13.6	13.9	62.1	0.2	. .	22.2
Outer Regional	7.8	5.6	18.7	10.8	12.9	35.6	. .	49.1	11.2
Remote	0.7	0.1	2.9	5.6	3.6	1.8	. .	21.2	2.0
Very Remote	0.1	. .	1.8	3.2	1.1	0.5	. .	29.7	1.2

. . Not applicable.
Source: ABS 2003b.

Table 2.3: Selected characteristics of Indigenous Australian children aged 0–14 years, 2001 (per cent)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Indigenous as a % of the child population	4.0	1.1	6.4	6.4	3.4	7.1	2.3	40.5	4.5
Indigenous as a % of all Indigenous children	30.1	6.0	28.0	14.3	5.5	3.8	0.8	11.4	100.0
Total Indigenous (N)	**53,873**	**10,794**	**50,189**	**25,622**	**9,778**	**6,878**	**1,497**	**20,428**	**179,128**

(N) Total number.
Source: ABS 2003c.

Population diversity

The Australian population is a diverse one with its Indigenous and migrant populations. At the 2001 census there were about 179,000 Indigenous Australian children. These children made up 4.5% of the total Australian child population in 2001 (Table 2.3).

- Most Indigenous Australian children were in New South Wales (30% of the total number of Indigenous children) followed by Queensland, where 28% of the Indigenous children lived.
- Although only 11% of Australia's Indigenous children lived in the Northern Territory, they accounted for nearly 40% of the territory's child population.

In 2001, 5.8% (230,000 children) were born in another country. This figure does not include children born to overseas-born parents. Overseas-born people live mainly in Major Cities: in 2001, over 80% were living in an urban area (ABS 2004b).

Part II

Child health, development and wellbeing

Health is often defined as the presence or absence of diseases, disabilities and deficits (Pollard & Lee 2003) but such a narrow definition overlooks the way in which health, particularly child health, is the product of a complex web of prenatal, social, cultural, demographic, family, neighbourhood, and economic and political factors. This interconnectedness is better represented by the definition of health favoured by the World Health Organization (WHO 1978): 'a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity'.

There are no nationally representative datasets to show how all of these domains influence child health, development and wellbeing outcomes. However, evidence from research indicates that many childhood experiences translate into long-term consequences often spanning into adulthood (Graham & Power 2004). In the sections that follow, relevant research findings describing the link between childhood exposures and outcomes are given. With available Australian data, Part II of this report describes:

- how healthy Australian children are (the level of mortality, morbidity and disability);
- how well healthy child development is promoted in Australia through breastfeeding, immunisation;
- what influences are affecting children's health and wellbeing (e.g. birthweight and prematurity, alcohol and tobacco use and exposure to environmental tobacco smoke);
- whether Australian children are growing up in a safe and secure environment (accidental injuries, children needing accommodation, children facing abuse and neglect, and children as victims of violence); and
- whether Australian children have opportunities for early learning, and how well they are performing at school.

This section is largely focused on individual-level factors that indicate or influence health, development and wellbeing in children. However, a sole focus on individual-level influences provides only a partial picture. In order to fully understand the scope for promoting healthy development and the factors that put children at risk of risk (Link & Phelan 1995), we also need to track the social and environmental context in which children grow up. This requires an understanding of the relationship between the child and their immediate social context of family, schools and neighbourhoods as well as broader social changes. These too, are important predictors of children's health, development and wellbeing and are the focus of Part III of this report.

How healthy are Australia's children?

3 Mortality

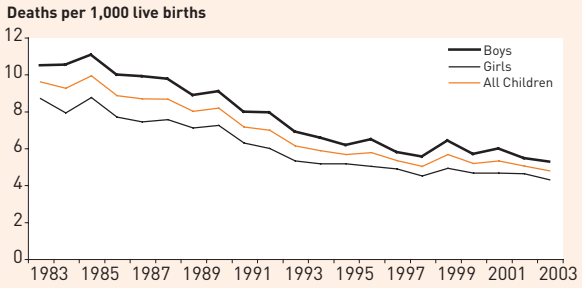
Death rates, life expectancy at birth and causes of death are key indicators of the health of a population (OECD 2003). They not only reflect circumstances around the time of death but also provide some insight into changes in social and environmental conditions, medical interventions, lifestyles and trends in underlying risk factors. This section describes the patterns of mortality in the Australian child population including information on age and sex patterns and trends.

'Death rates are one of the most widely used measures of health in a population. They provide insight into changes in social and environmental conditions, medical interventions, lifestyles and trends in underlying risk factors'

Infant mortality

The infant mortality rate is the number of deaths among infants less than 1 year of age in a given year, expressed per 1,000 live births in the same year (Figure 3.1).

Figure 3.1: Infant mortality rate, 1983–2003



Source: AIHW Mortality Database.

- The infant mortality rate for Australia in 2003 was 4.8 per 1,000 live births. In total, 1,199 infants died, representing less than 1% of all deaths in that year. However, infant deaths represent 67% of all deaths among children aged 0–14 years. Slightly more than half the infant deaths were of boys (56%).
- In the last two decades, the male infant death rate has been consistently higher than that of female infants. However, the infant mortality rate declined for both boys and girls between 1983 and 2003. In 1983, the rate for boys was 10.5 deaths per 1,000 live births. By 2003, this had halved to 5.2 per 1,000 live births. Similarly, the rate for girls dropped by 51% from 8.7 in 1983 to 4.3 per 1,000 live births in 2003.

In 2000, Australia's infant mortality rate ranked 16th, which placed Australia in the middle third, among 30 other OECD countries, falling behind countries such as the Netherlands, France, Italy, Germany, Spain and Japan (OECD 2003).

The average life expectancy at birth for boys born in 2001–03 was 77.8 years and for girls it was 82.8 years (ABS 2003d).

Age pattern

Infant mortality can be divided into two major groups according to the age of death. Deaths which occur during the first 4 weeks after birth (28 days) are called neonatal deaths, while deaths after 28 days and before 365 days of age are termed post-neonatal deaths.

As infants grow older their risk of dying decreases significantly. In 2003, 69% of the infant deaths occurred in the neonatal period, with 42% occurring on the day of birth and a further 17% occurring in the first week.

Indicators

- **Infant mortality rate.**
- **Sudden infant death syndrome (SIDS) rate.**
- **Death rate for children aged 1–14 years.**

Major causes

In recent years, the top three causes of infant mortality remained the same: conditions originating in the perinatal period, congenital malformations and other symptoms and abnormal findings. According to the International Classification of Diseases, 10th Revision (ICD-10), the major causes of infant mortality in 2003 were:

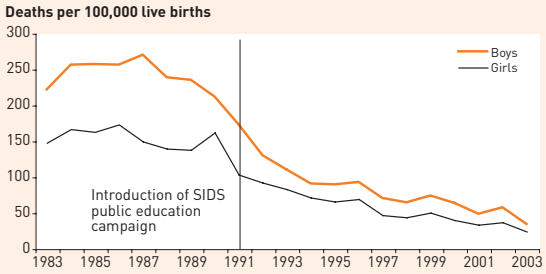
- certain conditions originating in the perinatal period (see Glossary for definition) (50% of total infant deaths);
- congenital malformations, deformations and chromosomal abnormalities (23%);
- symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (including SIDS) (10%);
- injury and poisoning (4%); and
- diseases of the nervous system (2%).

Other remaining conditions accounted for approximately 11% of infant deaths. The infant death rate was higher for male infants than for female infants for almost all leading causes of death.

Sudden infant death syndrome (SIDS)

- Following the introduction in 1991 of the National SIDS Council of Australia public education campaign on the sleeping position of infants[1], the death rate from SIDS decreased to a third of the rate in 1991 (Figure 3.2). A major contributor to the continuing fall in post-neonatal mortality has been the decline in deaths from sudden infant death syndrome.
- SIDS (which is included under the classification of symptoms and abnormal findings in the ICD-10) was the main leading cause of death in the post-neonatal period. In 2003, SIDS deaths comprised 17% of total post-neonatal deaths.

Figure 3.2: Infant deaths from SIDS, 1983–2003



Source: AIHW Mortality Database.

Infant mortality differentials

Infant mortality in Australia is low and declining. However, the low level of infant mortality is not consistent for all population groups. The infant mortality rate for Indigenous Australian infants was nearly three times higher than that for other Australian infants between 2001 and 2003. Nevertheless, between 1993 and 2003, Indigenous infant mortality decreased by approximately 3.3% per year. Death rates for infants in rural and remote areas are higher than for those infants in metropolitan areas.

Aboriginal and Torres Strait Islander infants

During the period 2001–03, there were 280 deaths (13 deaths per 1,000 live births) among Indigenous infants in Queensland, Western Australia, South Australia and the Northern Territory (the coverage of Indigenous people in deaths data in these jurisdictions is considered of sufficient completeness for statistical reporting). Deaths for Indigenous infants in these jurisdictions represented 6.3% of total Indigenous deaths and 72% of total deaths of all Indigenous children aged 0–14 years in the same jurisdictions. The life expectancy at birth for Indigenous Australians for the period 1996–2001 was 59.4 years for males and 64.8 for females, approximately 18–20 years behind the average life expectancy at birth for all Australians.

Of Indigenous Australian infant deaths, 56% were boys. The rate of deaths for Indigenous infants (13.0 per 1,000 live births) was nearly three times that of other Australian infants (4.5 per 1,000 live births).

1 NHMRC advised that babies should be placed on their back or on their side in such a way that they cannot roll onto their stomach.

Geographical location

The health of people living in geographically isolated areas of Australia is often poorer compared to those living in Major Cities and other urban locations. The reasons for their poorer health status include limited availability and access to health services and exposure to different health and environmental risks (AIHW 2003a).

- Infant deaths classified by the ABS ASGC remoteness categories indicate that during the period 2000–02, 2,303 infants died in Major Cities, 1,297 in Regional areas, and 246 in Remote and Very Remote areas. The rate of infant mortality by these categories varied from 4.6 deaths per 1,000 live births in Major Cities to 13.6 per 1,000 in Very Remote areas.
- The high rate of infant mortality in Very Remote areas is a reflection of very high rates of infant mortality occurring among the Indigenous people who make up a large part of the population in these areas.

Socioeconomic status

Socioeconomic status is an important risk factor for poor health outcomes in a population with those people of lower socioeconomic status tending to have higher rates of mortality (AIHW 2004b; AIHW: Dunn et al. 2002). Low socioeconomic status also has a highly adverse effect on the health and wellbeing of children. Wilkinson & Marmot (2003) showed that the effect of socioeconomic disadvantage is not limited to the extreme poor but that even those at the middle levels of society exhibit poorer health than do the wealthy. Children born into disadvantaged families are more likely to experience serious health problems and to die at an earlier age (Blakely et al. 2003).

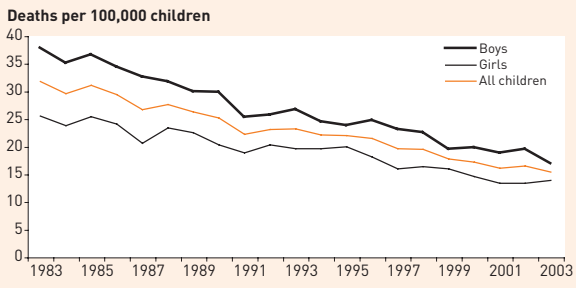
Socioeconomic disadvantage was measured using the Socioeconomic Index for Areas (SEIFA)—Index of Relative Socioeconomic Disadvantage developed by the Australian Bureau of Statistics for use at the Statistical Local Area level (ABS 2001a). This index is derived from selected attributes including low income, low educational attainment, high unemployment, and jobs in relatively unskilled occupations. Low scores on the index reflect geographical areas with many low income families and people with little training and unskilled occupations. High index scores indicate that the area has few families with low income, little training and unskilled occupations (ABS 2001a).

- The average infant mortality rates for each disadvantage group between 2000 and 2002 show higher rates in areas characterised by higher levels of disadvantage. Infants from the most disadvantaged areas are twice as likely as those from least disadvantaged areas to die before they reach their first birthday (7.8 deaths per 1,000 live births compared with 3.9 per 1,000).
- Male infants of all levels of disadvantage generally exhibit higher mortality rates than female infants. However, compared to female infant mortality rates, male infant mortality rates increased at a higher rate with the increasing level of disadvantage.
- Among the specific causes, conditions originating in the perinatal period, congenital malformations and other symptoms and abnormal findings were the major causes of infant death for all SEIFA quintiles. Deaths from injury for both male and female infants increased with increasing level of disadvantage.

Child mortality

The child mortality indicator is defined as the number of deaths of children aged 1–14 years of age per 100,000 children of the same age group (Figure 3.3).

Figure 3.3: Death rate for children aged 1–14 years, 1983–2003



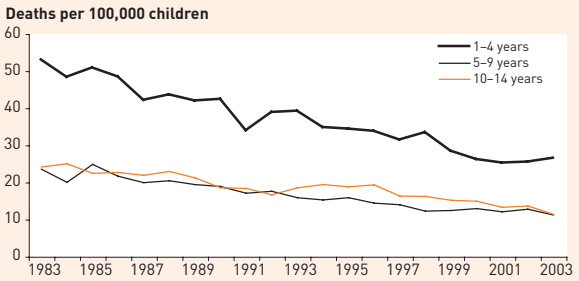
Source: AIHW Mortality Database.

- Between 1983 and 2003 the death rate for all children aged 1–14 years in Australia declined by 52%, from 31.8 deaths in 1983 to 15.4 deaths per 100,000 children in 2003.
- The death rate for boys aged 1–14 years has remained consistently higher than that for girls but the gap between boys and girls has narrowed since the late 1980s.
- In 2003, among children aged 1–14 years, there were 576 deaths or 15.4 deaths per 100,000 children. Fifty-six per cent of these deaths were of boys.

The age pattern of mortality among children shows that many deaths occur during the early childhood period, that is 1–4 years of age (Figure 3.4). In 2003, 47% of the deaths of children aged 1–14 were in the early childhood years. However, this is still much lower than the number of deaths occurring in infancy.

Between 1983 and 2003, the rate of deaths occurring in early childhood (1–4 years of age) declined by 45% (48% for girls and 42% for boys).

Figure 3.4: Age-specific death rate for children aged 1–14 years, 1983–2003



Source: AIHW Mortality Database.

Major causes

In 1983, the major causes of death among children aged 1–14 were external causes of injury and poisoning (e.g. transport accidents, drowning), neoplasms (including cancer), congenital malformations, and diseases of the nervous system. These conditions still remain the major causes of mortality among children (Table 3.1). However, between 1983 and 2003, the number of deaths from all these causes declined. The biggest single cause of death in children was injury and poisoning, which accounted for 40% of all child deaths in 2003. However, while they are still major causes of childhood mortality, deaths from injury and poisoning declined by almost 60% between 1983 and 2003. In addition to the decline in deaths from external causes, reduced death rates from congenital malformations and neoplasms over the last two decades have contributed to lower levels of child mortality in Australia.

Table 3.1: Major causes of death of children aged 1–14 years, 2003

	Number			Rate per 100,000 children		
Cause of death	**Boys**	**Girls**	**All children**	**Boys**	**Girls**	**All children**
Injury and poisoning	121	110	231	3.2	2.9	6.2
Neoplasms	60	39	99	1.6	1.0	2.7
Diseases of the nervous system	39	27	66	1.0	0.7	1.8
Congenital malformations	23	19	42	0.6	0.5	1.1
Diseases of the circulatory system	14	11	25	0.4	0.3	0.7
Endocrine, nutritional and metabolic diseases	13	9	22	0.3	0.2	0.6
Diseases of the respiratory system	18	17	35	0.5	0.5	0.9
Other symptoms, signs and abnormal findings	15	9	24	0.4	0.2	0.6
Infectious and parasitic diseases	5	6	11	0.1	0.2	0.3

Source: AIHW Mortality Database.

Child mortality differentials

- According to data from Queensland, Western Australia, South Australia and the Northern Territory, Indigenous Australian children aged 1–14 years died in 2001–03 at a rate of 36.9 per 100,000 children, compared with 16.2 deaths per 100,000 among other Australian children.
- In general, Indigenous children of all age groups experienced higher rates of mortality than other Australian children. However, the difference was highest in the age groups 1–4 and 10–14 where the Indigenous mortality rate was around three times that of other Australian children.
- The age-standardised rate of child deaths increased in 2000–02 with increasing remoteness: 14.6 deaths per 100,000 children in Major Cities and 41.7 per 100,000 in Very Remote areas. This pattern was most pronounced for children aged 1–4 years, where the rate of mortality in Major Cities was 22.2 deaths per 100,000 children compared with a rate of 59.5 deaths per 100,000 children in Remote and Very Remote areas combined.
- The average death rate for children aged 1–14 years for the period 2000–02 increased significantly with increasing disadvantage, as measured by the SEIFA Index of Socioeconomic Disadvantage. As socioeconomic disadvantage increased from lowest to highest, the rate of mortality for both males and females increased by about 64% from 12.8 per 100,000 children to 20.8 per 100,000.
- The mortality rate for boys increased in 2000–02 by 76% as the socioeconomic status moved from least disadvantaged to most disadvantaged. Compared to boys, girls experienced lower mortality across all socioeconomic groups. However, the excess mortality experienced by girls from the most disadvantaged areas was 48% compared to girls from the least disadvantaged groups.

4 Morbidity

Most childhood illnesses are mild and are usually treated successfully by parents or general practitioners. Hospital use accounts for a small part of health services provided to children and are usually for more severe health conditions.

This section presents statistics on the number and rate of child hospitalisations in 2002–03. Data on three of the major chronic diseases which affect children—asthma, diabetes and cancer—are also presented. Mental illness and injuries, which can also be significant chronic conditions among children are discussed in Chapters 6 and 16 respectively. The data presented in this section have been extracted from sources including the AIHW National Hospital Morbidity Database, the ABS 2001 National Health Survey, the National Diabetes Register and the National Cancer Statistics Clearing House.

Hospitalisations

Although affected by access and admission practices, hospitalisations can be used as a proxy indicator of the level of serious illness in the Australian community. In 2002–03, 544,325 hospitalisations for children aged 0–14 years were recorded on the AIHW National Hospital Morbidity database. Of these, 314,576 (57.8%) were for boys and 229,749 (42.2%) were for girls. Hospitalisation rates were higher for boys than for girls in all age groups. Overall, the rate for boys in 2002–03 was 15,398 per 100,000 compared with 11,835 per 100,000 hospitalisations for girls. Hospitalisation rates decreased with age. The rate for infants in 2002–03 was 57,217 per 100,000 infants, and that for children aged 10–14 was 7,712 per 100,000 children.

'Chronic conditions such as diabetes, asthma and cancer often need to be managed on a daily basis by both children and their carers'

The most common reasons for hospitalisations are classified according to the chapters of the International Classification of Diseases, 10th Revision, Australian Modification (ICD-10-AM). For infants, in 2002–03, the most common reasons for hospitalisations were conditions originating in the perinatal period (including conditions such as birth trauma, disorders related to length of gestation and foetal growth and respiratory and cardiovascular disorders specific to the perinatal period). These accounted for 36.1% of all hospitalisations for infants. Diseases of the respiratory system were the most common reasons for children aged 1–14 years, accounting for 19.1% of hospitalisations.

Hospitalisation rates for Indigenous Australian children were higher than those for other Australian children (16,251 per 100,000 compared with 13,168 per 100,000). The extent to which Indigenous patients are identified in hospital statistics has been improving, however, these numbers are still likely to be affected by under-identification of Indigenous people (ABS & AIHW 2003). Indigenous children also show differences in the reasons for hospitalisation. For example, they are much more likely to be admitted to hospital for assault (with rates more than six times those for other Australian children), and for burns and scalds (with a rate more than double that for other Australian children).

This chapter focuses on the major chronic diseases among Australian children which have the potential to cause significant illness and disability within the child population.

Although there are no data to describe the level of morbidity caused by specific chronic conditions among Indigenous children, it is important to note that, in general, the overall level of ill-health is much greater for Indigenous Australian children than for other Australian children. For example, the rate of otitis media (middle ear infection) among Indigenous children has been described as a major public health problem (ABS & AIHW 2003). In addition, some Indigenous children suffer from diseases such as rheumatic fever, which are almost unheard among most other Australian children.

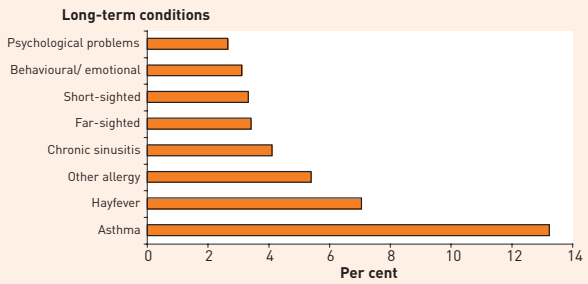
Chronic conditions

Children experience a wide variety of long-term conditions that either develop during childhood or are present at birth. Chronic conditions vary in severity and include cerebral palsy, asthma, cancer, diabetes, spina bifida and cystic fibrosis. In severe cases, chronic conditions may affect children's development by restricting play and other activities and may be a significant cause of stress for both children and their families (Isaacs & Sewell 2003; Jessop & Stein 1989). Unlike intermittent illnesses, such as colds, chronic conditions are ongoing and often need to be managed on a daily basis by both children and their carers. Managing these conditions may require substantial amounts of time and resources which, over an extended period, have a cumulative effect on children and their families in terms of social, psychological and economic pressures. There is evidence that chronically ill children and their families are twice as likely to experience psychological or emotional difficulties as other children and families (Swanston et al. 2000; Cadman et al. 1987). However, if a condition is properly managed, many chronically ill children are able to function well and live fulfilling lives.

Prevalence

Analysis of data from the 2001 ABS National Health Survey on conditions lasting, or expected to last, for more than 6 months provides a measure of the prevalence of long-term illness among Australian children (Figure 4.1).

Figure 4.1: Most frequently reported chronic conditions in children aged 0–14 years, 2001



Note: Chronic conditions are defined here as conditions lasting, or expected to last, 6 months or more.

Source: ABS National Health Survey 2001.

- Long-term conditions were reported in 2001 for 44% of children aged 0–14 years. Of these children, 25% had two long-term conditions and 18% had three or more long-term conditions.
- Asthma was the most frequently reported long-term condition in children aged 0–14 years, reported for 13% of all children. Asthma was followed by hayfever, reported for 7% of children, and other allergies reported for 5% of children.
- Diseases related to allergic reactions including asthma, hayfever, eczema and other allergies made up more than one-third of all reported conditions.

Specific chronic conditions

Asthma, diabetes and cancer contribute significantly to the burden of illness in Australia. For this reason, each of these chronic conditions (as well as mental health) has been made a National Health Priority Area, with health policy focused on reducing the burden of these conditions and raising public awareness.

Indicators

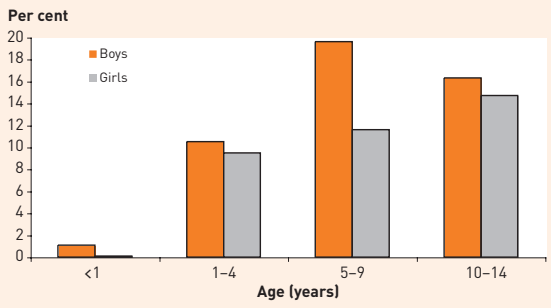
- **Proportion of children aged 0–14 years with asthma as a long-term condition.**
- **New cases of cancer per 100,000 children aged 0–14 years.**
- **Five-year relative survival rate for leukaemia in children aged 0–14 years.**
- **New cases of children aged 0–14 years receiving insulin on the National Diabetes Register as a rate per 100,000 children.**

Asthma

Asthma is the most common long-term condition among children. The disease is characterised by recurrent episodes of wheeze, shortness of breath and sometimes a cough. Among people with asthma, symptoms may occur spontaneously or in response to one of a wide range of triggers, such as pollen, physical activity, cold weather or tobacco smoke. In some children with severe asthma or in those cases where effective disease management has not been implemented, asthma can result in poor quality of life, interfere with leisure, school or other activities, create a need for urgent medical care including hospitalisation, and may cause premature death.

Assessing time trends in asthma is difficult due to inconsistent definitions of asthma. There is, however, evidence suggesting that asthma prevalence among children has been rising since the early 1980s into the early 1990s when this rise peaked. Since then there has been no evidence to suggest an increase in the prevalence of asthma (ACAM 2003). The most recent national prevalence estimates for asthma are from the 2001 ABS National Health Survey (Figure 4.2).

Figure 4.2: Parent-reported prevalence rates for asthma in children aged 0–14 years, 2001



Source: ABS National Health Survey 2001.

- Data from the 2001 ABS National Health Survey estimate that 527,479 children aged 0–14 years had asthma as a long-term condition, a prevalence rate of 13.2%. This compares with a prevalence rate of 11.5% for adults aged 15 years and over.
- Asthma prevalence was higher for boys (15.0%) than for girls (11.4%). This difference was most noticeable in the 5–9 years age group where the prevalence rate for boys was 1.8 times the rate for girls.
- Prevalence rates were lowest among infants less than 1 year old (0.6%) and highest among children in the 5–9 years age group (15.7%).

Although data on asthma prevalence rates for children were also collected in the 1995 National Health Survey, the results are not directly comparable due to changes in methodology which may have resulted in an increase in reporting rates.

Diabetes

Diabetes mellitus is a group of diseases characterised by high levels of glucose in the blood resulting from defects in insulin secretion, insulin action or both. High blood sugar levels are known to damage important body organs and lead to heart disease, stroke, blindness, neurological problems, and premature death (AIHW 2004b).

Type 2 diabetes is caused by reduced insulin production or the inability of the body to use insulin properly and is associated with being overweight or obese. The disease is managed through diet, exercise, oral medication and, as necessary, with insulin. Type 2 diabetes is uncommon in children, usually developing in people aged over 40. However, there is evidence that as obesity is increasing in children and young people, the incidence of Type 2 diabetes is also increasing (McMahon et al. 2004).

Type 1 diabetes, sometimes known as juvenile diabetes, usually arises in childhood and lasts throughout life. The disease is believed to be caused by an autoimmune condition that destroys the pancreatic cells that produce insulin. Daily injections of insulin are necessary to manage the disease. Again, some studies have indicated an increased incidence of Type 1 diabetes, though national data to confirm this trend are not yet available (AIHW 2004b; Craig et al. 2000). The incidence of Type 1 diabetes collected through the AIHW National Diabetes Register is shown in Table 4.1.

Table 4.1: New cases of Type 1 diabetes among children aged 0–14 years, 2000–2001

	Boys		Girls	
Age group	Number	Average annual rate per 100,000	Number	Average annual rate per 100,000
0–4	187	14.2	143	11.4
5–9	279	20.1	280	21.2
10–14	365	26.4	311	23.6
Total	**831**	**20.3**	**734**	**18.9**

Source: AIHW National Diabetes Register.

- In 2000 and 2001, the National Diabetes Register recorded 831 boys and 734 girls aged 0–14 years with Type 1 diabetes. Of these 1,565 children, 676 (43%) were aged 10–14 years, 559 (36%) were aged 5–9 years and 330 (21%) were aged 0–4 years.
- Incidence rates increased with age for both boys and girls. Among boys, the incidence rate increased from 14.2 cases per 100,000 boys aged 0–4 to 26.4 cases per 100,000 boys aged 10–14 years. Among girls, the incidence rate increased from 11.4 cases per 100,000 girls aged 0–4 to 23.6 cases per 100,000 girls aged 10–14 years.

Cancer

Cancer is a group of diseases in which cells become abnormal, grow in an uncontrolled way and spread to other parts of the body in a process known as metastasis. The risk of cancer increases with age and most types of cancer are relatively uncommon in children. Cancers in children tend to differ from those observed in adults in appearance, site of origin and response to treatment.

In 2001, 603 children aged 0–14 years were diagnosed with cancer. Between 1982 and 2001, the age standardised incidence rate for all cancers combined (excluding non-melanoma skin cancers) increased by an average of 0.6% per year for children aged 0–14 years. The cancer incidence rates in 2001 were 15.8 new cases per 100,000 for boys and 14.4 per 100,000 for girls. Incidence was highest for children aged 0–4 years (22.1 per 100,000 children).

The most common types of new cases of cancer among children aged 0–14 years in 2001 were leukaemia (6.0 per 100,000 boys, 5.3 per 100,000 girls) and brain cancer (3.3 per 100,000 boys, 2.5 per 100,000 girls). These accounted for 57% of cancers diagnosed in children in 2001.

In 2001, 113 children died from cancer and, of these deaths, 35% were from brain cancer and 32% from leukaemia (AIHW & AACR 2004).

Table 4.2: Age-specific relative 5-year survival rates for brain cancer and leukaemia diagnosed at ages 0–14, by age group, 1982–86 and 1992–97

	1982–86		1992–97	
Age at diagnosis	**Rate (%)**	**95% confidence interval**	**Rate (%)**	**95% confidence interval**
Leukaemia				
0–4	67.5	63.0–71.6	73.9	70.1–77.7
5–9	71.4	64.7–77.1	72.0	66.5–77.5
10–14	46.2	38.4–53.5	60.8	53.1–68.5
0–14[a]	**62.4**	**59.0–65.7**	**69.7**	**66.5–72.7**
Brain cancer				
0–4	57.3	49.7–64.1	53.0	46.7–59.2
5–9	57.7	49.6–64.9	62.3	55.1–69.5
10–14	67.1	58.2–74.5	76.3	70.0–82.6
0–14[a]	**60.1**	**55.5–64.5**	**61.9**	**57.9–65.6**

(a) Age-standardised to the 2001 Australian population.

Source: AIHW & AACR 2001.

Medical treatment is often successful if cancer is detected early. The risk of death due to certain cancers can be reduced through intensive monitoring and early detection and treatment. Significant increases in survival rates have been reported for many types of cancers over the last two decades in association with clinical trials and the development of new treatments (AIHW & AACR 2001). Survival after diagnosis can be used to assess the effectiveness of early cancer detection and treatment (Table 4.2).

Relative survival is the ratio between the observed survival rate among a group of people with cancer and the expected survival rate among the same group had they not been diagnosed with cancer. For example, a relative survival of 100% indicates that the disease has made no difference to survival of the group over a given period. A survival rate less than 100% indicates that cancer did reduce survival compared to the population without cancer.

- Five-year relative survival of children aged 0–14 years diagnosed with leukaemia in 1992–97 was 70%, a significant increase in survival compared with children with leukaemia diagnosed in 1982–86, for whom the relative survival rate was 62%.
- Five-year relative survival for children diagnosed with leukaemia was lower for children aged 10–14 than for younger children. This difference was statistically significant for children diagnosed in 1982–86 but not for those diagnosed in 1992–97.
- For brain cancer in children there was no significant improvement in five-year relative survival between 1982–86 and 1992–97.
- Five-year relative survival rates for children diagnosed with brain cancer in 1982–86 showed a small but statistically significant increase with age. The corresponding rates for children aged 10–14 diagnosed in 1992–97 was statistically significantly higher than those for younger children diagnosed in this period.

5 Disability

Children with a disability are not an easily identifiable group because whether or not a child is described as having a disability may vary across different contexts (AIHW 2004c). Disability is a multidimensional concept which involves an interaction between health conditions, personal factors and the environment. Combinations of these different factors determine a person's ability to function and participate in society (AIHW 2004b). Children with severe disabilities may be in good health, but may have long-term limitations on their activities and ability to participate. For these children full participation in society can be more difficult than for other Australian children, limiting educational and recreational/leisure opportunities (AIHW 2004b, 2004c).

In addition to the experiences of the individual affected, childhood disability also makes a significant impact on families and family life. The added strain of caring for a child with a disability for families and siblings can sometimes lead to social and financial disadvantage. Full-time parental/carer employment may be more difficult due to the intensive care needs of a child, and can lead to financial stress as well as relationship strain (AIHW 2004c). Financial pressure may also compound a family's ability to cope with a child's disability through lack of resources to acquire essential services and aids which may help the child to attain a better quality of life (AIHW 2004c).

The ABS 2003 Survey of Disability, Ageing and Carers defined 'disability' as the presence of one or more of 17 limitations, restrictions or impairments which has lasted, or is likely to last, for at least six months and restrict everyday activities (e.g. loss of sight, incomplete use of arms or fingers, difficulty learning or understanding, etc.) (ABS 2004c).

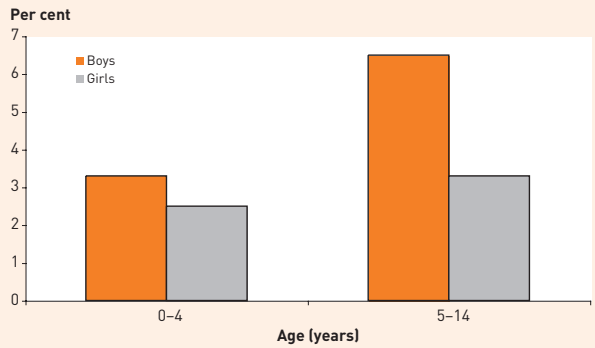
Children with a disability as described in this report mostly refer to those children with a severe or profound core activity limitation. Core activity limitation includes limitations on the ability to perform tasks in relation to self-care, mobility, communication. There are four levels of core activity limitation: profound, severe, moderate and mild. Children with a profound limitation are not able to do, or always need help with, a core activity. Those with a severe limitation may sometimes need help with a core activity, may have difficulty understanding or being understood by others, or may use sign language more easily than spoken communication (ABS 2004c).

Prevalence

The information on disability prevalence is derived from the 2003 ABS Survey of Disability, Ageing and Carers. Broad prevalence estimates of childhood disability are presented, followed by more detailed estimates of children with severe disability (i.e. those children with a severe or profound core activity limitation).

In 2003, there were approximately 320,000 children aged 0–14 years with a disability in Australia, accounting for 8% of the total child population aged 0–14 years (ABS 2004c). Of those children with a disability, approximately 52% had a severe or profound core activity restriction. This equates to approximately 4% (or 167,000) of the total Australian child population. The age and sex distribution of severe and profound core activity limitation among children in 2003, is shown in Figure 5.1.

Figure 5.1: Profound or severe core activity[(a)] limitation rates[(b)] by sex and age, 2003



(a) Core activities comprise self-care, mobility, communication, schooling and/or employment.
(b) Children with a profound or severe core activity limitation as a proportion of all children in the same age group and sex group.

Source: ABS 2004c.

'Children with severe disabilities may be in poor health and may have long-term activity limitations and participation restrictions'

- Among children with profound or severe core activity restrictions in 2003, boys aged 5–14 years had the highest rate (6.5%), followed by boys aged 0–4 years and girls aged 5–14 years (3.3%).

Between 1998 and 2003 the overall rate of profound or severe core activity limitation among children aged 0–14 remained relatively constant.

The proportion of children with profound or severe core activity limitation was highest among those from low income households (Table 5.1).

Aboriginal and Torres Strait Islander children

Little is known about the level of disability among Indigenous Australian children. It has long been suggested that the rate of disability among Indigenous people is high (AIHW 1997). In particular, Indigenous children have a documented high rate of hearing problems due to the high prevalence of otitis media, or middle ear infection (Couzos et al. 2001; Zubrick et al. 2004). However, more data are needed to assess the level of disability among Indigenous children.

Table 5.1: Profound or severe core activity limitation rates among children aged 0–14 years, by income quintiles, 2003 (per cent)

Total weekly equivalised[a]	Profound core activity limitation	Severe core activity restriction cash income quintiles
Lowest 20%	32.4	26.8
Quintile 2	23.8	30.0
Quintile 3	18.8	15.7
Quintile 4	7.2	7.6
Highest 20%	7.0	6.6
Not living in a household	0.2	0.4
Not known	10.5	13.0
Total children	**77,979**	**87,335**

(a) Equivalised means that income is weighted to take account of the size and composition of the household.

Source: AIHW analysis of the ABS 2003 Survey of Disability, Ageing and Carer's confidentialised unit record file.

Indicator

- **Proportion of children aged 0–14 years with severe or profound core activity restrictions.**

6 Mental health

Mental health is 'a state of emotional and social wellbeing' which allows people to undertake productive activities, experience meaningful interpersonal relationships, adapt to change and cope with adversity (WHO 1999). Mental health is important for cognitive and communication skills, learning, personal development, resilience and self-esteem.

It can be difficult to define terms such as mental health problems, mental disorders and emotional and behavioural problems as these are subjective states that can vary across cultures and among subgroups, and have no exact definitions. These terms are commonly used to describe changes in thinking, mood or behaviour that are associated with distress or impaired functioning. There are a number of different types of mental health problems and disorders, and each consists of a different combination of emotional and behavioural problems (Sawyer et al. 2000).

Mental health problems experienced by children may be manifested early on as disturbances of feelings, behaviours and thoughts. If these disturbances are distressing to the child or the parents, and if social and other functioning of the child is affected, then a mental health problem may be identified (Zubrick et al. 1995). Mental disorders are characterised by a clinically significant set of symptoms, as set out in the *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition (DSM-IV). The DSM-IV includes diagnostic criteria which should be met in order for a formal diagnosis of mental disorders to be made, including that the symptoms cause clinically significant impairment in social, academic or occupational functioning (APA 1994).

'If mental health problems are not resolved, they can lead to poorer quality of life, physical health problems and mental disorders'

If mental health problems are not resolved, they can lead to poorer quality of life, physical health problems, mental disorders, lowered academic and vocational attainment, risky behaviours, substance use, suicidal ideation and attempts, and family discord (Raphael 2000). Mental health is also interdependent with physical health (DHAC 2000a). Children with poor mental health are more likely than other children to be in poor physical health and similarly, poor physical health can also result in decreased mental functioning.

Not only can mental illness affect an individual child, it may also have a negative impact on the child's family and social environment. For example, parents of children with a mental illness tend to spend less time on their own personal needs than do parents of other children, and often suffer from greater anxiety about their child's wellbeing than do parents of typically developing children.

Determinants of mental health

Though the exact causes of mental illnesses are unclear, there are certain risk factors which are associated with the development of mental health problems in children. This does not mean that these factors cause mental illness, or that everyone who is exposed to them will develop a mental disorder, but children who are exposed to certain risk factors have been found to have a higher likelihood of developing a mental disorder (DHAC 2000b).

Risk factors can be individual (particular to the person), contextual (a product of the environment), or the result of the interaction between the person and the environment. In many cases, different risk factors may be closely associated with one another, for example, a child with poor social skills may also experience peer rejection and social isolation. Some of the factors that can contribute to the onset of a mental illness in children are:

- individual factors—prenatal brain damage, insecure attachment in infancy or childhood, low intelligence, difficult temperament, poor social skills, low self-esteem.

- family or social factors—having only one resident parent, marital discord between parents, parental substance misuse, parental mental disorder, social isolation.
- school context—bullying, peer rejection, inadequate behaviour management, failure to achieve academically.
- life events and situations—physical, sexual and emotional abuse and neglect, divorce and family break-up, physical illness or impairment, poverty, homelessness, abandonment or loss of family.
- community and cultural factors—socioeconomic disadvantage, social or cultural discrimination, neighbourhood violence and crime, population density and housing conditions (DHAC 2000b:16).

It is also important to note that a predisposition to some mental illnesses, such as schizophrenia, bi-polar disorder and depression can run in families (Hyman 1999). In addition, some children may have a genetic vulnerability to certain disorders, but these disorders will not develop without the interaction with non-genetic risk factors (USDHHS 2000).

Prevalence of mental health problems or disorders among Australian children

There are very few national data sources that describe the mental wellbeing of Australian children. Limited data on children's mental health problems were collected in the 2001 ABS National Health Survey. These data show that 264,000 or nearly 7% of Australia's children had long-term mental or behavioural problems (ABS 2002c).

However, the only detailed study to assess the mental wellbeing of children at a population level is the 1997 National Survey of Mental Health and Wellbeing (referred to from here on as the National Survey). The child component of this survey, which was conducted in 1998 with a sample of 4,500 children, indicates that about 14% or around half a million Australian children have mental health problems (Sawyer et al. 2000). Although these data are now somewhat out of date, they are the best available national data to describe the level of mental illness among Australia's children and are presented in detail in the following section.

Mental health problems

Mental health problems were measured in the National Survey using the Child Behaviour Checklist. The checklist asked about a number of emotional and behavioural problems. Sawyer et al. (2000) considered children to have mental health problems when they were experiencing problems in the range typically seen in children attending mental health clinics.

Mental health problems in this report are classified as either externalising problems or internalising problems. Externalising problems relate to anti-social or under-controlled behaviour such as delinquency and aggression. Internalising problems relate to inhibited or over-controlled behaviour such as anxiety and depression (Sawyer et al. 2000).

The most common specific problems identified in the National Survey were somatic complaints (chronic physical complaints without known cause or medically verified basis) and delinquent behaviour. While rates of delinquency were similar between boys and girls, boys experienced somatic complaints more than girls. Inattention and aggressiveness were also frequently noted, particularly in younger children, and social difficulties were commonly reported for young boys (Sawyer et al. 2000). A summary of the mental health problems experienced by children in 1998 are presented in Table 6.1.

Indicators

- **Proportion of children aged 4–14 years with mental health problems.**
- **Proportion of children aged 6–14 years with mental health disorders (ADHD, depressive disorder, conduct disorder).**

Table 6.1: Mental health problems among children aged 4–14 years, 1998 (per cent)

	Age-group	Total problems	Externalising problems	Internalising problems
Boys	4–12	14.9	13.6	15.0
	13–14	13.8	13.2	13.5
	4–14	*14.7*	*13.5*	*14.7*
Girls	4–12	14.4	12.1	11.3
	13–14	11.3	12.6	9.5
	4–14	*13.8*	*12.2*	*11.0*
All children	**4–14**	**14.3**	**12.9**	**12.9**

Source: AIHW analysis of the 1998 Child and Adolescent component of the National Survey of Mental Health and Wellbeing, unit record file.

- The survey estimated that in 1998 around 14% of Australian children aged 4–14 years had a mental health problem. A higher proportion of boys had mental health problems than girls (14.7% compared with 13.8%).
- The types of mental health problems identified also differed by gender. Girls aged 4–14 years had a higher proportion of externalising problems than internalising problems, while for boys, internalising problems were more common.

Mental health disorders

The prevalence of three mental disorders—depressive disorder, conduct disorder and attention-deficit hyperactivity disorder (ADHD)—were also investigated in the survey using the Diagnostic Interview Schedule for Children (Version IV) (Shaffer et al. 2000, cited in Sawyer et al. 2000). This Schedule uses the diagnostic criteria described in the DSM-IV to assign mental disorder diagnoses to children. The prevalence of these three mental disorders among children in 1998 is shown in Table 6.2.

Table 6.2: Children aged 6–12 years with ADHD, depressive disorder or conduct disorder, 1998 (per cent)

	Age-group	ADHD[a]	Conduct disorder	Depressive disorder[b]
Boys	6–12	19.3	4.8	3.7
	13–14	12.6	3.0	3.7
	6–14	*17.8*	*4.4*	*3.7*
Girls	6–12	8.8	1.9	2.1
	13–14	5.2	1.2	4.4
	6–14	*7.9*	*1.8*	*2.6*
All children	**6–14**	**13.0**	**3.1**	**3.1**

(a) The high proportion of children with ADHD could be influenced by diagnostic definitions of ADHD.

(b) Includes major depressive disorder and dysthymic disorder, a chronic depressive condition.

Note: The impairment criteria required by DSM-IV could not be incorporated into the criteria for a diagnosis used in the survey. It is also possible that for some children their symptoms may be better accounted for by another mental disorder that was not assessed in the survey.

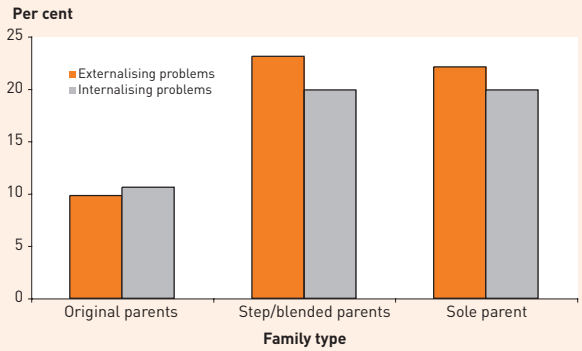
Source: AIHW analysis of the 1998 Child and Adolescent component of the National Survey of Mental Health and Wellbeing, unit record file.

- Of the specific disorders in 1998, ADHD was the most prevalent among children aged 6–14 years, reported in 17.8% of boys and 7.9% of girls. However, Sawyer et al. (2000:20) suggest that the prevalence of ADHD could have been overestimated, as some children reported to have ADHD 'may have been more appropriately diagnosed with another disorder not included in the survey'.
- Depressive disorder was reported in 3.7% of boys and 2.6% of girls. It has been suggested that the prevalence of this disorder could have been underestimated, as the prevalence was based on parent report and parents may not always recognise subjective distress experienced by children (Sawyer et al. 2000).
- Conduct disorder was reported in 4.4% of boys, and 1.8% of girls.
- All three disorders had a higher prevalence among boys than among girls.

Mental health problems and household demographics

The national survey also examined the prevalence of mental health problems alongside demographic characteristics such as family type (Figure 6.1) and weekly household income (Figure 6.2). Results from the survey show that children living in one-parent, step/blended or low-income families were more likely than other children to have mental health problems.

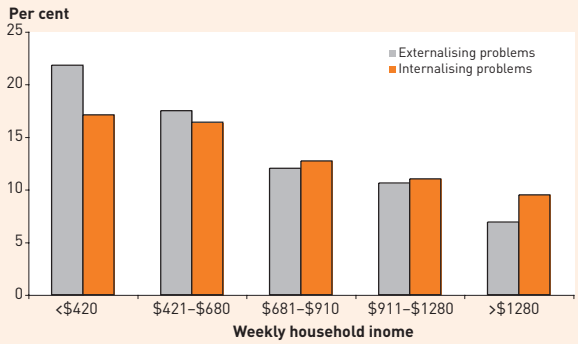
Figure 6.1: Mental health problems among children aged 4–14 years, by family type, 1998 (per cent)



Source: AIHW analysis of the 1998 Child and Adolescent component of the National Survey of Mental Health and Wellbeing, unit record file.

- The proportion of children with mental health problems was more than twice as high among children in step/blended families and sole parent families as compared with children living in original-parent families. This pattern was consistent for both externalising and internalising problems.

Figure 6.2: Mental health problems among children aged 4–14 years, by household income, 1998 (per cent)



Source: AIHW analysis of the 1998 Child and Adolescent component of the National Survey of Mental Health and Wellbeing, unit record file.

- The proportion of children with mental health problems was higher among children in households with the lowest weekly income. This pattern was consistent for both externalising and internalising problems.

How well are we promoting healthy child development?

7 Childhood immunisation

Australian children are protected against a number of communicable diseases through routine childhood immunisation. In Australia today, large scale immunisation programs exist for a wide variety of communicable diseases including diphtheria, tetanus, pertussis (whooping cough), poliomyelitis, measles, mumps, rubella, Haemophilus influenzae type b (Hib), hepatitis B, meningococcal C and pneumococcal disease.

Immunisation programs have proved very successful at preventing the spread of infectious diseases. For example, the worldwide eradication of smallpox and widespread elimination of poliomyelitis were largely achieved by limiting the spread of infection of these diseases through mass immunisation (AIHW 2004b).

Although serious adverse events following immunisation are rare, some people are concerned about or disagree with immunisation. Studies have shown that parents disagreeing with or having concerns about vaccination is the main reason why uptake of immunisation among children is incomplete (Hull et al. 2002). However, the risks of these diseases are far greater than the very small risks of immunisation. Vaccine-preventable diseases still have the potential to cause significant illness and death among children who are not immunised.

'Immunisation against communicable diseases is an effective public health intervention that has significantly reduced the morbidity and mortality arising from childhood diseases'

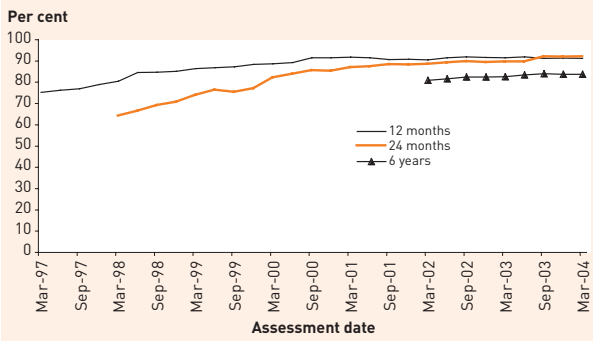
Vaccination coverage estimates

Vaccination coverage goals for Australia for the year 2000, recommended by the NHMRC, called for greater than 90% coverage of children at 2 years of age and near 100% coverage of children at school entry age. Vaccine coverage needs to exceed 90% in order to achieve and maintain the level of herd (or community) immunity necessary to interrupt the ongoing transmission of vaccine-preventable diseases (Lister et al. 1999).

Vaccination coverage estimates are obtained through the Australian Childhood Immunisation Register (ACIR), a national database for recording details of vaccinations given to Australian children under the age of 7 years. All children in this age group who are registered with Medicare are enrolled on the database. The ACIR was started in January 1996 as part of a response to a decline in childhood immunisation in Australia and an increase in preventable childhood diseases. Financial incentives are provided to doctors and parents to encourage both vaccination of their children and their inclusion on the ACIR.

The number of children fully vaccinated at 1, 2 and 6 years of age as a percentage of the total number of children in those age groups on the ACIR is presented in Table 7.1. Trends in vaccination coverage are presented in Figure 7.1.

Figure 7.1: Trends in vaccination coverage, 1997–2003



Note: Vaccination coverage at 6 years of age for Australia was assessed for the first time in 2002.

Source: AIHW 2004b.

- There is a trend in increasing vaccination coverage over time for children aged 1, 2 and 6 years, although the rate of increase has slowed over the past 2 years.

Table 7.1: Children fully vaccinated at 30 June 2004 (per cent)

Fully immunised	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
1 year of age[a]	90.4	91.7	91.6	89.3	91.4	93.4	90.8	85.2	90.9
2 years of age[b]	91.0	92.3	91.8	90.6	92.7	94.9	90.0	94.5	91.7
6 years of age[c]	83.2	85.5	83.6	81.1	83.3	80.4	84.9	78.7	83.5

(a) Aged 12–15 months at 31 March 2004.
(b) Aged 24–27 months at 31 March 2004.
(c) Aged 72–75 months at 31 March 2004.
Source: Australian Childhood Immunisation Register.

- Immunisation coverage at 1 and 2 years of age was around 90% among children in all states and territories.

Aboriginal and Torres Strait Islander children

There are varying estimates of the level of vaccination coverage among Indigenous Australian children. Coverage estimates vary from being much lower than those for other Australian children, to being about the same. In general, vaccination coverage tends to be higher among Indigenous Australian children from remote areas compared to Indigenous children living in non-remote areas.

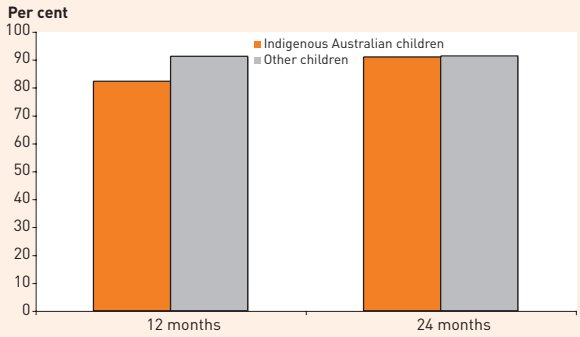
Coverage estimates for Indigenous children vary because of difficulties or inadequacies in data collection are because estimates are drawn from a number of sources. Different methods can also be used to estimate the level of vaccination coverage among Indigenous children.

The National Centre for Immunisation Research and Surveillance of Vaccine Preventable Diseases (NCIRS) undertook analysis to produce coverage estimates from the ACIR for Indigenous children (NCIRS 2004). These data are presented in Figure 7.2. Issues surrounding the identification of Indigenous children on the ACIR mean that estimates of immunisation coverage by Indigenous status may not be representative of the general population of Indigenous Australian children.

Indicator

- **Proportion of children who are fully vaccinated at 1, 2 and 6 years of age.**

Figure 7.2: Coverage estimates from the Australian Childhood Immunisation Register for Indigenous and other children 'fully vaccinated' at age 1 and 2 years[a]



(a) 3-month cohorts, age at 30 September 2003, calculated at 31 December 2003. Coverage assessment data was 12 or 24 months after the last birth date of each cohort.

Note: Due to the problems of Indigenous identification, data are included from New South Wales, Northern Territory, South Australia, Victoria and Western Australia only.

Source: NCIRS 2004.

- Full immunisation was better among Aboriginal and Torres Strait Islander children at 24 months than at 12 months, whilst immunisation rates at 12 and 24 months for other Australian children remained relatively consistent.

In another analysis of ACIR data, Hull et al. (2004) produced estimates of Indigenous immunisation coverage, using receipt of a particular Hib vaccine (PRP-OMP) as a proxy for Indigenous status. Their analysis showed that full immunisation for all scheduled vaccinations at 12 and 24 months was around 17% less for Indigenous children than for other Australian children. Another significant finding was that Indigenous immunisation coverage was more than 20% lower among children classified as living in the most highly accessible urban areas.

Breastfeeding

Breastfeeding is one of the most important health behaviours to promote the health and development of infants. Not only does breastfeeding have many positive effects on the survival, growth, development and health of infants and young children, it is also associated with greater social and economic benefits.

Babies are born with an immune system that is not fully developed, so a mother's antibodies present in breast milk, can protect an infant from disease while its own immune system is developing, particularly in the first 4–6 months of life (NHMRC 2003). Breastfeeding has a protective effect against many acute conditions, such as diarrhoea, respiratory infection, otitis media, bacterial meningitis, urinary tract infection, and necrotising enterocolitis (a serious gastrointestinal disease which can lead to death). Studies show a protective effect of breast milk against sudden infant death syndrome (SIDS), as well as against chronic diseases such as diabetes mellitus and allergic diseases such as eczema and asthma (American Academy of Pediatrics 1997; NHMRC 2003).

Breastfeeding also has beneficial health effects for the mother. Breastfeeding is thought to encourage bonding between mother and baby and, in addition, studies have shown that breastfeeding can lead to less bleeding after giving birth, as well as delaying ovulation and menstruation. The positive aspects of breastfeeding are not limited to health benefits. Although difficult to quantify, high rates of breastfeeding can affect many sectors of society including families, employers, the health system and governments (NHMRC 2003).

Raisler et al. (1999) found that breastfed infants made fewer visits to health professionals, a finding supported by Weimer (2001), who suggested that breastfeeding can lead to reduced health care costs, as well as reducing the time parents are absent from work in order to care for a sick child.

Recommendations for breastfeeding

The optimal duration of breastfeeding has been the subject of some debate. The World Health Organization (WHO) commissioned a systematic review of the current scientific evidence on the optimal duration of exclusive breastfeeding, comparing the benefits of exclusive breastfeeding for up to 6 months versus 4 months of age. The WHO classification of exclusive breastfeeding refers to infant feeding practices that consist only of breast milk, but may also include the consumption of vitamins, minerals, drops, syrups and medicines.

The review concluded that exclusive breastfeeding up to 6 months of age has several benefits for the mother and infant and it was therefore recommended that infants should be breastfed up to 6 months, with the introduction of complementary food and continued breastfeeding thereafter (WHO 2001a).

In Australia, breastfeeding is listed among the 'Dietary guidelines for children and adolescents', with emphasis on the importance of encouraging and supporting breastfeeding. These guidelines (NHMRC 2003) recommend breast milk as the only food necessary for infants up to about 6 months.

'Breastfeeding is one of the most important health behaviours to promote the health and development of infants'

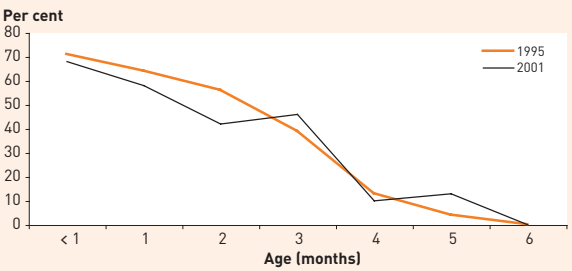
How many Australian babies are breastfed?

There are currently no national data available on the proportion of all Australian babies exclusively receiving breast milk.

Data from the ABS 2001 National Health Survey show that, in 2001, 87% of infants aged 0–3 years had, at some stage, obtained nutrition from breast milk, a similar figure to 1995 (86%). However, this figure includes those who had been obtaining all nutrition from breast milk, those obtaining nutrition from both breast milk, other milk and milk substitutes (e.g. infant formula, cows milk, soya milk), and those who obtained their nutrition from breast milk, other milk, milk substitutes and solids. Data from this survey cannot be compiled using the concept of 'exclusively breastfed' which has been adopted for national monitoring purposes.

However, information on babies who were fully breastfed—that is those babies who received only breast milk on a regular basis—is available from the ABS 1995 & 2001 National Health Survey (Figure 8.1).

Figure 8.1: Infants from newborn (<1 month) to 6 months fully breastfed, 1995 and 2001



Note: These data relate to infants receiving only breast milk on a regular basis. Some of these infants would be exclusively breastfed.

Source: ABS 2003e

- The proportion of infants fully breastfed decreased with age. In 2001, approximately 54% of babies were fully breastfed at 3 months of age or less, compared with around 32% of infants by 6 months of age or less.
- There was little change in the proportion of infants fully breastfed between the 1995 and 2001 surveys.

Population groups

Rates of breastfeeding vary between different population groups in Australia. For example, the 2001 ABS National Health Survey found that the proportion of infants receiving breast milk was higher among older mothers and also among mothers who had attained an associate diploma or higher qualification since leaving school (compared to mothers without a post-school qualification) (ABS 2003e).

Data from the NSW Child Survey also highlight a number of population differences (Table 8.1).

Indicator

- **Proportion of infants exclusively breastfed at ages 3 and 6 months.**

Table 8.1: Infants fully breastfed to 4 and 6 months, by population characteristics of mothers, children aged less than 2 years, NSW, 2001 (per cent)

Population characteristics of mothers	Fully breastfed to 4 months	Fully breastfed to 6 months
Maternal age		
<25 years	13.5	8.0
≥25 years	25.5	3.4
Maternal education		
Primary/secondary (less than tertiary)	20.2	4.0
Tertiary	32.3	5.5
Socioeconomic disadvantage		
Lowest 20% (most disadvantaged)	22.0	4.2
Quintile 2	20.0	2.7
Quintile 3	23.5	3.9
Quintile 4	30.2	5.9
Highest 20% (least disadvantaged)	26.4	6.1
Indigenous status (maternal)		
Aboriginal and Torres Strait Islander	15.8	5.9
Other Australian	24.9	4.6
Place of residence		
Urban	23.3	4.4
Rural	29.6	5.2

Source: NSW Centre for Public Health Nutrition 2004.

- The percentage of infants who were fully breastfed for at least 4 months was lower for those with mothers aged less than 25 years than for those with older (aged 25 years and over) mothers.
- The percentage of infants who were fully breastfed to at least 4 months was lower for those with mothers without a tertiary education than for those with mothers with a tertiary education.
- The percentage of infants who were fully breastfed to at least 4 months was lower for those with Aboriginal and Torres Strait Islander mothers than for those with non-Aboriginal and non-Torres Strait Islander mothers.

The level of breastfeeding among Aboriginal communities was investigated as part of the 2001 Western Australian Aboriginal Child Health Survey. Data from this survey showed that the proportion of Indigenous infants aged less than 6 months who were exclusively breastfed was 53%. Over a third of all Indigenous children were breastfed for more than 12 months. This represents a significantly higher proportion than observed in the total Western Australian population where around 20% of children were breastfed for 12 months or more (Zubrick et al. 2004).

9 Dental health

Australian children generally experience good oral health and Australia is among the top ranking countries in the world when comparing rates of dental decay (AIHW DSRU: Armfield et al. 2004). Good oral heath throughout infancy and early childhood contributes to better dental health in adulthood, resulting in less decay and reduced loss of natural teeth. Early preventive strategies, including water fluoridation, improved oral hygiene practices, better diet, regular brushing and flossing and improved disease management, all help to maintain the health of teeth and gums.

Oral health research shows that the social determinants of general health are also related to oral health (AIHW DSRU 2003a). This means that factors such as socioeconomic position and other social determinants such as personal control, stress and social support can influence the use of dental services and self-care practices (e.g. tooth brushing and diet). The level of access to dental health services in terms of availability and affordability is also an important determinant of dental health.

A national survey monitoring children's dental health commenced in 1977 as part of the School Dental Scheme. The survey has shown great improvements in the dental health of Australian children, including a decline in average decay experience, and an increase in the proportion of children with no dental decay until the 1990s. Much of this improvement can be attributed to the addition of fluoride to the public water supply (AIHW 1998). However, in more recent years the decline in dental decay appears to have ceased and there are signs that decay experience among children is increasing.

'Good oral heath throughout infancy and early childhood contributes to better dental health in adulthood'

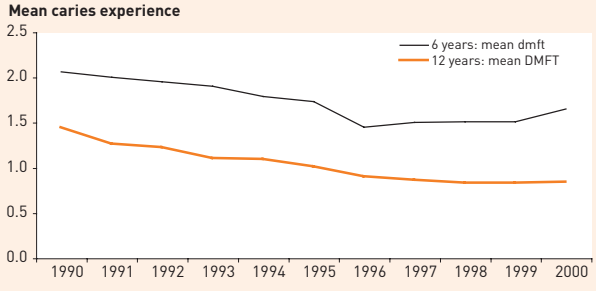
Dental health of school children

The Child Dental Health Survey monitors the dental health of children enrolled in the dental services operated by all state and territory health departments (AIHW DSRU: Armfield et al. 2004). Jurisdictionally funded school dental services typically provide dental care to primary school-aged children, although most states now extend the service into secondary school. The data obtained from the school dental services have some limitations, as only children enrolled with school dental services are represented in the sample. The services are not accessible to all school children and there is some variation among state and territory programs with respect to priority age groups and the nature of services. Some states and territories serve more than 80% of primary school children, while others serve smaller proportions. Data in this chapter come from the Child Dental Health Survey and the 1999 National Dental Telephone Interview Survey conducted by the Dental Statistics and Research Unit (DSRU) of the AIHW.

Dental decay experience is expressed as a dmft or DMFT score: the number of teeth currently decayed, teeth extracted due to decay, and teeth with fillings (AIHW 2000). The 'dmft' score describes decay experience in deciduous teeth (baby teeth), while the 'DMFT' score describes decay experience in permanent teeth. The other commonly used statistic is the percentage of individuals who are decay free, that is, when both dmft and DMFT equal zero.

The mean numbers of decayed teeth among children aged 6 years (dmft) and 12 years (DMFT) from 1990 to 2000 are shown in Figure 9.1.

Figure 9.1: Mean decay experience of children aged 6 and 12 years, 1990–2000



Source: AIHW DSRU various years.

- The mean number of decayed teeth in children aged 6 and 12 years decreased between 1990 and 2000. Among children aged 6 years, the average number of deciduous teeth affected by decay (dmft) decreased from 2.1 to 1.7. Among children aged 12 years, the average number of permanent teeth affected by decay (DMFT) decreased from 1.4 to 0.8.
- The mean number of decayed teeth was higher in the baby teeth of children aged 6 years than in the permanent teeth of children aged 12 years. In addition, while improvements in decay experience for children aged 12 years have stalled, for children aged 6 years, the average number of deciduous teeth affected by decay (dmft) appears to be increasing again.
- Over the decade 1990–2000 the proportions of children aged 6 and 12 years free from decay experience gradually increased. The proportion of children aged 6 years rose from 49% to 57%, while the proportion of children aged 12 years rose from 38% to 65%.

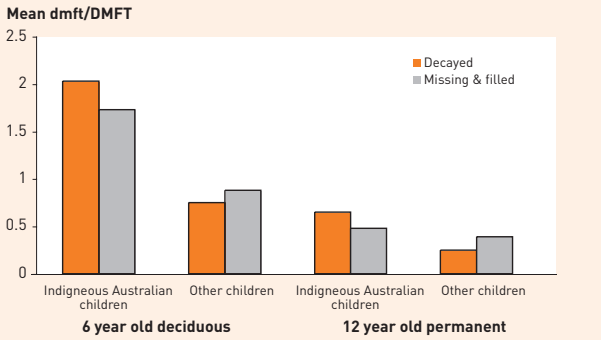
Aboriginal and Torres Strait Islander children

While there have been general improvements in the dental health of most Australian children, similar improvements have not occurred for Indigenous Australian children. In fact, one study in South Australia suggested that the dental caries rate for Indigenous Australian children seems to be increasing (AIHW DSRU 2003b). According to this study, Indigenous children have more than twice the caries rate of other Australian children in the deciduous dentition, and almost twice the dental caries rates of other Australian children at 12 years of age (Figure 9.2).

Indicators

- **Proportion of children decay-free at age 6 years and at age 12 years.**
- **Mean decayed, missing or filled teeth scores at age 6 years and at age 12 years.**

Figure 9.2: Caries experience of Indigenous and other children in South Australia, 2000



Source: AIHW Mortality Database.

Water fluoridation

Water fluoridation is an effective public health measure to prevent dental decay. It reduces dental disease, loss of teeth, and potentially time away from work or school and anaesthesia-related risks associated with dental treatment (ARCPOH 2004). Fluoridation of public water is favoured by public health experts because it is the most equitable way to achieve community-wide exposure to the caries prevention effects of fluoride. The proportion of children residing in areas with optimum fluoride concentrations is presented in Table 9.1.

- Although most children have access to fluoridated water, some parts of Australia (particularly Queensland) do not include fluoride in the public water supply.

Table 9.1: Child population 0–14 residing in areas with optimum[(a)] fluoride concentrations in the mains water

State/territory	Per cent
NSW	89.2
Vic	73.5
Qld	4.9
WA	88.9
SA	89.1
Tas	94.1
ACT	100.0
NT	80.8

(a) 0.7ppm, except SA and NT where >0.5ppm.

Source: DSRU unpublished data.

What factors can affect children adversely?

10 Low birthweight

Birthweight is a key indicator of infant health and has been described as a principal determinant of a baby's chance of survival and good health (Ford et al. 2003). Babies who are born with low birthweight are at a greater risk of poor health, disability and death than other infants. Mathers (AIHW: Mathers et al. 1999) identified low birthweight as the third leading cause of burden of disease among Australian children aged 0–14 years.

Low birthweight is defined by the World Health Organization as follows:

- low birthweight—babies weighing less than 2,500 grams
- very low birthweight—babies weighing less than 1,500 grams
- extremely low birthweight—babies weighing less than 1,000 grams.

Low birthweight can be due to prematurity or being small for gestational age (intra-uterine growth retardation). Infants from each of these groups make up two distinct populations with differing associated morbidities.

Immediate and long-term consequences

Low birthweight babies are at increased risk of hospitalisation and neonatal death and are more likely to suffer from physical and neurological complications than babies with normal birthweight. In addition to the increased risk of morbidity and mortality, children with an extremely low birthweight (less than 1,000 grams) have also been found to have more psycho-social problems. These children are at risk of having difficulties at school. Teenagers who had an extremely low birthweight were less likely to achieve well on intellectual measures, particularly arithmetic, than their peers (Saigal 2000).

Not only does low birthweight often result in complications during infancy and childhood, a number of adult health conditions have also been associated with low birthweight, although the relationship appears to be more complex. Some research suggests that low birthweight babies are at an increased risk of premature death and hospitalisation in adulthood (McIntire et al. 1999; Power & Li 2000). These babies are more likely to develop high blood pressure, non-insulin dependent diabetes and impaired glucose tolerance later in life (Barker et al. 1990; Hales et al. 1991). Frankel et al. (1996) found that low birthweight was associated with increased risk of coronary heart disease among obese adults, and Stein et al. (1996) suggest that coronary heart disease has its origins in foetal under-nutrition.

However, in recent times the causal relationship between low birthweight and adult health outcomes has been a subject of vigorous debate among researchers (Samaras et al. 2003; Huxley et al. 2002). Some researchers contend that there may be other factors, such as socioeconomic status or weight status later in life, that better explain why poor health outcomes are more likely for these particular infants. Nevertheless, low birthweight seems at least a marker for poor health outcomes in adulthood if not an independent predictor in its own right.

'Babies who are born with low birthweight are at greater risk of poor health, disability and death than other infants'

Table 10.1: Baby's birthweight, by birth status, 2002

	Live births		Foetal deaths		Total	
Birthweight (g)	**Number**	**Per cent**	**Number**	**Per cent**	**Number**	**Per cent**
Less than 1,000	1,156	0.5	980	57.4	2,136	0.8
1,000–1,499	1,528	0.6	125	7.3	1,653	0.7
1,500–1,999	3,276	1.3	113	6.6	3,389	1.3
2,000–2,499	10,270	4.1	106	6.2	10,376	3.9
≥2,500	237,109	93.6	355	20.8	237,464	93.2
Not stated	49	—	28	1.6	77	—
Total	**253,388**	**100**	**1,707**	**100**	**255,095**	**100**
Mean weight		3,371		1,306		3,358

— Rounded to zero.

Source: AIHW NPSU: Laws & Sullivan 2004.

How many Australian children are born with low birthweight?

Approximately 6% of all births in Australia result in babies with low birthweight. There were 17,554 low birthweight babies in 2002, representing 6.9% of all births, up from 6.3% in 1991. In 2002, the average birthweight of all live-born and stillborn babies was 3,358 grams. The number and proportion of infants born with a low birthweight in 2002 are shown in Table 10.1.

- Around 1 in 16 (6.4%) live births in 2002 were of low birthweight. By comparison, over three-quarters of foetal deaths were babies with low birthweight (77.5%). Overall, approximately 17,000 or 6.9% of all births were low birthweight.
- During 2002, there were a total of 1,653 very low birthweight babies (0.7% of total births) and 2,136 extremely low birthweight babies (0.8% of total births).
- Greater than 1 in 2 foetal deaths (57%) were of babies with extremely low birthweight.

Indicator

- **Proportion of infants weighing less than 2,500 grams at birth.**

Table 10.2: Birthweight of live births, by maternal Indigenous status, 2000–02

	Low birthweight (<2,500 g)		Normal or high (2,500 g or more)		Total		Mean birthweight
	Number	Per cent	Number	Per cent	Number	Per cent	Grams
Indigenous mother	3,356	12.9	22,729	87.1	26,104	100.0	3,169
Non-Indigenous mother	43,607	6.1	674,121	93.9	717,858	100.0	3,382

Note: Data related to babies born to Indigenous mothers only, and exclude babies born to non-Indigenous mothers and indigenous fathers. Thus the information is not based on the total count of Indigenous babies.

Source: AIHW NPSU unpublished data.

Risk factors

There are a number of risk factors associated with low birthweight including younger gestational age, younger or older maternal age, a high number of previous births, and multiple births. Maternal tobacco smoking, alcohol or other substance abuse, inadequate nutrition, and maternal illnesses or infection during pregnancy are also risk factors for low birthweight (Campbell 2004).

Population sub-groups

Low birthweight is more common in babies born to families of low socioeconomic status (James et al. 1997), single mothers and Indigenous mothers. No data are currently available on birthweight by marital status of the mother or the maternal socioeconomic status.

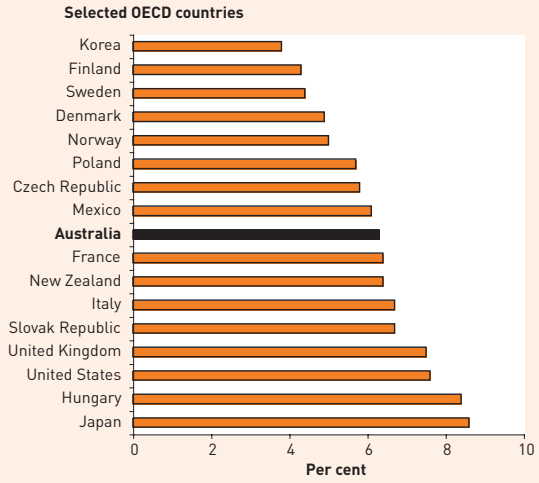
The proportion of live-born babies with low birthweight born to Indigenous mothers between 2000 and 2002 was almost 13%. This is approximately double the percentage of low birthweight babies of non-Indigenous mothers (6.1%) (Table 10.2).

International comparisons

The proportion of low birthweight babies varies across OECD countries (Figure 10.1).

- While around 6% of Australian babies are born with low birthweight, the percentage in Japan is close to 9%. In contrast, the proportion of low birthweight babies in Korea is much lower (3.8%).

Figure 10.1: Babies with low birthweight, selected OECD countries, 2000 (per cent)



Source: OECD 2003.

11 Smoking during pregnancy

Tobacco smoke is known to have a detrimental effect on babies before they are born. Smoking during pregnancy restricts the flow of oxygen to the foetus while, at the same time, nicotine, carbon monoxide and other chemicals in tobacco smoke are passed on from the mother to the baby through the placenta. This process can result in a multitude of poor birth outcomes. Smoking is a risk factor for pregnancy, and is associated with low birthweight, preterm birth, birth anomalies and perinatal death (NHMRC 1997; Walsh et al. 2001). Smoking also increases the mother's risk of spontaneous abortion, ectopic pregnancy (a pregnancy outside the uterus) and other obstetric complications (NHMRC 1997). Such is the impact of smoking during pregnancy that it is considered the most important known modifiable risk factor for low birthweight and infant mortality, given its high prevalence rates in comparison with other types of substance use (Chomitz et al. 1995).

In addition to these immediate physiological effects, prenatal exposure to smoking has also been associated with problems for children later in childhood. Cornelius et al. (2000) found that maternal smoking during pregnancy was significantly associated with an increased incidence of tobacco experimentation among children. The same study showed that smoking during pregnancy also predicted childhood anxiety/depression and externalising behaviours. Many other studies have also found a link between maternal smoking and childhood mental health and behavioural problems (see Brennan 2003). However, causal connections between maternal smoking and psycho-social problems are difficult to establish since smoking mothers may differ from non-smoking mothers in other ways (such as socioeconomic status and parenting style), which may better account for the subsequent development of problem behaviours among their children.

The extent of smoking during pregnancy in Australia

There are no overall national data on the prevalence of smoking in pregnancy and there is currently no national agreement on the collection of data on smoking during pregnancy. However, state and territory perinatal data are available for five states and territories: New South Wales, Western Australia, South Australia, the Australian Capital Territory and the Northern Territory (Table 11.1).

- The proportion of women who smoked while pregnant ranged from 14.9% in the Australian Capital Territory to 26.3% in the Northern Territory. Overall, 18.0% of women in the five states and territories smoked during pregnancy.

Table 11.1: Mother's tobacco smoking status during pregnancy, NSW, WA, SA, ACT and NT, 2002

	NSW	WA	SA[a]	ACT	NT	Total
Smoking status			**Number**			
Smoked	13,829	4,932	4,393	703	966	24,823
Did not smoke	70,745	19,464	12,722	3,884	2,276	109,091
Not stated	13	—	306	121	432	872
Total	**84,587**	**24,396**	**17,421**	**4,708**	**3,674**	**134,786**
			Per cent			
Smoked	16.3	20.2	25.2	14.9	26.3	18.4
Did not smoke	83.6	79.8	73.0	82.5	61.9	80.9
Not stated	0.0	—	1.8	2.6	11.8	0.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Defined as smoking status at first antenatal visit.

Note: There is currently no data available from other states and territories.

Source: AIHW NPSU: Laws et al. 2004.

Aboriginal and Torres Strait Islander children

The 2001 Western Australian Aboriginal Child Health Survey found a high prevalence of maternal tobacco use. The mothers of 47% of Aboriginal children (whose primary carer was also their birth mother) had smoked tobacco during pregnancy (Zubrick et al. 2004). This finding is largely consistent with data from the 1994 Aboriginal and Torres Strait Islander Survey which also showed a high prevalence of maternal smoking in Western Australia (45.4%) (Zubrick et al. 2004).

Tobacco smoking among Aboriginal and Torres Strait Islander women can be the outcome of many historical and contemporary social circumstances that result in complex patterns of use. For instance, the prevalence of tobacco use for Indigenous women in rural and remote areas is lower than that of Indigenous women in urban areas and, similarly, smoking prevalence decreases with higher socioeconomic status among Indigenous women (Ivers 2001; Zubrick et al. 2004).

'Smoking during pregnancy is considered to be the most important known modifiable risk factor for low birthweight and infant mortality'

Other substance use during pregnancy

The 2001 National Drug Strategy Household Survey asked women whether they had used licit and/or illicit drugs when they were pregnant, breastfeeding, or pregnant and breastfeeding, at some time during the previous 12 months. Women who were pregnant and/or breastfeeding in the previous 12 months were less likely toconsume alcohol (53%), tobacco (23%) and any illicit drug (8%) while they were pregnant and/or breastfeeding compared with when they weren't (83%, 24% and 17% respectively) (AIHW 2003b). The 2001 NDSHS also found those women who were pregnant, breastfeeding, or both pregnant and breastfeeding in the past 12 months were generally less likely to smoke, drink alcohol and use illicit drugs than women who were not pregnant and/or breastfeeding.

Almost all women who were pregnant in the past 12 months either abstained from consuming alcohol (36%) or reduced their consumption while pregnant (59%). A similar pattern applied to women who were breastfeeding, 66% of whom drank less alcohol and 28% of whom did not drink at all.

Indicator

- **Proportion of women smoking during pregnancy.**

12 Environmental tobacco smoke in the home

Environmental tobacco smoke is a toxin known to contain around 4,000 different chemical substances, making it one of the most hazardous environmental exposures for children (DiFranza et al. 2004). The health effects on children of inhaling second-hand smoke, or passive smoking, are well documented. Passive smoking is associated with respiratory infections, middle ear infections and more frequent colds, onset and severity of asthma, decreased lung function, eye and nose irritation, and sudden infant death syndrome (ACAM 2003; DiFranza et al. 2004; NHMRC 1997). Children in households with a smoker are more likely to take up smoking themselves. Darling and Reeder (2003) noted a three-fold increase in daily smoking behaviour among youth with any second-hand smoke exposure.

'Exposure to tobacco smoke is an environmental hazard for children'

Infants and children are particularly susceptible to the effects of passive smoking for a number of reasons. Firstly, children, and especially babies, have limited control over their physical environment. When exposed to second-hand smoke, children may be strapped into a car seat or confined in the same room as a parent or family member, with no choice but to breathe in polluted air. Secondly, very young children and infants are more at risk than adults because their immune system and respiratory functioning are still developing, making them more susceptible to harm from second-hand smoke (NHMRC 1997).

With increased awareness about the harmful effects of environmental tobacco smoke and with many jurisdictions moving towards legislating against smoking in public places and in the workplace, the number of smoke-free homes has also increased (Borland et al. 1999). It has been argued that because of the enormous potential harm to children from tobacco exposure, implementing effective tobacco control in this area through legislation and other government initiatives is not only a valid concern, but also a binding obligation under the UN Convention on the Rights of the Child (WHO 2001b).

Table 12.1: Household smoking status[(a)], by dependent children status[(b)], 1995–2001 (per cent)

	Dependent children			No dependent children[(c)]		
Household smoking status	**1995**	**1998**	**2001**	**1995**	**1998**	**2001**
Smokes inside the home	31.3	22.6	19.7	32.2	26.6	21.3
Only smokes outside the home	16.7	21.5	24.9	13.7	18.0	19.8
No-one at home regularly smokes	52.0	55.9	55.4	54.1	55.4	58.9

(a) Household smoking status as reported by respondents aged 14 years and over.
(b) Households contain dependent children aged 14 years or under.
(c) May include dependants aged 15 years and over.
Source: AIHW 2004b.

Children's exposure—trends over time

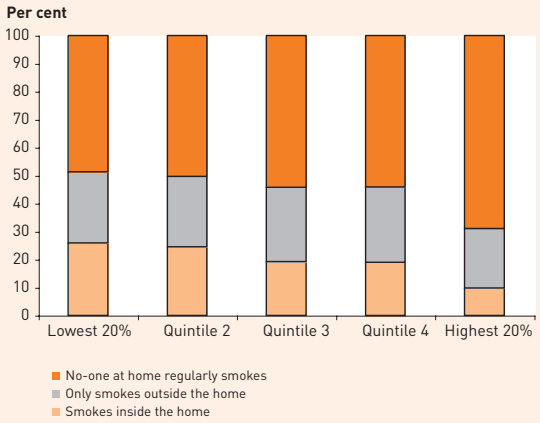
Data from the National Drug Strategy Household Surveys show that the proportion of households where adults smoked inside the home decreased between 1995 and 2001. Over the same period there was an increase in the proportion of households where smoking only took place outside (Table 12.1). Changes over the period were somewhat greater for those households with children under the age of 15.

- In 2001, around 1 in 5 Australian households with children under 15 years had a person that smoked inside the home.
- Between 1995 and 2001 the proportion of households with dependent children where household members smoked inside decreased by 37%. In households without dependent children, the proportion of indoor smokers also decreased by 34%.
- Over the same period, the proportion of household members who only smoke outside the home increased by 49% for those households with dependent children and by 45% for households without dependent children.
- In contrast, the proportion of households which were totally smoke free remained relatively constant over time.

Exposure to second-hand smoke and socioeconomic disadvantage

- Children in relatively disadvantaged households were more likely than other children to be exposed to second-hand tobacco smoke. For example, 26% of households in the most disadvantaged quintile had members who smoked inside compared to 10% of households in the least disadvantaged quintile.
- Households in the highest socioeconomic quintile also had lower proportions of regular smokers compared to other households—70% of households in the least disadvantaged quintile did not have any regular smokers compared to 49% of households in the most disadvantaged quintile.

Figure 12.1: Household smoking status[(a)], by socioeconomic position, 2001 (per cent)



1. Only includes households with dependent children aged 14 years or under.
2. Socioeconomic position determined using the ABS index of relative social disadvantage.

(a) Household smoking status as reported by respondents aged 14 years and over.

Source: National Drug Strategy Household Survey 2001.

Indicator

- **Proportion of households with children aged 0–14 years where adults smoke inside.**

13 Overweight and obesity

The increasing prevalence of overweight and obesity in Australian children is a serious public health concern (Catford & Caterson 2003; Waters & Baur 2003). Childhood obesity in Australia has been estimated to be rising at an annual rate of 1% (Australasian Society for the Study of Obesity 2004), meaning that half of all young Australians could be overweight by the year 2025.

In the short-term, children who are overweight or obese frequently experience psycho-social problems such as poor body image, disordered eating, low self-esteem and teasing by their peers. Overweight and obese children may also develop a range of health problems including asthma, sleep apnoea and early development of risk factors for heart disease such as raised blood pressure (Royal College of Physicians of London 2004). Even Type 2 diabetes—a chronic disease traditionally diagnosed only among adults—is now increasingly being detected among Australian children (McMahon et al. 2004).

Research also shows that young people who were overweight or obese as children are likely to be overweight as adults (Whitaker et al. 1997). This in turn can lead to a number of serious chronic conditions and even premature death. Overweight and obesity in adulthood is a risk factor for a number of health conditions including heart disease, high blood pressure, Type 2 diabetes and even some cancers (WHO 2000). As Australians are now living longer, this means that an increased number of people will live with long-term health problems and disability.

Prevalence

Overweight and obesity are measured by the body mass index (BMI), which is the ratio of weight in kilograms to the square of height in metres (kg/m^2). BMI is used to categorise people into one of four groups: underweight, acceptable weight, overweight, or obese. A child is considered obese if his/her BMI exceeds the cut-off point for his/her age.

The most recent national data on the weight of Australian children come from the 1995 ABS National Nutrition Survey (Table 13.1).

Table 13.1: Distribution of children aged 2–14 years, by weight category[(a)], 1995 (per cent)

	Age group	Underweight	Acceptable	Overweight but not obese	Obese	Total number
Boys	2–4	4.3	78.9	14.6	2.2	261
	5–9	8.0	77.2	10.4	4.3	489
	10–14	7.3	70.3	18.3	4.1	456
Total		**6.9**	**75.0**	**14.3**	**3.7**	**1,206**
Girls	2–4	4.8	72.5	18.5	4.2	285
	5–9	3.3	74.7	14.9	7.1	465
	10–14	4.9	73.3	16.9	4.9	426
Total		**4.3**	**73.7**	**16.4**	**5.6**	**1,176**

(a) Cole et al. (2000) developed age- and sex-specific BMI cut-off points that are appropriate for use with children. These revised cut-offs have been applied to this analysis.

'Young people who are overweight or obese as children are likely to be overweight as adults. This in turn can lead to a number of serious chronic conditions and even premature death'

Indicator

- **Proportion of children aged 2–14 years whose body weight is at an acceptable/unacceptable level as measured by BMI scores.**

- In 1995, while the majority of Australian children aged 2–14 years (75.0% of boys and 73.7% of girls) were of an acceptable weight, a relatively high proportion were overweight and obese: 14.3% of boys and 16.4% of girls were overweight, and 3.7% of boys and 5.6% of girls were obese.
- A small proportion of children were underweight: 6.9% of boys and 4.3% of girls.
- The proportion of children who were overweight or obese in 1995 was highest among boys aged 10–14 years (22.4%), and among girls aged 2–4 years (22.7%).

Causes

There are many interacting factors that have led to the increase in body fat among children in Australia. All children naturally gain body weight as they grow and develop. But fundamentally, for excess weight gain to occur, an imbalance must exist between the amounts of energy children are consuming and the energy they expend over an extended period of time.

While genetics may play an intervening role, it is clear that cultural, environmental, economic, familial and individual behavioural factors also influence the likelihood of this imbalance occurring. The following sections will focus on these factors with a particular focus on nutrition and physical activity.

Nutrition

There is evidence in Australia that children's intake of energy has been increasing over time (Cook et al. 2001; Magarey et al. 2001). This increase may have occurred for a number of reasons. Firstly, there is now a proliferation of food choices available to children. The foods marketed towards children are often highly refined and calorie dense (Zuppa et al. 2003). As a result, over-consumption can easily occur because not only are these foods pleasurable to eat, they are also ultimately less filling than more nutritious foods, prompting children to eat more in order to feel full. In parallel, fresh fruit and vegetables may be difficult to obtain or more expensive to buy in some areas (especially in regional and remote parts of Australia), and are less aggressively marketed and therefore may hold less appeal to children.

Secondly, processed and take-away foods also represent an attractive option for many parents. The well-documented changes in family structure and dynamics over recent decades (such as the increase in sole parent families and the greater participation of women in the labour force) mean that many parents struggle to meet the competing demands of work and family responsibilities (Weston et al. 2001). Since processed foods are now easier to prepare, cheaper to buy, and marketed more strongly than ever before (Catford & Caterson 2003), families may be selecting foods based on convenience or price rather than focusing on foods that are optimal for maintaining healthy weight.

Research shows that parental obesity increases the risk of adult obesity among their children (Lake et al. 1997; Whitaker et al. 1997). In part, this reveals that parents' personal food (and exercise) behaviours can also have a direct influence on the lifestyle patterns their children develop.

Physical activity

The other side to the energy equation that determines levels of body fat is the amount of energy expended by children on a daily basis. A whole-of-population shift to more sedentary lifestyles has been experienced in many developed countries including Australia (AIHW 2004d). Children are far less likely to use walking or pedal cycling as a means of transport or to play outdoors after school or on weekends than children of previous generations. Harten and Olds (2004) found that active transport levels of Australian children are very low. Children are also missing out on the benefits of incidental exercise due to the increase in labour-saving devices.

Changes in children's entertainment choices have also contributed to an increase in sedentary behaviour. Playing console and computer games and watching television and DVDs/videos are very popular leisure pursuits among children (ABS 2001b). Coupled with unprecedented access to the internet and mobile phones, children need not even leave home to maintain contact with their friends outside school hours.

With a decrease in incidental activity, planned physical activity becomes much more important to maintain a healthy weight. One important determinant of structured physical activity is whether community infrastructure and public spaces facilitate exercise by children. This infrastructure includes sports grounds, playgrounds, skate parks, bike paths, and so on. When suitable infrastructure does not exist or is perceived to be unsafe, parents may be less likely to encourage children to take up physical activity.

Participation in sport is also a positive way to encourage children to be physically active. However, the cost of equipment and uniforms can sometimes be an impediment to children taking part. Additionally, if children are already overweight, they may feel uncomfortable or incapable of participating in sport if the focus is more on achievement rather than participation and having fun.

Finally, as is the case for nutrition, children may not be inclined to participate in physical activity if their parents are not modelling healthy lifestyle behaviours themselves. Again, parents may find it difficult to engage in active play with their children due to increased demands on their time, or because of poor health or disability.

Differences among population groups

Most Australian children are not overweight or obese, but some children are more likely to be overweight than others. For example, children from lower socioeconomic quintiles are more likely than other children to be overweight or obese. Data from a social health atlas of South Australian children (Tennant et al. 2003) show that in both metropolitan and non-metropolitan areas, higher levels of overweight and obesity were recorded for disadvantaged children (Table 13.2).

- The proportion of overweight and obese children was higher for socioeconomically disadvantaged children in both Adelaide and non-metropolitan areas of South Australia.
- For example, among 4 year old boys in Adelaide, the proportion of overweight and obese among the most disadvantaged group of children was 1.2 times the level among children categorised as the least disadvantaged (1st quintile) (rate ratio). Similarly, among girls in non-metropolitan areas, the level of overweight and obesity was 1.4 times higher for the most disadvantaged children compared to the least disadvantaged group.

Overweight is also an important health concern among Aboriginal and Torres Strait Islander Australians but data about Indigenous Australian children are scarce. One study by Mackerras et al. (2003) looked at groups of Indigenous children living in urban and remote areas of the Northern Territory. Results showed that Indigenous children in urban areas included an excess of both overweight and underweight children, while the remote group included a large excess of underweight children.

Table 13.2: Children aged 4 years who are overweight or obese, by socioeconomic position, SA, 2000–01 (per cent)

	Adelaide		Non-metropolitan areas	
Socioeconomic disadvantage	**Boys**	**Girls**	**Boys**	**Girls**
Lowest 20% (most disadvantaged)	16.0	21.0	16.8	22.9
Quintile 2	16.7	20.2	19.3	20.8
Quintile 3	16.8	18.9	16.2	19.6
Quintile 4	14.4	19.1	16.0	19.8
Highest 20% (least disadvantaged)	12.8	17.0	12.4	16.9
Rate Ratio (quintile 1 to quintile 5)	**1.2**	**1.2**	**1.4**	**1.4**

Source: Tennant et al. 2003.

14 Tobacco use

Tobacco use is the risk factor associated with the greatest disease burden in Australia, responsible for about 10% of the total burden of disease in the Australian population (AIHW: Mathers et al. 1999). For this reason, dissuading young people from taking up smoking is a high-priority public health issue. Reduced smoking rates can be achieved by health promotion and prevention action that targets health risk behaviour more generally. Even adult-focused initiatives, which typically focus on quitting, can have a beneficial flow-on effect for children by contributing to effective prevention. Most importantly, if people do not begin using tobacco when they are young, they will most likely not begin using tobacco at all.

There have been some promising declines in tobacco smoking rates among young people in recent years. Hill et al. (2002) found a significant decrease in the number of committed 12–15 year old smokers between 1996 and 1999, as well as evidence that teenagers were finding it more difficult to purchase their own cigarettes. However, the same study showed there were still approximately 26,100 Australian school students aged 12–14 years making the transition from experimental smoking to established smoking each year (White & Scollo 2003).

The detrimental health effects of tobacco smoking are well established. In the short-term, tobacco use may lead to respiratory problems, shortness of breath, nicotine dependence (and subsequent withdrawal symptoms), persistent coughing and reduced physical fitness.

In addition, tobacco use is also a major risk factor for a number of serious health conditions including coronary heart disease, stroke, peripheral vascular disease, numerous cancers and a number of other diseases and conditions (AIHW 2004b).

'Tobacco use is the risk factor associated with the greatest disease burden in Australia'

Why do children take up smoking?

There are a wide variety of factors that influence children to start cigarette smoking (Rugkasa et al. 2001). One common finding is that children with parents or family members who smoke are more likely to take up smoking themselves. Similarly, children who believe that their parents would disapprove of smoking are less likely to experiment with tobacco. On the other hand, experimenting with cigarettes can also be a rebellion against adult authority, a way of bonding with peers or establishing personal identity.

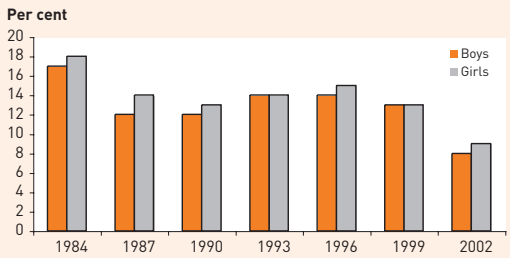
The smoking behaviour of friends is yet another widely researched influence, and peer pressure is well established as a reason that children take up smoking. Factors such as low education and poor socioeconomic circumstances may also be connected with children taking up smoking (Winstanley et al. 1995).

Representations of smoking in popular culture such as movies and television also make an impression on young people about the status and fashionable aspects of smoking (Dalton et al. 2003).

Prevalence

Time-series data on the prevalence of tobacco smoking by children aged 12–14 years are presented in Figure 14.1.

Figure 14.1: Secondary students aged 12–14 years smoking tobacco at least once in the previous week, 1984–2002 (per cent)



Source: Australian Secondary Students Alcohol and Drug survey (ASSAD), various years, Centre for Behavioural Research in Cancer, Anti-Cancer Council of Victoria, unpublished data.

Table 14.1: Secondary students aged 12–14 years smoking tobacco at least once in the previous week, 2002 (per cent)

	Boys		Girls		All	
Age (years)	**Number ('000)**	**Per cent**	**Number ('000)**	**Per cent**	**Number ('000)**	**Per cent**
12	7.0	6	6.1	5	13.2	6
13	8.4	6	10.2	7	18.6	7
14	16.1	12	20.0	15	36.1	14
12–14	**31.6**	**8**	**36.3**	**9**	**67.9**	**9**

(a) Estimated number of secondary students aged 12–14 using tobacco in the week before the survey. Numbers estimated from 2002 school enrolments and based on the portion of students smoking tobacco found in a 23,417 secondary students in Years 7 to 12.

Source: ASSAD Survey (2002), Centre for Behavioural Research in Cancer, Anti-Cancer Council of Victoria, unpublished data.

- Between 1984 and 2002, the estimated proportion of students who had smoked in the previous week fell from 17% to 9%. However, the proportion of students increased again after 1990.
- With the exception of 1993 and 1999, the proportion of girls who had smoked in the previous week was consistently higher than that of boys.
- In 2002, nearly 68,000 or 1 in 11 children aged 12–14 years (9%) had smoked tobacco in the week prior to the survey.
- Use of tobacco increased with age. Around 14% of children aged 14 years had smoked tobacco in the previous week, compared with 7% of children aged 13 years and 6% of children aged 12 years.

The Australian National Drug Strategy Household Survey (NDSHS) conducted in 2001 also found that a number of 14 year old children had had experience with tobacco. Among this age group, 11.4% of children were either occasional or regular smokers (AIHW, unpublished data).

In a new development, the 2004 NDSHS collected information on tobacco, alcohol and other drug use from children aged 12 years of age and over. Previously this survey only collected information from people aged 14 years and above.

Indicator

- **Proportion of children aged 12–14 who are current smokers.**

15 Alcohol misuse

Attitudes and behaviours that develop during childhood may continue into adult life. These behaviours often include use of alcohol and other drugs. Children often experiment with drugs that are used legally by adults, such as alcohol and tobacco. While use of tobacco and illicit drugs is usually actively discouraged by society, initiation to responsible alcohol use, especially in older children, can begin during childhood depending on family values and attitudes towards drinking as well as peer behaviours.

Younger people's ability to cope with alcohol is influenced by factors including their physical size and developmental readiness. Because children have no physiological tolerance to alcohol, the NHMRC recommends that in settings where alcohol is available to children under the age of 18, supervision by adults should occur at all times and any drinking of alcohol should be kept to a minimum. In addition, children who choose not to drink should be supported in their decision (NHMRC 2001).

What factors influence children's drinking behaviour?

A number of factors are known to influence a child's decision to experiment with alcohol. A study commissioned in 1998 by the then Commonwealth Department of Health and Community Services found that peer group norms were very influential in adolescent alcohol use, with the types of drinking behaviours adopted depending on the drinking behaviours of peer groups (Shanahan & Hewitt 1999). In the same study, adolescents indicated that they drank alcohol, among other reasons, to try a new experience, socialise or relax, because of peer pressure, to drown problems, or because they did not feel good about themselves. Other research has highlighted the importance of parenting influences on alcohol use. Hayes et al. (2004) suggest that parental monitoring, quality of the relationship between young people and their parents, and parental norms are all factors which impact on young adolescent's attitudes towards, and use of, alcohol. Moreover, their research shows that peer effects are particularly influential when a parent-child relationship is of poorer quality.

The variety of ready-to-drink alcoholic beverages known as 'alcopops' or 'designer drinks' that have emerged on the market have proved very appealing to young people, and especially younger drinkers (ADGP 2004; White & Hayman 2004). These drinks are often packaged similarly to soft drinks but may contain more than 1 1/2 standard drinks in every serve. Some evidence suggests that their consumption is linked to an increase in drunkenness (ADGP 2004).

Risky drinking

Risky drinking in the short-term, which may also be referred to as binge drinking or 'drinking to get drunk' is when a person drinks heavily over a short period of time, resulting in immediate and severe intoxication. This behaviour can have several undesirable effects on the health and wellbeing of children.

Possible outcomes from risky drinking include damage to the small bowel and subsequent diarrhoea, depression of the central nervous system, headaches, and stomach problems resulting in nausea, shakiness and vomiting (NDARC 2004). Risky drinking can also increase the risk of injury from falls, assault, road accidents, fights and other violence, and can foster coercive sexual activity and unprotected sex. Serious binge drinking can lead to alcohol poisoning, which may result in coma and death.

In addition, drinking alcohol in binge quantities is a risk factor for future hazardous patterns of alcohol consumption (Grant & Dawson 1997). Long-term excessive use of alcohol can lead to a number of physical, emotional and social problems, including alcohol addiction, poor diet, stomach problems, liver, heart and brain damage, depression, family and relationship problems, and legal and financial difficulties (NDARC 2004).

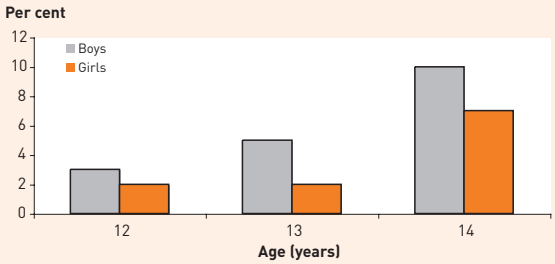
'Long-term excessive use of alcohol can lead to a number of physical, emotional and social problems'

Alcohol use

Data from the Australian Secondary Students Alcohol and Drug survey (ASSAD) show that most children have drunk alcohol at least once by the time they are 12 years of age. For example, in 2002, 51% of 12 year olds, 61% of 13 year olds and 74% of 14 year olds reported they had consumed alcohol in the previous year.

Levels of risky drinking among children in Australia in 2002 are presented in Figure 15.1. Risky drinking is defined as the consumption of five or more drinks in a row. Trend data from the ASSAD survey demonstrate that the proportion of children aged 12–14 years engaging in risky drinking was relatively constant over the period 1984 to 2002, ranging between 3% and 5%.

Figure 15.1: Students aged 12–14 years drinking five or more drinks in a row in the 2 weeks prior to the survey, 2002 (per cent)



Source: Australian Secondary Students Alcohol and Drug survey 2002, unpublished data.

- In 2002, 5% of 12–14 year old children had participated in risky drinking in the 2 weeks prior to the survey. The proportion of children drinking at this level was highest for the older age groups and also among boys.
- Approximately 3% of boys and 2% of girls aged 12 years had drunk five or more drinks in a row in the 2 weeks prior to the survey. The percentages were higher for older children—5% of 13 year old and 10% of 14 year old boys had participated in risky drinking at least once in the previous 2 weeks, while the percentages for 13 and 14 year old girls were 2% and 7%, respectively.

Indicator

- **Proportion of children aged 12–14 who engaged in high-risk (5 or more drinks in a row) drinking at least once in the last 2 weeks.**

How safe and secure are Australia's children?

16 Injuries

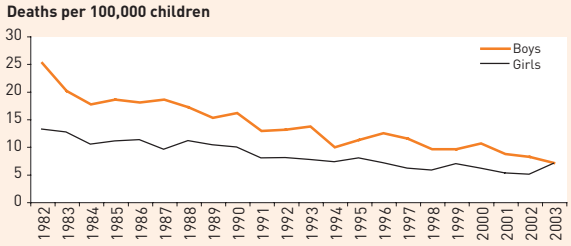
Injury and poisoning is the leading cause of death and a major cause of disability among children in Australia. For every child who dies from injury, many more are admitted to hospital for treatment, and others are treated in emergency departments. Injuries can have lasting effects, such as disability or disfigurement, which can impair a child's development and future wellbeing. In addition, disability or death from injury significantly affects on a child's family.

The typical causes of childhood injury vary according to their developmental stage (AIHW NISU: Pointer et al. 2003; AIHW NISU: Moller & Kreisfeld 1997). As children develop and their mobility increases, the hazards they are exposed to change. For example, the risk of hospitalisation for falls increases with age, but for other conditions, such as poisoning, children under 5 years have the highest risk of hospitalisation (AIHW NISU: Steenkamp & Cripps 2001). Before children have the ability to properly assess the risks involved in new activities and avoid potential dangers, they are particularly vulnerable to injury.

Childhood mortality and morbidity as a result of injury are preventable and can be effectively reduced through the implementation of prevention strategies. To minimise deaths and disability as a result of injury, Injury Prevention and Control was identified as one of seven National Health Priority Areas. The National Public Health Partnership *Draft National Injury Prevention Plan: 2004 Onwards* (SIPP 2004) identifies children as a major priority area for injury prevention. Childhood injury prevention initiatives focus on falls, drowning and near drowning, and accidental poisoning. Some of the strategies for preventing childhood injury include child-resistant closures to prevent accidental poisoning, compulsory use of seatbelts in private vehicles, and pool fencing to prevent drowning.

'Injury and poisoning is the leading cause of death and a major cause of disability among children in Australia'

Figure 16.1: Injury death rates for children aged 0–14 years, 1982–2003



Source: AIHW Mortality Database.

- There was a significant reduction in the injury death rates for children over the period 1982 (714 deaths) to 2003 (276 deaths) (Figure 16.1). In 1982 the rates for boys and girls were 25.1 per 100,000 and 13.1 per 100,000 respectively. The corresponding rates in 2003 were 7.0 per 100,000 for boys and 6.9 per 100,000 for girls.
- Between 1982 and 2003, boys had an injury mortality rate consistently higher than the rate for girls, though the gap between the sexes narrowed over the period.

Hospitalisations for injuries

In 2002–03 injury was the second most common reason for hospitalisations for children aged 1–14 years, responsible for approximately 66,000 hospitalisations. The most common groups of external causes of injury recorded for hospitalisations of children aged 0–14 years are shown in Table 16.1.

- In 2002–03, there were 65,651 hospitalisations for injury. Falls were the most common external cause of hospitalisation for injury among children at a rate of 628.1 per 100,000 children, followed by pedal cycle accidents (98.1 per 100,000 children) and accidental poisonings (80.8 per 100,000 children).

Table 16.1: Hospitalisation rates for children aged 0–14 years for specific external causes of injuries, 2002–03 (rate per 100,000 children)

	Age group	Falls	Transport accident–pedal cyclist	Accidental poisoning	Burns and scalds	Transport accident–pedestrian	Assault	All injuries
Boys	<1	365.1	0.0	83.2	124.3	3.2	69.7	1,169.0
	1–4	683.8	43.2	255.9	152.5	35.2	18.1	2,141.1
	5–9	835.4	133.8	19.7	18.4	29.8	11.3	1,784.2
	10–14	793.6	273.6	16.4	36.3	27.6	38.9	2,282.1
	0–14	*752.2*	*149.4*	*83.6*	*65.8*	*28.8*	*26.1*	*2,006.3*
Girls	<1	332.8	0.0	79.2	86.7	0.8	64.2	950.0
	1–4	539.6	19.0	236.3	99.1	18.2	14.6	1,624.7
	5–9	654.6	61.8	14.4	22.6	15.6	7.5	1,271.3
	10–14	339.8	53.8	20.7	10.5	18.0	14.7	1,055.2
	0–14	*497.6*	*44.1*	*77.9*	*42.3*	*16.1*	*15.4*	*1,268.8*
All children	**0–14**	**628.1**	**98.1**	**80.8**	**54.3**	**22.6**	**20.9**	**1,646.8**

Source: AIHW National Hospital Morbidity Database.

- There were distinct differences in the age patterns for different types of injury hospitalisation. For example, hospitalisation rates for assault were much more common among infants than children aged 1–14 years. In contrast hospitalisations for accidental poisoning and burns and scalds among were most common among children aged 1–4 years. Children aged 5–9 years had the highest hospitalisation rates for falls, while pedal cycle accidents were most common among children aged 10–14 years.
- Hospitalisation rates for injury were higher among boys than girls in all age groups. Overall, boys had an injury hospitalisation rate of 2,006.3 per 100,000 compared with a rate of 1,268.8 per 100,000 for girls.
- Infants had the lowest hospitalisation rates for injury among both boys and girls. Among boys, the age group with the highest hospitalisation rate was 10 to 14 years at 2,282.1 per 100,000 children. For girls, the highest hospitalisation rate was among those aged 1 to 4 years with a rate of 1,624.7 per 100,000 children.

Indicators

- Injury death rate for children aged 0–14 years.
- Road transport accident death rate for children aged 0–14 years.
- Accidental drowning death rate for children aged 0–14 years.
- Hospitalisation rate for children aged 0–14 years for injuries from assault
- Hospitalisation rate for children aged 0–14 years for accidental injuries (poisoning, burns and scalds, pedestrian accidents, pedal cycling).
- Assault death rate for children aged 0–14 years.
- Suicide death rate for children aged 10–14 years.

Table 16.2: Injury death rate for children aged 0–14 years, 2001–03 (rate per 100,000 children)

	Age group	Transport accident	Drowning	Assault	Falls	Suicide	All injuries
Boys	<1	1.8	1.6	3.1	0.3	0.0	17.0
	1–4	3.6	3.7	0.9	0.3	0.0	11.2
	5–9	2.5	0.8	0.5	0.1	0.0	5.1
	10–14	4.3	0.3	0.1	0.1	0.8	6.7
	0–14	*3.3*	*1.4*	*0.6*	*0.2*	*0.3*	*8.0*
Girls	<1	0.6	2.8	3.3	0.3	0.0	16.2
	1–4	3.0	2.3	0.7	0.2	0.0	8.5
	5–9	1.9	0.2	0.3	0.3	0.0	3.2
	10–14	1.9	0.2	0.3	0.1	0.8	4.0
	0–14	*2.1*	*0.9*	*0.6*	*0.2*	*0.3*	*5.6*
All children	**0–14**	**2.7**	**1.2**	**0.6**	**0.2**	**0.3**	**6.8**
All children (N)		**327**	**139**	**73**	**20**	**31**	**815**

(N) Total Number.

Source: AIHW Mortality Database.

Mortality

In 2003, injury was the leading cause of death among children aged 0–14 years accounting for 15% of all deaths of children (or 276 deaths). The rates for five of the most common external causes resulting in death over the period 2001–03 are presented in Table 16.2.

- Between 2001 and 2003, there were 815 deaths as a result of injury. The most common external causes of death from injury were transport accidents (2.7 per 100,000 children), followed by drowning (1.2 per 100,000 children) and assaults (0.6 per 100,000 children).

Population differences

Certain factors, such as sex and socioeconomic background, affect a child's risk of injury at all developmental stages. For most types of childhood injury, and for every age after infancy, boys are at a higher risk of injury than girls. The difference between boys and girls may be related to differences in socialisation, operating even at an early age, that lead to greater risk taking behaviour among boys (Wilson et al. 1991).

Children from low socioeconomic backgrounds and Indigenous Australian children also have a higher risk of injury and death from injury than other Australian children. Children from low socioeconomic groups are more likely to suffer injury from certain causes, such as house fire or assault, which are more often fatal than other causes of injury. The likelihood of a child being injured or killed has also been associated with single parenthood, low maternal education, young maternal age at birth, poor housing, large family size, and parental drug or alcohol abuse (UNICEF 2001).

Figure 16.2: Average injury death rates for Indigenous and other Australian children aged 0–14 years, 2001–03

Note: Includes Qld, WA, SA and NT only.

Source: AIHW Mortality Database.

- During the period 2001–03, in Queensland, Western Australia, South Australia and the Northern Territory, a total of 61 Indigenous Australian children died due to injury or poisoning. Indigenous children aged 0–14 years had a higher average injury mortality rate than other children. Among Indigenous children the average injury mortality rate was 19.0 per 100,000 children. The corresponding rate for other Australian children was 7.7 per 100,000 children.
- Although injury mortality rates were greater for Indigenous children than other children in all age groups, the pattern across age groups was similar. The age groups showing the largest difference in mortality rate was infancy. Indigenous infants had an average injury mortality rate three times the rate for other Australian infants. The average injury mortality rate among Indigenous infants was 55.6 per 100,000 infants. The corresponding rate for other Australian infants was 18.2 per 100,000 infants.
- During the period 2001–03 the leading causes of injury deaths among both Indigenous and other Australian children were transport accidents and accidental drowning.

17 Child abuse and neglect

Child abuse and neglect is an issue that causes more public concern than almost any other public health issue in the Australian community. The relationship between child abuse and neglect, and child health and wellbeing, is complex and is related to the type, severity and duration of the abuse or neglect and to the context in which it occurs. The more frequent, the more prolonged and the more serious the abuse or neglect, the more damaging it will be for the child.

Children in need of protection are of concern to health professionals because of the profound negative impact abuse and neglect can have on children's health and wellbeing. Abuse and neglect can have both short-term and long-term adverse consequences for children. Physical and sexual abuse can have an immediate damaging effect on children's health through the injuries that children incur. In addition, children who have been abused or neglected often have poor developmental outcomes, such as lower social competence, poor school performance and impaired language ability. The longer term effects of abuse and neglect are primarily related to a child's mental health and include depression, anxiety disorders and suicidal and self-injurious behaviours (Shonkoff & Phillips 2000).

In extreme cases, child abuse and neglect can lead to serious harm or injury. One measure for such extreme cases is the rate of hospital separations due to assault. These data are presented in Chapter 16.

Child abuse and neglect is associated with multiple risk factors including social and economic disadvantage, family disruption, domestic violence and substance abuse (AIHW 2005; Families Australia 2004). The presence or absence of other risk factors also influences the effects on the child. For example, the effects of abuse or neglect have been found to be less harmful if the child receives emotional support from another important adult in his or her life (Shonkoff & Phillips 2000). The negative effects of child abuse and neglect are likely to be compounded as the number of risk factors increases.

'Abuse and neglect can have a profound negative impact on children's health and wellbeing'

What constitutes abuse and neglect?

Child abuse and neglect is generally classified into one of the following four categories: physical abuse, sexual abuse, emotional abuse, or neglect (AIHW 2005), although many children are the victims of more than one type of abuse. Children who are in need of protection include those who have been abused, neglected or otherwise harmed, and/or whose parents cannot provide adequate care and protection for them.

Definitions of child abuse and neglect have generally broadened over time. For example, physical punishments that were once considered appropriate discipline for children by many in the community are now suspected to jeopardise aspects of normal mental and emotional development (UNICEF 2003) and are therefore considered inappropriate.

Prevalence and data issues

There are no reliable measures of the prevalence of child abuse and neglect in Australia, mainly due to the difficulties in both defining and measuring abuse and neglect. Prevalence rates can vary considerably depending on the definitions used.

The only available data relate to situations where children have come to the attention of the child protection authorities in each jurisdiction. These administrative statistics represent only a proportion of all abuse and neglect cases that occur within the community.

In Australia, child protection is the responsibility of the state and territory governments. The AIHW collects national data on child protection notifications, investigations and substantiations, children on care and protection orders, and children in out-of-home care. The following section provides data on children who were the subject of a child protection substantiation and children on care and protection orders.

Child protection substantiations

Overall the administrative data tend to suggest an increase in the numbers of children who were the subject of child protection substantiations over the last decade (AMA 2004) (Table 17.1). However, these apparent trends over time need to be interpreted with great caution because this type of data can reflect changes in policies and practices within the child protection system as well as changes in the actual prevalence of child abuse and neglect.

One possible explanation for the noted rise is an increase in reporting by professionals of suspected abuse as a result of the mandatory reporting requirements in most jurisdictions. Another possible reason is that the rise is due to an increased awareness in the community about child abuse and neglect and the role of community services departments in this area. The final reason is an increase in the incidence of child abuse and neglect or inadequate parenting causing harm to a child and resulting in an increase in the number of children who require a child protection response.

Rates of children who were the subject of substantiations generally decreased with age. In all jurisdictions, children aged under 1 year were the most likely to be the subject of a substantiation and children aged 10–14 years the least likely. Age is one of the factors that child protection workers take into consideration when determining the time taken to respond to a notification, the type of response and whether a notification will be substantiated, with younger children being regarded as the most vulnerable.

Care and protection orders

Most children and families who come into contact with the child protection authorities through the substantiation process or through other avenues are referred to various support services. Such services include parenting education, family mediation and counselling, and in-home family support. In situations where further intervention is required in order to protect a child, the child protection authority may apply to the relevant court for a care and protection order. Recourse to the court is generally a last resort and is used in situations where supervision and counselling are resisted by the family, where other avenues for resolution of the situation have been exhausted, or where removal of a child into out-of-home care requires legal authorisation.

Table 17.1: Children aged 0–14 years who were the subject of child protection substantiation, 1997–98 to 2003–04 (rate per 1,000 children)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
1997–98	5.2	6.2	5.5	2.5	4.8	1.0	5.0	5.8	5.1
1998–99	4.6	6.2	5.2	2.7	5.5	0.9	5.4	n.a[(a)]	4.8
1999–00	4.0	6.5	6.0	2.5	5.4	0.5	2.6	6.5	4.8
2000–01	4.4	6.8	7.8	2.6	5.4	0.8	3.0	6.1	5.4
2001–02	4.9	6.7	9.0	2.6	5.6	1.2	2.9	6.2	5.8
2002–03	7.9[(b)]	6.6	10.8	2.0[(c)]	6.2	1.7	3.8	6.3	7.2
2003–04	n.a[(d)]	6.9	15.1	2.2	6.5	2.4	7.2	9.5	n.a.

(a) Northern Territory could not provide data for 1998–99 and was not included in the totals for that year.

(b) The data for 2002–03 and previous years should not be compared. New South Wales implemented a modification to the data system to support legislation and practice changes during 2002–03 which would make any comparison inaccurate.

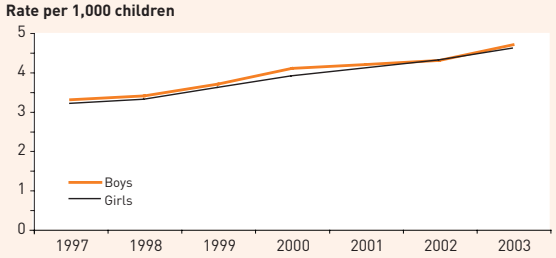
(c) The decline in the number of notifications for 2002–03 is associated with organisational and practice changes.

(d) In 2003–04 New South Wales was unable to provide data due to the ongoing implementation of the new data system. In addition, because NSW accounts for the largest number of substantiations, no national total can be calculated for this time period.

Source: AIHW unpublished data.

Children on orders are those children for whom there are more serious concerns about their safety and wellbeing. A care and protection order provides the community services department with greater authority and responsibility for the child. These orders include guardianship and custody orders as well as supervision orders. The data on children on care and protection orders show the total number of children on these orders at 30 June of each year and are therefore a measure of the prevalence of children on orders at a point in time (Figure 17.1).

Figure 17.1: Children aged 0–14 years on care and protection orders at 30 June, 1997–2003 (rate per 1,000 children)



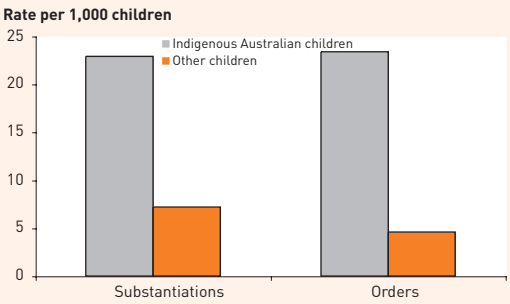
Source: AIHW unpublished data.

- The rate of children aged 0–14 years on care and protection orders at 30 June each year increased by 47% between 1997 and 2003.
- The number of orders was similar for boys and girls. In 2003 the rate for boys was 4.7 per 1,000 children and 4.6 per 1,000 for girls.

Aboriginal and Torres Strait Islander children

Indigenous Australian children are over-represented in the child protection system. This is despite a recognised under-reporting of violence in Indigenous communities (Memmott et al. 2001) (Figure 17.2). There are a number of different reasons for the over-representation of Indigenous children in the child protection system, including the intergenerational effects of the 'stolen generation' such as separation from family and culture (HREOC 1997), the poor socioeconomic status of Indigenous families, and cultural differences in child rearing practices.

Figure 17.2: Child protection substantiations and care and protection orders for Indigenous and other Australian children aged 0–14 years, 2002–03 (rate per 1,000 children)



Source: AIHW unpublished data.

- The rate of Indigenous Australian children aged 0–14 years in substantiations in 2002–03 was 22.9 per 1,000, compared with 7.2 for other Australian children.
- The rate of Indigenous children on care and protection orders at 30 June 2002 was 23.4 per 1,000, compared with 4.6 for other Australian children.

Indicators

- Rate of children aged 0–14 years who are the subject of a child protection substantiation.
- Rate of children aged 0–14 years who are the subject of care and protection orders.

18 Children as victims of violence

Victims of violence are often reluctant to report crimes to the police and therefore the true estimation of the level of crime experienced is often thought to be underestimated. Data show that many victims of violence do not report matters because they believe the police cannot do anything or because they think the violence they have experienced is too trivial to be reported (Carcach 1997; Williams & Bryant 2000). Moreover, children in particular, may feel intimidated and reluctant to report personal crimes if the perpetrator is known to the victim or is in a position of power (perhaps because they are older or an authority figure).

Crime victim surveys generally indicate that crimes against the person, particularly crimes of violence, are more heavily under-reported than property crimes. For instance, the 2002 ABS survey of crime and safety estimated that only 31% of assaults and 20% of female sexual assaults are reported to the police (ABS 2003f). By contrast around 85% of all property crimes are reported to the police.

While crime victim surveys are used to measure the extent of unreported or hidden victimisation, no Australian surveys currently include children under 15 in their sample (ABS 2004d). The two main sources of reporting criminal victimisation of those under 15 are derived from administrative data sets: recorded crime statistics, and substantiations of child abuse. Since 1993, the ABS has published an annual publication of recorded crime statistics collected by the police in each state and territory, according to standard offence classifications.

'Victims of physical assault and sexual assault not only experience harm in the short-term, but are at risk of further harm or harming others later in life'

Outcomes of victimisation

Adverse outcomes for young victims of violent crime can range from injuries to suicidal ideation behaviour (Simon et al. 2002), and depression (Arboleda-Florez & Wade 2001). A large body of international research suggests that physical and sexual abuse has multi-faceted short- and long-term negative effects on childhood development (Paolucci et al. 2001).

Victims of assault and sexual assaults not only experience harm in the short-term, but are at risk of further harm or harming others later in life. A key concern is that children who are victimised are at a greater risk of later victimising others (Lauritsen et al. 1991; Weatherburn & Lind 1997). Other research suggests that victimisation among young people can lead to diminished educational attainment and wide-ranging effects on socioeconomic attainment in early adulthood (Macmillan & Hagan 2004).

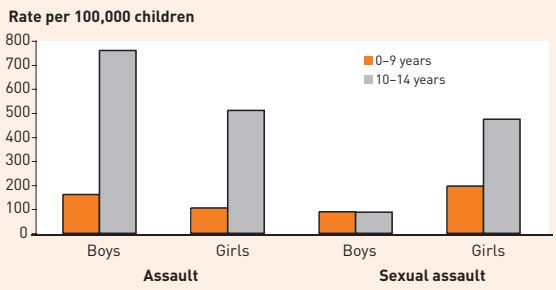
The overlap between victim and offender populations, and instances of intergenerational family violence, are cited as evidence of the cycle of violence, and of the need to break that cycle through the prevention of child abuse (Regoeczi 2000:494).

Victims of reported violence

Australian data show that children are sometimes victims of extreme violence. On average, 25 Australian children are killed by their parents each year (Mouzos & Rushforth 2003). Indermaur (2001) reported that up to one-quarter of young people in Australia have witnessed an incident of physical or domestic violence against their mother or stepmother.

In addition, and despite under-reporting, thousands of assaults and sexual assaults against children are reported to police each year. Data on crimes reported to the police are collated annually by the ABS and are presented here in Figure 18.1.

Figure 18.1: Victims of assault and sexual assault, by sex and age, 2003 (rate per 100,000 children)



Source: ABS Crime and Safety Survey 2002.

- Over 12,000 victims of all types of assault were recorded by police in 2003.
- Boys aged 10–14 years (800 per 100,000 children) were assaulted more than any other group of children.
- Boys were assaulted at higher rates than females in both the age groups.
- However, rates of reported sexual assault against girls aged 10–14 years were higher than those recorded for boys. Rates of sexual assault among these girls were five times those recorded for boys (475 compared with 88 per 100,000).
- Girls aged 10–14 years were sexually assaulted at twice the rate of girls aged 0–9 years. The rate of sexual assaults for boys was similar for both age groups and was consistently lower than the rate for girls.

Aboriginal and Torres Strait Islander children

Indigenous Australians are over-represented as victims of violence (NCP 2001) and Indigenous Australian children are no exception. While national data on the number of Indigenous children who are victims of violence are not available, data collected in New South Wales give some indication of the high rates of violence experienced by Indigenous children compared with other Australian children. For example, in 2001 rates of reported assault and sexual assaults among Indigenous children aged 0–14 years were between two and three times the rate for assaults and sexual assaults among the total NSW child population (NSW Bureau of Crime Statistics and Research, unpublished data).

Indicator

- **Rate of children aged 0–14 years who have been the victim of physical and sexual assault.**

19 Homelessness

Homelessness is a complex problem, arising from a combination of personal and societal factors. Poverty, unemployment, discrimination and a shortage of adequate and affordable housing are major societal factors contributing to homelessness in Australia. Personal problems such as domestic violence, drug and alcohol abuse, relationship and family breakdown, and mental health problems also increase a person's likelihood of becoming homeless.

A range of government services are available to homeless people, including programs designed specifically for people experiencing, or at risk of, homelessness. The Supported Accommodation Assistance Program (SAAP) is a major government response to homelessness, providing recurrent funding to agencies offering a variety of support services to homeless people.

Children in homeless families

A high rate of family homelessness has meant a significant proportion of Australia's homeless population are now children. In 2002–03, 53,700 children aged 17 years or less accompanied a parent or guardian seeking SAAP assistance. Of these children, 44% were under 5 years of age. Clients with children made up 25% of SAAP support periods[2] in 2002–03 (AIHW 2004e). The majority (84%) of these clients were single women with children, 12% were couples with children and 4.4% were single men with children. Support to accompanying children makes up 30% of the total number of occasions of support provided by SAAP each day (AIHW 2003c).

Children experience a number of negative educational, social and health consequences as a result of being homeless. Homeless children spend less time in school, have lower immunisation rates, display behavioural problems such as aggression, and experience psychological problems such as depression and low self-esteem (Efron et al. 1996; Molner et al. 1990). Parents in homeless families are also likely to be suffering from depression or stress which may mean they are unable to give their children adequate attention or affection. A high proportion of homeless children may also have witnessed or experienced domestic violence and are at a greater risk of becoming a victim of crime or involved in criminal activities themselves (AIHW 2004e; NCP 1999).

Indicator

- **Rate of children aged 0–15 years accompanying a parent or guardian seeking assistance from Supported Accommodation Assistance Program.**

Measuring homelessness

Obtaining an accurate count of homeless people is difficult for practical reasons. People often move in and out of homelessness and may never be counted. In an attempt to count homeless people, changes were made to the ABS Australian Census of Population and Housing to make it possible to count homeless people staying temporarily with others and those in improvised dwellings or sleeping on the street (ABS 2003g). In a recent analysis of 2001 census data combined with SAAP data, it was estimated that on census night 9% of homeless households were families and homeless families included one-quarter of the homeless population. The study showed there were 9,941 homeless children under 12 years, making up 10% of the homeless population and 0.3% of the Australian population under 12 years of age.

Another source of information about people that were homeless over a given period of time is to count the number of people seeking assistance from a SAAP agency. As SAAP services are provided not only to clients but also to the children who accompany them, these data are valuable in attempting to measure childhood homelessness (Table 19.1). However, a major limitation in using SAAP data as a measure of homelessness is that it does not include homeless people who do not seek SAAP assistance. The data do, however, include children who sought accommodation from SAAP services with their parents or guardian but were turned away. For example, in 2002–03, on an average day, 127 children seeking SAAP accommodation were turned away. This was 62% of all children seeking accommodation on an average day (AIHW 2004e).

2 A support period is the duration in which a SAAP agency is providing support to a client. A support period may vary from less than a day to several years and a client may have multiple support periods.

Table 19.1: Children aged 0–15 years accompanying a parent or guardian seeking assistance from Supported Accommodation Assistance Program, 2002–03 (per cent)

	Boys		Girls		Total	
Age group	Number	Per cent of children[(a)]	Number	Per cent of children[(a)]	Number	Per cent of children[(a)]
0–4	12,090	1.9	11,730	1.9	23,810	1.9
5–12	11,710	1.1	11,520	1.1	23,240	1.1
13–15	2,270	0.5	2,540	0.6	4,810	0.6
Total	**26,070**	**1.2**	**25,790**	**1.2**	**51,860**	**1.2**

Note: The number of accompanying children in the above table does not include children accompanying SAAP clients to agencies that have a high volume of clients as these agencies do not record details of accompanying children.

(a) As a proportion of the total age-specific Australian child population.

Source: SAAP data collection 2002–03.

Data collected about children seeking assistance from SAAP agencies are presented in Table 19.1. The states and territories are responsible for managing the SAAP program, while services are provided largely by independent agencies. Approximately 1,300 non-government, community or local government organisations are funded nationally under the program. Such organisations range from small stand-alone agencies with single outlets to larger auspice bodies with multiple outlets. These statistics are collected and collated by the AIHW.

- From 1 July 2002 to 30 June 2003, 1.2% of all children in Australia accompanied their parent or guardian seeking support from a SAAP agency.

Table 19.2: SAAP support periods: main reason for seeking assistance, unaccompanied children aged less than 15 years, 2002–03 (per cent)

	Proportion
Relationship/ family breakdown	24.9
Time out from family/ other situation	17.1
Domestic violence	10.7
Inter-personal conflicts	9.8
Usual accommodation unavailable	9.5
Eviction/ previous accommodation ended	7.3
Other	20.7

Source: SAAP data collection 2002–03.

- There was no difference in the rates for accompanying male children and accompanying female children.
- Younger children accompanied their parents or guardians at a higher rate than older children. While 1.9% of children aged 0–4 years accompanied their parent or guardian to a SAAP service, only 0.6% of children aged 13–15 years did so.

Causes of childhood homelessness

In a small number of cases children are made homeless after becoming estranged from their family. In 2002–03, 1,800 children aged under 15 years presented at a SAAP service unaccompanied by an adult (AIHW 2003c). Among these children, the most common reason for seeking assistance was family breakdown—24.9% of children indicated it was their main reason for seeking assistance. For a further 17.1%, the main reason for seeking assistance was time out from a family or other situation. In the majority of cases, however, children become homeless because their parents are homeless.

Parents may become homeless due to a combination of factors including domestic violence, marriage or other family breakdown, poverty and the increasing cost of housing. The most common reason for seeking assistance among SAAP clients with children is domestic violence. In 2002–03, 67% of child support periods were for children accompanying clients seeking support due to domestic violence (AIHW 2004e). In 51.8% of support periods for women presenting alone with children, domestic violence was the main reason for seeking assistance.

Table 19.3: SAAP support periods: main reason for seeking assistance, female with accompanying children, 2002–03 (per cent)

	Proportion
Domestic violence	51.8
Eviction/ previous accommodation ended	9.1
Relationship/ family break down	7.1
Usual accommodation unavailable	5.8
Financial difficulty	5.1
Physical/ emotional abuse	4.5
Other	16.6

Source: SAAP data collection 2002–03.

Population differences

There is a higher rate of homelessness among the Indigenous Australian population than among the other Australian population. While 2.4% of the Australian population identify as Indigenous, 9% of the homeless population at the last ABS Census were Indigenous (ABS 2003g). Indigenous people were also over-represented among SAAP clients during 2002–03, making up 17.7% of all SAAP clients for that period (AIHW 2003c). A higher proportion of Indigenous people were represented among SAAP clients with accompanying children (22%), and the proportion of support periods for Indigenous clients accompanied by five or more children was more than twice that of other Australian-born clients (AIHW 2004e).

'A high rate of family homelessness has meant a significant proportion of Australia's homeless population are now children'

How well are Australia's children learning and developing?

20 Preschool education

Many Australian children have access to early education before commencing school through formal early learning programs which can be provided either in a child care centre or preschool education setting. Preschool is a planned education and developmental program for children in the year (or in some jurisdictions, two years) before they begin full-time primary education. Children attending preschool are usually aged 4 or 5 years of age. A qualified early childhood teacher, who has completed a degree in education, plans the program and is usually supported by a teacher assistant (AEU 2004). Importantly, the term 'preschool', as used in this section, encompasses a number of learning environments, including formal learning programs in long day care centres, not just state-based preschools.

There are many studies which show significant benefits for children who access quality preschool programs, including better intellectual development and independence, sociability and concentration. Research also shows that participation in a preschool program promotes cognitive development in the short-term and prepares children to succeed in school (Boocock cited in Foley et al. 1999; Sylva et al. 2004).

Preschool programs may be an especially positive force in the lives of children from disadvantaged families where children may not be receiving ample stimulation from the home environment. In these cases preschool attendance may narrow existing achievement gaps. Overseas studies such as the longitudinal High/Scope Perry Preschool Study in the USA have also demonstrated the wider family, social and economic benefits of preschool (Schweinhart 2004). The High/Scope Perry Preschool Study is a continuing scientific experiment that has identified the short- and long-term benefits of a high-quality preschool education program for children living in poverty. Results from the study demonstrated that children receiving the quality early learning program had better intellectual and social development than those who did not receive a preschool program, with the benefits shown to extend throughout adulthood. At age 40, children who had participated in the program had better economic performance, reduced commission of crime in adulthood and better educational outcomes than their peers.

'Children who access quality preschool programs develop better intellectually and become independent and sociable'

How many children go to preschool?

Due to the varied nature of children's services throughout Australia, it is difficult to estimate the proportion of children who participate in formal learning programs in the year/years prior to Year 1 at school. Preschool has various names across Australia (e.g. preschool, kindergarten, child parent centres). In addition, while most children access these programs at 4 years of age, some states have provisions for children to access preschool when they are aged 3 years.

At present, no comprehensive nationally comparable collection of information on preschool services exists in Australia. For example, data from the 2001 ABS Census of Population and Housing show that around 56% of 4 year old children attended preschool, while estimates from the Report on Government Services are much higher (up to 85%). To provide a national picture of child care and preschool service provision in Australia, the AIHW is currently working towards implementing a national minimum data set about children's services. A National Minimum Data Set (NMDS) creates an agreed set of nationally significant data items (or questions) that will be collected in all Australian jurisdictions on a regular basis utilising an agreed and consistent collection method.

In the meantime, data from ABS 2002 Child Care Survey provide important information about early childhood education. An estimate of the proportion of 4 year old children attending preschool programs is presented in Table 20.1.

- In June 2002 approximately 59% of children aged 4 years attended preschool.
- In addition, 25.1% of children aged 4 years attended long day care. Many long day care centres offer educational preschool programs for children in this age group.

Table 20.1: Preschool and long day care participation among 4 year old children (per cent)

	Type of care		
	Preschool	Long day care	Total ('000)
June 1993	56.6	11.8	174.8
March 1996	45.9	14.0	154.4
June 1999	49.2	21.7	186.1
June 2002	59.0	25.1	195.8

Source: ABS 2002 Child Care Survey.

- The participation rate for long day care more than doubled between June 1993 and June 2002 from 12% to over 25%. By comparison, the participation rate for preschool was relatively constant over the same period.

Do all children access preschool programs equally?

Importantly, not all children have equal access to preschool programs and early education. For example, there is evidence that children in rural and remote areas of Australia and Aboriginal and Torres Strait Islander children are less likely to attend preschool than other Australian children. In some cases, services in Indigenous or remote areas do not exist, while in others transport or distance may be a significant barrier to attendance. Data from the 2001 ABS Census of Population and Housing show the total number of Indigenous Australian children attending preschool across Australia in 2001 (Table 20.2).

Table 20.2: Preschool participation rate for children aged 4 years, by Indigenous status and across remoteness areas, 2001 (per cent)

Remoteness area	Indigenous Aust children	Other Aust children	Total
Major cities	49.4	58.2	57.7
Inner Regional	46.4	54.5	53.9
Outer Regional	47.5	53.8	53.0
Remote	47.1	58.8	56.6
Very Remote	36.0	51.8	42.6
Australia	**45.9**	**56.9**	**56.1**

Source: ABS 2004b.

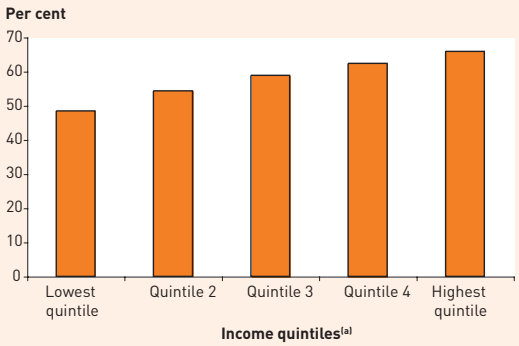
Indicator

- **Proportion of children aged 3–4 years enrolled at preschool.**

- There were marked differences in preschool participation across different regions. For example, the participation rate in Major Cities was nearly 58% compared with 43% in Very Remote parts of Australia.
- For all regions, the participation rate of Indigenous children was lower than the rate for other Australian children. Overall, the rate of participation in preschool for Indigenous children was 46% compared with 57% for other Australian children.

There is also evidence that children with certain family characteristics are also less likely than other Australian children to attend preschool. These include children from non-English-speaking backgrounds, children with no employed parent, or parents without a post-school qualification (ABS 2004b). More data from the Australian census also show the relationship between household income and preschool attendance (Figure 20.1).

Figure 20.1: Preschool participation rate for children aged 4 years, by household income, 2001



Note: Children stated as attending school, but where the type of schooling was not specified were excluded from this analysis.

(a) Household income data have been adjusted to account for differences in household size and composition.

Source: ABS 2004b.

- The preschool participation rate among children living in households with the highest incomes (65.9%) was 1.4 times greater than the rate in households with the lowest incomes (48.5%).

21 Literacy and numeracy

'Poor literacy and numeracy skills are a predictor for early school leaving'

Proficiency in reading, writing and mathematics is essential for day-to-day living, for further educational opportunities and for employment prospects. The aim of education is to assist children in developing these skills so that they may participate fully and productively within society. Early school experiences are particularly important as these can have a lasting impact on a person's attitude to education and training and confidence in their learning abilities (Frigo et al. 2003). A negative start in the education system may result in children falling further behind their peers as their schooling progresses.

As the number of low-skilled jobs in the employment market decreases, the importance of educational qualifications is increasing. Students who fail to complete school have restricted employment opportunities and are more likely to experience extended periods of unemployment than Year 12 graduates (Lamb et al. 2000). One predictor of early school leaving is poor literacy and numeracy skills (House of Representatives 2002). In general, literacy levels are high among school students in Australia. In a recent international study of reading, mathematical and scientific literacy among school students, Australian students had a mean score significantly higher than the mean score for all OECD students (OECD 2004). However, this study also found a large variation in the performance of students within Australia, suggesting the education system may not be meeting the needs of all students equally.

Indicator

- **Percentages of children in Years 3, 5 and 7 meeting national literacy (reading & writing) and numeracy benchmarks.**

What factors contribute to higher levels of literacy and numeracy?

A number of factors are associated with children's level of literacy and numeracy skills. These factors include children's home environment, their rapport with the school environment and their attitudes to reading and mathematics. For example, children who read for pleasure on a daily basis perform better in literacy tests than those who read for pleasure less frequently, and children who see themselves as capable of doing well in mathematics achieve better results than other children (OECD 2004; Zammit et al. 2002).

Factors within a child's home environment associated with literacy and numeracy levels include the number of books in the home, the amount of time parents spend discussing books with their child, the highest qualification level of a parent, and the presence of study aids, such as a desk, computer and dictionary (Zammit et al. 2002).

Children's engagement with the school environment—in connecting with concepts of learning and the school community—is also associated with educational achievements. Children who express positive feelings towards school and actively participate in school activities are more likely to have higher educational aspirations and grades and to stay at school till completion (Fullarton 2002). It is suggested that high rates of absenteeism, truancy and academic failure among some children may be symptoms of student disengagement (Mellor & Corrigan 2004).

National literacy and numeracy benchmarks

The Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) has established national benchmarks for reading, writing and numeracy for Years 3, 5 and 7 students. A benchmark is a nationally agreed minimum standard without which a student has difficulty in progressing at school. The majority of students met these benchmarks in 2001, though gender differences were evident in the results (Table 21.1).

Table 21.1: Students in Years 3 and 5 meeting national reading, writing and numeracy benchmarks, 1999–2001 (per cent)

		Reading			Writing			Numeracy		
School year		**1999**	**2000**	**2001**	**1999**	**2000**	**2001**	**1999**	**2000**	**2001**
Year 3	Boys	87.9	90.9	88.4	90.0	87.4	86.4	n.a.	92.7	93.7
	Girls	92.0	94.3	92.3	93.9	92.6	92.7	n.a.	92.8	94.3
Year 5	Boys	83.4	85.2	87.8	91.4	90.2	91.9	n.a.	89.4	89.5
	Girls	88.4	89.6	92.0	95.4	94.9	96.2	n.a.	89.8	89.8

n.a. Not available.

Source: MCEETYA 2001.

- In 2001, 92% of girls and 88% of boys in Years 3 and 5 met the national reading benchmark. The national writing benchmark was met by 92% of girls and 86% of boys.
- From 1999 to 2001 the percentage of girls meeting national reading and writing benchmarks was consistently higher than for boys in both Year 3 and Year 5.
- A greater percentage of Year 3 students met the national numeracy benchmark than Year 5 students in both 2000 and 2001. In 2001, over 93% of Year 3 students met the benchmark, compared with just under 90% of Year 5 students.

Differences among population groups

While literacy and numeracy levels are generally high among Australian children, some groups of students appear to be at a disadvantage. Indigenous children, boys, children in remote areas, and children from low socioeconomic backgrounds often do not achieve the same educational outcomes as other Australian children and are more likely to leave school early (Hunter & Schwab 2003; Lamb et al. 2000).

There are a variety of factors that may lead to under-achievement among these children, including social, cultural and language differences, differences in family and community attitudes to schooling and proximity to schools. Higher rates of absenteeism among these students may also contribute to their under-achievement as they receive fewer hours of instruction than their peers (Rothman 2001). However, as previously mentioned, absenteeism is sometimes viewed as a symptom of disengagement rather than a cause of failure and higher rates of absenteeism among particular groups in Australian schools may reflect something in the school, home or social environment which is causing disengagement among these students.

The lower achievement of Indigenous Australian students compared to other Australian students is apparent in Australia's results in two recent international student assessments: the OECD's Programme for International Student Assessment (PISA) 2003 which assessed the reading, mathematical and scientific literacy skills and the problem solving skills of 15 year old students and the Trends in International Mathematics and Science Study (TIMSS) 2002–03 which assessed Year 4 and Year 8 students in mathematics and science (Tables 21.2 and 21.3).

In all areas of both assessments, the average achievement of Indigenous Australian students is considerably below the average achievement of other Australian students and, in most cases, significantly below the international averages (Thomson & Fleming 2004a, 2004b).

A higher proportion of Indigenous students compared with other Australian students are also not meeting the minimum standards of the national benchmarks (Table 21.4).

- While 90% of Years 3 and 5 students met the national reading benchmark in 2001, only 72% of Indigenous Australian Year 3 students and 67% of Indigenous Australian Year 5 did so.

Table 21.2: Mean scores in the Trends in International Mathematics and Science Study (TIMSS) 2002–03 Assessment of Mathematics and Science, Year 4 and Year 8 students

	Mathematics		Science	
	Year 4	Year 8	Year 4	Year 8
Australia	**499**	**505**	**521**	**527**
Indigenous children	427	440	450	469
Other children	503	508	526	530
International average	**495**	**467**	**489**	**474**

Source: Thomson & Fleming 2004a, 2004b.

Table 21.3: Mean scores in the OECD Programme for International Student Assessment (PISA) 2003 Assessment Domains, by Indigenous status, 15 year old students

	Mathematical literacy	Reading literacy	Scientific literacy	Problem solving
Australia	**524**	**525**	**525**	**530**
Indigenous children	440	444	434	453
Other children	526	527	527	532
International average	**500**	**494**	**500**	**500**

Source: Thomson et al. 2004.

Table 21.4: Students in Years 3 and 5 meeting national reading, writing and numeracy benchmarks, by Indigenous status, 1999–2001 (per cent)

		Reading			Writing			Numeracy		
Sex and age group		**1999**	**2000**	**2001**	**1999**	**2000**	**2001**	**1999**	**2000**	**2001**
Year 3	Indigenous	73.4	76.9	72.0	66.9	65.0	67.8	n.a.	73.7	80.2
	All students	89.7	92.5	90.3	91.9	90.0	89.5	n.a.	92.7	93.9
Year 5	Indigenous	58.6	62.0	66.9	74.6	74.3	79.9	n.a.	62.8	63.2
	All students	85.6	87.4	89.8	93.0	92.5	94.0	n.a.	89.6	89.6

n.a. Not available.
Source: MCEETYA 2001.

- From 1999 to 2001, the proportion of Indigenous Australian students meeting the national writing benchmark was lower than the national rate. In 2001, the rates for Indigenous students in Years 3 and 5 were 68% and 80% respectively. This compares with national rates of 89.5% for Year 3 students and 94.0% for Year 5 students.
- The rates for Indigenous Australian students in Years 3 and 5 meeting the national numeracy benchmark in 2000 and 2001 were considerably lower than the national rates. In 2001, 80% of Indigenous Year 3 students and 63% of Indigenous Year 5 students met the benchmark. This compares with national rates of 94% for Year 3 students and 90% for Year 5 students.

22 Children and crime

During childhood, some young people will have an encounter with the criminal justice system. Fortunately, most episodes of juvenile offending behaviour are relatively minor and transient in nature, confined to one-off events (Carcach & Leverett 1999). A very small proportion of children have more serious interaction with the juvenile justice system leading to outcomes such as community service orders or sentences involving detention in custody. It is these children who are most vulnerable to continued and more serious offending later in life (Makkai & Payne 2003).

Some evidence points to an overall increase in the incidence of juvenile crime. The 1990s saw increased involvement by juveniles in offences 'against the person' as well as an increase in young females committing offences (Mukherjee et al. 1997). However, the limited data currently available in Australia make it difficult to determine trends over time.

This section examines the small number of children up to 14 years who are detained in juvenile detention each year as well as outlining some of the factors that can lead to crime. Importantly, these data do not adequately describe the extent of young people's involvement with violence, crime and juvenile justice in Australia. National data are currently available on the number of young people held in juvenile justice detention centres, either on remand or who have been sentenced. But this group of children represents only a small proportion of juveniles supervised by juvenile justice departments and an even smaller proportion of those who are dealt with by the juvenile justice system as a whole. Indeed, on 30 June 2002, between 7% and 17% of juvenile justice clients aged between 10 and 17 years were in custody, with the remainder subject to supervision in the community (SCRGSP 2004).

States and territories are implementing a new national data collection that will include young offenders who are on supervised community-based orders as well as in juvenile justice detention centres. This important new collection will provide information on the broad characteristics of juvenile justice clients and the way in which they move through the juvenile justice system (AIHW 2004f).

Understanding juvenile crime

A broad developmental perspective can help us understand some of the reasons why crime occurs (NCP 1999). The cumulation of life events and experiences and the way in which physical and social environments impact on a child's life provide important clues about their likely involvement in offending behaviour either as a juvenile or later in adulthood. For example research shows that young people with a history of juvenile offending are more likely to have existing mental health problems (Kessler 2002; Vermeiren 2003), to have been maltreated as children (Stewart et al. 2002) and to have substance dependencies (Wei et al. 2003).

The likelihood that a child will commit an offence is also inextricably associated with personal and social environments. Risk factors for involvement in juvenile crime include family factors, intelligence and school performance, truancy, the influence of delinquent peers, poverty and unemployment, and substance misuse (Weatherburn 2001).

Family factors can include a lack of parental supervision, parental rejection, lack of parental involvement with the child, and the inconsistent application of discipline. Other social environment risk factors include low family socioeconomic status, parental and sibling criminality, child abuse and neglect, and youth homelessness.

Indicator

- **Rate of children aged 10–14 years who are in detention in juvenile justice facilities.**

While the proportion of children in juvenile detention is very small, this particular group is vulnerable to a number of poor outcomes. In an Australian study of incarcerated male adult offenders, Makkai and Payne (2003) found that juvenile detention is a clear marker for the early onset and persistence into both criminal careers and drug use. Another study which followed a cohort of juvenile offenders from 1994–95 found that over half had been imprisoned at least once by 2002 (Lynch et al. 2003).

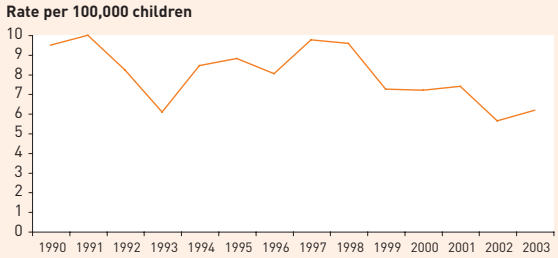
Although every state and territory has its own juvenile justice legislation, the legislation is similar across Australia. The basic emphasis of juvenile justice in all jurisdictions in Australia is on diversion of young people from court where appropriate, incarceration as a last resort, the victim's rights, the acceptance of responsibility by the offender for his or her behaviour, and community safety. When sentencing young people, the courts must consider how to minimise re-offending and the integration of juveniles back into the community, at the same time ensuring that youth who commit offences are appropriately penalised (AIHW: Broadbent 2001).

'A small proportion of children have serious interactions with the juvenile justice system leading to sentences involving detention in custody. These children are most vulnerable to continued and more serious offending later in life'

Statistics on juvenile offending

Each state and territory in Australia submits a quarterly count of juveniles in correctional institutions to the Australian Institute of Criminology to produce a detention rate for the whole of Australia. The detention rate for young people aged 10–14 years in Australia between 1990 and 2003 is shown in Figure 22.1. As mentioned earlier in this section, data will soon be available that will give a more complete picture of children's involvement with all aspects of the juvenile justice system.

Figure 22.1: Children aged 10–14 years in juvenile correctional institutions (sentenced and unsentenced) at 30 June each year, 1990–2003 (rate per 100,000 children)



Note: Because the trend presented here are a collated national picture of juveniles in custody, it is heavily influenced by changes within particular jurisdictions that have the largest number of detainees, particularly New South Wales, Queensland and Western Australia.

Source: AIC unpublished data.

- The detention rate for young people aged 10–14 years tended to decline over the period 1990–2003, from 9.5 per 100,000 (117) to 6.2 per 100,000 (85).

Between 1990 and 2003, the rates for 10–14 year old boys and girls both decreased by 35%. For boys, this change was from 15.6 per 100,000 to 10.2, while for girls, the change was from 3.0 per 100,000 to 1.9.

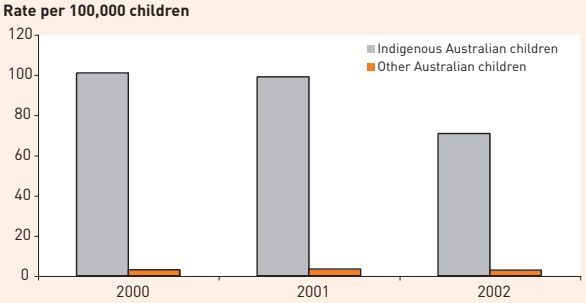
In 2003, boys had rates of juvenile detention more than five times those of girls.

In general, older children are detained at higher rates than younger children. For example, in 2003, children under 12 years of age were detained at a rate of 0.4 per 100,000, while for 12 year olds the rate was 2.9 per 100,000. For 13 year olds, the rate was 6.2 per 100,000, and for 14 year olds, the rate was 21.6 per 100,000.

Aboriginal and Torres Strait Islander detainees

During the period from 2000 to 2002, Indigenous Australian children between 10 and 14 years of age were detained at around 30 times the rate of other Australian children. State and territory information indicates that Indigenous children are not only over-represented in juvenile detention centres (Figure 22.2), but are also over-represented among those charged by the police, those facing court, and those placed on community-based orders (AIHW: Broadbent 2001).

Figure 22.2: Indigenous children and other Australian children aged 10–14 years in juvenile correctional institutions (sentenced and unsentenced) at 30 June each year, 2000–02 (rate per 100,000 children)



Note: Tasmanian data for Indigenous persons are considered unreliable for reporting. Therefore the Indigenous rates in this figure do not include data from Tasmania.

Source: AIC unpublished data.

Part III

The role of family and community

So far, the information provided in this report has focused on outcomes for children as well as measuring direct or 'proximal' factors that are known to be significant influences for these outcomes. However, the wellbeing of children also depends largely on wider environmental determinants including the social, emotional, physical and economic wellbeing of children's families and the strength of the communities in which they live. Such influences may be described as indirect or 'distal' factors.

Stanley, Sanson and McMichael (2002) point out that the influence of proximal risk factors can often be so powerful that more distal factors often do not receive the attention they deserve. Epidemiological research of the past, they argue, tended to ignore the important causal sequences and interactions of distal factors, as the influence of proximal factors on child outcomes dominate in statistical modelling. One difficulty with the data currently available in Australia, however, particularly administrative data, is that they cannot fully explain the influences these macro environmental factors will have on health and other outcomes for children.

With the available data, it is possible to examine statistics about the family and community context in which children are currently living, but it is much more difficult to show how these contexts have influenced outcomes for children. Questions such as how physical and mental health status, opportunities for learning and education, and access to health services and leisure and recreational activities are influenced by family and community factors are difficult to answer. It is also equally difficult to explain how these factors influence short- and long-term outcomes for children. These questions are best answered by multivariate and longitudinal research.

Other Australian studies (e.g. Western Australian Child Health Survey and Australian Temperament Project among Victorian children) have shown that the family and community environment and socioeconomic circumstances in which children are growing up have an effect on children's educational, psycho-social and criminal outcomes (Prior et al. 2000; Zubrick et al. 2000b). Neighbourhoods, along with individual circumstances, can also play a major role in shaping children's behaviour. Neighbourhoods where social cohesion is low may increase the vulnerability of families and children, while neighbourhoods with stronger community connectedness may provide a safe and secure environment for families and children (Vinson et al. 1996; Vinson 2004).

The school and community contexts in which children live also have a considerable influence over their health, development and wellbeing. These contexts, along with family, set foundations for learning, behaviour and health over the course of their life (Zubrick et al. 2000c).

By providing information in this section on elements of family structure, parenting and community influences, we can further our understanding of the context in which Australian children are growing up. This chapter presents data on a number of indicators on parental socioeconomic and health status, and the links with extended family, friends and community. Specifically, the chapter provides statistics on:

- types of families that children live in (couple parent and single parent families, and children living in out-of-home care);
- socioeconomic status (parental employment, and families' ability to raise money in an emergency);
- parental health, disability and chronic illness;
- social capital (families' ability to get outside support in time of crisis, ability to rely on friends and community for small favours, contacts with family and friends); and
- neighbourhood safety.

What kind of families and communities do Australia's children live in?

23 Family structure

With the changing social attitudes towards marriage and fertility choices, Australian families have changed dramatically in the last 30 years (ABS 2003h). The result has been an increasing diversity of family types within which Australian children are brought up. Throughout their lives, a number of children will experience a change from living in a couple family to having only one resident parent, while others will move from a lone parent family to a situation where they have new family members. Some children may even experience a number of family transitions before they reach adolescence. These types of changes can impact significantly on children. A child's personal experience of family change can sometimes result in poorer health and wellbeing, especially if changes to family structure are the result of a family breakdown.

Although the dominant type of family in Australia is still the couple family, lone parent families are becoming increasingly common (AIHW 2001; de Vaus 2004). According to 2001 census counts, the proportion of couple families with children was 47% of all families, a reduction of 6.4% from 50.2% in 1971. Lone parent families in 2001 represented 15.4% of all families, a significant increase from 5.7% in 1971 (ABS 2003c).

There are different types of couple families in which children grow up in Australia:

- intact families where the child is the biological, adopted or foster child of both members of the couple;
- blended families where at least one child is the biological child of the couple and at least one child is the stepchild of either member of the couple; and
- stepfamilies where at least one child is the stepchild of either member of the couple and none of the children is the natural or foster child of both members of the couple.

Family structure and child wellbeing

The relationship between family structure and child outcomes is not a simple causal one. A review of a number of research works by Wise (2003) indicate that there are many intervening factors such as parent-child relationship, parenting style and monitoring, and poor parental care or family discord (also see de Vaus & Gray 2003) that determine how children are able to function.

Also, child outcomes resulting from family change are not always negative. Children who have been in a family environment of conflict or abuse may experience positive outcomes following the transition. The response of children to family change can also vary depending on whether the child is more vulnerable or resilient to the effects of change. Nevertheless, research evidence indicates that changing family structure can have negative effects on children (de Vaus & Gray 2003; Ram & Hou 2003).

Studies suggest that children undergoing transitional change from one kind of family to another encounter some difficulties adjusting to new changes and are at an increased risk for mental health and for overall wellbeing (Sawyer et al. 2000; Silburn et al. 1996; Vimpani et al. 2002). Children from non-intact families, particularly lone parent families, are also likely to experience adverse developmental outcomes such as low educational attainment, increased likelihood of engaging in aggressive, antisocial and criminal behaviour and substance use in adulthood (de Vaus & Gray 2003; Deleire & Kalil 2002). This is partly to do with children having to adjust to new parent-child relationships, parental stressors such as changed socioeconomic status, parenting style and discipline, disruption to family cohesion, sibling relationship and parental mental health issues (Deater-Deckard & Dunn 1999 cited in Wise 2003).

Australian families

The ABS categorises Australian families into two broad groups: couple families which includes intact, step, blended and other families and lone parent families. The distribution of Australian children under age 15 years by the type of family they lived in as at June 2003 using more specific categories is shown in Table 23.1.

- In 2003, most children (72%) aged 0–14 years lived in intact families, a family consisting of both natural parents of the child.
- Nearly 20% of children lived in lone parent families. Of these children, 88% lived with lone mothers.

Table 23.1: Children aged 0–14 years, by family structure, 2003 (per cent)

Family structure		Number ('000)	Per cent
Couple families	Intact families[a]	2,805.9	72.1
	Step-families[a]	118.4	3.0
	Blended families[a]	197.5	5.1
	Other couple families	16.0	0.4
Lone parent families	Lone mother	663.1	17.0
	Lone father	88.6	2.3
Total children in all families[a]		**3,889.5**	**100.0**

(a) Includes a small number of children without a natural parent living in the household (e.g. foster children or other related children).
Source: ABS 2003h.

- A small proportion of children (less than 1% or approximately 28,100) aged 0–14 years lived with grandparents. This number includes only the youngest child who is under the age of 15 years. Therefore, the actual number of children under the age of 15 years who live with a grandparent could be higher.

Data from the 2001 ABS Census of Population and Housing highlighted that, in households with Indigenous people, the proportion of children living in one-parent families (44%) was twice the proportion of other children in one-parent households (20%) (ABS 2003i). The census also showed that, in households with Indigenous people, the proportion of children living in multi-family or group households (6%) was higher compared to children in other households (2%).

Changing family structure in Australia

- Between 1992 and 2003, the proportion of children living in one-parent families increased by 36% from 14.2% to 19.3% of all family types.
- The proportion of children living in couple families declined from 86% in 1992 to 81% in 2003 of all family types. Couple families here include step, blended and other families as well.

Family type and employment status

In 2003, in couple families where the youngest child was under the age of 15 years, at least one parent was in employment in 94% of families. In 59% of families where the youngest child was under 15 years of age, both parents were employed. In lone mother families where the youngest child was under 15, nearly 55% of mothers were not employed in 2003. In 86% of these families, no other person in the household was employed (ABS 2003h).

In lone mother families where the youngest child was aged 0–2 years, only 28% of mothers were employed. As the age of the youngest child increased, the proportion of lone mothers employed also increased. When the youngest child reached the age of 5–11 years and 12–14 years, approximately 53% of women were employed.

Employment status in lone father families was higher but still well below the community average. Over 57% of the fathers in lone father families where the youngest child was aged less than 15 years were employed in 2003.

Couple families with children under 15 had an average income 2.8 times that of lone parent families. Average income figures include wages and salaries as well as government pensions, benefits or allowances received. Even so, the income earned by lone parent families is much lower than that of couple families (ABS 2003c).

From the above data, it can be concluded that compared to children living in couple families, children living in lone parent families have less resources available to them. This may partially explain the higher risk associated with children living in lone parent families. Chapter 25 on 'Economic security' provides detailed information on income and the types of families that children are living in.

24 Family functioning

Family functioning is an important aspect of the family environment that influences child health and wellbeing. In general terms, family functioning is about how families relate, communicate, make decisions, solve problems and maintain relationships. The level of functioning within a family can be affected by changes in family circumstances, the interaction between parental employment and family life, specific relationships between individual family members as well as other external stressors which may affect the home environment.

Defining a single measure of family functioning is problematic. No general agreement exists as to what constitutes 'family functioning', although there is general consensus that proxy measures such as family type are inadequate (Zubrick et al. 2000a). Silburn et al. (1996) in their analysis of the 1993 Western Australian Child Health Survey, measured family functioning using indicators such as marital relationship quality, family discord, life-stress events (for example, divorce) and parent's disciplinary style. They found two aspects of family functioning—family discord and parental disciplinary style—were significant risk factors for children's poor mental health. Research studies in other countries have also shown links between parental conflict and children's wellbeing and behaviour (Grych & Fincham 1990).

The relationships that children maintain with their family, particularly their parents, are among the most important influences on healthy child development and psychological wellbeing (Shonkoff & Phillips 2000). Although it is important to recognise that parenting does not occur in a vacuum, there are many nurturing benefits for children living in families that get on together. These include having positive role models for building relationships, the ability to cope with stressful life events and the development of high self-esteem. On the other hand, families that do not get on well together tend to have high levels of conflict. These problems have adverse short- and long-term effects on the behaviour and wellbeing of children and young people.

'The relationships that children maintain with their family, particularly their parents, are among the most important influences on healthy child development and psychological wellbeing'

Table 24.1: Parents' rating of family cohesion in families with children aged 4–14 years, by selected characteristics, 1998 (per cent)

	Poor to fair	Good to excellent
Weekly household income		
<$420	12.3	87.7
$421–$680	11.7	88.3
$681–$910	7.1	92.9
$911–$1,280	6.9	93.1
>$1,280	5.2	94.8
Family type		
Original parents	6.8	93.2
Lone parent	12.8	87.2
Blended/ other	11.6	88.4

Source: AIHW analysis of the child and adolescent component of the National Mental Health Survey.

Family cohesion

The 1998 Child and Adolescent Component of the National Survey of Mental Health and Wellbeing examined the relationship between the level of family cohesion, and the mental health of children aged 4–17 years (Sawyer et al. 2000). The survey measured family cohesion by asking parents about their family's ability to get on with one another. Families with difficulty getting on with one another were characterised as follows—'They do not always agree and they may get angry'. Families' ability to get on was rated on a five-point scale, from 'poor' to 'excellent'.

Data for families with children aged 4–12 years are presented in Table 24.1 with distribution by household income and family type.

- The majority of families reported high levels of family cohesion, although the proportion of families rating their ability to get on as poor to fair was higher among the families with lower weekly household incomes.
- Family cohesion also tended to be higher in intact families (93% indicating good to excellent) than in lone parent or blended families (87% and 88% respectively).

Indicator

- **Proportion of children aged 4–12 years living in families where family cohesion is low.**

25 Economic security

Children living in families without economic security are at a greater risk of poor outcomes both in the short and longer term. When talking about economic hardship or poverty in the Australian context, people are usually referring to relative disadvantage. Relative disadvantage means that, in comparison to others in the population, a person has a standard of living that falls below an overall community standard, as opposed to absolute poverty which refers to the minimal needs, such as food and shelter, which a person requires just to survive. While there are probably very few children in Australia who are affected by absolute poverty, some children are living in families that are experiencing relative economic hardship, which can also be physically and socially debilitating.

The immediate impact of economic hardship is evident. Living in a family with low income can affect a child's nutrition, their access to medical care, the safety of their environment, the level of stress in the home, and the quality and stability of their care (Shore 1997). In addition, research confirms that for a number of health and social outcomes, including socio-emotional functioning, mental health, physical health, educational attainment and later employment prospects, children in the lowest income groups are at a higher risk of disadvantage than other children (for an overview, see Bradbury 2003 and Mayer 2002). In addition, evidence of the association between low socioeconomic status (which encompasses education and occupation as well as low income) and less favourable outcomes for children have been demonstrated throughout this report.

'Lack of employment is likely to result in immediate financial hardship, and the absence of a working role model may also impact on a child's long-term prospects for labour market success and other future outcomes'

However, although the strong association between income and outcomes for children is not contested, the mechanism through which poverty impacts on health and wellbeing is not well understood and is the subject of much debate in the research literature. Some researchers argue that more macro-level variables such as a person's position in the social hierarchy or the degree to which individuals are able to participate fully in society may better explain disparities in health and wellbeing (Marmot 2002).

This section examines the proportion of children living in families with low income as well as examining aspects of economic security including parental non-employment. Information is also presented on measures of financial stress, such as the ability of families to raise $2,000 for something important and the number of families who went without meals as a result of cash flow problems.

Household income

Income distribution is generally analysed using the concept of equivalised income. By using a special type of scaling method, different household types are taken into account. This is important because although a couple with two children may have the same income as a single person, a family has greater needs and so they cannot achieve the same standard of living as a single person. Equivalence scales adjust a household's net income for differences in size and composition. Using this method, persons are then divided into five equal groups, after being ranked according to that income, in order to compare their relative economic wellbeing (Table 25.1).

- In 2002–03, 22% of children aged 0–14 years (854,463) lived in households with incomes in the lowest quintile. The proportion of children in one-parent households with incomes in the lowest quintile was more than twice that of children in couple households, 43% compared with 17%.

Indicator

- **Proportion of children aged 0–14 years living in families where no parent is employed.**

Table 25.1: Equivalent OECD income quintiles for households with children aged 0–14 years, by type of household, Australia, 2002–03 (per cent)

	Equivalised disposable income quintile						
Household composition	**Lowest**	**Second**	**Third**	**Fourth**	**Highest**	**Total**	**Total ('000)**
Households							
Couple, one-family household	16.6	22.4	26.1	20.6	14.2	100.0	1,698,539
One parent, one-family household	38.3	29.4	21.5	8.0	2.8[a]	100.0	434,600
Multiple family household	11.5[b]	33.0	21.0[a]	23.8	10.7[a]	100.0	63,035
Total households with dependants	**20.8**	**24.1**	**25.1**	**18.2**	**11.9**	**100.0**	**2,196,174**
Children							
Couple, one-family household	17.3	24.6	26.1	19.4	12.6	100.0	3,091,655
One parent, one-family household	43.2	29.6	18.2	6.9	2.2[a]	100.0	702,937
Multiple family household	16.3[b]	33.9[a]	19.4[a]	22.3[a]	8.2[a]	100.0	99,213
Total children aged 0–14 years	**21.9**	**25.7**	**24.5**	**17.2**	**10.6**	**100.0**	**3,893,806**

(a) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(b) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

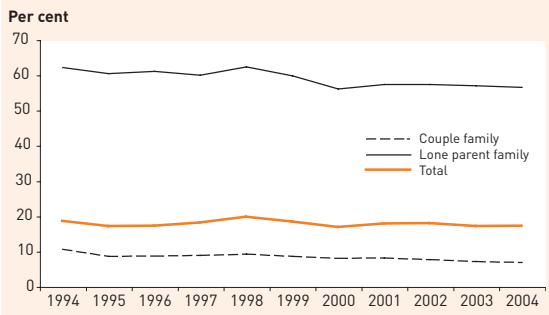
Note: Multiple family households contain two or more families. The vast majority of children in Australia (97.5%) live in one-family households.

Source: ABS unpublished data, 2002–03 Survey of income and housing costs.

Parental non-employment

Studies show that children living in families with no employed parent are at a disadvantage compared to other children because not only is lack of employment likely to result in immediate financial hardship, the absence of a working role model may also impact on a child's long-term prospects for labour market success and other future outcomes.

Figure 25.1: Children aged 0–14 years living in families where no parent is employed, June 1994 to June 2004 (per cent)



Source: ABS various years(b).

- The proportion of all children under 15 years living in families without a parent employed fell from 19% in June 1994 to 17% in June 2004, albeit with some fluctuation over this period.)
- Over the period, the proportion of children with no parent employed was considerably higher for those in one-parent families than in couple families. This is hardly surprising, given that single parents have no co-resident parent available to care for their children while they work. In 2004, among children who lived in couple families, 7% lived in families where neither parent was employed. Of children who lived in one-parent families, 57% lived in families where the parent was not employed.
- Reflecting the growth in the 1990s in the total number of single parents who were not employed, the number of children living in one-parent families where the parent was not employed increased 30% from around 363,000 in 1994 to around 471,000 in 2004. Conversely, the number of children living in couple families where neither parent was employed fell 36% from 341,000 to 219,000 over the same period.

- In 2001, approximately 16% of Indigenous Australian children aged 0–14 years lived in a family where no parent was employed.

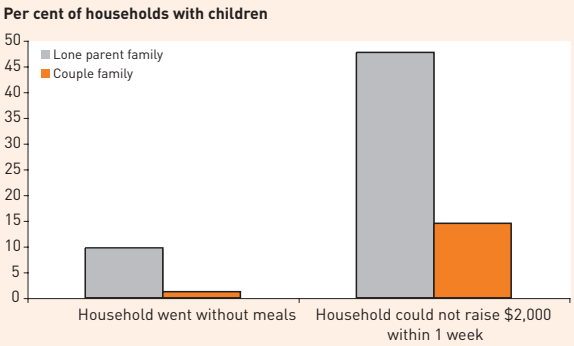
While low income and parental employment can provide a lot of information about poverty and disadvantage, these statistics should not be used in isolation (Brownlee 1990). Many researchers consider that poverty and disadvantage should be measured using both indicators of resources, such as income and indicators of 'living conditions'.

Financial hardship

Two further indicators of family poverty and financial hardship are the proportion of households with dependent children who went without food because of cash flow problems and the proportion of households with dependent children who would be unable to raise $2,000 within a week for something important.

As well as collecting information on the number of jobless families, the ABS 2002 General Social Survey asked respondents to report on a number of household financial stress indicators (ABS 2002a). The proportion of households experiencing financial stress varied markedly by family type (Figure 25.2).

Figure 25.2: Households with children aged 0–14 years with indications of financial stress, by family type, 2002 (per cent)



Source: AIHW analysis of 2002 GSS RADL.

- A small proportion of households with children aged 0–14 reported going without meals because of cash flow problems. Among couple families 1.2% went without meals compared with 9.7% of lone parent families.
- The proportion of households who said they would be unable to raise $2,000 within a week for something important also varied by household type. For couple families the percentage was 14.5% whereas for lone parent families, the proportion was much higher (47.7%).

Table 25.2: Children aged 0–14 years living in families where no parent is employed, by Indigenous status, 1996 and 2001 (per cent)

Family type		1996	2001
Couple families both unemployed	Indigenous	17.7	15.7
	Other Australians	8.4	6.8
Single parent unemployed	Indigenous	29.9	31.9
	Other Australians	9.5	10.2

Note: Percentages are calculated out of the total number of children including those children where parent's employment was not stated.
Source: 1996 & 2001 ABS Census of Population and Housing, unpublished data.

26 Children in out-of-home care

Out-of-home[3] care provides alternative accommodation to children whose parents are incapable of providing adequate care for them, or where alternative accommodation is needed during times of family conflict. Some children are placed in out-of-home care because they were the subject of child protection substantiation and require a more protective environment. While some children are placed in out-of-home care voluntarily, others may be placed through some type of court order. Such orders include care and protection orders, including formal administrative arrangements and other legal orders. This practice, however, differs greatly between jurisdictions:

- In the Northern Territory, all children in out-of-home care are on a court order or some other form of legal authority.
- In New South Wales, Victoria, South Australia, Tasmania and the Australian Capital Territory, children in out-of-home care can be placed on a range of different orders or authorities. (For example, in South Australia, children needing emergency or respite care are often placed in out-of-home care on the authority of their guardians.)

Although a child may be in out-of-home care in conjunction with being on an order, the order does not necessarily specify where the child must reside or that the child be placed in care. More information about out-of-home care can be found in the AIHW publication *Child Protection Australia 2003–04* (AIHW 2005). This report contains more detailed information about child protection in each state and territory of Australia.

Young people in out-of-home care represent a particularly disadvantaged group. Most of them have suffered child abuse or neglect, as well as the breakdown of their families. Compared with the general population, young people in out-of-home care have higher levels of aggressive/violent behaviour, higher levels of substance use, and a higher incidence of intellectual disability, mental health problems and poorer educational outcomes (Cashmore & Ainsworth 2004; Cashmore & Paxman 1996; Jackson 2001).

Where are the children placed?

Many forms of out-of-home care are available to children: foster care, placements with relatives or kin, and residential care. In addition, respite care is available as a form of temporary out-of-home care to provide short-term accommodation for children whose parents or carers are ill or unable to care for them.

Children who are placed in disability services, medical or psychiatric services, juvenile justice facilities, overnight childcare services or supported accommodation assistance placements are not included as these are beyond the scope of the data collection. The data also exclude children in unfunded placements and children living with parents where the jurisdiction makes a financial payment.

The current policy and practice emphasis is to keep children within families as much as possible. Where it has been necessary to place children in out-of-home care, the current practice is to reunite the child with the family as soon as possible. When it is necessary to place a child in out-of-home care, the preferred placement is within the wider family or community. This is particularly the case with Aboriginal and Torres Strait Islander children in accordance with the Aboriginal Child Placement Principle (AIHW 2005). In 2003, 77% of the Indigenous children needing out-of-home care were placed with a relative or kin.

'Young people in out-of-home care represent a particularly disadvantaged group. Most of them have suffered child abuse or neglect, as well as the breakdown of their families'

[3] 'Out-of-home care' is defined as out-of-home overnight care for children and young people less than 18 years of age, where the state or territory makes a financial payment.

Table 26.1: Children in out-of-home care at 30 June 2004 (per cent)

	Children aged 0–14 years in out-of-home care	
Age (years)	**Number**	**Per cent**
<1	621	3.3
1–4	4,314	22.8
5–9	6,836	36.2
10–14	7,117	37.7
Total	**18,888**	**100.0**

Source: AIHW 2005.

How many children are in out-of-home care?

At 30 June 2004, there were 18,888 children aged 0–14 years in out-of-home care in Australia. (Table 26.1). Of these children, nearly three-quarters (74%) were aged 5 years and over. Only 3% were under the age of one year.

Trends in out-of-home care

Since 2001, over 11,000 children have been admitted to out-of-home care in Australia each year. Of the children who are already in out-of-home care, a certain proportion is also discharged from care each year. A substantial number of children still remain in care in Australia.

Table 26.2: Children aged 0–14 years in out-of-home care, 1997–2004

At 30 June	Number	Rate per 1,000 children
1997	11,595	3.0
1998	11,526	2.9
1999	12,976	3.3
2000	14,209	3.6
2001	15,396	3.9
2002	16,039	4.0
2003	17,479	4.4
2004	18,888	4.7

Source: AIHW 2005.

- There was an increase of 63% in the number of children aged 0–14 in out-of-home care, from 11,595 in June 1997 to 18,888 in June 2004 (Table 26.2).
- The rate of children aged 0–14 years in out-of-home care also increased between 1997 and 2004, from 3.0 per 1,000 children aged 0–14 years to 4.7.

Characteristics of children aged 0–14 years in out-of-home care

- In 2003–04, 96% of the children in out-of-home care were placed in home-based care including foster care and with relatives/kin. Only 3% of the children were placed in residential care.
- Just over half the children (52%) in out-of-home care were boys.
- At 30 June 2004, there were 3,713 Aboriginal and Torres Strait Islander children aged 0–14 years in out-of-home care. The rate of Indigenous children in out of-home care was over five times that of other Australian children: 20.4 per 1,000 Indigenous children compared with 4.0 per 1,000 for other Australian children.

Indicator

- **Rate of children aged 0–14 years in out-of-home care.**

27 Parents with disability or chronic illnesses

Children who live with a parent with a disability or a chronic illness are sometimes involved in caring for that parent. This can affect children's opportunities for participation in schooling and social activities. Depending on the severity, the wellbeing of children of parents with a disability or mental illness may be affected by such factors as family discord, discontinuity of care, poor general parental skills, social isolation and poverty arising from the parental health status (ABS 1999; AICAFMHA 2001). Children whose parents have a mental illness are likely to be genetically predisposed to mental illness, and are more likely to suffer major depression, to experience learning disabilities and perform poorly academically, and are susceptible to substance abuse (Lancaster 1999; Kowalenko et al. 2000).

Farrell et al. (1999) reported higher rates of emotional and behavioural problems among children who live with a parent with mental illness. An estimate of 25–50% of children whose parents suffer from a mental illness experience a psychological disorder during childhood, adolescence or adulthood, compared to 10–20% in the general population. Similarly, 10–14% of children with a parent with mental illness will be diagnosed with a psychotic illness at some point in their lives, compared to 1–2% in the general population.

What do the data show?

In general, most Australian children live with parents who are in good health. In 2002, according to the HILDA survey, 16% of children in couple families had either or both parents who perceived their health to be fair or poor. The proportion of children in lone parent families where the parent reported to be in fair or poor health was 12.1%.

In 1998, approximately 673,000 (17%) Australian children aged 0–14 years lived with a parent who had a disability. The ABS 1998 Survey of Disability, Ageing and Carers defined 'disability' as the presence of one or more of 17 limitations, restrictions or impairments which has lasted, or is likely to last, for at least 6 months and restrict everyday activities (e.g. loss of sight, incomplete use of arms or fingers, difficulty learning or understanding, etc) (ABS 1999).

'Children who live with a parent with a disability or a chronic illness are often involved in caring for their parent, which can affect children's opportunities for participation in schooling and social activities'

Table 27.1: Children living in families in which a parent had a disability, 1998 (per cent)

	Families in which a parent had a disability		Children living with a parent with a disability	
	Number	Per cent	Number	Per cent
Age of children (years)				
0–4	138,362	14.3	179,655	14.0
5–9	175,160	17.6	239,086	18.1
10–14	199,377	19.5	254,200	19.5
Total 0–14	366,765[a]	17.2	672,942	17.2
Family type				
Couple families with children aged 0–14 years	299,483	17.6	560,698	17.4
Lone-parent families with children aged 0–14 years	67,282	15.6	112,243	16.4

(a) As families can have more than one child in any age group, this number does not add to the total.

Source: AIHW analysis of ABS 1998 Survey of Disability, Ageing and Carers confidentialised unit record file.

- There were 366,765 families with children aged 0–14 years (17% of all families with children aged 0–14 years) in which at least one parent reported a disability in 1998.
- Of the 672,942 children aged 0–14 years who were living with a parent with a disability, 17% were living in couple families and 16% of children were living in lone-parent families. There was no difference between the proportions of children living with a parent with a disability in lone-father or lone-mother families (ABS 2000). However, reflecting the distribution of lone-father and lone-mother families in the general Australian population, fewer children lived with a lone-father with a disability than with a lone-mother with a disability (approximately 11,095 and 101,148 respectively).

Of all children aged 0–17 years, the proportion of children living in a family where both parents had a disability was about 2% (89,500), 7% (250,800) lived in a family where only the mother had a disability and 9% (356,400) lived in a family where only the father had a disability (ABS 2000).

Indicators

- **Proportion of parents rating their health as 'fair' or 'poor'.**
- **Proportion of parents with a disability.**
- **Proportion of parents with a mental health problem.**

Type and severity of disability

Table 27.2: Proportion of children living with a parent with a disability, by type and severity of parent's disability, 1998 (per cent)

Type and severity of disability	Per cent
Main disabling condition	
Physical condition[a]	90.5
Mental or behavioural disorder[b]	11.4
Severity of limitation	
Profound or severe	27.5
Moderate or mild	72.5
All children 0–14 ('000)	**672.9**

(a) Physical condition includes cancers, endocrine diseases, diseases of the nervous system, eye, ear, circulatory system, respiratory system, digestive system and musculoskeletal system, congenital disorders, injuries and other physical conditions.
(b) Mental or behavioural disorder includes psychoses, neuroses, intellectual and developmental disorders, and other mental or behavioural disorders.
Source: AIHW analysis of ABS 1998 Survey of Disability, Ageing and Carers confidentialised unit record file.

- Of the children living with a parent with a disability in 1998, approximately 91% lived with a parent whose main disabling condition was a physical condition and about 11% with a parent whose main condition was mental or behavioural disorder.
- Approximately 73% of children lived with a parent whose disability was moderate or mild. A smaller proportion of children (28%) lived with a parent with a severe or profound limitation.

The proportion of children aged 0–17 years living in lone parent families with a parent suffering from a mental or behavioural disorder was substantially higher than the proportion living in couple families (17% and 10% respectively) (ABS 2000).

A relatively small number of young children (fewer than 5,500) took primary responsibility for caring for their parent(s). A greater proportion of children living with a parent with a disability provided care in the form of general household help (ABS 2000).

28 Neighbourhood safety

Neighbourhoods will affect children's lives differently depending on the level of advantage or disadvantage, the available resources, and the degree of social cohesion and safety that characterise the area. While other factors such as family characteristics and socioeconomic status are generally considered more important influences on children's overall health and wellbeing, there is growing evidence that neighbourhood influences can impact on children's physical and social development (Putnam 2000; Vinson 2004).

One neighbourhood factor that has been the subject of a wide variety of research relates to feelings of safety and fear of crime. It is widely understood that people should be protected from exposure to crime, particularly violent crime. Victims of violent crime may suffer serious injury, disability or death and, together with those who observe violence, are likely to experience psychological problems, such as post traumatic stress disorder. However, it is becoming increasingly clear that simply fearing the occurrence of these and other crimes is enough to experience a number of other poor outcomes.

Fear of crime

Fear of crime is typically measured in surveys by asking people how safe they feel in their neighbourhood when they are at home alone or on the streets at night and during the day. Whether well founded or not, fear of crime is a serious personal and community problem in that it detracts from people's quality of life and deters participation in the local community. In most cases, children and their families benefit greatly from actively participating in the social and cultural life of the area in which they live. However, people who perceive their neighbourhood as unsafe may be discouraged from accessing local services and recreational facilities and from creating social networks close to their homes.

Fear of crime and concerns about neighbourhood safety can impact on children's health in several ways. Firstly, there is evidence that people who perceive their neighbourhood as unsafe are less likely to engage in physical activity than other people (CDCP 1999). Parents living in areas perceived as unsafe may limit their children's physical activity by keeping them in the home and not allowing them to play outside or walk to school. Secondly, living with stress and anxiety associated with concerns about neighbourhood safety may directly impact on children's health (Ross & Mirowsky 2001).

The 2002 ABS General Social Survey (ABS 2002a) asked respondents to rate their feelings of safety in their neighbourhood. Data show that respondents from around 1 in 10 households with children indicated they felt unsafe in their neighbourhood at least some of the time (Table 28.1).

- The proportion of people in 2002 who felt unsafe both during the day and the night was highest for people in the lowest socioeconomic group (5.1%) and lowest for people in the highest socioeconomic group (0.7%). By contrast, the proportion of people who always felt safe was highest for people in the highest socioeconomic group (95.1%) and lowest for people in the lowest socioeconomic group (83.0%).
- People living in Major Cities were more likely to sometimes feel unsafe (8.3%) than people in Inner Regional areas (6.5%) and people in Outer Regional and Remote areas (5.6%).

'There is growing evidence that neighbourhood influences can impact on children's physical and social development'

Table 28.1: Adults living in households with children aged 14 years or less where neighbourhood is perceived as unsafe, by socioeconomic position and remoteness, 2002 (per cent)

	Always feels unsafe	Sometimes feels unsafe	Always feels safe
Socioeconomic disadvantage			
Lowest 20% (most disadvantaged)	5.1	12.0	83.0
Quintile 2	1.9	9.8	88.3
Quintile 3	1.8	6.0	92.2
Quintile 4	2.0	7.7	90.3
Highest 20% (least disadvantaged)	0.7	4.2	95.1
Remoteness			
Major Cities	2.2	8.3	89.5
Inner Regional	1.2	6.5	92.3
Outer Regional and Remote areas	3.3	5.6	91.1
Australia	**2.1**	**7.6**	**90.3**

Source: AIHW analysis of ABS GSS CURF data, 2002.

Poverty

People with lower incomes generally have a higher fear of crime than wealthier people (AIC: Grabosky 1995). It is well known that crime rates are higher in more disadvantaged neighbourhoods and this is likely to contribute to high levels of fear of crime among poorer people. However, the higher fear of crime among low-income people could also be related to physical and social aspects of the neighbourhoods in which many disadvantage people live. Research has found that features of the physical and social environment which indicate disorder or incivility will increase people's fear of crime (AIC: Grabosky 1995). Many of these signs of disorder and incivility, such as disrepair, rubbish, vandalism, gatherings of young males and public drinking, are more common in disadvantaged neighbourhoods.

The 2002–03 Household and Income Labour Dynamics Survey asked people how common particular signs of disorder were in their neighbourhood. Among parents living with children aged 14 years or less, signs of neighbourhood disorder were generally most common for people with the lowest socioeconomic status and least common for people with the highest socioeconomic status (Table 28.2).

Table 28.2: Parents reporting common signs of disorder in their neighbourhood, by socioeconomic position, 2002 (per cent)

Socioeconomic disadvantage	Homes and gardens in bad condition	Rubbish in streets	Teenagers hanging around	People being hostile and aggressive	Vandalism and theft	Burglary
Lowest 20% (most disadvantaged)	14.1	11.8	26.1	10.0	18.2	21.5
Quintile 2	13.1	8.5	22.6	6.5	13.0	15.6
Quintile 3	10.1	8.4	22.1	6.8	12.6	16.8
Quintile 4	6.4	7.8	14.1	3.6	9.4	13.4
Highest 20% (least disadvantaged)	4.9	4.3	14.0	2.1	8.3	16.6

Source: AIHW analysis of wave 2 HILDA data.

The impact of crime-prone neighbourhoods on children

The effect of merely living in a crime-prone neighbourhood as opposed to being a direct victim of crime is difficult to measure. Many of the negative outcomes associated with living in crime-prone neighbourhoods may also be the result of other factors commonly associated with high crime areas, such as poverty, unemployment and marginalisation.

Recent research has sought to find a direct link between living in a crime prone area and outcomes for children. This research has found that children living in neighbourhoods with high crime rates are significantly more likely to display behavioural or academic problems at school, to experience mental health problems and to become involved in crime themselves (AIC: Weatherburn & Lind 1998; Meyers & Miller 2004). However, this research also found that factors such as good parenting were effective in diminishing or eliminating neighbourhood influences.

Community factors can also be important in building resilience in children. Criminological research broadly supports the notion that crime rates are generally lower in socially cohesive communities and higher in socially disorganised neighbourhoods. Studies have found that social trust and neighbourhood cohesion can help break the link between economic disadvantage and delinquency (Putnam 2000).

Indicator

- **Proportion of households with children aged 0–14 years where neighbourhood is perceived as unsafe.**

29 Social capital

Research indicates that child development is powerfully shaped by social capital. Trust, networks, and norms of reciprocity within a child's family, school, peer group, and larger community have far reaching effects on their opportunities and choices, and hence on their behaviour and development (Putnam 2000). Children living in communities that have high levels of social capital can benefit from the positive spin-offs of community cohesion. These include: children growing up in relatively safe, low crime neighbourhoods; children being positively influenced by high trust, cooperative relationships in their surroundings; and children growing up in well-resourced areas, relatively free from poverty (Stone 2003). Braatz and Putnam (1996) and Francis et al. (1998) state that when parents and citizens become actively involved in schools students perform better, teachers become more committed, and parents and citizens take a keener interest in children's educational wellbeing (World Bank 1999).

Definitions of social capital and social cohesion

'Social capital refers to connections among individuals—social networks and the norms of reciprocity and trustworthiness that arise from them. In that sense social capital is closely related to what some have called "civic virtue." The difference is that "social capital" calls attention to the fact that civic virtue is most powerful when embedded in a sense network of reciprocal social relations. A society of many virtuous but isolated individuals is not necessarily rich in social capital' (Putnam 2000:19).

'Social cohesion can be described as the connections and relations between societal units such as individuals, groups (and) associations' (Berger-Schmitt 2002:2, following McCracken 1998). Embedded within this concept are feelings and attitudes such as shared values, trust, and a sense of belonging which shape and moderate these connections and relations (cited in AIHW 2003d:46).

'People living in disadvantaged areas where social cohesion is high cope better than those from equivalent areas where social cohesion is lower'

Different studies have used varying indicators to measure social capital. Due to data deficiencies, measures of social capital used in this section are limited to 'social and support networks' which Vinson (2004) defines as an element of social cohesion. Vinson prefers the term social cohesion to social capital as he believes that 'social cohesion subsumes some of the most important elements of "social capital"'. The main indicator of a support network is the access to social support in times of crisis. Additional information on the ability of families to ask for small favours and having regular contact with family and friends will also be included.

Access to social support is suggested to have a positive impact on health (Baum et al. 2000) and to buffer stress (Cassel 1976). Findings by Vinson (2004) and Putnam (2000) also indicate that people living in disadvantaged areas where social cohesion is high cope better than those from equivalent areas where social cohesion is lower. The amount and frequency of contact with family and friends may indicate the strength of a social network as these are the people that one will turn to in time of need for care and support.

ABS 2002 General Social Survey (GSS) data on various measures of social and support networks by family characteristics (family type, region of residence, employment status and number of people employed) are given in Table 29.1.

Table 29.1: Adults living in one-family households with children aged 14 years or less who had social support, by household type, 2002 (per cent)

Household characteristics	Able to get support in time of crisis	Could ask for small favours	Has weekly contact with family and friends
Family type			
Couple family	95.2	95.1	96.3
Lone parent family	94.7	90.9	95.6
Region of residence			
Major Cities	95.2	94.0	96.6
Inner Regional	95.8	95.4	95.2
Outer Regional and Remote	93.9	96.5	95.7
Employment status			
Employed	96.4	96.4	96.7
Unemployed	90.7	91.3	95.6
Not in labour force	92.1	89.4	94.6
Number employed in household			
None	88.4	86.0	92.0
One	94.2	93.5	96.9
Two or more	96.9	96.7	96.6

Source: AIHW analysis of 2002 GSS RADL.

Access to social capital

- Most Australian families with children in 2002 were able to access social support in times of crisis.
- For many families with young children it is important to maintain a strong link with their families, friends, neighbours and community to whom they can turn when in need for support. This support can come in many forms: being able to get help in times of crisis; asking for small favours like taking a child to school; being able to talk things over or seek advice.
- Regardless of family type, those with children aged 0–14 years had support available to them during a crisis.
- Compared to those living in Major Cities and Inner Regional areas, those with children living in Outer Regional and Remote areas had less support available in a crisis.
- Being in the labour force and having one or more people in employment made it more possible for those with children to get support during a crisis.
- Couple families and those in employment had regular contacts with family & friends and were in a better position to ask for small favours.
- Couple families with children aged 14 years or less were in a better position to ask for small favours than were lone parent families with children of the same age. Both family types with children had regular contacts with family and friends.
- Place of residence had virtually no impact on the ability of people to have regular contact with family and friends but living in Major Cities made it difficult to ask for small favours.

Indicator

- **Proportion of households with children under 15 years of age where respondent was able to get support in time of crisis from persons living outside the household.**

Part IV

Future directions

30 Monitoring the health, development and wellbeing of Australia's children—next steps

Research has established that behavioural and environmental factors in conjunction with biological factors are important predictors of healthy development of children. There is increasing recognition that the health and wellbeing of young children cannot be addressed in isolation from the family, community, and broader socioeconomic, political and cultural environments in which children live. A child's experience in life is largely influenced by the care they receive, or fail to receive, from their families and from the wider community. These experiences have a lasting effect on all aspects of a child's immediate and future wellbeing: physical and mental health, learning and education, employment, and social interaction. It was largely on this premise that the National Agenda for Early Childhood was initiated in the second half of 2002 (Commonwealth Task Force on Child Development, Health and Wellbeing 2003).

The National Agenda recognises that it is vital to achieve cooperation across and between governments, across sectors, academia, service providers, professionals and industry and with children, families and communities to achieve progress for children. This cooperation is also vital to measuring and reporting on how Australia's children are faring and, over time, how such collaborations are responding to the diverse needs of children. It is the aim of the National Agenda to provide a 'road map' to guide collaboration and future national investment in the area of early childhood (ACCAP 2004).

The success of the National Agenda depends on having accurate, timely and relevant information on the issues, policies and systems relevant to children. Therefore, the Australian Council for Children and Parenting (ACCAP), an advisory group to the Minister for Family and Community Services, organised a workshop to develop a nationally agreed reporting framework for Australia's children. The workshop brought together key governmental, community and academic stakeholders in early childhood policy and practice together with data and reporting experts to explore options for improving national reporting on children.

The workshop participants identified a number of areas that are critical in influencing children's health, development and wellbeing and for which indicators needed to be developed. The AIHW developed a set of indicators across these areas which formed the basis for this report, and were refined following input from the workshop participants, and our own advisory group who also participated in the workshop. This report was recognised by participants as a solid basis for building a partnership across all sectors to develop core population-based national indicators of child development, health and wellbeing in Australia (ACCAP 2004).

A copy of the workshop report is available from <www.facs.gov.au/accap>.

What is missing?

Preceding chapters have reported against a comprehensive set of indicators of Australian children's health, development and wellbeing and the contributing physical, mental, environmental, family and community influences. What is lacking are specific indicators to monitor the performance of systems and services that are available to children and their families. There is increasing evidence about the effectiveness of interventions at the child, family and community level for promoting child health, development and wellbeing, both during childhood and over the life course. A key message arising out of community consultation on the National Agenda for Early Childhood was that access to affordable and socially and culturally appropriate services and support systems that strengthen families and community capacity to look after children is important for improving outcomes for children. While there are numerous health and welfare systems for children and families in place, there are no indicators or coordinated data collections to monitor their impact on the targeted population.

In addition, this report has identified where there are gaps in existing data sources and where new indicators need to be developed.

Indicators on system performance

There are a number of new and existing health and welfare systems and services specifically designed for children and families. Some examples of these are childhood immunisation, child protection services and supported accommodation assistance programs. Although not reported as system indicators, indicators of overall impact of these services on children were included in this report. While there are established indicators for assessing the impact they make on the population, for example, there are no indicators to measure the appropriateness of these services for different population groups. Sets of system performance indicators for Australia are available and a number of indicators for children can be derived from these existing sets (See NHPC 2004; SCRGSP (Productivity Commission) 2005; SCRGSP 2003). However, indicators to assess issues such as the accessibility, appropriateness and quality in the existing indicators are limited. In general, indicators on system performance are lacking because more attention is focused on outcomes rather than the process involved in achieving them.

Monitoring system performance is complex, not least because there is no readily defined 'system'. While there is good health, learning and care infrastructure in place in Australia, often programs have been developed independently of one another, financed through various funding streams, and delivered at different levels of government as well as by a range of non-government organisations. This has resulted in a fragmented approach to policy and the delivery of assistance.

There is a wide range of interventions directed at children and their families being delivered across different settings, many of which are on a small scale tailored to local needs and priorities. Given the cross-sectoral nature of child health, development and wellbeing, it is important to measure coordination between services and supports, such as service linkages, referral mechanisms and joint planning processes. There is also the added difficulty in measuring outcomes and attributing them to system performance because an outcome can be the result of many factors, especially when that outcome is achieved many years after the intervention, for example, in the case of attributing success at school to attendance at a quality early learning program.

Regular monitoring of services, supports and policies directed at improving outcomes for children and families in Australia, such as through relevant AIHW publications, is important to make sure that interventions are actually making a positive difference, represent good use of public money, and to help identify areas where additional investment may be needed. There are not, for example, good data on the proportion of children who participate in formal early learning programs or on the characteristics of families with young children who do not access early learning programs or why. There are no national data on the number of parents accessing parenting education programs or mainstream family support services which assist them in their parenting role. Apart from the intensive family support services data, there are no other data at the national level on the support services used by children in need of protection and their families.

The type of information that might be collected under and reported against system performance includes information about accessibility, appropriateness, quality, effectiveness, efficiency and sustainability. It is important that indicators on system performance are internationally comparable as well as locally relevant.

It is desirable that longitudinal data are used in assessing the effect of services on outcomes. In the absence of these data, population-based surveys at regular intervals and administrative data collections which give trend data are useful ways to measure the effectiveness of programs. Linking existing data from different sources will also improve our ability to track progress over time. Research and specific program evaluation will be important for better understanding relationships between outputs (interventions) and outcomes (for example, change in the health status of individuals and populations) (NHPC 2001). Similar pathways of influence need to be considered when measuring the impact of welfare systems on outcomes.

Data gaps in existing indicators

Indigenous identification in data collections varies considerably between states and territories and different data collections. Although most data collections include an Indigenous status variable, the accuracy with which the Aboriginal and Torres Strait Islander people are identified in these datasets, uncertainties about Indigenous population estimates, and concerns about whether the survey methods employed are always the most suitable make it difficult to use such data with confidence. These issues have restricted the presentation of data by Indigenous status reported in this report and analysis of key issues affecting Indigenous children, such as hearing loss due to chronic middle ear infections. Currently there is a significant amount of work being done, by the ABS and AIHW in partnership with state and territory authorities, to improve the completeness of Indigenous identification in key data collections. A detailed description of these national initiatives and future plans are provided in *The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples* (ABS & AIHW 2003).

There are a number of gaps too in data about outcomes for other sub-populations of Australian children to allow meaningful comparisons, such as children from culturally and linguistically diverse backgrounds, especially new arrivals, and, for some outcome domains, children living in geographically isolated areas.

There is a scarcity of data on issues such as children's learning, social and emotional development, safety and security, crime, victimisation, as well as family functioning and social capital. The social and emotional domain in particular has been identified as an area for future indicator development.

There is a lack of recent objective national data on a number of areas highly relevant to children's health, such as overweight and obesity, nutrition and physical activity, and the incidence of Type 2 diabetes in children. National data sources for reporting on overweight and obesity are now almost a decade old and, for that, this report has relied on jurisdictional data in this area. No recent national data are available for indicators of the level of physical activity among children. A National Physical Activity for Health Action Plan developed by the Strategic Inter-Governmental forum on Physical Activity and Health (SIGPAH) of the National Public Health Partnership, and a National Plan for Health Weight 2008, developed by the National Obesity Taskforce, have included children and families as a key target group. These plans recognise the monitoring of levels of physical activity and overweight and obesity as a priority, and the need for a consistent system for doing so. The ABS National Health Surveys are useful for measuring the healthy behaviours of adults but need to be extended to include measured data on children's height and weight as well.

Statistics in this report on the mental health status of children are based on data from a survey conducted in 1998. Although the longitudinal surveys on Australian children, including Indigenous children, may provide some information on children's mental health status, these studies are limited to children of young ages. Since the scope of this report is children aged 0–14 years, new data collections are needed to understand the current situation.

More data are needed on the risk and protective factors related to child health, development and wellbeing. For example, reading to children is an area where national data would be useful as this is an important indicator of literacy acquisition. There are currently no national data available on the proportion or duration of Australian babies exclusively breastfed or on the prevalence of smoking and substance abuse in pregnancy. There are also significant gaps in the current national data on child protection, mainly due to the difficulties and jurisdictional differences in both defining and measuring abuse and neglect.

Where to next?

At the ACCAP workshop, it was agreed that the Australian Government Taskforce on Child Development, Health and Wellbeing, together with the AIHW and ACCAP, would develop a process for the continuing development of a reporting framework, while considering the need to:

- build on the momentum of the workshop to continue the development of indicators and cross-sectoral and jurisdictional engagement in the process;
- recognise the time and effort involved in contributing to the development of indicators;
- ensure an efficient reference capacity—a number of options were canvassed including reconvening the larger group, forming smaller groups based on areas of expertise or broadening the membership of the AIHW Advisory Group;
- ensure ongoing engagement of Indigenous people's expertise; and
- use existing resources and reference capacity wherever possible.

The importance of involving state and territory governments in the ongoing development of a national reporting framework was also recognised. The difficulties of working cross-sectorally across jurisdictions were noted, with the Council of Australian Governments (COAG) being the only ministerial level body with cross-sectoral decision making capacity. However, committees such as the Community Services Ministers Advisory Council (CSMAC) and the National Public Health Partnership (NPHP) may be well placed to carry this work forward.

Once this report is released, there may be a follow-up ACCAP workshop to consult with key stakeholders, including state and territory government representatives, to address areas identified by the report as requiring further indicator and data development.

New data developments relevant to children

Currently there are three national-level research projects in Australia, which have a particular focus on children. Two of these are longitudinal projects—Growing Up In Australia: The Longitudinal Study of Australian Children (LSAC), and Footprints in Time: The Longitudinal Survey of Indigenous Children (LSIC). Another important national research project is the development and testing of the Australian Early Development Index (AEDI), a population-level measure of how children are faring on school entry which may have potential as a national measure.

- **Growing Up In Australia: The Longitudinal Study of Australian Children** is aimed at examining the impact of Australia's unique social and cultural environment on the next generation. The study has a broad, multi-disciplinary base, involving a nationally representative sample of children, and examining topical issues of policy relevance. It explores family and social issues relevant to children's development, and addresses a range of research questions about family functioning, health, non-parental child care, and education. Its longitudinal structure will enable policy makers and researchers to determine critical periods for the provision of services and welfare support and identify the long-term consequences of broad policy innovations. Data will be collected over 7 years from two cohorts every 2 years. The first cohort of 5,000 children aged less than 12 months in 2003–04 will be followed until they reach 6 to 7 years of age, and the second cohort will comprise 5,000 children aged 4 to 5 years in 2003–04. Study informants include the child (when of an appropriate age) and their parents, carers and teachers (www.aifs.gov.au/growingup/).

- **Footprints in Time: The Longitudinal Survey of Indigenous Children** aims to improve understanding of, and policy response to, the diverse circumstances faced by Aboriginal and Torres Strait Islander children, their families and their communities. The survey includes a broad plan to track two age groups over time: 2,000 babies aged under 12 months and 2,000 4–5 year olds. Footprints in Time will provide a data resource that can be drawn on by Australian governments, researchers, service providers, parents and communities. This resource will provide a better insight into how a child's early years affect the way they develop and mature. For more information see <www.facs.gov.au/internet/facsinternet.nsf/aboutfacs/programs/indigenous-lsic.htm>.
- **The Australian Early Development Index: Building Better Communities for Children** project will enable up to 60 communities throughout Australia to assess how their children are developing by the time they reach school age. This 3 year project is conducted by the Centre for Community Child Health in partnership with the Telethon Institute for Child Health Research. It is an initiative of the Australian Government's National Agenda for Early Childhood and supported by a grant from Shell Australia.

  The AEDI is a community-level measure of young children's development based on a teacher-completed checklist (the AEDI checklist). It consists of over 100 questions measuring five developmental domains: language and cognitive skills; emotional maturity; physical health and wellbeing; communication skills and general knowledge; and social competence. In 2004 the AEDI was completed on over 5,900 children.

  For more information, see <www.australianedi.org.au>.
- In terms of monitoring the educational performance of Australian students, all students at Years 3, 5 and 7 are now assessed annually against national benchmarks in reading, writing and numeracy. To supplement these annual assessments in core areas, MCEETYA has agreed to national sample assessments to enable the monitoring of standards in the areas of primary science (Year 6), civics and citizenship (Years 6 and 10) and information and communications technology (Years 6 and 10). The first national sample assessment of primary science took place in 2003, civics and citizenship assessments commenced in 2004, and the first assessment in information and communications technology is intended for late 2005. The results of these assessments will be reported in the annual National Reports on Schooling in Australia as well as in separate monographs.
- Currently, the ABS National Children and Youth Statistics Unit (NCYSU) is reviewing the available information on children and youth with a view to producing an Information Development Plan. This plan will assess the quality of existing data on children and youth, and will identify data gaps, overlaps and deficiencies. The plan will present information priorities for children and youth, and will provide a framework for systematic improvement, integration and use of data sources. The overall objective of the plan is to improve the quality and quantity of data available on children and youth and to facilitate access to this data.
- In addition, the establishment of the Australian Research Alliance for Children and Youth (ARACY) is an important step towards strengthening collaborations between researchers, policy makers and practitioners and building our capacity to disseminate research from various disciplines and sources.

Continuing support for these or similar studies and networks in Australia will provide a valuable source of data for disentangling the interactions between family and community and socioeconomic influences, and child outcomes. This has been difficult to achieve with administrative data sources or from one-off surveys which give a snapshot view of children's circumstances. Longitudinal studies are also useful tools for monitoring systems performance: their appropriateness, effectiveness, efficiency, safety, responsiveness, continuity and accessibility, and their impact on outcomes.

AIHW data developments

The AIHW is undertaking a number of data development activities which are highly relevant to Australian children. These are briefly outlined below.

Juvenile Justice National Minimum Data Set (JJ NMDS)

The JJ NMDS is a collection being implemented by the AIHW on behalf of NCSIMG and the Australasian Juvenile Justice Administrators (AJJA). Each state and territory department responsible for the management of juvenile justice in their jurisdiction, as well as the ABS, AIC and Productivity Commission, contributes to its overseeing committee, the JJ Data Sub-Committee. The AIHW has the role of data custodian for the collection.

The JJ NMDS provides a unique source of information on the flow of young offenders through the justice system over time, and also from one form of 'intervention' to another. The foundation of this is the concepts of 'juvenile justice episode' and 'supervision period'. A supervision period may be composed of any number of episodes.

De-identified data will be collected from each juvenile justice client with regard to their date of birth, sex and Indigenous status. For each client episode, data will be collected on the episode type (e.g. pre-sentence remand, sentenced to a community order, etc.), transfers within or between facilities or jurisdictions, last known home suburb/postcode, the reason for exit at the end of the episode, and the start and end dates for the episode.

Children's Services NMDS

The AIHW in consultation with the Children's Services Data Working Group (CS DWG) is currently developing a Children's Services National Minimum Data Set (CS NMDS) for child care and preschool services. A core set of variables relating to these services has been pilot-tested and further testing was conducted in every jurisdiction during 2004. The final report on the development of the NMDS, and the final data dictionary should be complete in mid-2005. The new collection will provide nationally comparable data on children who use these services and the childcare workforce for the first time.

Child Protection and Out-of-home care NMDS

The AIHW is the data custodian for child protection data since 1991. The AIHW has an ongoing agreement with the states and territories to collect and report on this on their behalf. There are significant gaps in the current national data on child protection. Apart from the intensive family support services data, there are no other data at the national level on the support services used by children in need of protection and their families. Work is currently being undertaken by National Child Protection and Support Services (NCPASS) to broaden the scope of the national data collection and to improve comparability. A new national framework has been developed to count responses to calls received by community services departments in relation to the safety and wellbeing of children, including responses that occur outside the formal child protection system. Data elements such as the provision of advice and information, and assessment of needs, as well as general and intensive family support services, are incorporated into the new framework. It is proposed that national reporting will be aligned with this framework over the next few years.

In the next few years, the data will be provided to the AIHW in unit record format. This has been agreed to by each jurisdiction. The development of the data dictionaries to support this collection, based on the new reporting framework, has been concluded and will be pilot tested over the next 12 months. A feasibility study commenced in early 2005.

SAAP NDC Data Development

From 1 July 2005, the SAAP National Data Collection (NDC) will implement a new, more robust statistical linkage key that will allow for analyses of SAAP services over long periods of time, including analyses of the children's return to SAAP services as adults. Furthermore, the new linkage key aligns with that used by other welfare programs (e.g. HACC, disability services, and possibly juvenile justice and alcohol and drug services) and this will allow for studies, within agreed protocols, of usage of other welfare services by children in SAAP.

The SAAP NDC will also include an Indigenous identifier for children from 1 July 2005.

Data sources

AIHW Mortality Database

The AIHW Mortality Database is held at the AIHW for the purpose of data analysis in health research. The database is primarily used for cause of death analysis, and contains demographic information for analysis according to population groups (e.g. age, sex, Indigenous status, country of birth, geographic location).

Data availability: Annual from 1964 onwards

Further information:
<www.aihw.gov.au/mortality/index.cfm>

AIHW National Hospital Morbidity Database

The National Hospital Morbidity Database (NHMD) is compiled by the Institute from data supplied by the state and territory health authorities. It is a collection of electronic confidentialised summary records for admitted patients separated in public and private hospitals in Australia. All records are based on separation dates.

Hospital records are for 'separations' and not individuals, and as there can be multiple admissions for the same individuals, hospitalisation rates do not usually reflect the incidence or prevalence of the disease or condition in question.

Data availability: Annual from 1993–94 onwards

Further information:
<www.aihw.gov.au/hospitals/index.cfm>

National Diabetes Register

The National Diabetes Register (NDR) is a database that collects information about people who use insulin as part of their treatment for diabetes.

It includes persons who began using insulin for management of diabetes on and since 1 January 1999, and who have consented to be included in the NDR. These include persons using insulin to manage Type 1, gestational and Type 2 diabetes.

Data availability: All new cases of insulin-treated diabetes mellitus from 1 January 1999 onwards

Further information:
<www.aihw.gov.au/diabetes/ndr.cfm>

National Health Survey

The National Health Survey is conducted by the Australian Bureau of Statistics. Surveys in this series collect information about the health status of Australians, their use of health services and facilities, and health-related aspects of their lifestyle. The aims of the survey are to: obtain national benchmark information on a range of health issues, enable trends in health to be monitored over time, and provide information on health indicators for national health priority areas and for important subgroups of the population.

Data availability: 1989–90, 1995 and 2001

Further information: ABS 2002c.

Survey of Disability, Ageing and Carers

The Disability, Ageing and Carers Survey is conducted by the Australian Bureau of Statistics. It provides information on people with disabilities, older people and people who provide assistance to others because of their disabilities. Households with a member (such as parent or child) with a disability were identified, together with families in which a member is a primary carer. The survey sample includes private dwellings and selected non-private dwellings (such as hotels, motels, hospitals, nursing homes and other establishments providing care accommodation, but excluding corrective institutions). The survey was conducted in both urban and rural areas in all states and territories, but since 1997 excludes persons living in some remote and sparsely settled parts of Australia.
Data availability: 1981, 1988, 1993, 1998 and 2003
Further information: ABS 2004c.

National Cancer Statistics Clearing House (NCSCH)

The AIHW maintains the National Cancer Statistics Clearing House (NCSCH). Information on the incidence of cancer in the Australian population is provided to the NCSCH by the state and territory cancer registries. The NCSCH is the only national database of cancer incidence in Australia.

Data availability: The earliest cases recorded in the database are those diagnosed in 1982.

Further information:
<www.aihw.gov.au/cancer/ncsch/index.cfm>

Household and Labour Dynamics in Australia (HILDA) Survey

The Household, Income and Labour Dynamics in Australia (or HILDA) Survey is a household-based panel survey, funded by the Australian Government, which aims to tracks all members of an initial sample of households over an indefinite life. The first wave of the survey was conducted in the second half of 2001.

Data are collected on a wide range of issues, including: household structure, family background, marital history, family formation, education, employment history, current employment, job search, income, health and wellbeing, child care and housing. In addition, in every wave there is scope for additional questions on special topics.

Data availability: 2001 (wave 1), 2002 (wave 2), 2003 (wave 3)

Further information: <www.melbourneinstitute.com/hilda/>

The Child and Adolescent Component of the National Survey of Mental Health and Wellbeing

The Child and Adolescent Component of the National Survey of Mental Health and Wellbeing was commissioned by the Mental Health Branch of the then Commonwealth Department of Health and Aged Care and undertaken by the University of Adelaide.

Households were randomly selected in proportion to the population of each state and territory, and spread proportionally across metropolitan and non-metropolitan areas (except in the Northern Territory, where only children in metropolitan areas were included). A representative sample of 4,500 children was recruited, and the response rate for the survey was 70%. Information was gathered from parents of children and from adolescents aged 13–17 years. Parents were interviewed, and both parents and adolescents completed a self-report questionnaire.

Data availability: 1998

Further information: Sawyer et al. 2000.

Abbreviations

AACR	Australasian Association of Cancer Registries
ABS	Australian Bureau of Statistics
ACAM	Australian Centre for Asthma Monitoring
ACCAP	Australian Council for Children and Parenting
ACIR	Australian Childhood Immunisation Register
ADGP	Australian Divisions of General Practice
ADHD	Attention-Deficit Hyperactivity Disorder
AIC	Australian Institute of Criminology
AICAFMHA	Australian Infant, Child, Adolescent and Family Mental Health Association
AIHW	Australian Institute of Health and Welfare
AMA	Australian Medical Association
ASGC	Australian Standard Geographical Classification
ASSAD	Australian Secondary Students Alcohol and Drug survey
BMI	Body Mass Index
CDCP	Centers for Disease Control and Prevention (US)
DHAC	Australian Government Department of Health and Aged Care
dmft	Number of decayed, missing and filled deciduous teeth
DMFT	Number of decayed, missing and filled permanent teeth
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders, 4th edition
DSRU	Dental Statistics Research Unit
FaCS	Australian Government Department of Family and Community Services
GDP	Gross Domestic Product
GSS	General Social Survey
Hib	Haemophilus influenzae type b
HILDA	Household and Income Labour Dynamics in Australia survey
HREOC	Human Rights and Equal Opportunity Commission
LSAC	Longitudinal Study of Australian Children
MCEETYA	Ministerial Council on Education, Employment, Training and Youth Affairs
NATSIS	National Aboriginal and Torres Strait Islander Survey
NCIRS	Australian National Centre for Immunisation Research and Surveillance of Vaccine Preventable Diseases
NCP	National Crime Prevention
NCSCH	National Cancer Statistics Clearing House
NDARC	National Drug and Alcohol Research Centre
NDSHS	National Drug Strategy Household Survey
NHMRC	National Health and Medical Research Council
NHPA	National Health Priority Area
NHPC	National Health Performance Committee
NHS	National Health Survey
NISU	National Injury Surveillance Unit
NMDS	National Minimum Data Set
NNS	National Nutrition Survey
NPSU	National Perinatal Statistics Unit
NSWCCYP	New South Wales Commission for Children and Young People
OECD	Organisation for Economic Co-operation and Development
ROGS	Report on Government Services
SAAP	Supported Accommodation Assistance Program
SF-36	Short Form 36
SIDS	Sudden Infant Death Syndrome
TFR	Total Fertility Rate

TIMSS	Third International Mathematics and Science Study
UNICEF	United Nations Children's Fund
USDHHS	United States Department of Health and Human Services
WHO	World Health Organization

States/territories

ACT	Australian Capital Territory
NSW	New South Wales
NT	Northern Territory
Qld	Queensland
SA	South Australia
Vic	Victoria
WA	Western Australia
Tas	Tasmania

Glossary

Aboriginal: A person who identifies himself or herself to be of Aboriginal origin. See also **Indigenous.**

Acute: Coming on sharply to a crisis and often brief, intense and severe.

Age-specific rate: A rate for a specific age group. The numerator and denominator relate to the same age group.

Age standardisation: A method of removing the influence of age when comparing populations with different age structures.

ASGC Remoteness Index: Refers to the categoric classification. This classification consists of six ASGC Remoteness Area classes (Major Cities, Inner Regional, Outer Regional, Remote, Very Remote and Migratory). Each ASGC Remoteness Area class (excluding Migratory) consists of a range of ARIA+ index values (AIHW 2004g).

Birth cohort: People who are born in the same year.

Birthweight: The first weight of the baby (stillborn or liveborn) obtained after birth (usually measured to the nearest 5 grams and obtained within 1 hour of birth).

Blended families: A couple family containing two or more children, of whom at least one is the natural child of both members of the couple, and at least one is the step-child of either member of the couple.

Cause of death: From information reported on the medical certificate of cause of death, each death is assigned an underlying cause of death according to rules and conventions of the 9th or 10th revision of the International Classification of Diseases.

Child protection investigation: The process whereby the community services department obtains more detailed information about a child who is the subject of a notification and makes an assessment about the harm or degree of harm to the child and the child's protective needs.

Child protection notifications: A report is made to an authorised department by persons or other bodies making allegations of child abuse or neglect, child maltreatment or harm to a child. Where it is claimed that two children have been abused or neglected, this is counted as two notifications, even if the children are from one family.

Child protection substantiation: A child protection notification made to relevant authorities which was investigated, the investigation was finalised, and it was concluded that there was reasonable cause to believe that the child had been, was being or was likely to be abused or neglected or otherwise harmed.

Chronic condition: An illness that lasts, or is expected to last, for 6 months or more. These include asthma, cancer, diabetes, rheumatic heart disease, heart attack and stroke.

Conditions originating in the perinatal period: Conditions that have their origin in the perinatal period even though death or morbidity occurs later. These include pregnancy and birth complications, birth trauma, respiratory and cardiovascular disorders, infections, and disorders related to the length of gestation and foetal growth.

Confinement: Pregnancy resulting in at least one birth.

Congenital: A condition that is recognised at birth, or that is believed to have been present since birth, including conditions which are inherited or caused by environmental factors.

Core activity restrictions: The extent of a person's disability. Core activities are defined as self-care (bathing, dressing, eating, using toilet), mobility (moving around at home and away from home, getting into or out of bed or chair, using public transport), and communication (understanding and being understood by others). A person with a profound restriction is unable to perform a core activity, or always needs assistance with that activity, while a person with a severe restriction sometimes needs assistance to perform the activity.

Deciduous teeth: Also called baby or milk teeth. The teeth that are replaced by permanent (adult) teeth during childhood.

Dental caries: The disease process leading to tooth decay.

Diagnosis: A decision based on the recognition of clinically relevant symptomatology, the consideration of causes that may exclude a diagnosis of another condition, and the application of clinical judgment.

Disability: The presence of one or more of 17 restrictions, limitations or impairments.

Diseases: The underlying cause is defined as the disease which initiated the train of events leading directly to death. Deaths from injury or poisoning are classified according to the circumstances of the violence which produced the fatal injury, rather than to the nature of the injury.

dmft: The number of deciduous teeth currently decayed, extracted due to decay or with filling.

DMFT: The number of permanent (adult) teeth currently decayed, extracted due to decay or with filling.

Exclusive breastfeeding: Breastfeeding only—no other liquids or solids.

External cause: Environmental event, circumstance and/or condition as the cause of injury, poisoning and/or other adverse effect.

Externalising problems: Anti-social or under-controlled behaviour such as delinquency and aggression.

Full breastfeeding: Breastfeeding which may also include use of other milk and milk substitutes.

Gestation: The carrying of young in the uterus from conception to delivery.

Hospitalisation: This is the term used in this report to refer to the episode of care, which can be a total hospital stay (from admission to discharge, transfer or death), or a portion of a hospital stay beginning and ending in a change of type of care (for example, from acute to rehabilitation).

Immunisation: Inducing immunity against infection by the use of antigen (vaccine) to stimulate the body to produce its own antibodies. See also **Vaccination**.

Incidence: The number of new cases (of an illness or event, etc.) occurring during a given period. See also **Prevalence.**

Income units: Individuals or related groups of people living in the same household that share income.

Indicator: A key statistic that indicates an aspect of population health status, health determinants, interventions, services or outcomes. Indicators are designed to help assess progress and performance, as a guide to decision making. They may have an indirect meaning as well as a direct one. For example, Australia's overall death rate is a direct measure of mortality but is often used as a major indicator of population health.

Indigenous: A person who identifies himself or herself to be of Aboriginal, Torres Strait Islander or both Aboriginal and Torres Strait Islander origin. See also **Aboriginal**, or **Torres Strait Islander**.

Infants: Children aged less than 1 year.

Internalising problems: Inhibited or over-controlled behaviour such as anxiety and depression.

Intervention (for health): Any action taken by society or an individual which steps in (intervenes) to improve health, such as medical treatment and preventive campaigns.

Live birth: Live birth is the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy, which, after such separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached; each product of such a birth is considered live born (WHO).

Medicare: A national, government-funded scheme that subsidises the cost of personal medical services and which covers all Australians to help them afford medical care.

Morbidity: Refers to ill-health in an individual and to levels of ill-health in a population or group.

National Health Priority Areas (NHPA): The NHPA initiative is a collaborative effort involving the Australian Government and state and territory governments that seeks to focus public attention and health policy on those areas that are considered to contribute significantly to the burden of illness in the community, and for which there is potential for health gain.

National Minimum Data Set (NMDS): A National Minimum Data Set (NMDS) is a minimum set of data elements agreed for mandatory collection and reporting at a national level.

Neonatal: The period of 28 days (4 weeks) after birth.

Neoplasms: Abnormal growth of tissue which may be benign or malignant; includes cancers and leukaemias.

Organisation for Economic Co-operation and Development (OECD): An organisation of 24 developed countries, including Australia.

Perinatal period: The period between 20 weeks (140 days) of gestation and 28 days after birth.

Postnatal: The period of time after birth.

Prevalence: The number or proportion (of cases, instances, etc.) present in a population at a given time. See also **Incidence**.

Quintile: A group derived by ranking the population according to specified criteria and dividing it into five equal parts.

Socioeconomic status: A relative position in the community as determined by occupation, income and level of education.

Statistical Local Area: Based on the administrative areas of local government where these exist. Where there is no incorporated body of local government, SLAs are defined to cover the unincorporated areas. The SLA 'is the base spatial unit used by the Australian Bureau of Statistics (ABS) to collect and disseminate statistics other than those collected in Population Censuses' (ABS 2002d).

Step-families: A couple family containing one or more children, at least one of whom is the stepchild of either member of the couple and none of whom is the natural or foster child of both members of the couple.

Survival rates: The proportion of individuals diagnosed with a specific condition that have survived after a specified period of time.

Torres Strait Islander: A person who identifies himself or herself to be of Torres Strait Islander origin. See also **Indigenous**.

Vaccination: The process of administering a vaccine to a person to produce immunity against infection. See also **Immunisation**.

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