



The current state of women's health in Australia

Informing the development of the
National Women's Health Strategy 2020–2030

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List of Acronyms

ABS	Australian Bureau of Statistics
AIHW	Australian Institute of Health and Welfare
ALSWH	Australian Longitudinal Study on Women's Health
BED	Binge Eating Disorder
CALD	Culturally & Linguistically Diverse
COAG	Council of Australian Governments
COPD	Chronic Obstructive Pulmonary Disease
DALY	Disability-Adjusted Life Years
DSM-5	Diagnostic and Statistical Manual of Mental Disorders
GDM	Gestational Diabetes Mellitus
HDPs	Hypertensive Disorders during Pregnancy
HIV	Human Immunodeficiency Virus
HPV	Human Papillomavirus
ICD-10	International Classification of Diseases
IPV	Intimate Partner Violence
LARC	Long-Acting Reversible Contraception
LGBTIQA	Lesbian, Gay, Bisexual, Transgender, Intersex, Queer, Asexual
NHMRC	National Health and Medical Research Council
OECD	Organisation for Economic Co-operation and Development
PCOS	Polycystic Ovarian Syndrome
SES	Socioeconomic Status
STIs	Sexually Transmissible Infections
YLD	Years Lived with Disability
YLL	Years of Life Lost

1 Key points

These are the key points from each of the chapters. The topics for the chapter accord with the Minister's priorities for the next National Women's Health Strategy 2020-2030.

MENTAL HEALTH AND WELLBEING

What is working well?

- Since the Better Access Initiative was released in 2006, there has been a steady increase in the number of mental health-related GP services provided, with almost 3 in 5 mental health-related GP encounters provided to women.
- The federal government and each state/territory government have identified mental health and suicide prevention as policy priorities.

What needs particular attention?

- The prevalence of common mental disorders, such as anxiety and depressive disorders, remains stable at around 1 in 5 (20%) women since 2010.
- While the prevalence of substance use disorders in women is lower than in men, this gender gap is steadily narrowing globally, and the closing gender gap is most evident among younger adults.
- The suicide rate for women has increased slightly over the last decade.
- Perinatal depression remains a major issue, with a prevalence of around 10% among mothers of children aged 24 months or less, and the highest rate is among young mothers aged under 25 years (13.5%).
- Multimorbidity is highly prevalent among people with a mental disorder, with around 14.5% of women in 2007 reporting a concurrent mental disorder and physical condition.
- Younger women aged 15-44 years, Indigenous women, and women in marginalised groups continue to experience higher rates of mental disorders and suicide.
- Younger adults, Indigenous Australians, and people living in remote and very remote areas have lower rates of mental health-related GP encounters compared with older adults, non-Indigenous Australians, and people living in inner regional areas and major cities.
- There is a lack of research and data regarding the national estimates of eating disorders for Australians, in particular for marginalised and disadvantaged populations.
- There is a need to collect data on mental health status from women from culturally and linguistically diverse backgrounds, especially from non-English speaking migrants and refugees.

CHRONIC CONDITIONS

What is working well?

- Cardiovascular disease has been declining for almost 50 years, due to reductions in risk factors and better medical treatment. However, the decline has been slowing among younger people in recent years.
- Death rates from many cancers have also been decreasing, due to early detection and improved treatments.

What needs particular attention?

- Symptoms of heart attack in women are less likely to be recognised than in men, and women are less likely to receive appropriate treatment for heart disease.
- There are substantial inequalities between Indigenous and non-Indigenous women for most chronic conditions.
- Women in socioeconomically disadvantaged and marginalised groups continue to experience poorer health outcomes.

PREVENTIVE HEALTH

What is working well?

- Tobacco consumption is declining.
- Alcohol consumption is declining.

What needs particular attention?

- Overweight and obesity are increasing for all women, and particularly in younger generations.
- Screening rates in Australia for breast and cervical cancer are low in comparison with other high-income countries and have changed little over the last ten years.
- There are substantial inequalities between Indigenous and non-Indigenous women for most risk factors.

MATERNAL AND INFANT HEALTH

What is working well?

- The teenage fertility rate has continued to decline.

What needs particular attention?

- Given continuing increases in the prevalence of obesity and advanced maternal age in Australian women, it is expected that the infertility rate, caesarean section, and incidence of pregnancy complications (especially gestational diabetes (GDM) and hypertensive disorders during pregnancy) will continue to increase in the next decade.
- GDM screening and registration are effective in Australia, but engaging women with GDM in follow-up programs is difficult, with only half of the mothers obtaining glucose screening at six-weeks postpartum.
- Caesarean deliveries have increased over the last decade, especially among women with private insurance. In 2015, about 1 in 3 mothers had a caesarean birth, and 3 out of every 5 caesarean deliveries in Australia are planned (elective caesarean).
- While the rates of smoking and alcohol consumption have been declining in Australia, 1 in 10 Australian mothers are still smoking during pregnancy, and 40% drink at least some alcohol during pregnancy.
- Strategies are needed to heighten awareness of preconception health, particularly regarding nutrition and lifestyle, and target all women who are planning a pregnancy.

CONDITIONS PREDOMINANTLY AFFECTING WOMEN

What is working well?

- The success of the National Human Papillomavirus (HPV) Vaccination Program has led to a rapid and significant decline in genital warts, especially for young people under 30 years. It is expected to reduce the rates of HPV-related cancers in the coming years, such as cervical cancer

What needs particular attention?

- While a high proportion of women use a contraceptive method, the rate of contraceptive failure (unintended pregnancy) is high in Australia, and the uptake of long-acting reversible contraception has been low.
- The notification rates of sexually transmissible infections (especially chlamydia and gonorrhoea) continued to rise in Australian women over the last decade, in particular among young women aged under 30 years, Indigenous women, and women living in remote and very remote areas.
- There is limited evidence on national estimates of the prevalence of polycystic ovarian syndrome and endometriosis, especially the change over time.
- Hysterectomy rates declined over the last decade, but the rate was still high, at around 1 in 3 women.
- The timing of menarche and menopause not only reflect current health status, but are linked with adverse health outcomes in later life, including breast cancer, osteoporosis, type 2 diabetes, cardiovascular disease and mortality.
- While the prevalence of physical violence in the last 12 months has declined over the last decade, the rates of sexual violence and domestic violence have remained relatively steady over time.

HEALTHY AGEING AND DISABILITY

What is working well?

- Women (and men) are living longer, leading to the ageing of the population.
- More women in all age groups from 65 years and above are experiencing 'excellent' or 'very good' health, and less disability, than in previous decades.

What needs particular attention?

- Life expectancy of Indigenous women is about 10 years less than non-Indigenous women.
- With increasing age, women are likely to experience multiple chronic conditions simultaneously. The health system, as a whole, is not particularly well organised to cope with the increasing complexity of older women's health.
- Women are at increased risk of dementia as they get older. In the absence of any cure, or widely effective treatment of symptoms, the emphasis needs to be on prevention and taking care of women with dementia and the people who care for them.
- Better access to dental services is needed for women without private health insurance for dental services, and for those with low income or living in inner regional and remote areas.
- Prevention strategies are needed to reduce the risk of falls and fractures, including those that occur in residential aged care facilities.

- Research is needed on the implications of the high prevalence of multimorbidities among older people, with an estimated 82% of women aged 65+ in 2015 having more than one long-term condition; multimorbidity requires a more integrated approach to treatment and management of conditions across the health system.

2 Introduction

2.1 Background

The scope and methods of this evidence review on women's health and wellbeing, which was undertaken over a six-week period in June and July 2018, required a strategic approach to address both the volume of evidence and the breadth of subject material. First, the National Women's Health Policy 2010 was taken as an initial topic guide to update statistics, with some new areas added as the collection of evidence progressed. Second, the focus was to synthesise the available evidence to inform consultations for the key focus areas identified for the National Women's Health Strategy: *mental health; chronic disease and preventive health; maternal and infant health; conditions predominantly affecting women; and healthy ageing and disability*.

In addition to key data sources from the Australian Bureau of Statistics (ABS) and Australian Institute of Health and Welfare (AIHW), numerous individual studies and reviews were used (as listed below). As the review progressed to generate an updated picture of women's health, a number of limitations emerged that varied according to the topic, including:

- Conditions where prevalence rates were not reported separately for women and men and by age groups. This is especially an issue when disaggregated data are needed to identify trends over time;
- Different methods applied in the classification of conditions and stratification of variables have prevented comparative statistics;
- Availability of data on marginalised and disadvantaged population groups.

It should be noted that in parallel to this evidence review a similar update has been undertaken for male health, which may have resulted in both some overlap and differences in the approaches taken for each.

2.2 Data sources

The following national databases and surveys since 2010 were used in this evidence review to report national estimates specific to women:

- National databases – collected annually: Australian Cancer Database, National Death Index, National Hospital Morbidity Database, National Hospital Morbidity Database, Medicare Benefit Scheme Database
- National surveys: National Health Survey (2011-12, 2014-15), National Drug Strategy Household Survey (2010, 2013, 2016), Personal Safety Survey (2012, 2016), Survey of Disability, Ageing and Carers (2012, 2015), Australian Burden of Disease Study (2011, 2015)
- Mental health specific: National Survey of Mental Health and Wellbeing (2007), Australian Child and Adolescent Survey of Mental Health and Wellbeing (2013-14), National Survey of Psychotic Illness (2010)
- Maternal, sexual, and reproductive health specific: National Infant Feeding Survey (2010), National Perinatal Data Collection (annually), Australian and New Zealand Assisted Reproduction Database (annually), National Notifiable Diseases Surveillance System (annually)

- Marginalised populations: National Aboriginal and Torres Strait Islander Health Survey (2012-13), National Aboriginal and Torres Strait Islander Social Survey (2014-15), National Survey of the Health and Wellbeing of Gay, Lesbian, Bisexual, and Transgender (2012), National Trans Mental Health Study (2014)
- Women's health studies: Australian Longitudinal Study on Women's Health (follow-up every 3 years since 1996), Jean Hailes for Women's Health Survey (annual survey since 2015)

3 Overview of health and wellbeing of Australian women

This background document provides an overview of the health and wellbeing of the 12 million women (2016) in Australia. Many chronic conditions, such as cardiovascular disease and mental health, that impact on health and wellbeing show variations between men and women that reflect differences in the:

- Prevalence and development of chronic diseases.
- Response of women to treatment, including treatment efficacy and adverse events (side-effects).
- Demographic distribution, especially the higher percentage of women than men aged over 65 years.

The health and wellbeing of women also vary across key characteristics including age, socioeconomic disadvantage, Indigenous status, and remoteness. For instance, this is evident in the gap in life expectancy across population groups:^{1,2}

- Women born in Australia in 2013–2015 can expect to live to the age of 84.5 years on average.
- For Aboriginal and Torres Strait Islander women born in 2010–2012, life expectancy was estimated to be 9.5 years lower than non-Indigenous women (73.7 years compared with 83.1)

There is also increasing evidence of the specific health risks faced by women in the Lesbian, Gay, Bisexual, and Transgender (LGBT) community.³ Additionally little is known about differences in health experienced by women from non-English speaking backgrounds, including recent migrants.

3.1 Population characteristics

Demographic change is likely to be an important factor in women's health and their need for health services in the next period to 2030.

The 2015 population age structure (Figure 3-1) has noticeable peaks and troughs that can be explained by historical events:

- A post-World War II baby boom from 1946 to 1966, where the total fertility rate ranged from 3.0 to 3.5 babies per woman, resulting in a steady increase in the total population.^{4,5}
- The introduction of the Pill in 1961, which contributed to a dramatic reduction in the fertility rate,⁶ occurred alongside changing social attitudes towards family size and women engaging in employment in the 1960s and 1970s.⁷
- First echo of the baby boom from 1970-73, when children of the baby boomers started having children of their own.⁸
- Approximately 95,000 refugees resettled in Australia between 1975 and 1985.⁹
- Recent waves of migrants were from South East Asia.

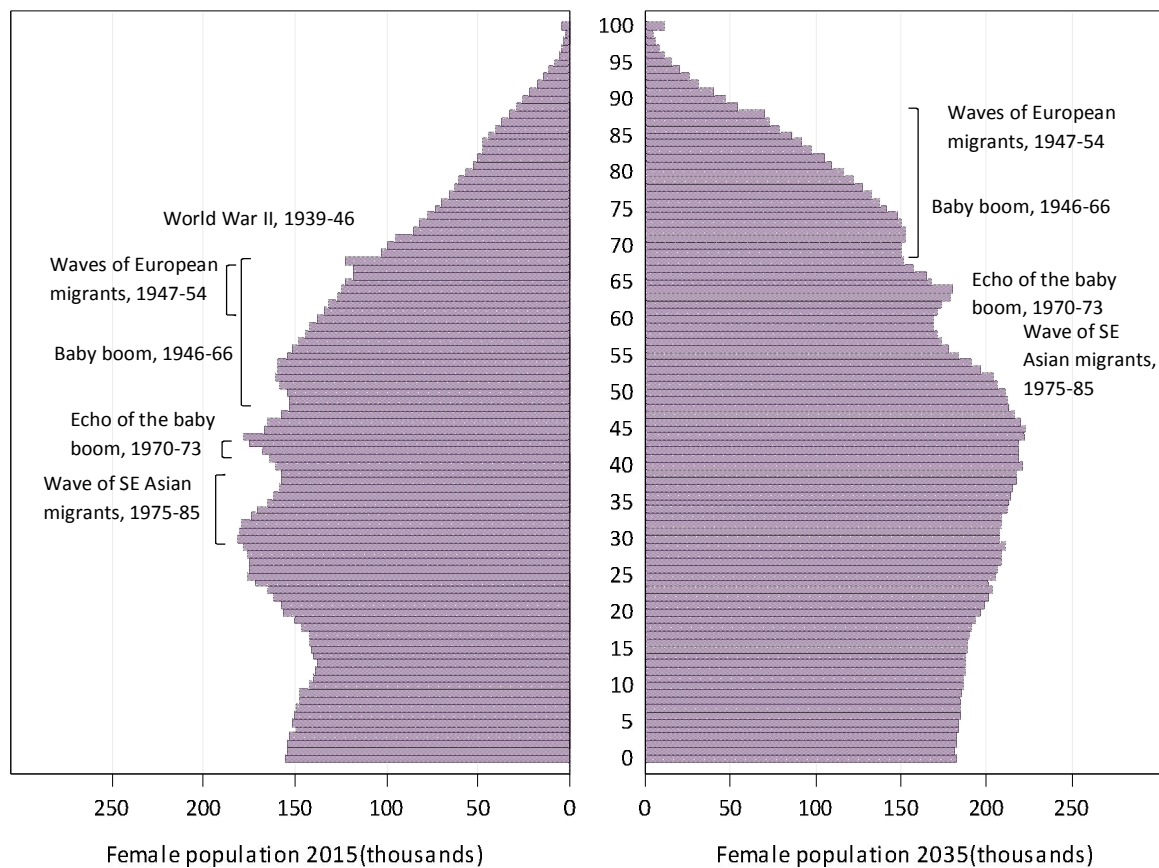


Figure 3-1: Comparison of the estimated Australian female resident age structure in 2015 and 2035
5,10

Key features of these demographic changes that are likely to impact on women's health are:

1. Many more women over the age of 75.
2. Later ages of first birth.
3. More migrant women, mainly born in Southeast Asia and other Asian countries, and their children as a new wave of first generation Australians.

3.2 Reproductive life stage

The health of women and their infants can be affected by numerous factors: the mother's age when giving birth, socioeconomic status, area of residence, pre-existing or pregnancy-related medical conditions, and health behaviours such as smoking and drinking alcohol during pregnancy.

- The average age of all women who gave birth continues to rise: from 29.7 years in 2004 to 30.2 years in 2014.
- 1 in 9 women (33,280 or 11%) who gave birth in 2014 smoked at some time during their pregnancy, a decrease from 15% in 2009.
- Almost half of women who gave birth in 2014 were overweight or obese at conception or early in pregnancy.

- 2 in 3 mothers had vaginal births, and 1 in 3 had caesareans in 2014. Caesareans were almost 3 times more common among mothers aged 40 and over.
- More than half (56%) of pregnant women in 2013 consumed alcohol before they knew they were pregnant and about 1 in 4 (26%) of these women continued to drink, even after they knew they were pregnant.

In addition, the reproductive characteristics of earlier age at menarche, pregnancy complications, and earlier age at menopause are risk factors for chronic diseases in later life.

3.3 General health and key chronic conditions

One of the simplest measures of general health is given by self-rated health status, which combines women's perceptions of their physical, social, emotional, and mental health and wellbeing. From Australian Bureau of Statistics (ABS) survey data:

- Overall in 2014–15, three in five women (58%) aged 15 years and over rated their health as excellent or very good.¹¹

These figures vary markedly with age, however, with the percentage who rated their health as excellent almost halving from 67% for those aged 25–34 years down to 36% for women aged 75 years and over.

Table 3-1: Selected chronic diseases reported by women, 2014–15¹¹

CONDITION	NUMBER	PER CENT
Mental and behavioural problems	2,217,500	19.2
CVD (cardiovascular disease)	2,152,300	18.6
Arthritis	2,110,400	18.3
Back problems	1,872,100	16.2
Asthma	1,369,200	11.8
Diabetes	534,500	4.6
COPD (chronic obstructive pulmonary disease)	297,900	2.6
Cancer	171,400	1.5

Table 3-1 shows estimates of the prevalence of chronic conditions (arthritis, asthma, back problems, cancer, cardiovascular disease, chronic obstructive pulmonary disease (COPD), diabetes and mental and behavioural problems) among Australian women from survey data from the ABS 2014–15 National Health Survey.¹¹

- One in two (52%) of women reported having one or more of 8 selected chronic diseases.
- As for self-rated health status, the prevalence of these chronic diseases varies greatly with age, with 87% of women aged 65 and over having a chronic disease, compared with 37% aged under 45.

3.4 Burden of chronic conditions across the life course

Figure 3-2 shows the burden of non-fatal disease, so common diseases that lead to loss of life (such as cancers and heart disease) are much less prominent, and conditions that cause disability are relatively more important.

- For girls and young women, common mental health problems (anxiety and depressive disorders) are the most important conditions.
- For women aged 45-74 years, musculoskeletal problems, including back pain and arthritis are most important.
- From the age of 75 years, dementia is a major problem, together with hearing and vision loss.

Rank	Age group (years)								
	Under 5	5–14	15–24	25–44	45–64	65–74	75–84	85–94	95+
1st	Other mental disorders (2.6; 17%)	Anxiety disorders (5.7; 13%)	Anxiety disorders (14.0; 14%)	Anxiety disorders (33.8; 12%)	Other musculoskeletal (37.3; 11%)	Other musculoskeletal (16.0; 11%)	Dementia (13.7; 10%)	Dementia (21.5; 25%)	Dementia (3.2; 34%)
2nd	Other gastrointestinal infections (1.5; 9.9%)	Asthma (5.1; 12%)	Depressive disorders (11.1; 11%)	Depressive disorders (27.9; 10%)	Back pain and problems (30.9; 9.3%)	Osteoarthritis (13.0; 9.3%)	COPD (12.4; 9.3%)	Hearing loss (5.8; 6.8%)	Coronary heart disease (0.7; 6.9%)
3rd	Asthma (1.4; 9.3%)	Depressive disorders (4.5; 10%)	Asthma (7.5; 7.3%)	Back pain and problems (25.8; 9.3%)	Anxiety disorders (26.6; 8.0%)	Back pain and problems (10.2; 7.3%)	Other musculoskeletal (9.8; 7.4%)	COPD (5.8; 6.7%)	Hearing loss (0.6; 6.2%)
4th	Other neurological conditions (1.4; 8.9%)	Dental caries (2.7; 6.2%)	Bipolar affective disorder (5.7; 5.6%)	Other musculoskeletal (18.2; 6.6%)	Osteoarthritis (24.1; 7.2%)	Rheumatoid arthritis (9.3; 6.7%)	Osteoarthritis (9.5; 7.2%)	Coronary heart disease (5.7; 6.7%)	Vision loss (0.6; 5.9%)
5th	Dermatitis and eczema (0.9; 5.8%)	Upper respiratory conditions (2.7; 6.1%)	Back pain and problems (5.7; 5.6%)	Asthma (16.1; 5.8%)	Depressive disorders (22.5; 6.8%)	COPD (8.5; 6.1%)	Hearing loss (9.5; 7.2%)	Osteoarthritis (4.3; 5.0%)	Osteoarthritis (0.4; 4.0%)
6th	Other congenital conditions (0.6; 3.7%)	Conduct disorder (2.6; 6.0%)	Upper respiratory conditions (5.1; 5.0%)	Upper respiratory conditions (13.9; 5.0%)	Rheumatoid arthritis (22.2; 6.7%)	Coronary heart disease (6.1; 4.4%)	Coronary heart disease (8.5; 6.4%)	Vision loss (4.1; 4.8%)	COPD (0.4; 3.9%)
7th	Anxiety disorders (0.6; 3.6%)	Acne (2.5; 5.7%)	Polycystic ovarian syndrome (5.1; 5.0%)	Bipolar affective disorder (10.2; 3.7%)	COPD (14.8; 4.5%)	Severe tooth loss (6.1; 4.4%)	Rheumatoid arthritis (6.3; 4.8%)	Other musculoskeletal (3.5; 4.1%)	Protein-energy deficiency (0.3; 3.1%)
8th	Protein-energy deficiency (0.4; 2.9%)	Epilepsy (1.7; 3.9%)	Alcohol use disorders (4.8; 4.7%)	Rheumatoid arthritis (9.0; 3.2%)	Asthma (14.4; 4.3%)	Hearing loss (5.9; 4.2%)	Back pain and problems (5.7; 4.3%)	Rheumatoid arthritis (2.8; 3.2%)	Epilepsy (0.3; 2.9%)
9th	Epilepsy (0.4; 2.7%)	Dermatitis and eczema (1.7; 3.8%)	Acne (3.9; 3.9%)	Polycystic ovarian syndrome (8.6; 3.1%)	Upper respiratory conditions (11.5; 3.5%)	Dementia (5.7; 4.1%)	Severe tooth loss (5.4; 4.1%)	Severe tooth loss (2.5; 2.9%)	Other musculoskeletal (0.3; 2.7%)
10th	Upper respiratory conditions (0.4; 2.7%)	Other musculoskeletal (1.3; 3.0%)	Eating disorders (3.7; 3.6%)	Eating disorders (8.3; 3.0%)	Genital prolapse (7.4; 2.2%)	Asthma (4.8; 3.4%)	Atrial fibrillation (3.8; 2.9%)	Atrial fibrillation (2.4; 2.9%)	Rheumatoid arthritis (0.2; 2.5%)

Figure 3-2: Leading causes of non-fatal burden (YLD '000, proportion %) for females, by age group, 2011¹²

Figure 3-3 shows the leading causes of death for women at each age:

- At younger ages, most deaths are due to ‘external’ causes – accidents and suicide.
- For ages 45-74, cancers are the major causes of death.
- For the oldest age groups, heart disease, stroke and dementia dominate.

Rank	Age group (years)								
	Under 5	5–14	15–24	25–44	45–64	65–74	75–84	85–94	95+
1st	Birth trauma/asphyxia (8.6; 17%)	Brain/CNS cancer (0.9; 9.2%)	Suicide/self-inflicted injuries (6.5; 26%)	Suicide/self-inflicted injuries (11.8; 13%)	Breast cancer (32.8; 14%)	Lung cancer (17.8; 11%)	Coronary heart disease (26.7; 14%)	Coronary heart disease (31.5; 20%)	Coronary heart disease (4.7; 24%)
2nd	Pre-term/lbw complications (8.5; 17%)	RTI/motor vehicle occupant (0.7; 7.3%)	RTI/motor vehicle occupant (4.8; 19%)	Breast cancer (7.9; 8.9%)	Lung cancer (24.9; 10%)	Coronary heart disease (14.2; 8.8%)	Stroke (19.2; 9.8%)	Dementia (21.6; 14%)	Dementia (3.3; 17%)
3rd	Other disorders of infancy (4.6; 9.2%)	Fire, burns and scalds (0.6; 6.4%)	Poisoning (1.2; 4.6%)	Poisoning (6.5; 7.3%)	Coronary heart disease (14.3; 6.0%)	Breast cancer (12.3; 7.6%)	Dementia (17.2; 8.8%)	Stroke (20.8; 13%)	Stroke (2.6; 14%)
4th	SIDS (3.6; 7.2%)	Cerebral palsy (0.6; 6.2%)	Other cancers (0.9; 3.5%)	RTI/motor vehicle occupant (3.7; 4.1%)	Bowel cancer (13.3; 5.6%)	COPD (9.6; 6.0%)	Lung cancer (11.1; 5.6%)	COPD (4.9; 3.2%)	Lower respiratory infections (0.8; 4.4%)
5th	Cardiovascular defects (2.8; 5.6%)	Suicide/self-inflicted injuries (0.6; 6.1%)	Epilepsy (0.8; 3.3%)	Chronic liver disease (3.1; 3.4%)	Stroke (9.6; 4.0%)	Stroke (8.1; 5.0%)	COPD (10.3; 5.2%)	Diabetes (4.8; 3.1%)	Falls (0.6; 3.4%)
6th	Other congenital conditions (2.3; 4.6%)	Homicide/violence (0.5; 5.1%)	Homicide/violence (0.8; 3.2%)	Bowel cancer (2.6; 2.9%)	Ovarian cancer (8.3; 3.5%)	Bowel cancer (7.9; 4.9%)	Bowel cancer (8.5; 4.3%)	Lower respiratory infections (4.0; 2.6%)	Chronic kidney disease (0.5; 2.9%)
7th	Other chromosomal abnormalities (2.0; 4.0%)	Other cancers (0.5; 5.0%)	Cerebral palsy (0.7; 2.7%)	Homicide/violence (2.6; 2.9%)	Suicide/self-inflicted injuries (7.4; 3.1%)	Pancreatic cancer (5.8; 3.6%)	Breast cancer (7.0; 3.6%)	Falls (4.0; 2.5%)	Diabetes (0.4; 2.3%)
8th	Other neurological conditions (1.4; 2.7%)	Other unintentional injuries (0.4; 4.4%)	Cystic fibrosis (0.5; 2.2%)	Melanoma (2.4; 2.7%)	COPD (7.1; 3.0%)	Dementia (5.1; 3.2%)	Diabetes (6.6; 3.4%)	Bowel cancer (3.9; 2.5%)	Atrial fibrillation (0.4; 1.9%)
9th	Neural tube defects (1.3; 2.6%)	Cardiovascular defects (0.4; 4.3%)	Other unintentional injuries (0.5; 1.9%)	Coronary heart disease (2.4; 2.7%)	Chronic liver disease (7.1; 3.0%)	Diabetes (4.9; 3.1%)	Pancreatic cancer (4.7; 2.4%)	Chronic kidney disease (3.7; 2.4%)	Non-rheumatic valvular disease (0.4; 1.9%)
10th	Brain malformations (1.2; 2.5%)	Other blood/metabolic disorders (0.4; 4.2%)	Brain/CNS cancer (0.5; 1.9%)	Stroke (2.4; 2.6%)	Pancreatic cancer (6.5; 2.7%)	Ovarian cancer (4.6; 2.8%)	Chronic kidney disease (4.2; 2.1%)	Non-rheumatic valvular disease (3.4; 2.2%)	COPD (0.3; 1.8%)

Figure 3-3: Leading causes of fatal burden (YLL '000, proportion %) for females, by age group, 2011

3.5 Factors that affect health

In addition to established sociodemographic factors (age, socioeconomic disadvantage, Indigenous status, and remoteness), a number of other trends have implications for future health outcomes:

- Reductions in smoking and alcohol consumption that can be expected to reduce the impact of smoking and alcohol-related chronic conditions.
- Advances in medical science have reduced the impact of some major conditions (e.g. premature deaths from heart disease), but also mean more people are likely to be living longer with multiple conditions (multimorbidity and disabilities).

- Increases in other risk factors, notably overweight, obesity, and physical inactivity. These can be expected to increase the risk of numerous chronic conditions (cardiovascular diseases, some cancers, and musculoskeletal conditions).
- Social changes, increasing pace of life, technological advances – factors that affect ‘stress’.

3.6 Multimorbidity

Multimorbidity refers to the co-occurrence of multiple conditions.

- Older people often have multiple chronic conditions, with an estimated 82% of women aged 65+ in 2015 having more than one long-term condition.
- Multimorbidity is also common among people with a mental disorder.
- In 2007, around 14.5% of women had a concurrent mental disorder and physical condition, with the most common being an anxiety disorder combined with a physical condition (about 1 million Australian women).¹³

There is increasing recognition by Australian governments that multimorbidity poses considerable challenges for treatment and management in terms of coordination and communication between the different parts of the system. Research is needed to address the scarcity of data on multimorbidity, including:

- The extent that certain conditions tend to cluster at different stages across the life course, and prevalence rates among marginalised and disadvantaged populations.
- Given that poor health behaviours, such as smoking, are risk factors for multiple chronic conditions, it is similarly the case that the conditions prevalent in people with multimorbidities often have common risk factors.
- Not only can one condition compound the burden of other conditions and complicate their treatment, but bidirectional associations can also occur, such as chronic conditions leading to mental health issues, including anxiety disorders.

Given the implications for the use of health services and the lack of evidence available on multimorbidities, this needs to be a priority for women’s health policy and research.

3.7 Strategies, policies and actions related to women’s health and wellbeing since 2010

Over the last decade, numerous policies at the National and State/Territory level have focused on women’s health.

WOMEN’S HEALTH POLICY/STRATEGY

Australian Government

- National Women’s Health Policy 2010

State/Territory Governments

- ACT Women’s Plan 2016-2026; ACT Women’s Plan 2010-2015
- Policy Framework for Northern Territory Women 2015-2020
- Queensland Women’s Strategy 2016-2021
- NSW Health Framework for Women’s Health 2013
- Victorian Women’s Sexual and Reproductive Health: Key Priorities 2017-2020; Priorities for Victorian Women’s Health 2014-2018; Victorian Women’s Health and Wellbeing Strategy

2010-2014

- South Australia's Women's Policy 2015; South Australian Women's Health Action Plan: Initiatives for 2010 and 2011
- Western Australian Women's Health Strategy 2018-2023; Western Australian Women's Health Strategy 2013-2017
- Tasmanian Women's Strategy 2018-2021; Tasmanian Women's Plan 2013-2018

For Aboriginal and Torres Strait Islander

- National Aboriginal and Torres Strait Islander Women's Health Strategy 2010

It is timely, therefore, to build upon existing initiatives and refresh the National Women's Health Policy for a coordinated and strategic approach across the life course. The data highlighted here show the importance of several factors that are likely to impact on women's health and their needs for health services in the period to 2030.

- *Population ageing and the increase in dementia and other conditions of old age.*
 - This includes the implications of multimorbidities and complex health problems that increase in prevalence in older age groups.
- *The importance of mental health issues for girls and younger women.*
 - This includes a focus on reducing trauma (in particular childhood abuse) and violence, given its adverse implications for both mental health and physical health and their contributions to the total burden of disease.
- *The central importance of reproductive health, not only for improved maternal and child health outcomes, but to support early prevention to reduce the risk of chronic diseases in later life.*
- *The need to increase prevention and early detection of factors that can greatly affect the development of chronic diseases.* These include:
 - Substantial public health measures to reduce the rise of overweight and obesity, as well as weight gain, including specific measures aimed at girls and younger women.
 - Improve recognition that risk factors and early markers of chronic disease may differ between men and women (the Heart Foundation's "Go Red" campaign is a good example).
 - Identifying women with specific reproductive characteristics, such as earlier menarche, pregnancy complications, and earlier menopause that are risk factors for chronic conditions in later life.
 - Screening to detect early indicators of cancers, type 2 diabetes, and markers of cardiovascular disease.
- *The continuing importance of policies that address the needs of groups of women at increased risk of chronic conditions, including:*
 - Aboriginal and Torres Strait Islander women.
 - Women living in remote and very remote areas.
 - Women in the LGBTIQ (lesbian, gay, bisexual, transgender, intersex, queer, asexual) community.
 - Migrant women and their daughters, mainly from Southeast Asia, who will make up an increasing proportion of the Australian female population and where research into health and health service needs is needed.
 - Homeless women.

4 Mental health and wellbeing

Key messages

What is working well?

- Since the Better Access Initiative was released in 2006, there has been a steady increase in the number of mental health-related GP services provided, with almost 3 in 5 mental health-related GP encounters provided to women.
- The federal government and each state/territory government have identified mental health and suicide prevention as policy priorities.

What needs particular attention?

- The prevalence of common mental disorders, such as anxiety and depressive disorders, remains stable at around 1 in 5 (20%) women since 2010.
- While the prevalence of substance use disorders in women is lower than men, this gender gap is steadily narrowing globally, and the closing gender gap is most evident among younger adults.
- The suicide rate for women has increased slightly over the last decade.
- Perinatal depression remains a major issue, with a prevalence of around 10% among mothers of children aged 24 months or less. The highest rate is among young mothers aged under 25 years (13.5%).
- Multimorbidity is highly prevalent among people with a mental disorder, with around 14.5% of women in 2007 reporting a concurrent mental disorder and physical condition.
- Younger women aged 15-44 years, Indigenous women, and women in marginalised groups continue to experience higher rates of mental disorders and suicide.
- Younger adults, Indigenous Australians, and people living in remote and very remote areas have lower rates of mental health-related GP encounters compared with older adults, non-Indigenous Australians, and people living in inner regional areas and major cities.
- There is a lack of research and data regarding national estimates of eating disorders for Australians, in particular for marginalised and disadvantaged populations.
- There is a need to collect data on mental health status from women from culturally and linguistically diverse backgrounds, especially from non-English speaking migrants and refugees.

4.1 Overview

Mental health is an overarching term that includes mental health promotion, mental illness prevention and treatment and rehabilitation, and social and emotional wellbeing.¹⁴ Mental illness is a description of the experience, defining attributes or diagnosis of those who meet the criteria for mental disorders under the established international classifications of ICD-10 or DSM-5. This includes common or high-prevalence mental disorders (such as anxiety and depressive disorders) and severe mental illnesses (such as psychosis).¹⁴

Since the last women's health policy was released in 2010, the prevalence of common mental disorders has changed little¹⁵ – with a stable rate of 1 in 5 women. Federal and state/territory governments have identified mental health as a policy priority, and access to mental health services has risen, but there seems to be little progress in reducing the burden of mental illness in Australia

over the last two decades. This evidence review on mental disorders among women highlights the importance of developing co-ordinated and gender-specific policies to address mental health and wellbeing.

It is estimated that in 2018 around 20% of adult Australians (or 3.8 million aged 16-85 years) will experience a mental disorder in a 12 month period, and around 45% of adults (8.5 million) will experience a common mental disorder in their life.¹⁶ These prevalence rates, however, are based on 2007 survey data from the National Survey of Mental Health and Wellbeing, that used clinical diagnostic criteria (ICD-10) to establish the prevalence of selected mental disorders, which can be categorised as anxiety disorders, affective or mood disorders (including depression), and substance use disorders.¹³ The 2007 survey findings for 12-month prevalence rates identified key differences in diagnosed mental disorders among women:

- Women experienced higher rates of mental disorders than men (22% vs 18%), particularly anxiety (17.9% vs 10.8%) and affective or mood disorders (7.1% vs 5.3%).
- Women had half the rate of substance use disorders (3.3% vs 7.0% for men).
- Women with a mental disorder were more likely to access services for their mental health problems in the 12 months prior to the survey (41% vs 28% for men).¹³

More recent studies provide further information on the prevalence of mental disorders:

- The 2014-15 National Health Survey conducted by the Australian Bureau of Statistics (ABS) uses self-reported mental health that shows slightly lower prevalence rates than for the diagnosed conditions, with almost one in five women (19%) reporting mental and behavioural disorders (compared with 16% of men).¹¹
- The Australian Burden of Disease Study (2011) reported that mental and substance use disorders were the second leading cause of non-fatal burden of disease in women behind musculoskeletal conditions, in particular for adolescents and adults to age 44.¹² In 2011, mental disorders were responsible for 22% of non-fatal burden and 12% of the total disease burden in females.
- The most recent Australian Child and Adolescent Survey of Mental Health and Wellbeing (2013-14) indicated that more than one in ten young females (11.5% aged 4 to 17 years) experienced mental disorders in the previous 12 months, with a higher prevalence of 16.3% seen for young males.¹⁷
- The 2010 National Survey of People with Psychotic Illness (2010), which was based on contact with specialised public mental health services (covering disorders from schizophrenia and bipolar mania, to severe depression with and without psychosis) showed a prevalence of 2.4 cases per 1000 female population aged 18-64 years (compared with a higher rate of 3.7 per 1000 for males).¹⁸ In contrast, of the half of participants (49.5%) who reported that they had attempted suicide over their lifetime, 57.5% were females compared with 44.2% males.
- The suicide rate was three times greater in men than in women (17.8 deaths compared with 5.8 deaths per 100,000 persons in 2016).¹⁹ The suicide rate in women has increased over the last decade, from 5.0 deaths per 100,000 in 2007, with a peak in 2015 at 6.1 deaths per 100,000.
- In 2011, suicide was the first leading cause of fatal burden among young women aged 15-44 years and was the seventh leading cause of fatal death among those aged 45-64 years.¹² The proportion of fatal burden due to suicide decreased significantly across the age groups, with

the highest proportion of 26% in women aged 15-24 years, 13% in those aged 25-44 years, and 3.1% in those aged 45-64 years.

Key determinants

These statistics show that gender is an important determinant of the type, experience, and outcomes of mental illness. There are many biological, socioeconomic (e.g. poverty, homelessness), political and cultural factors associated with being female that have a significant impact on women's mental health.²⁰ There are also certain periods across the life course when women are more likely to experience symptoms of mental illness, and these can be linked to hormonal fluctuation and reproductive events, such as the premenstrual and postnatal periods and the menopausal transition (or peri-menopause). Mental health may also be affected by negative life experiences across women's life course, in particular, intergenerational trauma, racism, violence, and abuse, as well as entering the workforce, offspring leaving home, or taking on carer roles for ageing relatives.¹⁴

Marginalised and disadvantaged populations

The ethnic-minority/marginalised populations may experience mental illness differently and have different health needs from those of other Australian women. A recent systematic review included 111 studies to examine the prevalence and correlates of depression among Australian women from 1999 to 2010.²¹ It concluded that the prevalence of depression among groups of women varied widely from 2.6% to 43.9%, with higher rates observed among younger women or specific population groups. For instance, among Indigenous women, mental and substance use disorders accounted for 35% of non-fatal burden and 19% of total burden, and suicide and self-inflicted injuries accounted for 6% of fatal burden in 2011, which are 1.5 to 2 times the prevalence seen in non-Indigenous women.²² Mental and substance use disorders are responsible for 13% of the gap in total disease burden between Indigenous women and non-Indigenous women.

Multimorbidity – mental and physical health

Multimorbidity is common among people with a mental disorder. In 2007, around 12% of Australian adults (or 1.9 million) had a mental disorder and a physical condition concurrently in the previous 12 months, with a higher prevalence among females (14.5%) than males (8.9%) and for those aged in their early 40s.¹³ The most commonly seen cluster of conditions in women was an anxiety disorder combined with a physical condition (12%), which affected about 1 million Australian women.¹³

Findings from the ALSWH highlight the potential for poor mental health, particularly anxiety and depression, to compound physical health problems for women, such as diabetes, cardiovascular diseases, and arthritis.²³ The relationship between poor mental health and physical conditions is likely to be 'bi-directional', with each condition exacerbating the other. The simultaneous presence of two or more conditions worsens the prognosis of all the diseases that are present, leading to an increasing number (and severity) of complications. This situation makes the treatment more difficult and potentially less effective.

4.1.1 Trends in mental disorders

Overall, the prevalence of common mental disorders, such as anxiety and depressive disorders, has remained stable over the last decade, affecting around 1 in 5 women. Specific mental disorders and their current prevalence rates are briefly described below.

4.1.1.1 Anxiety disorders

Anxiety disorders generally involve feelings of tension, distress, or nervousness and are the most common mental disorders in women. Anxiety disorders include Post-Traumatic Stress Disorder (PTSD), social phobia, agoraphobia, Generalised Anxiety Disorder (GAD), and Obsessive-Compulsive Disorder (OCD).

- In 2007, it was estimated that 1.4 million (17.9%) women experienced anxiety disorders in the previous 12 months, the most prevalent of these were PTSD (8.3%) and social phobia (5.7%).¹³
- In 2011, it was estimated that anxiety disorders accounted for 7.5% of the overall non-fatal disease burden in women.

4.1.1.2 Affective or mood disorders, including depression

Affective disorders involve mood disturbance or change in affect. They mostly tend to be recurrent, with the onset of individual episodes often related to stressful events or situations. Affective disorders comprise: Depressive Episode, Dysthymia, and Bipolar Affective Disorder.

- In 2007, it was estimated that 575,800 (7.1%) women experienced affective disorders during the previous 12 months, including 5.1% with one or more depressive episode and 1.7% with bipolar affective disorder.¹³
- Overall, affective disorders were one of the leading causes of non-fatal disease burden for women in 2011, including depressive disorders (6.4%), and bipolar affective disorder (1.8%).¹²

4.1.1.3 Substance use disorders

Although the prevalence of substance use disorders (especially alcohol and drug abuse) in women is lower than men, a recent systematic review showed that this gender gap is steadily narrowing globally and the closing gender gap is most evident among younger adults.²⁴

- In 2007, 3.3% (over 263,000) of women reported having a substance use disorder.¹³ Of these women, 2.1% of women reported harmful alcohol use, 0.7% reported alcohol dependence, and 0.8% reported drug use disorders.
- Substance use disorders often co-occur with high prevalence and low-impact mental disorders such as anxiety and depression.¹³
- Alcohol and illicit drug use among women in 2011 caused 2,417 (3.4%) deaths, and accounted for 3.8% of total burden of disease and injury in women, including 5.3% of fatal burden and 2.7% of the non-fatal burden.²⁵
- In terms of the amount of total disease burden in women attributable to alcohol use, cancer accounted for 25.6% (especially breast cancer 12.8%), injuries for 20.0%, and cardiovascular diseases for 10.7%, compared with 14.5%, 39.3%, and 3.7% respectively in men.²⁵

4.1.1.4 Psychological distress

Psychological distress is a general term used to describe a range of unpleasant feelings or emotions that impact the level of functioning. It is widely used as an indicator of mental health in population health surveys and epidemiological studies, with the Kessler Psychological Distress Scale (K10) specifically designed to measure non-specific psychological distress.¹³

- Evidence has shown a strong dose-response association between high levels of psychological distress (high K10 scores) and the diagnosis of anxiety and affective disorders.¹³ Of the people with a “very high” K10 score, 80% had reported a diagnosis of mental illness in the past 12 months.
- Data from the National Health Survey showed that 13.5% of women experienced high or very high levels of psychological distress in 2014-15 (compared with 9.9% for men).¹¹
- Between 2011-12 and 2014-15, the rates of high or very high psychological distress remained stable across most age groups.¹¹
- The ALSWH has reported that women aged 18-23 years in 2013 had higher levels of psychological distress than women in the same age group in 1996.²⁶

4.1.1.5 Eating disorders

Eating disorders are complex mental illnesses, characterised by problems associated with abnormal eating behaviours or body weight control, and a severe concern with body weight and shape. There are four common types of eating disorders: anorexia nervosa, bulimia nervosa, binge eating disorder (BED), and other specified feeding or eating disorder.²⁷

- Eating disorders affect both men and women and could occur at any stage of life, but evidence shows that young women are more likely to suffer from eating disorders and negative body image than men.^{17,27,28}
- The Butterfly Foundation reported that there were more than 913,000 Australians (around 4% of the population) with eating disorders in 2012.²⁷ This number was estimated by Deloitte Access Economics based on the average estimates taken from recent surveys from South Australia, New Zealand and the US. Females comprised around two-thirds (64%) of the total. Of these women, 46% had BED, 38% other eating disorders, 13% bulimia, and 3% anorexia.
- A recent community study of 6,041 adults aged over 15 years in South Australia found that the 3-month point prevalence of any DSM-5 (Diagnostic and Statistical Manual of Mental Disorders) eating disorder or disordered eating was 16.3% in 2008/2009.²⁹ This number was largely attributable to BED (5.6%) and sub-threshold BED (6.9%), whereas the 3-month prevalence of anorexia nervosa and bulimia nervosa were both under 1% (0.5% and 0.7%, respectively).

4.1.1.6 Perinatal depression

Pregnancy has been identified as a time of greater vulnerability for the development of depression and anxiety. Perinatal depression is the collective term used to describe both antenatal and postnatal depression. Antenatal depression is when mothers experience depression during pregnancy, and postnatal depression is experienced within the first year after the birth.³⁰

- Data from the 2010 Australian National Infant Feeding Survey showed that the prevalence of diagnosed depression among mothers of children aged 24 months or less was about 20% (111,000 women), including 10% (56,000 women) diagnosed with perinatal depression.³¹
- Beyondblue reported that up to 1 in 10 women (9%) experience antenatal depression, and 1 in 7 women (16%) experience postnatal depression.³⁰
- A systematic review in 2016 showed that the factors associated with antenatal depression or anxiety were: lack of social or of partner support, history of abuse or violence, history of mental illness, unplanned/unwanted pregnancy, and pregnancy complications/loss.³²

4.1.2 Mental disorders across the life course

Women's mental health needs are different across the life course.¹⁴ For example, during child-bearing years, women may require mental health supports related to perinatal depression, especially for those with pre-existing mental disorders.

Anxiety disorders:

- Women in younger age groups experienced higher rates of mental disorders in 2007, with the highest rate of anxiety disorder found in the 16-24 years age group (21.7%).¹³
- Anxiety disorders were the leading cause – accounting for 13% of non-fatal disease burden for women aged 15-44 years.¹² This proportion reduced to 8% among women aged 45-64 years, and was not in the top ten causes thereafter.
- The 2017 Jean Hailes for Women's Health Survey has also reported a decline in the severity of anxiety with age (measured by the generalised anxiety disorder score), with women aged 18-35 years the most anxious age group.³³
- The Australian Longitudinal Study on Women's Health (ALSWH) has shown that the prevalence of women with anxiety (as measured by the Goldberg Anxiety index) was higher in the younger cohort (at average age 33 years) than in the mid-age cohort (at average age 61 years).²³

Affective or mood disorders, including depression:

- The highest prevalence of affective disorder for women in 2007 was seen in the 25-34 years age group (8.7%).¹³
- Among females aged 15-44 years, depressive disorders were the second leading contribution to non-fatal disease burden, accounting for over 10% of non-fatal burden in 2011.¹² This proportion reduced to 8% among women aged 45-64 years. Bipolar affective disorder was also the fourth leading cause (5.6%) of non-fatal burden among women aged 15-24 years.
- The ALSWH has also found that the proportion of women with depression (measured by the Center for Epidemiological Studies Depression Scale, CESD-10) was higher in the younger cohort (born 1973-78) than in the mid-age cohort (born 1946-51).²³
- A systematic review (2014) of eight Australian studies has shown a wide variation in the prevalence of menopausal depression.³⁴ During the menopausal transition (perimenopause), the reported prevalence of depression ranged from 29% to 55%; and was 10% to 53% for

postmenopausal women. These findings highlight the importance of using validated questionnaires (such as the Greene Climacteric Scale, GCS) to measure the prevalence and severity of menopausal symptoms.

- While older women are least likely to experience depression, depression has a substantial impact on health due to limited family and social networks and less robust coping mechanisms.^{21,35} Older women experiencing depression may be less likely to seek help due to generational stoicism, lack of understanding about depression, and fear of discrimination or stigma related to mental illness.

Substance use disorders:

- In 2007, the prevalence of substance use disorders among women aged 16-24 years (9.8%) was three times that among women aged 25-34 years (3.3%).¹³
- In 2011, alcohol use disorders were the eighth leading cause (4.7%) of non-fatal burden for young women aged 15-24 years.¹²

Psychological distress:

- Women aged 18-24 years had the highest rate of high/very high psychological distress, and this increased from 13.0% in 2011-12 to 20.0% in 2014-15; otherwise, the prevalence remained stable across most age groups.¹¹
- 2013 ALSWH findings also show high levels of psychological distress (K10 scores) among young women, with 49% of those aged 18 to 23 reporting high or very high psychological distress.²⁶

Eating disorders:

- In 2011, eating disorders were ranked as the tenth leading cause of non-fatal disease burden for women aged 15-24 years (3.6%) and 25-44 years (3.0%).¹²
- The second Australian Child and Adolescent Survey of Mental Health and Wellbeing (2015) reported that 3.2% of young females aged 11-17 years suffered from either low weight or binge eating and purging problem eating behaviours, compared with 1.6% in 11-17 years old males.¹⁷ The highest rate (4.9%) was observed among 16-17 years old females.

Perinatal depression:

- In 2010, the prevalence of perinatal depression was the highest among young mothers aged under 25 years (13.5%), whereas the lowest rate was among mothers aged 30-34 years (9.2%).³¹

4.1.3 Marginalised and disadvantaged populations

Aboriginal and Torres Strait Islander women:

- In 2014-15, about one in three (34%) Indigenous Australian women reported having a mental health condition (including anxiety, depression, behavioural/emotional problems, and/or harmful use of, or dependence on alcohol or drug), compared with 25% of men.³⁶ Mental health conditions were less likely to be reported by young people (15-24 years) (22%) than by those in older age groups (ranging from 30% to 35%).

- Among Indigenous women, anxiety disorders, depressive disorders, and bipolar affective disorder accounted for 23.6% (11.5%, 9.0% and 2.6%, respectively) of non-fatal disease burden in 2011.²² Anxiety disorders and depressive disorders were the top two leading conditions contributing to non-fatal burden in Indigenous women aged 15-44 years.
- In terms of the health gap between Indigenous and non-Indigenous women, anxiety disorders and depressive disorders contributed to 4.1% and 3.2% respectively.²²
- Across all age groups, Indigenous women in 2012-14 were nearly three times (rate ratio: 2.5 to 2.9) more likely to experience high/very high levels of psychological distress compared with non-Indigenous women in the 2011-12 National Health Survey.³⁷
- Within the Indigenous population, people in the non-remote areas were more likely to report high/very high levels of psychological distress than those in remote areas (32% compared with 24%).³⁷ This difference was evident across all age groups, except for those aged 25-34 years.
- The suicide death rate among Indigenous people was more than twice that of non-Indigenous people (23.8 deaths compared with 11.4 deaths per 100,000 persons in 2016).¹⁹ Indigenous women also had a younger median age at suicide death than men (26.1 years and 29.8 years, respectively); with both of these ages far younger than for the non-Indigenous population (45 years).
- Suicide inflicted injuries accounted for 5.9% of total fatal burden in Indigenous women in 2011, double that of non-Indigenous women (2.9%).²² Suicide was the leading cause of fatal burden for Indigenous women aged 15-44 years, accounting for 32% for women aged 15-24 years and 12% for those aged 25-44 years.
- Alcohol use disorders were the third leading cause of non-fatal burden among Indigenous women aged 15-24 years and were the fifth leading cause among those aged 25-44 years, accounting for 3.9% of total non-fatal burden in 2011.²²
- There is a lack of research and data about the prevalence of eating disorders among young Aboriginal and Torres Strait Islanders.³⁸ One study of South Australian households found that binge eating disorders are at least as common, if not more common, in the Indigenous group.³⁹
- Data from the Australian Burden of Disease Study (2011) showed that the age-standardised DALY rate for eating disorders was similar between Indigenous and non-Indigenous people (around 1.1 per 1,000 people), while a larger proportion of the total burden for eating disorders was experienced by Indigenous women (69%).²²

Women living in rural and remote areas:

- People in rural (inner and outer regional) areas and remote areas face a range of stressors unique to living outside major cities, but the overall prevalence of mental disorders reported in rural and remote Australia is similar to that of major cities (around 20%).
- In 2011, mental and substance use disorders were the leading causes of total burden in major cities, inner regional, and outer regional areas, accounting for 25%, 23%, and 21% of disability-adjusted life years (number of years lost due to ill-health, disability or early death, DALYs), respectively. In remote and very remote areas, however, it was the third largest contributor to overall burden and contributed 13% and 14% of DALYs respectively.²²

- Rates of suicide and self-harm increase with remoteness. The age-standardised YLL (years of life lost due to premature death) rate of suicide/self-inflicted injuries in 2015 was more than double for women living in remote/very remote areas (5.8-9.1 YLL per 1,000 population) compared with those living in inner/outer regional areas (2.3-2.8) and major cities (2.3).⁴⁰
- Access to mental health services in rural and remote Australia is more limited than in major cities.⁴¹ In 2015-16 there were 482 MBS funded mental health encounters per 1,000 people in major cities, compared with 382 in rural and 108 encounters in remote areas per 1,000 people.

Homosexual, bisexual, and transgender women:

- Homosexual and bisexual people had more than double the prevalence rate of anxiety disorder (32% compared with 14%) and had three times the prevalence of affective disorders (19% compared with 6%) than heterosexual people in 2007.¹³
- The second National Survey of the Health and Wellbeing of Gay, Lesbian, Bisexual, and Transgender (GLBT) Australians (2012) reported that depression was the most commonly diagnosed mental disorder among the GLBT populations, with 34% of homosexual/bisexual females and 50% of trans females experiencing depression in the past three years.³ Around one-quarter (26%) of homosexual/bisexual females and 34.4% of trans females had anxiety disorders.
- The first Australian National Trans Mental Health Study (2014) also showed that trans people had a very high prevalence of depression and anxiety disorders. More than half (57%) of trans people had been diagnosed with depression at some time in their lives, and 40% had been diagnosed with anxiety disorders.⁴²

Refugee and migrant women:

- Mental Health in Multicultural Australia reported that there are no national estimates of the prevalence of mental disorders among migrants and refugees.⁴³ Cultural and language barriers are highly associated with mental health. The prevalence of mental illness varies widely depending on the disorders being studied, specific ethnic or country of birth groups, and the location of study.
- There are several factors associated with higher risk of experiencing mental illness among migrants, including limited English proficiency, separated cultural identity, loss of close family ties, lack of opportunity to use occupational skills, previous experience of trauma, and stresses related to migration and adjustment to a new country.⁴³

Homeless women:

- Mental illness is common among the homeless and those in unstable housing, but it is difficult to quantify the prevalence of mental illness among homeless populations as estimates vary widely depending on how mental disorders and homelessness are defined.⁴⁴
- The 2007 National Survey of Mental Health and Wellbeing reported that more than half (54%) of the people who reported ever being homeless had a mental disorder in the last 12 months, which is almost three times the prevalence of people never being homeless (19%). Of those ever being homeless, 39% experienced anxiety disorders, and 28% experienced affective disorders over the previous 12 months.

- The Specialist Homelessness Services (SHS) reported that national rates of SHS clients experiencing a current mental health issues has increased over time from 23.5% in 2012-13 to 32.3% in 2016-17.⁴⁵
- In 2016-17, the rate of SHS clients with a mental health problem was higher for women than for men (430 compared with 299 per 100,000 population), and the rate was 7 times as high for Indigenous Australians than other non-Indigenous (1835 compared with 260 per 100,000 population).
- Data collected from the Supported Accommodation Assistance Program (SAAP), a program funded by Australian and State/Territory Governments that provides crisis accommodation and related support services to people who are homeless or at imminent risk of becoming homeless, suggested that 11.4% of SAAP clients experienced mental health problems, 9.1% had substance abuse problems, and 7.0% had combined problems in 2010-11.⁴⁶
- Johnson and Chamberlain (2011)⁴⁷ challenged the widely accepted view that mental illness is the primary cause of homelessness. After reviewing 4,291 case histories of homeless people in Melbourne, the study suggested that the overall lifetime prevalence of mental illness was 31%. Of these, slightly less than half (48.4%) had a mental illness prior to becoming homeless, and just over half (51.6%) developed mental health issues (particularly anxiety and depression) after becoming homeless.

4.1.4 Access to mental health services

- The 2007 National Survey of Mental Health and Wellbeing reported that only 35% of people with mental disorders accessed mental health services for treatment. Women accessed health services for mental health problems more than men (41% compared with 28%).¹³
- Since the Better Access Initiative was released in 2006, there has been a steady increase in the number of mental health-related GP services provided, from 10.4% in 2006-07 to 12.4% (around 18 million) in 2015-16.⁴⁸
- The AIHW Mental Health Service report showed that most (58%) mental health-related GP encounters were provided to women in 2015-16, with these mainly for depression (35%), anxiety (19%), and sleep disturbance (11%).⁴⁸
- While mental health problems are more prevalent in young people, the rate of mental health-related GP encounters was lower among young adults aged 15-34 years compared with older adults, with the highest rate observed among people aged 65 years or over.⁴⁸
- The age-standardised rate of mental health-related GP encounters was higher for non-Indigenous Australian than for Indigenous Australian (860 compared with 626 encounters per 1,000 population).⁴⁸
- In terms of remoteness, people living in inner regional areas had the highest rate of mental health-related GP encounters (948 per 1,000 population), followed by people living in major cities (709 per 1,000 population), while people living in remote and very remote areas had the lowest rate of 339 per 1,000 population.⁴⁸
- Around 77,500 clients with mental illness used the Specific Homelessness Services in 2016-17.⁴⁸

- Young women aged 15-24 years accounted for nearly 3 in 5 of the community mental health care service contacts for eating disorders (58%) and of the hospitalisations for eating disorders (57%).¹⁶

4.1.5 Strategies, policies and actions

Federal and state/territory governments have been working together, through the National Mental Health Strategy, to coordinate mental health prevention strategies at state, territory and national levels. The following tables list the most current mental health prevention strategies, plans and frameworks from the Commonwealth and state/territory governments, and also the strategies, organisations and programs for marginalised populations.

MENTAL HEALTH PREVENTION

Australian Government

- National Mental Health Strategy
 - National Mental Health Policy 2008
 - Fifth National Mental Health and Suicide Prevention Plan 2017-2022
 - Mental Health Statement of Rights and Responsibilities 2012
- COAG: Roadmap for National Mental Health Reform 2012-2022
- National Review of Mental Health Programmes and Services 2014
 - Mental Health Expert Reference Group established
- National Mental Health Commission's Strategies and Actions 2012–2015
- E-Mental Health Strategy for Australia 2012
- Beyondblue – The National Depression Initiative
- Headspace – National Youth Mental Health Foundation

State/Territory Governments

- ACT Mental Health and Wellbeing Framework 2015-2025
- Northern Territory Mental Health Service Strategic Plan 2015-2021
- Queensland Mental Health, Drug and Alcohol Strategic Plan 2014-2019; Early Action: Queensland Mental Health Promotion, Prevention and Early Intervention Action Plan 2015-17
- Living Well: A Strategic Plan for Mental Health in NSW 2014-2024
- VicHealth Mental Wellbeing Strategy 2015-2019
- South Australian Mental Health Strategic Plan 2017-2022
- Western Australian Mental Health, Alcohol and Other Drug Services Plan 2015-2025
- Rethink Mental Health – Better Mental Health and Wellbeing: A Long-Term Plan for Mental Health in Tasmania 2015-2025

For Aboriginal and Torres Strait Islander

- National Strategic Framework for Aboriginal and Torres Strait Islander Peoples' Mental Health and Social and Emotional Wellbeing 2017-2023
- Queensland Aboriginal and Torres Strait Islander Mental Health Strategy 2016-2021; Queensland Aboriginal and Torres Strait Islander Social and Emotional Wellbeing Action Plan 2016-2018

- VIC Balit Murrup: Aboriginal Social and Emotional Wellbeing Framework 2017-2027; Korin Korin Balit-Djak: Aboriginal Health, Wellbeing and Safety Strategic Plan 2017-2027
- WA Aboriginal Health and Wellbeing Framework 2015-2030

For Lesbian, Gay, Bisexual, Transgender and Intersex (LGBTI)

- National Lesbian, Gay, Bisexual, Transgender and Intersex (LGBTI) Mental Health and Suicide Prevention Strategy 2016
- National LGBTI Health Alliance – a national peak health organisation in Australia for organisations and individuals that provide health-related programs, services and research focused on LGBTI people and other sexuality, gender, and bodily diverse people and communities

For Migrants and Refugees

- Mental Health in Multicultural Australia (MHiMA) – funded by the Department of Health to provide a national focus for advice and support to providers and government on mental health and suicide prevention for people from culturally and linguistically diverse backgrounds
- Program of Assistance for Survivors of Torture and Trauma (PASTT) – funded by the Department of Health to provide specialised support services to permanently resettled humanitarian entrants and those on temporary substantive visas living in the community who are experiencing psychological or psychosocial difficulties associated with surviving torture and trauma before coming to Australia

For Rural and Remote People

- *National Rural Health Alliance* – represents 35 national organisations working to improve the health and wellbeing of 7 million people living in rural and remote Australia
- Rural and Remote Mental Health (RRMH) – a non-for-profit organisation to deliver mental health programs and services to people living in rural and remote Australia. The three key programs are: Resource Minds (for mining and resources industries), Deadly Thinking (for Indigenous communities), and Rural Minds (for agriculture and farming communities).
- Queensland Rural and Remote Mental Health and Wellbeing Action Plan 2016-2018

For Homeless People

- Specialist Homelessness Services (SHS)

ALCOHOL AND DRUG USE PREVENTION

Australian Government

- National Alcohol Strategy 2018-2026
- National Drug Strategy 2017-2026
- National Ice Action Strategy 2015

State/Territory Governments

- ACT Alcohol, Tobacco and Other Drug Strategy 2010-2014
- Northern Territory Alcohol and Other Drugs Strategic Plan 2015-2018; Northern Territory Alcohol Harm Minimisation Action Plan 2018-2019

- Queensland Mental Health, Drug and Alcohol Strategic Plan 2014-2019; Queensland Alcohol and Other Drugs Action Plan 2015-2017
- NSW Health Drug and Alcohol Plan 2006-2010
- VicHealth Alcohol Strategy 2016-2019; Victoria's Ice Action Plan 2015
- South Australian Alcohol and Other Drug Strategy 2017-2021
- Western Australian Mental Health, Alcohol and Other Drug Services Plan 2015-2025
- Tasmanian Drug Strategy 2013-2018; Tasmanian Alcohol Action Framework 2010-2015

For Aboriginal and Torres Strait Islander

- National Aboriginal Torres Strait Islander Peoples' Drug Strategy 2014-2019

EATING DISORDER PREVENTION

Australian Government

- National Eating Disorders Collaboration (NEDC) – an initiative of the Department of Health to establish a collaboration of people and organisations with expertise and/or interest in eating disorders. NEDC's purpose is to develop a nationally consistent, evidence-based approach to the prevention and management of eating disorders in Australia.
- Butterfly Foundation – an organisation that coordinates the National Eating Disorders Collaboration for the Department of Health and operates a National Eating Disorders Support Helpline. Butterfly's mission is dedicated to bringing about change to the culture, policy and practice in the prevention and early intervention strategies, treatment, and support of people affected by eating disorders and negative body image.

State/Territory Governments

- Victorian Eating Disorders Strategy 2014; Victorian Centre of Excellence in Eating Disorders: Community model for early intervention and integrated solutions in eating disorders
- NSW Eating Disorder Implementation Plan 2014-2018; NSW Service Plan for People with Eating Disorders 2013-2018

SUICIDE PREVENTION

Australian Government

- National Suicide Prevention Strategy 2015
 - Living is for Everyone (LIFE) Framework 2007
 - National Suicide Prevention Strategy Action Framework
 - National Suicide Prevention Program (NSPP)
 - Mechanisms to promote alignment with and enhance State and Territory suicide prevention activities

State/Territory Governments

- Managing the Risk of Suicide: A suicide prevention strategy for the ACT 2009-2014
- Northern Territory Suicide Prevention Strategic Action Plan 2015-2018
- Queensland Suicide Prevention Action Plan 2015-2017; Gold Coast Mental Health Suicide

Prevention Strategy 2016-2018

- NSW Suicide Prevention Strategy 2010-2015
- Victorian Suicide Prevention Framework 2016-2025
- South Australian Suicide Prevention Plan 2017-2021
- Western Australia Suicide Prevention Strategy 2020
- Tasmanian Suicide Prevention Strategy 2016-2020

For Aboriginal and Torres Strait Islander

- National Aboriginal and Torres Strait Islander Suicide Prevention Strategy 2013
- Victorian Aboriginal Suicide Prevention and Response Action Plan 2010–2015

For Lesbian, Gay, Bisexual, Transgender and Intersex (LGBTI)

- National Lesbian, Gay, Bisexual, Transgender and Intersex (LGBTI) Mental Health and Suicide Prevention Strategy 2016

4.1.6 Research needs

Priority life stages and populations

- Research needs to focus on understanding the causes and impact of mental disorders at specific times across the life course, as well as variations in mental health services needs. Focus is particularly needed on anxiety and affective disorders as leading contributors to the non-fatal burden of disease among younger women (15-44 years), including the high prevalence of specific mental disorders, such as bipolar affective and eating disorders, within this age range.
- Research is needed to collect robust data on the specific mental health issues, including mental health service needs, of women in marginalised and disadvantaged populations:
 - Aboriginal and Torres Strait Islander women;
 - Women living in rural and remote areas;
 - Homosexual, bisexual and transgender women;
 - Refugees and migrant women;
 - Homeless women.

Data gap

- Given the most recent adult survey on mental health and wellbeing was conducted in 2007, cost-effective methods should be considered to update prevalence information for diagnosed mental disorders among Australian adults.¹⁶
- Due to lack of gender-specific analyses and lack of clarity about relationship between likelihood of mental illness and cohort/age effects (i.e. women in different age groups experience mental illness at different rates and at varying degrees of severity,²¹) the national prevalence rates of mental disorders need to be reported by gender and age groups, as well as by marginalised populations.
- It is suggested that eating disorders should be included in the national survey of mental health and wellbeing to obtain national estimates of eating disorders - in particular, prevalence, socioeconomic cost and service access.⁴⁹

- There is a need to collect national data on mental health from people with culturally and linguistically diverse backgrounds (CALD). Mental Health in Multicultural Australia (2013) identified several gaps in CALD data collections:⁴³
 - Reliance on country of birth as a sole indicator
 - Aggregation into country of birth categories for data analysis
 - Insufficient CALD sample size in national surveys
 - Exclusion of people with limited or no English proficiency from national surveys
 - Lack of confidence concerning quality CALD data

Next steps for optimal outcomes in women's mental health

- There has been an increase in the focus by governments on mental health. However, there is a conspicuous lack of gender focus in mental health policies. The Australian Women's Health Network stated that the only current policy incorporating a specific focus on the mental health needs of women is the 2010 National Women's Health Policy.²⁰ Since its release, there has been no evidence of linkages between this policy and other government policies on mental health, which suggests that the 2010 Women's Health Policy has been unable to influence subsequent action.²⁰ For instance, the Fifth National Mental Health and Suicide Prevention Plan (2017-2022) sets out eight priority areas and actions to achieve an integrated mental health system. While these areas are important for women experiencing mental disorders, there is no specific attention given to women in any of the areas. In fact, the need for women-specific mental health service delivery, support and education is not addressed in current mental health policy documents.²⁰
- The Victorian state government leads on a whole-of-government approach to eating disorders strategy, and this could be examined for a national approach.
- Aboriginal and Torres Strait Islander people view mental health and social and emotional wellbeing differently to non-Indigenous people.⁵⁰ This affects the way in which the policies, early prevention and intervention initiatives need to be framed, implemented, and evaluated. Current policy challenges to strengthen the mental health and wellbeing of Aboriginal and Torres Strait Islander people include 1) recognition of racism and Indigenous cultural and social circumstances; 2) limitations of evidence used to inform policy.⁵⁰
- The national homelessness strategy should include consideration of mental illness, and housing should be a part of the strategy to address mental health.
- A new strategy is needed to address a crisis in mental health service access in remote Australia, as Australians in these areas access mental health services at a much lower rate than their city counterparts.

5 Chronic diseases and preventive health

Key messages

CHRONIC CONDITIONS

What is working well?

- Cardiovascular disease has been declining for almost 50 years, due to reductions in risk factors and better medical treatment. However, the decline has been slowing among younger people in recent years.
- Death rates from many cancers have also been decreasing, due to early detection and improved treatments.

What needs particular attention?

- Symptoms of heart attack in women are less likely to be recognised than in men, and women are less likely to receive appropriate treatment for heart disease.
- There are substantial inequalities between Indigenous and non-Indigenous women for most chronic conditions.
- Women in socioeconomically disadvantaged and marginalised groups continue to experience poorer health outcomes.

PREVENTIVE HEALTH

What is working well?

- Tobacco consumption is declining.
- Alcohol consumption is declining.

What needs particular attention?

- Overweight and obesity are increasing for all women, and particularly in younger generations.
- Screening rates in Australia for breast and cervical cancer are low in comparison with other high-income countries and have changed little over the last ten years.
- There are substantial inequalities between Indigenous and non-Indigenous women for most risk factors.

5.1 Overview

Chronic conditions are those which are long-lasting and require long-term management. The most common chronic conditions among women and men in Australia are cardiovascular disease, cancer, chronic respiratory conditions, chronic musculoskeletal disorders, diabetes and mental health conditions.¹⁶

- Cardiovascular disease (including coronary heart disease and stroke) remain the leading group of causes of death for women as well as men.
- Breast, lung, bowel and other cancers remain major causes of death among women.

- Chronic respiratory conditions (especially asthma and chronic obstructive pulmonary disease) are among the leading causes of morbidity and mortality among both women and men.
- Musculoskeletal conditions (such as arthritis and back pain) also contribute substantially to the burden of chronic disease for women.
- For women, but not men, Alzheimer's disease and dementia are now the most common cause of morbidity and death among those aged over 75.
- Many of these conditions share common risk factors: tobacco smoking, overweight and obesity, poor nutrition, inadequate physical activity and harmful alcohol use.

National Strategic Framework for Chronic Conditions

Chronic conditions have a substantial impact on individuals, especially those with multiple conditions, and on the health system. Consequently, a National Strategic Framework for Chronic Conditions was endorsed by all health ministers in February, 2017.⁵¹

"The Framework moves away from a disease-specific approach and provides national direction applicable to a broad range of chronic conditions by recognising that there are often similar underlying principles for the prevention and management of many chronic conditions. The Framework will better cater for shared health determinants, risk factors and multi-morbidities across a broad range of chronic conditions."

The Framework recognises the changing needs of an ageing population in which women and men increasingly have multiple chronic conditions. Specifically it:

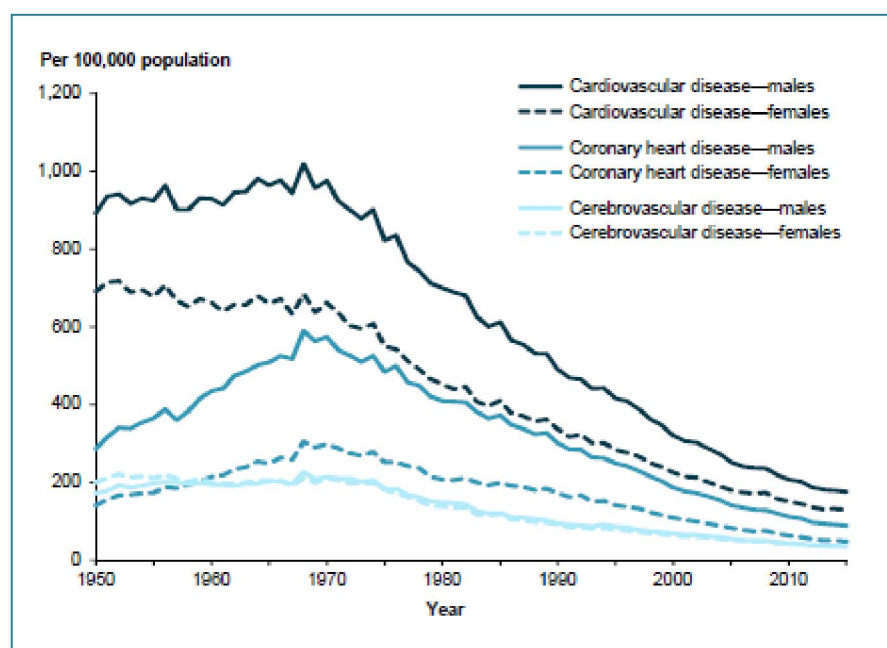
- Moves away from a disease-specific approach;
- Identifies key principles for the effective prevention and management of chronic conditions;
- Supports a stronger emphasis on coordinated care across the health sector;
- Acknowledges and builds on work already in place that supports chronic conditions;
- Complements state-based, national and international policy for chronic conditions;
- Accommodates existing and new strategies and policies without changing the responsibilities of the Australian or state and territory governments;
- Acknowledges the important role that the health sector may take as a leader and advocate in working with other sectors to address the social, economic and environmental determinants of health; and
- Provides flexibility to accommodate future and emerging priorities and allows for innovative solutions for the prevention and management of chronic conditions.

5.2 Cardiovascular diseases

The main forms of cardiovascular disease are coronary heart disease and stroke (also known as cerebrovascular disease). Based on estimates from the 2014-15 National Health Survey, about 3.3% of the adult population have coronary heart disease. The prevalence of coronary heart disease increases rapidly with age, affecting around 1 in 6 adults aged 75 and over. Coronary heart disease is about twice as common in men than it is in women, but rates of stroke are more similar for women and men.

5.2.1 Trends in cardiovascular diseases

Rates of death from cardiovascular disease have shown substantial changes over the last 50 years – see Figure 5-1.



Note: Rates have been standardised to the Australian population as at 30 June 2001.

Source: AIHW National Mortality Database.

Figure 5-1: Death rates for cardiovascular disease, coronary heart disease, and cerebrovascular disease, 1950-2015⁵²

These substantial reductions in cardiovascular disease are attributable to several factors: reductions in tobacco smoking, better control of high blood pressure and high cholesterol due to improved medicines, and medical advances in diagnosis and treatment. Despite these decreases in cardiovascular disease, there is still much room for improvement; for example, rates of heart disease in Japan are less than half those in Australia. Also, the decline has been slowing among younger people in recent years.

5.2.2 Cardiovascular diseases across the life course

Although signs and symptoms of cardiovascular disease do not usually become apparent until middle age or later, risk is accumulated across the life course through unhealthy behaviours such as smoking and weight gain beyond the 'healthy' range (body mass index greater than 25, which for a woman of the average height of 161 cm corresponds to a weight of 64 kg).

- For women, early menarche, early menopause, earlier age at first birth, and a history of miscarriage, stillbirth or hysterectomy have all been shown to be associated with higher risk of cardiovascular disease in later life.^{53,54}
- Pregnancy creates stresses on a woman's body that increase her risk of cardiovascular disease 10-15 years later.

- Gestational diabetes increases a woman's risk of later type 2 diabetes more than seven-fold.⁵⁵
- Gestational hypertension and pre-eclampsia increase a woman's risk of developing chronic hypertension by a factor of 2-4 times, and this in turn increases her risk of coronary heart disease and stroke.⁵⁶
- Risk of cardiovascular disease increases substantially after menopause.
- These findings point to the value of doctors considering women's reproductive history when assessing and managing their cardiovascular risk.
- Diabetes is also a risk factor for cardiovascular disease, more so for women than men.⁵⁷
- The signs and symptoms of heart attack experienced by women are often different from those experienced by men. This may lead to delays in seeking and receiving treatment, and to differences in how they are managed.⁵⁸

5.2.3 Marginalised and disadvantaged populations

Despite the advances in reducing cardiovascular disease in Australia, there are substantial differences among different subgroups of the population.⁵²

- Rates of coronary disease are 1.5 times higher in remote areas compared to major cities, and 1.5–2 times higher in the lowest socioeconomic areas compared with the highest.
- Rates of coronary heart disease are 2-3 times higher among Aboriginal and Torres Strait Islander people than among non-Indigenous Australians. Differences in rates of cardiovascular disease are a major contributor to the gap in life expectancy between Indigenous and non-Indigenous Australians.
- There is evidence that Aboriginal and Torres Strait Islanders experience longer delays in diagnosis and treatment and have poorer outcomes. Strategies to overcome these disadvantages in culturally appropriate ways, taking account of the diverse settings in which Aboriginal and Torres Strait Islanders live and receive treatment, have been proposed.⁵⁹

5.2.4 Strategies, policies and actions

- The National Strategic Framework for Chronic Conditions⁵¹ provides an agreed structured approach for national and state/territory governments to improve the prevention and management of cardiovascular disease.
- Peak bodies such as the Heart Foundation and the Stroke Foundation, provide advice to women and health professionals about all aspects of risk, detection and management of cardiovascular diseases. For example, they advocate for changes, such as improved clinical guidelines to ensure they address gender-related issues.
- The recently published guidelines for the prevention, detection and management of atrial fibrillation do not mention any gender-specific issues,⁶⁰ but the guidelines for heart failure do.⁶¹

5.2.5 Research needs

- A better understanding of the relationships between women's reproductive history and risk of cardiovascular disease. For example, does increasing risk of cardiovascular disease

predispose women to earlier menopause? To what extent is the association due to a common factor such as body weight?

- How best can information about the associations between pregnancy complications and risk of cardiovascular disease become better known to women and their general practitioners?

5.3 Cancers

Breast, lung and bowel (or colorectal) cancers are leading causes of death among women.⁶² These cancers also contribute substantially to the burden of disease in Australia due to the stressors associated with diagnosis and treatment. Cervical cancer is much less common among women in Australia but, with breast cancer, has been an important target for screening. Screening to detect early cancers and substantial improvements in diagnosis and treatment have led to improvements in survival.

5.3.1 Trends in cancer screening, incidence and survival

Comparisons among cancer rates:⁶²

- Death rates from all cancers among women decreased by 21% between 1993 and 2017, largely due to decreases in deaths from breast and bowel cancers.
- Among women, death rates for lung cancer (predominantly due to a history of smoking) now exceed those for breast cancer.
- However, breast cancer is the most commonly diagnosed cancer in women.

Breast cancer:

- Incidence increased from 81 new cases per 100,000 women in 1982 to 124 new cases per 100,000 women in 2017. This was mainly due to screening detection of early stage, non-invasive cancers.
- In 2017, 5-year relative survival for women with breast cancer was 90%, up from 72% in 1984-89.
- In 2014-15, 54% of women aged 50-74 participated in the BreastScreen program. This proportion has remained stable for several years. Some screening, estimated to be 3-4%, also occurs outside BreastScreen, in private diagnostic services.

Bowel cancer:

- Incidence of bowel cancer hardly changed from 1982 to 2017, and there were 49 new cases per 100,000 women in 2017.
- In 2017, 5-year relative survival for women with bowel cancer was 69%, up from around 50% 25 years ago.
- In 2014-15, 41% of eligible women participated in the National Bowel Cancer Screening Program. This program is gradually expanding to include more age groups and participation is also increasing.

Lung cancer:

- Incidence of lung cancer has been increasing in women for more than 20 years, while it has been decreasing in men. In 2017, there were 34 new cases per 100,000 women.
- In 2017, 5-year relative survival for women with lung cancer was 19%, compared to less than 10% in 1984-89.

Cervical cancer:

- The primary cause of cervical cancer is infection with human papilloma virus (HPV). Australia's HPV vaccination program aims to prevent these infections.⁶³
- Incidence of cervical cancer decreased from 14 new cases per 100,000 women in 1982 to 7 new cases per 100,000 women in 2017.
- In 2017, 5-year relative survival for women with cervical cancer was 72% compared to 69% in 1984-89.
- In 2014-15, 56% of women aged 20-69 participated in the National Cervical Screening Program. This proportion has remained stable over time, but this may change with recent changes from 'Pap' testing to HPV testing.
- Indigenous Australian women have a higher incidence of cervical cancer compared with non-Indigenous women.

Other cancers associated with women's genital organs:

- Compared to breast cancer, cancers associated with women's genital organs are much less common.⁶² For example, by the age of 85 a woman's risk of breast cancer is 1 in 8; this compares with 1 in 44 for uterine (mainly endometrial) cancer, 1 in 81 for ovarian cancer, and 1 in 168 for cervical cancer.
- Among these cancers, screening is only available for cervical cancer.
- Incidence of uterine cancer has been increasing over the last 20 years, while incidence of ovarian cancer has decreased slightly, and survival rates have improved slightly for both these cancers.

5.3.2 Cancers across the life course

Figure 5-2, from the AIHW report 'Cancer in Australia 2017' shows the ages when women are most likely to be diagnosed with the most common cancers, with breast cancer covering the widest age span (which is consistent with the widening of the age range for eligibility for BreastScreen).

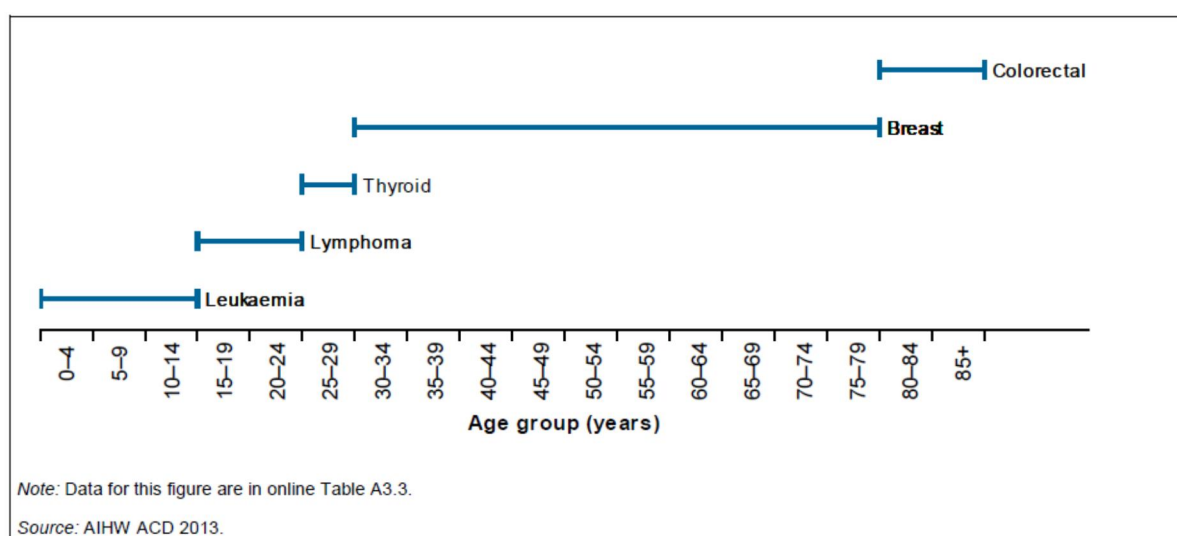


Figure 5-2: Most commonly diagnosed cancers in women at each age group⁶²

5.3.3 Screening

Issues associated with screening:⁶⁴

- Screening reduces deaths from cancer.
- Screening leads to early detection, increases in diagnoses and hence rising incidence rates.
- Early detection can lead to improved outcomes, and so improved survival (leading to increased prevalence, i.e. more people living with a history of the disease).
- However, there are trade-offs, including over-diagnosis and overtreatment.
- Over-diagnosis is the detection by screening of tumours that would not have presented clinically in a person's lifetime in the absence of screening.
- Improved technology for screening can reduce false positive and false negative findings and over-diagnosis.

Breast cancer:

- Breast cancer screening participation in Australia is currently around 54% of eligible women.
- This compares with the participation of 84% in Denmark, 75% in the UK and 72% in New Zealand, though the frequency of screening and age range covered varies between countries.

Bowel cancer:

- Bowel cancer screening participation among women in Australia is currently around 41%.
- International comparisons are not available for bowel cancer screening due to differences in screening processes and target populations.

Cervical cancer:

- Cervical cancer screening participation in Australia is currently around 56% of eligible women.
- This compares with the participation of 82% in Sweden, 76% in the UK and 76% in New Zealand, though the frequency of screening and age range covered varies between countries.

Screening participation by marginalised and disadvantaged women

Breast cancer:⁶²

- In 2014-15, breast screening participation for Indigenous women was 37%, compared to 53% for non-Indigenous women.
- Participation varied from 47% in very remote areas to 56% in inner regional areas.
- There was less variation by socioeconomic status, ranging from 51% in the lowest SES quintile to 53% in the highest SES quintile.

Bowel cancer:⁶²

- Indigenous status is not known when an eligible person is invited to participate. However, by comparing self-identification by participants with self-identification in the 2016 Census, it was estimated that participation for Indigenous Australians who were invited in 2015–2016 was 20%, compared with an estimated participation for non-Indigenous Australians of 43%.
- Participation data by remoteness and socioeconomic status are available for all persons (not disaggregated by sex) for the period 2015–2016.

- The participation was lowest in very remote areas (28%) and the highest rate in inner regional areas (44%).
- The participation varied less by socioeconomic status, ranging from 39% for people living in the lowest socioeconomic status areas to 43% for people living in the highest socioeconomic status areas.

Cervical cancer:⁶²

- National cervical screening participation data are not available by Indigenous status; however, a study in Queensland showed that participation of Indigenous women in 2010–2011 was more than 20 percentage points below that for non-Indigenous women.
- In 2014–2015, participation was highest in major cities (57%) and lowest in remote and very remote areas (52%)
- Participation decreased with socioeconomic disadvantage, from 63% in the most advantaged quintile of areas to 51% in the areas with lowest socioeconomic status.

5.3.4 Marginalised and disadvantaged populations

- Up until the age of 50, rates of cancer among Indigenous women are similar to rates among non-Indigenous women.⁶⁵ After that age, rates become relatively higher among Indigenous women.
- Between 2005 and 2013, cancer rates among non-Indigenous women remained constant whereas rates among Indigenous women continued to increase.
- Cancer survival is lower for Indigenous women than among non-Indigenous women; for example, for all cancers combined the 5-year survival rates were 54% and 67% respectively, and for cervical cancer, the rates were 56% and 72%.
- Participation in screening for cancers is much lower among Indigenous women than non-Indigenous women.
- Similarly, participation in screening programs tends to be lower and outcomes poorer for women living in more remote areas and in areas with lower socioeconomic status.

5.3.5 Strategies, policies and actions

Cancer Australia was established by the Australian Government in 2006 to reduce the impact of cancer, address disparities, and improve outcomes. It works with government health departments, cancer agencies, and professional and consumer groups. The organisation develops evidence-based position statements on a wide range of issues such as genetic testing, over-diagnosis due to cancer screening, and clinical guidelines. Cancer Australia also manages the website National Cancer Control Indicators that provides monitoring data across a range of cancer issues.

5.3.6 Research needs

- Screening participation is low in Australia, by international standards.
- Research and action are needed to improve participation, particularly among Indigenous women.
- Research to improve screening effectiveness is needed, including technology to reduce false positive and false negative rates and over-diagnosis.

5.4 Chronic respiratory conditions

Asthma and chronic obstructive pulmonary disease are the most common respiratory conditions and affect about a quarter of the Australian population.^{16,66}

5.4.1 Trends in chronic respiratory conditions

Asthma:⁶⁷

- The underlying causes of asthma are not well understood, although there is evidence that the risk of developing asthma is affected by environmental and lifestyle factors, family history, genetic factors such as an allergic tendency, smoking and obesity.
- Asthma is more common in women than men after puberty.

Chronic obstructive pulmonary disease (COPD):⁶⁸

- Tobacco use is the predominant cause of COPD and may account for as many as 8 out of 10 COPD-related deaths.
- Between 1979 and 2011, deaths due to COPD approximately halved for men while for women the rate increased between 1979 and 1997 and then declined.⁶⁹

5.4.2 Chronic respiratory conditions across the life course

Asthma:¹²

- The prevalence of asthma declines with age.
- In 2011, asthma was ranked as the third leading cause of non-fatal burden in women aged 15-24 years (7.3% of total YLD), and this declined to the 10th position among those aged 65-74 years (3.4% of total YLD).

Chronic obstructive pulmonary disease (COPD):⁷⁰

- The prevalence of COPD increases with age. Among women aged ≥40 years, the prevalence of COPD (FEV <80%) was 8.1% and increased to 32.9% among women aged ≥75 years, compared with 6.9% and 24.1% in men at the same age groups.

5.4.3 Marginalised and disadvantaged populations

Asthma:⁶⁷

- In 2012–13, about one in six (18%) Aboriginal and Torres Strait Islander people reported having asthma, compared with 11% of all Australians in the 2014-15 National Health Survey.
- Asthma also was more common among people living in socioeconomically disadvantaged localities compared with those in the least disadvantaged localities.

Chronic obstructive respiratory disease (CORD):⁶⁸

- Indigenous Australians were 2.3 times more likely to die from CORD as non-Indigenous Australians during the period 2007-2011.

- For people aged 55 and over, mortality rates increased with remoteness, with the highest rates in remote/very remote areas.

5.4.4 Strategies, policies and actions

General practitioners play a key role in the management of chronic respiratory conditions. The National Asthma Council Australia guidelines promote the writing of an asthma action plan for everyone with asthma. Management of COPD is mainly focused on slowing or preventing disease progression and maintaining function and quality of life. Strategies employed include smoking cessation, medications, oxygen therapy and pulmonary rehabilitation.

5.4.5 Research needs

- Many adults have both asthma and COPD. Further work is needed to identify women who have both asthma and COPD as they have higher health service use needs than those with just asthma or COPD alone.

5.5 Musculoskeletal conditions

Arthritis (osteoarthritis and rheumatoid arthritis), back pain and osteoporosis are major causes of chronic pain and disability in Australia. Together these conditions are the leading cause of non-fatal burden of disease for women over the age range 25-84 years, accounting for nearly a quarter of non-fatal burden.⁷¹

5.5.1 Trends in musculoskeletal conditions

Back problems:⁷²

- Back problems are a range of conditions related to the bones, joints, connective tissue, muscles and nerves of the back. They are a significant cause of disability and lost productivity in Australia.
- Back problems are more common for men than women, although women have higher rates of hospitalisation for back problems.

Osteoarthritis:⁷³

- This is a degenerative condition that mostly affects the hands, spine and joints such as hips, knees and ankles, and usually gets worse over time.
- It is the predominant condition leading to knee and hip replacement surgery in Australia (both of which have been increasing over the last decade).
- Hospitalisations associated with osteoarthritis (mainly for knee or hip surgery) are more common for women than men.
- There has been little change in the prevalence of osteoarthritis from 2001 to 2014-15.

Rheumatoid arthritis:⁷⁴

- This is an autoimmune disease where the body's immune system attacks its own tissues.
- Rheumatoid arthritis can affect anyone at any age, and may cause significant pain and disability.
- It is more common among women than men at all ages.

Osteoporosis:⁷⁵

- Osteoporosis is a condition that causes bones to become thin, weak and fragile, such that even a minor bump or accident can cause a broken bone (known as a minimal trauma fracture).
- Osteopenia is a condition when bone mineral density is lower than normal but not low enough to be classified as osteoporosis.
- Osteoporosis can lead to bone minimal trauma fracture which, particularly for hip fracture can lead to decreased quality of life, loss of functional independence, and increased mortality.
- Risk of osteoporosis increases as oestrogen levels decrease during and after menopause.
- In post-menopausal women, osteoporosis is frequently due to an imbalance in bone remodelling, with bone resorption exceeding bone formation.
- There is evidence of under-treatment of people with osteoporosis in Australia.⁷⁶

5.5.2 Musculoskeletal conditions across the life course

Back problems:¹²

- Back pain is the fifth leading cause of non-fatal burden for women aged 15-24 years and becomes the second leading cause of non-fatal burden for those aged 45-64 years.

Osteoarthritis:¹²

- Osteoarthritis is the fifth leading cause of non-fatal burden among women aged 45 years and over.

Rheumatoid arthritis:¹²

- Rheumatoid arthritis is the eighth leading cause of non-fatal burden for women aged 25-44 years and increased to the fourth leading cause of non-fatal burden for those aged 65-74 years.

Osteoporosis:⁷⁵

- More women than men aged 50 or over have osteoporosis or osteopenia—15% of women compared to 4% of men according to the 2014-15 National Health Survey.
- Older people and post-menopausal women are at greater risk of having these conditions.

5.5.3 Marginalised and disadvantaged populations

Evidence from National Health Surveys and Australian Aboriginal and Torres Strait Islander Health Surveys show that there is little difference in the prevalence of musculoskeletal conditions between Indigenous and non-Indigenous Australians, or across urban, rural and remote areas, or areas of different socioeconomic status.

5.5.4 Strategies, policies and actions

- The National Time to Move Strategy by Arthritis Australia promotes awareness and early prevention of osteoarthritis.

- Musculoskeletal conditions are managed in primary health care settings by a range of health care professionals, with about 18% of GP visits in 2015-16 related to musculoskeletal problems.¹⁶

5.5.5 Research needs

- The health outcomes of women with musculoskeletal conditions, their pathways through the health systems, and quality of care received are unknown.
- The role of reproductive factors, including hysterectomy, on risk of osteoporosis and other musculoskeletal conditions, requires further research.

5.6 Lifestyle risk factors

Figure 5-3 is from the Australian Burden of Disease Study of 2011.¹² It shows the leading risk factors for women. The leading risk factors, most of which are risk factors for chronic diseases, are: tobacco, body mass index (which is a risk factor for high blood pressure, raised cholesterol and raised blood glucose), physical inactivity, alcohol, and dietary composition.

Rank	Age group (years)						
	0–24	25–44	45–64	65–74	75–84	85–94	95+
1st	Alcohol (8.3; 3.4%)	Alcohol (12.7; 3.5%)	Tobacco (53.3; 9.3%)	Tobacco (40.0; 13.3%)	Tobacco (38.0; 11.6%)	Blood pressure (23.4; 9.7%)	Blood pressure (2.1; 7.4%)
2nd	Iron deficiency (2.4; 1.0%)	Tobacco (10.7; 2.9%)	Physical inactivity (34.3; 6.0%)	Body mass (21.9; 7.3%)	Blood pressure (29.3; 8.9%)	Tobacco (16.4; 6.8%)	Body mass (1.2; 4.1%)
3rd	Partner violence (1.8; 0.7%)	Partner violence (10.0; 2.7%)	Body mass (29.8; 5.2%)	Physical inactivity (19.6; 6.5%)	Body mass (23.9; 7.3%)	Body mass (14.1; 5.9%)	Physical inactivity (1.0; 3.6%)
4th	Drug use (1.7; 0.7%)	Body mass (8.4; 2.3%)	Alcohol (18.8; 3.3%)	Blood pressure (16.4; 5.5%)	Physical inactivity (21.6; 6.6%)	Physical inactivity (13.9; 5.8%)	Tobacco (1.0; 3.6%)
5th	Sex abuse (1.5; 0.6%)	Physical inactivity (8.3; 2.3%)	Blood pressure (15.2; 2.7%)	Blood glucose (10.7; 3.6%)	Blood glucose (12.0; 3.7%)	Alcohol (8.0; 3.3%)	Alcohol (1.0; 3.5%)
6th	Blood glucose (0.8; 0.3%)	Occupational (8.1; 2.2%)	Blood glucose (12.7; 2.2%)	Cholesterol (7.5; 2.5%)	Alcohol (9.9; 3.0%)	Blood glucose (7.7; 3.2%)	Blood glucose (0.7; 2.5%)
7th	Unsafe sex (0.2; 0.1%)	Drug use (7.1; 1.9%)	Occupational (11.2; 2.0%)	Alcohol (7.5; 2.5%)	Cholesterol (9.2; 2.8%)	Cholesterol (6.8; 2.8%)	Cholesterol (0.6; 2.0%)
8th		Sex abuse (4.2; 1.1%)	Cholesterol (11.1; 1.9%)	Fruit (5.9; 2.0%)	Fruit (8.0; 2.4%)	Fruit (5.4; 2.2%)	Air pollution (0.5; 1.7%)
9th		Iron deficiency (3.9; 1.1%)	Fruit (8.8; 1.5%)	Vegetables (4.2; 1.4%)	Vegetables (6.7; 2.1%)	Vegetables (5.0; 2.1%)	Bone density (0.5; 1.7%)
10th		Blood glucose (3.6; 1.0%)	Partner violence (8.4; 1.5%)	Nuts and seeds (4.0; 1.3%)	Nuts and seeds (5.1; 1.6%)	Nuts and seeds (3.8; 1.6%)	Fruit (0.4; 1.5%)

Figure 5-3: Leading risk factor contribution to total burden (DALY '000, proportion %), for females, by age group, 2011¹²

5.6.1 Tobacco

- Tobacco smoking is the leading preventable cause of death and disease in Australia and a leading risk factor for many chronic conditions.¹⁶ Tobacco use contributed to more than 1 in every 8 (13%) deaths and was responsible for 9.0% of the total burden of disease.
- The largest impact from tobacco use is on cancer, respiratory diseases and cardiovascular disease.
- Smoking is an established risk factor for menstrual problems, infertility, poorer birth, and earlier menopause.⁷⁷⁻⁷⁹

5.6.1.1 Trends in tobacco smoking

- Public health strategies have seen daily smoking rates in Australia decline. The National Drug Strategy Household Survey showed that the daily smoking rates halved between 1991 and 2016 (from 24% to 12%).⁸⁰
- However, there was no decline between 2013 and 2016.⁸⁰
- Figure 5-4 shows the trajectory of this success.⁸¹
- Few young people are taking up smoking, and most smokers are now aged over 40.
- While the prevalence of smoking among pregnant women has been declining, it is still high with 1 in 10 women smoking during pregnancy.⁸²

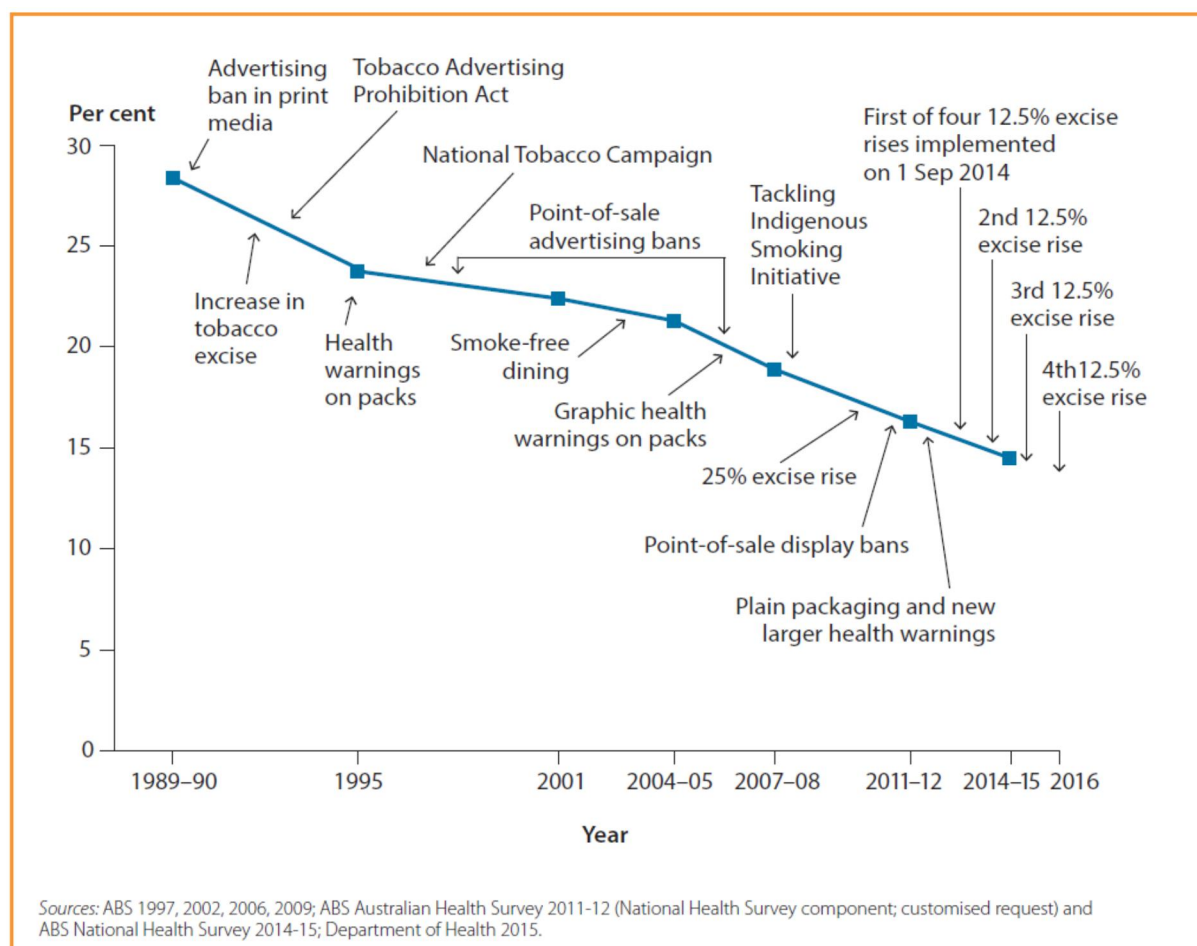


Figure 5-4: Daily smokers aged 18 or older and key tobacco control measures in Australia, 1989-90 to 2016⁸¹

5.6.1.2 Marginalised and disadvantaged populations

- The smoking rate for Indigenous people aged 15 and over was 2.7 times as high as for non-Indigenous adults (42% compared with 15%, age-standardised rate).⁸³
- Smoking rates among Indigenous Australians declined from 51% in 2002 to 42% in 2014–15. This decline was concentrated in non-remote areas, however, with little change to smoking rates in remote areas.
- The decline in smoking has also been unequal among other sub-groups of the Australian population (see Figure 5-5), and this will contribute to on-going health inequities.⁸⁰

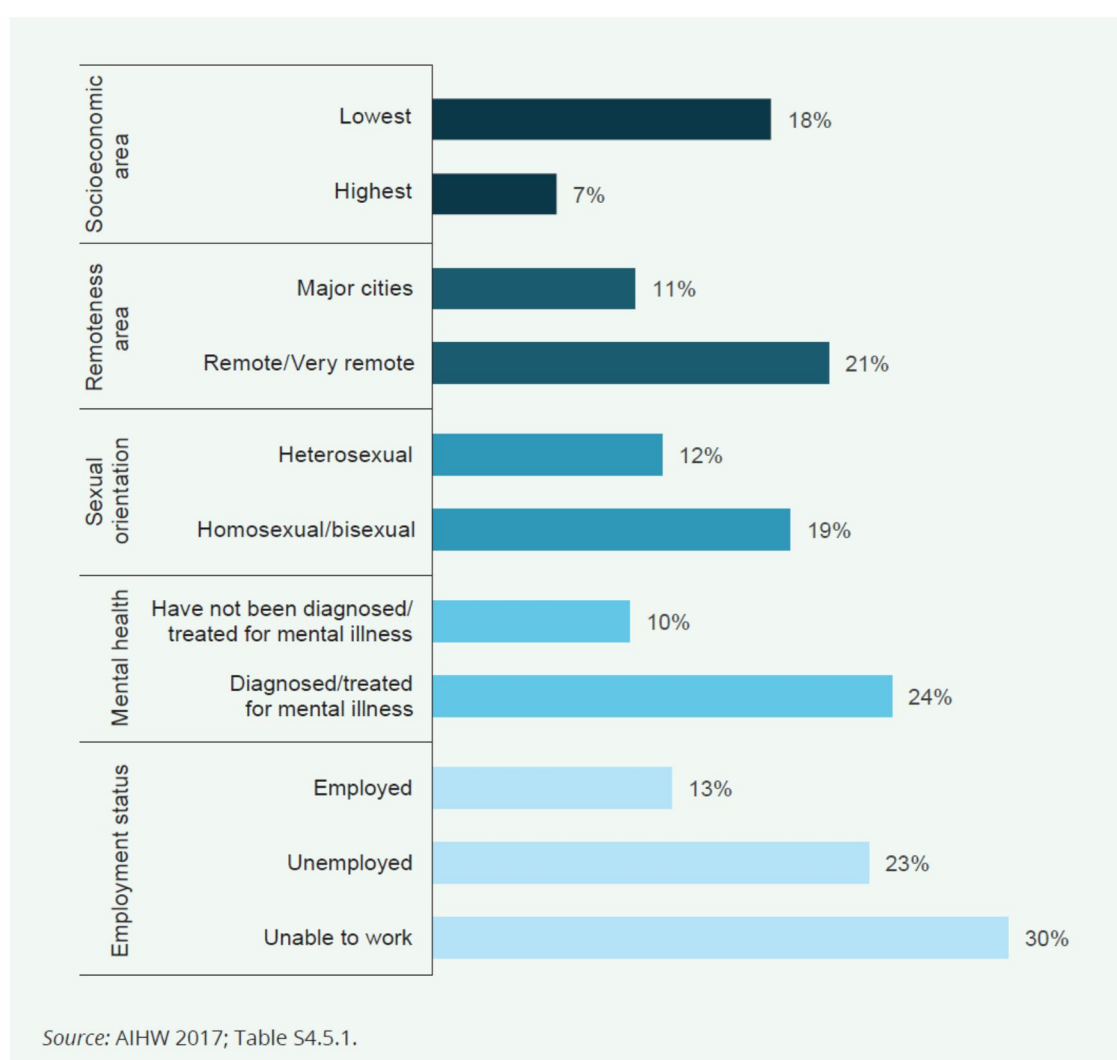


Figure 5-5: Proportion of people who are daily smokers, by selected demographic characteristics, 2016⁸⁰

5.6.1.3 Strategies, policies and actions

Tobacco control represents an outstandingly successful example of preventive health action. It has involved concerted actions by all levels of government over decades.

- The strategies used include:
 - education (e.g. warnings on packaging);
 - legislation/regulation (e.g. advertising bans); and
 - taxation (i.e. rising excise levels).

5.6.1.4

- There is a lack of data on smoking prevalence among homeless people.
- More generally, there is a need for research on the best ways for continuing smoking reduction, including to reduce the uptake of smoking by young women, and among marginalised and disadvantaged groups.

5.6.2 Body mass, overweight and obesity

Figure 5-6 shows associations between chronic conditions and body mass, classified as 'normal weight', 'overweight but not obese' and 'obese', based on the 2014-15 National Health Survey.¹⁶ It is estimated that 6.6% of the total burden of disease among women in Australia is attributable to overweight and obesity.

Overweight and obesity:⁸⁴

- are associated with earlier age of menarche, and more menopausal symptoms⁸⁵;
- affect menstrual regularity, the effectiveness of contraception, and pregnancy complications;
- increase the risk of polycystic ovary syndrome and endometrial cancer.

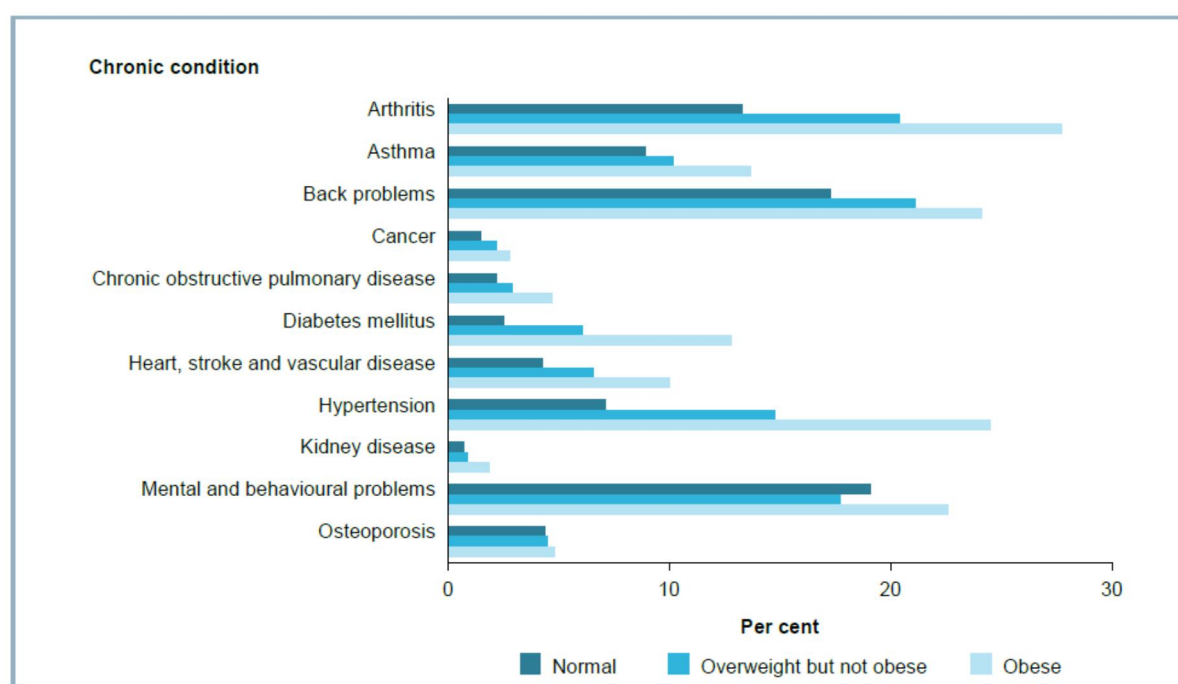


Figure 5-6: Prevalence of selected chronic conditions in adults, by BMI category, 2014-15

5.6.2.1 Trends in body mass, overweight and obesity

- Since the 1980s, body mass has increased in the Australian population, like many other countries worldwide.⁸⁶
- Australia now has the fifth highest proportion of obese people in OECD countries.⁸⁷
- For women, the prevalence of obesity increased from 8% in 1980 to 20% in 1995 and 27% in 2014-15.^{88,89}
- Successive generations of Australian women are becoming more overweight and obese, as illustrated in Figure 5-7 from the Australian Longitudinal Study on Women's Health. It shows the trend with age for four cohorts of women born in 1985-89, 1973-78, 1946-51 and 1921-26, together with possible future scenarios (predicted rates) if body mass continues to increase.
- These data show the importance of halting, or even reversing, weight gain in all age groups, adults as well as children and adolescents.
- As women often buy and prepare the family food, their role in preventing weight gain is crucial for the whole population, as well as their own health.

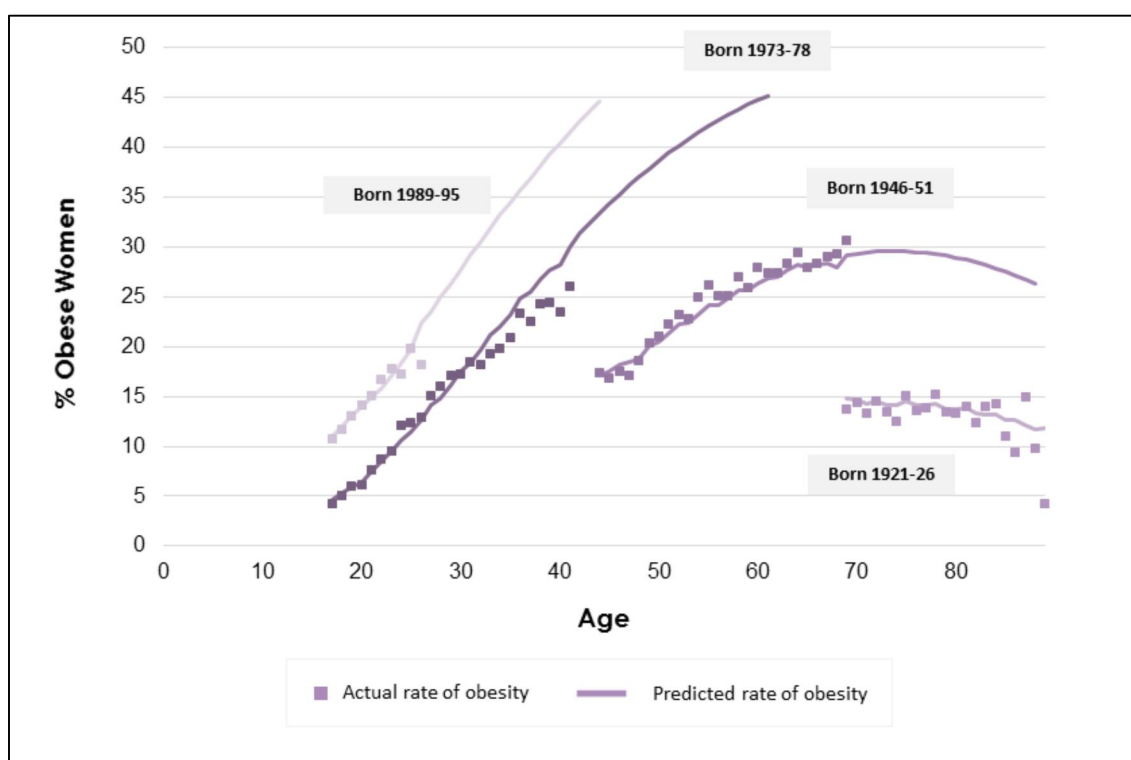


Figure 5-7: Actual percentages of obesity by age for women born in four different periods, and predicted levels to 2035

5.6.2.2

- In 2012–13, Aboriginal and Torres Strait Islander adults were 1.2 times as likely to be overweight or obese as non-Indigenous adults, and 1.6 times as likely to be obese.⁸⁹
- Indigenous children and adolescents are more likely to be obese than non-Indigenous children and adolescents.

- Almost two thirds (63%) of women who live in rural and remote areas are overweight or obese, compared to 53% of women living in major cities.
- In 2014–15, about 3 in 5 (61%) women in the lowest socioeconomic group were overweight or obese, compared with less than half (48%) of those in the highest socioeconomic group.

5.6.2.3 Strategies, policies and actions

Based on risk reduction strategies in other areas, such as tobacco control, halting the increase in body mass, and reducing it, across the population will require sustained action by all sectors over many years.

Education/health promotion

Government and non-governmental agencies (such as the Heart Foundation) undertake a number of interventions to reduce overweight and obesity by improving diet and promoting physical activity.

Examples include:

- Social marketing such as the ‘Girls Make Your Move’ campaign aims to increase physical activity among young women.
- The Healthy Weight Guide, which provides information and tools for different groups (such as parents, breastfeeding mothers, teenagers, Aboriginal and Torres Strait Islander people, people aged 65 and over) to set weight loss goals, plan and record meals and physical activity, and track their progress.
- The Health Star Rating and ‘Tick’ schemes to facilitate healthier food choices.

Community-based interventions

- Strategies targeting schools and workplaces are being promoted by State and Territory governments.

Laws and regulations

- Worldwide there is increasing recognition that self-regulation by the food industry needs to be strengthened by government interventions using laws and other statutory requirements to improve the quality and accessibility of food needed to maintain a healthy weight.
- Some Australian jurisdictions have requirements to display nutritional information on menus, restrictions on the marketing of unhealthy foods, and the regulation of health claims on foods and drinks.

Taxes and pricing interventions

- The World Health Organization Commission on Ending Childhood Obesity has recommended that governments use taxes to reduce the consumption of unhealthy products like sugar-sweetened non-alcoholic drinks.⁹⁰
- An increasing number of countries have now introduced taxes on energy-dense but nutritionally poor foods and drinks.

5.6.2.4

- Regular monitoring of body weight and waist circumference, and evaluation of the preventive strategies above, to identify which ones are working and for whom.

5.6.3 Physical activity

- Lack of physical activity is associated with increased risk of chronic conditions such as cardiovascular disease, type 2 diabetes, and some cancers.⁹¹
- Lack of physical activity is also associated with other risk factors, such as overweight and obesity, high blood pressure and high cholesterol.
- Physical activity can improve the management of osteoarthritis and enhance a sense of well-being.
- Strength and resistance training can improve muscle strength and bone density giving protection against osteoporosis.
- Sedentary behaviour, predominantly involving screen-based activities at work or for leisure, is also associated with increased risk of chronic disease.
- Combined with overweight and obesity (which can be a consequence of lack of physical activity), the total disease burden of disease is 9.0%, which is equal to the burden from tobacco smoking.¹²

5.6.3.1 Current Australian guidelines for physical activity and sedentary behaviour

Table 5-1: Australian guideline for physical activity and sedentary behaviour⁹²

	Ages 2–5 ¹	Ages 5–12 ²	Ages 13–17	Ages 18–64	Ages 65 and over
Physical activity	At least 180 minutes per day	At least 60 minutes per day	At least 60 minutes per day	At least 150 minutes over 5 sessions per week	At least 30 minutes per day
Sedentary or screen-based activity	Should not be restrained for more than 60 minutes at a time ³ No more than 60 minutes of sedentary screen time per day	No more than 120 minutes of screen use Break up long periods of sitting	No more than 120 minutes of screen use Break up long periods of sitting	Minimise and break up prolonged periods of sitting	Be as active as possible
Strength	N/A	Muscle strengthening activities 3 times a week	Muscle strengthening activities 3 times a week	Muscle strengthening activities 2 times a week	Incorporate muscle strengthening activities

5.6.3.2 Trends in physical activity

Changes in the measurement of physical activity and sedentary behaviour, and in Australian Guidelines make it difficult to reliably identify trends over time. However, recent data show that few Australians of all ages are meeting the current guidelines.⁹³

- In 2011–12:
 - The proportions of children who met the physical activity guideline declined with age. For example, at ages 2–5, 59% of girls (and 62% of boys) met the guideline. By ages 5–12, the proportions meeting these guidelines had dropped to 25%. By ages 13–17 the proportions were 7–8%.
 - For sedentary behaviour, the proportions of children meeting the sedentary screen-based activity guideline also decreased with increasing age, and girls were more likely to meet the guidelines than boys.
- In 2014–15:
 - The proportions of adults meeting the guidelines for physical activity declined with age.
 - More men than women met the guidelines for strength-based activity, but the gap decreased with age.

5.6.3.3

- Indigenous children were more physically active than non-Indigenous children.⁹⁴
- Indigenous adults aged 18–64, and Indigenous women aged 65 and over, were less likely to meet the physical activity guideline, compared with their non-Indigenous counterparts.
- Indigenous women were less likely than non-Indigenous women to meet either the physical activity or strength guidelines.
- Among children, there were few differences among socioeconomic groups, in terms of meeting guidelines.
- Adult women in the highest socioeconomic areas were more likely to meet the physical activity guideline, than women in the lowest socioeconomic areas.
- Children in major cities were less likely to meet the guidelines than those living in regional and remote areas.
- In contrast, adults in major cities were more likely to meet the physical activity guideline than those in regional and remote areas.

5.6.3.4

- Improving levels of physical activity requires population-based multi-sectoral, multi-disciplinary and culturally appropriate strategies.⁹⁵
- In Australia, there are many community-based interventions and health promotion activities underway, but these may need to be substantially increased, in conjunction with interventions to promote weight control, to have sufficient impact to reduce chronic conditions.

5.6.3.5 Research needs

- Monitoring trends in physical activity over time has been hampered by measurement difficulties. It is important to establish valid and reliable time series data in order to monitor progress, and to use these consistently over long periods of time (at least 10 years).
- There is a need for research to improve understanding of the effectiveness of community programs and government initiatives to improve levels of physical activity and how these are perceived in different sub-populations.

5.6.4 Diet

- Diet, including total energy intake, is a major determinant of body mass, overweight and obesity and hence women's risk of reproductive problems and chronic disease.
- A Mediterranean diet, which includes high consumption of vegetables and fruit, moderate consumption of fish and wine, low consumption of meat and dairy products, and monounsaturated fatty acids (from olive oil) as the main source of fat, is protective for cardiovascular diseases.⁹⁶
- Red meat, processed meat and sugar-sweetened beverages are all associated with increased risk of type 2 diabetes.⁹⁷

5.6.4.1

Summary of the NHMRC 2013 Australian Dietary Guidelines:⁹⁸

- To achieve and maintain a healthy weight, be physically active and choose amounts of nutritious food and drinks to meet your energy needs.
- Consume a wide variety of nutritious foods from these five food groups every day: plenty of vegetables of different types and colours, and legumes/beans (5 serves per day); fruit (2 serves per day); grain (cereal) foods, mostly wholegrain and/or high cereal fibre varieties, such as breads, cereals, rice, pasta, noodles, polenta, couscous, oats, quinoa and barley (for women 3-6 serves per day depending on age); lean meats and poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans (2-3 serves per day); milk, yoghurt, cheese and/or their alternatives, mostly reduced fat (2½-4 serves per day); and drink plenty of water.
- Limit intake of foods containing saturated fat, added salt, added sugars and alcohol.
- Encourage, support, and promote breastfeeding.
- Care for your food; prepare and store it safely.

5.6.4.2

- Due to changes in methodology across different national surveys,⁹⁹ it is difficult to obtain reliable trends in food consumption over time, but there is some evidence that between 1983 and 1995 women increased their intake of cereals and fish, and decreased their consumption of fruit and meat.
- Data from the 2011-12 National Nutrition and Physical Activity Survey showed that Australians generally fail to meet the Guidelines.¹⁰⁰
- Findings from the ALSWH show that:¹⁰¹

- Fewer than 2% of women met the guideline recommendation of five daily servings of vegetables, with the majority needing more than two additional servings.
- For young women, less than one-third met recommendations for fruit (32%) and meat and alternatives (28%), while only a small minority did so for dairy (12%) and cereals (7%).
- Fifty per cent of pregnant women met guidelines for fruit, but low percentages reached guidelines for dairy (22%), meat and alternatives (10%) and cereals (2.5%).
- For mid-age women, adherence was higher for meat and alternatives (41%) and cereals (45%), whereas only 1% had the suggested dairy intake of four daily servings.
- Results from the 2014-15 National Health Survey^{11,99} show that although women were more likely to meet the Guidelines than men, adherence was still poor, with 55% of women meeting the fruit guidelines and 10% the vegetable guidelines, compared with 44% and 4% of men, respectively. In general, older people were more likely to meet the guidelines than younger people.

5.6.4.3 Marginalised and disadvantaged groups

Comparisons between the National Aboriginal and Torres Strait Islander Nutrition and Physical Activity Survey, 2012-13 and the National Nutrition and Physical Activity Survey, 2011-12 showed that adherence to the guidelines was generally poorer among Indigenous than non-Indigenous people, especially for vegetables (Figure 5-8).¹⁰²

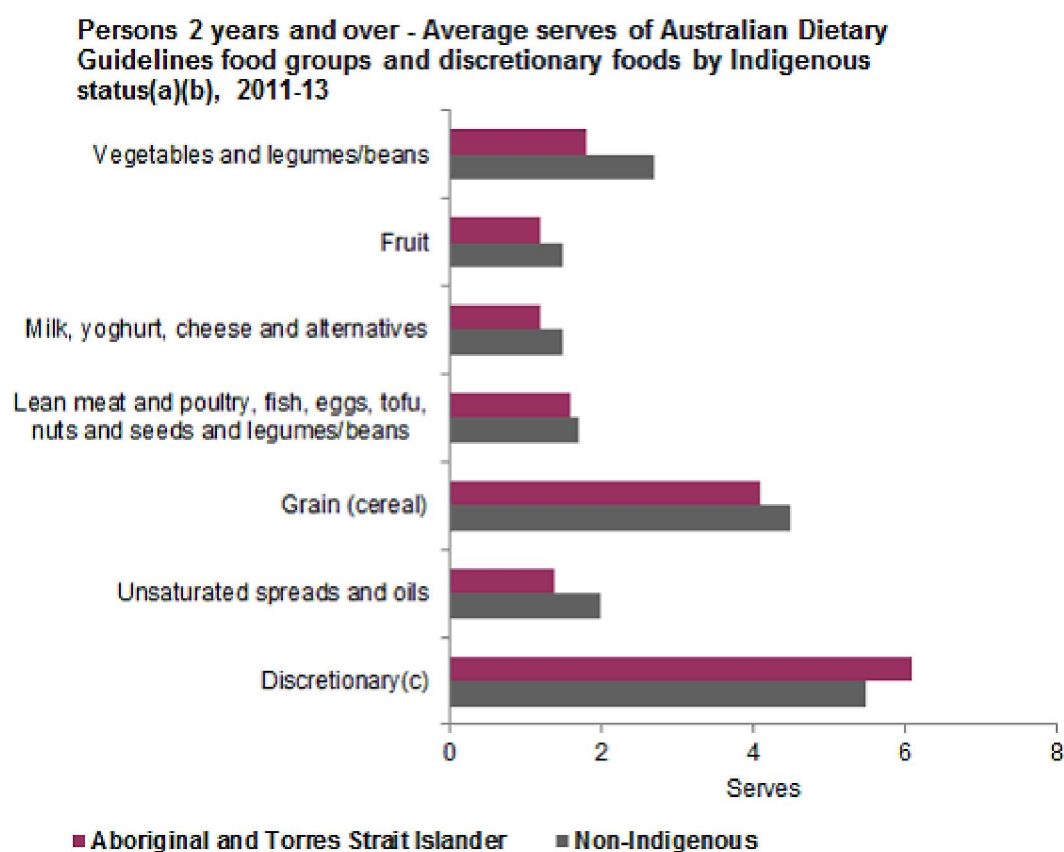


Figure 5-8: Average serves of Australian Dietary Guidelines food groups and discretionary foods by Indigenous status, 2011-2013

- Indigenous people, especially those living in remote areas, are more likely to run out of food and be unable to buy more (i.e. experience food insecurity), than non-Indigenous people.¹⁰³
- Other groups who experience food insecurity include families with no employment or low income, welfare recipients, single parent families, and some others living in more remote areas.¹⁰⁴
- Women, in particular are impacted by food insecurity.¹⁰⁵

5.6.4.4 Strategies, policies and actions

Policies relating to nutrition and food in Australia are complex in order to meet the needs and expectations of public health, agriculture and the food industry.

Currently, national policies are being driven by the Healthy Food Partnership, established in 2015. The Partnership is chaired by the Australian Government Minister for Rural Health and comprises representatives from the Australian Food and Grocery Council, Ausveg, Coles, Dairy Australia, Dietitians Association of Australia, Food Standards Australia New Zealand, Meat and Livestock Australia, Metcash, National Heart Foundation of Australia, Public Health Association of Australia, the Quick Service Restaurant Forum, and Woolworths. Its terms of reference include helping consumers to meet the Guidelines by making healthier food choices easier and more accessible.

5.6.4.5

- The Australian Dietary Guidelines have not been updated since 2013 and should now include the robust evidence about links between food and chronic disease that has become available from meta-analyses of large population studies and randomised controlled trials.
- There have been no national dietary surveys, using strong methodology, since 2011-12.

5.6.5 Alcohol

- Alcohol consumption is widespread in Australia. People who drink at excessive levels increase their own risk of acute and chronic disease but also risk harm to others.¹⁰⁶
- Although Australians now drink less alcohol per person per year than they did 50 years ago, they still drink more than the OECD average (9.7 litres per person per year, compared with 9.0 litres).^{107,108}
- Alcohol use was estimated to be responsible for 4.6% of the total burden of disease and injury and 3.4% of deaths (more than 5,000 deaths) in Australia in 2011.²⁵
- The proportion of total disease burden due to alcohol use was also almost three times greater in men than women.
- Alcohol contributes to the burden of disease associated with: injuries, cancers (for women, particularly for breast, liver and bowel cancers), cardiovascular diseases, and alcohol dependency.
- Alcohol consumption during pregnancy causes risk of fetal alcohol spectrum disorders, thought to be the leading cause of preventable developmental disabilities in the world.¹⁰⁹

5.6.5.1 Current Australian guidelines for alcohol

The National Health and Medical Research Council publishes guidelines for reducing health risks of drinking alcohol. These are:¹⁰⁶

- To reduce the risk of alcohol-related harm over a lifetime (such as chronic disease or injury) a healthy adult should drink no more than two standard drinks a day.
- To reduce the risks of injury on a single occasion of drinking, a healthy adult should drink no more than four standard drinks on any one occasion.
- For children and young people aged under 18, not drinking alcohol is the safest option. Alcohol may adversely affect brain development and lead to alcohol-related problems in later life.
- For women who are pregnant or planning a pregnancy, or are breastfeeding, not drinking is the safest option. Maternal alcohol consumption can harm the developing fetus or breastfeeding baby.

5.6.5.2

- Total alcohol consumption has declined over the last decade.¹⁰⁶
- About three-quarters of Australians aged 14 and over have consumed alcohol in the past year, and about 6% drink every day.
- National surveys show that young adults tend to drink more alcohol than older adults.
- Total consumption and lifetime risk have been declining in recent years – see Figure 5-9 from Australia's Health 2018.
- Women are less likely than men to exceed the guidelines for lifetime risk.

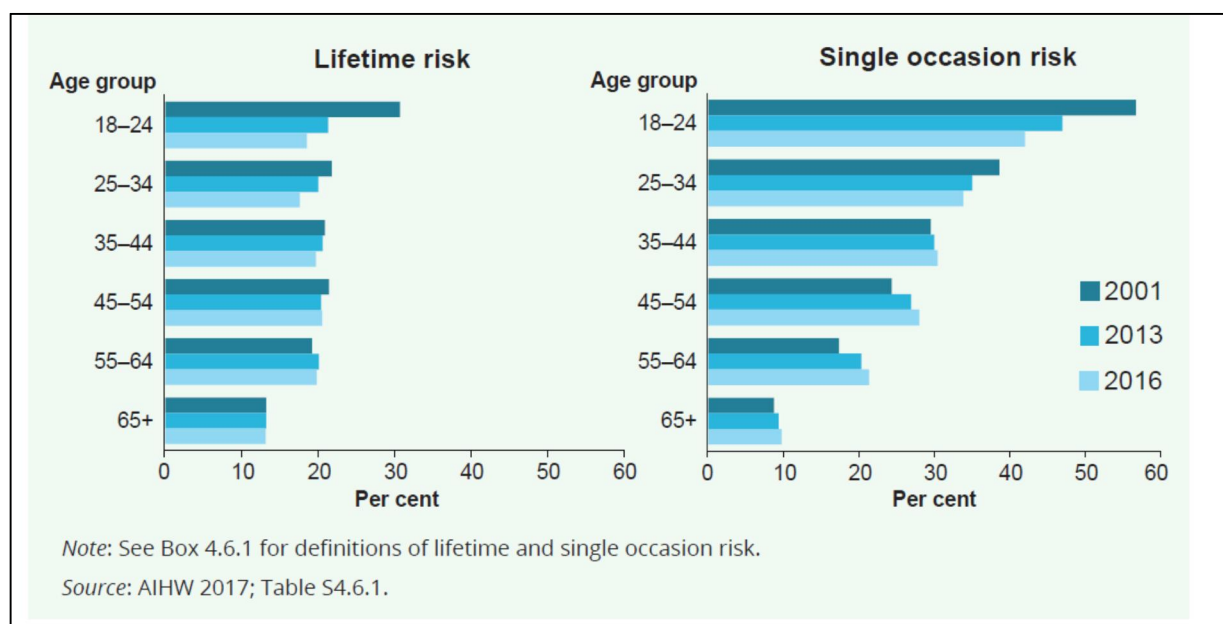


Figure 5-9: Percentages of people aged 18 and over who reported consuming alcohol to levels exceeding lifetime risk or single occasion risk by age group, 2001, 2013 and 2016

5.6.5.3 *Marginalised and disadvantaged groups*

- For women, differences in exceeding the guidelines for lifetime risk from alcohol consumption are less by socioeconomic group than they are for men.⁹⁴
- Women living in regional and remote areas are slightly more likely to exceed the guidelines than women in major cities.
- Women in higher socioeconomic areas are more likely to exceed the guidelines for lifetime risk than those in lower socioeconomic areas.

5.6.5.4

- The National Alcohol Strategy 2006–2011 had the broad goal to influence Australia's drinking culture to produce healthier and safer outcomes.
- The strategy's priority areas were: intoxication; public safety and amenity; health impacts; cultural place and availability.
- State and territory governments are involved in developing and implementing strategies to reduce alcohol-related harm (such as trading-hour restrictions), as well as liquor-licensing review.
- Local governments oversee events, functions and festivals where alcohol is served, and work with businesses, industry and community groups at a local level, and deliver harm-minimisation programs through service delivery, land-use planning and co-enforcement with other regulatory agencies.

5.6.5.5

- It is important to develop community programs and interventions to reduce alcohol consumption during pregnancy.

6 Maternal and infant health

What is working well?

- The teenage fertility rate has continued to decline.

What needs particular attention?

- Given continuing increase in the prevalence of obesity and advanced maternal age in Australian women, it is expected that the infertility rate, caesarean section, and incidence of pregnancy complications (especially gestational diabetes (GDM) and hypertensive disorders during pregnancy) will continue to increase in the next decade.
- GDM screening and registration are effective in Australia, but engaging women with GDM in follow-up programs is difficult, with only half of the mothers obtaining glucose screening at six-weeks postpartum.
- Caesarean deliveries have increased over the last decade, especially among women with private insurance. In 2015, about 1 in 3 mothers had a caesarean birth, and 3 out of every 5 caesarean deliveries in Australia are planned (elective caesarean).
- While the rates of smoking and alcohol consumption have been declining in Australia, 1 in 10 Australian mothers are still smoking during pregnancy, and 40% drink at least some alcohol during pregnancy.
- Strategies are needed to heighten awareness of preconception health, particularly regarding nutrition and lifestyle, and target all women who are planning a pregnancy.

6.1 Overview

Australian women are giving birth later in life, and almost half of mothers are overweight or obese at their first antenatal visit.¹¹⁰ The average age of first-time mothers has been increasing from 28.1 years in 2005 to 28.9 years in 2015.¹¹⁰ Given the increasing prevalence of obesity and advanced maternal age in Australia, it is expected that the infertility rate, caesarean section, and incidence of pregnancy complications, especially gestational diabetes and hypertensive disorders during pregnancy, will continue to increase in the next decade.

Behavioural risk factors such as tobacco smoking and alcohol consumption during pregnancy also impact on pregnancy outcomes and infant health. While the rates of smoking and alcohol consumption continue to drop in Australia, 1 in 10 women are still smoking during pregnancy,¹¹⁰ and 40% of Australian mothers drink at least some alcohol during pregnancy.¹¹¹ Cigarette smoking during pregnancy puts the fetus at risk for preterm birth, low birthweight, and birth defects.¹¹² Pregnant women who consume alcohol are found to be associated with miscarriage, stillbirth, and per-term birth, and fetal alcohol spectrum disorders.¹¹³ Younger mothers (aged under 25), Indigenous mothers, and mothers living in low SES and remote/very remote areas are more likely to smoke and consume alcohol during pregnancy.¹¹⁰ Regarding mental health issues during pregnancy (i.e. perinatal depression), please refer to the mental health and wellbeing chapter (section 4.1.1.6).

Preconception health

Health before conception is strongly associated with maternal and child health outcomes, with consequences that can extend across generations. The preconception period is commonly defined as the 3 months before conception; however, it needs to be redefined to account for biological, individual, and public health perspectives.¹¹⁴

- Biological perspective – days to weeks before embryo development;
- Individual perspective – a conscious intention to conceive, typically weeks to months before pregnancy occurs;
- Public health perspective – longer periods of months or years to address preconception risk factors, such as diet and obesity.

Many women of reproductive age are not prepared nutritionally for pregnancy – 9 out of 10 Australian women reported consuming less than 5 portions of fruit and vegetables per day. Alongside continued efforts to reduce cigarette smoking, alcohol consumption and obesity in the population, it is suggested to heighten awareness of preconception health, particularly regarding diet and nutrition. It is important to identify women who are contemplating a pregnancy and provide an opportunity to improve health before conception.¹¹⁴

6.1.1 Trends in markers of maternal health

6.1.1.1 Fertility and infertility

- In Australia, the total fertility rate has decreased over the last decade, from 1.88 births per woman in 2006 to 1.79 births per woman in 2016.¹¹⁴
- The median age of all mothers has been increasing from 30.7 years in 2006 to 31.2 years in 2016, and women aged 30-34 years had the highest fertility rate (123 babies per 1,000 women).¹¹⁴
- The proportion of women having their first child over the age of 30 years has risen from 23% in 1991 to 43% in 2011.¹¹⁵
- The teenage fertility rate, however, has continued to decline; in 2016, women aged 15-19 years had 11 babies per 1000 women.¹¹⁴
- The statistics for prevalence of infertility is limited and where reported, can vary greatly by the definition of infertility. In Australia, the common definition is failure to achieve a clinical pregnancy after 12 or more months of regular unprotected sexual intercourse.¹¹⁶ Using this definition, almost 20% of young Australian women reported a history of infertility by their early-to-mid 30s.¹¹⁷
- The latest reports from the National Perinatal epidemiology & Statistics Unit shows that over a 10-year period between 2006 and 2015, the number of assisted reproductive technologies (ARTs) treatment cycles in Australia has risen by 55% from 45,986 to 71,479. Additionally, the number of ART treatment cycles per woman of reproductive age also increased from 10.5 to 14.4 (Table 6-1).^{116,118}
- In Australia and New Zealand in 2015, approximately 95% of ART cycles were autologous cycles where women used their own oocytes or embryos, and 4% were recipient cycles where women received oocytes or embryos from another woman.¹¹⁶
- The mean age of women who underwent autologous cycles was 36.0 whereas the mean age of women undergoing recipient cycles was 40.6 years.¹¹⁶
- Causes of infertility reported by couples undergoing autologous and recipient cycles included female infertility factors (33.5%), male infertility factors (15.1%), combined male-female factors (10.5%) and the remaining were unexplained or not stated.¹¹⁶ Female infertility factors (reported alone or combined) accounted for 44% of autologous and recipient cycles.

Table 6-1: Number of assisted reproductive technology treatment cycles by year in Australia (NPESU reports)^{116,118}

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
No. of ART treatment cycles	43,493	45,986	56,817	56,923	65,202	56,489	61,158	64,905	66,143	67,707	71,479
% increase in cycles from previous year						-13.4	7.4	5.8	1.9	2.4	5.6
No. of ART treatment cycles per women*	10.1	10.5	11.7	12.6	14.2	12.0	12.9	13.7	13.7	13.9	14.4

*women of reproductive age (15-44 years)

6.1.1.2 Pregnancy complications

Gestational diabetes

Gestational diabetes mellitus (GDM) is a form of diabetes that occurs during pregnancy. After delivery, most women will have normal blood glucose levels, but 1 in 2 women will continue to have high glucose levels and develop type 2 diabetes later in life.

- In 2005-06, GDM affected around 5% of women aged 15-49 years.¹¹⁹ Diabetes Australia reported that GDM is the fastest growing type of diabetes in Australia, and the prevalence of GDM is likely to increase to 12-14% based on the new diagnostic criteria.^{120,121}
- In 2016, over 8000 women used insulin to manage GDM, with an estimate of 137 cases per 100,000 women (1 in 700 women) of reproductive age (15-49 years). Additionally, the number of women diagnosed with GDM receiving insulin treatment increased with age, peaking among those aged 30-34 years (333 cases per 100,000).
- Diabetes Australia suggests that women diagnosed with GDM should have a 75g OGTT (oral glucose tolerance test) to screen for persistent diabetes at 6-weeks postpartum, and they are recommended to be tested for type 2 diabetes again every one to three years depending on their risk factors, as well as before planning a pregnancy.¹²⁰
- The National Gestational Diabetes Register (NGDR) has been established since July 2017 within the National Diabetes Service Scheme to help women diagnosed with GDM to manage better their long-term health.¹²⁰ Women who register on the NGDR and their doctors will receive regular reminders to have diabetes checks.
- One evaluation study (in 2018) reported that GDM screening (86-97%) and NGDR registration (73-91%) were effective in Australia.¹²² However, engaging women with GDM in follow-up programs is difficult, with only half of the mothers (43-58%) obtaining glucose screening at six-weeks postpartum.
- After the six-week screening, there was no evidence of periodic mail-outs having any effect on encouraging mothers to seek further annual type 2 diabetes follow-up testing.¹²² It is suggested that managing recall and testing of women with GDM at the local level (e.g. a message from their family physician) is likely to be more effective than letters from a national source.¹²³
- A review study found that the screening rate was higher among older mothers, highly educated women, Asian women, and women who received prenatal care, were treated with insulin during pregnancy, and completed a 6-week postpartum visit.¹²⁴

Hypertensive disorder during pregnancy

Hypertension is the most common condition encountered during pregnancy. Hypertensive disorders during pregnancy (HDPs) are classified into four categories as recommended by the Society of Obstetric Medicine of Australia and New Zealand: chronic hypertension, gestational hypertension, pre-eclampsia/eclampsia, pre-eclampsia superimposed on chronic hypertension. Of women diagnosed with HDPs, around 20% have chronic hypertension, 40% have gestational hypertension, and 40% have pre-eclampsia.¹²⁵

- HDPs affect up to 10% of pregnancies and are a major cause of pregnancy complications and maternal death globally.¹²⁵
- HDPs are the second most common cause of direct maternal deaths worldwide behind haemorrhage.¹²⁶
- In Australia, hypertension has been increasing in women of childbearing age, given the changes in maternal characteristics in the recent decades, such as pre-existing medical conditions, older maternal age and obesity.^{125,127}
- Complications from HDPs (pre-eclampsia/eclampsia) accounted for 18.4% of direct maternal deaths in 2008-2012.¹²⁸

6.1.1.3 Birth

Caesarean birth

- Australia has a higher rate of caesarean section than the OECD average (32% compared with 28% of live births in 2013).¹²⁹
- The caesarean rate has risen steadily from 30% in 2005 to 33% in 2015.¹¹⁰ These trends remain after taking into account the changes in maternal age over time.
- In 2015, two-thirds (67% or 202,890) of mothers had a vaginal birth, and one-third (33% or 101,370) had a caesarean birth.¹¹⁰
- About 3 out of every 5 caesarean deliveries in Australia are planned (elective caesarean).¹³⁰
- Caesarean deliveries increased with maternal age (especially over the age of 40) but did not show much difference by remoteness and socioeconomic status.¹¹⁰
- Caesarean section rates are 1.4 times higher in private hospitals than in public hospitals (43% compared with 30% in 2011).¹³⁰ This increased rate cannot be entirely explained by the fact that older mothers (who are more likely to receive obstetric interventions) are also the most likely to have private health insurance.

Pre-term birth and low birthweight

- Between 2005 and 2015, the rates of pre-term birth and low birthweight changed little, remaining around 8-9% and 6.1-6.5% respectively over this period.¹¹⁰
- In 2015, the average gestational age for all babies was 38.6 weeks, with 8.7% born pre-term (before 37 completed weeks).¹¹⁰
- The mean birthweight of all babies in 2015 was 3,327 grams, with 6.5% born with low birthweight (less than 2,500 grams). Almost 3 in 4 low birthweight babies were pre-term.¹¹⁰
- In 2015, there were 9 perinatal deaths per 1,000 births (7 of them were stillbirths). Gestational age and birthweight are the biggest predictors of perinatal death.¹¹⁰

6.1.1.4 Breastfeeding

- The 2010 Australian National Infant Feeding Survey (ANIFS) demonstrated that breastfeeding was initiated for 95.9% of children at 0-2 years and 90.4% were exclusively breastfed.¹³¹ By four months of age, 68.7% of children were still receiving some breastmilk, and this dropped further to 60.1% by six months of age.
- Similar statistics were demonstrated in the ALSWH¹³² and a prospective pregnancy cohort study in Melbourne.¹³³
- A multicentre study conducted in Brisbane, Adelaide, and regional South Australia showed that the proportion of infants still breastfed at six months was as low as 41%.¹³⁴
- The 2010 ANIFS also showed that 61.4% were exclusively breastfed for less than one month, 39.2% for three months, and 15.4% for five months.¹³¹
- Breastfeeding patterns differ by ethnicity: 66% of infants of Chinese-born mothers received breastmilk at the time of the 2010 ANIFS survey compared to 59.9% of infants of Australian-born mothers.¹³⁵
- Breastfeeding patterns differ by number of children: breastfeeding of first-born children was more common among women who continued to deliver more children; approximately 71 % of women with one child initiated breastfeeding with this first child compared with 90.5 % of women with two children and 88.7 % of women with three or more children.¹³²
- Around 20% of multiparous women did not initiate breastfeeding with their youngest child.¹³²

6.1.2 Markers of maternal health across the life course

- Overall, infertility rate, incidence of pregnancy complications, caesarean section rate, and pre-term birth increase with maternal age.

6.1.3 Marginalised and disadvantaged populations

- In contrast to non-Indigenous women, the fertility rate in Indigenous women has increased from 1.97 births per woman in 2006 to 2.12 births per woman in 2016.¹¹⁴
- The median age of Indigenous mother was 25.5 years in 2016, approximately six years lower than the median age of all mothers.¹¹⁴ Indigenous women aged 20-24 years had the highest fertility rate (119 babies per 1000 women) in 2016.
- In 2015, Indigenous mothers were 1.3 times and 3.6 times more likely to have gestational diabetes (13% vs 9%) and pre-existing diabetes (3.8% vs 1.1%) compared with non-Indigenous mothers (age-standardised).¹¹⁰
- Indigenous mothers in 2015 were twice (1.9% vs 0.9%) as likely to have chronic (pre-existing) hypertension, compared with non-Indigenous mothers (age-standardised), while rates of gestational hypertension were similar between Indigenous and non-Indigenous mothers (4.5% vs 3.9% respectively).¹¹⁰
- In 2012-2014, the caesarean rate for Indigenous women was 1.2 times higher than that for non-Indigenous women.¹³⁰
- In 2015, the rates of pre-term birth and low birthweight were over 1.5 times higher among Indigenous mothers and mothers living in very remote areas.¹¹⁰

6.1.4 Strategies, policies and actions

- Clinical Practice Guidelines - Pregnancy Care 2018.
- National Maternity Services Plan 2010-2015.
- In 2017, the Australian Health Ministers Advisory Council agreed to start a new process to develop a National Strategic Approach to Maternity Services.
- The Australian Government Department of Health is developing an enduring strategy to promote breastfeeding and help overcome barriers to establish and maintain breastfeeding. The Strategy has undergone stakeholder consultation, literature review, and public consultation from May 2017-June 2018. The final Strategy will then be provided to the Australian Health Ministers' Advisory Council and the Council of Australian Governments (COAG) Health Council for endorsement.
- The current *Australian Dietary Guidelines* from the National Health and Medical Research (NHMRC), published in 2013, encourages, supports, and promotes breastfeeding. The Government's "Eat For Health" website provides numerous layman-friendly resources to educate and inform the public about breastfeeding.
- Australian Breastfeeding Association – funded by the Australian Government until 2019, which is a volunteer-run support network that provides breastfeeding information and support services to more than 80,000 mothers each year.

6.1.5 Research needs

Priority life stages and populations

Research aimed at reducing adverse maternal health outcomes needs to focus on these groups of women:

- Women of advanced maternal age
- Women who are overweight and obese
- Women who smoke and consume alcohol during pregnancy
- Aboriginal and Torres Strait Islander women
- Women living in remote and very remote areas

Policy priorities

- Research in GDM and HDP is urgently needed in many areas including early diagnosis, impact of new criteria, treatment targets, costs of health services, and long-term follow-up.
- Strategies are needed to heighten awareness of preconception health, particularly regarding nutrition and lifestyle, and target all women who are planning a pregnancy.

7 Conditions predominantly affecting women

Key messages

What is working well?

- The success of the National Human Papillomavirus (HPV) Vaccination Program has led to a rapid and significant decline in genital warts, especially for young people under 30 years. It is expected to reduce the rates of HPV-related cancers in the coming years, such as cervical cancer

What needs particular attention?

- While a high proportion of women use a contraceptive method, the rate of contraceptive failure (unintended pregnancy) is high in Australia, and the uptake of long-acting reversible contraception has been low.
- The notification rates of sexually transmissible infections (especially chlamydia and gonorrhoea) continue to rise in Australian women over the last decade, in particular among young women aged under 30 years, Indigenous women, and women living in remote and very remote areas.
- There is limited evidence on national estimates of the prevalence of polycystic ovarian syndrome and endometriosis, especially the change over time.
- Hysterectomy rates declined over the last decade, but the rate was still high at around 1 in 3 women.
- The timing of menarche and menopause not only reflect current health status but are linked with adverse health outcomes in later life, including breast cancer, osteoporosis, type 2 diabetes, cardiovascular disease and mortality.
- While the prevalence of physical violence in the last 12 months has declined over the last decade, the rates of sexual violence and domestic violence have remained relatively steady over time.

7.1 Sexual health

The notification rates of sexually transmissible infections (STIs) continue to rise in Australian, reflecting increasing unsafe sexual practices. Young women (15-29 years) and marginalised and disadvantaged populations, such as Aboriginal and Torres Strait Islander women and women living in remote and very remote areas, are disproportionately affected by STIs.

7.1.1 Trends in contraception and sexually transmissible infections

7.1.1.1 Contraception

- The oral contraceptive pill is the most commonly used (52-54%) contraceptive method in young Australian women from their late teens to mid-20s, followed by condom use (39-42%); only 12-15% of women use long-acting reversible contraception (LARC) including Implanon and Mirena.¹³⁶
- Data from ALSWH showed that the proportion of women using the oral contraceptive pill decreased over a 10 year study period, as women moved into relationships, and were trying

to conceive, become pregnant and complete their families, while condom use rate remained steady over time.¹³⁷

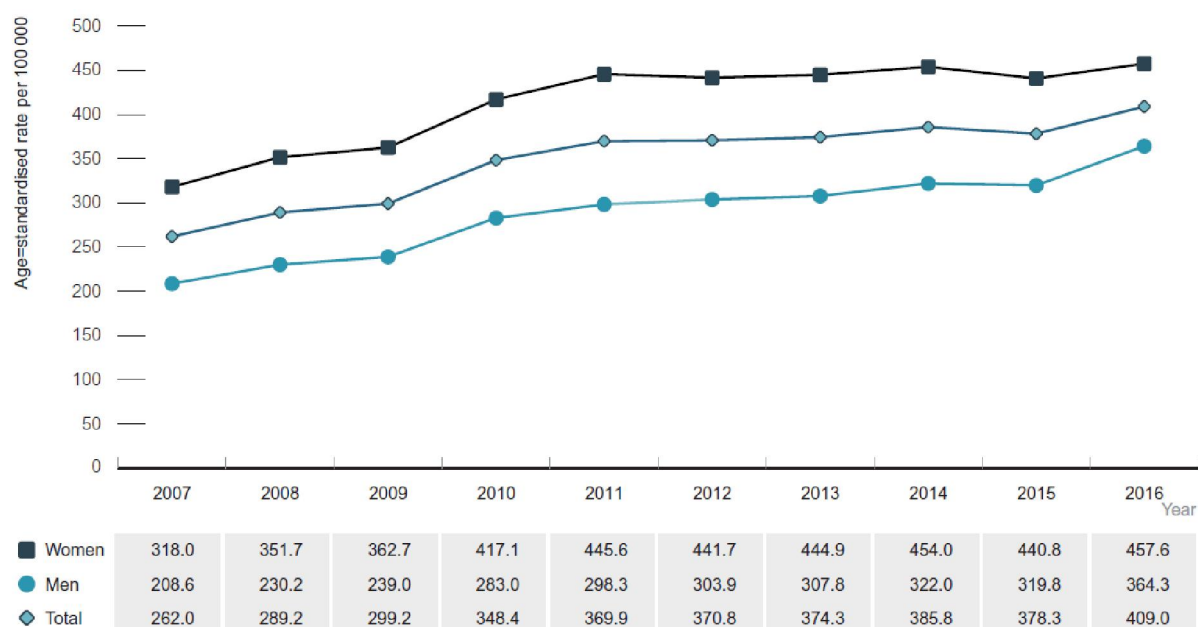
- While a high proportion (66-70%) of women used a contraceptive method, the unintended pregnancy rate is high in Australia. About one in ten women report contraceptive failure.¹³⁸
- LARC virtually eradicates contraceptive failure (unintended pregnancies), but its uptake rate has been low in Australia.¹³⁹
- Current barriers to increase the use of LARC include: evidence (data) gap, primary care barriers, and access and financial barriers.¹³⁹

7.1.1.2 Sexually transmissible infections

Chlamydia

Chlamydia is the most commonly diagnosed STI in Australian women. Figure 7-1 shows the chlamydia notification rate per 100,000 population between 2007 and 2016, by gender.¹⁴⁰

- The notification rate of chlamydia increased steadily between 2007 and 2011, remained relatively stable between 2011 and 2015, and increased slightly between 2015 and 2016, with a similar trend in both men and women.¹⁴⁰
- Over the past decade, a higher notification rate has been seen in women than men.
- Chlamydia is one of the main causes of infertility in women, because chlamydia often goes undetected and can spread to other parts of body causing damage to the reproductive system, in particular the uterus and fallopian tubes.¹⁴¹



Note: Excludes Victoria in all years, as 2015 and 2016 data were unavailable at the time of reporting.

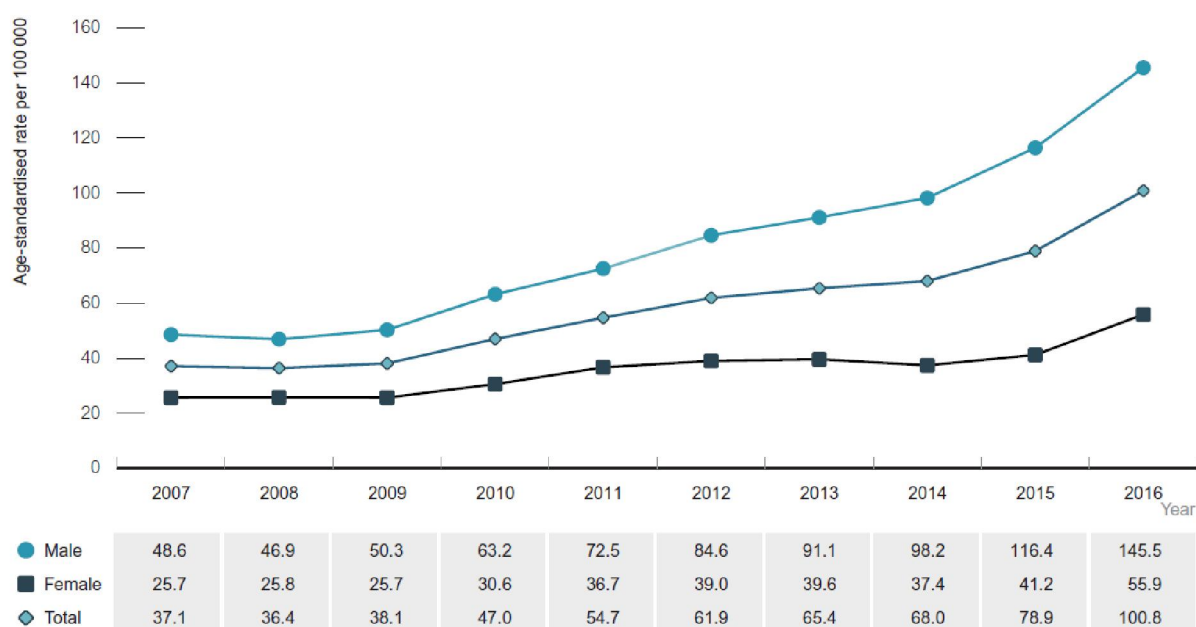
Source: Australian National Notifiable Diseases Surveillance System

Figure 7-1: Notification rates of chlamydia per 100,000 population between 2007 and 2016, by gender¹⁴⁰

Gonorrhoea

While in general women have a lower notification rate of gonorrhoea than men, for the Indigenous population and people living in remote/very remote areas the rate is higher among women than for men.¹⁴⁰ Figure 7-2 shows the gonorrhoea notification rate per 100,000 population between 2007 and 2016, by gender.¹⁴⁰

- Overall, the notification rate of gonorrhoea has increased steadily over the last decade, and the notification rate has been higher in men than women.¹⁴⁰
- Between 2011 and 2014, the rate remained stable in women, but in the two years to 2016 the notification rate increased by 51% from 37 per 100,000 in 2014 to 56 per 100,000.¹⁴⁰



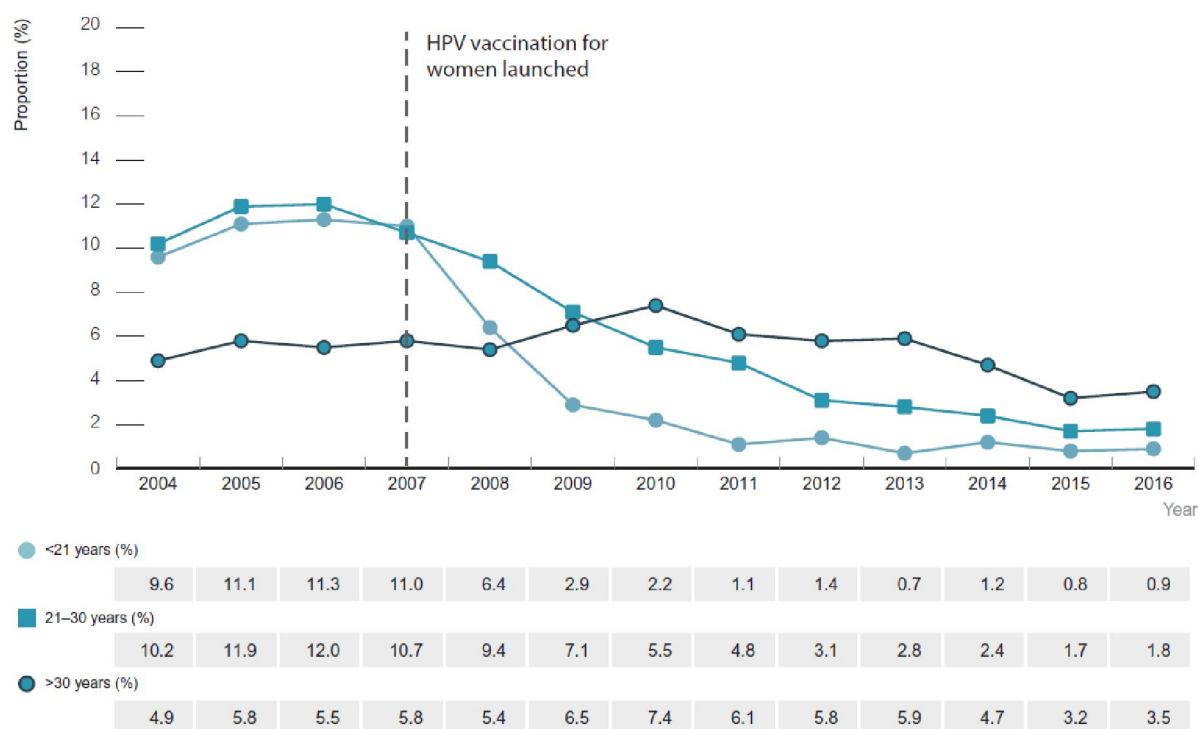
Source: Australian National Notifiable Diseases Surveillance System.

Figure 7-2: Notification rates of gonorrhoea per 100,000 population between 2007 and 2016, by gender¹⁴⁰

Human papillomavirus

Human papillomavirus (HPV) types 16 and 18 account for 70-80% of cervical cancer, and types 6 and 11 are the leading cause of genital warts.¹⁴⁰ The National HPV Vaccination Program began in 2007 for girls and was extended to include boys in 2013. The quadrivalent HPV vaccine (types 6, 11, 16, and 18) is now provided to all students aged 12-13 years. Catch-up programs were run from 2007 to 2009 for women aged 14-26 years. Figure 7-3 shows the proportion of women diagnosed with genital warts at first visit at sexual health clinics between 2004 and 2016, by age group.¹⁴⁰

- After the introduction of HPV vaccine to women in 2007, a significant decline has been observed in the diagnosis of genital warts at first visit at sexual health clinics.¹⁴⁰
- The detection of high-grade abnormalities in women undergoing cervical cancer screening (Pap screening) has declined significantly between 2006 and 2015 for women before age 20 years (69% reduction) and for those aged 20-24 years (41% reduction), reflecting the success of the national HPV vaccination program in girls.¹⁴⁰



Note: Excludes Aboriginal and Torres Strait Islander females.

Source: Genital Wart Surveillance Network.

Figure 7-3: Proportion of women diagnosed with genital warts at first visit at sexual health clinics between 2004 and 2016, by age group¹⁴⁰

Human immunodeficiency virus

Figure 7-4 shows the newly diagnosed human immunodeficiency virus (HIV) rate per 100,000 population between 2007 and 2016, by gender.¹⁴⁰

- Over the past decade, the notification rate of newly diagnosed HIV decreased in women from 1.0 per 100,000 in 2007 to 0.7 per 100,000 in 2016.¹⁴⁰
- The annual number of new HIV diagnoses decreased by 16% in women from 105 in 2007 to 88 in 2016.¹⁴⁰
- In 2016, it was estimated that 11% of people living with HIV were unaware of their HIV status (undiagnosed).¹⁴⁰ The proportion undiagnosed was higher in women (13%) than in men (10%), higher in Indigenous people (20%) than in Australian-born non-Indigenous people (7%); higher rates of undiagnosed HIV were also identified for people born in Southeast Asia (27%), sub-Saharan Africa (11%), and other countries (11%).



Source: State and territory health authorities; see Methodology for detail.

Figure 7-4: Newly diagnosed HIV rate per 100,000 population between 2007 and 2016, by gender
140

7.1.2 Sexually transmissible infections across the life course

Chlamydia:

- The trends of chlamydia notification rates vary by age group.¹⁴⁰ Over the last decade, notification rates have been highest in the age groups of 15-19, 20-24, and 25-29 years.
- Since 2012, the rates in the 15-19 age group have declined steadily for both men and women, while the rates for women in the 20-24 and 25-29 age groups have increased steadily since 2007.¹⁴⁰

Gonorrhoea:

- Over the last decade, notification rates have been highest in the age groups of 15-19, 20-24, and 25-29 years.¹⁴⁰
- Men had higher gonorrhoea notification rates in all age groups in 2016 than women, except in the 15-19 age groups, where women had a higher rate (176 compared with 146 per 100,000 for men).¹⁴⁰

Human papillomavirus:

- There has been a major reduction in genital warts diagnosis at first visit among women aged under 21 years (from 11% in 2007 to 0.9% in 2016).¹⁴⁰
- Women aged 21-30 years also had a substantial decline, from 10.7% in 2007 to 1.8% in 2016, reflecting the catch-up vaccination programs for women aged 14-26 years in 2007-2009.¹⁴⁰
- In women aged over 30 years, the diagnosis of genital warts fluctuated over the last decade and was 3.5% in 2016.¹⁴⁰

Human immunodeficiency virus:

- Between 2007 and 2014, the largest number of HIV notification was in the age group 30-39 years, followed by those aged 20-29 and 40-49 years, while since 2015, the largest number was in the age group 20-29 years.¹⁴⁰

7.1.3 Marginalised and disadvantaged populations

- In 2016, Indigenous women had over three times the notification rate of chlamydia (1535 compared with 483 per 100,000) and almost 15 times the notification rate of gonorrhoea (612 compared with 42 per 100,000) than non-Indigenous women.¹⁴²
- Between 2007 and 2016, the age-standardised rate of newly diagnosed HIV declined from 3.8 per 100,000 in 2007 to 2.9 per 100,000 in 2016 in the Australian-born non-Indigenous population; in contrast, the rate increased from 3.6 per 100,000 in 2007 to 6.4 per 100,000 in 2016 for Indigenous people.¹⁴²
- Women living in remote/very remote areas had over twice the notification rate of chlamydia (1063 compared with 460 and 340 per 100,000, respectively) and over 13 times the notification rate of gonorrhoea (618 compared with 41 and 45 per 100,000, respectively) than those living in inner/outer regions and major cities¹⁴⁰

7.1.4 Strategies, policies and actions

SEXUAL HEALTH STRATEGY

Australian Government

- Third National Sexually Transmissible Infections Strategy 2014-2017
- Seventh National HIV Strategy 2014-2017
- National Human Papillomavirus (HPV) Vaccination Program

State/Territory Governments

- Hepatitis B, Hepatitis C, HIV, Sexually Transmissible Infections: ACT Statement of Priorities 2016–2020
- NT Guidelines for the Management of Sexually Transmitted Infections in a Primary Health Care Setting 2016
- Queensland Sexual Health Strategy 2016-2021
- NSW Sexually Transmissible Infections Strategy 2016-2020
- Victorian Women's Sexual and Reproductive Health: Key Priorities 2017-2020
- South Australian Sexually Transmissible Infection Implementation Plan 2016-2018
- WA Sexual Health and Blood-borne Virus Strategies 2015-2018
- Tasmanian Sexual and Reproductive Health Strategic Framework 2013-2016

For Aboriginal and Torres Strait Islander

- Fourth National Aboriginal and Torres Strait Islander Blood Borne Virus and Sexually Transmissible Infections Strategy 2014-2017

7.1.5 Research needs

Priority life stages and populations

Research aimed at reducing adverse sexual health outcomes needs to target these at-risk populations:

- Young women aged 15-29 years
- Aboriginal and Torres Strait Islander women
- Women living in remote and very remote areas
- Sex workers
- Culturally and linguistically diverse people

Policy priorities

- Potential strategies to increase the use of LARC to reduce the rate of unintended pregnancies in Australia:¹³⁹
 - Education and information (for health providers, women, and communities)
 - Research to strengthen the evidence on the efficacy of LARC and on the (social, economic, and access) barriers to its use.
 - Policy and health system changes
- The latest National Sexually Transmissible Infections Strategy has set six priority areas for STIs, but none of them have elements specific to women:
 - Prevention
 - Testing
 - Management, Care, and Support
 - Workforce (health professionals)
 - Enabling Environment
 - Surveillance, Research, and Evaluation

7.2 Reproductive health

In addition to reproductive cancers discussed in the chronic disease section, such as breast cancer and cervical cancer, there is a range of reproductive conditions/events which affect women's health.

- Reproductive and maternal conditions accounted for 3.0% of non-fatal burden and 1.7% of total burden in women in 2011, and most of this burden was due to reproductive conditions.¹²
- Of the reproductive burden, nearly 40% was attributable to polycystic ovarian syndrome (PCOS), and 49% to genital prolapse.¹²

7.2.1 Trends in markers of reproductive health

7.2.1.1 Polycystic ovarian syndrome and adenomyosis

Polycystic ovarian syndrome (PCOS) is one of the most common endocrine conditions in women of reproductive age and a common cause of female infertility. Women diagnosed with PCOS present with diverse abnormalities, including cardio-metabolic (e.g. insulin resistance, obesity, inflammation, metabolic syndrome, type 2 diabetes, adverse cardiovascular risk profiles), reproductive (e.g.

irregular menstrual cycles, hirsutism, infertility, pregnancy complications) and psychological (e.g. depression, anxiety, negative body image, psychosexual dysfunction) abnormalities.^{143,144}

There are substantial gaps and considerable variations in the current literature regarding the prevalence of PCOS globally and in Australia.¹⁴⁵ This uncertainty in prevalence estimates exists due to the different diagnostic criteria used (including the National Institutes of Health (NIH) criteria, the more recent Rotterdam criteria, and the Androgen Excess Society (AES) recommendations) and significant clinical heterogeneity across the phenotypes.^{144,145}

- Globally, 8-13% of reproductive-age women are affected by PCOS, with up to 70% of affected women remaining undiagnosed.¹⁴⁴
- In Australia, the prevalence of PCOS was around 12-18% under the Rotterdam criteria,¹⁴⁶ while the Australian Longitudinal Study on Women's Health (ALSWH) reported that the prevalence of self-reported PCOS was 8.3%.¹⁴⁷
- To date, there is limited evidence on how the prevalence of PCOS has changed over the last decade in Australia.
- Data from ALSWH showed that infertility was 15-fold higher (OR 14.9, 95% CI 10.9-20.3) in women with PCOS, independent of BMI.¹⁴⁸

7.2.1.2 Endometriosis and associated pelvic pain

Endometriosis is also a common gynaecological condition affecting women of reproductive age. The most common symptom of endometriosis is chronic (long-term) pelvic pain, especially just before and during the menstrual period, which severely affects women's quality of life.

- In Australia, around 1 in 10 girls experience pelvic pain, and 1 in 10 women have endometriosis.¹⁴⁹
- About a third of women with endometriosis have fertility problems.¹⁴⁹
- Endometriosis is often associated with co-morbidities and progression to chronic pelvic pain, and on average it takes 7-12 years to diagnose.¹⁴⁹
- To date, there is no evidence available on how the prevalence of endometriosis has changed over the past decade.
- The causes of endometriosis are unclear. Some genetic, biological and environmental factors may affect the condition, such as a family history of endometriosis and low body weight.

7.2.1.3 Menarche and menopause

The timing of women's reproductive events, such as menarche and menopause, is not only an indicator that reflects current health status, but also a factor linked to the risk of adverse health outcomes in later life, including breast cancer, osteoporosis, type 2 diabetes, cardiovascular disease and mortality.^{54,150-153}

- **Early menarche** – is often defined when menarche occurs before age 12 (<12 years).¹⁵⁴
- **Early menopause** – is defined when the final menstrual period occurs before age 45 (40-44 years).¹⁵⁵
- **Premature menopause** – is defined when the final menstrual period occurs before age 40 (<40 years). If this occurs spontaneously, it is called premature ovarian insufficiency (POI).¹⁵⁵
- **Surgical menopause** – is defined when both ovaries are removed (hysterectomy and bilateral oophorectomy) before the normal menopause.¹⁵⁵

- Data from the Australian Longitudinal Study on Women's Health (ALSWH) showed that the median age at menarche was 13 years (IQR: 12-14 years), and the median age at natural menopause was 51 years (IQR: 49-54 years).¹⁵⁶
- An international collaboration of women's studies (InterLACE) which pooled data from over 50,000 women from nine studies reported that 14.1% of the women experienced early menarche, 2.0% had premature menopause, and 7.6% had early menopause.¹⁵⁶
- Early menarche was associated with increased risk of premature menopause and early menopause.¹⁵⁶
- Women having early menarche and no children had over five times increased the risk of premature menopause and two times higher risk of early menopause, compared with women who had menarche at 12 or later and two or more children.¹⁵⁶
- Vasomotor menopausal symptoms (hot flushes and night sweats) and other menopausal symptoms (including anxiety, depression and panic attacks) during the menopausal transition are associated with an increased risk of cardiovascular disease.¹⁵⁷

7.2.1.4 Hysterectomy

Hysterectomy is a common gynaecological procedure performed worldwide. While around 1 in 3 Australian women have had a hysterectomy, the rate has declined over time.¹⁵⁸

- Data from the National Hospital and Morbidity Database showed that hysterectomy rates in Australian women aged 25 years or over declined from 2000 to 2009, then stabilised from 2009 to 2014, but the rate was still high at an average rate of 47 hysterectomies per 10,000 women.¹⁵⁹ A similar pattern of change in trend was observed in all age groups.
- Between 2008-09 and 2013-14, on average 38% of hysterectomies were with removal of adnexa (hysterectomy with salpingectomy and/or oophorectomy (unilateral or bilateral)).¹⁵⁹ This percentage increased to 51% in 2013-14.
- Data from ALSWH found that by the age of 60, 20% of Australian women had a hysterectomy with ovarian conservation (hysterectomy only) and 9% had a hysterectomy and bilateral oophorectomy.¹⁶⁰
- Hysterectomy has been found to be associated with many chronic conditions in later life including depressive symptoms¹⁶¹, vasomotor symptoms (hot flushes and night sweats)¹⁶², and type 2 diabetes.¹⁶³

7.2.1.5 Genital prolapse

Genital prolapse (or pelvic organ prolapse) is the descent of one or more of the pelvic structures (including uterus, vagina, and bladder) from the normal location toward or through the vaginal opening.¹⁶⁴

- The prevalence of pelvic organ prolapse is difficult to assess with the estimates ranging from 3-8% from a review study.¹⁶⁵
- Genital prolapse affects women at all ages, although it is more common in older women.¹⁶⁴
- The biggest cause of prolapse is pregnancy and birth, particularly previous prolonged labour, instrumental delivery, episiotomy, and increasing parity.¹⁶⁴ Hysterectomy and previous prolapse surgery may also contribute.

7.2.2 Markers of reproductive health across the life course

PCOS:

- Burden from PCOS is most evident during the reproductive years. In 2011, PCOS was among the top ten conditions contributing to non-fatal burden among young women aged 15-44 years, accounting for 5.0% of total YLD (years lived with disability) for those aged 15-24 years and 3.1% for the 25-44 years age group.¹²

Endometriosis:

- Burden from endometriosis mostly affects women between the ages of 20 and 49 years.¹²

Hysterectomy:

- Across all age groups, the highest rate of hysterectomy was seen in women aged 45-54 years (an average rate of 36.1%), and this percentage remained relatively constant over time (ranged 35.2% to 37.2%).¹⁵⁹
- In contrast, the rate of hysterectomy declined in women aged 35-44 years from 32.1% in 2000-01 to 26.7% in 2013-14; and increased in women aged 55-64 years from 11.8% to 16.9%.

Genital prolapse:

- Burden from genital prolapse was highest from the age of 40 onwards. Genital prolapse was the tenth most important condition contributing to non-fatal burden among women aged 45-64 years, accounting for 2.2% of total YLD in 2011.¹²

7.2.3 Marginalised and disadvantaged populations

- Prevalence of PCOS varies by ethnic groups and at-risk populations, such as Indigenous women. One study of 248 Indigenous women aged 15-44 years showed the prevalence of PCOS was 15.3% (using the NIH criteria).¹⁶⁶ The rate was similar across age groups but was significantly higher in obese women (30.5%) compared with overweight (8.2%) and normal weight (7.0%) women.
- A recent systematic review of menopausal experience in Aboriginal women suggests that the average age of menopause onset appears earlier in most Aboriginal groups.¹⁶⁷ However, the two Australian Indigenous studies included in that review did not report the age of menopause.
- Compared with non-Indigenous women, Indigenous women had a higher rate of hysterectomy to treat gynaecological cancers, particularly in rural areas, but had lower rates of hysterectomy to treat menstrual disorders, genital prolapse, and endometriosis.¹⁶⁸

7.2.4 Strategies, policies and actions

Since the 2010 Women's Health Policy, the Australian Government has provided funding to develop an international evidence-based guideline for PCOS and a national action plan for endometriosis.

- The first International evidence-based guidelines on PCOS have been released in 2018.¹⁴⁴ The new guidelines suggest general practitioners use the Rotterdam 2003 criteria for the diagnosis of PCOS, while ultrasound is not recommended for diagnosis of PCOS in adolescents. The guidelines also covers a range of aspects in the management of PCOS,

including excess weight, use of combined oral contraceptive pills for treatment of clinical hyperandrogenism and irregular menstrual cycles, pre-pregnancy assessment, ovulation induction, and treatment of infertility.

- The Department of Health have just released Australia's first National Action Plan for Endometriosis (2018) to improve the quality of life of patients through better diagnosis, treatment, and aiming to ultimately find a cure.¹⁴⁹ The Government has announced a \$2.5 million program grant under the Medical Research Future Fund to support research in endometriosis.

7.2.5 Research needs

Priority life stages and populations

Research aimed at reducing adverse reproductive health outcomes needs to target these at-risk populations:

- Women of reproductive age
- Women who are overweight or obese
- Aboriginal and Torres Strait Islander women

Data gap

- There are limited data on national estimates of the prevalence of PCOS and endometriosis, especially changes over time.

7.3 Family and domestic violence

Family, domestic and sexual violence occur across all ages and all socioeconomic and demographic groups, but predominantly affect women. The most common and pervasive instances of family violence occur in intimate partner relationships (current or previous), which are usually referred to as domestic violence or intimate partner violence (IPV). Women who experience IPV are more likely to report poorer mental health, physical function, and general health, as well as higher levels of bodily pain.¹⁶⁹ Women who have experienced abuse or witnessed domestic violence as a child are more likely to experience family and domestic violence in adulthood.¹⁷⁰ Some groups of women are also more vulnerable to family, domestic and sexual violence, particularly young women, pregnant women, Aboriginal and Torres Strait Islander women, women with disabilities, and women experiencing financial hardships and lack of social supports.¹⁷⁰

7.3.1 Trends in family and domestic violence

- In 2016, about 1 in 6 (16% or 1.5 million) Australian women had experienced abuse before the age of 15.¹⁷¹
- About 1 in 6 (17% or 1.6 million) women had experienced physical/sexual violence by a current or previous partner since age 15, and almost 1 in 4 (23% or 2.2 million) women had experienced emotional abuse by a current or previous partner.¹⁷¹
- Of these women, more than half (54%) experienced more than one incident of violence.¹⁷¹
- The prevalence of total violence (including physical, sexual and domestic violence) in the last 12 months has declined over the last decade in both men and women, mostly driven by a drop in physical violence, which decreased from 4.6% in 2012 to 3.5% in 2016 in women.¹⁷¹

- The 12-month rates of sexual violence (1.6% in 2005 compared to 1.8% in 2016) and domestic violence (1.5% in 2005 compared to 1.7% in 2016) have not similarly declined, but remained relatively steady over the last decade.¹⁷¹
- Data from the burden of disease report also showed little change in age-standardised rates of burden due to IPV between 2003 and 2011, with a small increase from 4.4 to 4.9 DALY per 1,000 women. This was mainly a result of little change in the burden of the diseases linked to IPV, particularly anxiety and depressive disorders.
- Regarding the national estimates of total burden, it was estimated that 1.4% of the disease burden experienced by women in 2011 was attributable to physical/sexual IPV by a cohabiting partner.¹⁷²
- Mental health conditions (mainly anxiety and depressive disorders) made up the greatest proportion of this attributable burden (67%), followed by suicide and self-inflicted injuries (19%); over one-quarter (27%) of this burden was fatal.¹⁷²
- Physical and sexual IPV accounted for almost half (45%) of the total burden due to homicide and violence in women in 2011.¹⁷²

7.3.2 Family and domestic violence across the life course

- Young women are at greater risk of experiencing violence, particularly women inexperienced in relationships or in a relationship where there is a substantial age gap between partners.¹⁷⁰
- The rate of domestic violence is higher in pregnant women, especially in the period after birth.¹⁷⁰
- Total burden due to physical/sexual cohabiting IPV was highest among women aged 40-44 years.¹⁷²

7.3.3 Marginalised and disadvantaged populations

- The age-standardised rate of disease burden due to IPV was five times higher among Indigenous women than non-Indigenous women.¹⁷² A higher proportion of this burden was fatal for Indigenous compared with non-Indigenous women (34% compared with 24%).
- Family and domestic violence is a leading cause of homelessness, with 72,000 women sought homelessness services due to family violence in 2016-17.¹⁷⁰

7.3.4 Access to services

- Screening for domestic violence during pregnancy is currently implemented in most states and territories, but it is done in different ways (different screening programs and tools), and the information is not necessarily recorded in the health service systems.¹⁷⁰
- Women experiencing IPV may be less likely to participate in health care services such as cervical screening.¹⁷⁰

7.3.5 Strategies, policies and actions

VIOLENCE PREVENTION

Australian Government

- Family and Domestic Violence strategy 2016-2019.
- Defence Family and Domestic Violence Strategy 2017-2022.
- National Plan to Reduce Violence against Women and their Children 2010-2022.
- Council of Australian Governments (COAG) Advisory Panel on Violence against Women established in 2015.

State/Territory Governments

- ACT Prevention of Violence against Women and Children Strategy 2011-2017.
- Northern Territory Domestic, Family and Sexual Violence Reduction Framework 2018-2028.
- Queensland Domestic and Family Violence Prevention Strategy 2016-2026.
- NSW Domestic Violence Justice Strategy 2013-2017.
- Victoria's Strategy to Prevent Family Violence and All Forms of Violence Against Women First Action Plan 2018-2021.
- Next Phase of South Australia's Women's Safety Strategy 2011-2022.
- Western Australia's Family and Domestic Violence Prevention Strategy to 2022.
- Tasmania's Primary Prevention Strategy to Reduce Violence Against Women and Children 2012-2022.

7.3.6 Research needs

Data gap

- There are data gaps for information regarding victims, perpetrators and at-risk groups.^{170,173} Specifically, there are no or limited data on:
 - Marginalised (at-risk) populations, particularly Indigenous Australians, people with disability, LGBTI people (including those in same-sex relationships), migrants and refugees, and homeless people.
 - Pregnant women, who are not usually identified in national surveys except in the Personal Safety Survey.
 - Services and responses that victims and perpetrators receive, including specialist/mainstream services and police and justice responses.
 - Longitudinal data on pathways, impacts and health outcomes for victims and perpetrators.

Policy priority

- A consistent and comprehensive screening program to collect and report data on domestic violence in both public and private sectors, especially in the antenatal period, is suggested. This information would provide more robust data and allow for better targeting of support and prevention strategies.
- The main priorities to improve the evidence base for family, domestic and sexual violence include:

- Improving the quality and comparability of existing data.
- Maximising existing sources.
- Enhancing/adding to the datasets or by linking with other data sources to deal with priority gap areas.

8 Healthy ageing and disability

Key messages

What is working well?

- Women (and men) are living longer, leading to the ageing of the population.
- More women in all age groups from 65 years and above are experiencing 'excellent' or 'very good' health, and less disability, than in previous decades.

What needs particular attention?

- Life expectancy of Indigenous women is about 10 years less than non-Indigenous women.
- With increasing age, women are likely to experience multiple chronic conditions simultaneously. The health system, as a whole, is not particularly well organised to cope with the increasing complexity of older women's health.
- Women are at increasing risk of dementia as they get older. In the absence of any cure, or widely effective treatment of symptoms, the emphasis needs to be on prevention and taking care of women with dementia and people who care for them.
- Better access to dental services is needed for women without private health insurance that includes dental cover, and for those with low income or living in inner regional and remote areas.
- Prevention strategies are needed to reduce the risk of falls and fractures, including those that occur in residential aged care facilities.
- Research is needed on the implications of the high prevalence of multimorbidities among older people, with an estimated 82% of women aged 65+ in 2015 having more than one long-term condition; multimorbidity requires a more integrated approach to treatment and management of conditions across the health system.

8.1 Healthy ageing and disability

- Data from the 2014-15 National Health Survey show that women were more likely than men to report their health as being excellent or very good in all older age groups.¹⁷⁴
- Among women aged 65-74, 47% rated their health as excellent or very good. This percentage reduced to 37% in those aged 75-84 and 34% in women aged 85+ years. The comparable figures from the 2011-12 National Health Survey were 44%, 33% and 32% for women aged 65-74, 75-84 and 85+ respectively.
- The 2015 ABS Survey of Disability, Ageing and Carers showed that 52% of women (and 50% of men) aged 65 and over had some form of disability, down from 56% (and 55%) in 2003.² For those aged 85+, 80% of women experienced disability, down from 84% in 2003.
- Among women aged 65+, 22% experienced severe disability (down from 27% in 2003), and 56% of those aged 85+ experienced this level of disability (down from 65% in 2003).
- Long-term health conditions such as musculoskeletal conditions (34%) and cardiovascular disease (15%) are common among women aged over 65, and the prevalence of some, such as dementia, increases rapidly with increasing age.¹⁷⁵ Consequently, multimorbidity (the co-occurrence of multiple conditions) is common, with 82% of women aged 65+ in 2015 having more than one long-term condition.

- As shown in Figure 3-2 for women over 65, hearing loss, vision loss and tooth loss become important components of non-fatal burden of disease.
- Figure 3-3 shows that for women aged 85 and over falls are a major cause on fatal burden of disease (mainly due to hip fracture).
- An ageing population means that more women are living with these conditions.

8.1.1 Trends in life expectancy

- Life expectancy in Australia has been increasing, especially for women.¹⁷⁶
- Life expectancy at birth is higher for women than men.
- In 2014-2016, life expectancy at birth was 84.6 years for females and 80.4 years for males.
- For women, life expectancy in Australia is sixth highest in the world.
- In the past 10 years, life expectancy has increased by 1.1 years for women and 1.7 years for men.
- For women aged 35 in 2014-15, the remaining life expectancy was 50.3 years (compared to 46.6 for men).
- For women aged 65 in 2014-15, the remaining life expectancy was 22.3 years (compared to 19.6 for men).

As a consequence of increasing life expectancy, there will be increasing numbers of older people, especially women, in the population.

8.1.2 Marginalised and disadvantaged population

- Life expectancy at birth for Indigenous people is about 10 years less than for non-Indigenous people.¹⁷⁷ For example, an Indigenous girl born in 2010–12 had a life expectancy of 73.7 years, 9.5 years less than for a non-Indigenous girl.
- Older Indigenous people have poorer health and higher rates of disability than other older Australians. In the 2011 Census, older Aboriginal and Torres Strait Islander people were almost 3 times as likely as older non-Indigenous people to need help with self-care, mobility or communication tasks.
- Ageing-related conditions often affect Indigenous people at a younger age than non-Indigenous Australians. Hence, planning for aged care services takes account of the Indigenous population aged 50 and over, and 65 and over for non-Indigenous Australians
- People born overseas in non-English speaking countries form an increasing proportion of the older population. This is a diverse group who face additional problems in accessing services.
- There are very little data for the older Australian LGBTI community.¹⁷⁸ According to the Census in 2011, only 3% of people in same-sex couples were aged 65 or over, compared with 17% of people in opposite-sex couples. However, there are barriers to their access to aged care services.

8.1.3 Strategies, policies and actions

Current policies emphasise keeping older people in their own homes rather than in aged-care facilities. For example, in the 2018-19 Budget the “More Choice for a Longer Life Package” was announced with the aim “to support Australians to be better prepared - to live a healthy, independent, connected and safe life”.

8.1.4 Research needs

- National surveys and statistical reports should include sufficient older people to enable reliable findings to be reported by sex and 5-years up to at least ages 85-89 and 90+.
- Research is needed into the health status, and access and use of health services, by women (and men) in marginalised groups such as those from non-English speaking background and LGBTI communities.

8.2 Multimorbidity

8.2.1 Multimorbidity across the life course

- Older people often have multiple chronic conditions (multimorbidity).¹⁷⁹
- Multimorbidity can lead to patients seeing multiple doctors, including specialists, and prescriptions for multiple medications (polypharmacy).
- In Australia, there is little data on multimorbidity. However, Figure 8-1 below, from a study in Scotland¹⁸⁰, illustrates a plausible scenario here too. With increasing age, people accumulate more disease/disorders/conditions. As the authors of that paper say “Our findings challenge the single-disease framework by which most health care, medical research, and medical education is configured.” While general practitioners and geriatricians are familiar with multimorbidity in older people, there are calls that “healthcare professionals’ training needs to focus far more on coordinated, planned care of individuals. It should be based on patients’ overall goals and priorities and on balancing the risks and benefits of treatments, rather than simply on managing single diseases or organ systems”.¹⁸¹

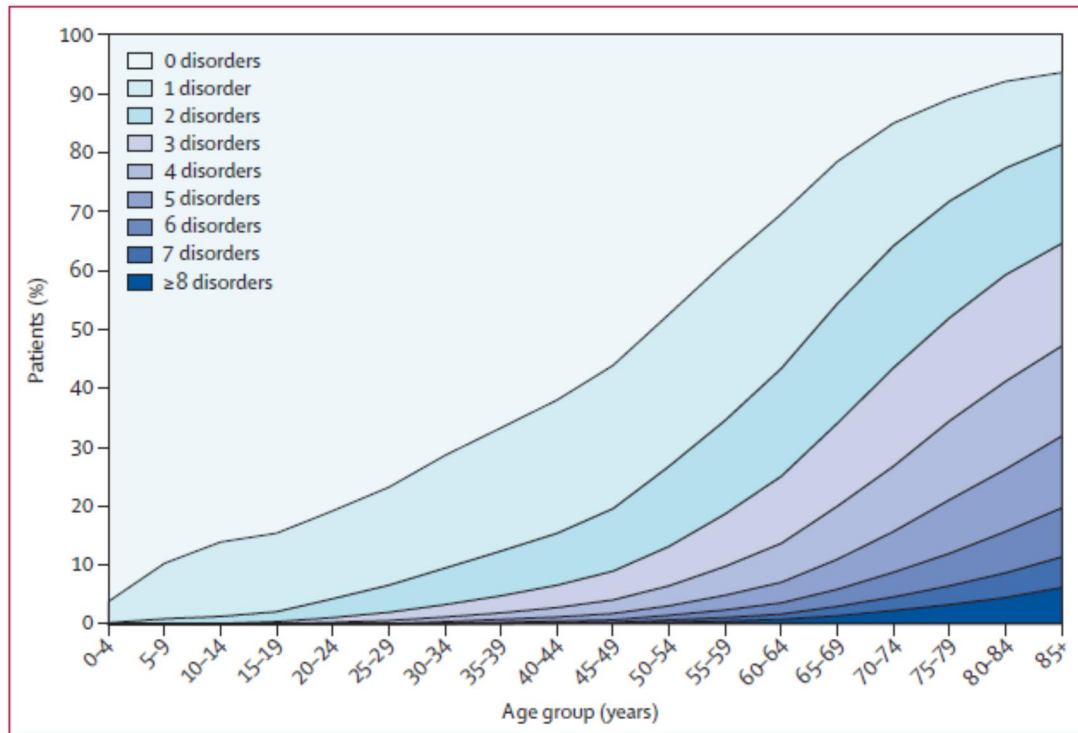


Figure 8-1: Number of chronic conditions by age group¹⁸⁰

8.2.2 Marginalised and disadvantaged populations

Little is known about the prevalence of multimorbidity among marginalised and disadvantaged populations.

8.2.3 Strategies, policies and actions

- There is increasing recognition by Australian governments that people with chronic and complex health conditions receive care from different health professionals working in different locations, and there can be lack of coordination and communication between the different parts of the system. This system can be difficult for patients to navigate, puts patient safety at risk and increases costs to individuals and the health system.
- The “Health Care Home”¹⁸² model of care is now being trialled to address these issues by “emphasising team-based, coordinated care and putting systems in place — like the shared care plan — to facilitate communication between all the health professionals who look after a person.”
- General practices and Aboriginal Community Controlled Health Services are now trialling the plan.

8.2.4 Research needs

- Research is often focussed on understanding the biology and improving treatments for single conditions in people without additional complex health problems. However, high

proportions of health issues and health costs occur among older people with multiple chronic conditions.

- Multimorbidity among older Australians needs detailed exploration: how it increases with age, sex differences, geographic and socio-economic differences, as well as which combinations of conditions are most likely to be clustered at different life stages.
- In particular, more evidence is needed on multimorbidity among vulnerable population groups.

8.3 Dementia

Dementia refers to groups of conditions, including Alzheimer's disease, that impair brain function, especially memory and executive function. It is predominantly a condition of the elderly and greatly impacts on the life of the person with dementia and those who care for them.

8.3.1 Trends in dementia

- In 2018, an estimated 376,000 people in Australia had dementia, 61% of them women.¹⁶
- For women, in 2016, dementia replaced heart disease as the leading underlying cause of death.¹⁹ However, this statistic needs to be considered in the light of ubiquity of multimorbidity in the elderly and consequential uncertainty in completion of death certificates.
- At present, there is no known cure for dementia, though there are some medicines that may be used to treat symptoms.
- Preventive measures are recommended across the life course.¹⁸³ These range from more years of education, adequate physical activity, control of smoking and overweight and obesity, effective treatment of hypertension, management of diabetes, depression and hearing loss, and maintaining social engagement.
- Care of women (and men) with dementia, and the people who care for them, is likely to require increasing resources across the spectrum of medical and social supports.

8.3.2 Dementia across the life course

- Prevalence of dementia increases rapidly with increasing age, especially after about 85 years. Therefore, the number of people living with dementia is strongly influenced by increasing life expectancy. Women's longer life expectancy accounts for much of their excess risk of dementia.

8.3.3 Marginalised and disadvantaged populations

- Dementia prevalence is estimated to be 2–5 times higher among Aboriginal and Torres Strait Islander people than among non-Indigenous people.¹⁸⁴
- Little is known about the prevalence of dementia in other marginalised and disadvantaged groups.

8.3.4 Strategies, policies and actions

- The National Framework for Action on Dementia 2015-2019 includes seven priority areas for action:¹⁸⁵
 - Increasing awareness and reducing risk
 - The need for timely diagnosis
 - Accessing care and support post diagnosis
 - Accessing ongoing care and support
 - Accessing care and support during and after hospital care
 - Accessing end of life and palliative care
 - Promoting and supporting research

8.3.5 Research needs

- The 'Boosting Dementia Research Initiative'¹⁸⁶ is increasing Australia's research on dementia in clinical and aged-care settings and among Indigenous people.
- Nevertheless, there is a lack of Australian data on dementia prevalence, and how it is treated and managed at the whole-of-population level.

8.4 Hearing and vision loss

- Loss of hearing and vision lead to communication problems, reductions in quality of life, and social isolation.¹⁸⁷
- Sensory impairments increase the risk of falls.¹⁸⁸
- Hearing loss is believed to be a risk factor for dementia.¹⁸³

8.4.1 Trends in hearing and vision loss

- Data on specific disabilities such as hearing and vision loss are collected in national surveys conducted by the Australian Bureau of Statistics but are not published in sufficient demographic detail needed for this report.
- However, data from participants in the Australian Longitudinal Study on Women's Health who were born in 1921-26 provide estimates for this cohort as they aged.¹⁸⁹
- Even when wearing a hearing aid, 15% of the women reported difficulties hearing a conversation when they were aged 73-78. By the time they were aged 85 to 90, this had doubled to 30%, but this percentage has remained stable since then.
- The percentage of women who reported that they had difficulty seeing newspaper print, even with glasses, increased from 15% at the age 73-78 to 28% by 86-91 years.

8.4.2 Marginalised and disadvantaged populations

Except for hearing among Indigenous children in the Northern Territory, there is little data available on sensory loss among marginalised and disadvantaged people in Australia.

8.4.3 Strategies, policies and actions

Support and advocacy for people with hearing and vision disabilities are provided by non-government organisations such as Australian Hearing and Vision Australia.

8.4.4 Research needs

Little is known about hearing and vision loss in Australia at present, including the effects on people's lives, especially among older people and those in marginalised and disadvantaged groups.

8.5 Oral health

Poor oral health affects quality of life and nutrition.¹⁹⁰

8.5.1 Trends in oral health

According to the National Dental Telephone Interview Survey in 2013, approximately 21% of women (and 17% of men) aged 65+ had no natural teeth, and of those with natural teeth, 42% wore dentures.

Based on similar telephone surveys conducted regularly since 1994 there have been few changes in oral health among adults over time. However, more people are reporting that costs have stopped them from making regular dental visits or receiving treatment.

8.5.2 Marginalised and disadvantaged populations

- As there is no universal insurance for dental care, use of dental services is strongly dependent on levels of income and private health insurance which includes dental cover.
- Public dental care, provided by states and territories, is available to pensioners and various concession card holders but there can be long waiting periods.¹⁹¹
- For these reasons oral health is much poorer for:¹⁹⁰
 - People who do not have private health insurance with dental cover,
 - People who are eligible for public dental care,
 - Low income,
 - Live in inner regional and remote areas.

8.5.3 Strategies, policies and actions

In 2015 “Healthy Mouths, Healthy Lives: Australia’s National Oral Health Plan 2015–2024” was approved by the COAG Health Council. It acknowledges the evidence of poor oral health among many Australians. The plan supports action in six Foundation Areas:

- Oral health promotion, including support for fluoridation;
- Access;
- Systems alignment and integration, recognising the complexity of dental services in Australia;
- Safety and quality of oral health services;

- Workforce planning, acknowledging mal-distribution of service providers;
- Research and evaluation.

8.5.4 Research needs

There has been no national survey of adult oral health that included a dental examination since 2004-6. The need for regular collection of population-level oral health data and evaluation of services is acknowledged in the National Oral Health Plan 2015–2024.

8.6 Frailty, falls and fractures

Frailty increases with age.¹⁹² The condition increases vulnerability, including risk of falls. Falls are a major cause of injury, hospitalisation and death.¹⁹³ Older women are particularly at risk of falls due to frailty.¹⁹⁴

8.6.1 Trends in frailty, falls and fractures

- The age-standardised rates of hospitalised fall injury cases for women aged 65 and older increased over the period from 2002–03 to 2012–13 by 2.6% per year.¹⁹⁵
- Most of these hospitalisations were for fractures, especially hip fractures.
- Rates of hip fracture are higher in women aged 65+ than in men.
- Rates of hip fracture among increase sharply with age from 126 per 100,000 at age 65-69 to 3,706 per 100,000 at age 95+.
- The age-standardised rate of falls by women living in residential aged care (9,566 per 100,000 population) was much higher than that for women living in the community (1,982 per 100,000)

8.6.2 Marginalised and disadvantaged populations

There is little reliable data on falls and fractures among women in marginalised and disadvantaged groups.

8.6.3 Strategies, policies and actions

There are several national policies for falls prevention, especially among the elderly:

- National Injury Prevention and Safety Promotion Plan: 2004–2014,¹⁹⁶
- National Aboriginal and Torres Strait Islander Safety Promotion Strategy,
- National Falls Prevention for Older People Plan: 2004 Onwards.

Strategies for falls prevention are promoted by the Australian Commission on Safety and Quality in Health Care and health agencies in the states and territories.

8.6.4 Research needs

While frailty, falls and fractures are fields of considerable research and monitoring, the needs of marginalised and disadvantaged populations are areas of research need.

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