# Your health

## Report of the Chief Health Officer Victoria, 2016

## Part 1: Health inequalities – a snapshot of Victoria

VICTORIA State Government | Health and Human Services

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# A message from the Chief Health Officer

This is the sixth biennial report published by the Chief Health Officer of Victoria, and the first since I commenced in this role last year. These reports provide an overview of the health and wellbeing of Victorians and are developed to meet the requirements of the *Public Health and Wellbeing Act 2008*.

This document, however, is more than merely an exercise in meeting that requirement. It has been written to provide a wide-ranging view of the health of all Victorians, with a particular focus on the inequalities that many people face and the impact these inequalities have on their health. As Victorians, we all deserve to have the same opportunity to live a healthy and satisfying life. The 2016 Chief Health Officer report recognises this, and the first part of the report has a particular focus on health inequalities.

Overall, the health of Victorians is generally good. This is seen in high rates of self-reported good health, increasing life expectancy, decreasing rates of risk factors such as smoking and excellent access to key disease prevention activities such as immunisation.

There are, however, areas in which we can still improve and gaps in health outcomes that can be bridged. The health of Aboriginal Victorians is still below that of non-Aboriginal Victorians; those who are more disadvantaged in terms of income and education are still displaying poorer health outcomes; and there have been increases in some non-communicable and communicable diseases.

This report recognises some of the challenges we face as we strive to keep improving the health of all Victorians and to protect Victoria from the hazards that we may face in the future. It also considers where there may be opportunities to tackle some of these challenges and reflects on some of the work the Victorian Government has initiated in this endeavour.

The 2016 Chief Health Officer report has been prepared with support and guidance from colleagues across the Department of Health and Human Services. I would like to take this opportunity to particularly thank the Health Intelligence Unit, the Health Protection Branch and the Prevention, Population Health and Place Branch. I would also like to thank the support of a number of external stakeholders and everyone else who has contributed to preparing this report.

Charles Guest
Chief Health Officer

# Contents

# Part 1: Health inequalities – a snapshot of Victoria

## Health and wellbeing in Victoria

*Victoria's health: The Chief Health Officer's report 2016* captures a broad range of information about the health and wellbeing status of all Victorians. It identifies health inequalities between population groups and across the state. With this knowledge, challenges and opportunities to improve health and wellbeing are proposed.

The health and wellbeing of Victorians is good by national and international standards. Despite the overall positive state of health, there are serious challenges ahead to maintain and improve this good health.

To improve the health and wellbeing of all Victorians, inequalities in health must be reduced. Much of these inequalities are preventable. If a subgroup of the population can achieve a high standard of health, why not the whole population? Good health is unequally shared across geographic areas, between high and low income groups, age groups, males and females, Aboriginal Victorians, cultural groups, lesbian, gay, bisexual, trans and intersex (LGBTI) peoples and others.

Socioeconomic disadvantage has the greatest impact on health inequality in Victoria. Disadvantaged adults, adolescents and children have poorer health and wellbeing than advantaged people for most health and wellbeing indicators. Self-reported health is a fundamental measure of broad health and wellbeing. If all Victorians had the rate of self-reported health of those with an annual household income of at least $125,000, then the health of about 550,000 adults would be improved – about one in nine adults.

Generally, the greatest relative difference in health and wellbeing is between Aboriginal Victorians and non-Aboriginal Victorians. For many indicators, adults and adolescents who speak a language other than English at home have poorer health and wellbeing than for other Victorians.

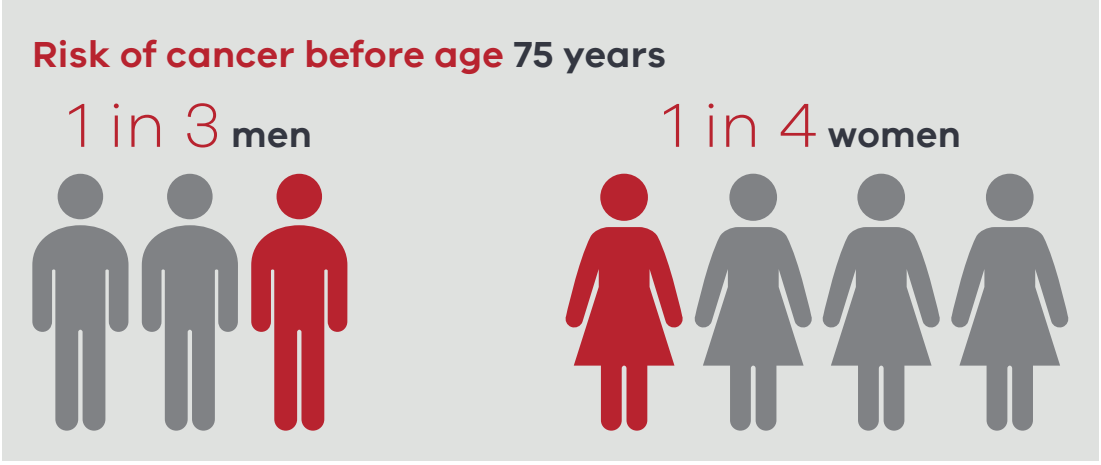
The need to prevent disease and to keep people healthy and out of hospital has become increasingly important in maintaining the good health and wellbeing enjoyed by many Victorians. This is compounded by the ageing and growth of our population. While some gains have been made – notably in smoking rates – chronic disease risk factors such as harmful use of alcohol, overweight and obesity, poor diets and physical inactivity are all contributing significantly to the burden of disease in Victoria. This is particularly true in some population groups at increased risk of disease or that have not enjoyed the benefits of health gains equitably.

## We are a healthy state

- Living longer – life expectancy continues to increase, especially for males: further gains can be made as females can expect to live 3.6 years longer than males.
- Self-reported heath and satisfaction with life – 40 per cent of adults rate their health as excellent or very good (with another 39 per cent rating it as good), as do 60 per cent of adolescents and 88 per cent of parents for children: 92 per cent of adults are satisfied with the quality of their lives.
- Substantial gains have been made – death rates continue to decrease and smoking rates have decreased by 40 per cent since 2003.
- Oral health – 45 per cent of adults rate their dental health as excellent or very good and another 30 per cent rate it as good.
- Social capital – 80 per cent of adults can get help when needed from family and friends: about half definitely feel valued by society and another third sometimes feel valued, while one in nine adults do not feel valued by society: two in three adolescents have a trusted adult in their lives.

## But not in every way

- Disability – one in six Victorians report living with a disability, rising to one in three for 65–69 year olds and one in two for 75–79 year olds.
- Obesity – while the rate of increase appears to have steadied, 31 per cent of children and 63 per cent of adults are still overweight or obese: there are about 1.3 million obese Victorians, including 83,000 children, with another 1.9 million adults and children overweight.
- Chronic disease – cardiovascular disease and cancers of the lung and colorectum are major causes of death; at least one in three males and one in four females will develop cancer before the age of 75 years; 6.1 per cent of adults report doctor-diagnosed diabetes, a rise of 50 per cent since 2003; one in five adults are living with arthritis; and one in 20 have osteoporosis.
- Oral health – about one in four adults 65 years of age or older have no natural teeth, nor do one in 20 of all adults: dental conditions (mostly tooth decay) are the highest cause of potentially preventable hospitalisations for children under 10 years of age.
- Distress and resilience – one in four adults have ever been diagnosed by a doctor with depression or anxiety, one in eight have high psychological distress, and one in four adolescents report low levels of resilience.
- Injury and suicide – 3,808 people aged 75 years or older were admitted to hospital with injury-related hip fractures in a year: there were 654 suicide deaths in 2015, about three-quarters of whom were male.
- Communicable disease – incidence of meningococcal disease (serotype W) and Buruli ulcer are increasing as are some sexually transmissible infections such as syphilis.



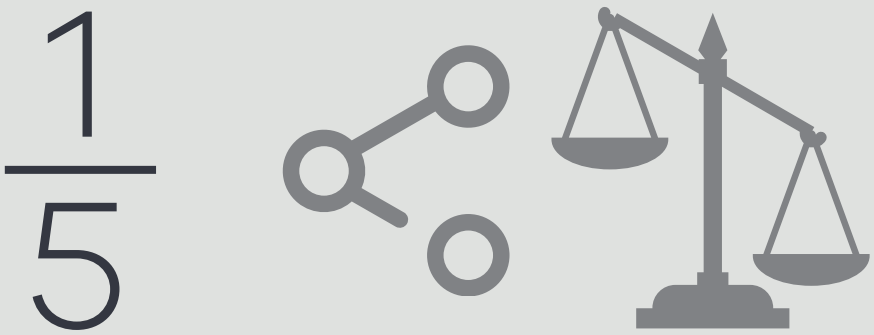
## Good health and wellbeing is not shared by all

- Socioeconomic disadvantage is the cause of the greatest impact on health inequality – its effects are felt by the largest number of people in the state, and it causes 21 per cent of the total burden of disease.
- Aboriginal Victorians generally have the largest extent of inequality – smoking rates are 2.6 times higher than in non-Aboriginal Victorians and high psychological distress is twice as high.
- Culturally and linguistically diverse adults have lower self-reported health, more psychological distress, and generally lower social capital, but lower alcohol consumption.
- Geography – death rates vary about 60 per cent across local government areas, self-reported health by 2.4-fold and a sixfold range in the rate of smoking: rural areas generally have poorer rates than metropolitan areas.
- Social capital – adults with chronic disease, high psychological distress, who are obese or who are smokers generally have lower social capital than others.

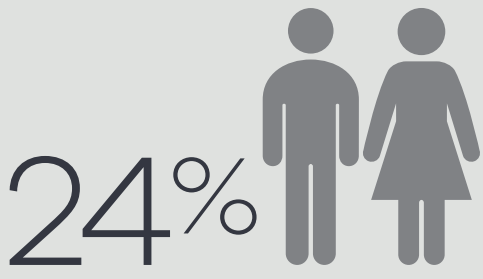
## Many Victorians protect their health

- Immunisation – while Victoria has some of the highest childhood vaccination rates in Australia, they remain below the 95 per cent rate needed to protect everyone: newly acquired hepatitis B notifications have decreased, partly as a result of the universal vaccination program.
- Screening – in the target age groups, about 60 per cent of women have routine cervical cancer screens, 50 per cent of women participate in BreastScreen Victoria and 40 per cent of men and women have bowel cancer screens.
- Biomedical checks – in the last two years about 80 per cent of adults have had their blood pressure checked, 60 per cent their blood cholesterol checked and 50 per cent their blood glucose checked, all having increased since 2005.

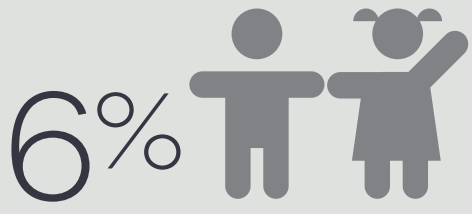
### Burden of disease due to socioeconomic disadvantage




### Percentage of obese adults 2014–15 (measured)




### Percentage of obese children 2014–15 (measured)



## There are risks ahead

- Some children are not starting life well – one in 12 babies are born of low birthweight, one in 12 mothers smoke during the first 20 weeks of pregnancy, half of two year olds were exposed to alcohol in utero and four in 10 children are not developmentally on track as they start their first year of school (on track on all five domains of the Australian Early Development Index).
- Chronic disease risks – one in three adults has high levels of total cholesterol and one in three has high levels of LDL ('bad') cholesterol.
- Smoking and alcohol consumption – about 500,000 adults smoke daily and 24,000 adolescents have smoked in the last week; three in five adults regularly consume too much alcohol and two in five consume too much on a single occasion.
- Poor diet and insufficient physical activity – one-third of total energy comes from discretionary foods and drinks (those high in energy with little nutritional value), less than one in 20 adults eats enough fruit and vegetables, one in eight drinks sugar-sweetened beverages every day; three in five adults, four in five adolescents and two in five children don't do enough physical activity.
- HIV and syphilis – there are more notifications of both HIV and syphilis, with most cases being reported among men who have sex with men.

## Challenges and opportunities

A healthy future for Victoria will be shaped by the health and wellbeing of the population. A key step to improving health for everyone is by reducing inequalities among population groups and across geographic areas within the state. We aim for all Victorians to enjoy the highest level of health and wellbeing.

Much of the poor health and chronic disease affecting Victorians is preventable. Each chapter in this report describes the health status of Victorians using several indicators and also identifies measures that Victoria is implementing to improve health and to reduce health inequalities across the state. Some measures target specific population groups or geographic areas; others are universally applied. Improving health and wellbeing is everyone's business. It will be by the collective effort of all sectors of Victoria, our communities and individuals that we will achieve better health and wellbeing for all.

**Children fully immunised at school entry**

9 in 10

**Adults ever diagnosed with depression or anxiety**

1 in 4

# Chapter 1: Introduction

Health plays an essential role in ensuring overall wellbeing through healthy communities, a productive workforce and ultimately a strong economy. A healthy Victoria is important to individuals, families and the community as a whole.

This report, *Victoria's health*, is the sixth report in the *Your health* series, covering the two-year period to December 2016. It has been prepared to meet the requirements of s. 21(c) of the *Public Health and Wellbeing Act 2008*. This report provides an overview of the health and wellbeing of Victorians, as well as the determinants of health in Victoria. It aligns to some extent with the *Public health and wellbeing outcomes framework* (Department of Health and Human Services 2016), particularly in its focus on health inequalities.

The report is split into two parts. Part 1 gives an overview of Victoria's health, drawing on the particular challenges that health inequalities pose within our community. The 2014 report was the first to include a focus chapter, and this report builds on this concept with a focus chapter reflecting key components of health inequalities and how they affect Victorians.

Part 2 uses the *National health performance framework* to address selected health indicators. The *National health performance framework* was originally developed by the National Health Performance Committee (NHPC) as a structure to guide the understanding and evaluation of the health system (NHPC 2001). The framework was reviewed by the NHPC in 2007–08, and the revised framework was agreed by the National Health Information Standards and Statistics Committee (NHISSC) and noted by health ministers in September 2009.

The domains of 'determinants of health,' 'health status' and 'health system interventions' are included in the framework and are presented in the three separate sections of Part 2 of this report.

## Determinants of health

The determinants of health affect health outcomes at the individual and population levels. This report begins by first considering upstream factors that contribute to health outcomes such as the environment and social factors before narrowing down to reflect on health behaviours and constitutional factors.

## Health status

This report details the overall wellbeing of Victorians, the prevalence of health conditions (grouped into non-communicable diseases, communicable diseases and oral health) and mortality data as indicators for health.

## Health system interventions

The final domain of the framework is reflected in a series of chapters that consider health service utilisation. Immunisation, screening and biomedical checks are all reported.

The information in this report is a valuable overview of the health issues that Victoria faces. It can provide an important reference for future policy and government investments for improving the health of the Victorian population, with many chapters

highlighting challenges and opportunities. The report provides a strong basis for a concerted public health effort to reduce health inequalities and further improve the health status of Victorians by tackling the enormous burden of preventable diseases.

### Data considerations

The data presented have been obtained from a variety of sources including published sources and administrative databases. Each data source has been cited in the report, and the technical notes at the end of each chapter describe the statistical methods used in analysis and interpretation.

Some indicators include data on the health and wellbeing of Aboriginal Victorians. In keeping with the department's report *The health and wellbeing of Aboriginal Victorians: Victorian Population Health Survey 2008 supplementary report* (Department of Health 2011), the terms 'Aboriginal' and Aboriginal Victorians' are taken to include both Aboriginal and Torres Strait Islander peoples.

In all cases the data cited is the most recent available at the time of data extraction (up to December 2016). Where the required data for the reporting period are not yet available, not considered reliable or were not collected, the most recent and reliable information available has been presented. In some instances, the information provided is for a calendar year (for example, January–December 2012) or for a financial year (for example, June 2012 – June 2013) or for a specific period (for example, 2010–11 to 2011–12, which covers two financial years, or 2010–11, which covers a two-year period). In many cases, the information provided falls outside the reporting period, and this is clearly noted in each instance.

Most of the information provided is specific to the Victorian resident population; however, there are some sections that include information relevant to other jurisdictions and/or all Australia. Once again, this is noted in each instance.

In most instances data are provided in graphical form for ease of interpretation. For Part 2 of the report, tables are referenced in the body of the text and included in a separate appendix.

## References

Department of Health 2011, *The health and wellbeing of Aboriginal Victorians: Victorian Population Health Survey 2008 supplementary report*, Government of Victoria, Melbourne.

Department of Health and Human Services 2016, *Victorian public health and wellbeing outcomes framework*, Government of Victoria, Melbourne.

NHPC (National Health Performance Committee) 2002, *National report on heath sector performance indicators 2001*, Queensland Health, Brisbane.

Victorian Government 2015, *Victorian public health and wellbeing plan 2015–2019*, Government of Victoria, Melbourne.

# Chapter 2: Victoria's population

In this edition of the Chief Health Officer's report, we describe inequalities in health outcomes across several subgroups of the Victorian population. Specifically, we report on several health indicators among metropolitan and rural Victorians, Aboriginal Victorians, low income earners, Victorians who do not speak English at home and among disadvantaged Victorians as identified by the Index of Relative Social Disadvantage (IRSD). The demographic characteristics of Victoria, including the population profile of these subgroups, are described in this chapter.

## Estimated resident population

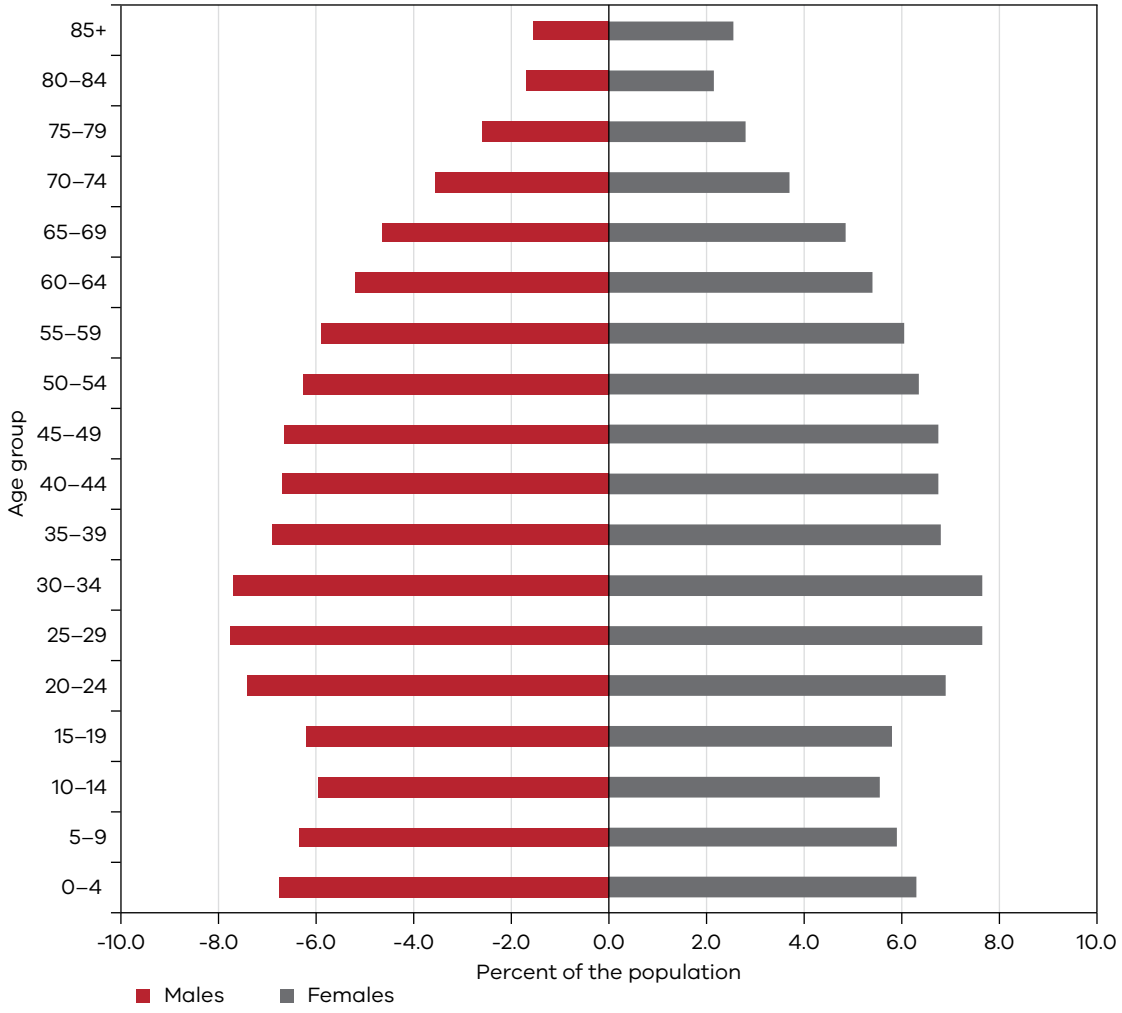
The estimated resident population of Victoria in June 2016 was 6.068 million, approximately 25 per cent of the total Australian population (Australian Bureau of Statistics (ABS) 2016). Between June 2015 and June 2016, Victoria recorded the highest growth rate of all states and territories at 2.1 per cent, and higher than the 1.4 per cent average growth for Australia (ABS 2016). Victoria's population is projected to grow to 10.3 million by 2061 (ABS 2013a). This projection is based on current trends in fertility, life expectancy at birth and net overseas migration. The median age of the population of Victoria is projected to increase from 37.3 years in 30 June 2012 to between 41.5 years and 44.9 years in 2061 (ABS 2013a).

## Age and sex distribution

Of the estimated 6.068 million people in Victoria in 2016, 50.6 per cent were female and 49.4 per cent were male. By age, 18.4 per cent of the population were aged 0–14 years, 21 per cent were 15–29 years, 21.3 per cent were 30–44 years, 24 per cent were 45–64 years and 15.1 per cent were 65 years or older (2.1 per cent 85 were years or older) (Figure 2.1).

There were slightly more males than females in the 0–64-year age group: in 2016 there were 102 males for every 100 females. In contrast, in the age group 65 years or older, there were 61 males for every 100 females. This difference is largely explained by higher rates of premature deaths for males (ABS 2015). As of June 2016 there were 916,879 Victorians aged 65 years or older. The majority were aged 65–84 years (86 per cent). The proportion of older people has increased markedly over past decades and is projected to increase further.

**Figure 2.1: Victoria's population in 2016, by age and sex**



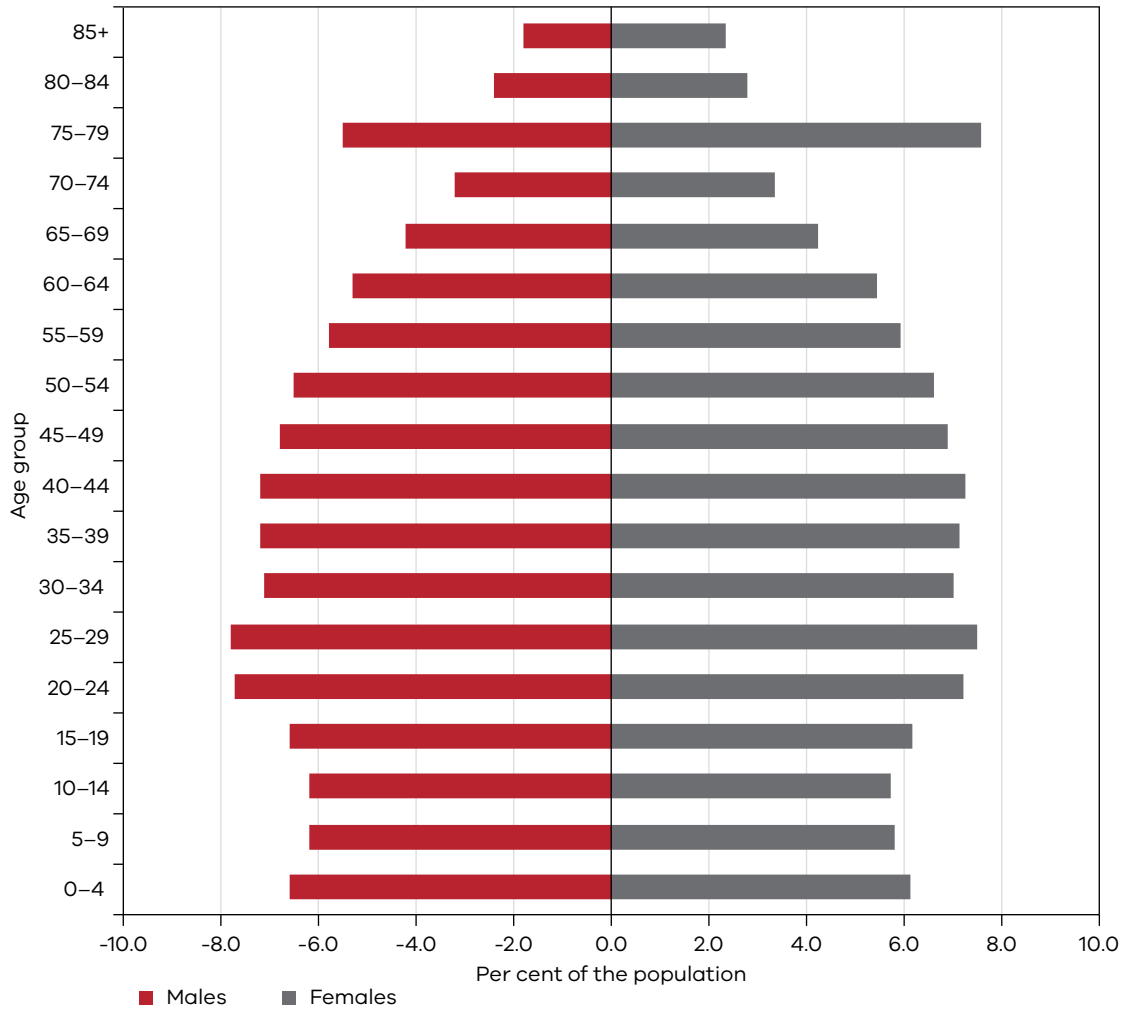

Data source: Australian Bureau of Statistics

## Aboriginal Victorians

In Victoria in 2011, 0.9 per cent of the population identified as Aboriginal (47,333 people) (ABS 2011a). As a proportion of the total population of each state and territory, Victoria has the lowest density (0.9 per cent) of Aboriginal people than any other state or territory, while the Northern Territory has the largest (30 per cent). Aboriginal Australians constitute 3 per cent of the total Australian population.

The age and sex structure of the Aboriginal population in Victoria is shown in Figure 2.2. In June 2011, the Victorian Aboriginal population had a younger age structure than the 2011 non-Aboriginal population (data not shown), with larger proportions of young people and smaller proportions of older people (ABS 2011a). This is due to higher birth rates and reduced life expectancy among Aboriginal Victorians who, on average, have a life expectancy approximately 10 years less that of the non-Aboriginal Victorian population (ABS 2013b). The median age of non-Aboriginal Victorians in 2011 was 37.3 years and in Aboriginal Victorians it was 21.7 years. More than one in three (35.2 per cent) Aboriginal Victorians were under 15 years of age and just 4.3 per cent were aged 65 or older (ABS 2011a).

**Figure 2.2: Victoria's Aboriginal population in 2011 by age and sex**

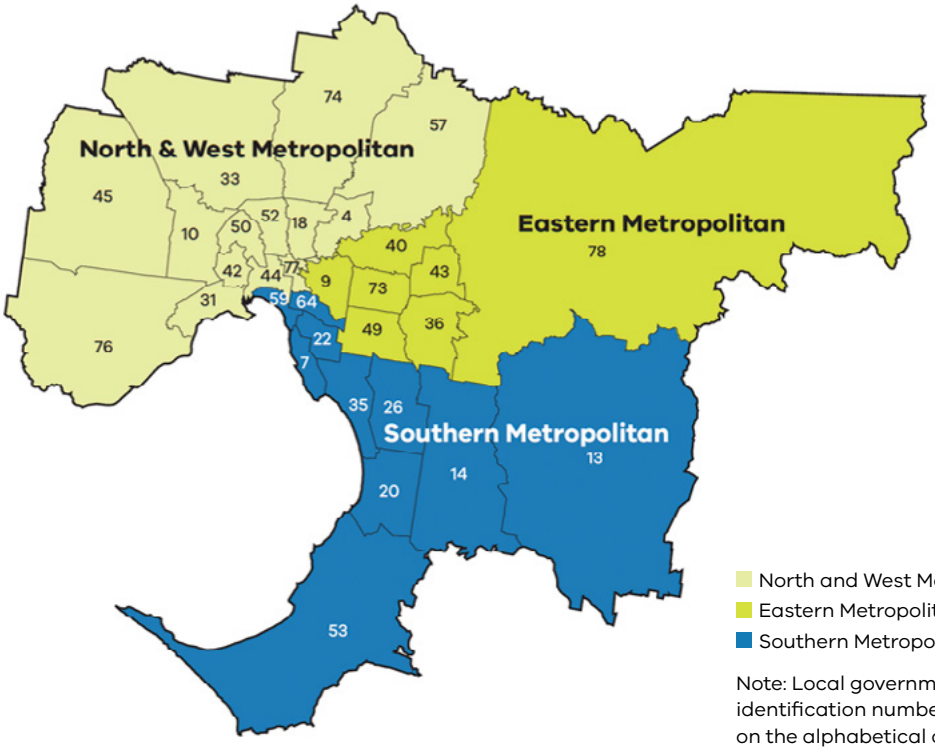



Data source: Australian Bureau of Statistics

## Metropolitan and rural Victoria

In 2014, 75.2 per cent of the Victorian population lived in metropolitan regions of Victoria, while 24.8 per cent lived in rural regions of Victoria. In 2014 metropolitan and rural areas were defined according to the Department of Health and Human Services geographical regional boundaries: Metropolitan Victoria encompasses North & West Metropolitan, Eastern Metropolitan and Southern Metropolitan regions while rural Victoria encompasses Loddon Mallee, Grampians, Barwon-South Western, Hume and Gippsland regions. These eight regions are made up of 79 local government areas (LGAs) – see Map 2.1 and 2.2 (and Tables 2.1 and 2.2).

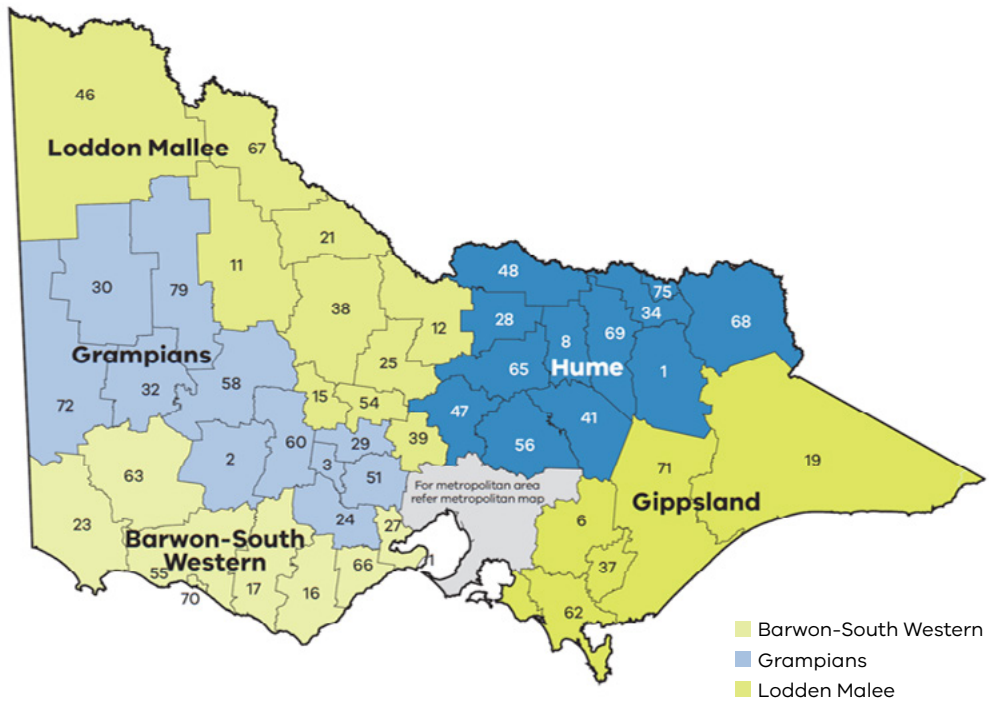
**Map 2.1: Metropolitan local government areas, by Department of Health and Human Services region**




North and West Metropolitan
Eastern Metropolitan
Southern Metropolitan

Note: Local government area identification numbers are based on the alphabetical order of LGA names in Table 2.1.

**Map 2.2: Rural local government areas, by Department of Health and Human Services region**




Barwon-South Western
Grampians
Lodden Malee
Hume
Gippsland

Note: Local government area identification numbers are based on the alphabetical order of LGA names in Table 2.2.

**Table 2.1: Metropolitan local government areas, by Department of Health and Human Services region**

| Metropolitan region | Local government area name | Local government area identification number |
|---|---|---|
| Eastern Metropolitan region | Boroondara | 9 |
| | Knox | 36 |
| | Manningham | 40 |
| | Maroondah | 43 |
| | Monash | 49 |
| | Whitehorse | 73 |
| | Yarra Ranges | 78 |
| North and West Metropolitan region | Banyule | 4 |
| | Brimbank | 10 |
| | Darebin | 18 |
| | Hobsons Bay | 31 |
| | Hume | 33 |
| | Maribyrnong | 42 |
| | Melbourne | 44 |
| | Melton | 45 |
| | Moonee Valley | 50 |
| | Moreland | 52 |
| | Nillumbik | 57 |
| | Whittlesea | 74 |
| | Wyndham | 76 |
| | Yarra | 77 |
| Southern Metropolitan region | Bayside | 7 |
| | Cardinia | 13 |
| | Casey | 14 |
| | Frankston | 20 |
| | Glen Eira | 22 |
| | Greater Dandenong | 26 |
| | Kingston | 35 |
| | Mornington Peninsula | 53 |
| | Port Phillip | 59 |
| | Stonnington | 64 |

**Table 2.2: Rural local government areas, by Department of Health and Human Services region**

| Region | Local government area name | Local government area identification number |
|---|---|---|
| Barwon-South Western | Colac-Otway | 16 |
| | Corangamite | 17 |
| | Glenelg | 23 |
| | Greater Geelong | 27 |
| | Moyne | 55 |
| | Queenscliffe | 61 |
| | Southern Grampians | 63 |
| | Surf Coast | 66 |
| | Warrnambool | 70 |
| Gippsland | Bass Coast | 5 |
| | Baw Baw | 6 |
| | East Gippsland | 19 |
| | Latrobe | 37 |
| | South Gippsland | 62 |
| | Wellington | 71 |
| Grampians | Ararat | 2 |
| | Ballarat | 3 |
| | Golden Plains | 24 |
| | Hepburn | 29 |
| | Hindmarsh | 30 |
| | Horsham | 32 |
| | Moorabool | 51 |
| | Northern Grampians | 58 |
| | Pyrenees | 60 |
| | West Wimmera | 72 |
| | Yarriambiack | 79 |

| Region | Local government area name | Local government area identification number |
|---|---|---|
| Hume | Alpine | 1 |
| | Benalla | 8 |
| | Greater Shepparton | 28 |
| | Indigo | 34 |
| | Mansfield | 41 |
| | Mitchell | 47 |
| | Moira | 48 |
| | Murrindindi | 56 |
| | Strathbogie | 65 |
| | Towong | 68 |
| | Wangaratta | 69 |
| | Wodonga | 75 |
| Loddon Mallee | Buloke | 11 |
| | Campaspe | 12 |
| | Central Goldfields | 15 |
| | Gannawarra | 21 |
| | Greater Bendigo | 25 |
| | Loddon | 38 |
| | Macedon Ranges | 39 |
| | Mildura | 46 |
| | Mount Alexander | 54 |
| | Swan Hill | 67 |

## Low income earners

In 2014, 18.7 per cent of Victorians reported an annual household income less than $40,000, while 19.2 per cent reported an annual household income greater than or equal to $125,000 (2014 Victorian Population Health Survey). Females were significantly more likely than males to report low income and less likely to report high income. Almost 50 per cent of adults aged 65 years or older reported an annual household income less than $40,000 (data not shown) compared with 18.7 per cent for the total population (Figure 2.3, Table 2.3).

**Table 2.3: Annual household income, by sex, Victoria, 2014**

| | Household income ($) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | < 40,000 | | | ≥ 40,000 to < 80,000 | | | ≥ 80,000 to < 125,000 | | | ≥ 125,000 | | |
| | % | LL (95% CI) | UL (95% CI) | % | LL (95% CI) | UL (95% CI) | % | LL (95% CI) | UL (95% CI) | % | LL (95% CI) | UL (95% CI) |
| Males | 17.2 | 16.2 | 18.3 | 22.8 | 21.3 | 24.4 | 19.7 | 18.3 | 21.1 | 22.5 | 21.0 | 24.2 |
| Females | 20.2 | 19.1 | 21.2 | 19.0 | 17.9 | 20.1 | 19.3 | 18.0 | 20.6 | 16.0 | 14.8 | 17.2 |
| Total | 18.7 | 18.0 | 19.5 | 20.9 | 19.9 | 21.8 | 19.5 | 18.5 | 20.5 | 19.2 | 18.2 | 20.2 |

Estimates are age-standardised to the 2011 Victorian population.

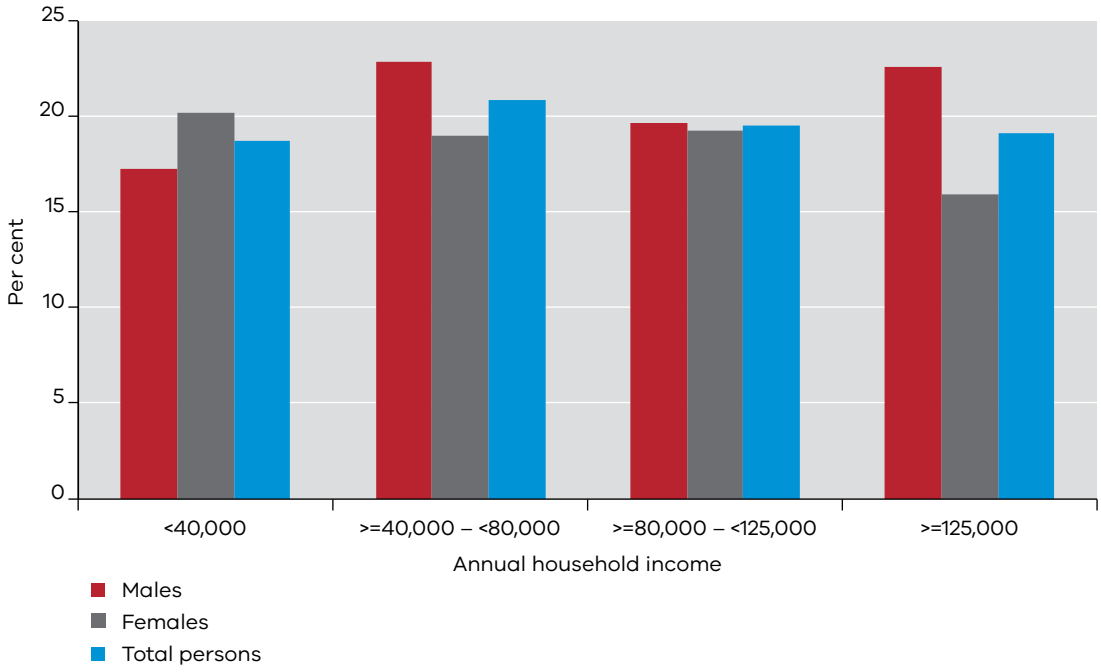
LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

Differences between groups are considered statistically significant where the 95 per cent confidence intervals (95% CI) for point estimates do not overlap.

Estimates may not add up to 100 per cent due to a proportion of 'don't know' or 'refused to say' responses not reported here.

Data source: Department of Health and Human Services 2016

**Figure 2.3: Annual household income, by sex, Victoria, 2014**




Data are age-standardised to the 2011 Victorian population.

Differences between groups are considered statistically significant where the 95 per cent confidence intervals (95% CI) for point estimates do not overlap.

Data source: Department of Health and Human Services 2016

## Cultural diversity

In the 100 years since the first national Census, the multicultural nature of Australian society has developed and grown significantly – especially here in Victoria. Our population is among the fastest growing and most diverse in Australia.

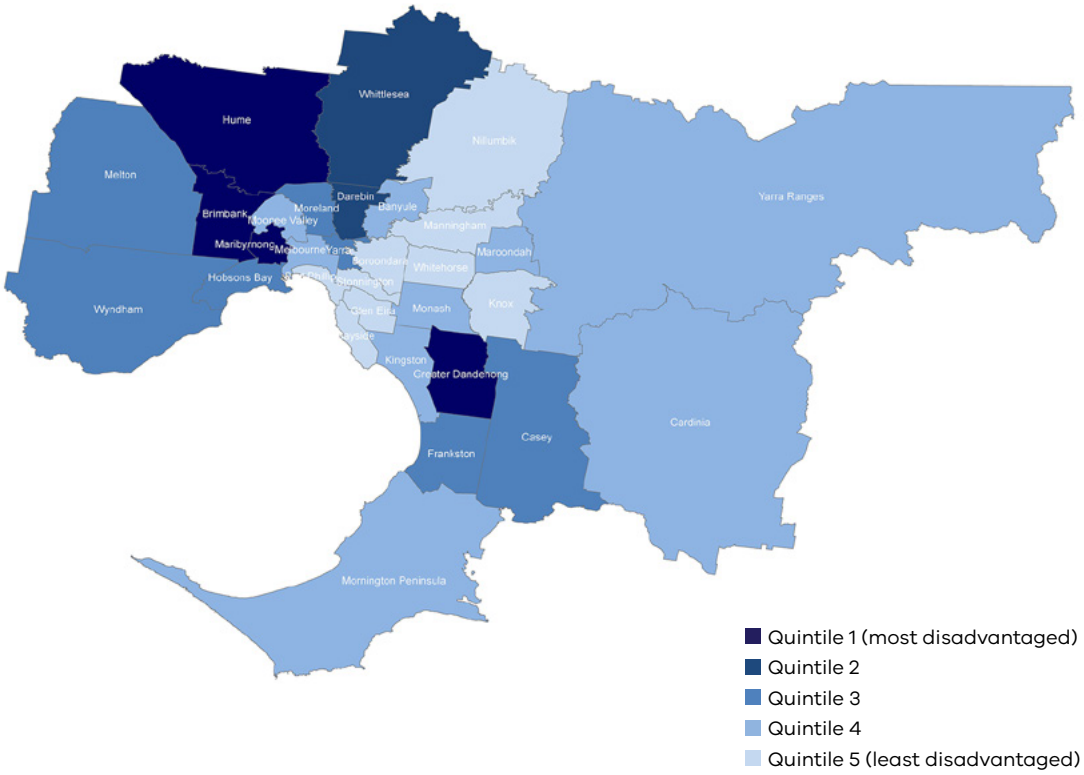
At the 2011 Census, 26.2 per cent of Victorians were born overseas in more than 200 countries (an increase from 23.8 per cent in 2006) (ABS 2011b). Of the total overseas-born, 74.5 per cent came from non-main English-speaking countries, increasing from 72.8 per cent in 2006. The top 10 countries of birth for Victoria in 2011 were England, India, China, New Zealand, Italy, Vietnam, Greece, Sri Lanka, Malaysia and Philippines. The 2011 Census has also revealed increasing diversity in languages other than English spoken at home: 23.1 per cent of Victorians spoke a language other than English at home (an increase from 20.4 per cent in 2006) (ABS 2011b). The number of Victorians with a religion increased by 249,091 (7.4 per cent), although there was a slight decrease in terms of the proportion of Victorians with a religion (from 68.7 per cent in 2006 to 67.7 per cent in 2011). In 2011, 67.7 per cent of Victorians followed 135 faiths compared with 68.7 per cent following 130 faiths in 2006. The three dominant religions in Victoria are Western Catholic, Anglican Church and Uniting Church, and this has not changed since the 2006 Census (ABS 2011b).

## Index of Relative Social Disadvantage

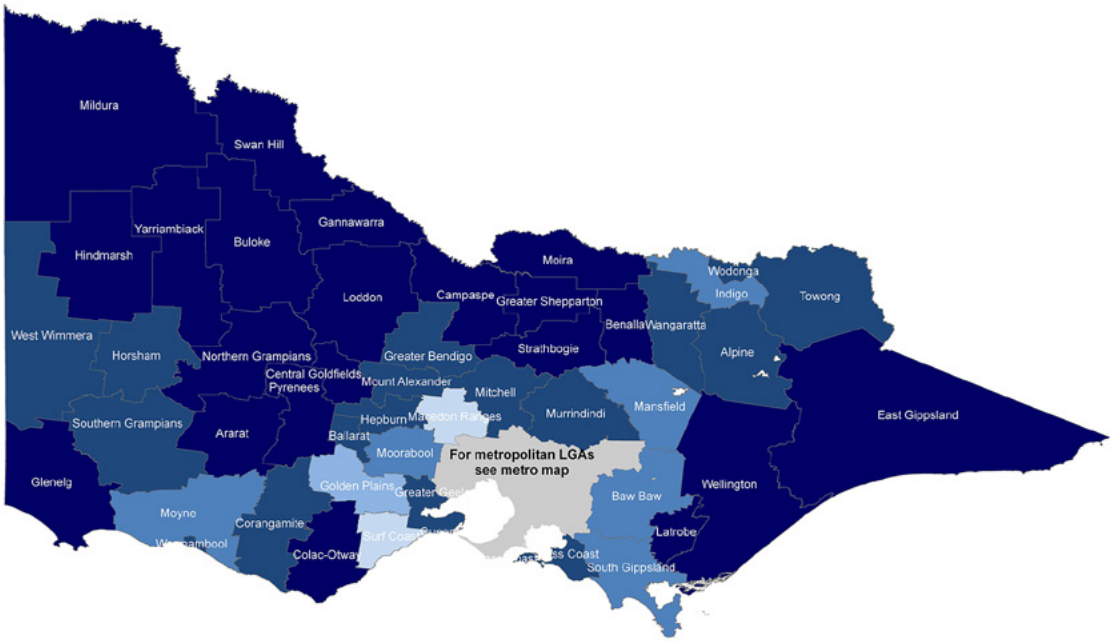
Socioeconomic status can affect a wide range of health behaviours, risks and outcomes. Within this report, the population is profiled using the IRSD (ABS 2013a). This index summarises information about the economic and social conditions of people and households within an area and includes characteristics of advantage and disadvantage. It includes measures of income, education and employment and reflects the aggregate characteristics of the population in an LGA. LGA IRSD scores are combined into population-based quintiles, and the health outcomes of the most disadvantaged areas (quintile 1) are contrasted with those of the most advantaged areas (quintile 5).

In metropolitan Victoria almost 60 per cent of LGAs were in the two least disadvantaged quintiles (quintiles four and five), and 13 per cent were in the 'most disadvantaged' quintile (quintile 1) (Map 2.3). In rural Victoria, over 40 per cent of LGAs were in the 'most disadvantaged' quintile (quintile 1), with only 8 per cent of LGAs in the least disadvantaged quintiles (quintiles 4 and 5) (Map 2.4).

**Map 2.3: Quintile of relative social disadvantage (IRSD) by local government areas in metropolitan Victoria**




**Map 2.4: Quintile of relative social disadvantage (IRSD) by local government areas in rural Victoria**



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# Chapter 3: Health inequalities

## Key messages

- Socioeconomic disadvantage has the greatest impact on health inequality in Victoria. Disadvantaged adults, adolescents and children have poorer health and wellbeing than advantaged people for most health and wellbeing indicators. If all Victorians had the rate of self-reported health of those with an annual household income of at least $125,000, then the health of about 550,000 adults would be improved.
- Generally, the greatest relative difference in health and wellbeing is between Aboriginal Victorians and non-Aboriginal Victorians. High psychological distress is about twice the rate for adult Aboriginal Victorians, daily smoking about three times the rate and smoking during pregnancy about five times the rate, compared with non-Aboriginal Victorians.
- Adults and adolescents who speak a language other than English at home have poorer health and wellbeing for many indicators than for Victorians who speak English at home. Inequalities exist in self-rated health, psychological distress, smoking and social capital indicators such as perception of safety walking in their street at night and trust in other adults.
- Adults with chronic diseases, with high psychological distress or who are obese or smoke, generally have lower social capital than those without these conditions. Inequalities include trust in other adults and perception of being valued by society.

## Introduction and overview

To improve the health and wellbeing of all Victorians, inequalities in health must be reduced. Such inequalities are the result of: general socioeconomic, cultural and environmental conditions; social and community networks; and individual biological and lifestyle factors. Inequalities can impact on individuals and communities. Many of these inequalities are preventable.

Assessment of the health and wellbeing of the whole population masks substantial inequalities within population groups and across geographic areas of Victoria. Health inequalities can impact in two ways, both of which are included in this chapter: First, there is the relative difference in rates. For example, a 3.4 fold relative difference in daily smoking rates between adults of low and high incomes means that low income earners are 3.4 times more likely to be smokers compared to high income earners. Second, there is the absolute difference in rates. This describes the excess rate experienced among one group compared to another, and relates that to the number of people affected by the excess rate. Absolute differences in rates can affect a large or small number of people depending on the underlying prevalence of the risk factor and the population number. For example, if low income earners had the same daily smoking rates as high income earners, there would be about 320,000 fewer adult smokers in Victoria. Similarly, there is a 2.6 fold relative difference in daily smoking rates for Aboriginal Victorians and non-Aboriginal Victorians. If both groups had the same smoking rates, making the absolute difference zero, there would be about 4300 fewer Aboriginal Victorians smoking.

Health inequalities between single demographic, geographic and health condition population categories are reported. However, individuals do not fall into single categories. They have multiple sociodemographic and health characteristics that

may interrelate. For example, a person may be female, have low income, identify as an Aboriginal Victorian and be obese. Many of these characteristics cluster, compounding the extent of inequality. Thus not everyone within the specific population group will have the same level of inequality – some people will have lower health status and others higher depending upon the combination of characteristics of the individual.

Health and wellbeing risk and protective factors accumulate and interact across all stages of life. Taking a life course approach, health inequalities are reported for infants, children, adolescents and adults, including older adults.

Comprehensive assessment of health and wellbeing inequalities in Victoria is outlined in the *Victorian public health and wellbeing outcomes framework* (DHHS 2016a). This chapter reports against a suite of indicators included in the framework. Inequalities between males and females, and between age groups for the indicators in this chapter, are described in other chapters of this report; however, older adults are captured in this chapter. This chapter does not report on population group strengths, but rather generally reports levels of inequalities in order to identify actionable insights.

The burden of disease and injury is a measure of population health that aims to quantify the gap between the ideal of living to old age in good health and the current situation – for the total population and between populations. For Australia in 2011, socioeconomic disadvantage accounted for 21 per cent of the total burden of disease (AIHW 2016a). The burden rate in disadvantaged areas was 50 per cent higher than the rate in advantaged areas. For comparison, cancer caused 19 per cent of the burden, and cardiovascular disease caused 15 per cent in the total population. The burden for Aboriginal and Torres Strait Islander Australians was 2.3 times that of non-Aboriginal Australians (AIHW 2016b). Data for Victoria is unavailable.

In Victoria there is little data available on the health of lesbian, gay, bisexual, transgender and/or intersex people (LGBTI). Similarly there is a scarcity of data for people from culturally and linguistically diverse backgrounds. Where possible, data for these population groups are reported.

People from refugee backgrounds may have experienced significant human rights violations, trauma, torture, disruption of basic services, poverty, food insecurity and extremely difficult living conditions, compounded by prolonged uncertainty. These circumstances place them at increased risk of complex physical and mental health conditions (Chaves et al. 2016). Data on asylum seekers and refugees are not reported in this report.

| How to interpret the data in this chapter |
| --- |
| • Differences between groups are considered statistically significant if the 95 per cent confidence intervals for point estimates do not overlap, and for rate ratios if the intervals of the two rates do not overlap. |
| • A rate ratio of 1.0 indicates that the rates in the two populations are not significantly different (are similar). |
| • A significant rate ratio of less than 1.0 indicates that the rate in the first population listed is a percentage of the comparison population. For example, a smoking rate ratio of 0.2 means the smoking rate in the first population is 20 per cent of the rate in the comparison population. |
| • A significant rate ratio of more than 1.0 indicates that the rate in the first population listed is a multiple of the rate of the comparison population. For example, a rate ratio of 5.0 means the rate in the first population is five times that of the comparison population. |

**How to interpret the data in this chapter**

- In the graphs containing rate ratios, the data point is centred on the rate ratio. The size of the bubble around the data point reflects the number of people affected if all people had the same level of health status as the comparison population (the group with the best health). For example, in Figure 3.4, if all adults had the rate of smoking of those with the highest annual household income of at least $125,000, there would be about 320,000 fewer adults smoking. The size of that bubble is substantially larger than the bubble for Aboriginal Victorians, where, if the rates were the same as non-Aboriginal Victorians there would be 4,300 fewer Aboriginal Victorians smoking. Essentially, the size of the bubble is an indicator of the burden of disease that could be reduced if the inequality was reduced.

## Wellbeing

Most Victorians report high levels of health and are satisfied with their lives. About half of adults and adolescents report excellent or very good health, as do the majority of parents for children. Similarly at least three-quarters of adults and adolescents are satisfied with their lives (Tables 3.1, 3.2 and 3.3). However, these high levels of wellbeing mask substantial inequalities between population groups of Victorians and across geographic areas of the state, as shown in Figures 3.1 and 3.2.

Lower income was the demographic factor associated with poor health of the largest number of adults. In 2014 adults with an annual household income of less than $40,000 were about 40 per cent less likely to report excellent or very good health, compared with those with an income of at least $125,000. If all Victorians had the same rate of self-reported excellent or very good health as those with an annual household income of at least $125,000, then the health of about 550,000 adults would be improved. Adults with low income were about 10 per cent less likely to be very satisfied or satisfied with their life than those with high income.

Adults who spoke a language other than English at home were about 20 per cent less likely to report good health, with similar rates of satisfaction with life. Aboriginal Victorians were less likely to be satisfied with their health than non-Aboriginal Victorians, although the rates of self-reported good health were similar. Among older Victorians (aged 65+) satisfaction with life was similar for people aged 65–74, 75–84 and 85 years or older. In contrast, older age groups reported poorer health.

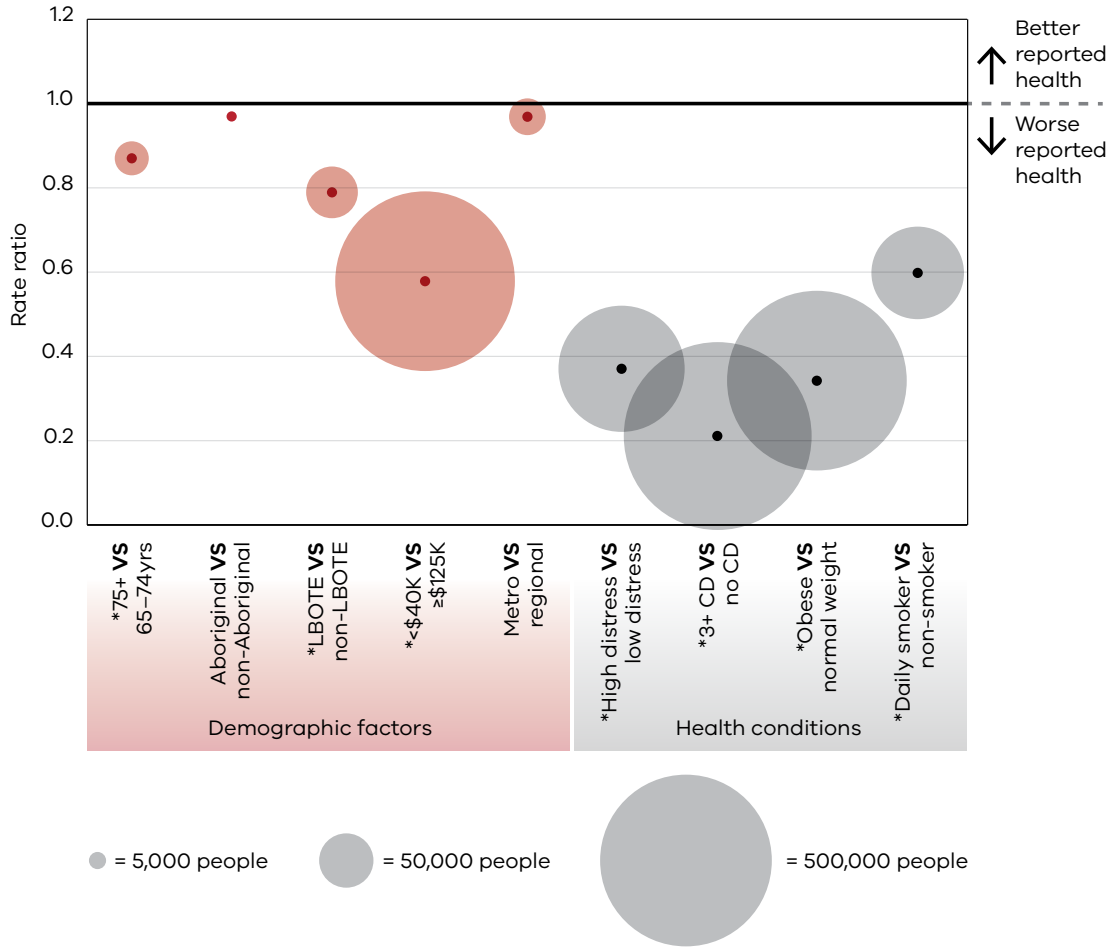
Self-reported health varied markedly across geographic areas. While rates were similar for adults, adolescents and children in metropolitan and regional Victoria, this masked a 2.4-fold difference in the proportion of adults who reported excellent or very good health between LGAs of the state – ranging from a high of 66 per cent to a low of 28 per cent (DHHS 2016b). In contrast, satisfaction with life varied less, with rates in LGAs varying by about 20 per cent across the state.

In Australia in 2014 similar proportions of heterosexual and gay/lesbian adults self-reported excellent or very good health (ABS 2015). Adults with a disability were half as likely to report such good health, as were adults with a mental illness, compared with those without these conditions.

Chronic diseases and obesity were the health conditions that were associated with poorer self-reported good health for the largest number of adults (Figure 3.1). Having one or more chronic diseases was associated with self-reporting poorer health for about 600,000 adults. Similarly if all Victorians were of healthy weight, then the self-reported good health of about 550,000 adults would be improved.

Adults with chronic disease, with high psychological distress, who are obese or who are daily smokers are less likely to report good health and be satisfied with their life (Table 3.1, Figure 3.1). Of these health conditions, chronic disease had the largest relative impact on self-reported health: Adults with three or more chronic diseases were about 80 per cent less likely to report good health than those without a chronic disease. Adults who were obese and adults with high psychological distress were about 70 per cent less likely to report good health than the comparison groups. Daily smokers were about 40 per cent less likely to report good health.

**Figure 3.1: Self-reported excellent or very good health, rate ratio of proportion and total population affected, by demographic and health factors, adults, Victoria, 2014**




LBOTE: Language background other than English
CD: Chronic disease
*Significantly different
Data source: 2014 Victorian Population Health Survey

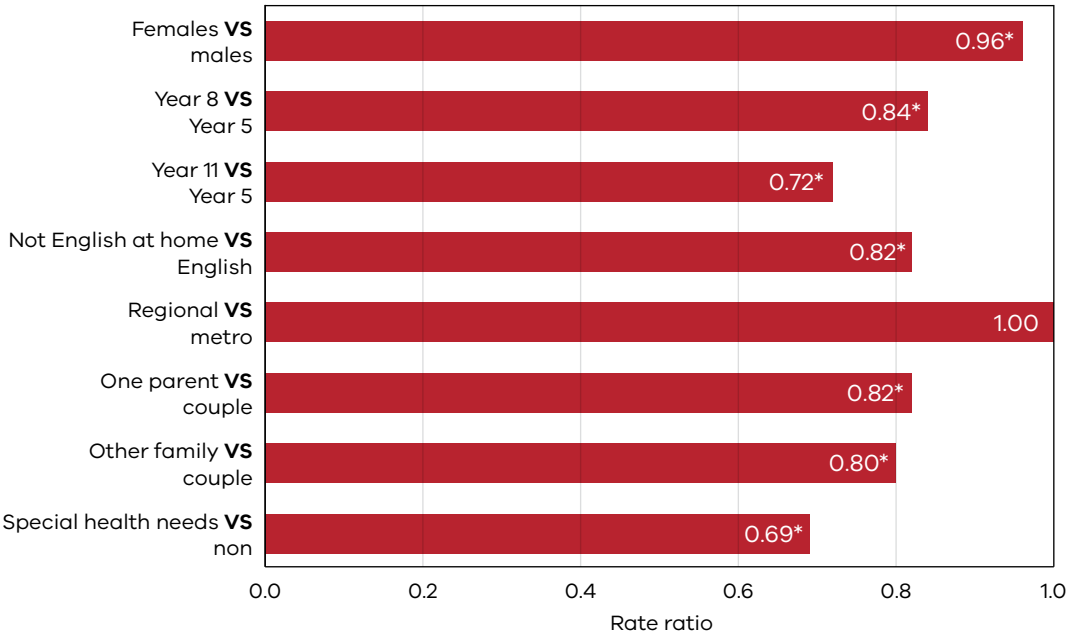
**Table 3.1: Wellbeing and mental health indicators, adults, by demographic and health factors, Victoria, 2014**

| | | Excellent/very good self-reported health | Very satisfied/ satisfied with life | High/very high psychological distress | Depression and anxiety |
|---|---|---|---|---|---|
| | | % (95% CI) | % (95% CI) | % (95% CI) | % (95% CI) |
| Adults (all) | | 40.2 (39.1, 41.4) | 92.4 (91.7, 93.0) | 12.6 (11.8, 13.6) | 24.2 (23.1, 25.2) |
| Demographic factors | 85+ years | 35.3* (31.7, 39.1) | 91.1 (88.7, 93.1) | 8.7 (6.7, 11.4) | 13.8* (11.2, 16.8) |
| | 75–84 years | 35.5* (33.5, 37.4) | 92.4 (91.3, 93.4) | 7.5 (6.5, 8.6) | 15.4* (14.0, 16.8) |
| | 65–74 years | 40.9 (39.4, 42.5) | 93.3 (92.5, 94.1) | 8.2 (7.3, 9.1) | 19.9 (18.7, 21.2) |
| | Aboriginal | 39.0 (29.2, 49.8) | 86.5 (75.6, 93.0) | 24.0* (16.6, 33.4) | 31.2 (22.2, 41.8) |
| | Non-Aboriginal | 40.2 (39.1, 41.4) | 92.4 (91.7, 93.1) | 12.6 (11.7, 13.5) | 24.2 (23.1, 25.3) |
| | Language other than English | 33.5* (31.1, 35.9) | 90.8* (89.3, 92.0) | 15.9* (14.0, 18.0) | 18.6* (16.6, 20.9) |
| | English only at home | 42.2 (40.9, 43.5) | 92.9 (92.1, 93.6) | 11.6 (10.7, 12/6) | 26.1 (24.9, 27.3) |
| | < $40,000 household income | 28.9* (26.0, 32.0) | 85.6* (83.2, 87.8) | 23.1* (20.4, 26.0) | 33.8* (30.8, 37.0) |
| | ≥ $125,000 household income | 50.2 (47.0, 53.4) | 95.6 (93.1, 97.2) | 8.7 (6.5, 11.4) | 21.0 (18.3, 23.9) |
| | Metropolitan (DHHS regions) | 39.9 (38.5, 41.3) | 92.5 (91.8, 93.2) | 12.6 (11.6, 13.7) | 22.8* (21.6, 24.1) |
| | Regional | 41.2 (39.2, 43.3( | 91.5 (89.8, 93.0) | 13.1 (11.4, 14.9) | 28.7 (26.7, 30.8) |
| Health conditions | High/very high psychological distress | 17.8* (15.3, 20.6) | 67.6* (64.4, 70.6) | n/a | 61.6* (58.4, 64.7) |
| | Low psychological distress | 48.0 (46.4, 49.6) | 97.7 (97.2, 98.1) | n/a | 12.8 (11.9, 13.7) |
| | 3+ chronic diseases | 10.5* (7.9, 13.7) | 86.3* (83.7, 88.6) | 27.0* (21.9, 32.8) | n/a |
| | 2 chronic diseases | 26.1* (21.4, 31.3) | 84.5* (80.3, 87.9) | 28.3* (23.3, 34.0) | n/a |
| | 1 chronic disease | 35.4* (33.3, 37.4) | 89.7* (87.7, 91.4) | 20.5* (18.4, 22.8) | n/a |
| | No chronic diseases | 49.4 (47.8, 50.9) | 95.9 (95.3, 96.5) | 5.4 (4.7, 6.2) | n/a |
| | Obese (self-report) | 17.6* (15.7, 19.7) | 86.4* (63.6, 88.7) | 18.5* (15.9, 21.4) | 29.7* (26,9, 32.6) |
| | Normal/under weight (self-report) | 51.8 (50.1, 53.6) | 94.5 (93.7, 95.3) | 10.0 (8.9, 11.3) | 21.9 (20.5, 23.5) |
| | Daily smoker | 26.2* (23.0, 29.6) | 84.8* (82.2, 87.1) | 22.6* (19.8, 25.8) | 35.4* (32.1, 38.8) |
| | Never smoked | 43.3 (41.9, 44.8) | 93.9 (93.1, 94.6) | 10.6 (9.7, 11.6) | 20.6 (19.4, 21.9) |

*Significantly different from comparison population (last population listed).
Data are age-standardised to the 2011 Victorian population.
Data source: 2014 Victorian Population Health Survey

Wellbeing was also not shared equally among adolescents and children in Victoria. About two-thirds of all adolescents in 2016 self-reported excellent or very good health (Table 3.2). The largest variation in good health between demographic groups was between school year levels, with adolescents less likely to report good health as they age (Table 3.2, Figure 3.2). Students in Year 8 were 16 per cent less likely to report good health than those in Year 5, and students in Year 11 were 28 per cent less likely.

**Figure 3.2: Self-reported excellent or very good health, rate ratio, by demographic and health factors, adolescents, Victoria, 2016**




*Significantly different
Data source: *About You* 2016

Adolescents who spoke a language other than English at home were 10 per cent less likely to report good health than those who spoke English at home. If adolescents who did not speak English at home had the same rate of good health as others, the health of about 10,000 students would be improved. Adolescents with special health care needs were 31 per cent less likely to report good health than other students. Adolescents living in couple families were most likely to report good health. Self-reported good health of adolescents varied by up to 22 per cent between Department of Education and Training (DET) Areas of Victoria – ranging from a high of 66 per cent to a low of 54 per cent.

Rates of satisfaction with the quality of their lives were generally higher than adolescents' reported good health and varied less across Victoria (Table 3.2). However, life satisfaction was not shared equally, following a similar pattern of inequality to self-reported good health.

High levels of resilience are an important protective factor for health and wellbeing. About two-thirds of adolescents in 2016 reported a high level of resilience (Table 3.2). The inequalities in resilience across Victoria were similar to those for good health and life satisfaction.

Adolescents living in couple families were more likely to have a high level of self-reported resilience than those living in single-parent or other types of families. Those who spoke a language other than English at home were 17 per cent less likely to be resilient than those who spoke English. Adolescents with special health care needs were 26 per cent less likely to report resilience than other students.

**Table 3.2: Selected health and wellbeing indicators, adolescents, by demographic and health factors, Victoria, 2016**

| | Excellent/ very good self-reported health | Satisfied with quality of life | High psychological distress | High resilience |
|---|---|---|---|---|
| | % | % | % | % |
| Adolescents (all) | 60.1 | 74.8 | 17.8 | 68.8 |
| Males | 61.4* | 78.2* | 12.5* | 68.9 |
| Females | 58.7 | 71.4 | 23.1 | 68.7 |
| Year 5 | 68.6* | 78.7* | 10.6* | 72.3* |
| Year 8 | 57.7* | 73.4* | 20.1* | 65.8 |
| Year 11 | 49.7 | 70.7 | 26.0 | 67.6 |
| English at home | 61.1* | 75.7* | 17.9 | 70.7* |
| Not English at home | 55.0 | 71.1 | 17.6 | 58.8 |
| Metropolitan (DET regions) | 60.1 | 74.7 | 17.8 | 68.6 |
| Regional | 60.1 | 75.1 | 17.7 | 69.4 |
| Other family | 51.0* | 53.9* | 33.8* | 48.1* |
| One-parent family | 52.1* | 66.7* | 23.8* | 65.1* |
| Couple family | 63.4 | 80.1 | 16.5 | 73.9 |
| Special health care needs | 41.3* | 56.9* | 46.0* | 54.4* |
| Not special health care needs | 60.2 | 80.2 | 15.1 | 73.3 |

| | Trusted adult in life | Sufficient physical activity | > 2 hours' screen time for recreation |
|---|---|---|---|
| | % | % | % |
| Adolescents (all) | 68.6 | 23.3 | 64.5 |
| Males | 68.1 | 29.2 | 65.9 |
| Females | 69.1 | 17.4 | 63.1 |
| Year 5 | 74.6* | 33.2 | 47.1* |
| Year 8 | 65.1 | 19.8 | 73.5* |
| Year 11 | 64.2 | 12.5 | 79.2 |
| English at home | 70.5 | 23.7 | 64.4 |
| Not English at home | 59.0 | 20.9 | 66.8 |
| Metropolitan (DET regions) | 68.3 | 23.2 | 65.3 |
| Regional | 69.3 | 23.7 | 62.3 |
| Other family | 56.1* | 22.0 | 64.9 |
| One-parent family | 65.7* | 20.8 | 72.7* |
| Couple family | 74.5 | 24.3 | 64.0 |
| Special health care needs | 62.1* | 16.7 | 77.9 |
| Not special health care needs | 68.3 | 17.6 | 76.6 |

*Significantly different from comparison population (last population listed)
Age group for all adolescents: Years 5, 8 and 11 – 10–17 years
Data source: *About You* 2016

**Table 3.3: Selected health and wellbeing indicators, children, by demographic and health factors, Victoria**

| | Excellent/very good proxy-reported health | Developmentally on track on 5 domains[1] | Ran out of food and could not afford to buy more | Exposed to alcohol in utero[2] | Regular smokers in the house[3] | Sufficient physical activity[3] | > 2 hours' screen time for recreation[3] |
|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % |
| Children (all) | 87.6 | 57.5 | 4.9 | 46.7 | 18.5 | 62.2 | 17.7 |
| Males | 86.3* | 49.2 | 5.1 | n/a | 18.6 | 67.2 | 18.9 |
| Females | 88.9 | 66.0 | 4.8 | n/a | 18.4 | 57.0 | 16.5 |
| < 4 years | 89.2 | n/a | 3.6* | n/a | 17.7 | n/a | n/a |
| 5–8 years | 86.7 | n/a | 5.5 | n/a | 18.3 | 70.2 | 13.9 |
| 9–12 years | 86.1 | n/a | 6.2 | n/a | 19.7 | 53.8 | 21.7 |
| Socioeconomic status: | | | | | | | |
| Most disadvantaged | 85.0* | n/a | 9.6* | 29.3* | 29.2* | 62.8 | 24.1* |
| Quintile 2 | 86.3 | n/a | 6.6* | 39.9 | 23.3* | 63.6 | 19.0 |
| Quintile 3 | 85.7 | n/a | 6.3* | 45.1 | 20.6* | 64.7 | 19.0 |
| Quintile 4 | 87.5 | n/a | 4.3* | 48.3 | 19.3* | 61.6 | 17.6 |
| Least disadvantaged | 90.5 | n/a | 2.3 | 57.5 | 10.0 | 60.3 | 14.2 |
| Metropolitan (DET regions) | 87.3 | 57.9 | 4.8 | 44.8 | 17.9 | 60.4* | 18.2 |
| Regional | 88.2 | 56.5 | 5.4 | 52.9 | 20.1 | 67.1 | 16.3 |
| Aboriginal Victorians | n/a | 35.1 | n/a | n/a | n/a | n/a | n/a |
| Non-Aboriginal Victorians | n/a | 57.9 | n/a | n/a | n/a | n/a | n/a |
| Special health care needs | 66.9 | n/a | 9.9* | 48.3 | 21.1 | 60.1 | 22.2* |
| Not special health care needs | 92.4 | n/a | 3.8 | 46.1 | 17.9 | 62.7 | 16.3 |

*Significantly different from comparison population (last population listed).

Age groups for all children varied: 0–12 years unless otherwise stated; 1 is at school entry; 2 is < 2 years; 3 is 5–12 years; n/a is not available or not applicable.

Socioeconomic status is *Socio-Economic Indexes for Areas (SEIFA) Index of Relative Socio-Economic Disadvantage (IRSD)* (ABS 2013b), based on students' home postcode.

Data source: VCHWS 2013 for all indicators except developmental vulnerability data source is AEDC 2015

For Victorian children in 2013, parents reported that 88 per cent of children aged younger than 13 years had excellent or very good health (Table 3.3). Like the inequalities among income groups for adults, children in the most disadvantaged areas had poorer health than those in the least disadvantaged areas. That is, the health of about 35,000 Victorian children would be improved if all children had the health of those of the least disadvantaged in the state.

## Social capital and social determinants

The social capital of Victorian adults, as assessed by five indicators, varied between demographic characteristics and health condition groups in a consistent pattern. Older adults, those with low income and those who spoke a language other than English at home generally had lower social capital than the comparison group (Table 3.4). Obese adults, daily smokers, those with high psychological distress and those with chronic diseases also generally had lower social capital than the comparison group.

Considering the demographic factors, lower income affected the perception of feeling valued by society for the largest number of adults (Figure 3.3). Adults with a household annual income of less than $40,000 were about 35 per cent less likely to report definitely feeling valued by society compared with those with an income of at least $125,000 (Table 3.4). If all Victorians in 2014 had the rate of feeling valued by society of those with an annual household income of at least $125,000, then the social capital of about 580,000 adults would be increased. Of the health conditions, chronic diseases affected the largest number of adults, reducing the perception of feeling valued by society of about 460,000 adults.

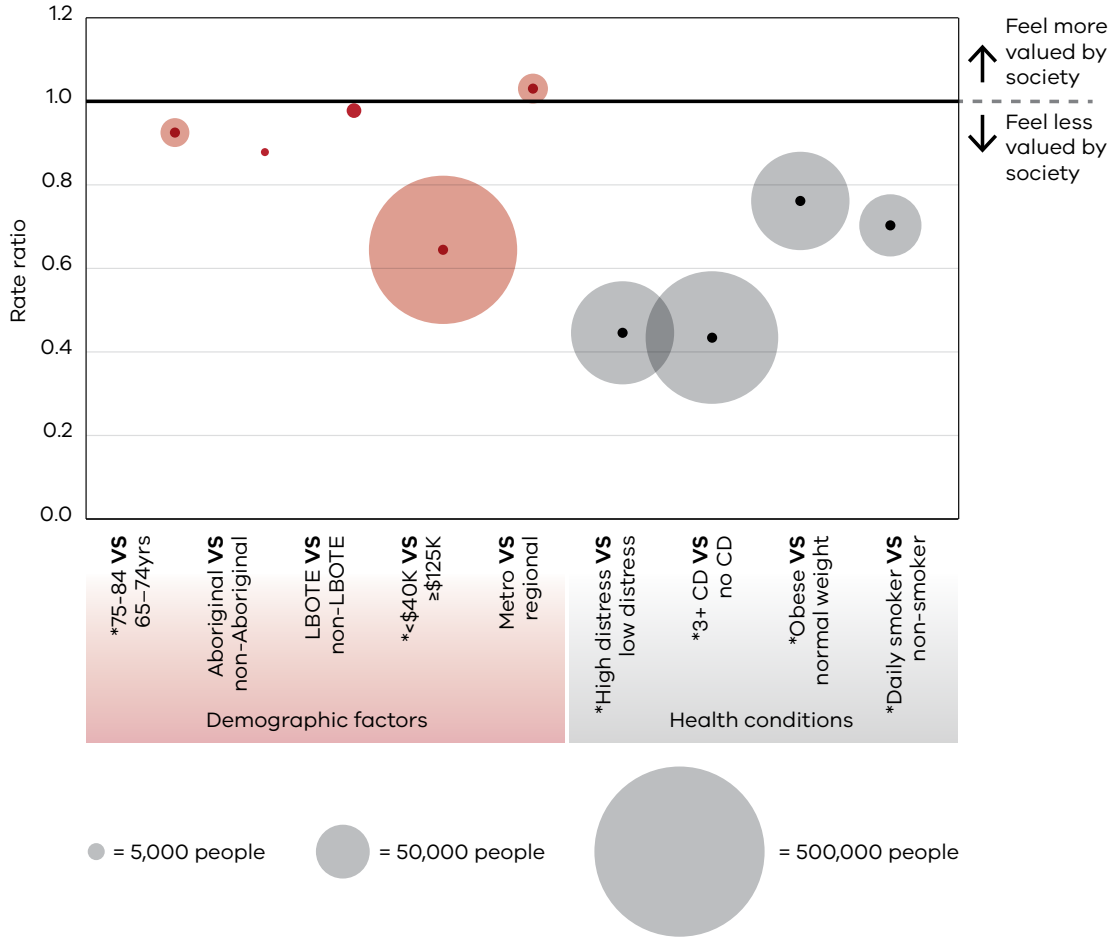
The largest relative difference in feeling valued by society between population groups was between adults with at least three chronic diseases and those with high psychological distress, compared with those without these conditions. Obesity and daily smoking also had marked impacts on feeling valued by society (Figure 3.3).

Adults aged 85 years or older were 20 per cent less likely to feel valued by society than those aged 65–74 years and those aged under 65 years. Adults aged 75–84 years were less likely to feel valued by society than younger adults. Older adults were also less likely to feel safe walking in their street at night. In contrast, older adults were more likely to report that most adults can be trusted (Table 3.4).

In regional areas adults were more likely to feel safe walking in their street at night than those in metropolitan areas and were more likely to be able to rely on someone outside their household for emergency care. Adults who spoke a language other than English at home were less likely than others to report that most adults can be trusted, to feel safe walking in their street at night and to be able to rely on someone outside their household for emergency care. In contrast, they were more likely to report that multiculturalism definitely made life in their area better.

In Australia in 2014, adults with a disability were about 20 per cent less likely to feel safe or very safe walking in their local area after dark, as were adults with a mental illness, than those without these conditions (ABS 2015). Adults who did not identify as heterosexual or gay/lesbian were up to about 40 per cent less likely to feel safe or very safe walking in their local area after dark, than others.

**Figure 3.3: Definitely feel valued by society, rate ratio of proportion and total population affected, by demographic and health factors, adults, Victoria, 2014**




LBOTE: Language background other than English
CD: Chronic disease
*Significantly different
Data source: 2014 Victorian Population Health Survey

**Table 3.4: Social capital indicators, adults, by demographic and health factors, Victoria, 2014**

| | | Most adults can definitely be trusted | Definitely feel valued by society | Definitely feel safe walking in their street at night | Multiculturalism definitely makes life in area better | Can rely on someone outside household for emergency care |
|---|---|---|---|---|---|---|
| | | % (95% CI) | % (95% CI) | % (95% CI) | % (95% CI) | % (95% CI) |
| Demographic factors | Adults (all) | 38.2 (37.1, 39.3) | 51.4 (50.2, 52.6) | 60.8 (59.6, 61.9) | 55.4 (54.3, 56.5) | 89.1 (88.5, 89.8) |
| | 85+ years | 53.8* (49.9, 57.6) | 43.2* (39.4, 47.0) | 30.8* (27.3, 34.6) | 35.7* (32.0, 39.5) | 83.8 (80.7, 86.6) |
| | 75–84 years | 46.5 (44.5, 48.5) | 50.1* (48.1, 52.2) | 41.0* (39.0, 43.0) | 38.0* (36.1, 40.0) | 84.2 (82.6, 85.6) |
| | 65–74 years | 45.1 (43.5, 46.7) | 54.2 (52.6, 55.7) | 53.3 (51.7, 54.9) | 44.5 (42.9, 46.1) | 86.5 (85.4, 87.6) |
| | Aboriginal | 45.3 (34.4, 56.6) | 45.3 (35.1, 56.0) | 70.6 (59.1, 79.9) | 49.7 (38.6, 60.9) | 91.7 (86.8, 94.9) |
| | Non-Aboriginal | 38.2 (37.1, 39.3) | 51.5 (50.3, 53.7) | 60.8 (59.6, 61.9) | 55.5 (54.3, 56.6) | 89.2 (88.5, 89.8) |
| | Language other than English | 25.7* (23.7, 27.8) | 52.3 (49.8, 54.8) | 48.6* (46.1, 51.1) | 59.2* (56.9, 61.4) | 82.3* (80.6, 84.0) |
| | English only at home | 41.9 (40.6, 43.2) | 51.2 (49.8, 52.5) | 64.7 (63.4, 65.9) | 54.1 (52.8, 55.4) | 91.4 (90.8, 92.0) |
| | < $40,000 household income | 27.9* (25.3, 30.6) | 40.0* (36.8, 43.3) | 49.8* (46.3, 53.2) | 49.2* (46.2, 52.2) | 82.3* (79.7, 84.5) |
| | ≥ $125,000 household income | 48.5 (45.8, 51.3) | 61.8 (58.6, 65.0) | 73.5 (70.3, 76.4) | 65.4 (62.3, 62.3) | 93.7 (92.3, 94.8) |
| | Metropolitan (DHHS regions) | 37.6 (36.3, 38.9) | 51.6 (50.2, 53.0) | 59.3* (58.0, 60.6) | 58.7* (57.4, 60.0) | 88.6* (87.8, 89.3) |
| | Regional | 39.5 (37.7, 41.4) | 50.2 (48.2, 52.2) | 64.8 (62.8, 66.8) | 44.7 (42.7, 46.8) | 90.8 (89.6, 91.8) |
| Health conditions | High/very high psychological distress | 21.9* (19.5, 24.6) | 26.7* (24.0, 29.5) | 45.0* (41.8, 48.2) | 49.2* (46.1, 52.3) | 80.8* (78.6, 82.8) |
| | Low psychological distress | 44.0 (42.5, 45.5) | 59.8 (58.2, 61.3) | 66.5 (65.1, 67.9) | 57.8 (56.3, 59.2) | 92.0 (91.3, 92.7) |
| | 3+ chronic diseases | 25.2* (20.7, 30.2) | 24.8* (20.8, 29.3) | 33.9* (29.0, 39.2) | 35.1* (30.1, 40.4) | 85.4* (81.5, 88.6) |
| | 2 chronic diseases | 29.7* (25.8, 33.9) | 41.3* (36.3, 46.5) | 51.1* (45.7, 56.6) | 48.8* (43.3, 54.3) | 86.8* (84.3, 88.9) |
| | 1 chronic disease | 36.3* (34.4, 38.2) | 45.4* (43.2, 47.5) | 58.8* (56.5, 61.0) | 54.9 (52.7, 57.1) | 88.9 (87.5, 90.2) |
| | No chronic disease | 41.8 (40.3, 43.3) | 56.8 (55.3, 58.3) | 65.1 (63.7, 66.6) | 57.3 (55.8, 58.7) | 90.1 (89.2, 90.9) |
| | Obese (self-report) | 32.6* (30.0, 35.2) | 42.2* (39.7, 45.1) | 61.3 (58.3, 64.3) | 48.0* (44.9, 51.2) | 88.5 (86.5, 90.3) |
| | Normal/under weight (self-report) | 41.6 (40.0, 43.2) | 55.6 (53.9, 57.3) | 58.7 (57.0, 60.3) | 60.0 (58.5, 61.6) | 89.3 (88.3, 90.2) |
| | Daily smoker | 29.4* (26.7, 32.1) | 37.8* (34.2, 41.5) | 57.9 (54.4, 61.3) | 42.4* (38.8, 46.1) | 86.7 (84.6, 88.5) |
| | Never smoked | 39.3 (38.0, 40.7) | 53.6 (52.1, 55.0) | 59.0 (57.6, 60.4) | 57.2 (55.9, 58.6) | 89.0 (88.1, 89.8) |

*Significantly different from comparison population (last population listed).
Data are age-standardised to the 2011 Victorian population.
Data source: 2014 Victorian Population Health Survey

Obese adults and daily smokers were less likely than comparison groups to report that most adults can be trusted, to feel valued by society and to report that multiculturalism definitely made life in their area better. If all Victorians in 2014 had the rate of feeling valued by society of those of healthy weight, then the social capital of about 250,000 adults would be increased. In Australia in 2014, adults with a disability were about 20 per cent less likely to report that most people can be trusted, as were adults with a mental illness, than those without these conditions (ABS 2015).

For adolescents, having a trusted adult in their lives is considered a strong protective factor against school disengagement, mental health issues and development of antisocial or risky behaviours. About two-thirds of adolescents had a trusted adult in their lives in 2016 (Table 3.2).

Adolescents living in couple families were most likely to have a trusted adult in their lives. Those who spoke a language other than English at home were 16 per cent less likely to have a trusted adult than those who spoke English. Year 5 students were the most likely to have a trusted adult, with rates in Year 8 and Year 11 about 15 per cent lower. Adolescents with special health care needs were 9 per cent less likely to have a trusted adult in their lives than other students.

Resilience varied markedly across geographic areas of Victoria. While rates were similar for adolescents in metropolitan and regional Victoria, this masked a 17 per cent difference between DET regions – ranging from a high of 74 per cent to a low of 63 per cent.

An indicator of social determinants of health is whether a household with children ran out of food and could not afford to buy more, a measure of food insecurity. In 2013 for Victorian children aged 0–12 years, one in 20 households was food insecure in the past 12 months (Table 3.3). Children living in the most disadvantaged areas of the state were about four times more likely to be food insecure than children in the least disadvantaged areas. That is, about 50,000 children lived in households with insufficient food. If all Victorian children had the rate of food insecurity of those living in the least disadvantaged areas, then 35,000 fewer children would live in households with insufficient food.

More than half of Victorian children were developmentally on track as they started their first year of formal full-time education, as defined by the Australian Early Development Index (AEDC). In 2015, 57.5 per cent of children were developmentally on track on all five domains – communication, emotional maturity, language and cognition, physical health and wellbeing and social competence. Boys were 25 per cent less likely than girls to be on track. Aboriginal Victorian children were 39 per cent less likely to be on track than other children.

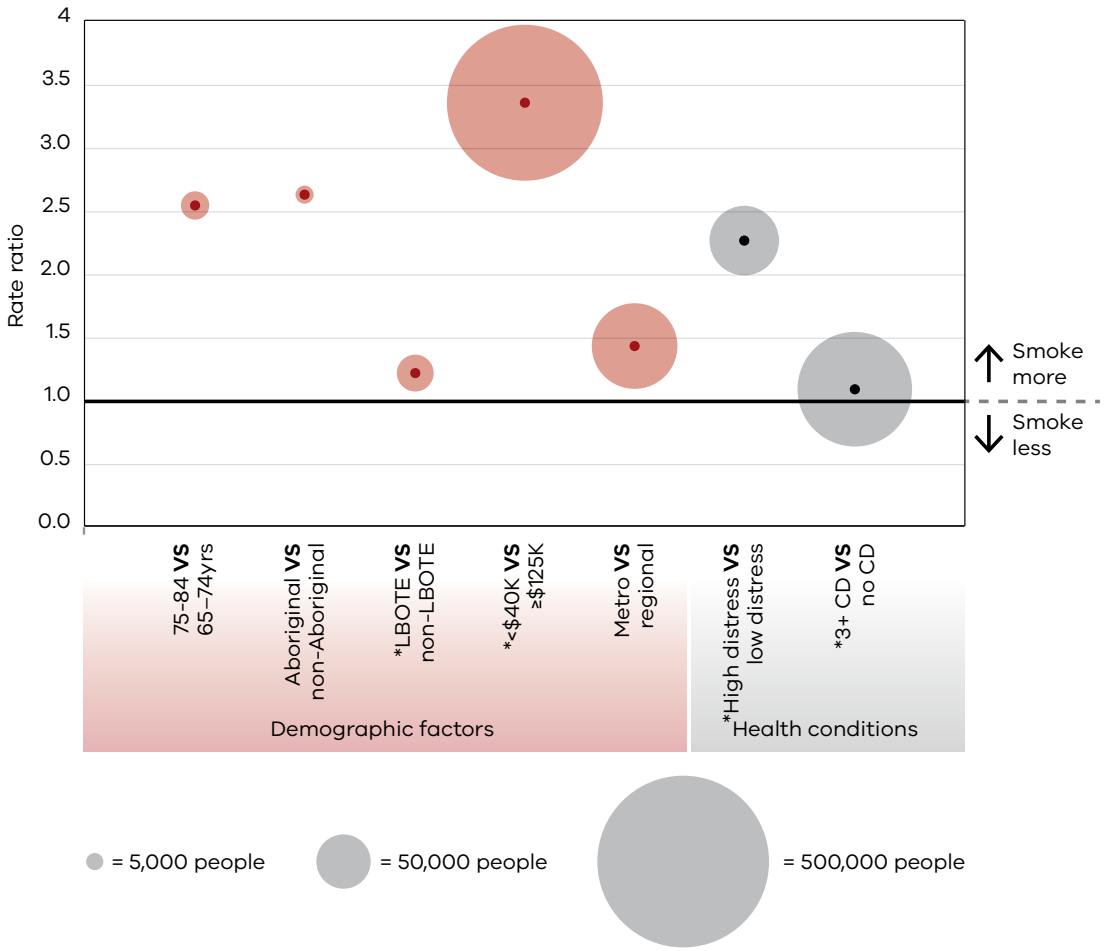
## Smoking and excess alcohol

Substantial gains have been made in Victoria in reducing the smoking rate for adults and adolescents, although these gains have not been made for all sociodemographic populations. However, smoking remains a leading cause of preventable death and disease and a significant contributor to health inequalities. In 2011 tobacco smoking caused 8.0 per cent of the burden of disease in Victoria, the largest burden due to a modifiable risk factor (AIHW 2016c). Alcohol use caused 4.2 per cent of the burden of disease. Excess alcohol can cause injuries in the short term and over a lifetime can cause diseases and death.

Of the demographic and health factors, lower income had the most impact on smoking. Lower income was associated with both the higher daily smoking rate of both the largest number of adults and the largest relative difference in smoking rates across the state. If all Victorians had the rate of daily smoking of those with an annual household income of at least $125,000, there would be about 320,000 fewer adults smoking (Figure 3.4). In 2014 adults with an annual household income of less than $40,000 were 3.4 times more likely to smoke daily compared with those with an income of at least $125,000 (Table 3.5).

Aboriginal Victorians were 2.6 times more likely to smoke daily compared with non-Aboriginal Victorians. If the smoking rate of Aboriginal Victorians were the same as others there would be about 4,300 fewer Aboriginal Victorians smoking. Adults living in regional areas (DHHS regions) were about 1.4 times more likely to smoke than those in metropolitan areas. If rates of daily smoking in regional areas were the same as for metropolitan areas, there would be about 100,000 fewer smokers. Rates of current smoking varied sixfold between local government areas of the state – ranging from 29.7 per cent to 5.2 per cent (DHHS 2016c). In Australia in 2013, adults who identified as homosexual or bisexual were about 70 per cent more likely to smoke daily than heterosexual people (AIHW 2014).

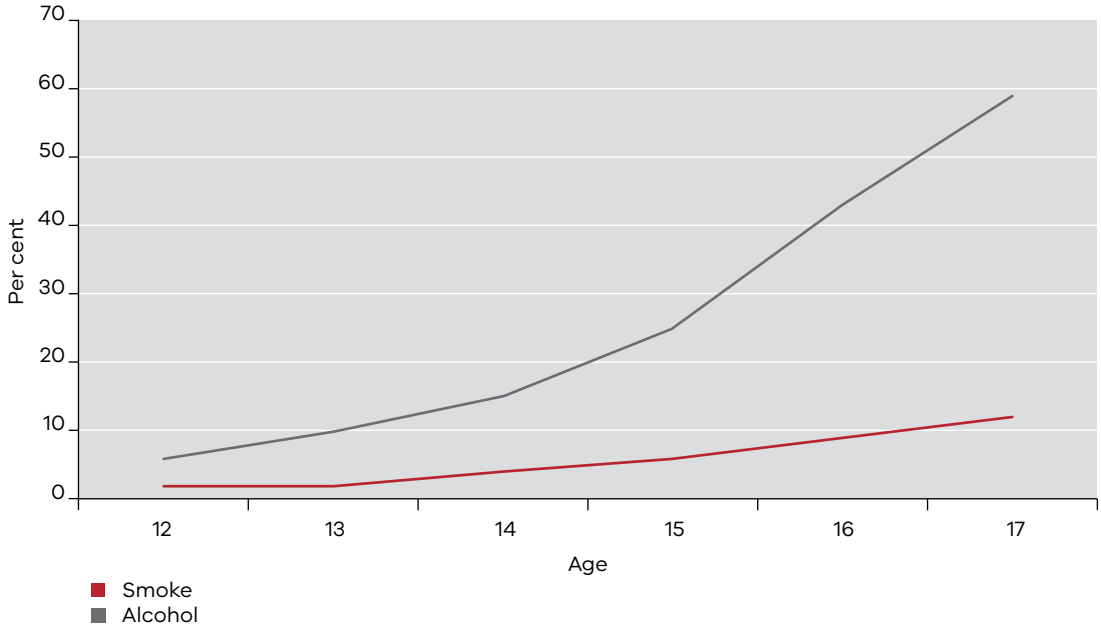
**Figure 3.4: Daily smoking, rate ratio of proportion and total population affected by smoke, by demographic and health factors, adults, Victoria, 2014**




LBOTE: Language background other than English
CD: Chronic disease
*Significantly different
Data source: 2014 Victorian Population Health Survey

There were about 24,000 adolescents aged 12–17 years who reported smoking cigarettes in the past week in 2014, representing 6 per cent of secondary school students (DHHS 2016d). Male and female students had similar rates of current smoking, and rates were similar in students' socioeconomic status categories (Table 3.6). The largest variation was between age groups. The percentage of students who were current smokers increased from 2 per cent of 12 year olds to 12 per cent of 17 year olds (Figure 3.5). Current smoking rates decreased by about one-third between 2008 and 2014. There was a greater reduction for adolescents aged 12–15 years (about a 50 per cent decrease) than for 16–17 year olds (about a 25 per cent decrease).

**Figure 3.5: Current smoking and alcohol consumption in the past month, proportion, by age, adolescents, Victoria, 2014**

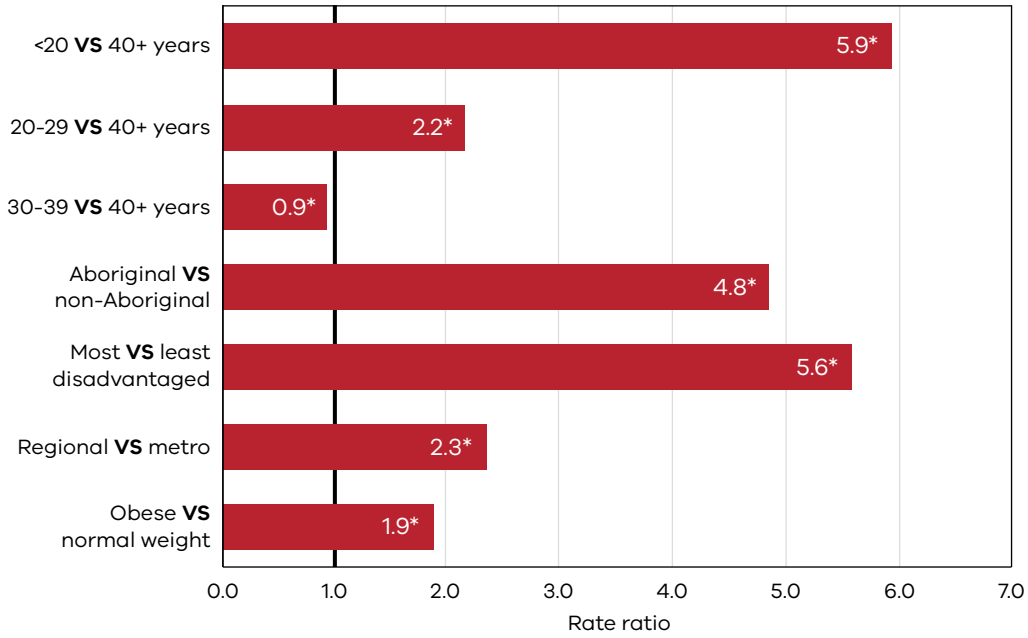



Data source: 2014 Victorian Population Health Survey

In Victoria in 2014, 5,972 Victorian mothers smoked in the first 20 weeks of pregnancy, representing about one in 13 mothers (Table 3.7). Rates of smoking in pregnancy were substantially higher for teenage mothers, Aboriginal Victorian mothers, mothers in disadvantaged areas and mothers in regional areas.

Mothers aged under 20 years were about six times more likely to smoke than mothers aged 40 years or older, with mothers 20–29 years about twice as likely to smoke as older mothers (Figure 3.6). Aboriginal Victorian mothers were about five times more likely to smoke than non-Aboriginal mothers and regional mothers twice as likely as metropolitan mothers. Socioeconomic disadvantage was associated with the largest number of mothers who smoked in the first 20 weeks of pregnancy. Mothers in the most disadvantaged areas of the state were 5.6 times more likely to smoke than those in the least disadvantaged areas. If all mothers smoked at the same rate as those in the least disadvantaged areas, then about 3,800 fewer mothers would have smoked during pregnancy.

**Figure 3.6: Mothers who smoked in the first 20 weeks of pregnancy, rate ratio, by demographic and health factors, Victoria, 2014**




*Significantly different

Data source: Victorian Perinatal Data Collection

Nearly one in five Victorian children lived in households where there was a regular smoker. In 2013, 18.5 per cent of children were exposed to smoke (Table 3.3). Children living in the most disadvantaged areas were about three times more likely to be exposed than those in the least disadvantaged areas. About 175,000 children lived in a household with at least one regular smoker. If all children had the same rate of exposure as those in the least disadvantaged areas, then about 100,000 fewer children would be exposed to cigarette smoke.

Excess alcohol is consumed by many Victorian adults. Six in 10 Victorian adults consume alcohol at quantities that place them at lifetime risk and two in 10 consume quantities of alcohol on a single occasion at least monthly that places them at risk.

Adults with the highest income and those that speak English only at home have about double the lifetime and single occasion risk of alcohol consumption than comparison groups (Table 3.5). Adults in regional areas have about 10–20 per cent greater risk of lifetime and single occasion harm than those in metropolitan areas. In LGAs of the state, rates of lifetime risk varied by more than twofold – ranging from 80.1 per cent to 38.6 per cent (DHHS 2016c). Adults with high psychological distress are more likely to smoke daily and less likely to consume alcohol at lifetime risk of harm.

In Australia in 2013 adults who identified as homosexual or bisexual were about 60 per cent more likely to drink alcohol at quantities that placed them at lifetime risk, than heterosexual people (AIHW 2014). In contrast, homosexual or bisexual adults were about 30 per cent less likely to drink risky quantities of alcohol on a single occasion at least monthly.

There were about 105,000 adolescents aged 12–17 years who drank alcohol in the past month in 2014, representing 26 per cent of secondary school students (DHHS 2016d). Male and female students had similar rates of current alcohol consumption, and rates were similar across socioeconomic status categories (Table 3.6). The largest variation was between age groups. The percentage of students who were current alcohol consumers increased from 6 per cent of 12 year olds to 59 per cent of 17 year olds. Current alcohol

consumption was about 50 per cent higher in regional areas than metropolitan areas. The proportion of adolescents who drank alcohol in the past month decreased by about one-third between 2008 and 2014. There was a greater reduction for adolescents aged 12–15 years (about a 50 per cent decrease) than for 16–17 year olds (about a 20 per cent decrease).

Almost half of all Victorian children aged under two years were exposed to alcohol in utero. In 2013, 46.7 per cent of biological mothers of children aged under two years reported drinking alcohol during the pregnancy of that child (Table 3.3). Mothers in the least socioeconomically disadvantaged areas were nearly twice as likely to drink alcohol during pregnancy as mothers in the most disadvantaged areas.

**Table 3.5: Lifestyle-related indicators, adults, by demographic and health factors, Victoria, 2014**

| | | Daily smoking | Alcohol consumption at life time risk | Alcohol consumption at single occasion risk at least monthly | Sufficient physical activity |
|---|---|---|---|---|---|
| | | % (95% CI) | % (95% CI) | % (95% CI) | % (95% CI) |
| | Persons (all) | 9.8 (9.1, 10.5) | 59.2 (58.0, 60.3) | 20.2 (19.2, 21.3) | 41.4 (40.2, 42.5) |
| Demographic Factors | 85+ years | 1.3* (0.7, 2.2) | 23.2* (20.0, 26.6) | 2.8* (1.8, 4.4) | 35.1* (31.4, 38.9) |
| | 75–84 years | 3.3* (2.7, 4.0) | 34.3* (32.4, 36.2) | 5.7* (4.8, 6.7) | 48.1* (46.4, 50.1) |
| | 65–74 years | 6.5 (5.7, 7.3) | 46.9 (45.3, 48.5) | 11.5 (10.6, 12.6) | 64.0 (62.4, 65.5) |
| | Aboriginal | 25.5* (16.7, 36.8) | 59.1 (48.5, 68.9) | 25.5 (17.7, 35.4) | 49.6 (39.6, 59.6) |
| | Non-Aboriginal | 9.7 (9.0, 10.4) | 59.3 (58.1, 60.4) | 20.3 (19.3, 21.4) | 41.3 (40.2, 42.5) |
| | Language other than English | 8.5 (7.4, 9.8) | 38.9* (36.5, 41.4) | 10.1* (8.3, 12.2) | 35.6* (33.2, 38.1) |
| | English only at home | 10.3 (9.5, 11.2) | 65.9 (64.7, 67.0) | 23.7 (22.5, 25.0) | 43.1 (41.8, 44.5) |
| | < $40,000 household income | 18.8* (16.3, 21.6) | 43.5* (40.1, 47.0) | 13.5* (11.1, 16.2) | 34.5* (31.3, 37.9) |
| | ≥ $125,000 household income | 5.6 (4.1, 7.6) | 74.1 (71.0, 77.0) | 27.2 (24.5, 30.1) | 50.5 (47.3, 53.6) |
| | Metropolitan (DHHS regions) | 8.9* (8.1, 9.8) | 58.0* (56.7, 59.3) | 19.0* (17.8, 20.3) | 41.4 (40.1, 42.8) |
| | Regional | 12.6 (11.4, 14.0) | 62.9 (60.9, 64.9) | 24.4 (22.5, 26.3) | 41.3 (39.3, 43.4) |
| Health conditions | High/very high psychological distress | 18.0* (15.8, 20.3) | 50.4* (47.2, 53.6) | 19.1 (16.5, 22.0) | 29.6 (26.8, 32.6) |
| | Low psychological distress | 8.0 (7.0, 9.0) | 61.1 (59.6, 62.6) | 20.1 (18.8, 21.5) | 44.6* (43.1, 46.2) |
| | 3+ chronic diseases | 9.3 (7.0, 12.3) | 56.4 (50.9, 61.8) | 9.3* (5.9, 14.4) | 25.5* (20.8, 30.9) |
| | 2 chronic diseases | 18.7* (14.2, 24.1) | 54.9 (49.6, 60.2) | 16.1 (12.4, 20.6) | 36.0* (30.8, 41.5) |
| | 1 chronic disease | 11.4* (10.2, 12.9) | 61.1 (58.9, 63.3) | 21.3 (19.4, 23.4) | 40.3* (38.0, 42.6) |
| | No chronic disease | 8.6 (7.7, 9.5) | 60.5 (59.0, 61.9) | 20.7 (19.4, 22.0) | 43.4 (41.9, 44.9) |
| | Obese (self-report) | 10.2 (8.6, 12.1) | 57.5 (54.3, 60.6) | 19.9 (17.3, 22.7) | 34.6* (31.6, 37.7) |
| | Normal/under weight (self-report) | 9.8 (8.8, 11.0) | 58.7 (57.1, 60.4) | 18.2 (16.8, 19.7) | 45.3 (43.6, 47.0) |
| | Daily smoker | n/a | 65.9* (62.9, 68.8) | 35.3* (32.0, 38.7) | 32.2* (28.7, 35.8) |
| | Never smoked | n/a | 53.0 (51.6, 54.4) | 14.4 (13.3, 15.5) | 41.8 (40.4, 43.2) |

*Significantly different from comparison population (last population listed).

Data are age-standardised to the 2011 Victorian population.

Data source: Department of Health and Human Services 2016b

**Table 3.6: Smoking and alcohol indicators, adolescents, by demographic and health factors, Victoria, 2014**

| | Currently smoke (in past week) | Currently drink alcohol (in past month) |
|---|---|---|
| | % | % |
| Adolescents (all) | 6 | 26 |
| Males | 5 | 24 |
| Females | 6 | 27 |
| 12 years | 2* | 6* |
| 13 years | 2* | 10* |
| 14 years | 4* | 15* |
| 15 years | 6* | 25* |
| 16 years | 9 | 43* |
| 17 years | 12 | 59 |
| Metropolitan (ARIA+) | 6 | 23* |
| Regional | 6 | 34 |
| Socioeconomic status: | | |
| Most disadvantaged | 5 | 17 |
| Quintile 2 | 4 | 30 |
| Quintile 3 | 5 | 26 |
| Quintile 4 | 7 | 31 |
| Least disadvantaged | 6 | 25 |

*Significantly different from comparison population (last population listed)
Age group for all adolescents: 12–17 year old school students.
Socioeconomic status is SEIFA IRSD.
Data source: Department of Health and Human Services 2016d

**Table 3.7: Mothers who smoked in the first 20 weeks of pregnancy, by demographic and health factors, Victoria, 2014**

| | | % |
|---|---|---|
| Mothers (all) | | 7.7 |
| Demographic groups | < 20 years | 30.8* |
| | 20–29 years | 11.2* |
| | 30–39 years | 4.8 |
| | 40+ years | 5.2 |
| | Aboriginal | 35.4* |
| | Non-Aboriginal | 7.3 |
| | Socioeconomic status: most disadvantaged | 14.5* |
| | Quintile 2 | 9.9* |
| | Quintile 3 | 6.7* |
| | Quintile 4 | 4.4* |
| | Least disadvantaged | 2.6 |
| | Metropolitan (DHHS regions) | 5.8* |
| | Regional | 13.6 |
| Health conditions | Obese at conception (self-report) | 12.1 |
| | Normal/under weight at conception (self-report) | 6.5 |

*Significantly different from comparison population (last population listed).
Socioeconomic status is SEIFA IRSD.
Data source: Victorian Perinatal Data Collection

## Active living

Active living encompasses regular physical activity and limiting screen time for recreation. In 2011, insufficient physical activity caused 4.4 per cent of the burden of disease in Victoria (AIHW 2016c).

With increasing income, adults are more likely to be physically active. Lower income affected the rate of sufficient physical activity of the largest number of adults. In 2014 adults with an annual household income of less than $40,000 were about 30 per cent less likely to be physically active compared with those with an income of at least $125,000 (Table 3.6). There are about 2.5 million Victorian adults who do not do sufficient physical activity. If all adults had the rate of physical activity of those with an annual household income of at least $125,000, there would be about 450,000 more adults meeting physical activity guidelines. While rates were similar in metropolitan and regional Victoria, there was an almost twofold difference in the rate in local government areas across the state – ranging from a high of 59 per cent to a low of 31 per cent (DHHS 2016c).

Adults with high psychological distress, with chronic diseases, or who were obese or who smoked daily were less likely to do sufficient physical activity. Having two chronic diseases was associated with a 20 per cent decrease in the likelihood of doing sufficient activity; having three or more diseases decreased the likelihood by about 40 per cent. Adults with high psychological distress were about two-thirds as likely to do sufficient activity as those with low distress. Obese adults and daily smokers were about 75 per cent as likely to do sufficient activity as normal weight and non-smokers respectively.

Rates for adolescents and children also varied markedly. While about a quarter of adolescents did sufficient physical activity in 2016, the rate varied markedly with age and sex (Table 3.2). Males were about 70 per cent more likely to do sufficient activity than females. About a third of children in Year 5 in 2013 did sufficient activity decreasing to 12 per cent in Year 11.

Almost two-thirds of children did sufficient activity, with boys more likely to do sufficient activity than girls (Table 3.2). About three-quarters of children aged 5–8 years and half of children aged 9–12 years were sufficiently active. Children in regional areas were 11 per cent more likely to do sufficient physical activity than children in metropolitan areas.

For screen time, about two in 10 children and six in 10 adolescents had too much screen time for recreation. Males were more likely to exceed the guidelines than females. Rates increased with age, from 14 per cent for children 5–8 years to 22 per cent for Year 11 students. Children in the most disadvantaged areas were about 70 per cent more likely to have too much screen time than those in the least disadvantaged areas. Children with special health care needs were about one-third more likely to have too much screen time compared with other children.

## Obesity

In 2011 overweight and obesity caused 4.8 per cent of the burden of disease in Victoria (AIHW 2016c). The rate of overweight and obesity burden in the lowest socioeconomic areas of Australia was 2.3 times that of the highest socioeconomic areas.

Obesity and overweight prevalence are most accurately assessed by measurement, generally from triennial national surveys. The annual collection of self-reported height and weight by adults in the Victorian Population Health Survey is integral to the regular assessment of these prevalence and to the assessment of inequalities in the state. Rates of self-reported overweight and obesity of adults are reported in Chapter 7.

In 2014–15 almost two-thirds of Victorian adults were measured as overweight or obese including one-quarter of adults who were obese (ABS 2016) (Table 3.8). For children 5–17 years, almost one-third were overweight or obese including about one in 17 who were obese. That is, in Victoria there are 3.2 million overweight or obese people – 1.7 million adults overweight and 1.2 million obese, and 248,000 children aged two years or older overweight and 83,000 obese. Rates in males and females differed. Women were about 50 per cent more likely to be overweight than men, and girls about three times more likely to be obese than boys.

**Table 3.8: Measured overweight and obesity, adults and children, by age and sex, Victoria, 2014–15**

| | | Obese | Overweight | Overweight or obese |
|---|---|---|---|---|
| | | % | % | % |
| Children | Children (5–17 years) | 5.9 | 23.7 | 30.9 |
| | Males | 3.1* | 24.9 | 28.0 |
| | Females | 9.6 | 24.2 | 34.1 |
| | 2–4 years (Australia) | 8.7 | 11.3* | 20.0* |
| | 5–7 years (Australia) | 10.0 | 14.6* | 24.1* |
| | 8–11 years (Australia) | 6.0 | 21.0 | 26.8* |
| | 12–15 years (Australia) | 6.9 | 21.2 | 27.6* |
| | 16–17 years (Australia) | 7.9 | 24.7 | 32.9 |
| | Aboriginal Australians (2–14 years) | 10.2* | 19.6 | 29.7* |
| | Non-Aboriginal Australians (2–14 years) | 6.5 | 18.4 | 25.0 |
| Adults | Adults (18+ years) | 26.4 | 37.1 | 63.3 |
| | Males | 25.9 | 44.9* | 70.4* |
| | Females | 26.8 | 29.5 | 56.5 |
| | 18–24 years | 12.5* | 23.3* | 40.0* |
| | 25–34 years | 17.4* | 34.9* | 51.3* |
| | 35–44 years | 26.8* | 39.4 | 67.2* |
| | 45–54 years | 30.2 | 40.5 | 70.7 |
| | 55–64 years | 34.7 | 41.2 | 74.7 |
| | 65+ years | 34.3 | 40.1 | 73.6 |
| | Aboriginal Victorians (15+ years) | 34.1 | 31.7 | 65.8 |
| | Aboriginal Australians (15+ years) | 37.1 | 28.6 | 66.0 |
| | Aboriginal Australians (18+ years) | 38.1* | 31.5* | 69.6 |
| | Non-Aboriginal Australians (18+ years) | 27.6 | 42.6 | 70.0 |

*Significantly different from comparison population (last population listed).

Data only available for Australian children by age, Aboriginal and Torres Strait Islander Australian children and non-Aboriginal Australian adults.

Data are age-standardised to the 2001 Australian Estimated Resident Population.

Data sources: ABS 2016 and ABS 2014 for Aboriginal and non-Aboriginal data.

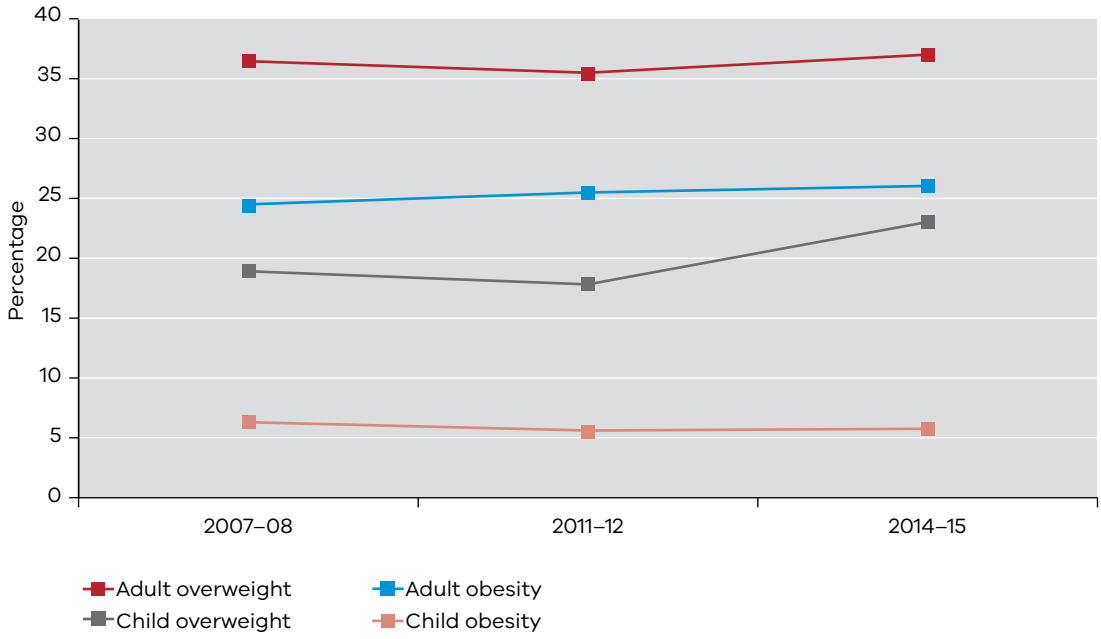
For adults, obesity and overweight rates increased with age. Rates of overweight increased by about 40 per cent between 18–24 and 35–44 years, and then plateaued in older age groups. Obesity rates increased rapidly from 18–24 years to about 2.5-fold by 45–54 years. For adult Aboriginal Australians in 2012–13 the rate of obesity was greater than for non-Aboriginal Australians, while the rate of overweight was lower for Aboriginal Australians (ABS 2014). For children, the rate of obesity was greater for Aboriginal Australians than for others.

Across the Primary Health Networks of Victoria, the rate of adults who were overweight and obese ranged from a high of 70 per cent to a low of 60 per cent (AIHW 2016d). Obesity rates varied by about 65 per cent between Primary Health Networks – from a high of 35 per cent to a low of 21 per cent.

For children, rates of overweight and obesity at local areas across Victoria, for Aboriginal Victorian children, and for children living in advantaged and disadvantaged areas are currently being measured (Strugnell et al. 2016). Preliminary findings indicate substantial inequalities among the sociodemographic groups.

Rates of obesity in Victoria have been increasing for several decades. However, since 2007–08 there has been a steadying in rates of measured obesity and overweight in Victorian adults and children, consistent with national trends (ABS 2009, ABS 2013a, ABS 2016) (Figure 3.7).

**Figure 3.7: Trends in prevalence of overweight and obesity, adults and children, Victoria**




Data are age-standardised to the 2001 Australian population.
Data sources: ABS 2009; 2013a; 2016

## Mental health

Mental disorders have a significant impact on the health and wellbeing of Victorians. Anxiety disorders and depressive disorders were the fourth and fifth largest specific causes of burden of disease in Victoria in 2011, after coronary heart disease, back pain and other musculoskeletal conditions (AIHW 2016c). Psychological distress had a marked association with self-reported good health and satisfaction with life of adults as reported above. Rates of psychological distress varied markedly across Victoria for adults and adolescents.

Lower income was the demographic factor associated with higher psychological distress of the largest number of adults. If all Victorians had the rate of high psychological distress of those with an annual household income of at least $125,000, then the health of about 310,000 adults would be improved (Figure 3.8). In 2014 adults with an annual household income of less than $40,000 were 2.7 times more likely to report high or very high psychological distress compared with those with an income of at least $125,000 (Table 3.1). Similarly, low-income adults were about 60 per cent more likely to report being diagnosed with anxiety and depression.

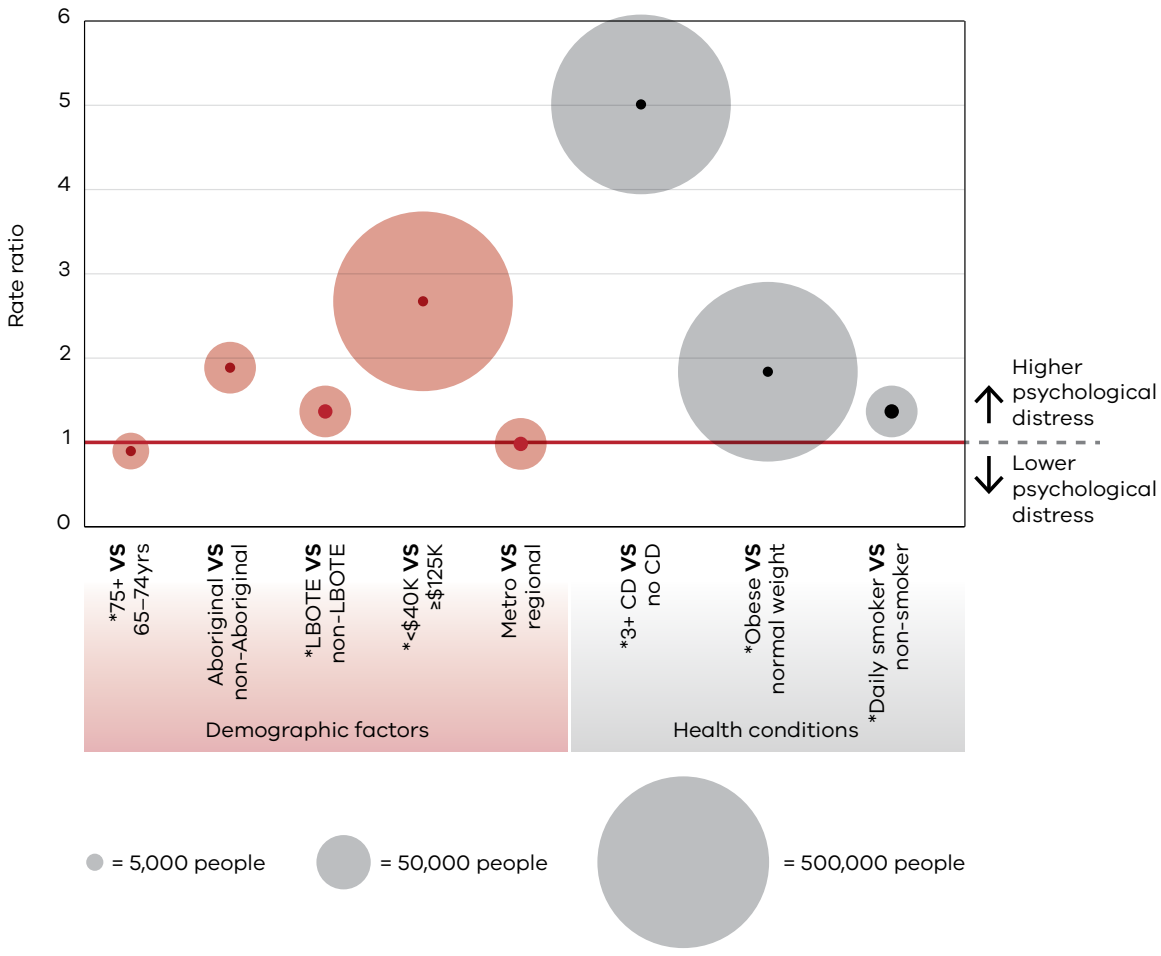
Aboriginal Victorians were nearly twice as likely to report high distress compared with non-Aboriginal Victorians. If the rate of distress for Aboriginal Victorians was the same

as for others, then the health of more than 3,000 Aboriginals would be improved. Adults who spoke a language other than English were about 40 per cent more likely to report high distress, yet were less likely to be diagnosed with anxiety or depression.

Rates of high psychological distress for adults varied eight fold between local government areas of the state – ranging from 21 per cent to 2.7 per cent, with similar rates in metropolitan and regional areas (departmental regions) (DHHS 2016b). In contrast, rates of depression and anxiety varied 2.6 fold across the state. Adults who had been diagnosed with chronic diseases, smoked or were obese were up to twice as likely to report high distress as those without the conditions.

About one in four adults have been diagnosed with depression and anxiety in their lifetime (Table 3.1). The inequality across Victoria of diagnosis with depression and anxiety is less than for adults with high levels of psychological distress while following a similar pattern. In 2007 homosexual/bisexual Australians aged 16–85 years, compared with heterosexual people, were more than twice as likely to have anxiety disorders and nearly three times as likely to have depression and mood disorders (ABS 2008).

**Figure 3.8: High/very high psychological distress, rate ratio of proportion and total population affected, by demographic and health factors, adults, Victoria, 2014**

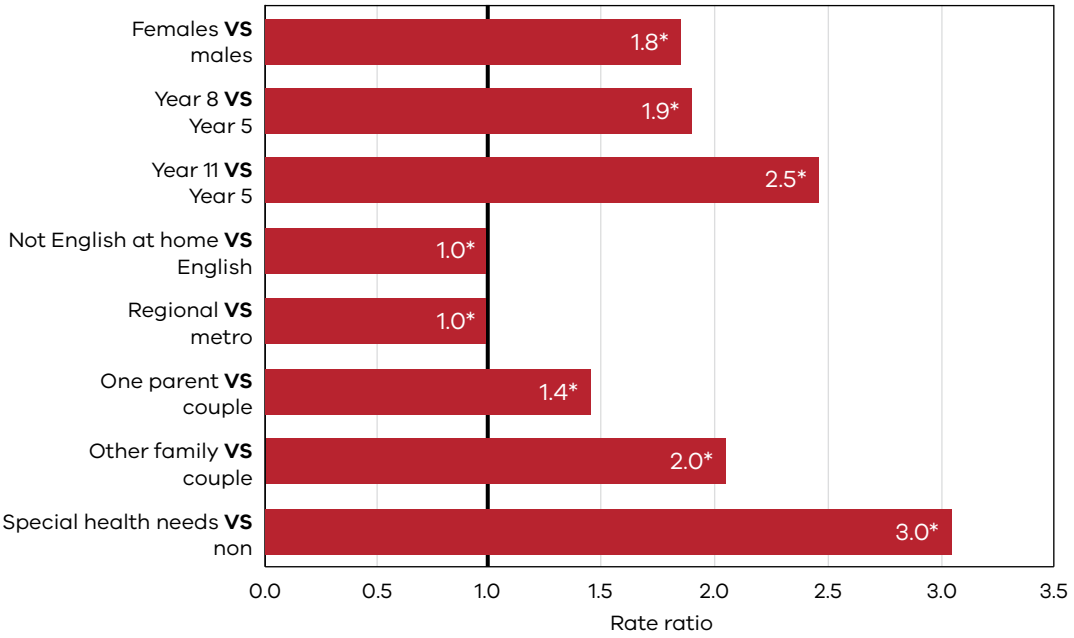



LBOTE: Language background other than English
CD: Chronic disease
*Significantly different
Data source: 2014 Victoria Population Health Survey

For adolescents, about one in six reported experiencing psychological distress in 2016. As for adults, adolescent females were more likely to report experiencing distress than males. Adolescent females were about twice as likely to experience psychological distress as males (Table 3.2, Figure 3.9). The largest variation of rates of psychological distress between groups were between adolescents with special health care needs and others, school Year levels and family types.

Year 5 students were the least likely to experience distress, with rates in Year 8 about double and rates in Year 11 2.5 times higher than for students in Year 5. Adolescents with special health care needs about three times more likely to report distress than other students. Adolescents living in couple families were least likely to report distress.

**Figure 3.9: High level of psychological distress, rate ratio, by demographic and health factors, adolescents, Victoria, 2016**




*Significantly different
Data source: *About You* 2016

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