DONNA WATERS

LEARNING OBJECTIVES

In this chapter you will:

• Be introduced to the demographic profile of Australia’s children and young people and the measures used to monitor their health and wellbeing
• Gain a sense of the current health and wellbeing of children and young people living in Australia
• Consider existing and emerging threats to the health and wellbeing of Australia’s children and young people within a global context
• Reflect on your knowledge of the health and wellbeing of Australia’s children and young people, and how you might use this knowledge in your work as a nurse
Introduction

This chapter examines the health of children and young people growing up in Australia. The aim is to consider children and young people in a more global context and as the future population of Australia. We will look at population characteristics, challenges to healthy growth and development, and emerging health and social trends. We will also define and describe some of the measures (or indicators) of children and young people’s health referred to throughout the text.

The future role of the paediatric nurse is not only shaped by emerging physical threats such as childhood obesity, injury and chronic illness, but also by behavioural, developmental and mental threats resulting from the rapid social and environmental change affecting children and young people all over the world. We invite you to consider the idea that the health and welfare of the children and young people of Australia are as much determined by the context of the past and present as they will be by the context of the future.

As you read more widely about the health and wellbeing of children and young people, you will become aware of many different definitions and descriptors for age groups within this population. The Australian Bureau of Statistics (ABS), for example, defines children as those aged under 15 years of age and young people as being 15–24 years of age. In Australia, legal adulthood is established at 18 years of age, and the ABS defines young adults as being in the age range 18–34 years.

In this text, infants, children, adolescents and young people approaching adulthood (up to 18 years of age) collectively constitute the group defined as Australia’s children and young people. We will use the age range 0–4 years to describe the period of infancy and early childhood, 5–12 years as childhood and 13–18 years as adolescence.

CASE STUDY 1.1

Australia – the ‘lucky country’?

According to the major indices of a successful society, Australia ranks as one of the best places to live in the world. The population of this somewhat isolated continent – the sixth-largest land-mass in the world – enjoys health, housing, nutrition, income, civil rights and a strongly performing economy. A comparatively small total population of 24 million people clusters towards the moderate climates and highly urbanised areas of the east coast, with more than 11 million Australians settled in the largest cities of Melbourne, Sydney and Brisbane.

Aboriginal Australians inhabited the continent for tens of thousands of years before colonisation by the British in 1788. After centuries of discrimination and exploitation, Aboriginal and Torres Strait Islander peoples now make up less than 3 per cent of Australia’s population. While the government formally apologised to Aboriginal Australians in 2008 for years of discrimination and injustice, Aboriginal Australians continue to experience high rates of illness, unemployment and imprisonment.

Australia’s current political orientation is towards Asia, but a rich and complex immigration history has woven itself into the fabric of a country that is now home to people from over 140 countries. With the gradual dismantling of the White Australia policy in the years following World War II, the 1950s saw the arrival of mainly European
migrants seeking to build a better life for their families, especially their children. Around 72 per cent of Australia’s population was born in Australia. In 2012, the majority of permanent migrants to Australia were from the United Kingdom, the People’s Republic of China, India, the Philippines and Vietnam.

Australia’s children and young people

Indicator measurement

Before we take a look at the many reports published about the current and future state of the health of children and young people in Australia, it is useful to provide a quick update on some demographic and statistical terminology. The use of a common international language for the measurement and tracking of health indicators allows for the comparison of global data over time and between countries. In Australia, government agencies routinely collect data on the health and wellbeing of the population. The best known of these agencies are the ABS and the Australian Institute of Health and Welfare (AIHW). In addition to conducting the national Census of Population and Housing every five years since 1911, the ABS collects a wide range of demographic and statistical data to inform future planning by the Commonwealth government.

Advances in technology and data capture have enabled health data agencies to significantly increase the transparency and sophistication of data recording, and to improve accessibility to organised and standardised sets of health indicators. It is now common to find companion documents or large appendices to indicator reports outlining the rationale for the choice of a unit of measurement (for example, average over one year); definitions of numerators and denominators for rate-based calculations; and reporting of centiles, summary statistics (mean and median) and measures of spread or variation (standard deviation) to facilitate comparison with other data. While rate-based statistics are mostly used to describe population-level data, various clinical indicators are also used in Australian hospitals for measuring trends and variations in the quality and safety of health care (ACHS 2015).

The routine measurement of standardised internationally recognised indicators of health and wellbeing over time is extremely useful because health indicators can:

- offer a snapshot of the health of a community or group at a single point in time
- enable long-term tracking of the health of specific populations or groups
- monitor upward and/or downward movements or trends over time
- measure the impact of specific health interventions such as health-promotion strategies
- use past information to predict (or model) what might happen in the future
- facilitate international comparisons (benchmarking).

In addition to the routine collection of Australian health data, health indicators also enable us to compare the health and wellbeing of Australian children and young people with those of other children growing up in countries similar to ours. For example, it is very common for government reports to compare statistics for Australia against those of countries who share membership of the Organisation for Economic Cooperation and Development (OECD). It is of note, for example, that for data collected in 2011, the OECD Family Database (OECD, 2015: 2) names Australia among the four OECD countries with the highest proportions (14–18 per cent) of children living in jobless families.
Table 1.1 defines indicator measures for some of the 19 common health priority areas identified as key national indicators (or headline indicators) for describing the health, development, wellbeing and welfare of children and young people in Australia.

Table 1.1  Example of key national health indicators for children and young people

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Indicator</th>
<th>How it is measured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortality</td>
<td>Infant mortality: Number of deaths of infants less than 1 year of age in a given year</td>
<td>Rate per 1000 live births</td>
</tr>
<tr>
<td></td>
<td>Sudden Infant Death Syndrome (SIDS)</td>
<td>Rate per 100 000 live births</td>
</tr>
<tr>
<td></td>
<td>Death rate for children 1–14 years</td>
<td>Rate per 100 000 children</td>
</tr>
<tr>
<td>Morbidity</td>
<td>Proportion of all children (0–14 years) diagnosed with asthma</td>
<td>Percentage of all children with asthma 0–14 years</td>
</tr>
<tr>
<td></td>
<td>New cases of type 1 diabetes among children 0–14 years</td>
<td>Rate per 100 000 children</td>
</tr>
<tr>
<td></td>
<td>New cases of cancer among children 0–14 years</td>
<td>Rate per 100 000 children</td>
</tr>
<tr>
<td>Disability</td>
<td>Proportion of children aged 0–14 years with severe or profound core activity limitations</td>
<td>Percentage of all children 0–14 years</td>
</tr>
<tr>
<td>Injuries</td>
<td>Age-specific death rates from all injuries for children 0–14 years</td>
<td>Rate per 100 000 children</td>
</tr>
<tr>
<td>Overweight and obesity</td>
<td>Proportion of children whose BMI is above international cut-off point for ‘overweight’ or ‘obese’, adjusted for age and sex</td>
<td>Percentage of all children</td>
</tr>
</tbody>
</table>

Note that this table illustrates our first example of how different definitions and descriptors are used for reporting on health trends within age groups. The AIHW *Children’s headline indicators* report (AIHW, 2011a) describes results for 12 indicators of health and wellbeing for children 0–12 years of age. The AIHW also offers a dynamic online tool for viewing 18 of the headline indicators by group such as age, family type and remoteness. Another report, *A picture of Australia’s children* (AIHW, 2012), describes outcomes on similar indicators, but defines children as those aged 0–14 years, while an earlier report, *Making progress: The health, development and wellbeing of Australia’s children and young people* (AIHW, 2008), focused on children and young people up to 20 years of age. It is therefore important to look at the characteristics of groups included in each data set before attempting to compare indicator results across groups.

**Mothers and babies**

If you were born in Australia in 2014, you were one of 12.8 births per 1000 population, were slightly more likely to be male (105.1 males to 100 females born) and were likely to be one of the three out of four babies born in the most populous states of New South Wales, Victoria or Queensland. With only 2.9 neonatal deaths per 1000 live births per year (4.1 per 1000 infants), and a stable maternal mortality rate of fewer than seven deaths per...
100 000 per year, it is expected that you would have survived your birth. You are likely to have access to nutritious food, will grow normally and generally be healthy. Living in a culturally diverse, stable and democratic society, you will attend school and live a long life (average 81.2 years). Being born in Australia in 2014, you contributed to a population growth of 1.4 per cent per year and joined a diverse Australian population with an estimated net migration rate of 5.65 migrants per 1000 population (AIHW, 2015a).

Further, as a baby born in Australia, it is likely that (AIHW, 2012, 2015a):

• your mother is 30 years of age or older (in 1991, the average age of women having their first baby was 27.9; in 2013, it was 30.1)
• you weighed an average of 3.3 kilograms at birth and were born within a normal weight range between 2500 and 4499 grams (although 6.4 per cent of you weighed less than 2500 grams and were considered to be of low birth weight)
• you were delivered vaginally in a hospital following a spontaneous labour (although 33 per cent were born following a caesarean section and 18.4 per cent of your mothers elected to have this procedure without first going into labour)
• you were conceived naturally, but for 3.6 per cent your parents will have received some form of assisted reproductive technology (Li et al., 2012)
• half of you (46 per cent) were exclusively breastfed up to 4 months of age, with rates falling to 14 per cent at six months
• approximately 92 per cent of you were fully immunised by 1 year of age.

Children and young people

In June 2015 (ABS, 2015a), the total number of children under 15 years of age living in Australia was 4.48 million, comprising 19 per cent of the total population. In 2015, the estimated resident population of young people entering adulthood (turning 18 years of age) was 153 613 males and 146 078 females, a ratio of 105.16 males to every 100 females (ABS, 2015a).

The overall number of children in Australia doubled between 1925 and 1995 (an increase of 2.4 million). Most of this growth occurred after World War II, when there was not only a rise in the birth rate, but also high levels of migration of young couples with children to Australia. A small increase in fertility also occurred between the mid-1980s and mid-1990s, when the Baby Boomer generation reached child-bearing age. Since then, fertility rates have generally been below the level required to replace the Australian population.

Despite these small increases in the total number of children, a reduced fertility rate combined with increased life expectancy and lower migration all add up to proportionally fewer children in the Australian population at the current time. As in other developed countries, the trend is for the proportion of people aged 65 years and over to increase by 2.8 percentage points (from 13.6 per cent to 16.4 per cent between 2010 and 2015), while the proportion of Australian children is projected to decline from 18.9 per cent to 17.6 per cent during the same period. Proof of this trend already exists, with the proportion of children decreasing from 36 per cent of the total population in 1925 to 22 per cent in 1990 and 19 per cent in 2012, with further decline to 17.6 per cent projected in 2015 (ABS, 2013b). The most recent 2016 census will inform future projections.

Figure 1.1 compares the age distribution of the Australian Aboriginal and Torres Strait Islander population with the non-Aboriginal and Torres Strait Islander population of Australia. The Aboriginal and Torres Strait Islander population is characterised by higher fertility and mortality rates than the general Australian population. In the most recent analysis of population data in 2006, children and young people (defined as 0–24 years in this example) represented more than half (57 per cent) of the total 517 000 Aboriginal and
Torres Strait Islander people in Australia. Children under 15 years of age comprised 38 per cent of this population, compared with only 19 per cent of the general population (ABS, 2011a). These powerful numbers clearly place Aboriginal and Torres Strait Islander children and youth at the core of their family, culture and community relationships. The median age of the Australian Aboriginal and Torres Strait Islander population in 2006 was 21 years, compared with a median age of 37 years for other Australians.

![Comparison of Aboriginal and Torres Strait Islander population with general population of Australia, 2006](source: Australian Indigenous Health InfoNet (2016)).

**Australian families**

The demographic characteristics of 6.3 million Australian families reported in the 2009–10 Family Characteristics Survey (ABS, 2011c) reveal that 44 per cent were couple families with resident children. Just over 40 per cent of families had no resident children of any age and 14 per cent were sole-parent families with resident children. Of the 6.3 million families included in the 2009–10 report, 40 per cent (or 2.5 million) were migrant families demonstrating very similar characteristics (46 per cent couple families with resident children and 10 per cent sole parents). More migrant families live in multi-family (4.5 per cent) or group households (3.8 per cent) than Australian-born persons (2.3 per cent) (ABS, 2011c).

**REFLECTION POINTS 1.1**

- Many Australian women are delaying having babies until later in life, and are increasingly requiring assistance to become pregnant. Forty-seven per cent of mothers over 40 years of age and 42.5 per cent of those choosing to deliver in a private hospital will have their baby delivered by caesarean section. What implications does this have for nurses working in neonatal and paediatric care settings?
- The proportion of children and young people in the Australian population is declining while the proportion of adults over 65 years is increasing. What impact might this have on health funding, and on the wealth and wellbeing of Australians in the future?
Chapter 1: Australia’s children and young people

The health of Australia’s children and young people

A snapshot

Case Study 1.1 referred to Australia’s international reputation as the ‘lucky country’, and generally Australian children are healthy and well. But there are large variations between health indicators for children living in remote or socially disadvantaged areas, between Aboriginal and Torres Strait Islander children and those in the general population, and even between the various states and territories of Australia. Different health indicators are also important at different points in the lifespan. For example, infant mortality is an internationally recognised indicator of health and wellbeing in infancy. This is because a child’s risk of death is greatest at the time of birth and during the first year of life (AIHW, 2012). Similarly, birth weight, breastfeeding and immunisation rates are indicators of a healthy early childhood (0–4 years) (AIHW, 2008). As children grow, injury and chronic diseases pose more serious risks, and as they enter adolescence (13–18 years), indicators of mental and physical health are likely to include overweight and obesity, sexually transmitted infections, sleep disorders and/or mental health problems associated with real-time or cyber-bullying, substance use, and injury or violence (AIHW, 2008, 2011b).

The economic and social situations of the families and communities in which children and young people grow up – for instance, access to healthy food, employment, child care, parental health, disability and homelessness – are important determinants of future health. Similarly, indicators of childhood safety and security (injury, child abuse and neglect, children as victims of violence, and juvenile crime) sit alongside indicators of learning and development, which again vary across the lifespan. While early childhood education, literacy and numeracy rates, and youth participation in university education or work, are equally important indicators of the wellbeing of children and young people, educational outcomes are not the focus of this text.

A number of major reports on child and youth health have been commissioned by the Australian government over the past five years, and no doubt others will have been completed by the time you read this text. This section draws on data from mainly government data collections and reports to paint a picture of the current health and wellbeing of Australia’s children and young people.

Mortality

Infant and child mortality rates are strongly associated with economic advantage and social determinants of health – access to clean water, nutritious food, a safe environment and
health care. In Table 1.1, we outlined some of the common national indicators for measuring the general health status of children and young people in Australia. Mortality – especially infant mortality – is significant as one of few indicators that are routinely measured by OECD countries and that feature in most international comparisons of the health of children.

Infants

More than two-thirds of infant deaths in Australia occur in the first 28 days after birth (during the neonatal period) and almost half of these occur on the day the baby is born (AIHW, 2012). Despite this, a number of factors have contributed to Australia’s progress in significantly reducing infant mortality over the past 30 years. These include improved effectiveness of and participation in maternal antenatal care, better nutrition and the advantageous economic and environmental climate enjoyed by the majority of Australians (see Case Study 1.1).

Australia’s infant mortality rate is currently 4.1 deaths per 1000 live births, a reduction from 8.8 deaths per 1000 live births recorded in 1986 (AIHW, 2012). Almost half of all infant deaths (46 per cent) are due to perinatal conditions (complications occurring during pregnancy or birth); a further 26 per cent are due to congenital anomalies and malformations. While hypospadias (a defect of the male urethra) was the most common congenital anomaly reported in Australian infants in 2002–03 (Abeywardana & Sullivan, 2008), conditions of the heart and circulatory system were the most common malformations causing death. The remaining infant deaths are due to a range of mostly undefined abnormal signs and symptoms, including Sudden Infant Death Syndrome (SIDS).

Infant mortality rates vary across populations. In remote and very remote areas of Australia, the infant mortality rate is almost twice that of babies born in major cities at 6.8 per 1000 live births, and is similar for Aboriginal and Torres Strait Islander infants (7.2 deaths per 1000 live births) when based on combined data for New South Wales, South Australia and the Northern Territory (AIHW, 2012). A comparison of infant mortality in OECD countries in 2012 (OECD, 2013) revealed that infant mortality was highest in Mexico (14.1 deaths per 1000 live births) and lowest in Japan (1.1 deaths per 1000 live births), with Australian infant mortality rates equivalent to the OECD average.

Neonatal intensive-care units, with their associated specialised technology and staff, combined with improved communications and emergency light retrieval systems, have contributed significantly to reducing neonatal deaths. Beyond birth, increasing awareness of national immunisation schedules and SIDS prevention through national health-promotion campaigns has contributed to reductions in vaccine-preventable diseases in infants, and reduced the rate of sudden and unexpected death in infants less than 1 year of age during sleep, previously known as ‘cot death’. In 2010, the mortality rate from SIDS was 27 deaths per 100 000 live births, or 7 per cent of total infant deaths; almost three-quarters of these were male infants.

Children

The death rate for children aged 1–4 years of age (19 deaths per 100 000 children) is almost twice that of children aged 5–9 years or 10–14 years (both 10 per 100 000) (AIHW, 2012). This is attributed to higher rates of injury and comorbidities from congenital conditions affecting this age group. However, the Making Progress report (AIHW, 2008) shows that the mortality rate of Australian children under five years of age is equal to the OECD average. Cancers and accidental drowning each account for three deaths per 100 000 in children aged less than 4 years (AIHW, 2008: 7).

Among Aboriginal and Torres Strait Islander children, the mortality rate of 25 deaths per 100 000 population is twice as high as the Australian average for children 0–14 years (13 per 100 000), but this rate is even higher for children living in remote or very remote
regions (31 deaths per 100,000). Despite this, the rate of all childhood deaths (regardless of age group) has declined by an average of 52–60 per cent since 1986. This is largely due to reduced child mortality from traffic accidents, and coincides with the introduction of child safety seats in cars, as well as strict seatbelt and drink-driving legislation in Australia. While injury remains the leading cause of death (34 per cent) for Australian children, cancers (17 per cent) and diseases of the nervous system (11 per cent) also contribute significantly. It is of note that while death by suicide is relatively rare in children under 15 years of age (0.4 per 100,000 children), 17 of the 52 suicide deaths occurring between 2007 and 2011 in this age group were Aboriginal and Torres Strait Islander children (ABS, 2011b).

Young people

The independence of adolescence introduces a whole different set of risks to the health and wellbeing of young people aged between 15 and 18. Injuries from traffic or workplace accidents, the harmful effects of alcohol and other drug use, and mental health problems are the leading causes of death in this age group.

In 2011 (ABS, 2011b), more than one-quarter (27.8 per cent) of all male deaths in the 15–24 years age group were due to suicide. In 2006, transport accidents and self-harm resulting in suicide accounted for 11 and five deaths per 100,000, respectively (AIHW, 2008). Unlike any other age group, mortality rates for male adolescents are twice as high as those for females of the same age. Between 2005 and 2009, the number of deaths among Aboriginal and Torres Strait Islander youths aged between 15 and 24 years was almost three times higher than for the non-Indigenous population. The mortality rate for young Aboriginal and Torres Strait Islander people during this period was 115 deaths per 100,000, compared with 41 deaths per 100,000 for young people of the same age in the general population (AIHW, 2011a).

Hospitalisation

The Australian government nominates a range of health conditions (National Health Priorities) that are of specific relevance to the Australian population because of the burden these conditions place on the daily lives of families and communities, and their impact on the economic sustainability of the country. While reducing injury has been a National Health Priority since 1986, common chronic conditions affecting both adults and children in Australia (asthma, diabetes and cancer) collectively account for 20 per cent of the burden of disease among children aged 0–14 years (AIHW, 2012). The impact of chronic conditions is often measured by hospitalisation rates (or hospital separation rates), as this provides an indication of the burden of illness experienced by the child or young person and their family.

Importantly, the monitoring of hospitalisations also determines the need for future health services in Australia, such as training needs for paediatric specialists in nursing, medicine and surgery, as well as demand for hospital, operating and intensive care beds, and for community clinics and outreach or home care. Considering that 37 per cent of Australia’s children and young people had at least one long-term condition in 2007–08, and that this equates to more than 1.5 million children, you can start to see why chronic conditions of childhood are important (ABS, 2009).

Injury

Injury clearly contributes to mortality in children and young people, but injuries are also responsible for a significant number of admissions to hospital within these age groups with
an overall rate of 1785 per 100,000 population (Pointer, 2014). During a 12-month period (2011–12), more than 130,000 children and young people were hospitalised with injuries, with boys twice as likely to be admitted than girls. Consistent with the mortality rates discussed above, the highest rates of hospitalisation due to injury during this period were among males aged 18–24 years – largely due to unintentional transport injuries and assaults – and among those living in rural and remote regions, or of Aboriginal and Torres Strait Islander descent.

Drowning and thermal injuries (burns) were the most common injuries requiring hospitalisation in infants (less than 12 months) and young children (1–4 years); however, unintentional ingestion of poisons and falls from playground equipment still constitute major risks to young children. During 2011–12, rates of injury due to falls were highest among the 5–9 years age group (701 per 100,000 population), again mostly due to climbing equipment (Pointer, 2014). Falls also accounted for 8703 hospitalisations among 10–14-year-olds in 2011–12, with 15 per cent of these cases involving skateboards. Unintentional transport injuries, self-harm and assault become more prevalent as causes of injury in this age group, and by 15–17 years of age, the AIHW (Pointer, 2014) reports the rate of hospitalisation for intentional self-harm at 302 cases per 100,000 population. This rate is four times higher in females and most commonly involves intentional self-poisoning (Pointer, 2014).

A further snapshot of the type of injuries leading to the hospitalisation of Aboriginal and Torres Strait Islander children and young people was conducted for the period 2011–13. During these two years, 18,537 Aboriginal and Torres Strait Islander children and young people were hospitalised due to injury, with the age-standardised rate higher among Aboriginal and Torres Strait Islander males (2982 cases per 100,000 population) compared with 2023 per 100,000 for Aboriginal and Torres Strait Islander females (Pointer, 2016). The highest rates of injury were observed in older age groups for both sexes, with an increased rate of injury associated with increasing remoteness from around 10 years of age.

The most common cause of injury among Indigenous children and young people of all age groups up to 15 years was falls, again involving playground equipment in the younger age groups. Assault was the leading cause of hospitalisation in the 15–17 and 18–24 years age groups, with the rate of 457 cases per 100,000 population being six times higher than that for all Australians (Pointer, 2016).

Chronic conditions

It may seem unusual to associate chronic conditions with children and young people, but chronic diseases have the potential to interrupt normal growth and development, and to produce immediate and possible long-term effects on physical, emotional and social wellbeing. These impacts – especially on normal growth and development – are frequently overlooked as the unintended consequences of a chronic illness and its long-term treatment.

The range of chronic conditions affecting children and young people is broad, and includes those resulting from neurological congenital anomalies such as spina bifida and neural tube defects, cardiac defects such as transposition of vessels, Tetralogy of Fallot and gastrointestinal, renal and limb deficits. Genetic conditions (Trisomy 13, 18 and 21, phenylketonuria and cystic fibrosis) also constitute an important burden for Australia’s children and young people, and around 7 per cent of Australian children aged 0–14 years also have a disability of some kind. The most common types of disability are intellectual disabilities (affecting an estimated 161,000 children, or 3.9 per cent) and sensory or speech problems (affecting an estimated 119,000 children, or 2.9 per cent) (AIHW, 2012). All chronic conditions will impact on the way a child lives, grows and functions within their society.

We will briefly explore three of the more commonly encountered chronic conditions affecting Australia’s children and young people – common not only because of their...