

2 Health of Australians

Chapter 2 provides a picture of the health of Australians, both their wellbeing and their ill health. It also provides profiles of major diseases and conditions, and their effects in Australia.

The chapter focuses on the health of the Australian population as a whole. International comparisons show that Australians enjoy good health and that their trends are broadly in step with improvements occurring in other developed countries. However, differences in the health of population groups persist within Australia.

The chapter is organised into seven major sections:

- 2.1 Aspects of health:** focuses on variations in health in general terms, such as life expectancy and oral health. It also describes some health conditions that do not rank highly in terms of morbidity and mortality but still affect quality of life.
- 2.2 Functioning and disability:** describes the concepts of functioning, activity limitation and disability, as outlined by the International Classification of Functioning, Disability and Health (ICF) framework. Some relevant Australian data are provided.
- 2.3 Morbidity and illness:** outlines the extent of morbidity, illness and pain associated with various diseases and conditions, using measures of both disease prevalence and perception of illness and pain.
- 2.4 Injuries:** describes how accidents and injuries have an increasing share of the ever-diminishing mortality in the early and middle years of life. It also reviews morbidity associated with injuries and poisoning.
- 2.5 Mortality:** uses death statistics, covering the cause of death, death rates and trends in mortality, to describe the health status of the population and how it is changing.
- 2.6 Non-communicable diseases:** focuses on chronic diseases, that is, those that persist for a long time. The section also includes profiles of National Health Priority Areas diseases and conditions.
- 2.7 Communicable diseases:** provides statistics on levels of infectious diseases, and describes the morbidity and mortality associated with them.

This chapter should be read in conjunction with other chapters, in particular Chapters 3 and 4. Information on health risk factors relevant to various diseases and conditions covered in this chapter is in Chapter 3, whereas information on the health of defined population groups is given in Chapter 4. Information on health service and resource use, covered in Chapters 5 and 6, also sheds some light on the extent of disease in Australia.

2.1 Aspects of health

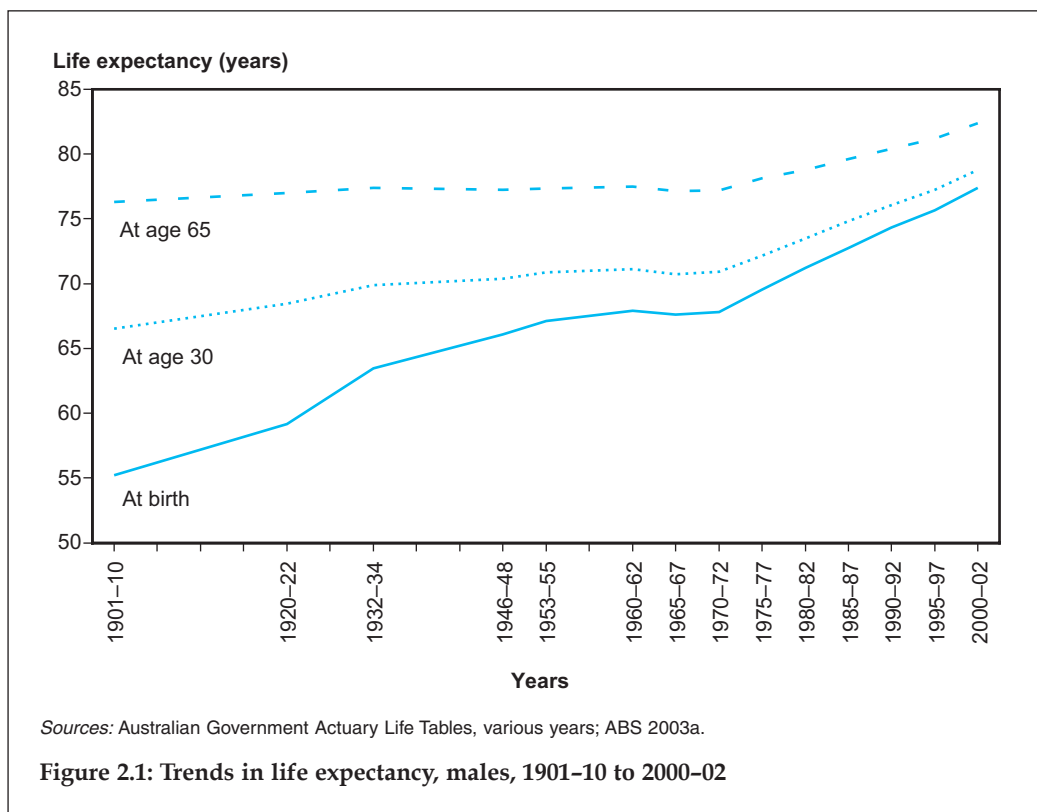
As mentioned in Chapter 1, most data on health tend to be about ill health. ‘Positive’ health is more difficult to measure, but doing so remains a desirable goal. Another aspect that merits more attention is that of symptoms, rather than diseases. Frequent complaints, such as headaches, rashes and troubles with teeth, are often seen as minor and not recognised or accepted as ill health. However, these complaints are common enough to take a considerable toll on populations and individuals.

This section provides brief overviews on six different aspects of health in Australia.

Life expectancy

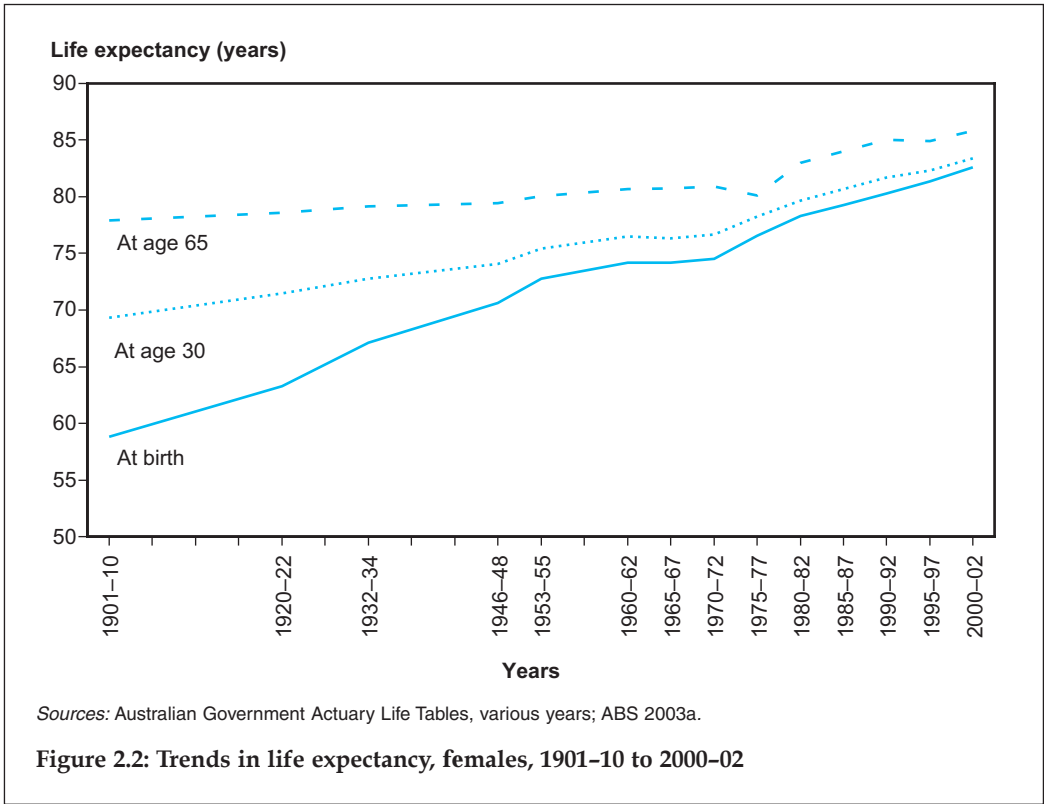
In 2000–02, life expectancy in Australia at birth was 77.4 years for males and 82.6 years for females; hence people’s life expectancy is now 80 years. In contrast, a male could expect to live 55.2 years and a female 58.8 years in the 1901–10 period. This is an increase of about 22 years (40%) for males and 24 years (41%) for females over the last century (Figures 2.1 and 2.2).

The difference in male and female life expectancies also increased during this period, from 3.6 years higher for females in the 1901–10 period to 7.1 years in 1980–82. However, since then the gap has declined steadily to 5.2 years in 2000–02.



Reductions in infant and child mortality have been the greatest contributors to this improvement. Significant gains also occurred through reductions in death rates among the middle-aged and the elderly, especially for cardiovascular diseases (heart disease and stroke), over the past several decades. Males aged 30 in 2000–02 could expect to live to 78.8 years and females to 83.4 years; this is about 13 years more than the respective life expectancies in the period 1901–10. Similarly, males aged 65 in 2000–02 could expect to live to 82.4 years and females to 85.8 years, about 7 years more than for those in that age bracket in 1901–10.

These trends have important demographic, health and wellbeing consequences. Not only do they increase the proportion of the population reaching an advanced age, but they also influence health, disease and disability patterns in a population.



Variation in life expectancy

Life expectancy varies across population groups within Australia. Aboriginal and Torres Strait Islander peoples have a much lower life expectancy than the national average. Life expectancy for Indigenous newborns in 1999–01 was about 20 years less than that for non-Indigenous newborns. For Indigenous persons aged 30–34, life expectancy was about 16 years less than their non-Indigenous counterparts; for those aged 65–69, the difference was 7 to 10 years (ABS 2002a).

The socioeconomically most disadvantaged fifth of males and females were also expected to live about 4 years and 2 years less, respectively, than males and females in the most advantaged fifth in 1998–00 (Draper et al., in press).

Life expectancy also shows geographical variation. Life expectancy at birth in 2000–02 in the Northern Territory was lower by 6.1 and 5.9 years for males and females respectively, compared with the national averages (ABS unpublished). These differences mainly reflect the lower life expectancy of the Indigenous population, which makes up close to 30% of the Northern Territory's population (ABS & AIHW 2003).

International comparisons

Overall, Australians enjoy one of the highest life expectancies in the world (WHO 2004). Table 2.1 compares Australia with a range of other countries (but note that the estimates of Australian life expectancy differ from those provided on the previous page because of slightly different methods used). The Australian male life expectancy in 2002 was close to the highest recorded—in Japan and Iceland (78.4 years) and Sweden (78.1). Similarly, female life expectancy in Australia was not far behind the countries with the highest female life expectancy—Japan (85.2 years) and France (83.5). Life expectancies in Australia were a little higher than in countries such as Canada, New Zealand, Norway and Spain, and higher again than in the United Kingdom and the United States.

Most of the countries compared in Table 2.1 are from the more developed regions of the world. The life expectancies in less developed countries are considerably lower. Regions defined by the United Nations as being made up of less developed countries, that is, countries outside Europe, North America, Australia, Japan and New Zealand, had an overall life expectancy of about 64 years in 2002, compared with 75 years in developed regions. The African continent had the lowest life expectancy at birth (less than 50 years). Life expectancy in the Asian region varied greatly, from 65 years for males and 68 for females in Indonesia to corresponding figures of 70 and 73 for China, and 77 and 82 for Singapore.

Healthy life expectancy

Australians can expect to enjoy good health for about 90% of their life span, with the remaining 10% of their time spent with illness or disability. In terms of health-adjusted life expectancy (HALE), a measure of the expected number of years to be lived without reduced functioning (WHO 2004), Australian males in 2002 could expect to live the equivalent of 70.9 years without reduced functioning and Australian females about 74.3 years. This compared favourably with other countries that have high life expectancies (Table 2.1).

Self-reported health

Self-reported health status is commonly used as an indicator of general health and wellbeing. It refers to physical and mental health as assessed by individuals according to their values and (especially in older Australians) has been found to be a strong indicator of future health care use and mortality (AIHW 1999).

National information on self-reported health status is provided by the Australian Bureau of Statistics' (ABS) surveys, which ask respondents to rate their general health as excellent, very good, good, fair or poor.

Table 2.1: Life expectancy at birth and health-adjusted life expectancy, selected countries, 2002

Males				Females			
Country	Life expectancy (LE) (years)	Health-adjusted life expectancy (HALE) (years)	HALE/LE (%)	Country	Life expectancy (LE) (years)	Health-adjusted life expectancy (HALE) (years)	HALE/LE (%)
Japan	78.4	72.3	92.2	Japan	85.2	77.7	91.2
Iceland	78.4	72.1	92.0	France	83.5	74.7	89.5
Sweden	78.1	71.9	92.1	Switzerland	83.4	75.3	90.3
Australia^(a)	77.9	70.9	91.0	Spain	83.0	75.3	90.7
Switzerland	77.7	71.1	91.5	Australia^(a)	83.0	74.3	89.5
Israel	77.4	70.5	91.1	Sweden	82.7	74.8	90.4
Singapore	77.4	68.8	88.9	Italy	82.5	74.7	90.5
Canada	77.2	70.1	90.8	Canada	82.3	74.0	89.9
Italy	76.7	70.7	92.2	Austria	82.1	73.5	89.5
New Zealand	76.7	69.5	90.6	Iceland	81.8	73.6	90.0
Austria	76.4	69.3	90.7	Norway	81.7	73.6	90.1
Norway	76.3	70.4	92.3	Singapore	81.7	71.3	87.3
Spain	76.1	69.9	91.9	Germany	81.6	74.0	90.7
Netherlands	76.0	69.7	91.7	Finland	81.5	73.5	90.2
Malta	75.9	69.7	91.8	Belgium	81.5	73.3	89.9
France	75.9	69.3	91.3	Israel	81.3	72.3	88.9
Greece	75.8	69.1	91.2	New Zealand	81.2	72.2	88.9
United Kingdom	75.8	69.1	91.2	Netherlands	81.1	72.6	89.5
Germany	75.5	69.6	92.2	Greece	81.0	72.9	90.0
Belgium	75.2	68.9	91.6	United Kingdom	80.5	72.1	89.6
Denmark	74.9	68.6	91.6	Portugal	80.5	71.7	89.1
Finland	74.8	68.7	91.8	Malta	80.3	72.3	90.0
USA	74.6	67.2	90.1	USA	79.8	71.3	89.3
Ireland	74.4	68.1	91.5	Ireland	79.7	71.5	89.7
Portugal	73.6	66.7	90.6	Denmark	79.5	71.1	89.4
Poland	70.6	63.1	89.4	Poland	78.7	68.5	87.0
China	69.6	63.1	90.7	China	72.8	65.2	89.6
Indonesia	64.9	57.4	88.4	Indonesia	68.0	58.9	86.6
South Africa	48.8	43.3	88.7	South Africa	52.6	45.3	86.1

(a) Estimates provided here by the World Health Organization differ from those of the Australian Bureau of Statistics cited in the text.

Source: WHO 2004.

According to the 2001 National Health Survey, the great majority of Australians aged 18 and over considered themselves to be in good health, with 18% rating their health as excellent, 33% as very good, and 30% as good. A further 14% reported fair health but 5% reported poor health. It should be noted that many people likely to have poorer health, such as those in hospitals and institutions and the homeless, were not included in the survey.

The overall distribution of responses was similar for both males and females (Table 2.2) but differed by age group (Figure 2.3). Health status declined with age, with the proportion of people reporting fair or poor health status increasing in higher age groups.

Table 2.2: Self-reported health status, people aged 18 and over, 1995 and 2001

Rating	Males		Females		Persons	
	1995	2001	1995	2001	1995	2001
Excellent	18.9	17.1	18.6	18.3	18.7	17.7
Very good	35.1	31.8	35.3	33.4	35.2	32.6
Good	28.9	32.3	28.9	29.6	28.9	30.9
Fair	12.8	13.7	13.2	13.9	13.0	13.8
Poor	4.3	5.1	4.0	4.8	4.2	5.0

Note: Rates are age-standardised to the 2001 Australian population.

Source: AIHW analysis of ABS 2001 National Health Survey.

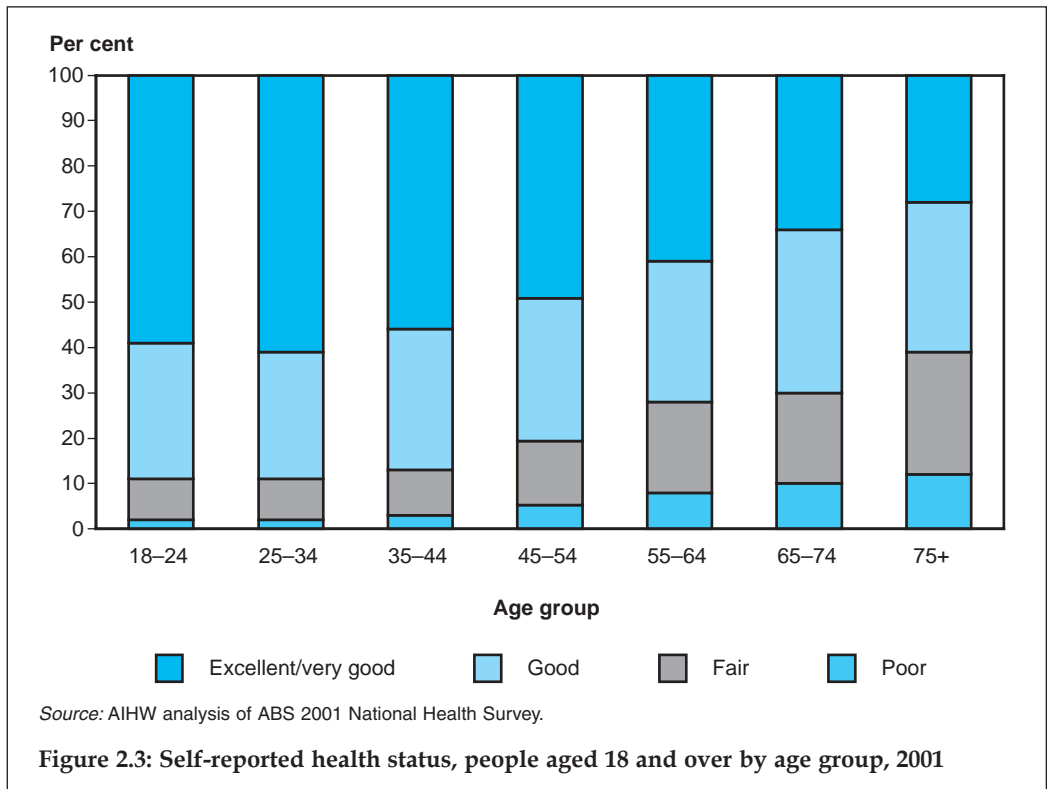
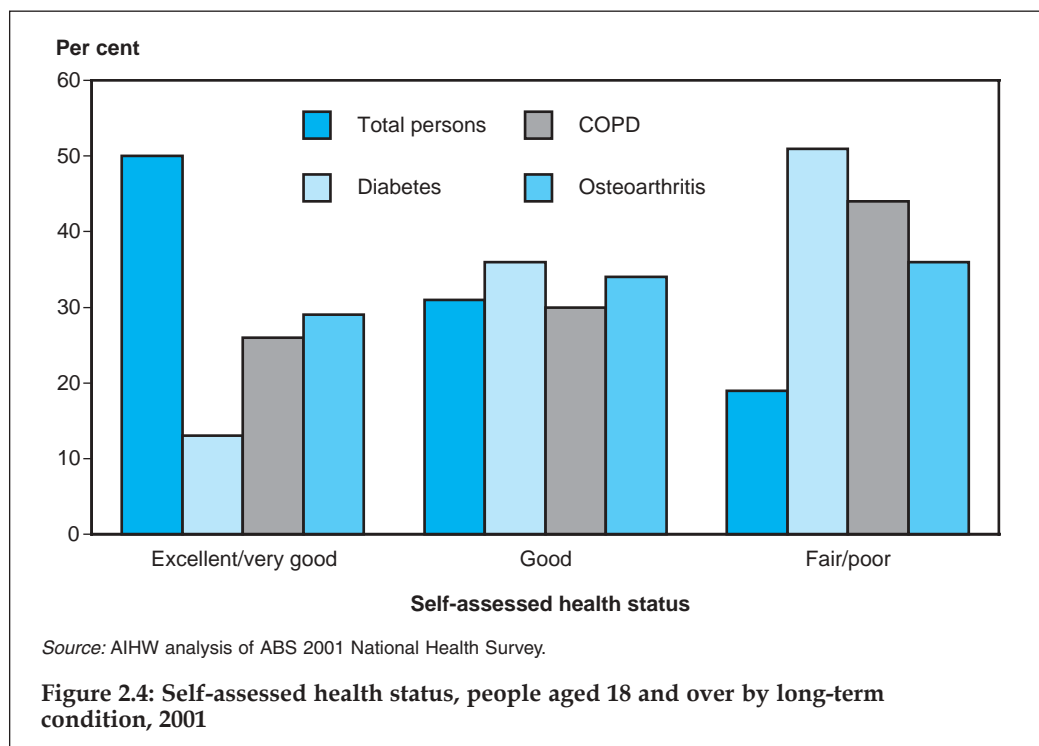


Figure 2.3: Self-reported health status, people aged 18 and over by age group, 2001

Nearly two-thirds of Australians reported that their health status was unchanged compared with a year ago, 21% said it had improved, and 13% said it was worse. The pattern was similar for both males and females.

The self-reported health status of the population appeared to decline between 1995 and 2001 (Table 2.2). The proportion reporting their health as excellent or very good declined from 53.9% to 50.3% whereas the proportion reporting their health as fair or poor increased from 17.2% to 18.8%. The changes were similar for both males and females.

People with a long-term illness are much more likely to report their health as fair or poor. For example, those with diabetes, chronic obstructive pulmonary disease (COPD) and osteoarthritis were considerably more likely to report fair or poor health compared with the total population (Figure 2.4). Of those reporting long-term conditions, 21% rated their health as fair or poor in contrast to 4% of those who had reported having no long-term conditions.



People with a disability also tend to report lower levels of health than the general population. According to the 1998 Survey of Disability, Ageing and Carers, poor health was reported by 11% of people with a disability and by only 1% of those without disability.

Similarly, the overall health status reported by people with certain risk factors, such as smokers and those who are obese, is poorer than that of the total population (Table 2.3).

Table 2.3: Self-reported health status, people aged 18 and over, by selected risk factor, 2001

Risk factor	Self-reported health status (per cent)			Total
	Excellent/ very good	Good	Fair/poor	
Obese	35.3	36.0	28.7	100.0
Smoker	43.8	34.3	21.9	100.0
All persons	50.2	31.0	18.9	100.0

Note: Rows may not total to 100% due to rounding.

Source: AIHW analysis of ABS 2001 National Health Survey.

Oral health

Oral health is much more than the absence of dental disease. It has a range of dimensions that reflect (among other things) people’s comfort, eating, social interaction, self-esteem and satisfaction with their appearance. Therefore no single measure describes oral health comprehensively.

Three different measures help to describe oral health:

- The number of remaining natural teeth: good oral health may be described as having 20 or more teeth;
- Self-rated oral health: the response scale ranges from ‘excellent’ to ‘poor’; and
- Impaired quality of life due to oral conditions: this covers discomfort while eating, being self-conscious about teeth, and finding life less satisfying because of dental problems.

The 2002 National Dental Telephone Interview Survey and a subsequent self-completed questionnaire that was mailed to interviewees provide insights to the oral health of Australians along these three dimensions. According to the survey, at least 84% of people had 20 or more teeth, 80% rated their oral health as good, very good or excellent, and 83% experienced no adverse effects of oral conditions on their quality of life.

However, there was considerable discrepancy between these perceptions in that only 62% of people reported relatively good oral health in all three dimensions. They are represented by the estimated 8.7 million people who overlap on all three circles in Figure 2.5. An estimated 1.3 million adults had 20 or more teeth and experienced no effect on their quality of life, but still rated their oral health only as average, poor or very poor. A further 900,000 had 20 or more teeth and rated their oral health as good, very good or excellent, yet reported experiencing one or more adverse effects on their quality of life. Other examples are depicted in Figure 2.5.

These measures were used to construct a graded scale of four categories of perceived oral health.

- The ‘least healthy’ end of the scale included the 16% of people who had fewer than 20 natural teeth, regardless of the other two dimensions.
- The second group comprised the 12% of people who had 20 or more teeth but who experienced one or more effects on their quality of life, regardless of their self-rated oral health.

- The third group comprised the 10% of people who had 20 or more teeth and reported no effect on their quality of life, but who rated their oral health only as average, poor or very poor.
- The fourth group was the remaining 62% of people who reported positive oral health in all three dimensions.

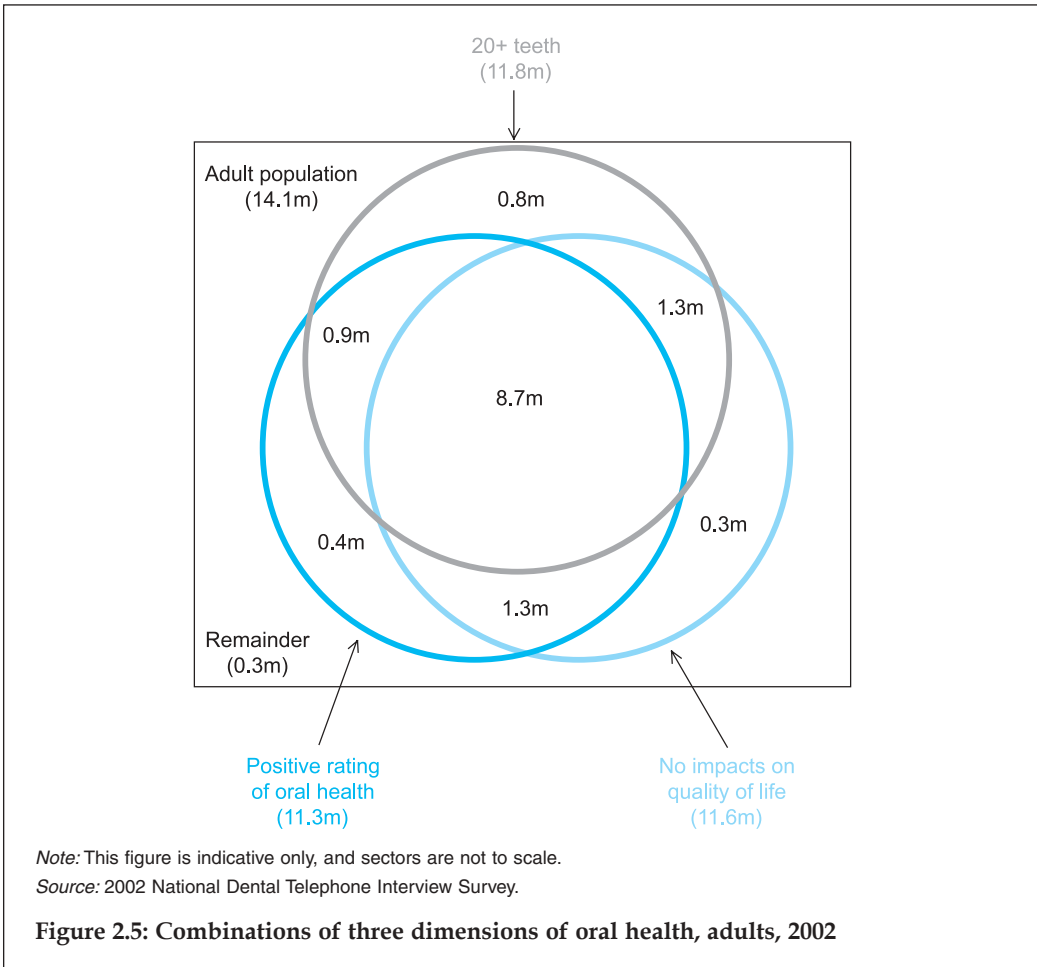
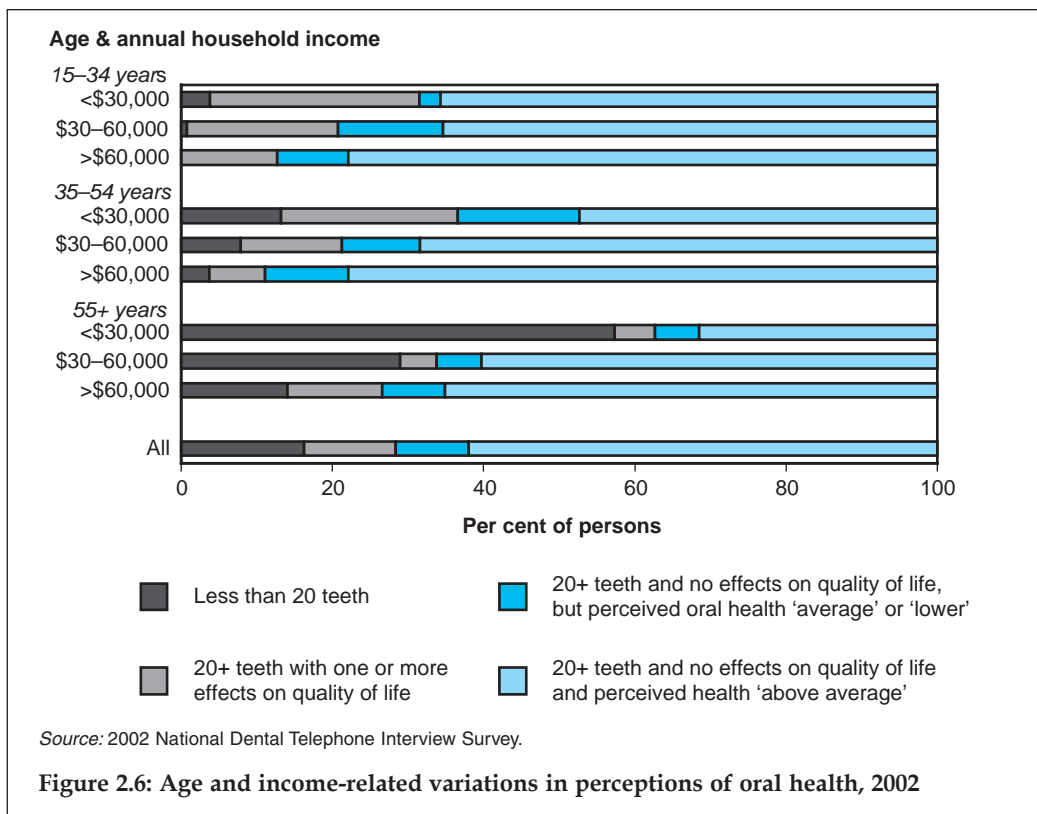


Figure 2.6 contrasts the distribution of these categories of oral health among groups defined by age and annual household income. Younger people were more likely to report all three positive dimensions of oral health than older people. In addition, positive dimensions of oral health were more likely to be reported by people in high-income households compared with those in low-income households, and this difference is apparent within each age group. Interestingly, the effects of age and income effectively cancelled one another out: among the oldest age group in the highest income category, 65% of people reported all three positive dimensions of oral health, which was virtually identical to the figure for all adults (62%).



The survey did not include dental examinations and therefore it is not possible to know whether the people surveyed had clinically defined dental disease or treatment needs. Just as health is more than the absence of disease, some people with relatively positive perceptions of oral health may have dental treatment needs while some people with relatively negative perceptions of their oral health may have no clinical disease.

These results provide several insights into oral health within the Australian population. Given the difficulties in defining 'positive' health, it is not surprising that there was incomplete overlap in the three dimensions of oral health studied (Figure 2.5). In part, this probably reflects individual differences in concepts of health. For example, some people's ratings of oral health may be strongly influenced by their experience of tooth loss whereas others may place greater emphasis on the effects of dental problems on quality of life when making such ratings. To the extent that these three dimensions collectively identify Australian adults who have more positive perceptions about their oral health, the results in Figure 2.6 provide some important public health implications.

More positive perceptions among young people compared with older people could reflect the high levels of dental disease and tooth loss that today's older Australians have had over much of their lives. Yet this is not an inevitable legacy: people in the

oldest age group who were in the highest income category had a profile of positive oral health that was virtually identical to the overall population of Australian adults. And within that overall population, the results indicate that there is potential to improve overall oral health, not only by reducing levels of tooth loss, but by reducing the effect of oral conditions on quality of life.

Sexual health

Sexual health is another major aspect of health. It is affected by, and in turn affects, a broad range of attitudes and social values.

Attitudes to sexuality and reproduction have changed considerably over the past several decades, since the introduction of improved methods of contraception and easy access to them. In addition, various social and economic factors have influenced decisions about marriage and the timing, spacing and number of children.

This section provides an overview of the sexual health of Australians, relating in particular to sexual health practices and associated risk factors, as well as sexual health problems. Section 2.7 on communicable diseases, later in this chapter, provides information on sexually transmitted infections (STIs). Information on other aspects of reproduction are given in Chapter 4 under Section 4.1: Mothers and babies.

The Australian Study of Health and Relationships (ASHR), a national survey carried out in 2001–02 and broadly representative of the population aged 16–59, is an important source of information on the sexual health of Australians. Other sources of information on the subject include the Bettering the Evaluation and Care of Health (BEACH) survey of general practice activity, hospital databases and the National Notifiable Disease Surveillance System (NNDSS).

First intercourse, cohabitation, marriage and fertility

Based on the ASHR, the median age of first intercourse was 16 years. Some 40% of males and one-quarter of females had intercourse before the age of 16.

Australian women are increasingly delaying or avoiding marriage and postponing their childbearing. An indicator of these trends is the median age of first marriage. In 2002, it was 27 years for Australian females and 29 years for Australian males, compared with 22 years and 25 years, respectively, only two decades earlier. Almost three-quarters (73%) of couples now cohabit before marrying (ABS 2003b). Some 30% of all births occur outside marriage, although in most cases the paternity is acknowledged (ABS 2002b). The median age of mothers at the birth of their first child was 30.2 years in 2002, the highest on record.

The birth rate for women aged 20–24 has fallen from 104 per 1,000 in 1982 to 56 per 1,000 in 2002. Those aged 30–34, for the third consecutive year, have the highest fertility at 111 per 1,000. Consequently, the total fertility rate has declined in Australia from around 3.61 births per woman in 1961 to around 1.75 births in 2002 (ABS 2002b). The total fertility rate is notably below the replacement level of 2.1 births, and has been so for the past 25 years.

Around one in five women of reproductive age will remain childless if current fertility patterns persist (Hugo 2002). For many such women, childlessness is a deliberate choice. Others may have fertility problems, either due to natural causes or to problems such as previous pelvic infections. Postponement of childbearing also results in age-related infertility.

Risk of unplanned pregnancies

Excluding those who were pregnant or attempting to become so, and those who for various other reasons had no need of contraception, only 13% of women were at risk of an unplanned pregnancy in 2001–02 (Richters et al. 2003a). This level of protection involves both effective use of contraception and other forms of avoiding pregnancy.

Use of contraception

A variety of contraceptive methods are used for family planning, including non-medical, medical or surgical methods (Table 2.4). In Australia, diaphragms, oral contraceptives, intra-uterine devices, injectables and tubal occlusion devices, as well as post-coital or ‘emergency’ contraception, require medical prescription or other medical intervention. Tubal ligation or (occasionally) hysterectomy for women and vasectomy for men are the surgical procedures used.

Some 71% of respondents to the ASHR were using some form of contraception (Smith et al. 2003a). Sterilisation (male or female) was the most common method, with oral contraceptives and/or the condom also widely used.

Table 2.4: Methods of contraception currently used by women, 2001–02

Method	Per cent
Tubal ligation/hysterectomy	22.5
Male partner has vasectomy	19.3
<i>Subtotal (sterilisation)</i>	<i>41.8</i>
Oral contraceptive	33.6
Condom	21.4
Withdrawal	4.5
Safe-period methods	4.4
Injectables	1.5
Intrauterine devices	1.2
Progestogen implants	1.1
Diaphragms and caps	0.9
Spermicidal foam or jelly	0.2
Female condom	<1.0

Note: Column sums to more than 100% because women could report use of more than one method.

Source: Richters et al. 2003a.

Contraceptive use at the time of first intercourse has increased from less than 30% in the 1950s to over 90% in the 2000s. Much of this increase is due to an increase in condom use, as 79.4% of males and 76.2% of females who first had intercourse in the 2000s reported using condoms (Rissel et al. 2003).

In addition to the methods reported in Table 2.4, approximately one in five female respondents to the ASHR said they had used emergency contraception. More than a quarter of those aged 16–19 and two-fifths of those aged 20–29 had used this method. Among users of emergency contraception, 53.3% had used it once, 24.8% twice, and 20.6% three or more times (Smith et al. 2003b).

Pregnancy termination

National information on pregnancy termination is poor, although it has been estimated that one in five pregnancies is terminated (Hugo 2002). Only South Australia, the Northern Territory and Western Australia collect population-based data on induced abortions, and only South Australia publishes these numbers. The number of terminations notified in South Australia in 2002 was 5,417, a rate of 17.2 terminations per 1,000 females aged 15–44 (Pregnancy Outcomes Unit 2003).

In 2002–03, Medicare fee-for-service benefits were paid for 73,927 terminations of pregnancy nationally, but this figure excludes services to public patients in hospital and through other publicly funded programs (Department of Health and Ageing, personal communication).

The proportion of ASHR female respondents who became pregnant as a teenager varies from 22.8% among those now aged 50–59 to 16.9% among those now aged 20–29. Three-quarters (76.1%) of all female respondents had been pregnant at least once, and 22.6% of this group reported having had one or more terminations. The number of terminations ranged from 1 to 12, with 75.7% reporting one, 18.9% reporting two, and only 5.4% reporting three or more terminations (Smith et al. 2003b).

Health of reproductive organs and pregnancy

Limited information is available on the health of reproductive organs and services used in this regard. A composite profile, based on information from the BEACH survey of general practice, hospital separations and the ASHR, is provided below.

Health service use

Female genital system problems, according to the BEACH survey, accounted for 4.6% of the total number of health problems managed by general practitioners (GPs) in 2002–03 (AIHW: Britt et al. 2003). Almost half of these visits were for genital check-ups or Pap smears (27%) or for menopausal problems (22%). A further 11% of these consultations involved menstrual problems. Pregnancy and family planning were the subject of 2.9% of these consultations. Male genital problems accounted for 1% of all health problems managed by GPs.

Statistics on hospital separations (Table 2.5) provide additional information on the extent of morbidity related to reproductive organs as well as complications of pregnancy.

In 2002–03, Medicare fee-for-service benefits were paid for 6,076 tubal ligations and 26,978 vasectomies (Department of Health and Ageing, personal communication). These figures exclude services provided to public patients in hospitals and through other publicly funded programs.

Table 2.5: Hospital separations for diseases of the sex organs and pregnancy-related disorders, 2001-02

Principal diagnosis	Number of separations		Proportion of total separations (per cent)	
	Males	Females	Males	Females
Diseases of the male genital organs	43,987	..	1.5	..
Diseases of the breast	2,000	12,078	0.1	0.4
Diseases of the female pelvic organs and genital tract	..	160,762	..	4.7
Complications relating to pregnancy	..	50,092	..	1.5
Complications relating to labour/delivery	..	262,516	..	7.7
Complications relating to the puerperium	..	32,526	..	1.0
Pregnancy with abortive outcome	..	79,717	..	2.3

.. Not applicable.

Source: AIHW National Hospital Morbidity Database.

Sexual difficulties

Almost one-fifth of male ASHR respondents aged 50-59, and one-eighth of those aged 40-49, reported trouble keeping an erection during at least a month in the past year (Richters et al. 2003b). However, only 5.2% of those aged 50-59 and 1.4% of those aged 40-49 had used treatment to aid erections.

Reports of trouble with vaginal dryness ranged from 7% among females aged 16-19 to more than one-third of those aged 50-59. Pain during intercourse declined from 25% of females aged 16-19 to 15.2% among those aged 50-59.

Other sexual difficulties experienced for more than one month included lack of interest in sex or not finding sexual intercourse pleasurable, premature or non-orgasm, and lack of confidence in sexual performance or bodily attractiveness.

Use of other services

Family planning organisations provide services to promote the sexual and reproductive health of Australians, particularly for those unable to or who prefer not to access such services through GPs. The services include contraception, counselling and information, and the management of sexual and reproductive health. Other services (largely in urban areas) include clinics and community education programs (undertaken both directly and through the training and resourcing of teachers and community workers), and education and training of GPs and nurses.

Sexual Health and Family Planning Australia, which collects data on all state and territory family planning organisations except South Australia, reported 129,102 client visits in 2002-03, a slight increase from 126,720 in 2000-01 (SH&FPA 2003). Early intervention services—Pap smears, pregnancy, rubella and hepatitis checks or STI investigations—represented almost 49% of the total service provision; reproductive and sexual health management accounted for 29% of these services; and contraception for 22%. South Australia's family planning organisation, called SHine, provided over 16,900 clinical services to 5,068 individuals during 2002-03 (SHine 2003). The pattern of services requested was broadly similar to those of other family planning organisations.

Sexually transmissible infections

The incidence and prevalence of sexually transmissible infections (STIs) are important indicators of the variation in the nature and degree of sexual activity within the population. Unlike other infections, only sexually active individuals can be infected with an STI by their contacts. Contacts may have no symptoms but still be infectious at the time of the activity. Since most of the STIs are not immediately life-threatening, those who carry them may continue to contribute to new infections for a long time.

Some STIs are notifiable through the National Notifiable Diseases Surveillance System (NNDSS). These include HIV and AIDS, hepatitis B and C, chlamydia, donovanosis, gonococcal infection and syphilis. Several diseases commonly or usually spread by sexual contact, including parasitic infestations such as pubic lice, are not subject to national notification and no information on their prevalence is available.

In the ASHR, 20.2% of males and 16.9% of females reported that they had been diagnosed with an STI or a bloodborne virus at some stage of their life (Grulich et al. 2003a). The proportions for the 12 months before the survey were 2.0% and 2.2% respectively (Table 2.6). GPs, rather than sexual health clinics, were the most common source of treatment.

Table 2.6: Self-reports of being diagnosed with an STI or bloodborne virus, 2001-02 (per cent)

Infection or virus	Ever		Last 12 months	
	Males	Females	Males	Females
Diagnosed with an STI	20.2	16.9	2.0	2.2
Pubic lice	9.8	4.2	0.3	0.1
Genital warts	4.0	4.4	0.5	0.3
Wart virus (on Pap smear)	..	5.1	..	0.8
Chlamydia	1.7	3.1	0.2	0.2
Genital herpes	2.1	2.5	0.8	1.1
Syphilis	0.6	0.1	<0.1	0.0
Gonorrhoea	2.2	0.6	<0.1	<0.1
Non-specific urethritis	5.0	..	0.3	..
Pelvic inflammatory disease	..	2.3	..	0.2
Bacterial vaginosis	..	1.8	..	0.6
Trichomoniasis	..	0.8	..	<0.1
Candida or thrush ^(a)	6.6	57.6	1.3	17.5
Hepatitis A	1.9	1.6	<0.1	<0.1
Hepatitis B	0.7	0.5	0.0	<0.1
Hepatitis C	0.5	0.5	0.0	<0.1

.. Not applicable.

(a) Not included when calculating lifetime or 12-month incidence of STIs.

Source: Grulich et al. 2003b.

Among those heterosexually active, 42.5% of men and 34.2% of women had used condoms within the year before the survey (de Visser et al. 2003). However, among those who had vaginal intercourse with one or more casual partners over the past six months, only 44.6% of men and 35.4% of women had always used condoms.

Heterosexual couples who used other forms of contraception were significantly less likely to use condoms. Condom use was higher among younger persons and among those with more than one sexual partner. Homosexual males also reported higher condom use (58.9% in the past year). They were also considerably more likely, at 86.8%, to report always using condoms for anal sex with a casual partner.

Information from the NNDSS on STIs is given in Section 2.7 of this chapter. Status reports on HIV/AIDS and hepatitis B and C are also provided in that section.

Vision impairment and eye disorders

Vision impairment and blindness have a large impact on the individuals involved, the workforce and the community. Eye disorders significantly reduce quality of life, increase dependent living and are much more common among those who die prematurely (Taylor 2001).

The leading causes of vision impairment and blindness in Australia are primarily age-related eye disorders (Box 2.1). These include macular degeneration, cataract, glaucoma and diabetic retinopathy. Much refractive error is also age-related but it can be corrected by eyewear and need not result in vision impairment or blindness. Eye disorders have a significant impact on government expenditure. In 2002, for example, Medicare benefits paid about \$90 million for eye surgery (HIC 2003).

Box 2.1: Common eye disorders

Refractive error is a defect of the eye which prevents parallel light rays from being brought to a single focus precisely on the retina, resulting in blurred vision. The four most common refractive errors are myopia (short-sightedness), hyperopia (long-sightedness), astigmatism and presbyopia. Refractive error is correctable with lenses, but uncorrected refractive error can lead to impaired vision or blindness.

The major causes of vision impairment and blindness include:

***Age-related macular degeneration (AMD)** is a condition affecting the central area of the retina (macula) that is responsible for fine central vision. It is highly associated with ageing, but smoking and genetic factors also contribute to its development. While there is no cure, early detection and treatment can reduce further vision loss.*

***Cataracts** are cloudy or opaque areas in the lens of the eye. Advancing age, smoking, excess exposure to sunlight and diabetes can increase the risk of cataracts. The condition can be corrected by surgery, which consists of removing the lens of the eye and replacing it with an artificial lens.*

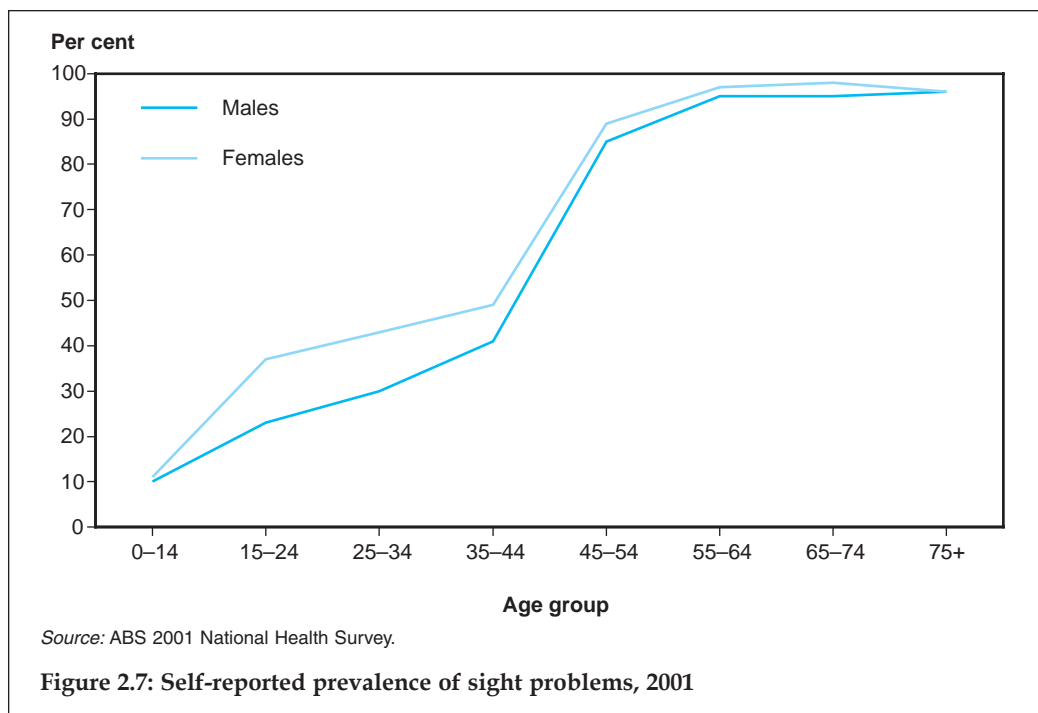
***Glaucoma** is a condition of increased fluid pressure inside the eye (intraocular pressure). This increased pressure damages the optic nerve causing partial vision loss, with blindness as a possible outcome. Treatment in the form of eye drops can reduce intraocular pressure, but not restore vision already lost.*

***Diabetic retinopathy** is a complication of diabetes. Elevated blood sugar damages the blood vessels that nourish the retina. Most of the vision loss due to diabetes can be prevented by early treatment.*

Source: Adapted from US National Library of Medicine 2001.

Based on results of the 2001 National Health Survey, 9.7 million Australians, or 51% of the population, had at least one sight problem (ABS 2002c). The most commonly reported eye disorders were refractive errors such as long-sightedness (22%), short-sightedness (21%), presbyopia (9%) and astigmatism (5%). All are correctable with lenses. Cataract and glaucoma, eye disorders that can cause vision impairment or blindness, were reported by 2% and 1% of respondents, respectively. The prevalence of sight problems rapidly increase with age, reaching 87% by ages 45–54 and 96% by ages 75 and over (Figure 2.7). Prevalence was also greater among females (55%) than males (47%).

Vision impairment and blindness are among the major causes of disability. According to the 1998 Survey of Disability, Ageing and Carers, ‘loss of sight’ was the reason or part of the reason for disability in 349,800 persons, 2% of the total population. It was the principal cause of disability in 113,200 persons and about 39,600 persons had a severe or profound ‘core activity restriction’ due to loss of sight (AIHW 2003a).



Hearing loss

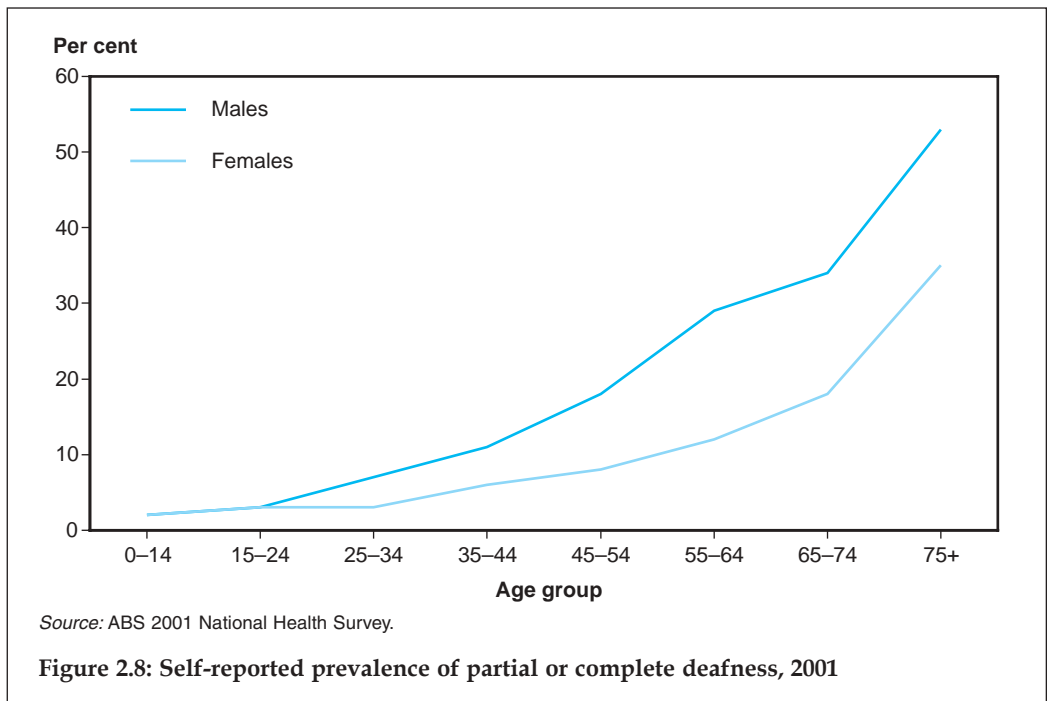
Hearing impairment can have serious consequences for both children and adults. Among children, it can hinder the development of language and communication skills, and lead to learning and social difficulties. In adults, it can have serious effects on a person’s sense of wellbeing, social interaction and employment.

From self-reports in the 2001 National Health Survey, it was estimated that over two million Australians, or 11% of the population, had partial or complete deafness (ABS

2002c). The prevalence increased gradually from 2% at the youngest ages to 53% for males and 35% for females aged 75 and over (Figure 2.8).

These estimates may underestimate the prevalence of hearing loss. Objective assessments by trained audiologists report an overall prevalence of 22% for hearing impairment among people aged 15 and over in South Australia, compared with 13% through self-reports for the same age group in the 2001 National Health Survey. Approximately 17% of the total population had a level of impairment likely to cause some difficulties in speech discrimination (Wilson et al. 1998).

Major causes of hearing impairment differ between children and adults. In children, it is largely attributable to foetal infection, congenital malformation and genetic causes. Among adults, the impairment is significantly associated with age, male sex and occupational noise exposure (Wilson et al. 1998). Some ear diseases, such as tinnitus, Meniere’s disease and otitis media, also increase the risk of hearing impairment.



2.2 Functioning and disability

As mentioned in Chapter 1, the International Classification of Functioning, Disability and Health (ICF) has helped to broaden our view of health. For example, illness and injury are key factors in disturbing the normal structure or functions of the body, affecting the ability of many people to function and take part in the spectrum of activities of life. However, functioning and disability cannot be simply viewed in terms of signs and symptoms, or in terms of body and pain. These issues need to be further

conceptualised and described. This section begins by explaining some of the concepts used to understand and describe disability. It then provides summary statistics on the functional status of Australians.

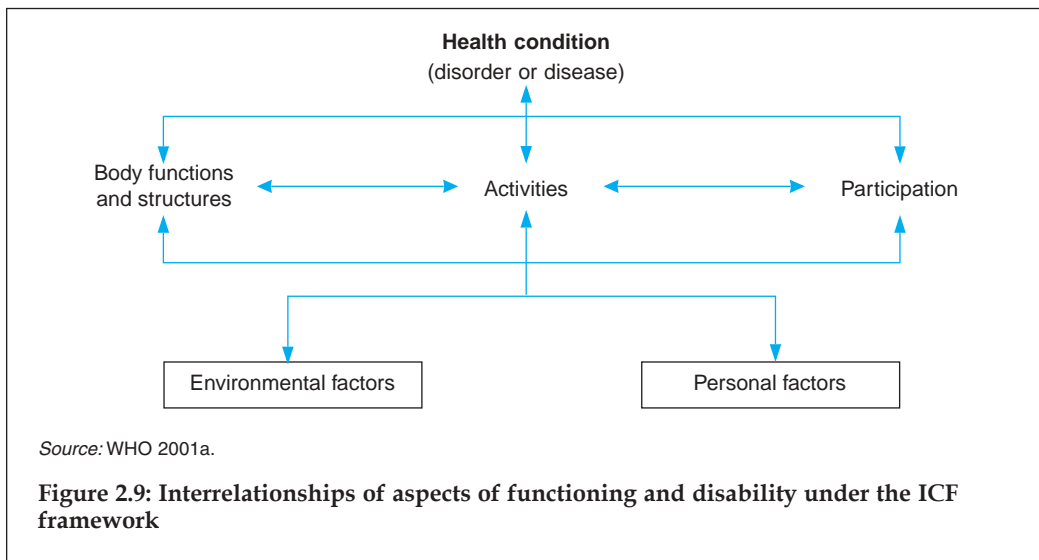
International Classification of Functioning framework

An understanding of functioning and disability requires a picture of an interrelated range of concepts that describe how humans function, alone or with others. These concepts are outlined by the ICF framework and their relationships are shown in Figure 2.9.

The ICF describes functioning and disability as multidimensional concepts relating to:

- the body functions and structures of people;
- the activities they do and the life areas in which they participate; and
- the factors in their environment which affect these experiences.

Each one of these components is defined in the context of a health condition. Disability is the umbrella term for any or all of an impairment of body structure or function, a limitation in activities, or a restriction in participation.



The ICF views a person's functioning or disability as a dynamic interaction between health conditions and environmental and personal factors. Environmental factors—an important new component of the ICF—are included in recognition of their influence on functioning and disability. Although personal factors are acknowledged in the interactive model shown in Figure 2.9, they are beyond the scope of the ICF and thus it does not classify them. Such factors might include age, sex and Indigenous status, and would be selected by users according to the application. Definitions of various ICF components are given in Box 2.2.

Box 2.2: Definitions of ICF components

Body functions are the physiological functions of body systems (including psychological functions).

Body structures are anatomical parts of the body such as organs, limbs and their components.

Impairments are problems in body function and structure such as significant deviation or loss.

Activity is the execution of a task or action by an individual.

Participation is involvement in a life situation.

Activity limitations are difficulties an individual may have in executing activities.

Participation restrictions are problems an individual may experience in involvement in life situations.

Environmental factors make up the physical, social and attitudinal environment in which people live and conduct their lives. These are either barriers to or facilitators of the person's functioning.

Disability in Australia

While disability involves an interaction between health conditions and environment, broad measures of the level of disability in a society can be derived without a detailed focus on underlying health conditions. This approach is important in assessing the need for assistance in a population. (Disability related to specific health conditions among older persons is described in detail in Chapter 8 of this report.)

The following information is based on the 1998 ABS Survey of Disability, Ageing and Carers. The ABS uses questions based on various ICF concepts to screen into the survey people with a mixture of specific and non-specific health conditions, impairments and/or activity limitations.

While most Australians are free from a disability for which they require assistance, many others, particularly those in the higher age groups, have more intensive care and assistance needs. From the 1998 survey, an estimated 19.3% of Australians, corresponding to 3.6 million persons, were categorised by the ABS as individuals with a disability (Table 2.7). Almost one-third of these, 1.1 million persons or 6.1% of the Australian population, required assistance with core activities of daily living (self-care, mobility and/or communication), and were therefore referred to by the ABS as having a 'severe or profound core activity restriction'.

Prevalence estimates for five main disability groups—'intellectual', 'psychiatric', 'sensory/speech', 'acquired brain injury' and 'physical/diverse'—are provided in Table 2.8. These disability groupings do not classify people; instead, they group aspects of people's experience in ways that are generally recognised in the disability field, and in legislative and administrative contexts in Australia (AIHW 2003b, 2003c).

Table 2.7: Main disabling conditions, 1998

Disabling condition	Age <65 years		Age 65+ years		All ages	
	Number ('000)	% of the population	Number ('000)	% of the population	Number ('000)	% of the total population
Main disabling condition						
Intellectual	209.0	1.3	*3.7	0.2	212.7	1.1
Psychiatric	197.2	1.2	87.3	3.8	284.5	1.5
Sensory/speech	235.8	1.4	193.8	8.5	429.6	2.3
Acquired brain injury	35.7	0.2	*3.5	*0.2	39.2	0.2
Physical/diverse	1,709.7	10.4	934.4	41.2	2,644.1	14.2
Total with a disability	2,387.4	14.5	1,222.7	53.9	3,610.1	19.3
Main disabling condition and a severe or profound core activity restriction						
Intellectual	101.3	0.6	**1.6	**0.1	103.0	0.6
Psychiatric	57.9	0.4	73.4	3.2	131.3	0.7
Sensory/speech	38.2	0.2	46.8	2.1	84.9	0.5
Acquired brain injury	10.8	0.1	**2.1	**0.1	12.9	0.1
Physical/diverse	447.9	2.7	356.5	15.7	804.4	4.3
Total with a severe/ profound core activity restriction	656.1	4.0	480.4	21.2	1,136.5	6.1

Note: Estimates marked with * have an associated relative standard error (RSE) of between 25% and 50%. Estimates marked with ** have an associated RSE of 50% or more. All such estimates should be interpreted accordingly.

Source: AIHW 2003a: Table S1.

Focusing on estimates based on 'all disabling conditions' reported by or for people:

- **Physical/diverse disabilities** were the most commonly reported disabilities. Around 3,028,500 Australians (16.2% of the total population) of all ages had one or more physical/diverse disabilities in 1998. Of these, 2,853,400 also had one or more activity limitations or participation restrictions. Less than one-third of persons with physical/diverse disability (975,400 persons) had a severe or profound core activity restriction.
- One or more **intellectual disabilities** were experienced by 503,000 persons of all ages, or 2.7% of Australians. Of these, 496,500 also had one or more activity limitations or participation restrictions. More than half of the persons with intellectual disabilities (301,900 persons) had a severe or profound core activity restriction.
- **Psychiatric disability** was experienced by 768,900 persons (4.1% of the total population), of whom 757,100 had activity limitations or participation restrictions. A little over half of those with a psychiatric disability (398,300 persons) had a severe or profound core activity restriction.
- **Sensory/speech disability** was experienced by 1,404,600 persons (7.5% of the total population), of whom 1,286,900 had activity limitations or participation restrictions. Close to four out of 10 persons (524,000) with sensory/speech disability had a severe or profound core activity restriction.

- **Disabilities associated with an acquired brain injury** were experienced by 211,100 persons (1.1% of the total population), of whom 201,600 had activity limitations or participation restrictions. More than one-half of the persons with an acquired brain injury (113,300 persons) had a severe or profound core activity restriction.

Table 2.7 describes the distribution of main disabling conditions. Physical/diverse disabilities were not only the most common disabilities noted in the population but were also the main disabling condition in 2.6 million persons (14.2% of the total population).

Table 2.8: Prevalence of disabling conditions, 1998

Disability group	Age <65 years		Age 65+ years		All ages	
	Number ('000)	% of the population	Number ('000)	% of the population	Number ('000)	% of the total population
All disabling conditions						
Intellectual	376.9	2.3	126.1	5.6	503.0	2.7
Psychiatric	504.1	3.1	264.8	11.7	768.9	4.1
Sensory/speech	685.7	4.2	718.9	31.7	1,404.6	7.5
Acquired brain injury	159.0	1.0	52.0	2.3	211.1	1.1
Physical/diverse	1,903.9	11.6	1,124.6	49.6	3,028.5	16.2
All disabling conditions and activity limitations and participation restrictions						
Intellectual	370.4	2.3	126.1	5.6	496.5	2.7
Psychiatric	493.5	3.0	263.6	11.6	757.1	4.1
Sensory/speech	597.9	3.6	689.0	30.4	1,286.9	6.9
Acquired brain injury	150.8	0.9	50.8	2.2	201.6	1.1
Physical/diverse	1,771.2	10.8	1,082.2	47.7	2,853.4	15.3
All disabling conditions and severe or profound core activity restrictions						
Intellectual	184.8	1.1	117.1	5.2	301.9	1.6
Psychiatric	209.9	1.3	188.4	8.3	398.3	2.1
Sensory/speech	218.7	1.3	305.5	13.5	524.2	2.8
Acquired brain injury	75.2	0.5	38.2	1.7	113.3	0.6
Physical/diverse	517.2	3.2	458.3	20.2	975.4	5.2

Source: AIHW 2003a: Table S1.

2.3 Morbidity and illness

Another major indicator of the health of a population is the extent of morbidity and illness in the population. Such information is important in gauging the need for health services and care. The term 'morbidity' often covers disability. However, in this section morbidity covers the presence of a disease, condition or a disorder. Illness in this context refers to the state of feeling unwell (see Box 2.3). Disability has been discussed in Section 2.2.