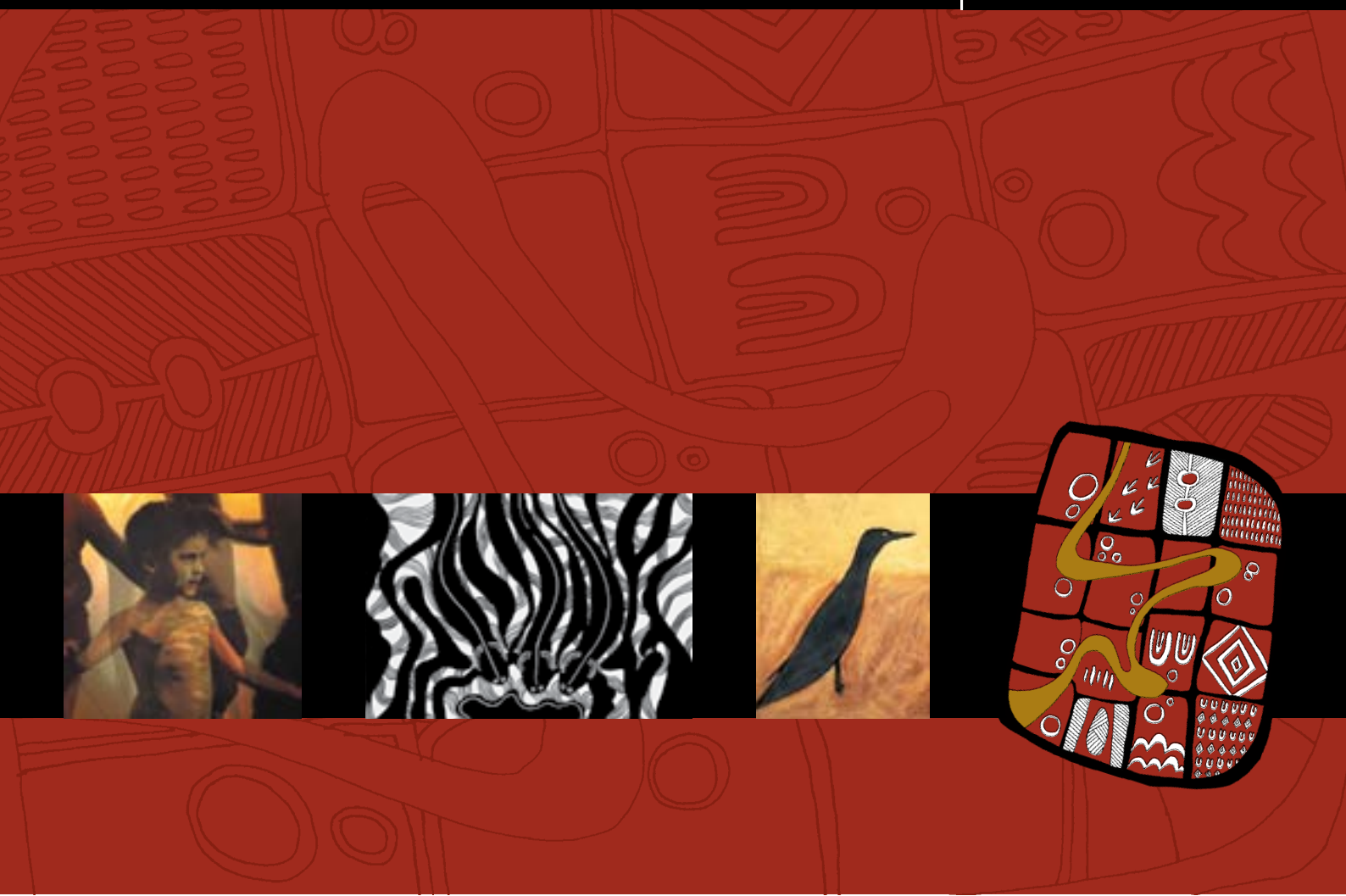


The health and wellbeing of Aboriginal Victorians

Victorian Population
Health Survey 2008
Supplementary report



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Victorian Population Health Survey 2008
Supplementary report

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This work was undertaken by the Health Intelligence Unit, Prevention and Population Health Branch, Wellbeing, Integrated Care and Ageing, Victorian Government Department of Health. The project team comprised Ms Alison Markwick, Dr Imran Haider, Ms Loretta Vaughan and Dr Zahid Ansari. Ms Markwick took the lead role in analysing the data and preparing the report. Dr Syed Imran Haider helped with the data analysis. Ms Vaughan is the manager of the Victorian Population Health Survey and has been since its inception. Without Ms Vaughan there would be no data to analyse. Dr Zahid Ansari is the director of the Health Intelligence Unit and provided support and critical evaluation of the work.

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Note on artwork

The collage on the cover of this publication includes the work of the following artists (from left to right):

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The collage represents the Department of Health's work to close the health gap on Aboriginal disadvantage.

It consists of four images by Victorian Aboriginal artists. The main image was commissioned by the Department of Health and produced by Vicki Couzens to represent healthy communities.

The other three artworks were chosen by Vicki Couzens and the Koorie Heritage Trust. Their inclusion in the collage is courtesy of the artists and the Koorie Heritage Trust Collection. For more information on the collage go to aboriginalhealth@health.vic.gov.au.

Please note:

Throughout this document, the term Aboriginal is taken to include people of Aboriginal and Torres Strait Islander descent. Aboriginal is used in preference to Indigenous and Koori. While Koori refers to Aboriginal people from the south-eastern part of Australia, we choose not to use this term as not all Aboriginal people living in Victoria are Koori.

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Foreword

The Department of Health is committed to working with Victorian Aboriginal community and other key stakeholders to close the gap in health outcomes between Aboriginal and non-Aboriginal Victorians.

A key priority in the government's *Victorian Health Priorities Framework 2012–2022* is to develop a system that is responsive to people's needs, particularly key population groups such as Aboriginal people. To do this well we need a clear understanding of health status and its broader social determinants. The Victorian Government recognises that people's health outcomes cannot be separated from the social, economic and cultural environment in which they live.

The Victorian Population Health Survey is a cornerstone of Victoria's population health surveillance by the Department of Health. It was initiated in 1998, with the first survey of adult Victorians conducted in 2001.

The survey's findings fill a significant void in the accessible data needed to ensure public health programs are relevant and responsive. In 2008, the sample size was expanded to enable data to be reported at the local government area level. This provided a sufficient sample of Aboriginal adults living in Victoria to allow for a separate analysis of their health and wellbeing.

This supplementary report contains the key findings from the 2008 VPHS in relation to Aboriginal adults in Victoria. It presents information on health outcomes and the underlying social determinants of health. There are significant disparities in most of the underlying determinants of health that impact on health outcomes between Aboriginal and non-Aboriginal Victorians. The value of this survey is that it collects a broad range of data that can help us to better understand the disparities that impact on health outcomes and inform the ongoing development of policies and strategies to close the gap.

The Victorian government is reviewing the *Victorian Indigenous Affairs Framework (VIAF)* in order to strengthen its whole-of-government framework underpinning efforts to raise life expectancy and quality of life for Aboriginal Victorians. The findings in this report will contribute to this process and will inform the government in setting new targets. Progress towards these targets will be monitored using data from future surveys of the Victorian Population Health Survey which are conducted at the local government area, every three years.

The 2011 Victorian Population Health Survey includes a number of additional questions specifically for Aboriginal people, such as their experiences of the health system and cultural connectedness. This will further inform our continuing efforts to help close the gap between Aboriginal and non-Aboriginal Victorians.



FRAN THORN
Secretary

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Introduction

About the Victorian Population Health Survey

The Victorian Population Health Survey (VPHS) has been conducted on an annual basis by the Victorian Department of Health since 2001 and is an important component of its population health surveillance capacity.

The aim of the survey is to provide quality and timely information about the health and wellbeing of adult Victorians that can be used to inform policy development and strategic planning, decisions about public health priorities, and monitor trends over time.

For the years 2001 to 2007, the survey was conducted statewide and sampled approximately 7,500 Victorians. In 2008 the sample size was expanded for the first time to approximately 34,000 Victorians, to enable analysis by local government area (LGA).

About this supplementary report

The larger sample size also allowed a separate analysis of the health and wellbeing of Aboriginal adults aged 18 years and older. Therefore, this is the first time that the Department of Health is specifically reporting on the health and wellbeing of Aboriginal adults living in Victoria.

In the Census year of 2006 it was estimated that six per cent of the Aboriginal population in Australia lived in Victoria,

which represents 0.6 per cent of the total Victorian population (Australian Bureau of Statistics (ABS) 2008).

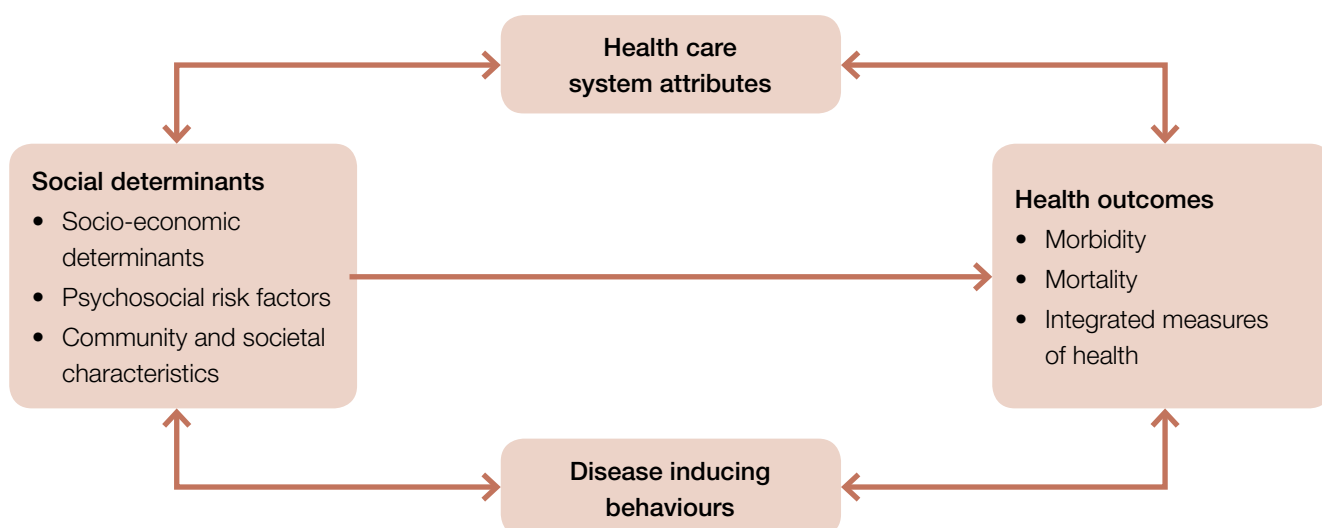
For the purposes of this report, the term 'Aboriginal' is used to refer to both Aboriginal and Torres Strait Islander people in preference to the term Indigenous. While Koori refers to Aboriginal people from the south-eastern part of Australia, we choose not to use this term as not all Aboriginal people living in Victoria are Koori.

The public health model of the social determinants of health

A public health model of the social determinants of health, published in 2003 by Ansari et al., provided the theoretical framework for the VPHS and informed the development of the questionnaire. The model is illustrated in Figure 1 and is based on three components that interact directly and indirectly to affect a person's health or health outcomes.

Essentially, the model predicts that the underlying social determinants of health, which includes socioeconomic determinants, psychosocial risk factors and community and societal characteristics, impact on the health of individuals both directly and indirectly via the healthcare system and disease-inducing behaviours. This model not only informed the development of the VPHS, but also provides the framework for this report. For further details about the model see Ansari et al. (2003).

Figure 1: Public health model of the social determinants of health



Source: Ansari et al. 2003

Structure of this report

All comparisons are between Aboriginal and non-Aboriginal adults, with subcomparisons by gender and geographic area of residence: rural or urban Victoria.

Chapter 1 describes the survey methodology, statistical methods used, and the demographic profile of the survey respondents.

Chapter 2 reports on the first component of the public health model of the social determinants of health – the social determinants. It describes what is meant by the social determinants and makes comparisons of the various indicators collected by the VPHS. The social determinants are further broken down into three subcomponents: socioeconomic determinants, psychosocial risk factors, and community and societal characteristics.

Chapter 3 reports on the second component of the public health model of the social determinants of health – disease-inducing behaviours. It examines selected disease-inducing behaviours including smoking, alcohol consumption, physical activity, fruit and vegetable consumption, and body weight.

Chapter 4 reports on the third component of the public health model of the social determinants of health – the healthcare system. It evaluates the use of various healthcare services as indicators of availability, access and healthcare-seeking behaviour.

Chapter 5 reports on the fourth and final component of the public health model of the social determinants of health – health outcomes. It investigates whether any observed disparities described in Chapters 2, 3 and 4 translate into disparities in health outcomes.

Comparisons with national surveys

The most recent surveys conducted in Australia that specifically investigated the health and wellbeing of Aboriginal Australians were the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) conducted in 2004 to 2005 and the National Aboriginal and Torres Strait Islander Social Survey (NATSISS) conducted in 2008. Both surveys were conducted by the ABS on a national level, stratified by state, with a sufficient sample size to produce state-based estimates.

Some of the health and social indicators used in these surveys were identical or very similar to those used in the 2008 VPHS. Where this was the case, this report refers to those findings.

Summary of findings

Analysis of the 2008 VPHS data shows that Aboriginal Victorians are significantly more likely to suffer ill-health than non-Aboriginal Victorians. It confirms many of the findings of the national health and social surveys.

Health outcomes

In 2008 Aboriginal Victorians had a significantly higher prevalence of depression and anxiety, cancer, stroke and asthma, and were more likely to rate themselves as being of only fair or poor health compared with non-Aboriginal Victorians.

Social determinants of health

There were profound disparities between Aboriginal and non-Aboriginal Victorians in the social determinants of health, which are likely to explain, at least in part, the worse health outcomes observed for Aboriginal Victorians.

Socioeconomic determinants

Aboriginal Victorians were significantly socioeconomically disadvantaged compared with non-Aboriginal Victorians, with: lower total annual household incomes; lower levels of educational attainment; higher rates of unemployment or being unable to work; higher rates of divorce, separation or widowhood; lower rates of home and private health insurance ownership; and higher rates of geographic relocation.

Contrary to current perceptions, Aboriginal Victorians were no more likely than their non-Aboriginal counterparts to reside in larger households and a significantly higher proportion lived alone.

Psychosocial risk factors

Approximately 18 per cent (almost one-fifth) of Aboriginal Victorians had experienced food insecurity on at least one occasion in the previous year compared with about five per cent of non-Aboriginal Victorians. This indicates that Aboriginal Victorians were almost four times more likely than their non-Aboriginal counterparts to have

experienced at least one episode of food insecurity in the previous 12 months.

This is the first time in Australia that data on psychological distress, based on the Kessler 10 (K10) psychological distress scale, has been collected and analysed for Aboriginal adults. Almost one in four Aboriginal Victorians (approximately 22 per cent) had high or very high psychological distress levels, almost twice that of non-Aboriginal Victorians (11.3 per cent).

Community and societal characteristics

Aboriginal Victorians fared as well as non-Aboriginal Victorians for various indicators of social networks and support structures including daily social contacts, ability to get help from friends or neighbours (including emergency care for self or children), and ability to get a job through a friend or relative if needed. However, there were two notable disparities: Aboriginal Victorians were significantly less likely to be able to get help from family and less likely to be able to raise \$2,000 within two days in an emergency, compared with their non-Aboriginal counterparts.

There were no significant disparities in relation to indicators of community participation and civic engagement. Aboriginal Victorians were just as likely as non-Aboriginal Victorians to have attended a local community event in the previous six months and to have volunteered in a local group.

By contrast, with respect to beliefs and attitudes about their community and society, we found some significant disparities between Aboriginal and non-Aboriginal Victorians. In particular, Aboriginal Victorians fared worse than their non-Aboriginal counterparts in feelings of personal safety, trust in people, opportunities to have a real say on important matters and feeling valued by society. However, there were no differences in beliefs about the value of multiculturalism.

Disease-inducing behaviours

Of the six disease-inducing behaviours evaluated, Aboriginal Victorians only fared worse in three compared with their non-Aboriginal counterparts: they were more likely to smoke, not eat enough fruit, and be obese if they resided in rural Victoria. There were no significant

differences in short- or long-term risk of alcohol-related harm, vegetable consumption or physical activity. By contrast, a significantly higher proportion of Aboriginal men abstained from alcohol consumption compared with their non-Aboriginal counterparts.

Healthcare system attributes

Of the few healthcare system attributes evaluated, there were no significant differences between Aboriginal and non-Aboriginal Victorians in the proportion who had had medical checks in the preceding two years for blood pressure, blood cholesterol, blood glucose or bowel cancer, nor was there any difference in the proportion who had ever had their eyes checked. Given that Aboriginal Victorians were more likely to suffer from ill-health, we would have predicted that this should have been reflected in Aboriginal Victorians having a higher use of healthcare services.

In contrast, Aboriginal Victorians were significantly more likely than non-Aboriginal Victorians to have sought help from a health professional for a mental health problem in the previous year.

Discussion of findings

The Ansari et al. (2003) public health model of the social determinants of health predicts that any disparities in the underlying social determinants will ultimately impact on health outcomes both directly and indirectly via disease-inducing behaviours and factors that relate to the healthcare system. The following is a discussion of our findings for the various components of the social determinants of health.

Socioeconomic determinants

The data shows profound disparities in socioeconomic status between Aboriginal and non-Aboriginal Victorians. **In seven of the eight indicators of socioeconomic status evaluated, Aboriginal Victorians fared worse than their non-Aboriginal counterparts.** It would therefore be expected that this would have a significant impact on their health as a consequence; this is, in fact, what we observed.

The one socioeconomic indicator where there was no difference between Aboriginal and non-Aboriginal Victorians was average household size. **Aboriginal Victorians were significantly more likely to reside in one-person households than their non-Aboriginal counterparts.** This is contrary to expectations because poverty and overcrowding tend to go hand in hand, as has been well documented among many Australian Aboriginal communities (Gracey & King 2009). Possible explanations for this finding may be that studies of Aboriginal Australians and their living conditions typically focus on people who reside in geographic areas where there are housing shortages such as the Northern Territory and, in particular, the more remote communities. Only six per cent of the Australian Aboriginal population resides in Victoria and there are no remote communities. Therefore, Victoria may just be different. Alternatively, or in addition, there is evidence (to be discussed further on) that there may be a selection bias in the VPHS whereby the respondents who identified as Aboriginal may have been more affluent (by virtue of having a landline telephone) and not entirely representative of the overall Aboriginal Victorian population. Nevertheless we still observed profound socioeconomic disparities between Aboriginal and non-Aboriginal Victorians.

Socioeconomic status can profoundly affect a person's health. For example, having a low total annual household income means there is less disposable income to purchase healthy foods, engage in leisure time activities that may be an important source of physical activity as well as its benefits to mental health, to afford safe and adequate housing with heating, and to afford healthcare. People on low incomes are often forced to relocate more frequently as a consequence of being in the low end of the rental market and this causes major disruptions to their social networks, continuity of education and healthcare, and employment opportunities. A low level of educational attainment puts people at higher risk of unemployment and severely limits their likelihood of obtaining a job that pays a decent living wage. Low levels of educational attainment are also associated with lower levels of health literacy. Being divorced, separated or widowed is often associated with high levels of psychological distress and lower household incomes.

Psychosocial risk factors

The data shows that of the two psychosocial risk factors evaluated – food insecurity and psychological distress – Aboriginal Victorians were significantly more likely to be at greater risk of both.

Food insecurity has obvious and predictable effects on health via a poor diet because food that satisfies hunger is likely to be rich in calories but poor in nutrients. The evidence shows that food insecurity is associated with obesity and poverty in Australia and other developed countries (Burns 2004). We investigated this relationship in the current survey (data not shown), and found that 61.5 per cent of Aboriginal Victorians who had experienced food insecurity in the previous 12 months were overweight or obese compared with 52.1 per cent of Aboriginal Victorians who had not experienced food insecurity. Food insecurity is also a significant source of psychological distress.

High or very high levels of psychological distress are a significant risk factor for depression and anxiety. We observed that these high levels of psychological distress directly translated into a high prevalence of depression and anxiety. **Almost 35 per cent of Aboriginal Victorians, compared with 20 per cent of non-Aboriginal Victorians, had ever been diagnosed by a doctor with depression or anxiety.** In turn, depression and anxiety puts individuals at greater risk of various chronic diseases such as cardiovascular disease (Bunker et al. 2003) and possibly certain cancers, albeit that causality is notoriously difficult to prove (National Cancer Institute 2011). We observed a significantly higher prevalence of cancer among Aboriginal Victorians compared with non-Aboriginal Victorians. Although statistical significance was not met, there was a substantially higher prevalence of heart disease in Aboriginal men and stroke in Aboriginal women compared with their non-Aboriginal counterparts.

We observed a clear gender disparity in the prevalence of doctor-diagnosed depression and anxiety in non-Aboriginal Victorians that we did not observe between Aboriginal men and women. We found that Aboriginal men were just as likely as their female counterparts to have ever been diagnosed with depression or anxiety.

By contrast, non-Aboriginal men were significantly less likely to have ever been diagnosed compared with their female counterparts.

It is well documented that men are less likely to be diagnosed with depression or anxiety and, while the reasons for this remain unclear, there is evidence that women are more likely to seek medical attention for symptoms of depression or anxiety than men. Currently the common perception is that depression and anxiety are under-diagnosed in men and this leads us to speculate that if the same holds true for Aboriginal as well as non-Aboriginal Victorians, perhaps our findings are also an underestimate of the true prevalence of depression and anxiety among Aboriginal men. Given that the data shows that more than one in three Aboriginal Victorian men had ever been diagnosed with depression or anxiety, this is an alarming finding and would suggest that an appropriate policy and service response is required to address Aboriginal social and emotional wellbeing.

It is well documented in the international literature that both food insecurity and psychological distress are strongly associated with low SES. A separate analysis (data not shown) of food insecurity and psychological distress by total annual household income was performed and showed very strong socioeconomic status gradients.

The lower the total annual household income, the higher the prevalence of both food insecurity and high or very high levels of psychological distress. Therefore, it is possible that the higher levels of food insecurity and psychological distress among Aboriginal Victorians were due, at least in part, to socioeconomic disparities, although causality and its direction cannot be proven in a cross-sectional survey design.

Community and societal characteristics

Community and societal characteristics includes social networks and support structures, community participation, and the beliefs and attitudes about people and society that are the enabling factors for community participation.

Social networks and support structures

We evaluated seven indicators of social networks and support structures including (1) number of social contacts, (2) ability to get help from family, (3) neighbours

or (4) friends, (5) ability to get emergency care for self or children, (6) ability to get a job through a friend or relative, and (7) ability to raise \$2,000 within two days in an emergency. Of the seven indicators of social networks and support structures, Aboriginal Victorians fared as well as non-Aboriginal Victorians, with the following two exceptions.

- **Aboriginal Victorians were significantly less likely to be able to raise \$2,000 within two days in an emergency, although they were just as likely to be able to get emergency care for themselves or their children from a friend or relative.** Ability to raise money in an emergency is regarded as an indicator of financial stress and therefore this finding strongly suggests that socioeconomic rather than lack of social networks and support are in play here.
- **Aboriginal Victorians were less likely to be able to get help from family when needed, although they were just as likely to be able to get help from friends or neighbours.** This possibly reflects the legacy of past government policies in relation to Aboriginal families, which were intended to significantly weaken family ties (Perkins et al. 2008). The 2008 NATSISS reported that almost half (46.6 per cent) of Aboriginal Victorians had relatives who were removed by the government from their natural families and 13 per cent had themselves been removed. **Aboriginal Victorians were disproportionately affected by past policies, such as the policy of assimilation, and had the highest proportion of Aboriginal people removed from their families than any other state or territory (13 per cent compared with 8.2 per cent for Australia).**

Overall, it can be concluded that socioeconomic determinants such as household income have a bigger part to play in the health disparities between Aboriginal and non-Aboriginal Victorians rather than an absence of social networks and the support that they provide. When people are in poverty they usually lack the material resources needed with which to help each other, but this does not necessarily mean that they fail to provide comfort and emotional support. The data suggests that this may be the case for Aboriginal Victorians.

Community participation

Two indicators of community participation were evaluated: attending a community event and volunteering. **There were no differences in community participation between Aboriginal and non-Aboriginal Victorians.**

Whether these indicators are a robust measurement of community participation among Aboriginal Victorians is not known because the questions were not developed with any consideration of potential cultural differences. Moreover, the questions are broad enough that it is possible that Aboriginal respondents were referring to participation in Aboriginal cultural events while non-Aboriginal respondents were reporting on other community events. Asking the question: 'Did you attend a local community event in the last six months?' may infer that there is a single community, which may not be the case. Therefore if there are discrete communities that do not mingle, this question will not shed much light on whether Aboriginal respondents actively participated in the wider community. However, if attendance at a community event, regardless of whether it is a separate community, is understood to indicate a level of social connectedness, then the data suggests that Aboriginal Victorians experienced similar levels of social connectedness to non-Aboriginal Victorians.

Beliefs and attitudes

We evaluated four indicators of trust in people and social institutions that enable people to participate in community life. Trust has been defined as a set of socially learned and confirmed expectations that people have of each other, and of the organisations and institutions in which they live, and of the natural and moral social orders that set the fundamental understandings for their lives (Kramer 1999). Conversely, distrust has been defined as a lack of confidence in the other, a concern that the other may act so as to harm one, that he/she does not care about one's welfare or intends to act harmfully, or is hostile (Kramer 1999). Trust is essential within social systems to enable cooperative and altruistic behaviours that enhance collective wellbeing and the attainment of collective goals. Trust in our civic institutions and the people who run them, such as our healthcare system, is therefore essential in order to maximise an individual's health and wellbeing.

Two indicators assessed **trust in people**: whether the person felt safe walking down their street alone after dark and whether the person thought that most people could be trusted. We found low levels of trust among Aboriginal women compared with non-Aboriginal women, and among Aboriginal compared with non-Aboriginal adults who resided in rural Victoria. We also noted substantial differences between Aboriginal and non-Aboriginal men, and between Aboriginal and non-Aboriginal adults who resided in urban Victoria, suggesting low levels of trust in these Aboriginal populations too, although these did not reach statistical significance.

We also noted clear gender disparities in both Aboriginal and non-Aboriginal Victorian populations, where women had lower levels of trust. This is not an unexpected finding as gender discrimination still exists and violence against women continues to be a major public health concern (Human Rights and Equal Opportunity Commission 2008).

Two indicators assessed **civic trust**: whether a person believed there were opportunities to have a real say on issues that were important to them and whether they felt valued by society. The findings are somewhat complicated and suggest that gender and regional differences may have been important factors.

We observed statistically significant differences between Aboriginal and non-Aboriginal adults who resided in urban Victoria, for both indicators of civic trust, revealing lower levels of civic trust in the urban Aboriginal population. We also observed substantial disparities between Aboriginal and non-Aboriginal Victorians who resided in rural Victoria that would also suggest lower levels of civic trust in the rural Aboriginal population; however, this did not reach statistical significance. Of note is the high proportion of rural Aboriginal adults (almost 10 per cent) who declined to answer or could not say whether they felt valued by society. By contrast, we also observed substantial differences between Aboriginal and non-Aboriginal men in beliefs about opportunities to have a say, and between both Aboriginal men and women compared with their non-Aboriginal counterparts in beliefs about being valued by society, which suggests lower levels of civic trust. These findings, however, did not reach statistical significance.

It is important to note that where we observed disparities of such large magnitude that failed to reach statistical significance, it is highly possible that had there been a larger sample size of Aboriginal respondents, statistical significance may have been reached. In the upcoming 2011 VPHS, we will oversample for Aboriginal respondents in order to increase the number of Aboriginal respondents and reassess all indicators of personal and civic trust.

However, this data suggests that Aboriginal Victorian adults had lower levels of personal and civic trust compared with non-Aboriginal Victorian adults.

The lower levels of trust in both people and society among Aboriginal Victorians may be reflective of discriminatory practices and negative attitudes of past governments, institutions and individuals towards Aboriginal Australians. It is plausible that low levels of trust in both people and society among Aboriginal Victorians may continue to be perpetuated by current experiences of racism and discrimination. Studies have shown that between 58 and 79 per cent of Aboriginal Australians have experienced racism (Paradies et al. 2008). The 2008 NATSISS reported that 26 per cent of Aboriginal youths aged 15 to 24 years had experienced discrimination on the basis of their Aboriginality in the preceding 12 months. They also found a direct impact on health, employment and education in those who had experienced discrimination compared with those who had not, where 42 versus 25 per cent had high or very high levels of psychological distress, 22 versus 13 per cent were unemployed, and 35 versus 43 per cent were currently studying. Moreover, 29 per cent of those who had been discriminated against compared with 39 per cent of those who had not, agreed that most people could be trusted, indicating that distrust is associated with the experience of discrimination.

There is a large body of evidence in the international public health literature that shows a strong association between personal experiences of racism and ill-health in minority groups across the world that remains after adjustment for a range of confounding factors (Paradies 2006). Moreover, the association has been shown in longitudinal as well as cross-sectional studies, suggesting that racism precedes ill-health rather than the other way around. The most consistent finding is the association between experiences of racism and mental health

conditions such as psychological distress, depression and anxiety (Paradies 2006). This is also consistent with our findings that Aboriginal Victorians disproportionately experienced high levels of psychological distress as well as doctor-diagnosed depression and anxiety compared with their non-Aboriginal counterparts, which has implications for policy development and implementation.

Where there are low levels of trust, as we report here among Aboriginal Victorians, there is a cause for concern that has implications for developing and implementing policies that seek to reduce the health inequities between Aboriginal and non-Aboriginal Victorians. We may need to consider policies that also address the underlying issues of distrust among the Aboriginal population. The upcoming 2011 VPHS will include additional questions on experiences of racism that will add to our understanding of the issue.

Disease-inducing behaviours

Of the six disease-inducing risk factors investigated (smoking; excess alcohol consumption; overweight and obesity; insufficient physical activity; inadequate fruit consumption; and inadequate vegetable consumption), we only observed disparities between Aboriginal and non-Aboriginal Victorians in three risk factors. **Aboriginal Victorians were more likely to smoke, not eat enough fruit and to be obese if they resided in rural Victoria.** By contrast, **Aboriginal men were twice as likely to completely abstain from alcohol consumption as non-Aboriginal men.**

These findings suggest that the direct impact of the observed disparities in the social determinants of health on health outcomes may be far greater than the indirect effect via disease-inducing behaviours. This has important implications for the development and implementation of policies that seek to reduce the health inequities experienced by Victorian Aboriginal adults. Currently, there is a predominance of policies that tend to be focused on addressing disease-inducing behaviours, access to and promotion of the use of healthcare services. While this is appropriate and important, this report shows that there is also a need for policies to address the underlying socioeconomic disparities between Aboriginal and non-Aboriginal Victorians.

The higher prevalence of smoking among Aboriginal men and women is of particular concern considering we also found a significantly higher prevalence of cancer, asthma and stroke (in women). We also noted a higher prevalence of stroke in men, and heart disease in men and women, that did not reach statistical significance. These diseases are either common consequences of or are further exacerbated by smoking. While we did not ask the survey respondents to specify the type of cancer of which they were diagnosed, it is well documented that lung cancer is one of the most common cancers and usually caused by smoking. Therefore, this report confirms previous findings regarding smoking prevalence and redrews attention to a specific target for intervention.

Obesity is defined by the World Health Organization (WHO) as a body mass index (BMI) of greater or equal to 30 kg/m², while overweight is defined as a BMI of between 25 and 30 kg/m² (WHO 1997). The WHO recommended BMI cut-offs for overweight and obesity are based on pooled data from a number of countries and do not take into consideration specific differences between different populations. Studies have shown that the healthy range of BMI for Aboriginal Australians appears to be between 17 and 22, with metabolic complications developing as BMI increases beyond 22 kg/m², rather than 25 kg/m². Therefore, the estimates of overweight and obesity that we report here for Aboriginal Victorians are likely to be underestimated as they are based on the recommended WHO cut-offs (WHO 1997).

Healthcare system attributes

The VPHS does not collect a lot of data on factors that relate to the healthcare system; what is collected mostly falls under the rubric of primary healthcare. Primary healthcare is the first point of contact a person encounters in the healthcare system. In Australia this is usually provided by a general practitioner or community health nurse. Secondary healthcare refers to those services usually provided by a hospital. Tertiary healthcare refers to highly technical specialist services for treating people with complex or complicated health needs. The VPHS does not collect any data on secondary or tertiary healthcare.

We did not observe any significant differences between Aboriginal and non-Aboriginal Victorians in the proportions who had had their eyes, blood pressure, blood cholesterol

or blood glucose checked by a health professional or in those who had been tested for bowel cancer. However, given that our report shows that Aboriginal Victorians experienced greater ill-health, we would have expected this to have been reflected in a higher use of healthcare services, assuming that there were no barriers to accessing such services. **Therefore, our findings suggest an underuse of healthcare services by Aboriginal Victorians commensurate with their healthcare needs.**

In relation to mental healthcare, we found that Aboriginal Victorians were significantly more likely than their non-Aboriginal counterparts to have sought professional help for a mental health problem in the previous year. This is reflected in the significantly higher prevalence of doctor-diagnosed depression and anxiety among Aboriginal Victorians. However, Aboriginal Victorians were also significantly more likely than their non-Aboriginal counterparts to have experienced high levels of psychological distress, which is one of the main reasons for a person seeking professional help for a mental health problem in the first place. Therefore, whether Aboriginal Victorians are accessing mental healthcare services commensurate with their needs cannot be ascertained from this data and it is possible that they are not. This is consistent with our other findings and the generally accepted view that much could be done to improve and promote mental healthcare services in Australia, including addressing the prejudices and taboos that continue to exist in our society about mental ill-health.

Given that the VPHS only collects limited data on healthcare services, the 2008 VPHS is not properly equipped to assess the contribution of healthcare service use to health outcomes in Aboriginal Victorians. No questions were asked about hospitalisation or attendance at emergency departments in relation to secondary or tertiary healthcare. Unpublished work conducted by the Health Intelligence Unit showed that between 2000 and 2006, Aboriginal Victorians were nearly two and half times more likely than their non-Aboriginal counterparts to have been hospitalised for an ambulatory care sensitive condition (ACSC), suggesting that there are significant barriers to accessing primary healthcare services. ACSCs are those for which hospitalisation is thought to be avoidable if preventive care and early disease management are applied, usually in the ambulatory setting.

There is ample evidence in the peer-reviewed literature and various government reports of disparities between Aboriginal and non-Aboriginal Australians in accessing and receiving healthcare services. For example, the Australian Institute of Health and Welfare (AIHW) published a report in 2006 that revealed that Aboriginal Australians hospitalised with coronary heart disease were considerably less likely to receive key medical investigations and treatment (Mathur et al. 2006). Aboriginal people who resided in Western Australia were also significantly less likely to have received surgery for lung and prostate cancer (Hall et al. 2004).

The interpretation of our findings is therefore ambiguous at best, as the lack of significant differences in the various medical checks between Aboriginal and non-Aboriginal Victorians could be interpreted as there being no barriers to healthcare or that there are significant barriers for Aboriginal Victorians because the healthcare service use was not commensurate with the healthcare need. The latter explanation is more likely given the higher levels of ill-health among Aboriginal compared with non-Aboriginal Victorians. It is also an explanation more consistent with the public health literature. Therefore, this report refrains from making any statements about the healthcare system component of the public health model of the social determinants of health. In the next survey, to be conducted in 2011, we will include additional questions in relation to healthcare system use, in consultation with appropriate advisors.

Policy implications

These findings show that in 2008 Aboriginal Victorians suffered greater ill-health than their non-Aboriginal counterparts. The data suggests that the direct impact of the observed disparities in the social determinants of health on health outcomes may be far greater than their indirect impact via disease-inducing behaviours. This has important implications for the development and implementation of policies that seek to reduce the health inequities experienced by Victorian Aboriginal adults. Currently there is a predominance of policies that tend to be focused on addressing disease-inducing behaviours and access to and promotion of the use of healthcare services. While this is appropriate and important, this report shows there is also a need for policies to address

the disparities in the underlying social determinants of health between Aboriginal and non-Aboriginal Victorians.

Of the social determinants of health that impacted on the Aboriginal Victorians adults, significant disparities in the socioeconomic determinants, such as household income and educational attainment, as well as the psychosocial risk factors of food insecurity and psychological distress, stand out. It appears that the high levels of psychological distress directly translate into high levels of depression and anxiety and this may be an important area for policy development and intervention.

A higher preponderance of negative beliefs and attitudes relating to trust in people and society may contribute to or even underpin the high levels of psychological distress and warrants further attention and investigation. This is a potential area for policy development and implementation, with a focus on the underlying reasons for distrust such as experiences of racism.

The disease-inducing behaviour of tobacco smoking is also disproportionately represented among Aboriginal Victorians and its impacts on health are clearly reflected in the data. The prevalence of smoking among Aboriginal Victorians has been identified as an area for intervention under the *Victorian Indigenous affairs framework (VIAF)* by the Aboriginal Affairs Taskforce within the Department of Planning and Community Development (2010).

Policy implications

Currently the majority of policies that seek to reduce the health disparities that Aboriginal adults experience in Victoria tend to focus on addressing disease-inducing behaviours and access to and promotion of the use of healthcare services. While this is appropriate and important, this report clearly shows that there is also a need for policies to address the significant disparities in the underlying social determinants of health, particularly in relation to socioeconomic disparities, food insecurity, psychological distress and levels of trust in people and society.

Comparison with most recent national surveys

There were substantial differences between the 2004–05 NATSIHS, 2008 NATSISS and the 2008 VPHS reports for the few indicators that were similar enough to be compared. For example, the VPHS estimated the smoking prevalence in Aboriginal Victorians to be 30.4 per cent, while the 2004–05 NATSIHS estimated it to be 47.6 per cent and the 2008 NATSISS estimated it to be 51.6 per cent. These differences most likely reflect differences between the surveys in their respective methodologies. Briefly summarised:

- **Age groups surveyed:** The NATSISS collected data for people aged 15 years and older, while the VPHS collected data for people aged 18 years and older. Given that the prevalence of many health indicators varies with age, any indicator that is more common among younger age groups would be expected to generate a higher prevalence estimate in the NATSIHS and NATSISS compared with the VPHS and vice versa.
- **Number of people sampled per household:** Both the NATSIHS and NATSISS sampled up to two members of the same household. Since individuals in the same household tend on average to be more similar to each other than to the rest of the population, this may have introduced a selection bias that could lead to the over or underestimation of some indicators. For example, smoking may be overestimated because the likelihood of becoming a smoker is increased when another member of the same household smokes.
- **Interview method:** Both the NATSIHS and NATSISS were conducted by face-to-face interview, whereas the VPHS was conducted by computer-assisted telephone interview (CATI). Concerns have been raised that telephone samples under-represent people with low incomes, young adults, transient and Indigenous populations. Therefore, it is possible that the VPHS exhibits selection bias where low socioeconomic status Aboriginal Victorians are under-represented. The effect

of this would be to underestimate the prevalence of any indicator (such as smoking) that tends to follow a socioeconomic status gradient where the prevalence decreases with increasing SES. There is evidence for such a selection bias in the 2008 VPHS, as the proportion of Aboriginal Victorians who owned their home (approximately 57 per cent, not adjusted for age) or were able to raise \$2,000 within two days in an emergency (approximately 77 per cent, not adjusted for age) in the 2008 VPHS was substantially higher than reported in the 2008 NATSISS (approximately 41 and 55 per cent respectively), suggesting that the VPHS sample was of higher SES.

- **Sampling frame and sampling method:** The sampling frame for the 2008 NATSISS was based on where Aboriginal Australians were identified in the 2006 Census of population and housing. By contrast, the sampling frame for the 2008 VPHS was based on an electronic listing of Victorian six-digit telephone exchange prefixes and localities, and stratified by the 79 Victorian LGAs. Only once a randomly selected respondent agreed to participate in the survey were they asked if they were Aboriginal.

Therefore, in addition to substantial differences in the sampling frames and sampling methods, the national surveys actively sought people of Aboriginal descent and excluded non-Aboriginal people, whereas the VPHS did not. The 2008 NATSISS sampling frame was based on the 2006 population Census and therefore assumed that there had not been any significant movement of Aboriginal people since 2006. Similarly the 2004–05 NATSIHS was based on the 2001 population Census and assumed there had not been any significant movement of Aboriginal people since 2001. This was not a limitation of the VPHS.

- **Sample size:** The final sample size for Aboriginal Victorians aged 18 years and over was 339.

Survey	National sample	Victorian sample	Victorian sample aged 18 years and older
2004–05 NATSIHS	10,439	850	455
2008 NATSISS	13,307	2,252	1,198
2008 VPHS	N/A	34,168 (all people)	339 (Aboriginal Victorians)

While the VPHS had the smallest sample size, sample size is unlikely to explain the differences observed between the VPHS and 2004–05 NATSIHS or 2008 NATSISS for estimates where the RSEs were below 25 per cent.

Limitations

The 2008 VPHS is the first survey conducted by the Victorian Department of Health with a sample size large enough to be able to investigate the health and wellbeing of Aboriginal Victorians. However, it was not designed with this in mind but rather to enable a small-areas analysis of the health and wellbeing of all Victorians down to the level of LGA. It is therefore fortuitous, given that only approximately 0.6 per cent of Victorians identify as being Aboriginal (ABS 2008), that we were able to interview a sufficient number of Aboriginal Victorians to enable us to produce this report.

Cultural relevance and appropriateness

Since the 2008 survey was not conducted specifically with Aboriginal Victorians in mind, the questions asked had not been considered in the context of their cultural relevance or appropriateness to Aboriginal people. In 2011 we will be repeating the survey at the LGA level and will pay due diligence to the suitability and cultural appropriateness of the questions asked, as well as include other questions that may be of more relevance to the Aboriginal population.

Sample size

While the sample of Aboriginal Victorians in the 2008 VPHS report was adequate for most indicators of moderate to high prevalence, where the prevalence of an indicator was low in the general population (for example, type 2 diabetes), statistically reliable estimates could not be obtained. Moreover, we observed a number of substantial disparities between Aboriginal and non-Aboriginal Victorians that failed to reach statistical significance. Yet some of these disparities were so substantial that it is quite possible that had there been a larger number of Aboriginal respondents, they may well have reached statistical significance. Therefore, we plan to oversample the Aboriginal population in the upcoming 2011 VPHS at LGA level in order to obtain a larger sample size of Aboriginal respondents so we will be able to reassess these particular indicators and determine if the previously observed differences reach statistical significance.

Telephone surveys

Since telephone surveys require householders to have landlines, they are known to typically under-represent those with very low incomes, young adults, transient, and Aboriginal and Torres Strait Islander populations.

The fact that we observed a substantially higher proportion of Aboriginal Victorians who owned their homes and were able to raise \$2,000 in an emergency compared with what was reported in the 2008 NATSISS, suggests that the VPHS sample may be subject to some selection bias in favour of individuals with a higher SES. This is also confirmed by comparison of the age distribution of the Aboriginal and non-Aboriginal population in the 2008 survey with the 2006 Australian Census data for Aboriginal Victorians (Figure 1.1). While the Aboriginal population from the 2008 VPHS survey is clearly much younger than the non-Aboriginal population, it is not as young as the population reported in the 2006 Census data. The Census data showed that 54 per cent of the adult Victorian Aboriginal population were between the ages of 20 and 40 years compared with 48 per cent for the 2008 VPHS. By contrast, only 38 per cent of the non-Aboriginal population were aged 20–40 years.

Conclusions

Despite the limitations of the 2008 VPHS survey we still observed profound disparities between Aboriginal and non-Aboriginal Victorians in their health and wellbeing. Aboriginal Victorians generally fared worse than their non-Aboriginal counterparts. The data also shows that underpinning the disparities in health outcomes are disparities in socioeconomic status, psychosocial risk factors, levels of trust in people and society, and disease-inducing behaviours.

Chapter 1: Methods



Chapter 1: Methods

1.1 Summary

The VPHS is conducted by CATI in a randomly selected representative sample of Victorians aged 18 years and older who reside in private dwellings. The Department of Health's Human Research Ethics Committee approved the 2008 survey method and questionnaire.

Only one person per household was interviewed and this was the adult with the most recent birthday. A respondent's Aboriginal status was determined during the course of the interview.

A total of 34,168 Victorians were interviewed in 2008 including 808 (2.4 per cent) in languages other than English. Of those, 339 (approximately one per cent) respondents identified as Aboriginal.

1.2 Stratification

There are five rural and three metropolitan Department of Health regions in Victoria that comprise 79 LGAs. The survey sample was stratified by LGA in 2008, with a target sample of 426 interviews per LGA. The total sample achieved was 34,168 completed interviews, including 808 in languages other than English.

1.3 Sampling frame

The department generated an electronic listing of Victorian six-digit telephone exchange prefixes and localities to form the basis of the sampling frame. All eligible prefixes were allocated to each of the 79 LGA sampling areas, using locality and postcode information.

1.4 Sample generation

Random digit dialling (RDD) was used to generate a sample of telephone numbers that formed the household sample for the CATI. All residential households with landline telephone connections were considered in-scope for the survey. A telephonic mode of survey delivery excludes various population groups, such as people who are homeless or itinerant, people in hospitals or institutions, the frail and aged, and people with disabilities who cannot participate in an interview.

The department appended randomly generated suffixes to current eligible six-digit telephone number prefixes. The numbers were then 'washed' against current electronic business listings to remove known business numbers.

1.5 Data collection

Almost two-thirds of all completed interviews were achieved within the first three calls. This proportion is consistent with national experience on similar surveys.

1.6 Call routine

The interviewers made up to six call attempts to establish contact with a household and up to another nine call attempts to complete an interview where required.

Call attempts were spread over different times of the day and different days of the week, and were controlled by a customised call algorithm in the survey management system. Except for engaged numbers at the first call attempt, a non-contact in any specific time block was automatically scheduled for call back in a different time block as per the call back routine. A scripted message was left at the first and second calls to an answering machine, encouraging respondents to contact the VPHS 1-800 number. After establishing contact, interviewers could make calls, by appointment, outside the time block hours.

After contacting a household, an interviewer would select for interview the person (usually a resident) aged 18 years or over with the most recent birthday.

1.7 Interviewing in languages other than English

Interviews were conducted in eight community languages: Italian, Greek, Mandarin, Cantonese, Vietnamese, Arabic, Turkish and Serbo-Croatian.

CATI interviewers were recruited to undertake the interviews in these other languages as required. Respondents who received an approach letter could nominate to be interviewed in their preferred language.

1.8 Fieldwork period

The average interview length was 22 minutes and interviewing was conducted between 24 September and 16 December 2008. This followed two pilot tests of the questionnaire earlier in September 2008 and the modification of the questionnaire.

1.9 Participation rate

The participation rate, defined as the proportion of households where contact was made and an interview was then completed, was 64.9 per cent. The participation rate was similar in the metropolitan LGAs and rural LGAs (64.9 per cent). However, there was some variation in final participation rate by LGA, ranging from 56.4 per cent to 73.1 per cent.

1.10 Weighting

The survey data was weighted to reflect the following.

- (i) The probability of selection of the respondent within the household. Although a single respondent was randomly selected from within a household, the size of any household can vary upwards from one person. To account for this variation, the project team treated each respondent as representing the whole household, so his or her weight factor included a multiplier of the number of people in the household. Further, a household may have more than one telephone line (that is, landlines used primarily for contact with the household), which would increase that household's probability of selection over those households with only one telephone line. To ensure the probability of contacting any household was the same, the project team divided the weight factor by the number of telephone lines connected to the household.

The formula for the selection weight (*sw*) component was:

$$sw = nah/npl$$

where:

nah = the number of adults aged 18 years or over in the household

npl = the number of telephone lines in the household.

- (ii) The age–sex–geographic distribution of the population. The project team applied a population benchmark (*pbmark*) component to ensure the adjusted sample distribution matched the population distribution for the combined cross-cells of age group and sex by LGA. The categories used for each of the variables were:

- *age group*: 18–24, 25–34, 35–44, 45–54, 55–64 and 65 years or over
- *sex*: male, female
- *geography*: 79 LGAs.

The *pbmark* component was calculated by dividing the population of each cross-cell by the sum of the selection weight components for all the respondents in the sample within that cross-cell. For each cross-cell, the formula for this component was:

$$pbmark_i = N_i / \sum sw_{ij}$$

where:

i = the *i*th cross-cell

j = the *j*th person in the cross-cell

N_i = the population of the *i*th cross-cell

$\sum sw_{ij}$ = the sum of selection weights for all respondents (1 to *j*) in the *i*th cross-cell.

Calculating the person weight to be applied

The project team assigned respondent records a weight factor (*pwt*) by multiplying the selection weight (*sw*) value by the population benchmark value (*pbmark*):

$$pwt_{ij} = sw_{ij} * pbmark_i$$

where:

i = the *i*th cross-cell

j = the *j*th person in the cross-cell.

1.11 Statistical analysis

The survey data was analysed using the Stata statistical software package (StatCorp LP, College Station Texas).

Age standardisation

Given there were large differences in the age composition of Aboriginal compared with non-Aboriginal Victorians where the Aboriginal population tended to be younger, it was necessary to standardise or adjust for age using the direct method of standardisation. This method adjusts for the effects of differences in the age composition between populations so they can be directly compared. The direct age standardised percentages presented are based on the weighted sum of age-specific rates in the population. The 2008 VPHS report published in June 2010 used five-year age groups to calculate the age-specific rates. However, due to the low numbers of Aboriginal respondents in the survey, five-year age groups were too small to be used for low-prevalence indicators. Therefore in order to be consistent across all indicators, we used 10-year age groups in this supplementary report to calculate the age-specific rates. The 'standard' population used in the calculations was the estimated resident mid-year 2006 Victorian population.

Confidence intervals (95% CI)

A 95 per cent confidence interval is used to indicate the reliability of an estimate and indicates that there is a 95 per cent probability that the true value of an estimate is contained within the interval. So, the confidence interval is the likely range of the true value for an estimate. Throughout the report, 95 per cent confidence intervals have been included in tables and graphs.

**95 per cent confidence interval =
point estimate \pm standard error \times 1.96**

Statistical significance

The only trends and patterns in the data that are discussed in the report are statistically significant trends and patterns. Statistical significance provides an indication of how likely a result is due to chance and is determined by comparing the 95 per cent confidence intervals. Significant differences between estimates were deemed to exist where confidence intervals for those estimates did not overlap.

The term 'significance' is used to denote statistical significance. It is not used to describe clinical significance, the relative importance of a particular finding, or the actual magnitude of difference between two estimates.

Relative standard error

A relative standard error (RSE) provides an indication of the reliability of an estimate. Estimates with an RSE of less than 25 per cent are generally regarded as 'reliable' for general use. Estimates with an RSE between 25 and 50 per cent should be interpreted with caution. Estimates with an RSE greater than 50 per cent are not considered reliable.

**Relative standard error (%) =
Standard error / Point estimate \times 100**

1.12 Interpretation of tables and graphs

Tables

All tables are colour-coded to show statistically significant differences between estimates for the Aboriginal compared with the non-Aboriginal population. Red indicates that the estimate is significantly higher for the Aboriginal compared with the non-Aboriginal population, and blue indicates that it is significantly lower.

Tables that report data by geographic area of residence are also shade-coded to show statistically significant differences between estimates for adults residing in rural compared with urban Victoria. Yellow shading indicates that the estimate is significantly higher for the rural compared with urban population; grey indicates that it is significantly lower.

Estimates that have an RSE between 25 and 50 per cent have been marked with an asterisk (*) and should be interpreted with caution. Estimates with an RSE of greater than 50 per cent are not reported because they are not reliable. They are marked with a double asterisk (**) in place of the estimate.

Graphs

Graphs are employed only where there are important differences between the Aboriginal and non-Aboriginal populations. All graphs (with the exception of Figure 1.1) are presented with the point estimate (height of the column) and 95 per cent confidence interval. The 95 per cent confidence intervals are depicted as vertical lines that cross the point estimate, similar to error bars.

1.13 Profile of survey respondents

Known population benchmarks for selected data items may be used to assess the representativeness of the sample. Table 1.1 shows the benchmark data and weighted and unweighted estimates obtained from the survey. A comparison between benchmark and survey data indicates the following:

- Females were more likely than males to participate in the survey.
- Adults aged less than 65 years were less likely to participate than adults aged 65 years or over.
- Adults born in Australia were more likely to participate than those born overseas, perhaps as a result of those who do not speak English or any of the languages offered for interview.
- The survey included a lower proportion of employed people.
- One per cent of respondents identified themselves as being Aboriginal and/or Torres Strait Islander.

Table 1.1: Profile of respondents in the Victorian Population Health Survey, 2008

Selected characteristics	Benchmark data (%)	Survey outcome (%)	Weighted survey outcome (%)	95% confidence interval	
				Lower limit	Upper limit
Sexⁱ					
Male	49.0	38.0	48.9	48.1	49.8
Female	51.0	62.0	51.1	50.2	51.9
Age group (years)ⁱ					
18–24	12.9	4.7	12.9	12.2	13.7
25–34	18.4	9.4	18.4	17.6	19.2
35–44	19.4	17.0	19.3	18.7	20.0
45–54	17.8	19.6	17.8	17.2	18.4
55–64	14.1	21.3	14.1	13.7	14.6
65+	17.5	28.0	17.5	17.0	18.0
Marital statusⁱⁱ					
Married	50.0	57.4	58.4	57.5	59.2
Widowed	6.0	10.9	4.8	4.6	5.1
Separated/divorced	10.5	11.8	6.8	6.5	7.2
Never married	33.4	12.4	20.7	19.9	21.6
Country of birthⁱⁱⁱ					
Australia	71.3	79.2	71.4	70.6	72.2
Employment status^{iv}					
Employed	61.9	51.4	59.9	59.1	60.7
Unemployed	3.3	2.8	3.6	3.3	4.0
Not in the labour force	34.8	45.0	35.7	34.9	36.5
Private health insurance^v					
Yes	42.8	50.6	54.6	53.8	55.5

Notes to Table 1.1:

Table 1.1 shows the profile of all respondents regardless of Aboriginal status.

i ABS 2007a.

ii ABS 2007b. The 'never married' category is not directly comparable between the Census and the VPHS 2006 because the survey collected an extra category – 'living with a partner'. Benchmark figures apply to people aged 15 years or over.

iii ABS 2007c. Benchmark figure applies to the whole Victorian population (all ages).

iv ABS 2007d. Benchmark figures apply to people aged 15 years or over.

v PHIAC 2007. Benchmark figure applies to the whole Victorian population (all ages).

Figure 1.1: Weighted age distribution of Victorians in 2008 by Aboriginal status

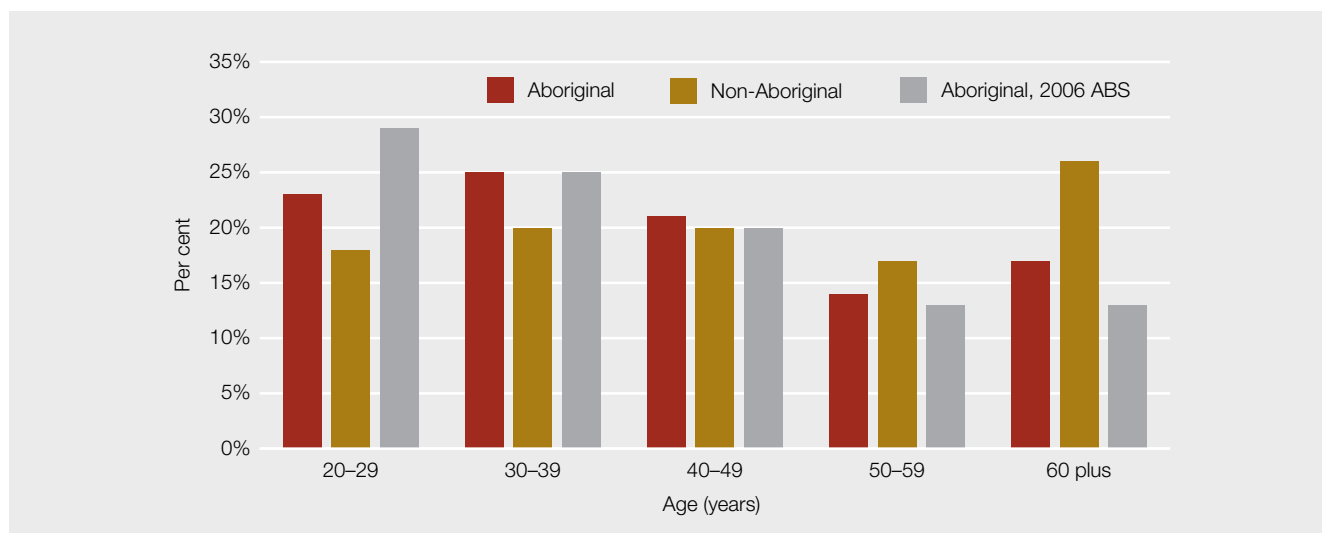
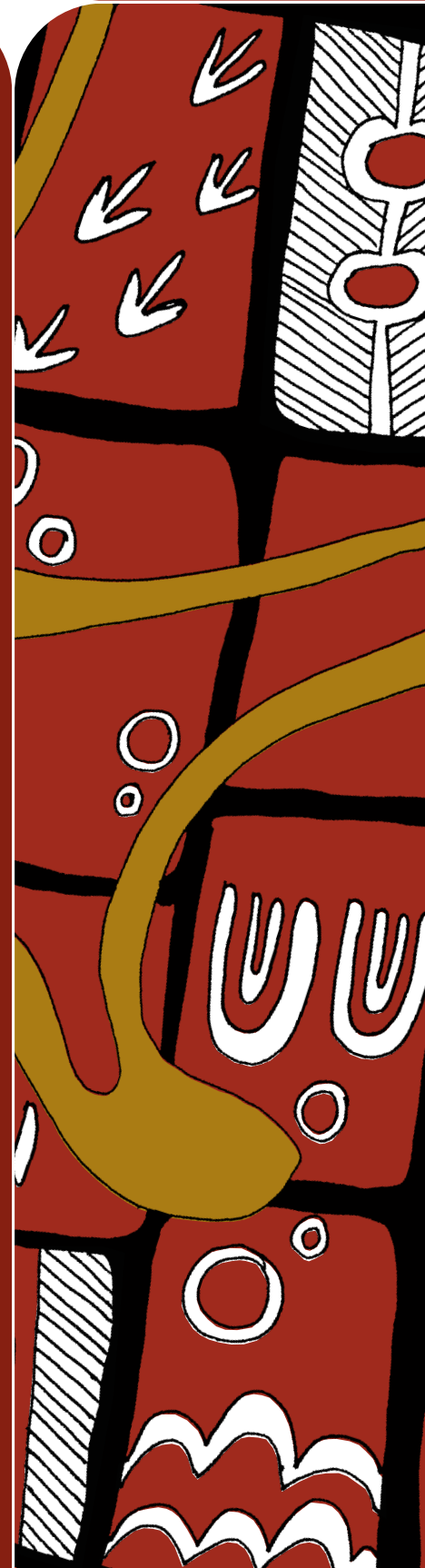


Figure 1.1 shows the weighted age composition of Aboriginal compared with non-Aboriginal Victorians in 2008 and the 2006 Census data for Aboriginal Victorians.

Approximately 48 per cent of the weighted VPHS 2008 sample who identified as being Aboriginal were aged less than 40 years compared with 38 per cent who did not identify as Aboriginal. By contrast, the 2006 Census data indicated that 54 per cent of Aboriginal Victorians were aged under 40 years. To avoid confusion, it should be remembered that the denominator used to calculate these percentages was all adults aged 20 years and older and did not include those aged under 20 years.

Chapter 2:
Social determinants of health



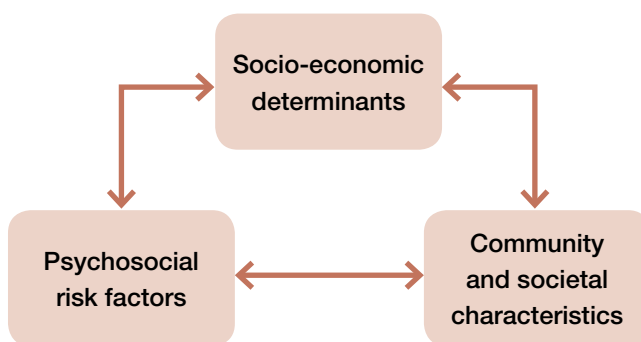
Chapter 2: Social determinants of health

According to WHO, **'The social determinants of health are the conditions in which people are born, grow, live, work and age, including the health system. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels, which are themselves influenced by policy choices. The social determinants of health are mostly responsible for health inequities – the unfair and avoidable differences in health status seen within and between countries'** (WHO 2011b).

Nowhere in Australia are health inequities best observed than among the Australian Aboriginal population. According to the ABS, the life expectancy at birth for Aboriginal males and females is 67.2 and 72.9 years respectively compared with 78.7 and 82.6 years for non-Aboriginal males and females (ABS 2009). This is a difference of 11.5 years for males and 9.7 years for females.

In their public health model of the social determinants of health, Ansari et al. (2003) identified three distinct components of the social determinants of health. These include socioeconomic determinants, psychosocial risk factors, and community and societal characteristics. Figure 2.1 illustrates the interrelationship of these components.

Figure 2.1: The interrelationship of the components of social determinants in the public health model of the social determinants of health



Source: Ansari et al. 2003

Table 2.1 summarises the social determinants according to whether they are socioeconomic, psychosocial, or characteristics pertaining to the community and society in which the individual resides. The list is by no means exhaustive.

Table 2.1: Social determinants in the public health model of the social determinants of health

Socioeconomic determinants	Psychosocial risk factors	Community and societal characteristics
Age	Poor social networks	Social networks and support structures
Sex/gender	Low self-esteem	Social and community participation
Ethnicity	Self-efficacy	Civic and political involvement and empowerment
Education	Depression	Trust in people and social institutions
Occupation	Anxiety	Tolerance of diversity
Income	Insecurity	Altruism, philanthropy and voluntary work
Employment	Loss of sense of control	Poverty
Religion	High physical/psychological demand	Residence (rural, urban, remote)
Housing (affordability, security of tenure, structure and maintenance of building, occupancy, including overcrowding)	Chronic stress	Income inequality
	Isolation	Crime rate
	Anger/hostility	Domestic violence
	Coping	Unemployment rate
	Perception/expectations	

Source: Ansari et al. 2003

Structure of this chapter

This chapter is structured according to the three components of the social determinants of health proposed by Ansari and colleagues in 2003. All analyses are a comparison between Aboriginal and non-Aboriginal Victorians in 2008 by sex and geographic area of residence (urban or rural Victoria).

Part A reports on the socioeconomic determinants of total annual household income, highest level of educational attainment, employment status, marital status, household size, neighbourhood tenure, home ownership and private health insurance. Part B reports on two psychosocial risk

factors: food insecurity and psychological distress. Part C reports on: the community and societal characteristics of social contacts; ability to get help when needed from family, neighbours and friends; ability to obtain emergency care for oneself or children; ability to obtain a job if needed from a relative or friend; ability to raise \$2,000 within two days in an emergency; attendance at local community event in the previous six months; volunteerism; feelings and beliefs regarding personal safety; trust in people; being valued by society and opportunities to have a real say on important issues; and views about multiculturalism.

Part A: Socioeconomic determinants

The weight of scientific evidence supports a socioeconomic explanation of health inequities. For almost every disease and condition known, a socioeconomic gradient can usually be shown to exist where the lower the socioeconomic status the more likely the poorer health outcome.

There are many different indicators of socioeconomic status that can broadly be categorised into occupation-based, qualification-based, income-based and area-based indicators.

The VPHS collected household and individual-level information on a number of socio-demographic characteristics including total annual household income, employment status, highest level of educational attainment, occupation, marital status, household composition and living arrangements. These and other data collectively form the basis for determining a person's socioeconomic status and are used by the ABS to calculate the area-based Index of Relative SocioEconomic Disadvantage (IRSED). The ABS determines an overall IRSED score for a given geographic area such as an LGA and thus socioeconomic status is assigned based on area of residence.

However, any given IRSED score does not represent a person or household and individuals within a given LGA can differ markedly in their socioeconomic status. For example, the LGA of Boroondara is rated as being one of the least socioeconomically disadvantaged LGAs in Victoria and yet contains substantial pockets of people in public housing. Typically, investigations of health inequalities are conducted using IRSED scores, as this is usually the only data available. However, area-based socioeconomic status often lacks the sensitivity to detect socioeconomic gradients in various health outcomes. Therefore, use of individual-level data, such as total household income, as an indicator of socioeconomic status is far more sensitive. The data is available in this survey.

The following section reports on various indicators of socioeconomic status and how these do or do not differ between Aboriginal and non-Aboriginal Victorians.

Household income

Total annual household income includes all sources of income such as wages, family tax benefits, child support payments and all other sources. Respondents were asked to indicate the income bracket into which their total annual household income fell.

Table 2.2 shows total annual household income in Victoria in 2008, by sex and Aboriginal status.

Aboriginal Victorians were significantly more likely to report total annual household incomes of less than \$40,000 and significantly less likely to report incomes of more than \$80,000 compared with non-Aboriginal Victorians.

While there were no statistically significant differences in total annual household income between Aboriginal men and women, there was a substantially higher proportion of Aboriginal men who reported household incomes in excess of \$80,000, and a substantially higher proportion of Aboriginal women who refused to answer or did not know. By contrast, non-Aboriginal men were significantly more likely to report total annual household incomes of over \$40,000 than their female counterparts.

Table 2.2: Total annual household income, by sex and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
\$20,000 or less	16.2	10.0	25.2	24%	8.4	7.8	9.0	4%
\$20,001–\$40,000	24.1	15.8	34.9	20%	16.5	15.6	17.4	3%
\$40,001–\$80,000	28.8	19.9	39.8	18%	27.0	25.8	28.2	2%
Greater than \$80,000	21.8	13.3	33.5	24%	33.9	32.6	35.2	2%
Don't know or refused to say	9.1*	5.0	16.2	30%	14.3	13.3	15.3	4%
Females								
\$20,000 or less	17.6	12.2	24.7	18%	11.3	10.7	11.8	3%
\$20,001–\$40,000	25.4	18.4	34.0	16%	16.2	15.5	16.9	2%
\$40,001–\$80,000	27.8	19.9	37.5	16%	24.6	23.7	25.5	2%
Greater than \$80,000	12.6*	6.9	21.8	30%	26.0	25.0	27.0	2%
Don't know or refused to say	16.6	10.2	26.0	24%	22.0	21.1	23.0	2%
Persons								
\$20,000 or less	16.2	11.5	22.3	17%	9.9	9.5	10.3	2%
\$20,001–\$40,000	25.6	19.4	33.1	14%	16.2	15.7	16.8	2%
\$40,001–\$80,000	28.2	21.8	35.7	13%	25.7	25.0	26.5	1%
Greater than \$80,000	16.6	11.3	23.8	19%	29.9	29.1	30.7	1%
Don't know or refused to say	13.3	9.0	19.2	19%	18.3	17.6	19.0	2%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

Figure 2.2: Total annual household income in Aboriginal and non-Aboriginal Victorians

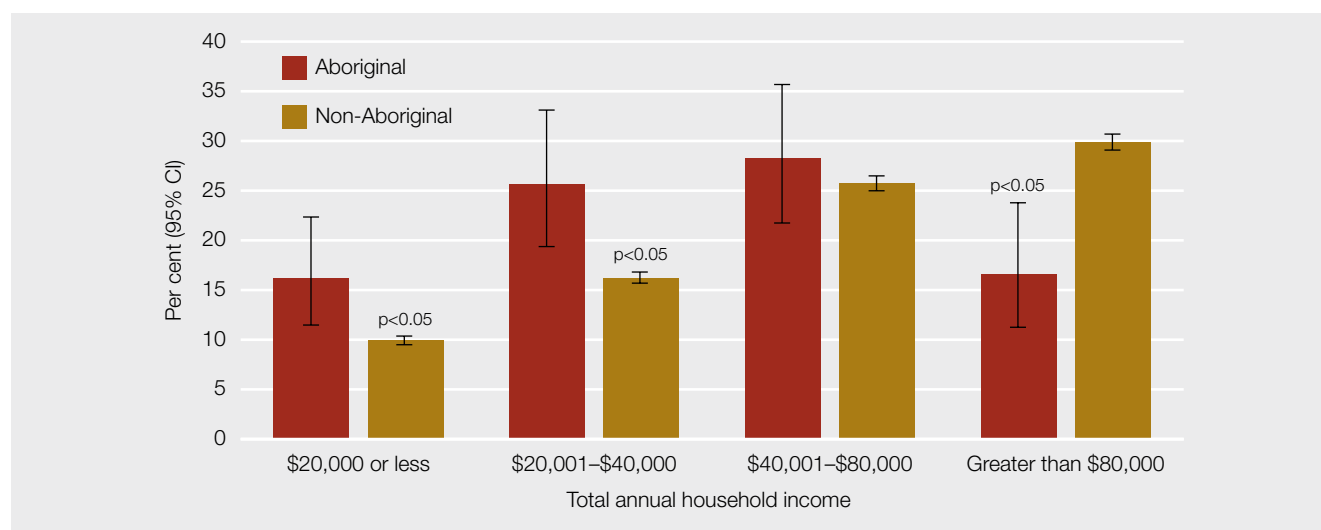


Table 2.3 Total annual household income, by geographic area of residence and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
\$20,000 or less	21.5	15.5	29.0	16%	11.9	11.2	12.6	3%
\$20,001-\$40,000	23.7	16.5	32.9	18%	19.6	18.7	20.5	2%
\$40,001-\$80,000	29.7	21.9	38.8	15%	30.3	28.9	31.6	2%
Greater than \$80,000	10.6	6.6	16.4	23%	23.8	22.5	25.3	3%
Don't know or refused to say	14.5	9.3	22.0	22%	14.4	13.4	15.5	4%
Urban								
\$20,000 or less	13.3*	7.3	22.9	29%	9.1	8.6	9.7	3%
\$20,001-\$40,000	26.0	17.8	36.1	18%	15.0	14.3	15.7	2%
\$40,001-\$80,000	27.7	19.2	38.2	18%	24.3	23.4	25.2	2%
Greater than \$80,000	20.1	12.6	30.5	23%	32.0	31.0	32.9	2%
Don't know or refused to say	13.0*	7.5	21.6	27%	19.7	18.8	20.5	2%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

Figure 2.2 highlights the income disparities between Aboriginal and non-Aboriginal Victorians in 2008.

Table 2.3 shows total annual household income in Victoria in 2008, by geographic area of residence and Aboriginal status.

Aboriginal adults who resided in rural Victoria were significantly more likely to report total annual household incomes of \$20,000 or less and significantly less likely to report incomes of greater than \$80,000 compared with their non-Aboriginal counterparts. Aboriginal adults who resided in urban Victoria were significantly more likely

to report incomes of \$20,001 to \$40,000 and less likely to report incomes of greater than \$80,000 compared with their non-Aboriginal counterparts.

Non-Aboriginal adults who resided in rural Victoria were significantly more likely to report incomes of less than \$80,000 and less likely to report incomes of greater than \$80,000 compared with their urban counterparts. While there were no statistically significant differences in income between Aboriginal adults who resided in rural compared with urban Victoria, the proportion reporting incomes greater than \$80,000 who resided in urban Victoria was almost double that of those who resided in rural Victoria.

Education

Higher educational attainment is associated with better employment opportunities and higher income, which in turn is associated with higher levels of health literacy and better health and wellbeing overall. Survey respondents were asked to indicate their highest level

of educational attainment: primary, secondary, Technical and Further Education (TAFE) or tertiary. It should be noted that people who attended TAFE may or may not have completed secondary-level education.

Table 2.4 shows the highest level of educational attainment in Victoria in 2008, by sex and Aboriginal status.

Table 2.4: Highest level of education attempted or completed, by sex and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
None, other, don't know or refused to say	**		100%	0.8	0.6	1.1	18%	
Some primary	0.0	.	.	0.8	0.6	1.0	14%	
Completed primary	**		75%	1.5	1.3	1.8	9%	
Some secondary	33.2	23.0	45.2	17%	21.3	20.2	22.4	3%
Completed secondary	16.6*	9.5	27.4	27%	17.5	16.4	18.6	3%
TAFE or trade certificate or diploma	21.6	13.0	33.7	24%	24.2	23.1	25.3	2%
Tertiary	25.4	16.7	36.8	20%	34.0	32.7	35.3	2%
Females								
None, other, don't know or refused to say	**		73%	0.6	0.5	0.8	13%	
Some primary	**		103%	1.3	1.1	1.6	9%	
Completed primary	**		71%	2.0	1.8	2.3	6%	
Some secondary	39.9	30.2	50.6	13%	24.9	24.1	25.7	2%
Completed secondary	15.8	10.1	24.0	22%	20.3	19.4	21.2	2%
TAFE or trade certificate or diploma	18.4	12.4	26.4	19%	18.7	17.9	19.6	2%
Tertiary	22.4	15.6	31.2	18%	32.2	31.2	33.2	2%
Persons								
None, other, don't know or refused to say	**		61%	0.7	0.6	0.9	12%	
Some primary	**		102%	1.1	0.9	1.2	7%	
Completed primary	**		53%	1.8	1.6	1.9	5%	
Some secondary	36.6	29.1	44.7	11%	23.2	22.5	23.9	1%
Completed secondary	16.9	11.6	24.0	19%	18.9	18.2	19.6	2%
TAFE or trade certificate or diploma	19.6	14.1	26.5	16%	21.4	20.7	22.1	2%
Tertiary	24.1	18.0	31.4	14%	33.0	32.2	33.8	1%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Overall, Aboriginal Victorians were significantly more likely to have lower levels of educational attainment compared with their non-Aboriginal counterparts. A significantly higher proportion of Aboriginal Victorians had not completed secondary-level education and a significantly lower proportion had attempted tertiary-level education compared with their non-Aboriginal counterparts. This supports the national finding (reported by the ABS) that only 45 per cent of Aboriginal students in 2009 completed Year 12 compared with 77 per cent of non-Aboriginal students (ABS 2009).

While there were no statistically significant differences between Aboriginal men and women, there was a substantially higher proportion of women who had not completed their secondary education, suggesting lower levels of educational attainment. Non-Aboriginal women were significantly more likely than their male counterparts to have not completed their secondary education and significantly less likely to have attended TAFE.

Table 2.5 shows the highest level of educational attainment in Victoria in 2008, by geographic area of residence and Aboriginal status.

Aboriginal Victorians were significantly more likely to have not completed secondary school compared with their non-Aboriginal counterparts regardless of whether they resided in rural or urban Victoria.

While there were not statistically significant differences between Aboriginal adults who resided in rural compared with urban Victoria, there was a substantially higher proportion of rural Aboriginal adults who had not completed secondary education and a lower proportion who had attempted TAFE or tertiary education, suggesting lower levels of educational attainment. Overall, there were significantly lower levels of educational attainment among non-Aboriginal adults who resided in rural compared with urban Victoria.

Table 2.5: Highest level of educational attainment, by geographic area of residence and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
None, other, don't know or refused to say	**		92%	0.4	0.3	0.6	16%	
Some primary	**		103%	0.4	0.3	0.6	16%	
Completed primary	**		52%	1.1	0.9	1.3	8%	
Some secondary	46.4	36.8	56.3	11%	32.0	30.8	33.3	2%
Completed secondary	13.1	8.2	20.4	23%	19.9	18.6	21.2	3%
TAFE or trade certificate or diploma	17.7	12.2	24.9	18%	23.2	22.0	24.4	3%
Tertiary	17.7	11.8	25.8	20%	23.0	21.7	24.3	3%
Urban								
None, other, don't know or refused to say	**		77%	0.8	0.6	1.1	13%	
Some primary	0.0	.	.	1.3	1.1	1.6	8%	
Completed primary	0.0	.	.	2.1	1.8	2.3	6%	
Some secondary	31.2	21.8	42.5	17%	20.0	19.2	20.8	2%
Completed secondary	19.2	12.0	29.4	23%	18.7	17.9	19.6	2%
TAFE or trade certificate or diploma	21.1	13.5	31.6	22%	20.7	19.9	21.6	2%
Tertiary	27.1	18.9	37.2	17%	36.3	35.4	37.3	1%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Employment

The balance of the evidence shows that employment for most people not only provides financial security but also improves general health and wellbeing and reduces psychological distress (The Royal Australasian College of Physicians, 2010). Conversely, long-term absence from employment, work disability and unemployment are detrimental to physical and mental health. The benefits of employment include financial remuneration, providing

structure and purpose to days, ensuring a minimum level of physical activity, providing a sense of community and social inclusion, allowing workers to feel they are making a contribution not only to their families but to society, and decreasing the likelihood of engaging in risky behaviours such as excessive alcohol consumption.

Table 2.6 shows employment status in Victoria in 2008, by sex and Aboriginal status.

Table 2.6: Employment status, by sex and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
Employed	63.4	53.7	72.1	7%	69.1	68.1	70.1	1%
Unemployed	9.1*	4.7	17.1	33%	4.0	3.4	4.6	8%
Home duties	**			99%	0.8	0.6	1.0	14%
Student	**			63%	4.7	4.1	5.4	7%
Retired	16.4	12.1	21.8	15%	18.4	18.0	18.8	1%
Unable to work	5.7*	2.7	11.6	37%	2.7	2.4	3.1	7%
Don't know, refused to say or other	0.0	.	.		0.3	0.2	0.4	25%
Females								
Employed	42.2	33.7	51.1	11%	52.5	51.5	53.5	1%
Unemployed	7.9*	4.3	14.1	30%	3.1	2.7	3.5	7%
Home duties	21.1	14.1	30.3	20%	14.9	14.1	15.6	2%
Student	**			63%	6.4	5.8	7.2	6%
Retired	17.4	14.2	21.1	10%	19.6	19.2	20.0	1%
Unable to work	8.6*	5.2	14.1	26%	2.9	2.6	3.3	6%
Don't know, refused to say or other	**			102%	0.6	0.5	0.8	14%
Persons								
Employed	52.1	45.3	58.9	7%	60.6	59.9	61.4	1%
Unemployed	8.7	5.4	13.8	24%	3.5	3.2	3.9	5%
Home duties	10.7	7.0	16.1	21%	8.0	7.6	8.4	3%
Student	4.2*	1.6	10.8	49%	5.6	5.1	6.1	4%
Retired	16.9	14.3	20.0	9%	19.0	18.7	19.3	1%
Unable to work	7.2	4.7	11.1	22%	2.8	2.6	3.1	4%
Don't know, refused to say or other	**			101%	0.4	0.3	0.6	12%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: **higher/lower**.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Aboriginal Victorians were significantly more likely to be unemployed or unable to work compared with their non-Aboriginal counterparts. Reasons for not being in the labour force included being engaged in home duties, being a student, being retired and being unable to work. Aboriginal Victorians were almost three times more likely to report being unable to work than their non-Aboriginal counterparts.

Both Aboriginal and non-Aboriginal women were significantly less likely than their male counterparts to be employed, which may be largely accounted for by those engaged in home duties.

Figure 2.3 shows the employment status of Aboriginal compared with non-Aboriginal Victorians in 2008.

Table 2.7 shows employment status in Victoria in 2008, by geographic area of residence and Aboriginal status.

Figure 2.3: Employment status of Aboriginal and non-Aboriginal Victorians

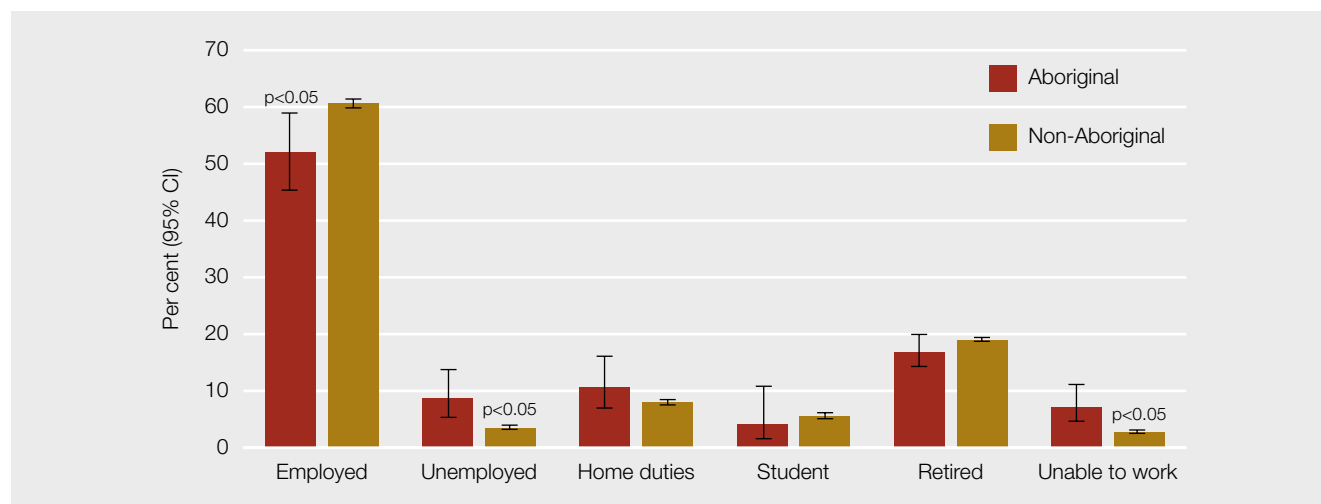


Table 2.7: Employment status, by geographic area of residence and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
Employed	54.3	45.4	62.8	8%	61.4	60.1	62.6	1%
Unemployed	12.6*	7.4	20.6	26%	3.4	2.9	4.1	9%
Not in labour force	33.0	26.1	40.8	11%	34.8	33.7	36.0	2%
Don't know, refused to say or other	**			102%	0.4	0.2	0.6	23%
Urban								
Employed	50.3	41.0	59.5	9%	60.5	59.6	61.4	1%
Unemployed	7.0*	3.3	14.5	38%	3.6	3.2	4.1	6%
Not in labour force	42.7	33.9	51.9	11%	35.5	34.6	36.3	1%
Don't know, refused to say or other	0.0	.	.		0.5	0.3	0.6	14%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Aboriginal adults who resided in rural Victoria were significantly more likely to be unemployed than their non-Aboriginal counterparts, although the data must be viewed with caution because the RSE was in excess of 25 per cent. However, this would be the most likely explanation since there was a substantially (although not statistically significant) lower proportion who were employed, while the proportion not in the labour force was similar between Aboriginal and non-Aboriginal adults.

Aboriginal adults who resided in urban Victoria were significantly less likely to be employed than their non-Aboriginal counterparts and there was a substantially (although not statistically significant) higher proportion who were unemployed or not in the labour force.

While there were no statistically significant differences in the employment status of Aboriginal adults by geographic area of residence, there was a substantially lower proportion who were not in the labour force and a substantially higher proportion who were unemployed. By contrast, there were no significant differences in employment status among non-Aboriginal adults by geographic area of residence.

The 2008 NATSISS reported that 52.4 per cent of Aboriginal Victorians aged 15 years or older were employed and 10.4 per cent were unemployed. These estimates were not adjusted for age but correlate extremely well with the crude estimate calculated in the VPHS (data not shown) of 55.9 and 10.2 per cent respectively. The 2008 NATSISS reported that the unemployment rate was significantly greater in Aboriginal compared with non-Aboriginal Australians and this concurs with our findings for Victoria presented in this report.

Marital status

Marriage or living with a partner is associated with better economic wellbeing, physical and mental health (Wood et al. 2007). There is evidence of a causal pathway in both directions whereby healthier people are more likely to marry (or live with a partner) but also being married (or living with a partner) actually brings short- and long-term health benefits to the respective parties through encouraging positive health behaviours, improving access to and use of healthcare, and promoting better mental health.

Table 2.8 shows marital status in 2008 by sex and Aboriginal status.

Table 2.8: Marital status, by sex and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
Married or living with a partner	60.7	49.7	70.6	9%	69.4	68.3	70.4	1%
Widowed, divorced or separated	18.6	11.3	29.2	24%	6.9	6.3	7.5	4%
Never married	20.6	14.3	28.7	18%	23.5	22.6	24.5	2%
Don't know or refused to say	**			104%	0.2	0.1	0.3	24%
Females								
Married or living with a partner	63.4	54.2	71.7	7%	64.9	64.0	65.9	1%
Widowed, divorced or separated	22.4	15.2	31.9	19%	15.8	15.2	16.4	2%
Never married	14.2	9.0	21.6	22%	18.9	18.1	19.7	2%
Don't know or refused to say	0.0	.	.		0.4	0.3	0.5	15%
Persons								
Married or living with a partner	61.2	53.6	68.3	6%	66.9	66.2	67.6	1%
Widowed, divorced or separated	20.3	14.9	27.0	15%	11.6	11.2	12.0	2%
Never married	18.4	13.6	24.5	15%	21.2	20.6	21.8	1%
Don't know or refused to say	**			102%	0.3	0.2	0.4	13%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Aboriginal Victorians were significantly more likely to be widowed, divorced or separated than their non-Aboriginal counterparts.

There were no significant differences between Aboriginal men and women. By contrast, there was a statistically significant gender disparity in non-Aboriginal Victorians, where women were significantly less likely to be married or living with a partner and more likely to be divorced, separated or widowed than their male counterparts.

Non-Aboriginal men were significantly more likely to have never married than their female counterparts.

Table 2.9 shows marital status in 2008 by geographic area of residence and Aboriginal status.

Aboriginal people who resided in rural Victoria were significantly more likely to be divorced, separated or widowed than their non-Aboriginal rural counterparts and significantly less likely to be married or living with a partner. By contrast, while the differences between Aboriginal and non-Aboriginal adults who resided in urban Victoria did not reach statistical significance, there was a substantially higher proportion of Aboriginal adults who were divorced, separated or widowed.

While there were no statistically significant differences in marital status between Aboriginal adults who resided in rural compared with urban Victoria, there was a substantially higher proportion of rural Aboriginal adults who were divorced, separated or widowed or never married. By contrast, non-Aboriginal people who resided in rural Victoria were significantly more likely to be married or living with a partner compared with their urban counterparts and significantly less likely to never have been married.

Table 2.9: Marital status, by geographic area of residence and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
Married or living with a partner	55.0	46.4	63.4	8%	69.2	67.9	70.4	1%
Widowed, divorced or separated	23.5	16.6	32.2	17%	11.7	10.9	12.6	4%
Never married	21.3	14.7	29.8	18%	19.0	18.0	20.0	3%
Don't know or refused to say	**			102%	0.1*	0.1	0.4	26%
Urban								
Married or living with a partner	65.0	54.4	74.3	8%	66.1	65.3	67.0	1%
Widowed, divorced or separated	18.1	11.4	27.5	23%	11.6	11.1	12.1	2%
Never married	16.9	10.9	25.3	22%	21.9	21.2	22.7	2%
Don't know or refused to say	0.0	.	.		0.4	0.3	0.5	14%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Household size

There is good evidence that overcrowded housing is detrimental to physical health and limited evidence for detrimental effects on mental health, childhood development, growth and education (Office of the Deputy Prime Minister 2004).

Table 2.10 shows mean household size in Victoria in 2008, by sex and Aboriginal status.

There was no difference between Aboriginal and non-Aboriginal Victorians in the average size of their households.

Given that the mean is a summary measure that can mask important differences in the distribution of household size, Table 2.11 shows household size in Victoria in 2008, by sex and Aboriginal status.

Table 2.10: Mean household size by sex and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Mean	95% CI	RSE	Mean	95% CI	RSE		
Males	2.9	2.5	3.2	6%	3.2	3.2	3.3	1%
Females	3.1	2.9	3.4	4%	3.2	3.2	3.2	1%
Persons	3.0	2.8	3.3	4%	3.2	3.2	3.2	0%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Table 2.11: Household size by sex and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
One person	13.0	8.0	20.7	24%	7.2	6.8	7.7	3%
Two people	37.8	29.1	47.5	13%	31.9	30.8	32.9	2%
Three people	21.9	13.4	33.8	24%	20.1	19.0	21.2	3%
Four people	13.5*	7.2	23.9	31%	23.1	21.9	24.4	3%
Five people or more	13.3*	6.7	24.5	33%	17.4	16.2	18.6	4%
Don't know or refused to say	**			86%	0.3	0.2	0.5	21%
Females								
One person	12.4	7.8	19.2	23%	9.8	9.4	10.2	2%
Two people	29.3	22.4	37.3	13%	29.5	28.7	30.4	1%
Three people	24.3	16.5	34.2	19%	19.1	18.3	20.0	2%
Four people	14.5	9.5	21.6	21%	23.4	22.5	24.4	2%
Five people or more	19.5	12.7	28.6	21%	17.7	16.7	18.6	3%
Don't know or refused to say	0.0	.	.		0.4	0.3	0.5	12%
Persons								
One person	12.7	9.0	17.5	17%	8.7	8.4	9.0	2%
Two people	33.6	27.2	40.7	10%	30.5	29.9	31.2	1%
Three people	22.5	15.9	30.9	17%	19.6	18.9	20.3	2%
Four people	14.4	9.9	20.4	19%	23.3	22.5	24.1	2%
Five people or more	16.6	11.2	23.9	19%	17.5	16.8	18.3	2%
Don't know or refused to say	**			84%	0.4	0.3	0.5	11%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: **higher/lower**.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Aboriginal Victorians were significantly more likely to reside in a home with only one person and significantly less likely to reside in a home with four people compared with their non-Aboriginal counterparts. The overall trend gives the impression that Aboriginal Victorians live in households with fewer people, even though the mean or average

household size (see Table 2.10) did not differ statistically between Aboriginal and non-Aboriginal Victorians. Figure 2.4 illustrates the findings.

Table 2.12 shows mean household size in 2008 by sex, geographic area of residence and Aboriginal status.

Figure 2.4: Household size in Aboriginal and non-Aboriginal Victorians

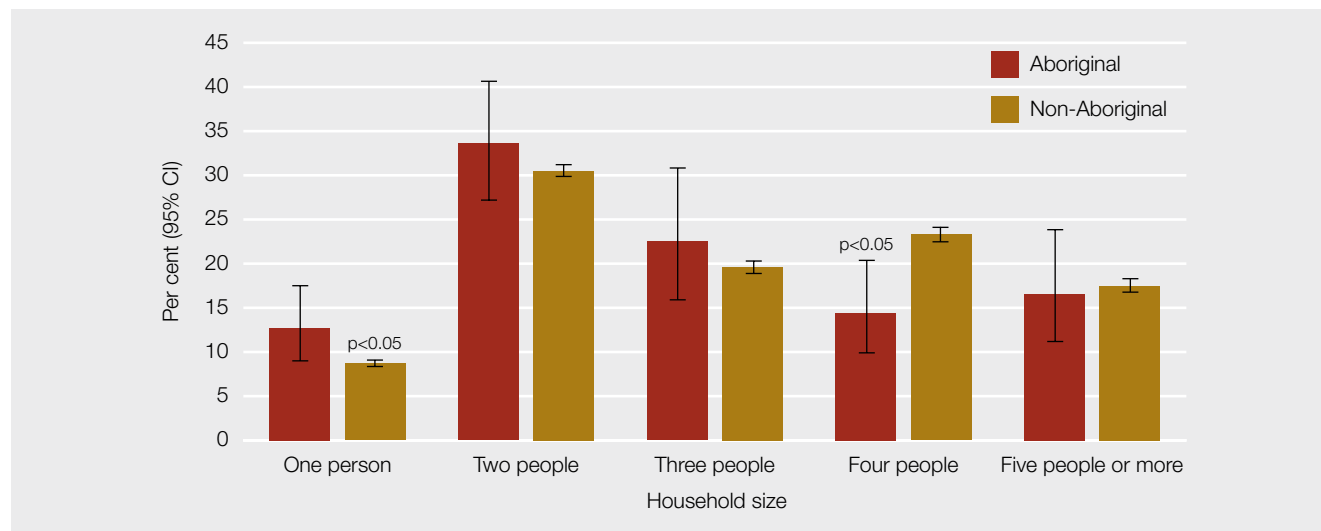


Table 2.12: Mean household size by sex, geographic area of residence, and Aboriginal status

	Aboriginal				Non-Aboriginal		
	Mean	95% CI	RSE	Mean	95% CI	RSE	
Rural males	2.9	2.4 3.4	9%	3.1	3.1 3.2	1%	
Urban males	2.9	2.5 3.3	7%	3.3	3.2 3.3	1%	
Rural females	2.9	2.6 3.2	5%	3.1	3.1 3.1	1%	
Urban females	3.2	2.9 3.6	5%	3.2	3.2 3.3	1%	
Rural persons	2.9	2.6 3.2	5%	3.1	3.1 3.1	1%	
Urban persons	3.1	2.8 3.4	5%	3.2	3.2 3.3	1%	

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

The mean household size was not significantly different between Aboriginal and non-Aboriginal Victorians regardless of whether they resided in rural or urban Victoria. Similarly, the mean household size did not differ between rural or urban Aboriginal men or women. However, non-Aboriginal men and women who resided in rural Victoria had significantly lower mean household sizes compared with their urban counterparts.

Given that the mean is a summary measure that can mask important differences in the distribution of household size, Table 2.13 shows household size in 2008 by sex and Aboriginal status.

Aboriginal Victorians who resided in urban Victoria were significantly less likely to reside in a home with four people compared with their non-Aboriginal counterparts. There were no other differences between Aboriginal and non-Aboriginal people regardless of whether they resided in rural or urban Victoria.

Table 2.13: Household size, by geographic area of residence and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
One person	13.5	9.0	19.9	20%	8.8	8.4	9.3	3%
2 people	42.9	34.7	51.4	10%	34.1	32.9	35.3	2%
3 people	14.8	9.2	23.1	24%	19.5	18.2	20.8	3%
4 people	14.0	8.8	21.7	23%	20.9	19.6	22.2	3%
5 people or more	14.6	9.3	22.3	23%	16.4	15.3	17.6	4%
Don't know or refused to say	**			102%	0.2	0.1	0.3	18%
Urban								
One person	12.0	7.3	19.1	25%	8.6	8.2	9.0	2%
2 people	28.5	20.1	38.6	17%	29.0	28.2	29.9	1%
3 people	27.2	17.8	39.2	20%	19.8	19.0	20.7	2%
4 people	14.3	8.7	22.7	25%	24.2	23.2	25.1	2%
5 people or more	17.7*	10.6	28.2	25%	18.0	17.0	18.9	3%
Don't know or refused to say	**			102%	0.4	0.3	0.5	12%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: **higher/lower**.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Neighbourhood tenure

Neighbourhoods/local areas are an important unit in society. One indicator of the stability of neighbourhoods is the number of years that a person has lived in their current neighbourhood. Frequent geographic relocation often reflects a person's financial and employment circumstances, with those who are less secure being obliged to move more frequently. Constant geographic relocation can be a risk factor for disrupted social and community connections that in turn make people more vulnerable to negative life outcomes.

Table 2.14 shows the length of time lived in a particular neighbourhood by sex and Aboriginal status.

Aboriginal Victorians were significantly more likely to have only resided in their neighbourhood for less than a year than their non-Aboriginal counterparts. Conversely, Aboriginal Victorians were significantly less likely than their

non-Aboriginal counterparts to have been resident in their neighbourhoods for more than 10 years. These findings strongly suggest that the Aboriginal population of Victoria experiences significantly higher rates of geographic relocation (see Figure 2.5).

While there were no statistically significant differences between Aboriginal men and women, there were substantially higher proportions of women who had been resident in their neighbourhood for one to five years and substantially lower proportions who had been resident for five years or more, suggesting that Aboriginal women are more likely to relocate geographically. By contrast, there were no significant differences between non-Aboriginal men and women.

Table 2.15 shows the length of time lived in a particular neighbourhood in Victoria in 2008, by geographic area of residence and Aboriginal status.

Table 2.14: Length of time lived in neighbourhood, by sex and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
Less than a year	15.7*	9.4	25.1	25%	8.6	7.8	9.5	5%
One to five years	19.0	11.6	29.5	24%	23.1	22.0	24.3	3%
Six to 10 years	20.0*	11.7	32.1	26%	16.9	15.9	17.9	3%
Greater than 10 years	45.2	35.7	55.1	11%	51.3	50.0	52.6	1%
Don't know or refused to say	0.0	.	.		0.1*	0.0	0.2	36%
Females								
Less than a year	14.1	8.8	21.6	23%	8.0	7.4	8.7	4%
One to five years	33.2	24.7	42.9	14%	22.5	21.6	23.5	2%
Six to 10 years	12.9	8.2	19.7	22%	18.5	17.7	19.3	2%
Greater than 10 years	39.8	30.3	50.1	13%	50.8	49.8	51.8	1%
Don't know or refused to say	**			106%	0.1*	0.1	0.2	34%
Persons								
Less than a year	14.8	10.3	20.9	18%	8.3	7.8	8.8	3%
One to five years	26.5	20.2	34.0	13%	22.8	22.1	23.6	2%
Six to 10 years	16.3	11.0	23.6	20%	17.7	17.1	18.4	2%
Greater than 10 years	42.3	35.0	49.9	9%	51.1	50.3	51.9	1%
Don't know or refused to say	**			104%	0.1*	0.1	0.2	25%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Figure 2.5: Neighbourhood tenure by Aboriginal status

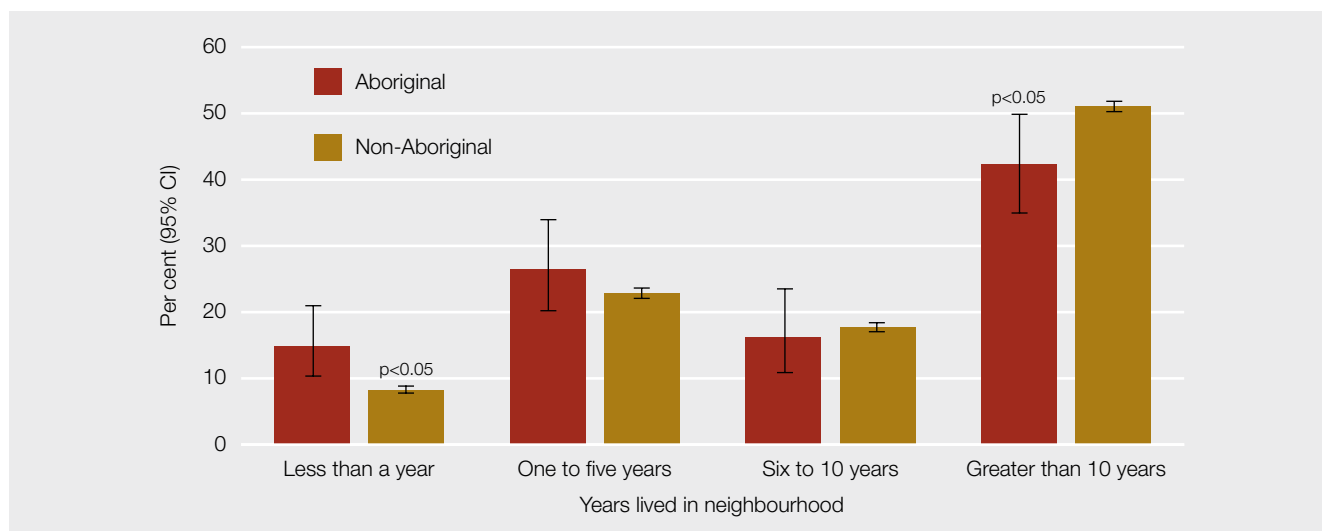


Table 2.15: Length of time lived in neighbourhood, by geographic area of residence and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
Less than a year	15.7	9.9	24.0	23%	8.1	7.3	9.0	5%
One to five years	28.0	20.2	37.4	16%	23.5	22.2	24.9	3%
Six to 10 years	11.7	7.6	17.6	21%	18.8	17.8	19.9	3%
Greater than 10 years	44.5	35.9	53.3	10%	49.5	48.1	50.9	1%
Don't know or refused to say	**			104%	0.0*	0.0	0.1	37%
Urban								
Less than a year	14.3*	8.6	22.8	25%	8.3	7.7	9.0	4%
One to five years	25.9	17.5	36.6	19%	22.6	21.7	23.5	2%
Six to 10 years	19.3	11.7	30.3	25%	17.3	16.5	18.1	2%
Greater than 10 years	40.5	30.5	51.5	13%	51.7	50.7	52.7	1%
Don't know or refused to say	0.0	.	.		0.1*	0.1	0.2	27%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Aboriginal adults who resided in rural Victoria were significantly more likely to have only been resident in their neighbourhood for less than a year and significantly less likely to have been resident in their neighbourhood for five to 10 years compared with their non-Aboriginal counterparts. While the pattern appeared to be similar for Aboriginal adults who resided in urban Victoria, it did not reach statistical significance.

There were no significant differences in the length of time lived in their neighbourhood by Aboriginal or non-Aboriginal Victorians who resided in rural compared with urban Victoria.

Home ownership

The ability to own a home is largely dependent on financial resources. Home ownership increases with increasing household income. Table 2.16 shows home ownership in 2008 in Victoria, by sex and Aboriginal status.

Aboriginal Victorians were significantly less likely than their non-Aboriginal counterparts to own or be purchasing their own home. It logically follows, therefore, that Aboriginal Victorians were significantly more likely than their non-Aboriginal counterparts to be renting their residence.

While there were no statistically significant differences between Aboriginal men and women, a substantially higher proportion of Aboriginal women owned their home. By contrast, there was no significant difference between non-Aboriginal men and women in the proportion who owned their home. However, there was a significant gender disparity where non-Aboriginal men were more likely than their female counterparts to report they were renting, while non-Aboriginal women were more likely than their male counterparts to have refused to answer the question or reported not knowing.

Table 2.16: Home ownership, by sex and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
Owned or being purchased	60.4	50.5	69.6	8%	78.4	77.2	79.6	1%
Rent (private or public)	38.9	29.8	48.8	13%	20.0	18.8	21.1	3%
Other	**			102%	0.8	0.6	1.1	13%
Don't know or refused to say	**			103%	0.8	0.6	1.1	16%
Females								
Owned or being purchased	69.1	59.8	77.1	6%	79.8	78.9	80.7	1%
Rent (private or public)	30.8	22.9	40.1	14%	17.7	16.9	18.6	2%
Other	**			102%	1.0	0.8	1.2	11%
Don't know or refused to say	0.0	.	.		1.5	1.2	1.8	11%
Persons								
Owned or being purchased	62.9	55.6	69.7	6%	79.1	78.4	79.9	0%
Rent (private or public)	36.7	30.0	44.0	10%	18.8	18.1	19.6	2%
Other	**			90%	0.9	0.8	1.1	9%
Don't know or refused to say	**			101%	1.1	0.9	1.3	9%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 2.17: Home ownership, by geographic area of residence and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
Owned or being purchased	63.8	56.6	70.4	6%	81.8	80.4	83.1	1%
Rent (private or public)	35.8	29.2	42.9	10%	16.5	15.2	17.8	4%
Other	**			102%	1.1	0.9	1.3	10%
Don't know or refused to say	**			101%	0.6	0.5	0.8	15%
Urban								
Owned or being purchased	62.3	52.0	71.7	8%	78.3	77.4	79.2	1%
Rent (private or public)	37.3	28.0	47.7	14%	19.5	18.7	20.4	2%
Other	**			102%	0.8	0.7	1.1	11%
Don't know or refused to say	0.0	.	.		1.3	1.1	1.6	10%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 2.17 shows home ownership in 2008 in Victoria, by geographic area of residence and Aboriginal status.

Aboriginal Victorians were significantly less likely to own their home compared with non-Aboriginal adults regardless of whether they resided in rural or urban Victoria.

There were no differences between Aboriginal Victorians who resided in rural compared with urban Victoria. By contrast, the proportion of non-Aboriginal Victorians who owned their home was significantly higher for those that resided in rural compared with urban Victoria.

The 2008 NATSISS reported that only 41.3 per cent of Aboriginal Victorians aged 15 years and older owned their home with or without a mortgage. This estimate was not adjusted for age and was substantially lower than the VPHS crude (not adjusted for age) estimate (data not shown) of 57.1 per cent. However, both surveys concurred that Aboriginal Victorians were significantly less likely to own their home, with or without a mortgage, than non-Aboriginal Victorians.

Private health insurance

Having private health insurance is associated with a higher level of household income because there are significant tax incentives for high-income earners to purchase private health insurance. Table 2.18 shows the proportion of adults who had private health insurance in 2008 in Victoria, by sex and Aboriginal status.

Aboriginal Victorians were significantly less likely than their non-Aboriginal counterparts to have private health insurance.

While there were no statistically significant differences between Aboriginal men and women, a substantially higher proportion of Aboriginal men had private health insurance. By contrast, there was no significant gender disparity among non-Aboriginal Victorians.

Table 2.18: Private health insurance, by sex and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
Yes	43.2	31.5	55.7	15%	54.9	53.6	56.3	1%
No	54.0	42.3	65.3	11%	43.8	42.5	45.2	2%
Don't know or refused to say	**			81%	1.3	0.9	1.7	16%
Females								
Yes	36.3	28.0	45.6	13%	54.3	53.3	55.4	1%
No	63.7	54.4	72.0	7%	44.9	43.8	46.0	1%
Don't know or refused to say	0.0	.	.		0.8	0.6	1.0	13%
Persons								
Yes	41.9	34.1	50.1	10%	54.6	53.8	55.5	1%
No	56.9	48.9	64.5	7%	44.4	43.5	45.2	1%
Don't know or refused to say	**			87%	1.0	0.8	1.3	11%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: **higher/lower**.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 2.19: Private health insurance, by geographic area of residence and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
Yes	36.9	29.2	45.3	11%	45.6	44.2	47.1	2%
No	62.8	54.4	70.5	7%	53.4	51.9	54.8	1%
Don't know or refused to say	**			102%	1.0	0.7	1.4	17%
Urban								
Yes	45.3	34.5	56.6	13%	57.7	56.7	58.7	1%
No	53.0	42.1	63.6	11%	41.3	40.3	42.3	1%
Don't know or refused to say	**			93%	1.0	0.8	1.3	14%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 2.19 shows the proportion of adults who had private health insurance in Victoria in 2008, by geographic area of residence and Aboriginal status.

Aboriginal adults who resided in urban Victoria were significantly less likely to have private health insurance than their non-Aboriginal counterparts. While there were no statistically significant differences between Aboriginal and non-Aboriginal adults who resided in rural Victoria, there was a substantially higher proportion of Aboriginal adults who did not have private health insurance.

While there were no differences among Aboriginal Victorians by geographic area of residence, there was a substantially higher proportion of Aboriginal adults who resided in urban Victoria who had private health insurance. By contrast, non-Aboriginal adults who resided in urban compared with rural Victoria were significantly more likely to have private health insurance.

Part A summary: Socioeconomic determinants

There were profound socioeconomic disparities between Aboriginal and non-Aboriginal Victorians where Aboriginal Victorians:

- had lower total annual household incomes
- had lower levels of educational attainment
- had higher rates of being unemployed or unable to work
- had higher rates of divorce, separation or widowhood
- were more likely to live on their own in a one-person household
- were more likely to have only lived in their neighbourhood for less than a year and less likely to have lived in their neighbourhood for more than 10 years
- were less likely to own their home
- were less likely to have private health insurance.

There were no significant differences between Aboriginal and non-Aboriginal Victorians in average household size.

Part B: Psychosocial risk factors

Martikainen et al. (2002) define 'psychosocial' as 'pertaining to the influence of social factors on an individual's mind or behaviour, and to the interrelation of behavioural and social factors'. Examples of psychosocial factors include poor social networks, low self-esteem, self-efficacy, insecurity and chronic stress.

In this section we report on two psychosocial indicators: food insecurity and psychological distress levels.

Food insecurity

The World Food Summit of 1996 defined food security as existing 'when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life' (Food and Agriculture Organisation of the United Nations 1996). Where this is not the case, 'food insecurity' is said to exist.

Survey respondents were asked the question: 'In the last 12 months, were there any times that you ran out of food and couldn't afford to buy more?' If they answered yes, they were deemed to have experienced food insecurity.

Table 2.20 shows the proportion of adults who had experienced food insecurity in the previous 12 months in Victoria in 2008, by sex and Aboriginal status.

Aboriginal men and women were more than three times more likely to have experienced food insecurity in the previous 12 months compared with their non-Aboriginal counterparts.

While there were no statistically significant differences between Aboriginal men and women, there was a substantially lower proportion of Aboriginal women who had not experienced food insecurity. By contrast, non-Aboriginal women were significantly more likely to have experienced food insecurity than their male counterparts.

Table 2.20: Prevalence of food insecurity, by sex and Aboriginal status

	Aboriginal					Non-Aboriginal				
	Per cent	95% CI	se	RSE	Per cent	95% CI	se	RSE		
Males										
No	85.4	74.8	92.0	4.3	5%	95.4	94.7	96.0	0.3	0%
Yes	14.6*	8.0	25.2	4.3	30%	4.4	3.8	5.1	0.3	7%
Don't know or refused to say	0.0	.	.	0.0		0.2*	0.1	0.3	0.1	30%
Females										
No	79.3	70.0	86.3	4.2	5%	93.5	92.9	94.0	0.3	0%
Yes	20.7	13.7	30.0	4.2	20%	6.4	5.9	7.0	0.3	4%
Don't know or refused to say	0.0	.	.	0.0		0.1*	0.1	0.2	0.0	28%
Persons										
No	82.3	75.2	87.7	3.2	4%	94.4	94.0	94.8	0.2	0%
Yes	17.7	12.3	24.8	3.2	18%	5.4	5.0	5.8	0.2	4%
Don't know or refused to say	0.0	.	.	0.0		0.1	0.1	0.2	0.0	21%

Data are age-standardised to the 2006 Victorian population.

95% CI = 95 per cent confidence interval

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

Figure 2.6 shows the proportion of Victorians who had experienced food insecurity in the preceding 12 months, by sex and Aboriginal status.

Table 2.21 shows the proportion of adults who ran out of food at least once in the previous 12 months and could not afford to buy more, by geographic area of residence and Aboriginal status in 2008.

Figure 2.6: Prevalence of food insecurity among Aboriginal and non-Aboriginal Victorians

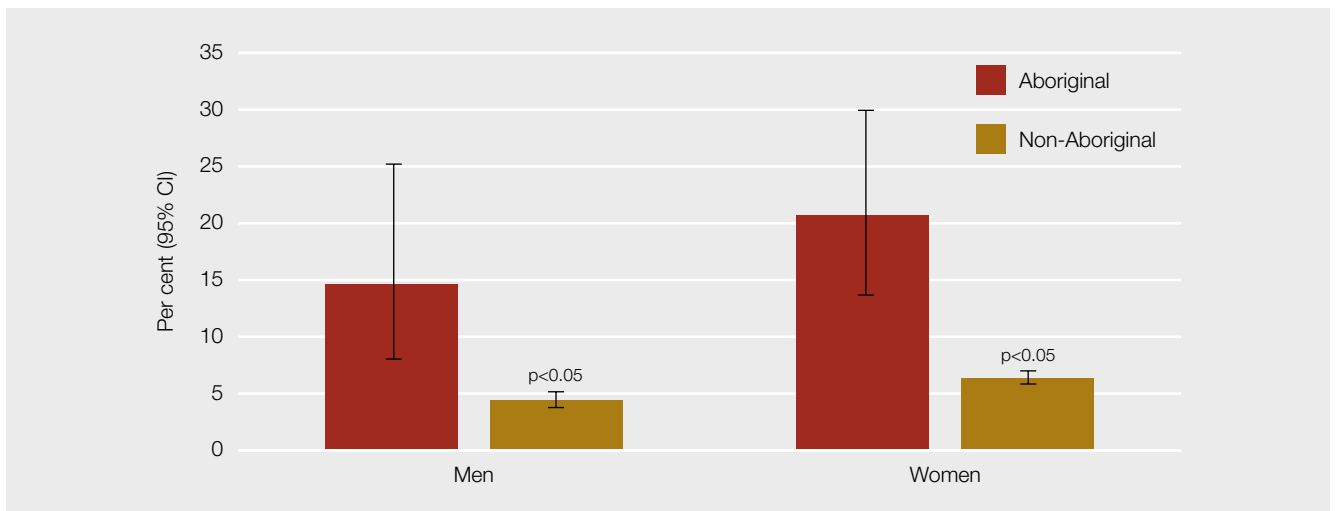


Table 2.21: Prevalence of food insecurity, by geographic area of residence and Aboriginal status

	Aboriginal					Non-Aboriginal				
	Per cent	95% CI	se	RSE	Per cent	95% CI	se	RSE		
Rural										
No	83.3	75.0 - 89.2	3.6	4%	94.2	93.6 - 94.8	0.3	0%		
Yes	16.7	10.8 - 25.0	3.6	21%	5.7	5.1 - 6.3	0.3	6%		
Don't know or refused to say	0.0	.	0.0		0.1*	0.1 - 0.2	0.0	29%		
Urban										
No	81.9	71.8 - 89.0	4.3	5%	94.5	94.0 - 95.0	0.3	0%		
Yes	18.1	11.0 - 28.2	4.3	24%	5.3	4.8 - 5.9	0.3	5%		
Don't know or refused to say	0.0	.	0.0		0.2	0.1 - 0.3	0.0	25%		

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

Aboriginal adults who resided in either rural or urban Victoria were significantly more likely to have experienced food insecurity compared with their non-Aboriginal counterparts.

There were no significant differences between Aboriginal adults who resided in rural compared with urban Victoria in the proportion who had experienced food insecurity in the previous 12 months. Similarly, there were no differences between non-Aboriginal adults who resided in rural compared with urban Victoria.

Psychological distress

Psychological distress is an important risk factor for various chronic diseases such as depression and cardiovascular disease (Holden et al. 2010; Kelly et al. 2009). The Kessler Psychological Distress Scale (K10) is a set of 10 questions designed to measure the level of psychological distress

over a four-week period and has been included in the survey. It cannot be used to determine the presence of major illnesses but has been validated as a simple measure of anxiety, depression and worry (psychological distress).

The K10 covers the dimensions of depression and anxiety such as nervousness, hopelessness, restlessness, sadness and worthlessness. It consists of 10 questions that have the same response categories: all of the time, most of the time, some of the time, a little of the time and none of the time (that are scored 5 through to 1). The 10 items are summed to yield scores ranging from 10 to 50. Individuals are categorised to four levels of psychological distress, based on their score: low (< 16), moderate (16–21), high (22–29) and very high (30–50).

Table 2.22 shows psychological distress levels in Victoria in 2008, by sex and Aboriginal status.

Table 2.22: Psychological distress levels,[†] by sex and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
Low (< 16)	59.9	48.0	70.8	10%	65.4	64.1	66.7	1%
Moderate (16–21)	17.3	10.6	27.0	24%	21.6	20.4	22.8	3%
High and very high (22–50)	22.2	13.8	33.8	23%	9.5	8.7	10.4	4%
Don't know or refused to say	**			74%	3.5	3.0	4.1	8%
Females								
Low (< 16)	44.9	35.1	55.2	12%	59.8	58.8	60.9	1%
Moderate (16–21)	26.8	18.7	36.9	17%	24.1	23.1	25.1	2%
High and very high (22–50)	22.4	15.6	31.1	18%	13.0	12.3	13.7	3%
Don't know or refused to say	5.8*	2.8	11.6	36%	3.1	2.7	3.4	6%
Persons								
Low (< 16)	52.2	43.9	60.4	8%	62.6	61.7	63.4	1%
Moderate (16–21)	22.1	16.3	29.2	15%	22.9	22.1	23.6	2%
High and very high (22–50)	22.0	16.2	29.1	15%	11.3	10.7	11.8	2%
Don't know or refused to say	3.7*	1.8	7.3	36%	3.3	3.0	3.6	5%

[†] Based on Kessler 10 Psychological Distress Scale (K10)

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: **higher/lower**.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Aboriginal Victorians were significantly more likely to have experienced high or very high psychological distress levels compared with their non-Aboriginal counterparts.

There was no difference between Aboriginal men and women in the proportion who had high or very high distress levels; however, non-Aboriginal women were significantly more likely to have high or very high psychological distress levels compared with their male counterparts.

Figure 2.7 shows the contrast in psychological distress levels between Aboriginal and non-Aboriginal adult Victorians in 2008.

Table 2.23 shows the psychological distress levels in Victoria in 2008, by geographic area of residence and Aboriginal status.

Figure 2.7: Psychological distress levels by Aboriginal status

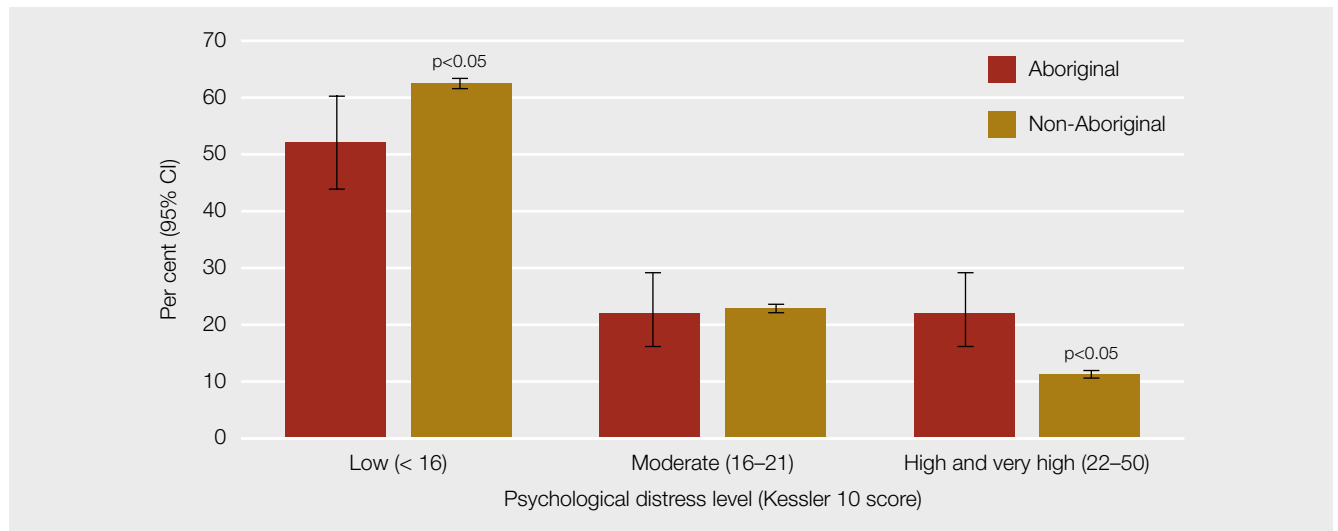


Table 2.23: Psychological distress levels,[†] by geographic area of residence and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
Low (< 16)	51.1	42.2	60.0	9%	63.0	61.5	64.5	1%
Moderate (16-21)	24.6	17.4	33.6	17%	22.9	21.6	24.3	3%
High and very high (22-50)	21.0	14.4	29.5	18%	11.2	10.3	12.2	4%
Don't know or refused to say	3.3*	1.4	7.8	44%	2.9	2.4	3.5	10%
Urban								
Low (< 16)	52.4	40.9	63.6	11%	62.4	61.4	63.4	1%
Moderate (16-21)	21.0	13.6	31.0	21%	22.8	21.9	23.8	2%
High and very high (22-50)	22.0	14.4	32.0	20%	11.3	10.7	12.0	3%
Don't know or refused to say	4.6*	1.9	10.9	45%	3.4	3.1	3.9	6%

[†] Based on Kessler 10 Psychological Distress Scale (K10)

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

Aboriginal adults were significantly more likely to have experienced high or very high psychological distress levels compared with their non-Aboriginal counterparts, irrespective of whether they resided in rural or urban Victoria.

There were no significant differences in the psychological distress levels of Aboriginal or non-Aboriginal adults who resided in rural compared with urban Victoria.

A report released by the AIHW in June 2011 on the 42 key indicators of progress of chronic disease and associated

determinants, noted that ‘the 2004–05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) used a reduced set of five questions of the 10 that comprise the K10. Therefore, there are no complete K10 comparable data available between Indigenous and non-Indigenous Australians’. This report now corrects that data gap and provides, for the first time in Australia, data on psychological distress levels in Aboriginal compared with non-Aboriginal adults.

Part B summary: Psychosocial risk factors

- Aboriginal Victorians were more likely to have experienced food insecurity in the previous 12 months.
- Aboriginal Victorians were more likely to have experienced high or very high psychological distress levels.

Part C: Community and societal characteristics

Community and societal characteristics are concepts that fall under the rubric of 'social capital'. **'The key indicators of social capital include social relations, formal and informal social networks, group membership, trust, reciprocity and civic engagement. Social capital is generally understood as the property of the group rather than the property of the individual'** (Harper 2001).

In this section we report on various indicators of social capital and compare Aboriginal and non-Aboriginal Victorians.

Social networks and support structures

Contact with others

Communication is central to developing and maintaining social ties, sharing knowledge and information, and

staying in touch with events. There are many ways to stay in touch, apart from meeting face to face or speaking on the telephone. Computer and internet technology is increasingly being used as a means of finding information and of becoming, and staying, informed.

The 2008 survey collected information on the number of people with whom a respondent spoke, either face to face or on the telephone, on the day before they were interviewed. The number of contacts on an average day does not necessarily reflect social isolation or detachment, but a lack of social contact may imply some vulnerability from not being in touch with people or events.

Table 2.24 shows the number of contacts incurred on the previous day in Victoria in 2008, by sex and Aboriginal status.

Table 2.24: Number of people spoken to on the previous day, by sex and Aboriginal status

	Aboriginal					Non-Aboriginal				
	Per cent	95% CI	se	RSE	Per cent	95% CI	se	RSE		
Males										
None	**		0.1	80%	2.6	2.2	3.2	0.2	9%	
Less than five	20.7	12.9	31.6	4.8	23%	18.8	17.8	19.8	0.5	3%
Five to nine	23.9	15.2	35.4	5.2	22%	25.8	24.6	27.0	0.6	2%
10 or more	55.2	43.3	66.6	6.1	11%	52.5	51.2	53.9	0.7	1%
Don't know or refused to say	0.0	.	.	0.0		0.3	0.2	0.4	0.1	22%
Females										
None	4.7*	2.0	10.6	2.0	43%	2.1	1.8	2.4	0.2	8%
Less than five	23.5	16.6	32.3	4.0	17%	19.7	18.9	20.5	0.4	2%
Five to nine	30.8	22.4	40.6	4.7	15%	30.1	29.1	31.1	0.5	2%
10 or more	41.0	32.2	50.4	4.7	11%	47.8	46.8	48.9	0.6	1%
Don't know or refused to say	0.0	.	.	0.0		0.3	0.2	0.4	0.1	19%
Persons										
None	2.4*	1.0	5.6	1.0	43%	2.4	2.1	2.7	0.1	6%
Less than five	22.6	16.7	29.8	3.3	15%	19.3	18.6	19.9	0.3	2%
Five to nine	28.5	21.9	36.1	3.6	13%	28.0	27.2	28.7	0.4	1%
10 or more	46.6	38.7	54.6	4.1	9%	50.1	49.3	51.0	0.4	1%
Don't know or refused to say	0.0	.	.	0.0		0.3	0.2	0.4	0.0	15%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

There were no significant differences between Aboriginal and non-Aboriginal Victorians in the number of people they had spoken with on the previous day.

While there were no statistically significant differences between Aboriginal men and women, a substantially higher proportion of Aboriginal men reported having spoken with 10 or more people. By contrast, non-Aboriginal men were significantly more likely to have spoken with 10 or more people compared with their female counterparts; women were significantly more likely to have spoken with five to nine people.

Table 2.25 shows the number of contacts incurred on the previous day in Victoria in 2008, by geographic area of residence and Aboriginal status.

Aboriginal adults who resided in rural Victoria were significantly less likely to have spoken with 10 or more people on the preceding day compared with their non-Aboriginal counterparts and significantly more likely to have spoken with five to nine people.

There were no significant differences between rural and urban Aboriginal adults. By contrast, non-Aboriginal adults who resided in rural Victoria were significantly more likely to have a larger number of contacts on the previous day compared with their urban counterparts.

Table 2.25: Number of people spoken to on the previous day, by geographic area of residence and Aboriginal status

	Aboriginal				Non-Aboriginal					
	Per cent	95% CI	se	RSE	Per cent	95% CI	se	RSE		
Rural										
None	**		1.8	61%	1.6	1.3	2.0	0.2	11%	
Less than five	16.5	11.7	22.7	2.8	17%	17.9	16.9	19.0	0.5	3%
Five to nine	41.7	31.9	52.1	5.2	12%	27.4	26.1	28.7	0.6	2%
10 or more	38.9	30.0	48.5	4.8	12%	52.8	51.4	54.3	0.7	1%
Don't know or refused to say	0.0	.	.	0.0		0.3*	0.2	0.5	0.1	27%
Urban										
None	**		1.3	58%	2.6	2.3	3.0	0.2	7%	
Less than five	25.1	17.2	35.1	4.6	18%	19.8	19.0	20.6	0.4	2%
Five to nine	22.3	14.9	32.2	4.4	20%	28.1	27.2	29.1	0.5	2%
10 or more	50.4	39.5	61.2	5.6	11%	49.2	48.1	50.2	0.5	1%
Don't know or refused to say	0.0	.	.	0.0		0.3	0.2	0.4	0.0	18%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Ability to get help from family, friends and neighbours

Families, friends and neighbours are among the more immediate sources of care and support for individuals if they need help with everyday activities or unforeseen contingencies. They are part of the social environment in which adults spend a large part of each day and in which children grow and develop. Social and support networks refer to informal relationships that individuals have with family, friends, neighbours and other members of their community. These networks often serve as a resource, providing information or emotional, practical and financial support. These resources are often provided without obligation, except for a norm of reciprocity. At a social level, social and support networks provide people with a sense of belonging.

Table 2.26 shows the proportion of adults who were able to get help from family when needed in Victoria in 2008, by sex and Aboriginal status.

Aboriginal Victorians were more than twice as likely as their non-Aboriginal counterparts to report being unable to get help from family.

There were no significant differences between Aboriginal men and women; however, non-Aboriginal women were significantly more likely to report being unable to get help from family when needed compared with their male counterparts.

Table 2.26: Ability to get help from family when needed, by sex and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
No or not often	16.1*	8.9	27.3	29%	6.3	5.8	7.0	5%
Sometimes	12.1*	6.5	21.5	31%	12.1	11.2	13.0	4%
Yes	71.7	60.1	81.0	7%	81.0	79.9	82.0	1%
Don't know or refused to say	**			104%	0.6	0.4	0.8	17%
Females								
No or not often	13.1*	7.8	21.0	25%	8.0	7.5	8.6	3%
Sometimes	9.9*	5.9	16.3	26%	11.7	11.0	12.4	3%
Yes	76.6	67.7	83.6	5%	79.9	79.1	80.8	1%
Don't know or refused to say	**			99%	0.4	0.3	0.5	19%
Persons								
No or not often	15.1	10.0	22.2	20%	7.2	6.8	7.6	3%
Sometimes	10.5	6.7	16.2	23%	11.9	11.3	12.4	2%
Yes	74.0	66.2	80.5	5%	80.4	79.8	81.1	0%
Don't know or refused to say	**			86%	0.5	0.4	0.6	13%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: **higher/lower**.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 2.27: Ability to get help from family when needed, by geographic area of residence and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
No or not often	14.9	9.1	23.4	24%	6.8	6.2	7.4	4%
Sometimes	14.3	9.3	21.5	22%	11.0	10.2	11.9	4%
Yes	69.9	60.6	77.9	6%	81.9	80.9	82.9	1%
Don't know or refused to say	**			79%	0.4*	0.2	0.6	28%
Urban								
No or not often	15.1*	8.6	25.0	27%	7.3	6.8	7.8	4%
Sometimes	8.1*	3.8	16.5	38%	12.2	11.5	12.9	3%
Yes	76.8	65.8	85.1	6%	80.0	79.1	80.8	1%
Don't know or refused to say	0.0	.	.		0.5	0.4	0.7	14%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: **higher/lower**.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 2.27 shows the proportion of adults who were able to get help from family when needed in Victoria in 2008, by geographic area of residence and Aboriginal status.

Aboriginal adults who resided in either rural or urban Victoria were more than twice as likely as their non-Aboriginal counterparts to report not being able to get help from family when needed.

There were no differences between Aboriginal Victorians who resided in rural compared with urban Victoria. By contrast, the proportion of non-Aboriginal Victorians who reported that they definitely could get help from family when needed was significantly higher for those who resided in rural compared with urban Victoria.

Table 2.28: Ability to get help from neighbours when needed, by sex and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
No or not often	29.6	19.4	42.3	20%	24.3	23.1	25.5	3%
Sometimes	21.6	13.2	33.3	24%	21.5	20.4	22.7	3%
Yes	45.5	34.1	57.4	13%	50.1	48.7	51.4	1%
Don't know or refused to say	3.3*	1.3	8.0	47%	4.1	3.6	4.7	7%
Females								
No or not often	24.3	17.1	33.2	17%	24.6	23.6	25.6	2%
Sometimes	18.3	12.1	26.6	20%	21.8	20.9	22.8	2%
Yes	50.9	41.1	60.7	10%	50.2	49.1	51.2	1%
Don't know or refused to say	6.5*	2.6	15.5	46%	3.4	3.1	3.9	6%
Persons								
No or not often	25.5	19.1	33.2	14%	24.5	23.7	25.2	2%
Sometimes	19.0	13.5	26.0	17%	21.7	20.9	22.4	2%
Yes	50.3	42.2	58.4	8%	50.1	49.3	51.0	1%
Don't know or refused to say	5.2*	2.3	11.2	40%	3.8	3.4	4.1	5%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

Table 2.28 shows the proportion of adults who were able to get help from neighbours when needed in Victoria in 2008, by sex and Aboriginal status.

There were no significant differences between Aboriginal and non-Aboriginal Victorians in the ability to get help from neighbours when needed.

Similarly, there were no significant differences between the sexes for either Aboriginal or non-Aboriginal Victorians.

Table 2.29: Ability to get help from neighbours when needed, by geographic area of residence and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
No or not often	23.4	16.4	32.1	17%	19.6	18.4	20.8	3%
Sometimes	19.8	12.5	30.0	22%	19.3	18.1	20.6	3%
Yes	48.5	40.4	56.6	9%	58.0	56.6	59.5	1%
Don't know or refused to say	8.4*	4.1	16.3	35%	3.1	2.5	3.8	10%
Urban								
No or not often	25.9	17.3	36.9	19%	26.1	25.2	27.1	2%
Sometimes	19.1	12.0	29.0	23%	22.5	21.6	23.4	2%
Yes	51.5	40.3	62.6	11%	47.4	46.3	48.4	1%
Don't know or refused to say	**			72%	4.0	3.6	4.4	5%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: **higher/lower**.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 2.29 shows the proportion of adults who were able to get help from neighbours when needed in Victoria in 2008, by geographic area of residence and Aboriginal status.

The proportion of Aboriginal adults who resided in rural Victoria and did not know or refused to say whether they could get help from neighbours when needed was significantly higher compared with their non-Aboriginal counterparts. Otherwise, there were no significant differences between Aboriginal and non-Aboriginal Victorians or between Aboriginal adults who resided in rural compared with urban Victoria. By contrast, the proportion of non-Aboriginal Victorians who reported that they definitely could get help from neighbours when needed was significantly higher for those who resided in rural compared with urban Victoria.

Table 2.30: Ability to get help from friends when needed, by sex and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
No or not often	**		51%	5.0	4.5	5.6	6%	
Sometimes	17.1*	9.7	28.3	28%	14.6	13.6	15.6	3%
Yes	81.7	70.6	89.2	6%	79.7	78.5	80.8	1%
Don't know or refused to say	**		106%	0.7	0.5	0.9	14%	
Females								
No or not often	4.9*	2.4	9.7	36%	4.9	4.5	5.4	5%
Sometimes	13.6	8.4	21.4	24%	12.7	12.0	13.4	3%
Yes	81.5	73.2	87.6	4%	81.9	81.0	82.7	1%
Don't know or refused to say	0.0	.	.		0.5	0.4	0.6	11%
Persons								
No or not often	3.0*	1.6	5.6	33%	5.0	4.6	5.4	4%
Sometimes	15.2	10.2	22.1	20%	13.6	13.0	14.3	2%
Yes	81.7	74.8	87.1	4%	80.8	80.1	81.5	0%
Don't know or refused to say	**		103%	0.6	0.5	0.7	9%	

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 2.30 shows the proportion of adults who were able to get help from friends when needed in Victoria in 2008, by sex and Aboriginal status.

There were no significant differences between Aboriginal and non-Aboriginal Victorians in the ability to get help from friends when needed.

There were no significant differences between Aboriginal men and women; however, non-Aboriginal men were significantly less likely than their female counterparts to definitely be able to get help from friends and significantly more likely to 'sometimes' be able to get help.

Table 2.31 shows the proportion of adults who were able to get help from friends when needed in Victoria in 2008, by geographic area of residence and Aboriginal status.

There were no significant differences between Aboriginal Victorians who resided in rural compared with urban Victoria or between Aboriginal and non-Aboriginal Victorians, regardless of where they resided. By contrast,

non-Aboriginal Victorians who resided in rural Victoria were significantly more likely to be able to get help from friends when needed compared with their urban counterparts.

Figure 2.8 highlights the differences between Aboriginal and non-Aboriginal adults in their ability to get help when needed from family, neighbours and friends.

Table 2.31: Ability to get help from friends when needed, by geographic area of residence and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
No or not often	3.6*	2.2	6.1	26%	3.9	3.5	4.5	7%
Sometimes	17.0	11.0	25.3	21%	11.6	10.8	12.5	4%
Yes	79.2	70.9	85.5	5%	84.0	83.0	84.9	1%
Don't know or refused to say	**			103%	0.4	0.3	0.6	13%
Urban								
No or not often	**			55%	5.4	5.0	5.9	4%
Sometimes	14.0*	7.7	24.1	29%	14.3	13.6	15.1	3%
Yes	83.6	73.4	90.4	5%	79.6	78.7	80.4	1%
Don't know or refused to say	0.0	.	.		0.7	0.5	0.8	11%

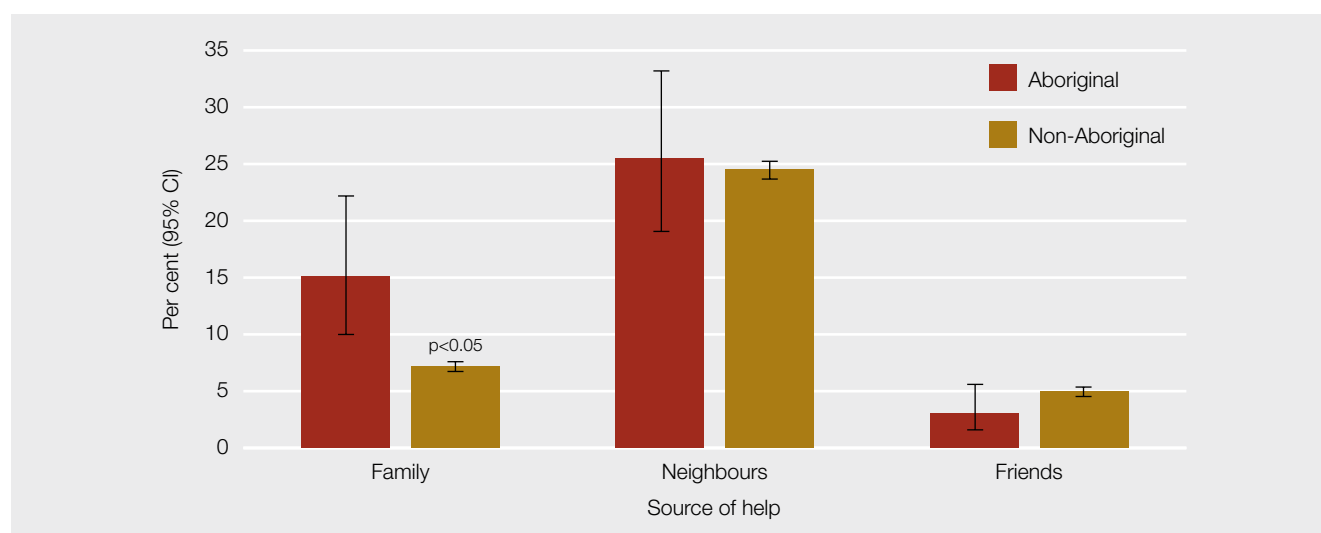
95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Figure 2.8: Proportion of adults who were unable to get help from family, neighbours or friends when needed by Aboriginal status



Provision of emergency care for self or children

Respondents were asked whether a relative or friend not living with them would care for them or their children in an emergency (data not shown). There were no significant differences between Aboriginal and non-Aboriginal Victorians.

There were also no significant differences between Aboriginal adults who resided in rural compared with urban Victoria. By contrast, non-Aboriginal adults who resided in rural Victoria were significantly more likely to be able to get emergency care compared with their urban counterparts.

Ability to get a job through a friend or relative

Respondents were asked about whether they could get a job through a friend or relative if the need arose. Table 2.32 shows the proportion of adults who were able to get a job through a friend or relative if needed, by sex and Aboriginal status.

While there were no statistically significant differences between Aboriginal and non-Aboriginal Victorians, a substantially higher proportion of Aboriginal men reported that they would be able to get a job through a friend or relative if needed.

Similarly, while there were no statistically significant differences between Aboriginal men and women, a substantially higher proportion of Aboriginal men reported that they would be able to get a job through a friend or relative if needed. By contrast, non-Aboriginal men were significantly more likely than their female counterparts to be able to get a job if needed.

Table 2.32: Ability to get a job through a friend or relative if needed, by sex and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
Yes	68.2	55.5	78.7	9%	57.2	55.7	58.6	1%
No	26.3	16.9	38.5	21%	33.3	32.0	34.7	2%
Don't know or refused to say	**			51%	9.5	8.7	10.4	5%
Females								
Yes	50.1	40.3	59.9	10%	49.3	48.1	50.4	1%
No	41.4	32.0	51.4	12%	39.4	38.3	40.5	1%
Don't know or refused to say	8.6*	3.9	17.9	40%	11.3	10.6	12.1	3%
Persons								
Yes	59.9	51.7	67.6	7%	53.2	52.3	54.1	1%
No	33.8	26.8	41.7	11%	36.4	35.5	37.2	1%
Don't know or refused to say	6.3*	3.3	11.6	32%	10.4	9.9	11.0	3%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 2.33: Ability to get a job through a friend or relative if needed, by geographic area of residence and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE		Per cent	95% CI	RSE	
Rural								
Yes	56.1	46.1	65.7	9%	56.1	54.6	57.6	1%
No	38.0	28.5	48.5	14%	34.7	33.3	36.1	2%
Don't know or refused to say	5.9*	2.9	11.6	35%	9.2	8.4	10.2	5%
Urban								
Yes	64.2	52.8	74.2	9%	52.2	51.1	53.3	1%
No	29.6	20.7	40.4	17%	37.0	35.9	38.1	1%
Don't know or refused to say	6.2*	2.5	14.6	45%	10.8	10.2	11.6	3%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

Table 2.33 shows the proportion of adults who were able to get a job through a friend or relative if needed, by geographic area of residence and Aboriginal status.

While there were no statistically significant differences between Aboriginal and non-Aboriginal Victorians regardless of where they resided, there was a substantially higher proportion of Aboriginal adults who resided in urban Victoria and reported being able to get a job through a friend or relative compared with their non-Aboriginal counterparts.

While there were no statistically significant differences between Aboriginal Victorians by geographic area of residence, there was a substantially higher proportion of Aboriginal adults who resided in urban Victoria and reported being able to get a job through a friend or relative compared with their rural Aboriginal counterparts. By contrast, non-Aboriginal Victorians who resided in rural Victoria were significantly more likely than their urban counterparts to be able to get a job through a friend or relative.

Ability to raise \$2,000 within two days in an emergency

Survey respondents were asked: 'If you needed to, could you raise \$2,000 within two days in an emergency – this includes accessing "own" savings, borrowing money, or using a credit card or bank card?' The question indicates financial stress, with those unable to raise \$2,000 within two days in an emergency being particularly vulnerable.

Table 2.34 shows the proportion of adults who were able to raise \$2,000 within two days in an emergency, by sex and Aboriginal status.

Aboriginal Victorians were significantly less likely to be able to raise \$2,000 within two days in an emergency compared with their non-Aboriginal counterparts.

While there were no significant differences between Aboriginal men and women, non-Aboriginal men were significantly more likely to be able to raise \$2,000 within two days in an emergency compared with their female counterparts.

Figure 2.9 shows the proportion of adults who were unable to raise \$2,000 within two days in an emergency, by sex and Aboriginal status.

Table 2.34: Ability to raise \$2,000 within two days in an emergency, by sex and Aboriginal status

	Aboriginal					Non-Aboriginal				
	Per cent	95% CI	se	RSE	Per cent	95% CI	se	RSE		
Males										
Yes	80.2	69.4	87.9	4.7	6%	87.4	86.4	88.3	0.5	1%
No	17.5*	10.3	28.2	4.5	26%	10.0	9.2	10.9	0.4	4%
Don't know or refused to say	**			1.5	64%	2.6	2.1	3.0	0.2	9%
Females										
Yes	77.7	69.7	84.1	3.7	5%	83.7	82.9	84.5	0.4	0%
No	21.1	14.8	29.0	3.6	17%	12.7	12.0	13.5	0.4	3%
Don't know or refused to say	**			0.7	56%	3.6	3.2	4.0	0.2	6%
Persons										
Yes	79.0	72.1	84.5	3.2	4%	85.4	84.8	86.1	0.3	0%
No	19.1	13.8	25.7	3.0	16%	11.5	10.9	12.0	0.3	2%
Don't know or refused to say	2.0*	0.7	5.2	1.0	49%	3.1	2.8	3.4	0.2	5%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Figure 2.9: Proportion of adults who were unable to raise \$2,000 within two days in an emergency, by Aboriginal status

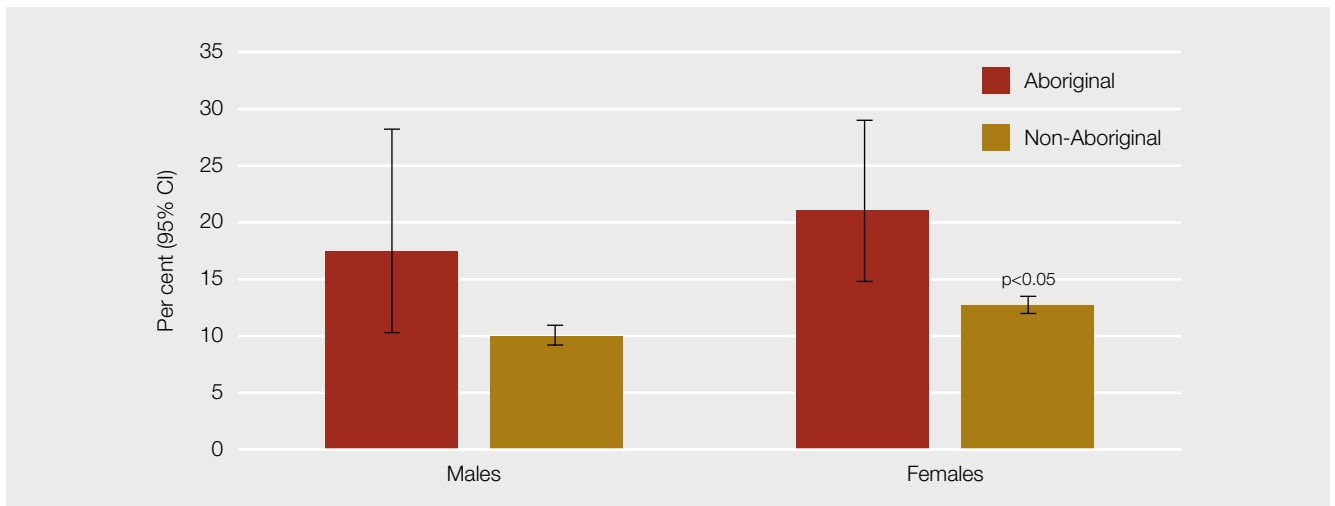


Table 2.35: Ability to raise \$2,000 within two days in an emergency, by geographic area of residence and Aboriginal status

	Aboriginal					Non-Aboriginal				
	Per cent	95% CI	se	RSE	Per cent	95% CI	se	RSE		
Rural										
Yes	69.7	61.0	77.2	4.2	6%	86.0	85.0	87.0	0.5	1%
No	24.4	17.2	33.4	4.1	17%	11.5	10.6	12.4	0.5	4%
Don't know or refused to say	5.9*	2.4	13.6	2.6	44%	2.5	2.1	3.0	0.2	9%
Urban										
Yes	84.1	75.2	90.3	3.8	5%	85.2	84.4	85.9	0.4	0%
No	15.9	9.7	24.8	3.8	24%	11.5	10.9	12.2	0.4	3%
Don't know or refused to say	0.0	.	.	0.0		3.3	3.0	3.7	0.2	6%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: **higher/lower**.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

Table 2.35 shows the proportion of adults who were able to raise \$2,000 within two days in an emergency, by geographic area of residence and Aboriginal status.

Aboriginal adults who resided in rural Victoria were significantly less likely to be able to raise \$2,000 within two days in an emergency compared with their non-Aboriginal counterparts. By contrast, there was no difference between Aboriginal and non-Aboriginal adults who resided in urban Victoria.

There were no significant differences between non-Aboriginal adults who resided in rural compared with urban Victoria. However, while statistical significance was not reached, there was a substantially lower proportion of Aboriginal adults who resided in rural compared with urban Victoria who were not able to raise \$2,000 within two days in an emergency.

The 2008 NATSISS reported that 54.6 per cent of Aboriginal Victorians aged 15 years and older could raise \$2,000 within a week in an emergency. This estimate was

not adjusted for age and was substantially lower than the VPHS crude (not adjusted for age) estimate (data not shown) of 77.2 per cent. The timeframe for being able to raise the money was considerably shorter in the VPHS (two days) compared with the NATSISS (one week), but whether the timeframe affected the response remains to be seen. However, if it did, one would expect the effect to be an increase in the ability to raise the money for the shorter timeframe, thus increasing the disparity between the two surveys. For a more complete discussion of possible reasons for the disparities between the national and state surveys, please see Chapter 6. Although there was a substantial difference between the estimates reported in the 2008 NATSISS and the 2008 VPHS, both surveys concurred that Aboriginal Victorians were far less likely to be able to raise \$2,000 in an emergency than non-Aboriginal Victorians.

Community participation

Networks formed through community and civic engagement tends to bring together people from different backgrounds who may not otherwise interact. Community and civic engagement thus facilitates social cohesion by allowing the expression of different perspectives, and it fosters greater appreciation of diversity and understanding throughout the community.

Participating in recreational and leisure activities not only allows for social interaction and engagement with a broader cross-section of the community but contributes to individual wellbeing through benefits to physical and mental health.

Attended a community event

Respondents were asked whether they had attended a local community event, such as a church fete, school concert or craft exhibition, in the previous six months.

Table 2.36 shows the proportion of adults who attended a local community event in the preceding six months, by sex and Aboriginal status.

While there were no statistically significant differences between Aboriginal and non-Aboriginal Victorians in the proportion who attended a local community event in the previous six months, there was a substantially higher proportion of Aboriginal men who did not attend such an event.

While there were also no statistically significant differences between Aboriginal men and women, there was a substantially higher proportion of Aboriginal women who attended such an event. By contrast, there was a significant gender disparity among non-Aboriginal Victorians, where women were more likely than their male counterparts to have reported attending a local community event in the previous six months.

Table 2.36: Attendance at a local community event, by sex and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
Yes	44.0	32.8	55.8	14%	51.3	50.0	52.7	1%
No	56.0	44.2	67.2	11%	48.4	47.0	49.7	1%
Don't know or refused to say	0.0	.	.		0.3*	0.2	0.5	28%
Females								
Yes	56.1	46.2	65.6	9%	54.9	53.9	56.0	1%
No	42.6	33.3	52.5	12%	44.6	43.6	45.7	1%
Don't know or refused to say	**			96%	0.4	0.3	0.6	18%
Persons								
Yes	49.4	41.8	57.1	8%	53.2	52.3	54.1	1%
No	49.9	42.3	57.6	8%	46.5	45.6	47.3	1%
Don't know or refused to say	**			99%	0.3	0.3	0.5	15%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 2.37: Attendance at a local community event, by Aboriginal status and rurality

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
Yes	56.2	45.7	66.1	9%	65.7	64.2	67.1	1%
No	42.0	32.4	52.3	12%	34.0	32.6	35.5	2%
Don't know or refused to say	**			93%	0.3	0.2	0.5	22%
Urban								
Yes	45.9	35.9	56.3	12%	48.8	47.7	49.8	1%
No	54.1	43.7	64.1	10%	50.9	49.8	51.9	1%
Don't know or refused to say	0.0	.	.		0.3	0.2	0.5	19%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 2.37 shows the proportion of adults who attended a local community event in the preceding six months, by geographic area of residence and Aboriginal status.

While there were no statistically significant differences between Aboriginal and non-Aboriginal adults who resided in rural or urban Victoria, a substantially lower proportion of Aboriginal adults had attended a local community event in the previous six months.

While there were no statistically significant differences between Aboriginal adults by geographic area of residence, a substantially higher proportion of those in rural Victoria had attended a local community event in the previous six months. By contrast, non-Aboriginal adults who resided in rural compared with urban Victoria were significantly more likely to have attended a local community event.

Volunteering

Ways of expressing community and civic engagement include being involved in the community through volunteering. The 2008 survey asked respondents whether they had helped out a local group as a volunteer.

Table 2.38 shows the proportion of Victorians in 2008 who helped out as a volunteer for a local group, by sex and Aboriginal status.

Table 2.38: Volunteerism, by sex and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
No or not often	68.6	56.3	78.7	8%	67.0	65.8	68.3	1%
Sometimes	16.7*	9.3	28.2	29%	10.2	9.4	11.1	4%
Yes	14.7*	8.5	24.2	27%	22.5	21.5	23.6	2%
Don't know or refused to say	0.0	.	.		0.2*	0.1	0.4	27%
Females								
No or not often	68.4	58.9	76.5	7%	67.2	66.2	68.2	1%
Sometimes	11.5*	6.7	19.1	27%	10.3	9.7	11.0	3%
Yes	20.1	13.9	28.3	18%	22.2	21.4	23.0	2%
Don't know or refused to say	0.0	.	.		0.3*	0.1	0.6	39%
Persons								
No or not often	68.2	60.2	75.4	6%	67.2	66.4	67.9	1%
Sometimes	14.1	9.1	21.1	21%	10.3	9.7	10.8	3%
Yes	17.7	12.7	24.1	16%	22.4	21.7	23.0	1%
Don't know or refused to say	0.0	.	.		0.2	0.1	0.4	24%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

There were no significant differences between Aboriginal and non-Aboriginal Victorians in the proportion who had helped out as a volunteer for a local group.

Similarly, there were no significant differences between men and women regardless of their Aboriginal status.

Table 2.39 shows the proportion of Victorians in 2008 who helped out as a volunteer for a local group by geographic area of residence and Aboriginal status.

Aboriginal adults who resided in rural Victoria were significantly less likely to have volunteered compared with their non-Aboriginal counterparts.

While there were no statistically significant differences between Aboriginal Victorians by geographic area of residence, a substantially higher proportion of those in urban Victoria had not volunteered compared with their rural counterparts. By contrast, non-Aboriginal people residing in rural Victoria were significantly more likely to have volunteered compared with their urban counterparts.

Table 2.39: Volunteerism, by geographic area of residence and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
No or not often	60.0	51.0	68.4	7%	56.1	54.7	57.5	1%
Sometimes	19.4	13.0	28.0	20%	12.0	11.1	13.0	4%
Yes	20.6	14.9	27.8	16%	31.7	30.5	33.0	2%
Don't know or refused to say	0.0	.	.		0.1	0.1	0.2	23%
Urban								
No or not often	72.4	61.1	81.4	7%	71.2	70.2	72.1	1%
Sometimes	11.0*	5.3	21.4	36%	9.7	9.0	10.3	3%
Yes	16.6	10.3	25.8	24%	18.9	18.2	19.7	2%
Don't know or refused to say	0.0	.	.		0.3*	0.2	0.5	28%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: **higher/lower**.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

Beliefs and attitudes

Whether individuals take up opportunities for social interaction and community engagement may depend on the extent to which certain conditions are fulfilled, including whether they trust casual acquaintances and strangers, feel valued as members of society and consider there are opportunities to be involved in different institutions and activities. This section focuses on the extent to which these enabling conditions are encouraging interaction and engagement.

Feeling safe

A sense of safety is an important determinant of a person's willingness to engage in the cultural, community and civic activities that a society offers. Feelings of safety are usually measured in terms of whether people feel safe in selected situations when they are unaccompanied. In this sense, safety refers to individual perceptions of personal harm or vulnerability. The 2008 survey asked respondents whether they felt safe walking down their street alone after dark.

Table 2.40 shows the proportion of Victorians who felt safe walking down their street after dark by sex and Aboriginal status.

Aboriginal women were significantly less likely than their non-Aboriginal female counterparts to feel safe walking alone down their street after dark. While the proportion of Aboriginal men who did not feel safe walking alone down their street after dark was almost twice that of their non-Aboriginal counterparts, it did not reach statistical significance and the RSE of the estimate was in excess of 25 per cent, which means it should be interpreted with caution.

For both Aboriginal and non-Aboriginal Victorians, there were statistically significant gender disparities where women were twice and three times more likely respectively to report not feeling safe compared with their male counterparts.

Table 2.40: Proportion of adults who felt safe walking down their street alone after dark, by sex and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
No or not often	17.4*	10.3	27.8	25%	10.9	10.1	11.7	4%
Sometimes	6.3*	2.6	14.8	45%	12.0	11.1	13.0	4%
Yes	73.1	61.6	82.2	7%	74.7	73.5	75.8	1%
Don't know, refused to say or N/A	**			61%	2.4	2.1	2.7	6%
Females								
No or not often	38.0	29.1	47.8	13%	32.5	31.6	33.5	2%
Sometimes	22.1	14.8	31.6	19%	19.0	18.1	19.9	2%
Yes	32.1	24.4	40.9	13%	44.3	43.2	45.4	1%
Don't know, refused to say or N/A	7.8*	4.2	13.9	30%	4.2	3.9	4.6	4%
Persons								
No or not often	28.5	22.0	36.0	13%	22.0	21.3	22.6	2%
Sometimes	13.5	9.2	19.5	19%	15.5	14.9	16.2	2%
Yes	52.7	45.0	60.3	7%	59.1	58.3	60.0	1%
Don't know, refused to say or N/A	5.3*	3.1	8.9	27%	3.4	3.1	3.6	3%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: **higher/lower**.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

N/A = not applicable where respondent is disabled and can't walk or lives in a remote property.

Figure 2.10 shows the proportion of Victorian men and women who reported feeling safe walking down their street alone after dark.

Table 2.41 shows the proportion of Victorians who felt safe walking alone down their street after dark in 2008 by geographic area of residence and Aboriginal status.

Figure 2.10: Proportion of adults who felt safe walking down their street alone after dark, by Aboriginal status

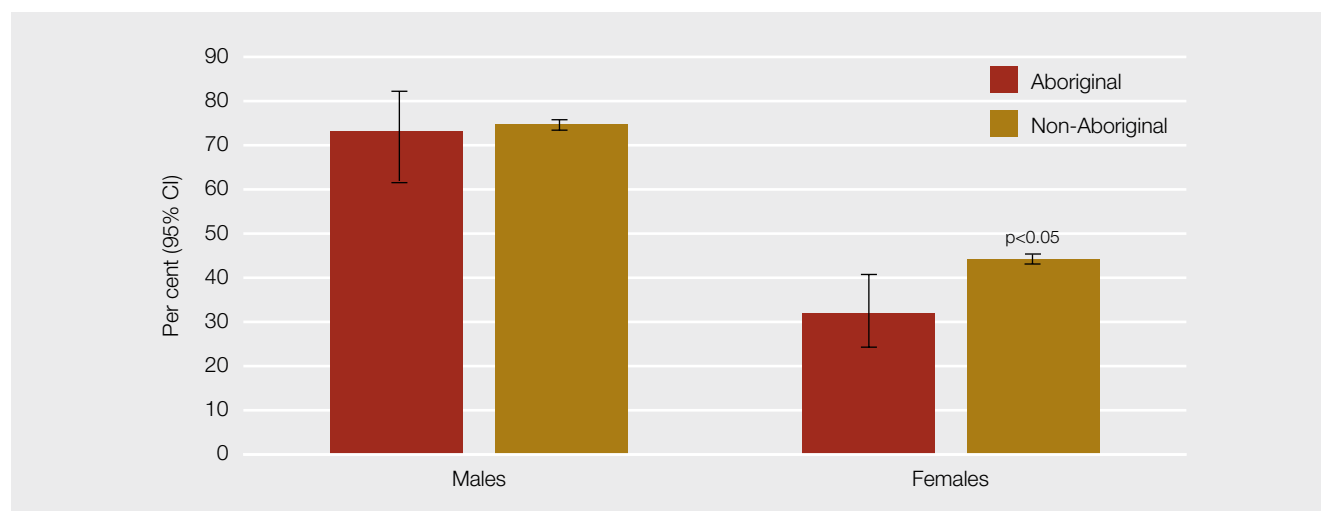


Table 2.41: Proportion of adults who felt safe walking down their street alone after dark, by geographic area of residence and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
No or not often	26.0	18.3	35.4	17%	17.7	16.7	18.7	3%
Sometimes	10.8	6.6	17.2	25%	11.3	10.3	12.3	5%
Yes	55.4	46.2	64.1	8%	65.5	64.2	66.9	1%
Don't know, refused to say or N/A	7.9*	4.5	13.4	28%	5.6	5.2	6.0	4%
Urban								
No or not often	29.0	20.9	38.6	16%	23.6	22.8	24.5	2%
Sometimes	14.3	8.6	22.8	25%	17.0	16.2	17.8	2%
Yes	52.8	42.6	62.7	10%	56.8	55.8	57.8	1%
Don't know, refused to say or N/A	3.9*	1.5	10.2	50%	2.5	2.2	2.8	6%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

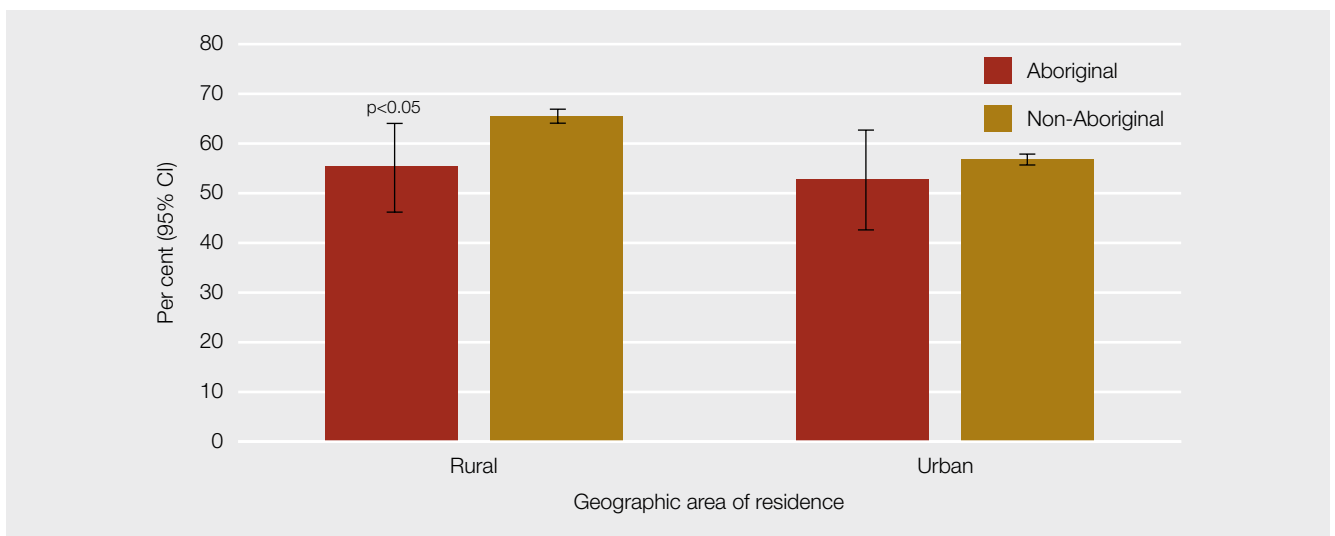
N/A = not applicable where respondent is disabled and can't walk or lives in a remote property.

Aboriginal people residing in rural Victoria were significantly less likely to report feeling safe compared with their non-Aboriginal counterparts. Although it did not reach statistical significance, there was also a substantially higher proportion of Aboriginal adults who resided in urban Victoria and did not feel safe walking alone down their street after dark compared with their non-Aboriginal counterparts.

There were no significant differences between Aboriginal adults who resided in rural compared with urban Victoria. By contrast, non-Aboriginal people residing in rural Victoria were significantly more likely to feel safe walking alone down their street after dark than their urban counterparts.

Figure 2.11 shows the proportion of Victorians who reported feeling safe walking alone down their street after dark in 2008 by geographic area of residence and Aboriginal status.

Figure 2.11: Proportion of adults who felt safe walking alone down their street after dark, by geographic place of residence and Aboriginal status



Feelings of trust

Trust is important for positive relationships between individuals and among groups. Trust in others is sometimes defined with reference to the type of relationship involved. The concept of interpersonal trust refers to trust between people who are known to one another. To describe social wellbeing, social trust (which refers to trust among casual acquaintances or strangers in everyday social interaction) is sometimes distinguished from civic trust (which refers to trust in public or high-profile institutions, and the respect that citizens are accorded in their relationships with institutions). The 2008 survey included indicators of both social and civic trust. Respondents were asked

Respondents were asked whether they agreed that most people could be trusted, as an indicator of social trust.

Table 2.42 shows the proportion of adults in Victoria in 2008 who agreed that most people could be trusted, by sex and Aboriginal status.

Aboriginal women were significantly more likely to disagree that most people could be trusted compared with their non-Aboriginal counterparts. While a higher proportion of Aboriginal men also disagreed that most people could be trusted compared with their non-Aboriginal counterparts, the difference did not reach statistical significance.

For both Aboriginal and non-Aboriginal Victorians, there was a gender disparity where men were significantly more likely to agree that most people could be trusted compared with their female counterparts.

Table 2.42: Proportion of adults who believed that most people could be trusted, by sex and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
No or not often	23.1	14.9	34.2	21%	19.0	17.9	20.2	3%
Sometimes	32.8	22.5	44.9	18%	38.4	37.0	39.7	2%
Yes	44.0	33.6	55.1	13%	41.3	40.0	42.6	2%
Don't know/refused to say	**			104%	1.4	1.1	1.7	11%
Females								
No or not often	32.4	23.9	42.3	15%	22.1	21.2	23.0	2%
Sometimes	46.7	37.0	56.7	11%	42.6	41.5	43.7	1%
Yes	19.4	13.6	27.0	18%	33.8	32.8	34.8	1%
Don't know/refused to say	**			90%	1.5	1.3	1.8	8%
Persons								
No or not often	27.1	20.6	34.6	13%	20.6	19.9	21.3	2%
Sometimes	39.7	31.8	48.1	11%	40.5	39.7	41.4	1%
Yes	32.5	25.3	40.7	12%	37.4	36.6	38.2	1%
Don't know/refused to say	**			90%	1.5	1.3	1.7	7%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: **higher/lower**.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Figure 2.12 shows the beliefs of Victorian women in 2008 about whether most people could be trusted.

Table 2.43 shows the proportion of adults in Victoria in 2008 who agreed that most people could be trusted, by geographic area of residence and Aboriginal status.

Figure 2.12: Proportion of Victorian women who believed that most people could be trusted, by Aboriginal status

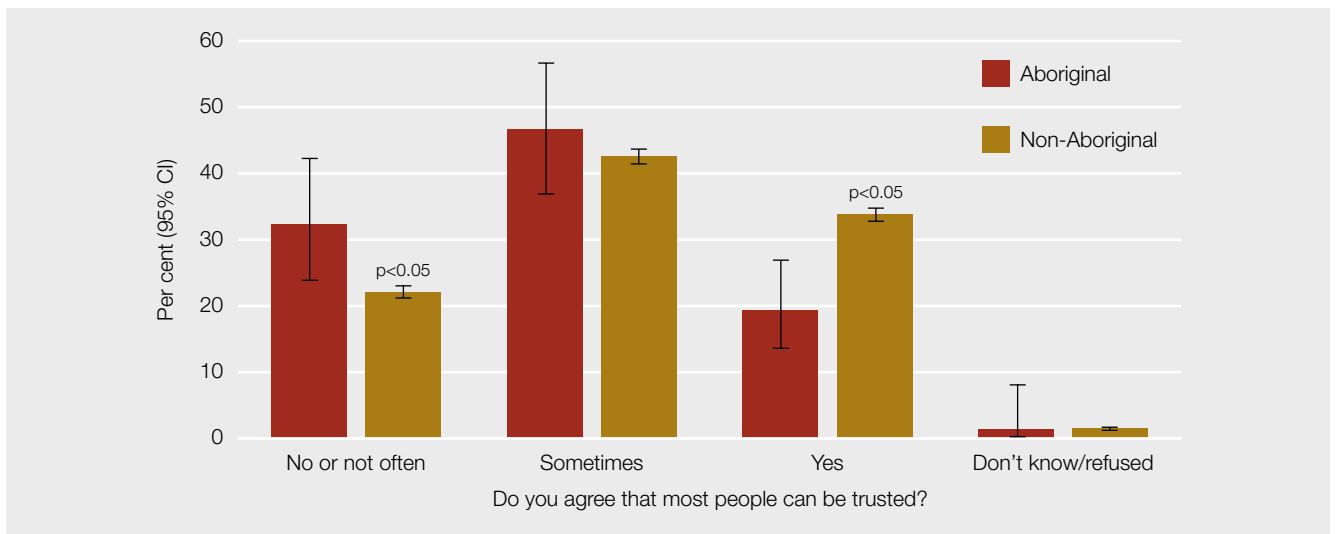


Table 2.43: Proportion of adults who believed that most people could be trusted, by geographic area of residence and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
No or not often	35.0	26.4	44.6	13%	19.5	18.1	20.9	4%
Sometimes	34.3	26.1	43.7	13%	38.2	36.8	39.6	2%
Yes	30.5	22.3	40.2	15%	41.5	40.2	43.0	2%
Don't know/refused to say	**			73%	0.8	0.6	1.0	12%
Urban								
No or not often	22.0	14.3	32.4	21%	21.1	20.3	22.0	2%
Sometimes	42.8	31.8	54.6	14%	41.3	40.3	42.3	1%
Yes	34.1	24.3	45.5	16%	35.9	34.9	36.9	1%
Don't know/refused to say	**			97%	1.7	1.5	2.0	8%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

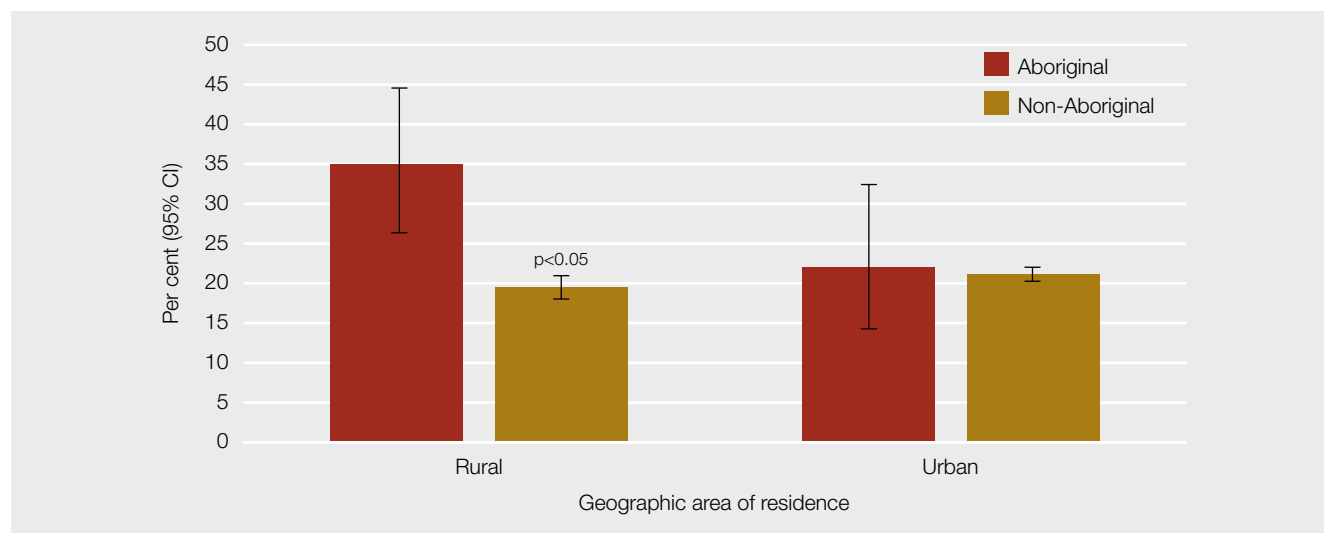
Aboriginal people residing in rural Victoria were significantly more likely to disagree that most people could be trusted compared with their non-Aboriginal counterparts. However, there were no significant differences between Aboriginal and non-Aboriginal adults who resided in urban Victoria.

While there were no statistically significant differences among Aboriginal Victorians by geographic area of residence, there was a substantially higher proportion

of Aboriginal adults who resided in rural Victoria that disagreed that most people could be trusted. By contrast, non-Aboriginal people who resided in rural Victoria were significantly more likely than their urban counterparts to agree that most people could be trusted.

Figure 2.13 shows the proportion of Victorians who did not agree that most people could be trusted, by geographic area of residence and Aboriginal status.

Figure 2.13: Proportion of adults who did not believe that most people could be trusted, by geographic area of residence and Aboriginal status



Opportunities to have a say

Civic trust in populations can be measured by the extent to which people feel they have an opportunity to have a say and feel valued by the society in which they belong. The 2008 survey collected information on whether respondents felt they had opportunities to have a real say on issues that were important to them.

Table 2.44 shows the proportion of adults in Victoria in 2008 who believed there were opportunities to have a real say on issues that were important to them, by sex and Aboriginal status.

While there were no statistically significant differences between Aboriginal and non-Aboriginal Victorians in the proportion who believed there were opportunities to have a real say on issues that were important to them, there was a substantially higher proportion of Aboriginal compared with non-Aboriginal men who did not.

While there was no statistically significant gender disparity in Aboriginal Victorians, a substantially higher proportion of men did not believe there were opportunities to have a real say. By contrast, there was a significant gender disparity in non-Aboriginal Victorians, where men were significantly more likely to disbelieve there were opportunities to have a real say compared with their female counterparts.

Table 2.44 Proportion of adults who believed there were opportunities to have a real say on issues that were important to them, by sex and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
No or not often	33.9	23.4	46.3	18%	24.3	23.2	25.5	2%
Sometimes	26.8	17.4	38.7	20%	29.8	28.6	31.1	2%
Yes	37.8	27.4	49.4	15%	43.4	42.1	44.8	2%
Don't know/refused to say	**			60%	2.5	2.1	2.9	8%
Females								
No or not often	23.1	15.7	32.6	19%	21.1	20.2	22.1	2%
Sometimes	30.6	23.1	39.2	13%	33.6	32.6	34.6	2%
Yes	42.8	34.2	51.8	11%	41.6	40.6	42.7	1%
Don't know/refused to say	**			56%	3.6	3.2	4.1	6%
Persons								
No or not often	28.0	21.2	36.0	14%	22.7	21.9	23.4	2%
Sometimes	27.9	21.5	35.4	13%	31.8	31.0	32.6	1%
Yes	41.4	34.0	49.3	9%	42.5	41.6	43.3	1%
Don't know/refused to say	2.6*	1.1	6.0	43%	3.1	2.8	3.4	5%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 2.45: Proportion of adults who believed there were opportunities to have a real say on issues that were important to them, by geographic area of residence and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
No or not often	16.9	11.8	23.5	18%	21.7	20.5	22.9	3%
Sometimes	39.0	30.2	48.6	12%	29.1	27.8	30.5	2%
Yes	41.1	32.3	50.6	11%	47.3	45.8	48.8	2%
Don't know/refused to say	**			58%	1.9	1.5	2.3	11%
Urban								
No or not often	33.4	24.0	44.4	16%	23.1	22.2	24.0	2%
Sometimes	21.7	14.2	31.6	20%	32.7	31.7	33.7	2%
Yes	42.4	32.2	53.3	13%	40.7	39.7	41.7	1%
Don't know/refused to say	**			57%	3.5	3.2	3.9	5%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: **higher/lower**.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 2.45 shows the proportion of adults in Victoria in 2008 who believed there were opportunities to have a real say on issues that were important to them, by geographic area of residence and Aboriginal status.

There was a significantly higher proportion of Aboriginal adults who resided in urban Victoria who did not believe that there were opportunities to have a real say compared with their non-Aboriginal counterparts. While there were no statistically significant differences between Aboriginal and non-Aboriginal adults who resided in rural Victoria, there was a substantially higher proportion of Aboriginal adults who did not believe there were opportunities to have a real say.

Aboriginal adults who resided in urban Victoria were significantly more likely to disbelieve there were opportunities to have a real say compared with their rural counterparts. Similarly, non-Aboriginal people who resided in urban Victoria were significantly less likely to believe that there were real opportunities to have a say than their rural counterparts.

Figure 2.14: Proportion of adults who did not believe there are opportunities to have a real say on matters that were important to them, by area of residence and Aboriginal status

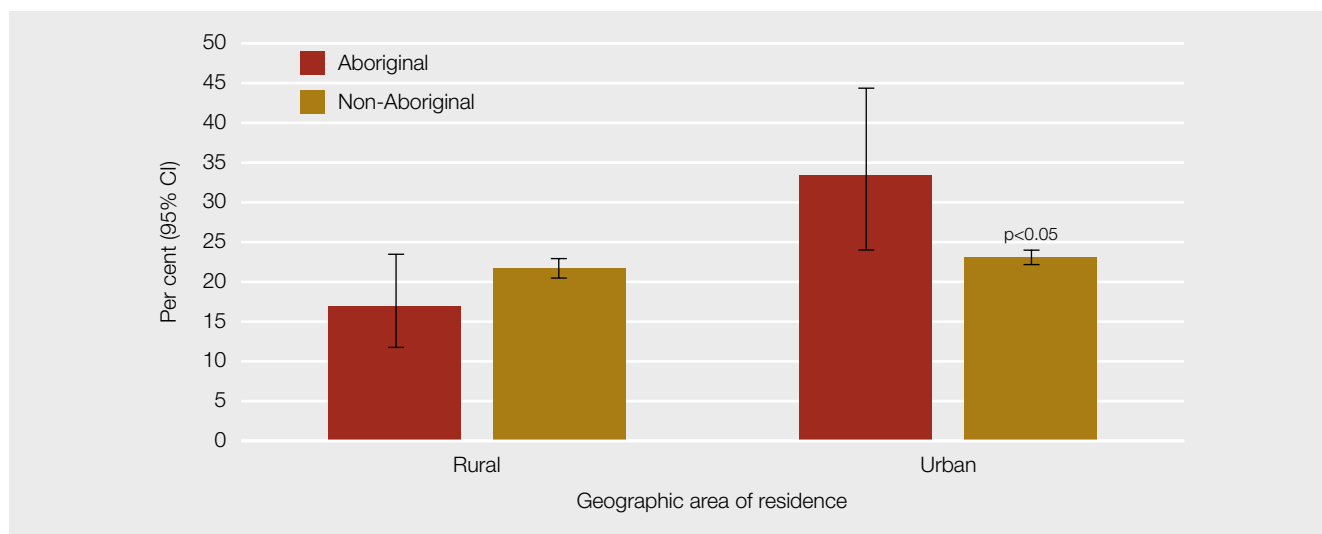


Figure 2.14 shows the proportion of adults who did not believe there were opportunities to have a real say on matters that were important to them, by geographic area of residence and Aboriginal status.

The 2008 NATSISS reported that 45.5 per cent of Aboriginal Victorians aged 15 years and over did not or 'only a little of the time' felt there were opportunities to have a say within the community on important issues. This estimate was not adjusted for age and was substantially lower than the VPHS crude (not adjusted for age) estimate (data not shown) of 30.9 per cent. The 2008 NATSISS reported that Aboriginal Australians were slightly less likely to feel able to have a say, but it is not clear if this reached statistical significance.

Feeling valued by society

A second indicator of civic trust is the extent to which people feel they are valued by society. Respondents were asked “do you feel valued by society?” Table 2.46 shows the proportion of adults in Victoria in 2008 who reported feeling valued by society, by sex and Aboriginal status.

While there were no statistically significant differences between Aboriginal and non-Aboriginal Victorians in the proportion who did or did not feel valued by society, there was a substantially higher proportion of both Aboriginal men and women who did not feel valued by society.

There were no significant gender disparities in the proportion who felt valued by society whether they were Aboriginal or non-Aboriginal.

Table 2.46: Proportion of adults who felt valued by society, by sex and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE		Per cent	95% CI	RSE	
Males								
No or not often	19.0*	11.3	30.1	25%	12.7	11.9	13.6	4%
Sometimes	29.5	19.4	42.2	20%	28.3	27.1	29.6	2%
Yes	44.4	32.8	56.6	14%	53.4	52.0	54.8	1%
Don't know/refused to say	7.1*	3.1	15.5	42%	5.6	5.0	6.2	5%
Females								
No or not often	17.6	11.0	27.1	23%	12.1	11.4	12.8	3%
Sometimes	26.8	19.4	35.8	16%	30.2	29.2	31.2	2%
Yes	50.6	41.2	59.9	10%	51.9	50.8	53.0	1%
Don't know/refused to say	4.9*	2.3	10.3	39%	5.8	5.3	6.3	4%
Persons								
No or not often	17.7	12.2	25.0	18%	12.4	11.9	13.0	2%
Sometimes	27.7	21.1	35.5	13%	29.2	28.4	30.0	1%
Yes	48.4	40.7	56.3	8%	52.6	51.8	53.5	1%
Don't know/refused to say	6.1*	3.4	10.7	29%	5.7	5.3	6.1	3%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

Table 2.47: Proportion of adults who felt valued by society, by geographic area of residence and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
No or not often	11.2	7.3	17.0	22%	12.3	11.5	13.3	4%
Sometimes	28.8	20.7	38.5	16%	27.5	26.2	28.8	2%
Yes	50.3	41.4	59.2	9%	54.9	53.5	56.4	1%
Don't know/refused to say	9.7*	5.5	16.3	28%	5.2	4.6	6.0	7%
Urban								
No or not often	21.3	13.4	32.1	22%	12.5	11.8	13.2	3%
Sometimes	27.2	18.4	38.3	19%	29.8	28.9	30.8	2%
Yes	47.7	37.0	58.6	12%	51.7	50.7	52.8	1%
Don't know/refused to say	**			60%	5.9	5.5	6.4	4%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Figure 2.15: Proportion of adults who did not feel valued by society, by area of residence and Aboriginal status

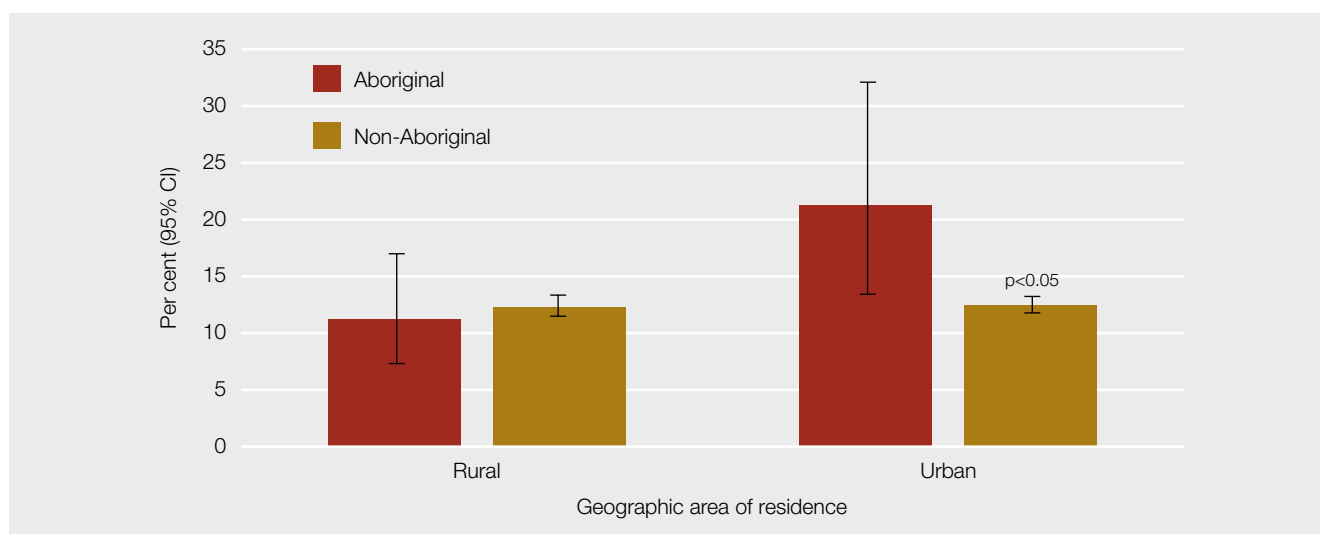


Table 2.47 shows the proportion of adults in Victoria in 2008 who reported feeling valued by society, by geographic area of residence and Aboriginal status.

Aboriginal adults who resided in urban Victoria were significantly more likely not to feel valued by society compared with their non-Aboriginal counterparts. There were no significant differences between Aboriginal and non-Aboriginal adults who resided in rural Victoria.

Non-Aboriginal adults who resided in rural Victoria were significantly more likely to feel valued than their urban counterparts. While there were no statistically significant differences between Aboriginal adults who resided in rural compared with urban Victoria, there was a substantially higher proportion of urban Aboriginal adults who did not feel valued by society.

Figure 2.15 shows the proportion of adults who did not feel valued by society, by geographic area of residence and Aboriginal status.

Tolerance of diversity

Tolerance of diversity, or an ability to get along with people of different cultural and social backgrounds, is a key aspect of social cohesion. The 2008 survey asked respondents whether they thought multiculturalism (as a general concept) made life in their area better.

Table 2.48 shows the proportion of adults in Victoria in 2008 who believed that multiculturalism made life in their area better, by sex and Aboriginal status.

There were no significant differences between Aboriginal and non-Aboriginal Victorians or between Aboriginal men and women in their beliefs about whether multiculturalism made life better in their area. However, non-Aboriginal women were significantly less likely than their male counterparts to say they did not believe that multiculturalism made life better, although they were also more likely to refuse to answer, not know or state that the question was not applicable to where they lived.

Table 2.48: Proportion of adults who believed multiculturalism made life in their area better, by sex and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
No or not often	15.5*	8.5	26.4	29%	11.6	10.8	12.4	4%
Sometimes	23.8	15.1	35.4	22%	24.3	23.2	25.5	3%
Yes	50.6	39.1	62.0	12%	52.4	51.0	53.7	1%
Not applicable	6.2*	3.1	11.9	34%	7.3	6.7	7.8	4%
Don't know/refused to say	**			69%	4.5	4.0	5.0	6%
Females								
No or not often	11.6*	6.5	19.8	28%	9.8	9.2	10.4	3%
Sometimes	28.8	20.3	39.1	17%	23.9	23.0	24.9	2%
Yes	43.4	33.9	53.4	12%	52.5	51.4	53.5	1%
Not applicable	12.6	7.9	19.5	23%	8.3	7.8	8.8	3%
Don't know/refused to say	**			51%	5.5	5.0	6.0	4%
Persons								
No or not often	12.2	7.8	18.7	22%	10.7	10.2	11.2	2%
Sometimes	26.3	19.7	34.3	14%	24.2	23.4	24.9	2%
Yes	48.3	40.2	56.4	9%	52.4	51.5	53.2	1%
Not applicable	9.1	5.8	14.1	23%	7.8	7.4	8.1	2%
Don't know/refused to say	4.0*	1.7	9.3	44%	5.0	4.7	5.4	4%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 2.49: Proportion of adults who believed multiculturalism made life in their area better, by geographic area of residence and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE		Per cent	95% CI	RSE	
Rural								
No or not often	10.7	6.6	16.8	24%	11.8	11.0	12.7	4%
Sometimes	20.4	13.4	30.0	21%	21.8	20.6	23.0	3%
Yes	51.2	41.6	60.7	10%	43.8	42.4	45.3	2%
Not applicable	14.1	9.5	20.5	20%	18.0	17.0	19.0	3%
Don't know/refused to say	**			52%	4.6	4.0	5.3	7%
Urban								
No or not often	13.2*	7.3	22.7	29%	10.4	9.8	11.0	3%
Sometimes	29.4	20.4	40.3	17%	25.0	24.1	25.9	2%
Yes	47.0	36.1	58.2	12%	55.3	54.2	56.3	1%
Not applicable	5.9*	2.5	13.4	43%	4.1	3.7	4.4	4%
Don't know/refused to say	**			57%	5.3	4.9	5.7	4%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

* Estimate has a relative standard error (RSE) between 25 and 50 per cent and should be interpreted with caution.

** Estimate has a relative standard error (RSE) greater than 50 per cent and is not reported as it is unreliable for general use.

Table 2.49 shows the proportion of adults in Victoria in 2008 who believed that multiculturalism made life in their area better, by geographic area of residence and Aboriginal status.

There were no significant differences in beliefs about multiculturalism between Aboriginal and non-Aboriginal adults or between Aboriginal adults who resided in rural compared with urban Victoria. By contrast, non-Aboriginal people residing in rural Victoria were significantly less likely to believe that multiculturalism made life better and more likely to report that multiculturalism was not applicable to their area compared with their urban counterparts.

Part C summary: Community and societal characteristics

Compared with their non-Aboriginal counterparts, Aboriginal Victorians in 2008 were less likely to:

- be able to get help from family when needed
- be able to raise \$2,000 within two days in an emergency
- feel safe walking down their street alone after dark if they were female or resided in rural Victoria
- agree that most people could be trusted if the respondents were female or resided in rural Victoria
- believe there were opportunities to have a real say on issues if they resided in urban Victoria
- feel valued by society if they resided in urban Victoria.

There were no significant differences between Aboriginal and non-Aboriginal Victorians in:

- the number of social contacts spoken to on a given day
- their ability to get help from neighbours or friends when needed
- their ability to obtain emergency care for themselves or their children
- volunteering
- beliefs about multiculturalism.

Some findings were equivocal, in that while there was a suggestion of differences between Aboriginal and non-Aboriginal Victorians, as the estimates were substantially different, they did not reach statistical significance. It is possible that a future survey with a larger Aboriginal sample size might show that Aboriginal Victorians also fare worse in likelihood to:

- attend a community event if they are male or reside in rural Victoria
- feel safe walking down their street alone after dark if they are male or reside in urban Victoria
- agree that most people could be trusted if the respondent was male
- believe there were opportunities to have a real say on issues if the respondent was male or resided in rural Victoria
- feel valued by society.

Another equivocal but positive finding was that Aboriginal Victorians were more likely to be able to get a job through a friend or relative if they are male or reside in urban Victoria.

Chapter 3:
Disease-inducing behaviours



Chapter 3: Disease-inducing behaviours

Chapter 2 sought to investigate some of the social determinants of health in relation to Aboriginal compared with non-Aboriginal Victorians in 2008. The social determinants of health exert direct effects on a person's health, as well as indirect effects by profoundly influencing known disease-inducing behaviours.

This chapter seeks to explore some of those disease-inducing behaviours, specifically smoking, excessive consumption of alcohol, inadequate fruit and vegetable consumption, inadequate physical activity, and being overweight or obese. Such behaviours are essentially lifestyle choices that are potentially amenable to change through education and health promotion activities. Moreover, addressing the inequities

in the underlying social determinants of health in disadvantaged populations may also help to reduce the incidence of such disease-inducing behaviours.

Smoking

Respondents were asked to describe their current smoking status. In this report 'current smokers' includes daily smokers and occasional smokers. Respondents were also asked if they had ever smoked, whether they had consumed a total of 100 commercial or hand-rolled cigarettes. If they answered yes and did not currently smoke, they were classified as ex-smokers.

Table 3.1 shows the prevalence of smoking in Victoria in 2008, by sex and Aboriginal status.

Table 3.1: Smoking status, by sex and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
Current smoker ^a	28.6	19.2	40.3	19%	21.3	20.2	22.5	3%
Ex-smoker	29.5	20.3	40.7	18%	27.4	26.3	28.5	2%
Non-smoker	41.9	30.9	53.7	14%	51.1	49.7	52.4	1%
Don't know or refused to say	0.0	.	.		0.2	0.2	0.4	23%
Females								
Current smoker	32.6	24.7	41.7	13%	16.8	16.0	17.7	3%
Ex-smoker	15.2	10.1	22.3	20%	20.4	19.6	21.2	2%
Non-smoker	52.1	42.7	61.5	9%	62.5	61.5	63.5	1%
Don't know or refused to say	**			103%	0.3	0.2	0.4	15%
Persons								
Current smoker	30.4	23.7	38.0	12%	19.0	18.3	19.8	2%
Ex-smoker	21.4	15.8	28.3	15%	23.7	23.0	24.3	1%
Non-smoker	48.2	40.3	56.2	9%	57.1	56.2	57.9	1%
Don't know or refused to say	**			102%	0.3	0.2	0.3	13%

^a Current smoker includes daily and occasional smokers.
Data are age-standardised to the 2006 Victorian population.
95% CI = 95 per cent confidence interval

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: **higher/lower**.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Overall, almost one in three Aboriginal Victorians were current smokers in 2008, a significantly higher proportion than their non-Aboriginal counterparts.

There was no difference between Aboriginal men and women in the prevalence of current smoking. This was in direct contrast to the non-Aboriginal population

where men were significantly more likely than women to be current smokers.

Figure 3.1 shows smoking status by Aboriginal status.

Table 3.2 shows the prevalence of smoking in Victoria in 2008, by geographic area of residence and Aboriginal status.

Figure 3.1: Smoking status in Aboriginal and non-Aboriginal Victorians

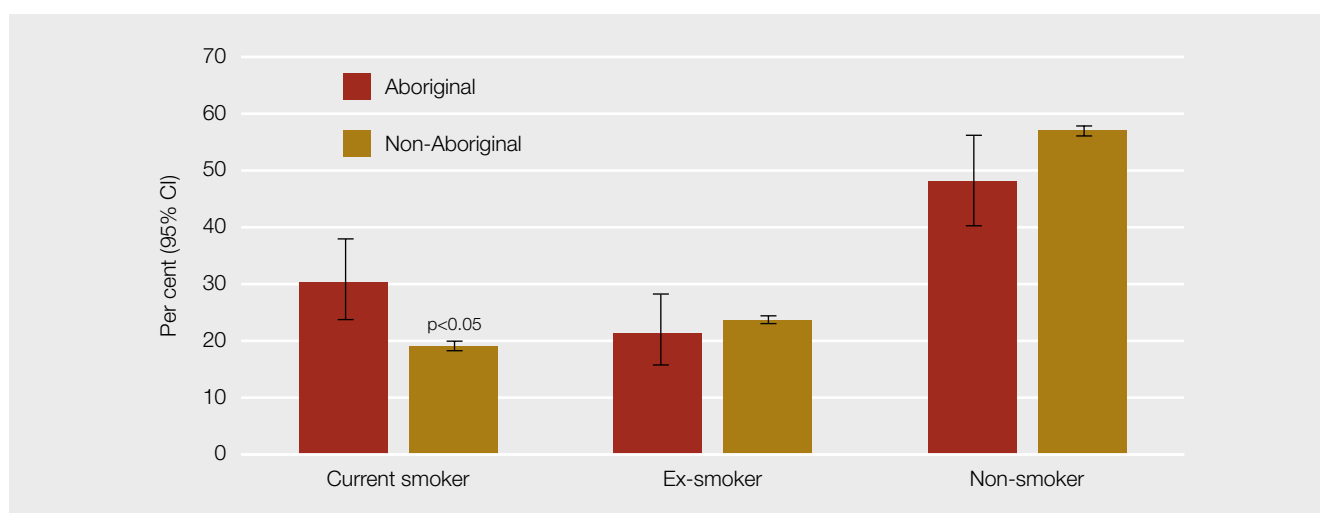


Table 3.2: Smoking status, by geographic area of residence and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
Current smoker	36.6	27.7	46.5	13%	20.1	18.8	21.4	3%
Ex-smoker	23.5	17.0	31.5	16%	24.1	23.1	25.2	2%
Non-smoker	39.9	31.2	49.3	12%	55.5	54.1	56.9	1%
Don't know or refused to say	**			102%	0.3	0.2	0.4	18%
Urban								
Current smoker	26.8	18.6	36.9	18%	18.7	17.8	19.5	2%
Ex-smoker	19.8	12.7	29.5	22%	23.5	22.7	24.3	2%
Non-smoker	53.4	42.6	64.0	10%	57.6	56.6	58.7	1%
Don't know or refused to say	0.0	.	.		0.2	0.2	0.3	17%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

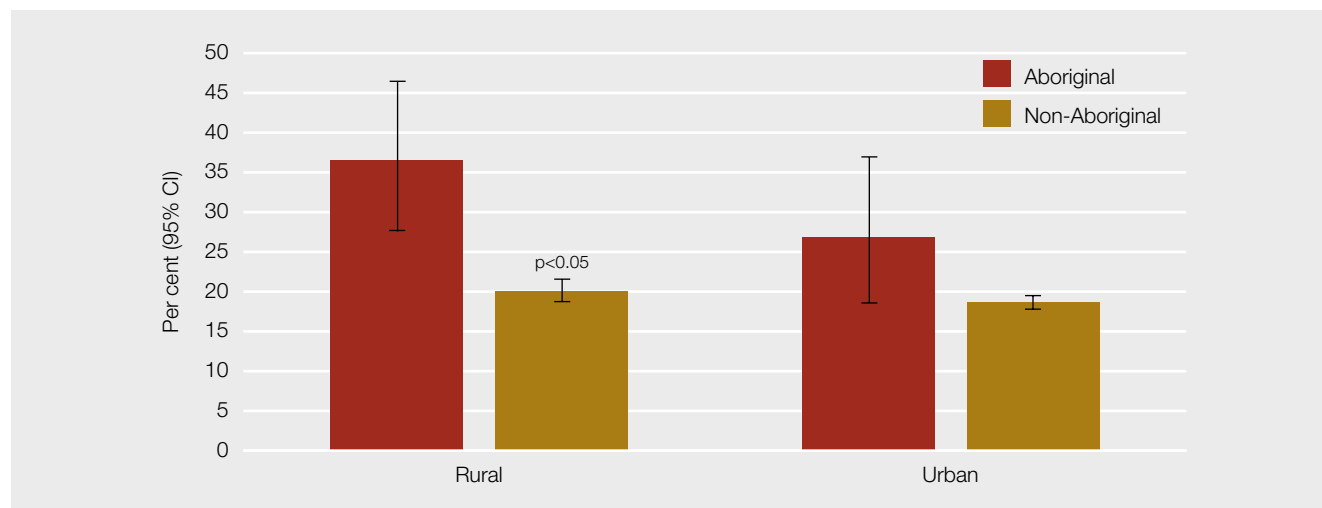
Aboriginal Victorians who resided in rural Victoria were significantly more likely to smoke than their non-Aboriginal counterparts. By contrast, while there were no statistically significant differences in the prevalence of smoking between Aboriginal and non-Aboriginal adults who resided in urban Victoria, there was a substantially higher proportion of Aboriginal smokers.

While there were no statistically significant differences among Aboriginal Victorians by geographic area of residence, there was a substantially higher proportion of smokers in rural compared with urban Victoria. By contrast, there were no significant differences in the prevalence of smoking among non-Aboriginal Victorians by geographic area of residence.

Figure 3.2 shows the prevalence of smoking among Aboriginal and non-Aboriginal Victorians, by geographic area of residence.

The 2008 NATSISS and the 2004–05 NATSIHS estimated the smoking prevalence in Victoria to be much higher (51.6 and 47.6 per cent respectively). These estimates were not adjusted for age while the VPHS estimate was. The crude (not adjusted for age) estimate (data not shown) in the 2008 VPHS was 33.9 per cent. Although the smoking prevalence estimates between the national surveys and the VPHS were substantially different, all three surveys concurred that the smoking prevalence was statistically significantly higher in Aboriginal compared with non-Aboriginal Victorians. For a discussion of possible reasons for the disparities between the national and state surveys, please see the introduction.

Figure 3.2: Prevalence of smoking in Aboriginal and non-Aboriginal Victorians, by geographic area of residence



Alcohol consumption

Regular, excessive consumption of alcohol over time places people at increased risk of chronic ill health and premature death (long-term risk). Episodes of heavy drinking may place the drinker (and others) at risk of injury or death (short-term risk). The consequences of heavy, regular use of alcohol may include cirrhosis of the liver, cognitive impairment, heart and blood disorders, ulcers, cancers and damage to the pancreas.

The 2001 *Australian alcohol guidelines: health risks and benefits* (NHMRC 2001), which were current when the VPHS 2008 was conducted, emphasise patterns of drinking as opposed to levels of consumption (the average amount consumed). The concept of drinking patterns refers to aspects of drinking behaviour other than the level of drinking, and includes when, where and with whom drinking behaviour occurs, the type of drinks consumed, the number of heavy drinking occasions undertaken and the norms associated with drinking behaviour. The 2001 guidelines identified patterns of drinking behaviour as creating a risk to health, defining these risks in the following way.

- Short-term risk is defined as excessive alcohol intake on a particular occasion.
- Long-term risk is defined as high-level intake over months and years.

The 2001 guidelines specified the risks for various drinking levels for males and females of average or larger than average body size (≥ 60 kg for males and ≥ 50 kg for females), over the short and long term. The guidelines categorised risk according to three levels:

1. low risk – a level of drinking at which the risk of harm is minimal and there are possible benefits for some of the population
2. risky – a level of drinking at which the risk of harm outweighs any possible benefit
3. high risk – a level of drinking at which there is a substantial risk of serious harm and above which risk increases rapidly.

The 2001 guidelines define short-term risk in terms of the number of standard drinks consumed per drinking occasion and is summarised in Table 3.3.

The 2001 guidelines define long-term risk in terms of the amount typically consumed each week and is summarised in Table 3.4.

Respondents were asked if they had consumed any alcoholic beverage in the preceding 12 months. If they replied in the affirmative, they were asked further questions about the frequency and quantity consumed. Their answers were used to calculate their average consumption and compared with the 2001 NHMRC guidelines to assess whether their consumption put them at short-term and/or long-term risk of alcohol-related harm.

Table 3.3: 2001 Australian alcohol guidelines for risk to health in the short term^a

	Low risk	Risky	High risk
Males	Up to six on one day; no more than three days per week	Seven to 10 on any one day	11 or more on any one day
Females	Up to four on one day; no more than three days per week	Five to six on any one day	Seven or more on any one day

^a Quantities in standard drinks
Source: NHMRC 2001

Table 3.4: 2001 Australian alcohol guidelines for risk to health in the long term^a

		Low risk	Risky	High risk
Males	On an average day	Up to four per day	Five to six per day	Seven or more per day
	Overall weekly level	Up to 28 per week	29–42 per week	43 or more per week
Females	On an average day	Up to two per day	Three to four per day	Five or more per day
	Overall weekly level	Up to 14 per week	15–28 per week	29 or more per week

^a Based on a standard drink containing 10 g or 12.5 mL of alcohol
Source: NHMRC 2001

Table 3.5: Short-term risk of alcohol-related harm, by sex and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
Abstainer	22.4	14.2	33.5	22%	12.4	11.5	13.3	4%
Low risk	27.4	18.0	39.2	20%	33.1	31.9	34.3	2%
Short-term risk	50.3	39.7	60.8	11%	54.0	52.7	55.3	1%
Don't know or refused to say	0.0	.	.		0.5	0.4	0.7	16%
Females								
Abstainer	20.5	14.2	28.7	18%	22.9	22.0	23.8	2%
Low risk	40.1	31.2	49.6	12%	39.2	38.2	40.2	1%
Short-term risk	38.1	29.1	48.0	13%	37.3	36.3	38.3	1%
Don't know or refused to say	**			67%	0.6	0.4	0.7	15%
Persons								
Abstainer	20.5	15.0	27.4	15%	17.8	17.2	18.5	2%
Low risk	34.9	27.9	42.6	11%	36.2	35.4	37.0	1%
Short-term risk	43.9	37.0	51.1	8%	45.5	44.6	46.3	1%
Don't know or refused to say	**			71%	0.5	0.4	0.6	11%

a Consumption of alcohol on any one day over the recommended 2001 NHMRC Australian guidelines

95% CI = 95 per cent confidence interval

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: **higher/lower**.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 3.5 shows the prevalence of consuming alcohol at levels commensurate with being at short-term risk of alcohol-related harm in Victoria in 2008, by sex and Aboriginal status.

There were almost twice as many Aboriginal men who were abstainers from alcohol compared with their non-Aboriginal male counterparts. While there were no significant differences between Aboriginal men and women in the proportion of abstainers, non-Aboriginal men were almost half as likely to abstain from alcohol consumption as their female counterparts.

There were no significant differences between Aboriginal and non-Aboriginal Victorians in their short-term risk status for alcohol-related harm.

While there was no statistically significant gender disparity among Aboriginal Victorians, there was a substantially higher proportion of Aboriginal men who were at short-term risk of alcohol-related harm. By contrast, there was a significant gender disparity among non-Aboriginal Victorians, where non-Aboriginal men were more likely to be at short-term risk of alcohol-related harm compared with their female counterparts.

Table 3.6: Short-term risk of alcohol-related harm, by geographic area of residence and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
Abstainer	18.8	12.4	27.4	20%	16.0	15.1	17.0	3%
Low risk	33.8	26.9	41.5	11%	31.4	30.3	32.6	2%
Risky/high risk	46.8	38.2	55.7	10%	52.0	50.7	53.4	1%
Don't know or refused to say	**			67%	0.5	0.4	0.7	13%
Urban								
Abstainer	21.3	14.1	30.8	20%	18.4	17.6	19.2	2%
Low risk	35.5	25.7	46.7	15%	37.8	36.9	38.8	1%
Risky/high risk	42.5	33.5	52.1	11%	43.3	42.3	44.3	1%
Don't know or refused to say	**			100%	0.5	0.4	0.7	14%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 3.6 shows the prevalence of consuming alcohol at levels commensurate with being at short-term risk of alcohol-related harm in Victoria in 2008, by geographic area of residence and Aboriginal status.

There were no significant differences in short-term risk status between Aboriginal and non-Aboriginal adults, regardless of whether they resided in rural or urban Victoria.

There was no significant difference between Aboriginal adults who resided in rural compared with urban Victoria. By contrast, there was a significantly higher proportion of non-Aboriginal adults at short-term risk of alcohol-related harm who resided in rural compared with urban Victoria.

The 2004–05 NATSIHS concluded that Aboriginal Australians were almost twice as likely to drink at short-term risky levels at least once a week as their non-Aboriginal counterparts. While the VPHS did not find any difference between Aboriginal and non-Aboriginal Victorians, there were insufficient numbers of Aboriginal adults in the 2008 VPHS to enable short-term risk to be further analysed by whether the short-term risky drinking occurred at least yearly, monthly or weekly.

The 2004–05 NATSIHS noted that Aboriginal Australians were twice as likely to have abstained from alcohol in the previous year as non-Aboriginal Australians. In Victoria, we did not observe this for Aboriginal women but did for Aboriginal men.

Table 3.7: Long-term risk of alcohol-related harm, by sex and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
Abstainer	22.4	14.2	33.5	22%	12.4	11.5	13.3	4%
Low risk	73.7	62.6	82.5	7%	82.4	81.3	83.4	1%
Long-term risk	3.9*	1.7	8.6	41%	4.3	3.8	4.9	7%
Don't know or refused to say	0.0	.	.		1.0	0.7	1.4	17%
Females								
Abstainer	20.5	14.2	28.7	18%	22.9	22.0	23.8	2%
Low risk	74.9	66.3	82.0	5%	73.3	72.3	74.2	1%
Long-term risk	3.4*	1.4	8.2	46%	3.1	2.7	3.5	6%
Don't know or refused to say	**			76%	0.7	0.6	1.0	13%
Persons								
Abstainer	20.5	15.0	27.4	15%	17.8	17.2	18.5	2%
Low risk	75.3	68.2	81.2	4%	77.7	76.9	78.4	0%
Long-term risk	3.6*	1.9	6.7	32%	3.7	3.3	4.0	5%
Don't know or refused to say	**			78%	0.9	0.7	1.1	11%

Based on 2001 NHMRC Australian guidelines.

Data are age-standardised to the 2006 Victorian population.

95% CI = 95 per cent confidence interval

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: **higher/lower**.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 3.7 shows the prevalence of consuming alcohol at levels commensurate with being at long-term risk of alcohol-related harm in Victoria in 2008, by sex and Aboriginal status.

The estimates of long-term risky and high-risk alcohol consumption among Aboriginal Victorians were associated with RSEs of greater than 25 per cent and therefore the results must be treated with caution. We did not find a difference between Aboriginal and non-Aboriginal Victorians in the proportion at long-term risk of alcohol-related harm, which concurs with the findings of the 2004–05 NATSIHS. However, the 2004–05 NATSIHS reported that 16 per cent of Aboriginal Victorians consumed alcohol at levels commensurate with long-term risk, an estimate considerably higher than we report here for both Aboriginal and non-Aboriginal Victorians.

Given that many people have a tendency to under-report their alcohol consumption, it is possible that a contributing factor to the large difference between the two surveys could be that such under-reporting is easier and hence more prevalent when the interview is conducted by telephone (VPHS) rather than face to face (NATSIHS). For a more detailed discussion, please see Chapter 6.

There were no significant differences in the long-term risk status between Aboriginal men and women. By contrast, non-Aboriginal women were significantly more likely than their male counterparts to abstain from alcohol consumption, while non-Aboriginal men were significantly more likely to be at both long-term and short-term risk of alcohol-related harm.

Table 3.8: Long-term risk of alcohol-related harm, by geographic area of residence and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
Abstainer	18.8	12.4	27.4	20%	16.0	15.1	17.0	3%
Low risk	77.0	68.3	83.9	5%	78.5	77.3	79.6	1%
Risky/high risk	3.8*	1.9	7.2	34%	4.6	3.9	5.3	8%
Don't know or refused to say	**			86%	0.9	0.7	1.2	15%
Urban								
Abstainer	21.3	14.1	30.8	20%	18.4	17.6	19.2	2%
Low risk	74.6	64.9	82.4	6%	77.5	76.6	78.3	1%
Risky/high risk	3.4*	1.4	8.3	46%	3.3	3.0	3.7	6%
Don't know or refused to say	**			100%	0.8	0.6	1.1	14%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Figure 3.3: Proportion of adults who abstained from alcohol consumption, by sex and Aboriginal status

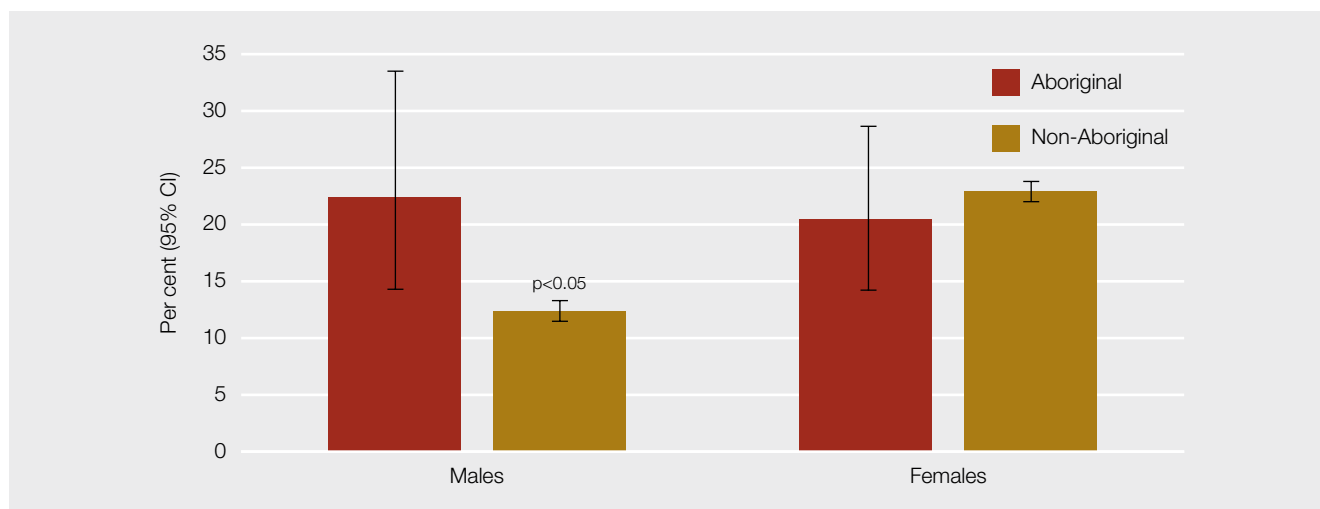


Table 3.8 shows the prevalence of consuming alcohol at levels commensurate with being at long-term risk of alcohol-related harm in Victoria in 2008, by geographic area of residence and Aboriginal status.

There were no significant differences in the long-term risk status for alcohol consumption between Aboriginal adults residing in rural compared with urban Victoria, or compared with their non-Aboriginal counterparts.

By contrast, non-Aboriginal adults who resided in rural Victoria were significantly less likely to abstain from alcohol consumption compared with those who resided in urban Victoria and were significantly more likely to be at both long-term and short-term risk of alcohol-related harm.

Figure 3.3 shows the prevalence of abstinence from alcohol consumption in the preceding 12 months in Victoria in 2008, by sex and Aboriginal status.

Physical activity

Physical inactivity is a major modifiable risk factor for a range of conditions including cardiovascular disease, diabetes, some cancers, obesity and falls among the elderly. The evidence suggests that health benefits accrue with increasing levels of physical activity and that this protective effect occurs even if adopted in middle and later life, which suggests physical activity is an obvious target for health promotion. Monitoring physical activity levels at the population level is relevant for investigating the outcomes of health promotion efforts.

Information was collected on three types of physical activity to measure the extent to which the population is engaging in sufficient physical activity to achieve a health benefit and meet the current national guidelines:

- time spent walking (for more than 10 minutes at a time) for recreation or exercise, or to get to and from places
- time spent doing vigorous household chores (excluding gardening)
- time spent doing vigorous activities other than household chores and gardening (for example, tennis, jogging, cycling or keep-fit exercises).

Data was collected on the number of sessions and the duration of each type of physical activity.

The level of health benefit achieved from physical activity partly depends on the intensity of the activity. In general, to obtain a health benefit from physical activity requires participation in moderate-intensity activities (at least). Accruing 150 or more minutes of moderate-intensity physical activity (such as walking) on a regular basis over one week is believed to be 'sufficient' for health benefits and is the recommended threshold of physical activity according to the *National physical activity guidelines for Australians* issued by the federal Department of Health and Ageing (DoHA) in 1999. For those who achieve an adequate baseline level of fitness, extra health benefits may be gained by undertaking at least 30 minutes of regular vigorous exercise on three to four days per week.

The sum of the proportion of adults who undertake only vigorous physical activity or walking *and* vigorous activity sets the upper limit for the proportion of the population who may satisfy both the health benefit and health fitness criteria to meet the guidelines on physical activity. The actual proportion of adults who fulfil both criteria is reduced to the extent that individuals do not spend sufficient time on physical activity and/or do not participate in physical activity regularly.

The 'sufficient time and sessions' measure of physical activity is regarded as the preferred indicator of the adequacy of physical activity for a health benefit because it addresses the regularity of the activity undertaken. Under this measure, the requirement to participate in physical activity regularly (that is, on five, preferably seven, days per week) is an accrued 150 or more minutes of at least moderate-intensity physical activity.

Those respondents who satisfied both criteria (time and number of sessions) were classified as doing 'sufficient' physical activity to achieve an added health benefit in the analysis that follows (Table 3.9).

The number of minutes spent on physical activity was calculated by adding the minutes of moderate-intensity activity to two times the minutes of vigorous activity (that is, the minutes of vigorous intensity activity are weighted by a factor of two).

Respondents were classified as doing 'insufficient' physical activity if they reported undertaking physical activity during the week before the survey but did not accrue 150 minutes and/or did fewer than five sessions. Respondents were considered to be 'sedentary' if they reported no physical activity for the relevant time period. Those classified as 'sedentary' or 'insufficient' have been referred to as doing an 'insufficient' amount of physical activity to achieve health benefits.

The *National physical activity guidelines for adults* (DoHA 1999) have been applied to all respondents (adults aged 18 years and over) in previous VPHS reports to provide information about the prevalence of different levels of physical activity, including sufficient physical activity to achieve a health benefit.

Table 3.9: Definition of sufficient physical activity

Physical activity category	Time and sessions per week
Sedentary	0 minutes
Insufficient time and/or sessions	Less than 150 minutes or 150 or more minutes, but fewer than five sessions
Sufficient time and sessions	150 minutes and five or more sessions

Table 3.10: Physical activity, by sex and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
Did not meet PA guidelines	25.1	16.0	37.2	22%	32.7	31.4	33.9	2%
Met PA guidelines	69.8	57.3	79.9	8%	63.7	62.4	65.0	1%
Don't know, refused or not applicable	**			53%	3.6	3.2	4.2	7%
Females								
Did not meet PA guidelines	41.2	32.3	50.7	12%	33.0	32.0	34.0	2%
Met PA guidelines	55.2	45.8	64.1	9%	62.8	61.8	63.8	1%
Don't know, refused or not applicable	3.6*	1.7	7.6	38%	4.2	3.8	4.6	5%
Persons								
Did not meet PA guidelines	34.4	27.3	42.3	11%	32.9	32.1	33.7	1%
Met PA guidelines	61.3	53.2	68.8	7%	63.2	62.4	64.0	1%
Don't know, refused or not applicable	4.3*	2.1	8.5	36%	3.9	3.6	4.3	4%

PA = physical activity.

Data are age-standardised to the 2006 Victorian population.

95% CI = 95 per cent confidence interval

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 3.10 shows the proportion of Victorians who met the physical activity guidelines in 2008, by sex and Aboriginal status.

There were no significant differences between men and women or between Aboriginal and non-Aboriginal Victorians in the proportion who did or did not engage in sufficient physical activity to meet the Australian guidelines.

While statistical significance was not met, the proportion of Aboriginal men who did not meet the physical activity guidelines was considerably lower compared with the non-Aboriginal men. Conversely, the proportion of Aboriginal women who did not meet the physical activity guidelines was considerably higher compared with both their Aboriginal male and non-Aboriginal female counterparts.

Table 3.11: Physical activity, by geographic area of residence and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
Did not meet PA guidelines	26.5	19.4	35.0	15%	31.2	30.0	32.5	2%
Met PA guidelines	68.3	59.1	76.3	6%	64.1	62.8	65.5	1%
Don't know, refused or not applicable	5.2*	2.2	11.8	43%	4.7	4.1	5.3	7%
Urban								
Did not meet PA guidelines	38.1	28.4	48.8	14%	33.4	32.4	34.4	2%
Met PA guidelines	58.2	47.2	68.4	9%	62.9	61.9	63.9	1%
Don't know, refused or not applicable	**			51%	3.7	3.4	4.1	5%

PA = physical activity.

95% CI = 95 per cent confidence interval.

Data are age-standardised to the 2006 Victorian population.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 3.11 shows the proportion of Victorians who met the physical activity guidelines in 2008, by geographic area of residence and Aboriginal status.

While there were no statistically significant differences between Aboriginal and non-Aboriginal Victorians who resided in rural Victoria, there was a substantially lower proportion of Aboriginal adults who did not meet the guidelines for physical activity. By contrast, while there were no statistically significant differences between Aboriginal and non-Aboriginal Victorians who resided in urban Victoria, there was a substantially higher proportion of Aboriginal adults who did not meet the guidelines.

While there were no statistically significant differences among Aboriginal Victorians by geographic area of residence, there was a substantially higher proportion of Aboriginal adults who resided in urban compared with rural Victoria who did not meet the physical activity guidelines. By contrast, there were no significant differences between non-Aboriginal Victorians by geographic area of residence.

Fruit and vegetable consumption

The current Australian guidelines recommend a minimum daily vegetable intake of four serves for people aged 12–18 years and five serves for people aged 19 years and over, where a serve is defined as half a cup of cooked vegetables or a cup of salad vegetables (NHMRC 2003a, 2003b). The recommended minimum daily fruit intake is three serves for people aged 12–18 years and two serves for people aged 19 years and over, where a serve is defined as one medium piece or two small pieces of fruit or one cup of diced pieces (Table 3.12).

Table 3.13 shows the proportion of Victorians who met the recommended Australian guidelines for daily fruit consumption in 2008, by sex and Aboriginal status.

Aboriginal Victorians were significantly less likely to meet the recommended guidelines for fruit consumption compared with their non-Aboriginal counterparts.

While there were no statistically significant differences between Aboriginal men and women, a substantially higher proportion of Aboriginal men did not meet the guidelines for daily fruit consumption. By contrast, there was a significant gender disparity for non-Aboriginal adults, where men were significantly less likely to have met the guidelines than their female counterparts.

Table 3.12: Recommended daily intake of fruit and vegetables

Guideline	Age group ^(a)	Recommended daily intake
Fruit	Persons ages 12–18	Three serves
	Persons aged 19 years and over	Two serves
Vegetables	Persons ages 12–18	Four serves
	Persons aged 19 years and over	Five serves

Source: NHMRC 2003a; 2003b

(a) Excludes pregnant or breastfeeding women.

Table 3.13: Fruit consumption, by sex and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
Did not meet guidelines	70.2	58.6	79.7	8%	57.3	55.9	58.6	1%
Met guidelines	29.7	20.2	41.3	18%	41.7	40.4	43.1	2%
Don't know or refused to say	**			104%	1.0	0.8	1.4	15%
Females								
Did not meet guidelines	55.2	45.3	64.7	9%	45.0	43.9	46.1	1%
Met guidelines	42.3	33.1	52.1	12%	54.1	53.0	55.2	1%
Don't know or refused to say	**			69%	0.9	0.7	1.1	11%
Persons								
Did not meet guidelines	62.7	55.1	69.7	6%	51.0	50.1	51.9	1%
Met guidelines	35.9	29.0	43.5	10%	48.1	47.2	48.9	1%
Don't know or refused to say	**			68%	0.9	0.8	1.1	10%

Data are age-standardised to the 2006 Victorian population.

95% CI = 95 per cent confidence interval

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 3.14: Fruit consumption, by geographic area of residence and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
Did not meet guidelines	61.1	53.0	68.6	7%	53.1	51.6	54.6	1%
Met guidelines	36.4	28.8	44.8	11%	46.0	44.5	47.5	2%
Don't know or refused to say	**			79%	0.9	0.7	1.2	14%
Urban								
Did not meet guidelines	63.2	53.1	72.3	8%	50.2	49.1	51.2	1%
Met guidelines	36.0	26.9	46.2	14%	48.9	47.8	49.9	1%
Don't know or refused to say	**			99%	0.9	0.8	1.2	12%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: **higher/lower**.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 3.14 shows the proportion of Victorians who met the recommended Australian guidelines for daily fruit consumption in 2008, by geographic area of residence and Aboriginal status.

Aboriginal adults who resided in urban Victoria were significantly less likely to have met the Australian guidelines for daily fruit consumption compared with their non-Aboriginal counterparts. By contrast, while there was also a substantially greater proportion of Aboriginal compared with non-Aboriginal Victorians who resided in rural Victoria and did not meet the guidelines for daily fruit consumption, this did not reach statistical significance.

There were no significant differences in daily fruit consumption between Aboriginal adults who resided in rural compared with urban Victoria. By contrast, non-Aboriginal adults who resided in rural Victoria were significantly less likely to have met the guidelines for daily fruit consumption compared with their urban counterparts.

Table 3.15: Vegetable consumption, by sex and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
Did not meet guidelines	90.9	82.0	95.6	4%	93.4	92.7	94.0	0%
Met guidelines	9.1*	4.4	18.0	36%	5.1	4.6	5.7	5%
Don't know or refused to say	0.0	.	.		1.5	1.2	1.9	11%
Females								
Did not meet guidelines	87.1	79.1	92.3	4%	87.9	87.2	88.5	0%
Met guidelines	10.1*	5.7	17.1	28%	10.8	10.2	11.5	3%
Don't know or refused to say	**			62%	1.3	1.1	1.5	9%
Persons								
Did not meet guidelines	89.3	83.8	93.1	3%	90.5	90.1	91.0	0%
Met guidelines	9.5	6.0	14.8	23%	8.1	7.6	8.5	3%
Don't know or refused to say	**			62%	1.4	1.2	1.6	7%

a Data are age-standardised to the 2006 Victorian population.

95% CI = 95 per cent confidence interval

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 3.15 shows the proportion of Victorians who met the recommended Australian guidelines for daily vegetable consumption in 2008 by sex and Aboriginal status.

There were no significant differences between Aboriginal and non-Aboriginal Victorians in the proportion who did or did not meet the guidelines for daily vegetable consumption.

There were also no differences between Aboriginal men and women. However, non-Aboriginal women were more than twice as likely to meet the recommended guidelines for vegetables as their male counterparts.

Table 3.16: Vegetable consumption, by geographic area of residence and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
Did not meet guidelines	87.7	81.1	92.1	3%	88.8	88.0	89.6	0%
Met guidelines	11.9	7.5	18.4	23%	10.0	9.3	10.7	4%
Don't know or refused to say	**			100%	1.2	1.0	1.5	12%
Urban								
Did not meet guidelines	90.7	82.5	95.3	3%	91.2	90.7	91.8	0%
Met guidelines	7.7*	3.6	15.8	38%	7.3	6.8	7.8	4%
Don't know or refused to say	**			70%	1.5	1.2	1.8	9%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 3.16 shows the proportion of Victorians who met the recommended Australian guidelines for daily vegetable consumption in 2008, by geographic area of residence and Aboriginal status.

There were no significant differences between Aboriginal and non-Aboriginal adults in the proportion who did or did not meet the guidelines for vegetable consumption, regardless of whether they resided in rural or urban Victoria.

There were no significant differences in the proportion of Aboriginal adults who met the guidelines for vegetable consumption and resided in rural compared with urban Victoria. By contrast, non-Aboriginal adults who resided in rural Victoria were significantly more likely to have met the guidelines for vegetable consumption compared with their urban counterparts.

Body weight status

There are serious health risks associated with being underweight, overweight, and obese. Health risks associated with being underweight include increased susceptibility to infection, amenorrhea, osteoporosis, problems with body temperature regulation, anaemia and hair loss. Health risks associated with being overweight or obese include type 2 diabetes, cardiovascular disease and hypertension, gallbladder disease, psychosocial disturbances and certain types of cancers.

The body mass index (BMI) provides a measure of weight in relation to height and can be used to estimate levels of unhealthy weight in a population. It is calculated as weight in kilograms divided by height in metres squared:

$$\text{BMI} = \text{weight (kg)} / \text{height squared (m}^2\text{)}$$

WHO classifies adult body weight status based on the following BMI scores:

BMI score	Weight category
< 18.5	Underweight
18.5–24.9	Normal
25.0–29.9	Overweight
30.0–34.9	Obese class I
35.0–39.9	Obese class II
≥ 40.0	Obese class III

Source: WHO 2011a

Survey respondents were asked to report their height and weight and the formula described above was used to calculate their BMI.

It is important to note that studies comparing self-reported height and weight with actual physical measurement have shown that people tend to underestimate their weight and overestimate their height, resulting in an underestimation of their BMI. Therefore, estimates of the prevalence of overweight and obesity in a population that are based on self-reported data are likely to be an underestimate. A further cautionary note is that BMI cannot distinguish between body fat and muscle. Therefore, an individual who is very muscular with low body fat could have a high BMI estimate and be classified as being obese. However, self-reported data still has a place in health monitoring because such data is relatively inexpensive and easy to collect, and has been shown to be useful in monitoring trends over time.

It is also important to note that the WHO recommended BMI cut-offs for overweight and obesity are based on pooled data from a number of countries and do not take into consideration specific differences between different populations. Studies have shown that the healthy range of BMI for Aboriginal Australians appears to be between 17 and 22, with metabolic complications developing as BMI increases beyond 22 kg/m², rather than 25 kg/m². Therefore, the estimates of overweight and obesity that we report here for Aboriginal Victorians are likely to be underestimates because they are based on the recommended WHO cut-offs (WHO 1997).

Given that the number of Aboriginal adults in this survey was quite small, it was not possible to evaluate the proportion of Aboriginal adults who were underweight. Therefore, only being overweight and obese is reported.

Table 3.17: Body weight status, by sex and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
Underweight	**		63%	0.9	0.7	1.3	15%	
Normal	34.5	24.4	46.2	16%	38.6	37.3	39.9	2%
Overweight	31.7	22.0	43.2	17%	40.1	38.8	41.4	2%
Obese	27.1	17.2	40.0	22%	17.2	16.3	18.2	3%
Don't know or refused to say	6.0*	2.2	15.0	49%	3.1	2.6	3.8	10%
Females								
Underweight	**		56%	3.5	3.1	4.1	7%	
Normal	37.6	28.9	47.2	13%	48.2	47.2	49.3	1%
Overweight	29.5	21.7	38.9	15%	24.3	23.5	25.2	2%
Obese	21.6	14.8	30.4	18%	16.2	15.5	16.9	2%
Don't know or refused to say	8.6*	4.7	15.0	29%	7.7	7.2	8.3	4%
Persons								
Underweight	1.5*	0.7	3.6	44%	2.2	2.0	2.5	6%
Normal	37.7	30.4	45.6	10%	43.5	42.7	44.4	1%
Overweight	30.1	23.8	37.3	12%	32.0	31.2	32.8	1%
Obese	22.8	16.6	30.4	15%	16.7	16.1	17.3	2%
Don't know or refused to say	7.8*	4.6	13.0	27%	5.5	5.1	6.0	4%

a Data are age-standardised to the 2006 Victorian population.

95% CI = 95 per cent confidence interval

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 3.17 shows body weight status in Victoria in 2008, by sex and Aboriginal status.

While there were no statistically significant differences between Aboriginal and non-Aboriginal Victorians in body weight status, there was a substantially lower prevalence of overweight and higher prevalence of obesity in Aboriginal men compared with their non-Aboriginal counterparts, and a higher prevalence of obesity in Aboriginal women compared with their non-Aboriginal counterparts.

While there were no statistically significant gender differences between Aboriginal men and women in the prevalence of overweight or obesity, there was a substantially higher prevalence of obesity in Aboriginal men compared with their female counterparts. By contrast, there was a statistically significant gender disparity in non-Aboriginal Victorians where men were more likely to be overweight, but not obese, compared with their female counterparts.

Table 3.18: Body weight status, by geographic area of residence and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
Underweight	**		58%	1.7	1.3	2.2	13%	
Normal	33.7	25.7	42.7	13%	38.7	37.3	40.1	2%
Overweight	31.1	23.2	40.4	14%	34.4	33.0	35.8	2%
Obese	28.2	20.6	37.3	15%	19.6	18.5	20.6	3%
Don't know or refused to say	6.1*	3.2	11.4	33%	5.7	4.9	6.6	8%
Urban								
Underweight	**		53%	2.4	2.1	2.8	7%	
Normal	40.0	29.9	51.0	14%	45.1	44.0	46.1	1%
Overweight	29.9	21.5	39.8	16%	31.3	30.3	32.2	2%
Obese	19.6	12.1	30.4	24%	15.8	15.1	16.5	2%
Don't know or refused to say	8.6*	4.3	16.5	35%	5.5	5.0	6.0	4%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 3.18 shows the body weight status in Victoria in 2008, by geographic area of residence and Aboriginal status.

There were no statistically significant differences between Aboriginal and non-Aboriginal Victorians in the prevalence of overweight, regardless of whether they resided in urban or rural Victoria.

Aboriginal adults who resided in rural Victoria were significantly more likely to be obese compared with their non-Aboriginal counterparts. By contrast, while there was a substantially higher prevalence of obesity among Aboriginal adults who resided in urban Victoria compared with their non-Aboriginal counterparts, this did not reach statistical significance.

While there were no statistically significant differences in Aboriginal adults by geographic area of residence, the prevalence of obesity was substantially higher among Aboriginal adults who resided in rural compared with urban Victoria. By contrast, non-Aboriginal adults residing in rural Victoria were significantly more likely to be overweight or obese than their urban counterparts.

Figure 3.4: Prevalence of obesity, by geographic area of residence and Aboriginal status

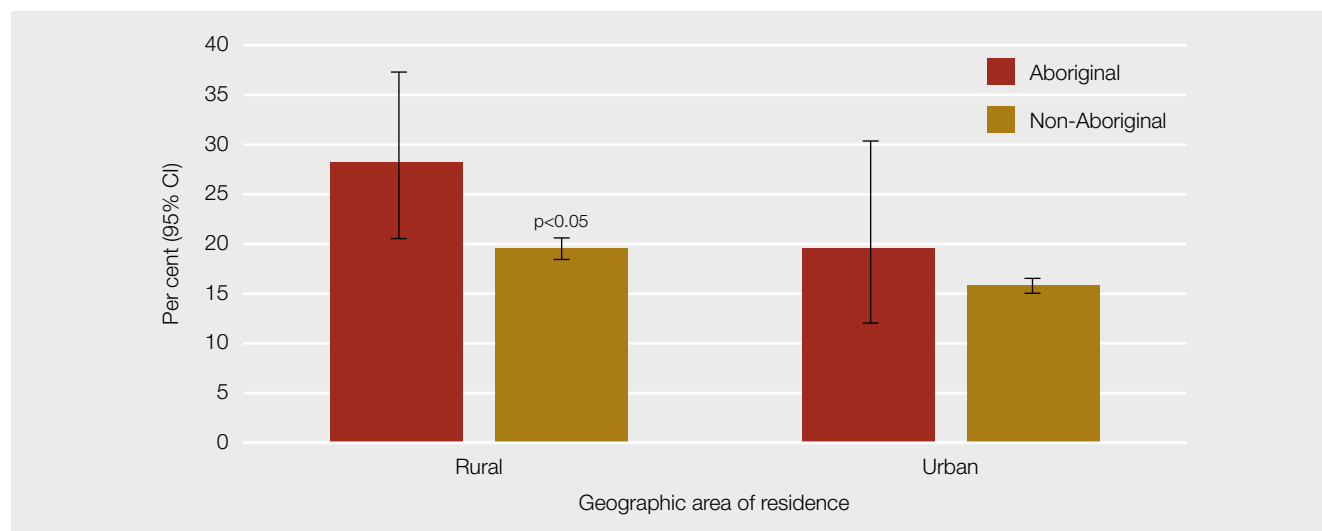


Figure 3.4 shows the prevalence of obesity, by area of residence and Aboriginal status.

The 2004–05 NATSIHS reported a crude combined overweight and obesity prevalence of 48 per cent in Aboriginal Victorians aged 15 years or older for Victoria. However, since the NATSIHS estimate did not include the

proportion of people who refused or did not know their height and weight in the denominator of the calculation, it cannot be compared with the 2008 VPHS estimate, which was 53.8 per cent. The 2004–05 NATSIHS did not find any statistically significant difference in the proportion of Aboriginal Victorians who were overweight or obese compared with non-Aboriginal Victorians.

Summary: Disease-inducing behaviours

When compared with non-Aboriginal adults in Victoria in 2008, Aboriginal adults were significantly more likely to:

- be current smokers
- abstain from consuming alcohol (men only)
- not meet the recommended guidelines for daily fruit consumption
- be obese if they resided in rural Victoria.

By contrast, there were no significant differences between Aboriginal and non-Aboriginal adults in:

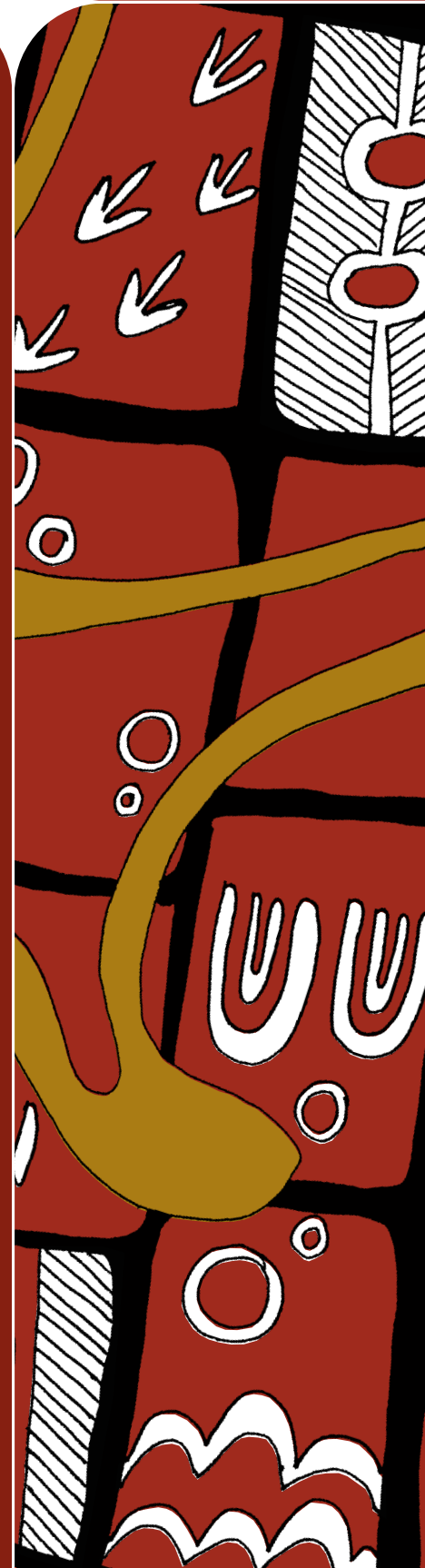
- short- or long-term risk of alcohol-related harm
- daily vegetable consumption
- physical activity.

Some findings were equivocal, in that while there was a suggestion of differences between Aboriginal and non-Aboriginal Victorians on the basis that the estimates were substantially different, they did not reach statistical significance. It is possible that a future survey with a larger sample size might show that Aboriginal Victorians are also:

- less likely to meet physical activity guidelines if they reside in urban Victoria or are female
- more likely to be obese.

Another equivocal but positive finding was that Aboriginal Victorians who resided in rural Victoria and both Aboriginal and non-Aboriginal men may be more likely to meet physical activity guidelines.

Chapter 4:
Healthcare system attributes



Chapter 4: Healthcare system attributes

The final piece of the public health model of the social determinants of health is the healthcare system and its attributes. Once healthcare is required, the ability to recognise the need as early as possible, to actively seek and to successfully access appropriate services will significantly impact on the prognosis of most health conditions and diseases. It is well known that early intervention tends to be associated with better prognoses, particularly for chronic diseases such as cancer and cardiovascular disease.

While the VPHS asks a few questions about the use of healthcare services, these are very limited and mainly in relation to primary healthcare, where primary healthcare is the point of first contact for an individual with the healthcare system. The VPHS does not ask any questions about hospitalisation or emergency room attendance that would reflect use of secondary and tertiary healthcare.

Eye and other health checks

Eye examinations

It is recommended that people who experience changes to their vision should see a health professional for an eye examination as soon as possible. If people are over the age of 40, have diabetes, have a family history of eye disease, or are of Aboriginal or Torres Strait Islander origin, they are advised to have regular eye examinations to help detect eye problems and allow for treatment at an early stage (DoHA 2010).

Respondents were asked if they had ever seen someone who specialises in eyes, such as an optician, optometrist or ophthalmologist. Table 4.1 shows the proportion of Aboriginal and non-Aboriginal Victorians in 2008 who had ever undergone an eye examination and/or had their blood pressure, blood cholesterol, or blood glucose checked by a health professional in the previous two years, by sex.

Table 4.1: Proportion of Victorians who had undergone eye examinations and other health checks, by sex and Aboriginal status

Sex	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
Eye examination	70.6	60.1	79.2	7%	74.3	73.0	75.5	1%
Blood pressure check	79.6	68.8	87.3	6%	75.2	74.0	76.4	1%
Blood cholesterol check	58.7	48.8	68.0	8%	57.9	56.7	59.0	1%
Blood glucose check	54.7	44.8	64.3	9%	51.0	49.8	52.2	1%
Females								
Eye examination	80.5	72.0	86.9	5%	80.9	79.9	81.8	1%
Blood pressure check	86.6	78.9	91.8	4%	83.2	82.3	84.1	1%
Blood cholesterol check	58.3	50.1	66.1	7%	55.1	54.2	56.1	1%
Blood glucose check	58.3	48.7	67.3	8%	53.3	52.3	54.3	1%
Persons								
Eye examination	75.2	68.2	81.0	4%	77.6	76.8	78.4	1%
Blood pressure check	83.0	76.5	87.9	4%	79.3	78.5	80.0	0%
Blood cholesterol check	59.1	52.3	65.6	6%	56.4	55.7	57.2	1%
Blood glucose check	56.2	49.0	63.1	6%	52.1	51.3	52.9	1%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

There were no significant differences between Aboriginal and non-Aboriginal Victorians in the proportion who had ever had an eye examination.

While there was no statistically significant difference between Aboriginal men and women, a substantially higher proportion of Aboriginal women had had an eye examination some time in their lives. By contrast, there was a statistically significant gender disparity in non-Aboriginal adults where a higher proportion of women had had an eye examination.

Table 4.2 shows the proportion of Aboriginal and non-Aboriginal Victorians in 2008 who had ever undergone an eye examination and/or had their blood pressure, blood cholesterol, or blood glucose checked by a health professional in the previous two years, by geographic area of residence.

There were no statistically significant differences in the proportion of Aboriginal compared with non-Aboriginal Victorians who had ever had an eye examination, regardless of where they resided. There were also no statistically significant differences between adults who resided in rural compared with urban Victoria, whether they were Aboriginal or not.

Table 4.2: Proportion of Victorians who had undergone eye examinations and other health checks, by geographic area of residence and Aboriginal status

Area of state	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
Eye examination	74.4	65.6	81.6	5%	77.8	76.5	79.1	1%
Blood pressure check	79.2	69.5	86.4	5%	78.5	77.1	79.8	1%
Blood cholesterol check	56.9	47.7	65.6	8%	52.6	51.3	53.8	1%
Blood glucose check	57.4	47.9	66.3	8%	50.3	49.0	51.7	1%
Urban								
Eye examination	75.7	65.9	83.3	6%	77.6	76.7	78.5	1%
Blood pressure check	84.9	76.2	90.8	4%	79.5	78.6	80.4	1%
Blood cholesterol check	60.4	51.8	68.5	7%	57.7	56.8	58.6	1%
Blood glucose check	56.3	47.1	65.1	8%	52.8	51.9	53.8	1%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Blood pressure checks

High blood pressure or hypertension is an important risk factor for cardiovascular disease and the risk of disease increases with increasing blood pressure levels (AIHW 2004). There are several modifiable causes of high blood pressure including poor nutrition, especially a diet high in salt, low levels of physical activity, obesity and high levels of alcohol consumption.

Respondents were asked if a health professional had checked their blood pressure in the previous two years. Table 4.1 (above) shows the proportion of Aboriginal and non-Aboriginal Victorians who had had a blood pressure check.

There were no significant differences between Aboriginal and non-Aboriginal Victorians in the proportion who had had their blood pressure checked in the previous two years.

While there was no statistically significant difference between Aboriginal men and women, a substantially higher proportion of Aboriginal women had had their blood pressure checked. By contrast there was a statistically significant gender disparity in non-Aboriginal Victorians where a higher proportion of women had had their blood pressure checked.

Table 4.2 shows the proportion of Aboriginal and non-Aboriginal Victorians who had had a blood pressure check in the previous two years by geographic area of residence. There were no significant differences between Aboriginal and non-Aboriginal Victorians. Similarly, there were no significant differences between adults who resided in rural compared with urban, whether they were Aboriginal or not.

Blood cholesterol checks

Elevated blood cholesterol is an important risk factor for coronary heart disease, stroke and peripheral vascular disease. Cholesterol checks are recommended for people at high risk of disease such as smokers, those with a significant family history of coronary heart disease (a first-degree relative affected at an age under 60 years), those who are overweight or obese, those who have hypertension and those aged 45 years and over (National Heart Foundation of Australia and The Cardiac Society of Australia and New Zealand 2001).

Respondents were asked if they had had their blood cholesterol level checked by a health professional in the previous two years. Table 4.1 shows the proportion who did by sex and Aboriginal status.

There were no statistically significant differences between Aboriginal and non-Aboriginal Victorians in the proportion who had had their blood cholesterol checked in the previous two years.

While there were no statistically significant differences between Aboriginal men and women, there was a significant gender disparity in non-Aboriginal adults where a higher proportion of men had had their blood cholesterol checked.

Table 4.2 shows the proportion of Aboriginal and non-Aboriginal Victorians who had had their blood cholesterol level checked in the previous two years by geographic area of residence.

There were no significant differences between Aboriginal and non-Aboriginal Victorians.

While there were no statistically significant differences in Aboriginal adults by geographic area of residence, a significantly lower proportion of non-Aboriginal adults who resided in rural Victoria had had their blood cholesterol level checked compared with their urban counterparts.

Blood glucose checks

Blood glucose tests are used to detect the development of, or a predisposition to, diabetes mellitus. Those at risk of the disease are advised to have their blood glucose levels checked periodically. At-risk groups include people who are physically inactive, overweight or obese people, those with high total cholesterol and those with high blood pressure (AIHW 2008).

Respondents were asked if they had had their blood glucose level checked in the previous two years by a health professional. Table 4.1 shows the proportion that did by sex and Aboriginal status.

There were no statistically significant differences between Aboriginal and non-Aboriginal Victorians in the proportion who had had their blood glucose checked in the previous two years.

While there were no statistically significant differences between Aboriginal men and women, there was a significant gender disparity in non-Aboriginal adults where a lower proportion of men had had their blood glucose level checked in the previous two years.

Table 4.2 shows the proportion of Aboriginal and non-Aboriginal Victorians who had had their blood glucose level checked in the previous two years by geographic area of residence.

While there were no statistically significant differences between Aboriginal and non-Aboriginal Victorians, there was a substantially higher proportion of Aboriginal adults who resided in rural and urban Victoria who had had their blood glucose level checked compared with their non-Aboriginal counterparts.

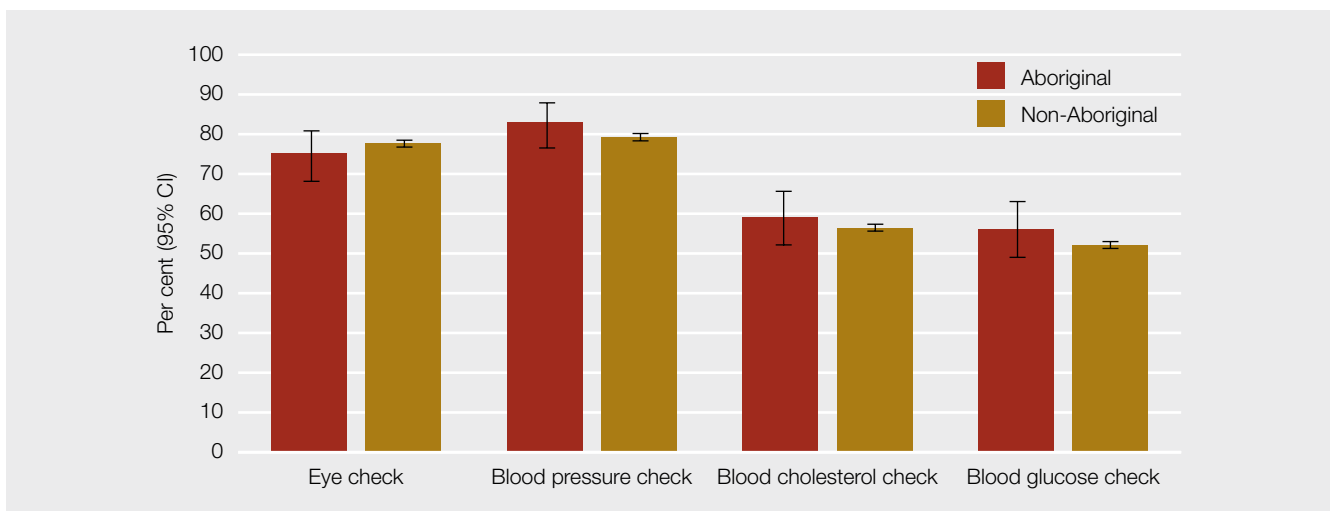
While there were no statistically significant differences in Aboriginal adults by geographic area of residence. A significantly lower proportion of non-Aboriginal adults who resided in rural Victoria had had their blood glucose level checked compared with their urban counterparts.

Figure 4.1 summarises the all the findings described above.

Cancer screening

The 2008 survey included a series of questions about undergoing screening for bowel, cervical and breast cancer. Screening is where a test is performed to detect the presence of a disease or condition and is done in the absence of symptoms or signs of the disease. However, because the number of Aboriginal respondents was rather small, it was not possible to analyse the data for cervical and breast, or bowel cancer screening.

Figure 4.1: Proportion of Victorians who had undergone eye examinations and other health checks, by Aboriginal status



Bowel cancer detection

Respondents were also asked if they had had a bowel examination in the previous two years to detect bowel cancer. This included respondents who presented with symptoms that were being investigated.

Table 4.3 shows the proportion of Victorians aged 50 years and older in 2008 who had had a bowel examination to detect bowel cancer in the previous two years, by sex and Aboriginal status.

Although there were no statistically significant differences between Aboriginal and non-Aboriginal Victorians, a substantially higher proportion of Aboriginal men had had a bowel examination in the previous two years compared with their non-Aboriginal male counterparts.

While there were also no statistically significant differences between Aboriginal men and women, a substantially higher proportion of men (almost double) had had a bowel examination compared with their female counterparts, although the RSE of the estimate for Aboriginal women exceeded 25 per cent and must therefore be treated with caution. By contrast, there was a statistically

significant gender disparity between non-Aboriginal men and women, where men were more likely to have had a bowel examination.

Table 4.4 shows the proportion of Victorians aged 50 years and older in 2008 who had had a bowel examination to detect bowel cancer in the previous two years, by geographic area of residence and Aboriginal status.

Although there were no statistically significant differences between Aboriginal and non-Aboriginal adults whether they resided in rural or urban Victoria, a substantially higher proportion of Aboriginal adults who resided in urban Victoria had had a bowel examination compared with their non-Aboriginal counterparts.

While there were no statistically significant differences between Aboriginal adults by geographic area of residence, a substantially higher proportion of Aboriginal adults who resided in urban Victoria had had a bowel examination compared to their rural counterparts. By contrast, there was no difference in the proportion of non-Aboriginal adults who had had a bowel examination by geographic area of residence.

Table 4.3: Proportion of Victorian adults aged 50 years and older who had undergone bowel cancer testing, by sex and Aboriginal status

Sex	Aboriginal			Non-Aboriginal		
	Per cent	95% CI	RSE	Per cent	95% CI	RSE
Males	45.5	28.4 – 63.7	21%	33.3	31.8 – 34.9	2%
Females	25.7*	14.8 – 40.7	26%	25.9	24.7 – 27.1	2%
Persons	35.6	24.3 – 48.8	18%	29.4	28.5 – 30.4	2%

95% CI = 95 per cent confidence interval.

Data are age-standardised to the 2006 Victorian population.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

Table 4.4: Proportion of Victorian adults aged 50 years and older who had undergone bowel cancer testing, by geographic area of residence and Aboriginal status

Area of residence	Aboriginal			Non-Aboriginal		
	Per cent	95% CI	RSE	Per cent	95% CI	RSE
Rural	24.8	15.6 – 37.0	22%	30.4	29.1 – 31.7	2%
Urban	41.9	25.6 – 60.3	22%	29.0	27.8 – 30.3	2%

95% CI = 95 per cent confidence interval.

Data are age-standardised to the 2006 Victorian population.

Use of mental health services

Respondents were asked if they had sought help from a medical professional for a mental health problem in the previous 12 months.

Table 4.5 shows the proportion of Aboriginal and non-Aboriginal Victorians who sought help for a mental health problem from a health professional in the previous 12 months.

Almost twice as many Aboriginal Victorians had sought help from a medical professional for a mental health problem in the previous 12 months compared with their non-Aboriginal counterparts.

While there were no statistically significant differences between Aboriginal men and women, a substantially higher proportion of Aboriginal women had sought professional help for a mental health problem. By contrast, there was a statistically significant gender disparity in non-Aboriginal Victorians where women were more likely to have sought professional help for a mental health problem compared with their male counterparts.

Figure 4.2 shows the proportion of Victorian men and women who sought help for a mental health problem from a health professional in the previous 12 months.

Table 4.5: Proportion of Victorians who had sought professional help for a mental health problem, by sex and Aboriginal status

Sex	Aboriginal					Non-Aboriginal				
	Per cent	95% CI	se	RSE	Per cent	95% CI	se	RSE		
Males	14.1*	8.0 23.6	3.9	28%	8.5	7.8 9.3	0.4	5%		
Females	24.1	15.9 34.7	4.8	20%	14.0	13.2 14.7	0.4	3%		
Persons	19.2	13.4 26.6	3.4	18%	11.3	10.7 11.8	0.3	2%		

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: **higher/lower**.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

Figure 4.2: Proportion of Victorians who sought professional help for a mental health problem, by sex and Aboriginal status

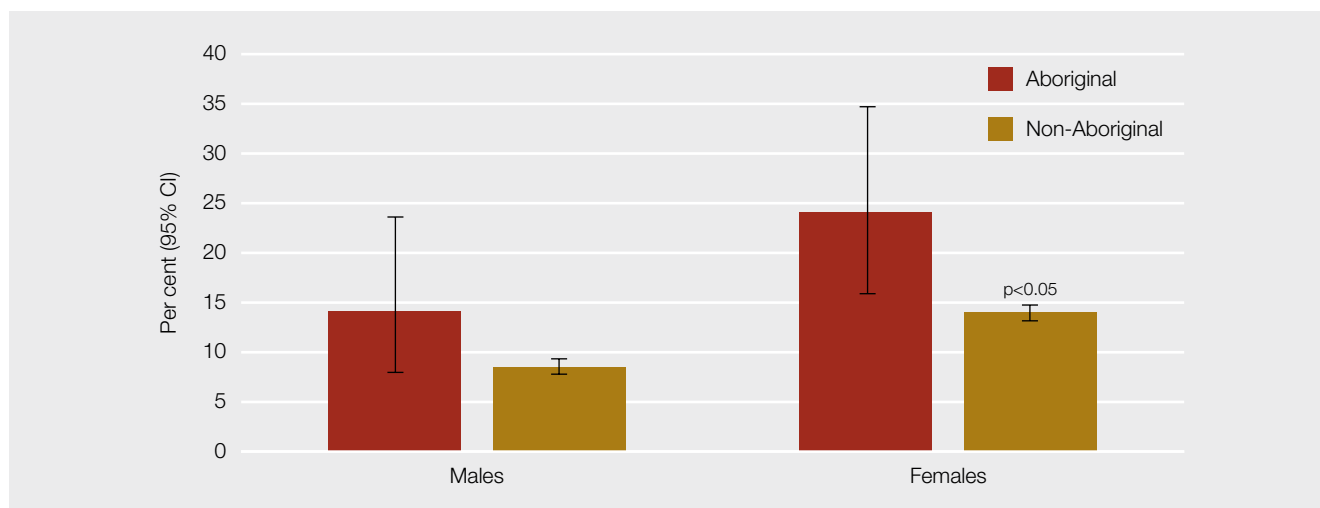


Table 4.6 shows the proportion of Victorians who sought help for a mental health problem from a health professional in the previous 12 months (by geographic area of residence and Aboriginal status).

Aboriginal adults who resided in rural Victoria were significantly more likely to have sought professional help for a mental health problem than their non-Aboriginal counterparts. While there was also a substantially higher proportion of Aboriginal compared with non-Aboriginal adults who resided in urban Victoria that sought help, this did not reach statistical significance.

There were no statistically significant differences in the proportion who had sought professional help for a mental health problem by geographic area of residence whether they were Aboriginal or non-Aboriginal.

Figure 4.3 shows the proportion of Victorians who sought help for a mental health problem from a health professional in the previous 12 months.

Table 4.6: Proportion of Victorians who had sought professional help for a mental health problem, by geographic area of residence and Aboriginal status

Area of state	Aboriginal					Non-Aboriginal				
	Per cent	95% CI	se	RSE	Per cent	95% CI	se	RSE		
Rural	22.4	15.4 – 31.3	4.1	18%	11.7	10.8 – 12.6	0.5	4%		
Urban	17.2*	10.0 – 28.0	4.5	26%	11.1	10.5 – 11.8	0.3	3%		

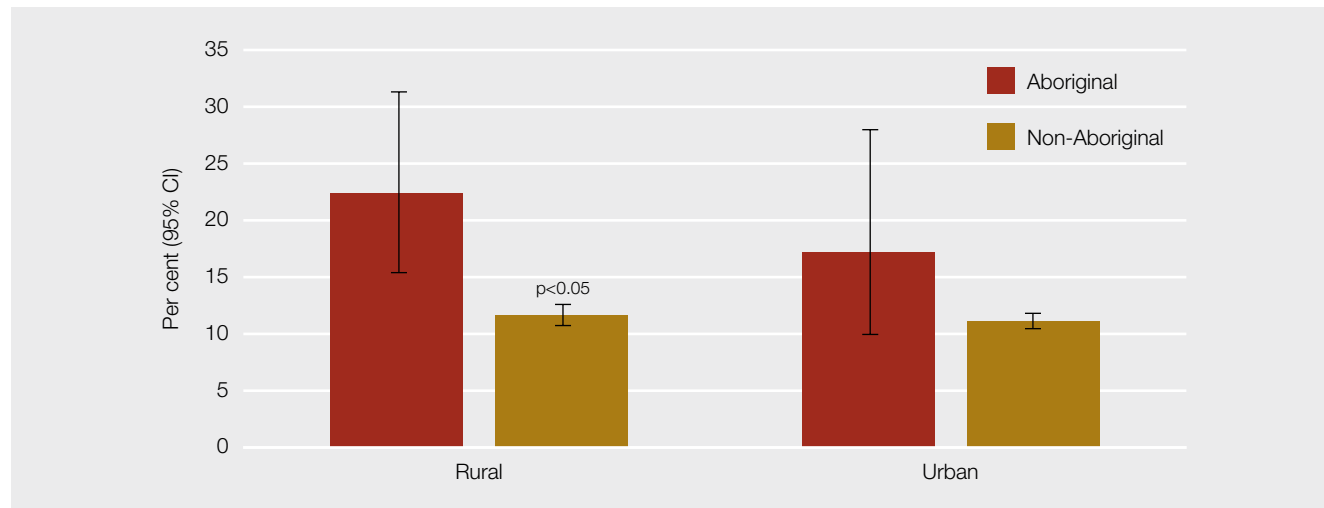
95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

Figure 4.3: Proportion of Victorians who sought professional help for a mental health problem, by geographic area of residence and Aboriginal status



Summary: Healthcare system attributes

Compared with non-Aboriginal adults in 2008 Aboriginal Victorians were significantly more likely to have sought professional help for a mental-health-related problem.

By contrast, there were no statistically significant differences between Aboriginal and non-Aboriginal adults in the proportion who had received:

- eye examinations
- blood pressure checks
- blood cholesterol checks
- blood glucose checks.

Some findings were equivocal, in that while there was a suggestion of differences between Aboriginal and non-Aboriginal Victorians on the basis that the estimates were substantially different, they did not reach statistical significance. It is possible that a future survey with a larger sample size might show that Aboriginal men were more likely to have had a bowel examination to detect bowel cancer.

Chapter 5:
Health outcomes



Chapter 5: Health outcomes

Chapters 2, 3 and 4 investigated potential inequities in the underlying social determinants of health, disease-inducing behaviours and use of various healthcare services between Aboriginal and non-Aboriginal Victorians that predispose individuals to various negative health outcomes. This chapter seeks to investigate whether the observed inequities do in fact translate into disparities in health outcomes between Aboriginal and non-Aboriginal Victorians.

Self-reported health status

Self-reported health status has been shown to be a reliable predictor of ill-health, future healthcare use and premature mortality, independent of other medical, behavioural or psychosocial risk factors (Burstrom & Fredlund 2001; Idler & Benyami 1997; Miilunpalo et al. 1997).

Respondents were asked to summarise their perceptions of their health status by indicating whether, in general, they would say their health was excellent, very good, good, fair or poor.

Table 5.1 shows self-reported health status in Victoria in 2008, by sex and Aboriginal status.

Aboriginal Victorians were significantly more likely to rate their overall health as being fair or poor and less likely to rate their health as excellent or very good compared with their non-Aboriginal counterparts.

There were no significant differences between Aboriginal men and women. By contrast, there was a statistically significant gender disparity in non-Aboriginal Victorians where men were less likely to rate their health as excellent or very good and more likely to rate it as good than their female counterparts.

Table 5.1: Self-reported health status among Victorians, by sex and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
Excellent or very good	29.9	20.5	41.4	18%	41.8	40.4	43.1	2%
Good	42.7	30.9	55.4	15%	39.1	37.7	40.4	2%
Fair or poor	27.0	17.3	39.7	21%	18.9	17.9	20.0	3%
Don't know or refused to say	**			78%	0.2	0.2	0.3	21%
Females								
Excellent or very good	32.6	24.6	41.8	14%	46.1	45.0	47.2	1%
Good	37.9	29.3	47.4	12%	36.4	35.3	37.4	1%
Fair or poor	29.4	20.8	39.9	17%	17.3	16.5	18.1	2%
Don't know or refused to say	0.0	.	.		0.2	0.2	0.3	18%
Persons								
Excellent or very good	31.3	24.6	38.8	12%	44.0	43.2	44.9	1%
Good	40.7	32.9	48.9	10%	37.7	36.8	38.5	1%
Fair or poor	27.9	21.0	36.1	14%	18.1	17.4	18.8	2%
Don't know or refused to say	**			74%	0.2	0.2	0.3	14%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Figure 5.1 shows the disparity in self-reported health status between Aboriginal and non-Aboriginal Victorians in 2008.

Table 5.2 shows self-reported health status in Victoria in 2008, by geographic area of residence and Aboriginal status.

Figure 5.1: Self-reported health status among Victorians, by Aboriginal status

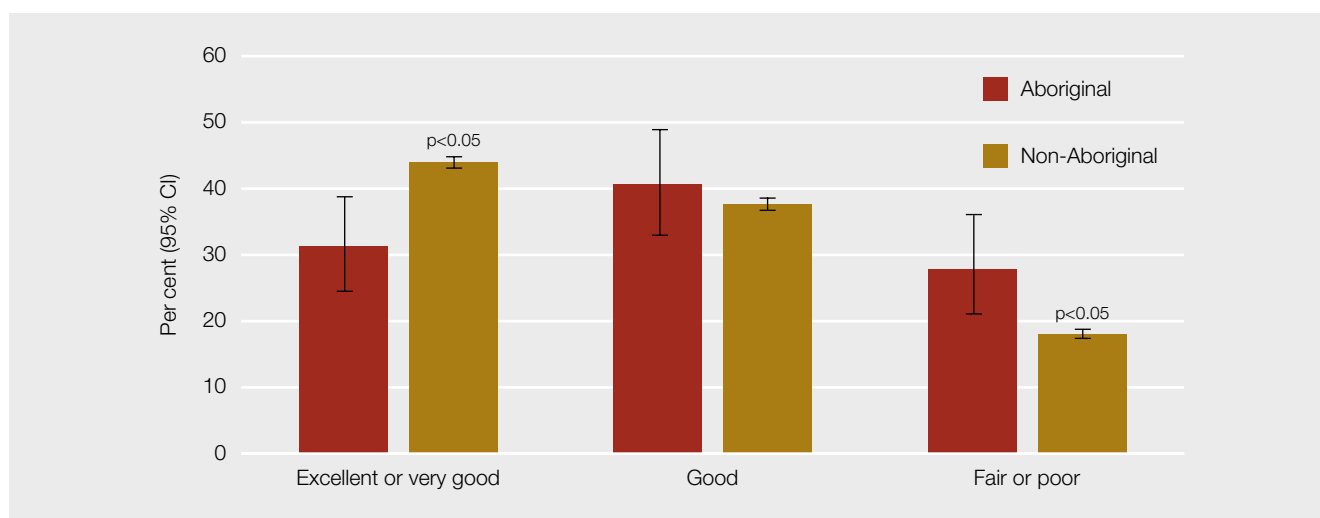


Table 5.2: Self-reported health status among Victorians, by geographic area of residence and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
Excellent or very good	29.1	21.9	37.5	14%	43.8	42.4	45.3	2%
Good	42.3	33.4	51.7	11%	38.3	36.8	39.7	2%
Fair or poor	28.2	20.3	37.8	16%	17.7	16.7	18.8	3%
Don't know or refused to say	**			75%	0.2	0.1	0.2	19%
Urban								
Excellent or very good	32.9	23.7	43.5	15%	43.9	42.9	45.0	1%
Good	39.7	29.2	51.3	14%	37.5	36.5	38.6	1%
Fair or poor	27.4	18.4	38.8	19%	18.3	17.5	19.1	2%
Don't know or refused to say	0.0	.	.		0.2	0.2	0.3	17%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Aboriginal adults who resided in rural Victoria were significantly more likely to rate their health as fair or poor and less likely to rate their health as excellent or very good compared with their non-Aboriginal counterparts. While there were no statistically significant differences in self-reported health status for Aboriginal compared with non-Aboriginal people who resided in urban Victoria, there was a substantially higher proportion of Aboriginal adults who reported fair or poor health and a substantially lower proportion who rated their health as excellent or very good.

There were no significant differences in the self-reported health status of Aboriginal or non-Aboriginal people by geographic area of residence.

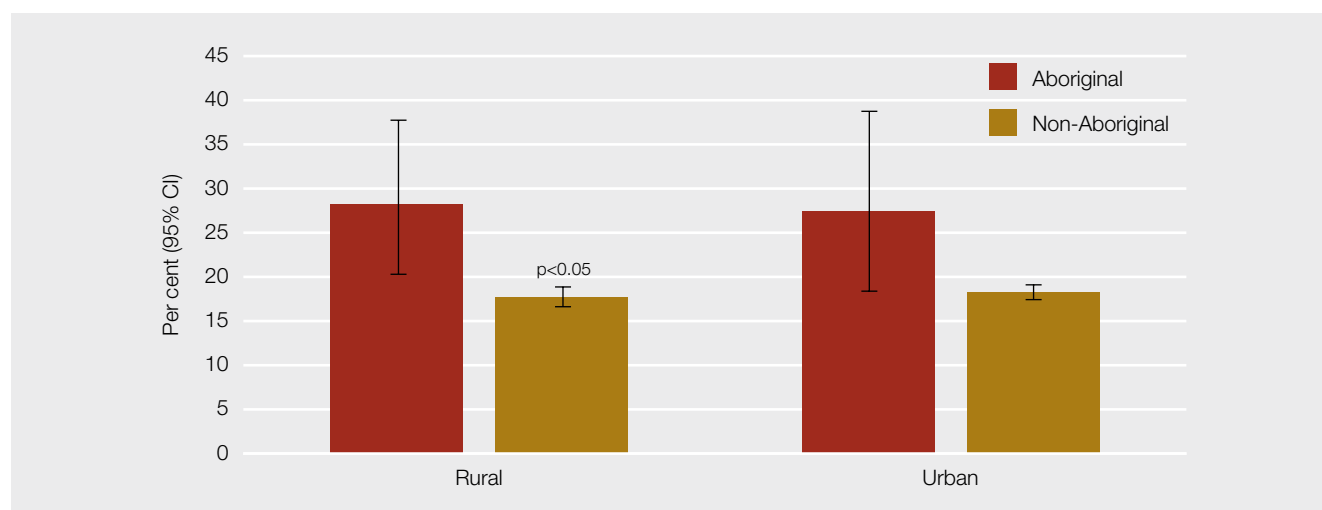
Figure 5.2 shows the prevalence of self-reported health rated as being 'fair' or 'poor', by geographic area of residence and Aboriginal status.

The 2008 NATSISS reported that 47.8 per cent of Aboriginal Victorians aged 15 years and older rated their health as being excellent or very good and 27.4 per cent rated their health as fair or poor.

The 2004–05 NATSIHS reported that 39.7 per cent of Aboriginal Victorians aged 15 years or older rated their health as being excellent or very good and 29.9 per cent rated their health as fair or poor.

The VPHS estimates (approximately 31 and 28 per cent respectively) were not too dissimilar from the national surveys, particularly considering that the age groups surveyed were also slightly different and the inclusion of younger people who tend to be in better health would be expected to increase such estimates. Moreover, all three surveys concluded that there were significant differences between the Aboriginal and non-Aboriginal populations.

Figure 5.2: Fair or poor self-reported health status among Victorians, by geographic area of residence and Aboriginal status



Lifetime prevalence of depression and anxiety

There is strong and consistent evidence of an association between depression and anxiety and physical illness in each of the National Health Priority Area disease groups (Clark & Currie 2009). Depression is also associated with poorer health outcomes in those with physical diseases.

The survey asked respondents if they had at any time in their lives been diagnosed by a doctor with depression or anxiety. In Chapter 3 we showed that Aboriginal Victorians were significantly more likely to have experienced high or very high levels of psychological distress compared with non-Aboriginal Victorians. This puts Aboriginal Victorians at higher risk of depression or anxiety. Table 5.3 shows the lifetime prevalence of depression or anxiety in Victoria in 2008, by sex and Aboriginal status.

Aboriginal Victorians were significantly more likely than non-Aboriginal Victorians to have ever been diagnosed by a doctor with depression or anxiety. Of particular note is that the proportion of Aboriginal men ever diagnosed with depression or anxiety was more than twice that of their non-Aboriginal male counterparts.

There was no statistically significant gender disparity among Aboriginal Victorians. This is in direct contrast to non-Aboriginal Victorians where women were significantly more likely than men to have ever been diagnosed by a doctor with depression or anxiety, a finding that is consistently well documented in the national and international literature.

Table 5.3: Lifetime prevalence of doctor-diagnosed depression or anxiety, by sex and Aboriginal status

	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
Never been diagnosed	65.0	52.9	75.4	9%	85.1	84.1	86.0	1%
Yes, been diagnosed	34.9	24.5	47.0	17%	14.8	13.9	15.7	3%
Don't know or refused to say	**			104%	0.2*	0.1	0.4	47%
Females								
Never been diagnosed	64.3	53.7	73.6	8%	75.5	74.6	76.4	1%
Yes, been diagnosed	35.7	26.4	46.3	14%	24.3	23.4	25.3	2%
Don't know or refused to say	0.0	.	.		0.2	0.1	0.3	23%
Persons								
Never been diagnosed	65.2	56.9	72.6	6%	80.2	79.5	80.8	0%
Yes, been diagnosed	34.8	27.4	43.0	12%	19.6	19.0	20.3	2%
Don't know or refused to say	**			102%	0.2*	0.1	0.3	26%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: higher/lower.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Figure 5.3: Lifetime prevalence of doctor-diagnosed depression or anxiety, by sex and Aboriginal status

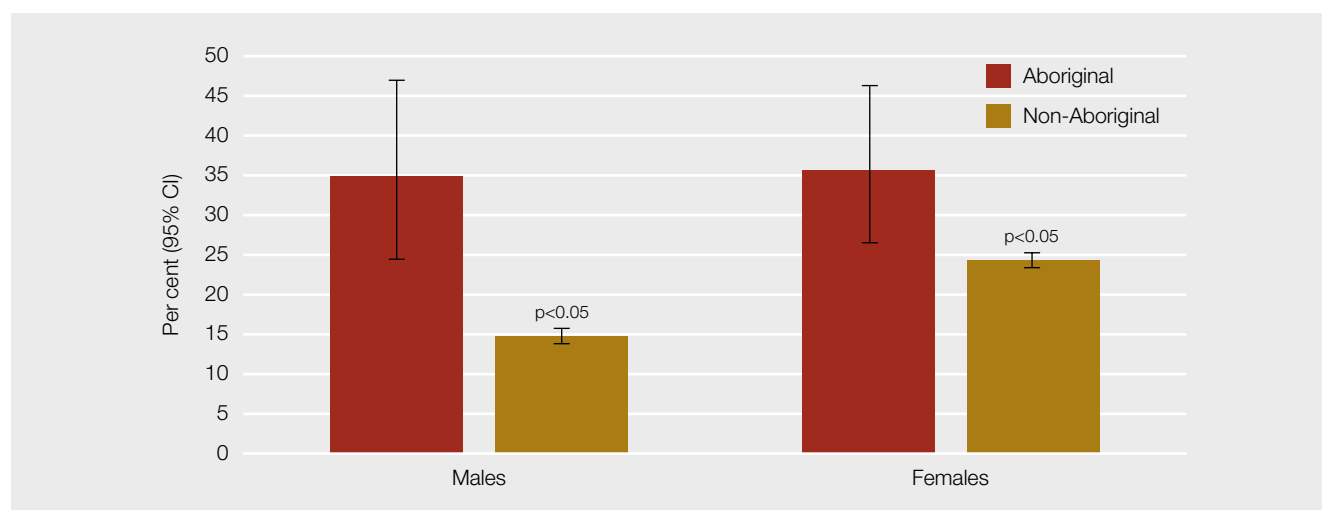


Table 5.4: Lifetime prevalence of depression and anxiety, by sex, geographic area of residence and Aboriginal status

	Aboriginal			Non-Aboriginal		
	Per cent	95% CI	RSE	Per cent	95% CI	RSE
Rural males	32.6	21.2 – 46.6	20%	16.1	14.5 – 17.7	5%
Urban males	35.8	22.7 – 51.3	21%	14.3	13.2 – 15.5	4%
Rural females	33.2	24.3 – 43.5	15%	27.0	25.3 – 28.7	3%
Urban females	36.4	24.6 – 50.1	18%	23.5	22.5 – 24.6	2%
Rural persons	33.9	25.6 – 43.5	14%	21.6	20.4 – 22.8	3%
Urban persons	35.4	25.6 – 46.5	15%	19.0	18.2 – 19.8	2%

95% CI = 95 per cent confidence interval

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: **higher/lower**.

Figure 5.3 shows the lifetime prevalence of doctor-diagnosed depression or anxiety by sex and Aboriginal status in Victoria in 2008.

Table 5.4 shows the lifetime prevalence of depression or anxiety in Victoria in 2008, by sex, geographic area of residence, and Aboriginal status.

Aboriginal men were significantly more likely to have ever been diagnosed by a doctor with depression or anxiety compared with their non-Aboriginal counterparts irrespective of whether they resided in rural or urban Victoria. While the prevalence of depression and anxiety

was also substantially higher in Aboriginal women compared with their non-Aboriginal counterparts, irrespective of where they resided, this did not reach statistical significance.

There was no statistically significant difference in the prevalence of depression and anxiety among Aboriginal Victorians by geographic area of residence. By contrast, there was a significantly higher prevalence of depression and anxiety in non-Aboriginal women who resided in rural compared with urban Victoria.

Lifetime prevalence of various chronic diseases and conditions

The VPHS asks respondents if they have ever been diagnosed by a doctor with any of the following diseases or conditions:

- cancer
- heart disease
- stroke

- high blood pressure
- arthritis
- osteoporosis
- asthma
- type 2 diabetes.

Table 5.5 shows the lifetime prevalence of these diseases and conditions in Victoria in 2008, by sex and Aboriginal status.

Table 5.5: Lifetime prevalence of selected diseases and conditions, by sex and Aboriginal status

Sex	Aboriginal			Non-Aboriginal				
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Males								
Cancer	11.8*	6.0	21.9	33%	5.9	5.4	6.4	4%
Heart disease	13.2*	6.8	24.0	33%	8.1	7.6	8.6	3%
Stroke	**			63%	2.8	2.5	3.1	6%
High blood pressure	24.4	15.7	35.8	21%	24.8	23.8	25.7	2%
Arthritis	19.1	12.2	28.6	22%	16.3	15.6	17.1	2%
Osteoporosis	**			52%	2.1	1.8	2.5	7%
Asthma	26.7	17.3	38.7	21%	19.6	18.5	20.8	3%
Type 2 diabetes	7.4*	3.2	16.0	41%	5.8	5.3	6.3	4%
Females								
Cancer	11.5	7.4	17.4	22%	7.0	6.6	7.4	3%
Heart disease	6.1*	2.6	13.8	43%	5.1	4.7	5.4	4%
Stroke	5.9*	2.4	14.1	46%	2.1	1.9	2.3	6%
High blood pressure	26.6	19.8	34.7	14%	26.9	26.2	27.7	1%
Arthritis	26.9	19.9	35.3	15%	23.3	22.7	24.0	1%
Osteoporosis	9.3*	5.4	15.5	27%	6.9	6.5	7.3	3%
Asthma	33.2	24.7	42.8	14%	22.7	21.8	23.6	2%
Type 2 diabetes	5.1*	2.1	12.0	45%	3.8	3.5	4.1	4%
Persons								
Cancer	11.8	7.9	17.4	20%	6.4	6.1	6.8	3%
Heart disease	8.1*	4.5	14.0	29%	6.5	6.2	6.8	3%
Stroke	4.8*	2.3	9.8	37%	2.4	2.2	2.6	4%
High blood pressure	25.6	19.4	33.0	14%	25.9	25.3	26.6	1%
Arthritis	23.5	18.1	30.0	13%	20.0	19.5	20.5	1%
Osteoporosis	8.2*	4.8	13.6	27%	4.7	4.4	4.9	3%
Asthma	29.3	22.5	37.0	13%	21.2	20.5	21.9	2%
Type 2 diabetes	5.5*	2.9	10.4	33%	4.7	4.5	5.1	3%

95% CI = 95 per cent confidence interval.

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: **higher/lower**.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

** Estimate has an RSE greater than 50 per cent and is not reported as it is unreliable for general use.

Table 5.6: Lifetime prevalence of selected diseases and conditions, by geographic area of residence and Aboriginal status

	Aboriginal				Non-Aboriginal			
	Per cent	95% CI	RSE	Per cent	95% CI	RSE		
Rural								
Cancer	7.8*	4.4	13.5	29%	7.0	6.5	7.5	4%
High blood pressure	31.5	24.1	39.9	13%	26.9	26.0	27.9	2%
Arthritis	22.7	16.5	30.5	16%	21.4	20.6	22.1	2%
Asthma	35.9	27.2	45.7	13%	22.9	21.5	24.2	3%
Urban								
Cancer	14.3	8.9	22.2	24%	6.2	5.8	6.6	3%
High blood pressure	22.7	14.7	33.2	21%	25.6	24.9	26.4	2%
Arthritis	24.6	17.2	33.8	17%	19.5	18.9	20.2	2%
Asthma	25.4	17.0	36.2	19%	20.7	19.8	21.6	2%

95% CI = 95 per cent confidence interval.

Data are age-standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for non-Aboriginal Victorians are identified by colour as follows: **higher/lower**.

* Estimate has an RSE between 25 and 50 per cent and should be interpreted with caution.

Estimates for heart disease, stroke, osteoporosis and type 2 diabetes are not reported because the RSEs for both rural and urban Victoria exceeded 25 per cent.

Table 5.6 shows the lifetime prevalence of these diseases and conditions by geographic area of residence and Aboriginal status.

Heart disease, stroke and osteoporosis

Heart disease, stroke and osteoporosis are age-related diseases. Given the age structure of the Aboriginal population in Victoria is much younger than the non-Aboriginal population and that the sample size of the Aboriginal population in the 2008 VPHS survey is quite small, it is unsurprising that the RSEs for the prevalence estimates of these diseases in the Aboriginal population exceeded 25 per cent and should therefore be treated with caution.

While the prevalence of heart disease, stroke and osteoporosis is considerably higher among Aboriginal Victorians compared with non-Aboriginal Victorians, the difference only reached statistical significance for stroke in women where the prevalence is more than double that of their non-Aboriginal female counterparts. The prevalence of stroke in men could not be estimated.

These findings are equivocal at best, although suggestive of there being a higher prevalence of heart disease, stroke and osteoporosis among Aboriginal compared with non-Aboriginal Victorians. A future survey with a larger Aboriginal sample size is therefore required.

The 2004–05 NATSIHS reported that 25.1 per cent of Aboriginal Victorians had a long-term health condition associated with the heart and circulatory system, such as heart disease or hypertensive disease. The VPHS treated heart disease, stroke and high blood pressure separately and these cannot be combined for comparison for risk of double-counting people who report comorbidities. However, the 2004–05 NATSIHS reported that the prevalence of diseases of the heart and circulatory system were significantly higher among Aboriginal Victorians compared with non-Aboriginal Victorians.

The 2004–05 NATSIHS reported that 1.5 per cent (RSE of 48 per cent) of Aboriginal Victorians had osteoporosis compared with 8.2 per cent (RSE of 27 per cent) reported in the 2008 VPHS. While both estimates have RSEs that exceed 25 per cent and should therefore be treated with caution, the NATSIHS also reported a prevalence of 2.6 per cent (RSE of 9.8 per cent) for non-Aboriginal Australians, a figure considerably lower than the VPHS estimate of 4.7 per cent (RSE of 3 per cent).

Cancer

Unequivocally, the prevalence of cancer was significantly higher in Aboriginal Victorians compared with non-Aboriginal Victorians.

There were no significant differences in cancer prevalence between the sexes, irrespective of Aboriginal status.

When geographic residence was taken into account, however, Aboriginal adults who resided in rural Victoria did not have a significantly higher prevalence of cancer compared with their non-Aboriginal counterparts, whereas those who resided in urban Victoria did.

The 2004–05 NATSIHS reported that 1.4 per cent (RSE of 42.7 per cent) of Aboriginal Victorians had reported cancer, a figure considerably lower than the 11.8 per cent (RSE of 20 per cent) VPHS estimate. Similarly, the NATSIHS reported that 1.9 per cent (RSE of 11.4 per cent) of non-Aboriginal Australians had reported cancer, a figure considerably lower than the VPHS estimate of 6.2 per cent (RSE of three per cent). Moreover, the 2004–05 NATSIHS did not find any statistically significant differences between Aboriginal and non-Aboriginal Victorians, whereas the 2008 VPHS did.

High blood pressure

There were no significant differences in the prevalence of high blood pressure between Aboriginal and non-Aboriginal Victorians, nor was there a significant gender disparity between Aboriginal men and women. By contrast, there was a significant gender disparity in non-Aboriginal Victorians, where women had a significantly higher prevalence of high blood pressure compared with their male counterparts.

While there was a considerably higher prevalence of high blood pressure in Aboriginal adults who resided in rural compared with urban Victoria, this did not reach statistical significance. By contrast, there was no significant difference in the prevalence of high blood pressure in non-Aboriginal adults by geographic area of residence.

Arthritis

While Aboriginal men and women had a higher prevalence of arthritis compared with their non-Aboriginal counterparts, this did not reach statistical significance. Similarly, Aboriginal women had a considerably higher prevalence of arthritis compared with their male counterparts, but this also did not reach statistical significance.

Non-Aboriginal women had a significantly higher prevalence of arthritis compared with their male counterparts.

There were no statistically significant differences in the prevalence of arthritis in Aboriginal adults compared with their non-Aboriginal counterparts, irrespective of whether they resided in rural or urban Victoria or between Aboriginal adults who resided in rural compared with urban Victoria. However, while statistical significance was not met, Aboriginal adults who resided in urban Victoria had a substantially higher prevalence of arthritis compared with their non-Aboriginal counterparts.

While there was no statistically significant difference in the prevalence of arthritis among Aboriginal Victorians by geographic area of residence, non-Aboriginal adults who resided in rural compared with urban Victoria had a significantly higher prevalence of arthritis.

The 2004–05 NATSIHS reported that 22.8 per cent (RSE of 8.2 per cent) of Aboriginal Victorians had arthritis, a similar estimate to that which we report here (23.5 per cent; RSE of 13 per cent). However, the 2004–05 NATSIHS reported a significantly higher prevalence of arthritis in Aboriginal Victorians, almost twice that of non-Aboriginal Victorians.

Asthma

Aboriginal Victorians had a significantly higher prevalence of asthma compared with non-Aboriginal Victorians.

While Aboriginal women had a substantially higher prevalence of asthma compared with their male counterparts, this did not reach statistical significance. By contrast, non-Aboriginal women had a significantly higher prevalence of asthma compared with their male counterparts.

Aboriginal adults who resided in rural Victoria had a significantly higher prevalence of asthma compared with their non-Aboriginal counterparts. While Aboriginal adults who resided in urban Victoria also had a substantially higher prevalence of asthma compared with their non-Aboriginal counterparts, this did not reach statistical significance.

While there was no statistically significant difference in the prevalence of asthma in Aboriginal adults by geographic area of residence, those who resided in rural Victoria had a substantially higher prevalence of asthma compared with their urban counterparts. By contrast, there was no significant difference in the prevalence of asthma in non-Aboriginal Victorians by geographic area of residence.

The 2004–05 NATSIHS reported that 21.0 per cent (RSE of 11 per cent) of Aboriginal Victorians had reported having asthma compared with the VPHS estimate of 29.3 per cent (RSE of 13 per cent). Similarly the NATSIHS asthma prevalence estimate for non-Aboriginal Australians was 10.3 per cent (RSE of 5.1 per cent), less than half

the VPHS estimate of 21.2 per cent (RSE of 2 per cent). While the prevalence estimates between the 2004–05 NATSIHS and 2008 VPHS surveys differ considerably, both surveys found a statistically significantly higher prevalence of asthma in Aboriginal compared with non-Aboriginal Victorians.

Type 2 diabetes

Given that the prevalence of type 2 diabetes is quite low and that the sample size of Aboriginal Victorians is also quite small, it is unsurprising that the RSEs for these estimates exceeded 25 per cent and the results must therefore be treated with caution.

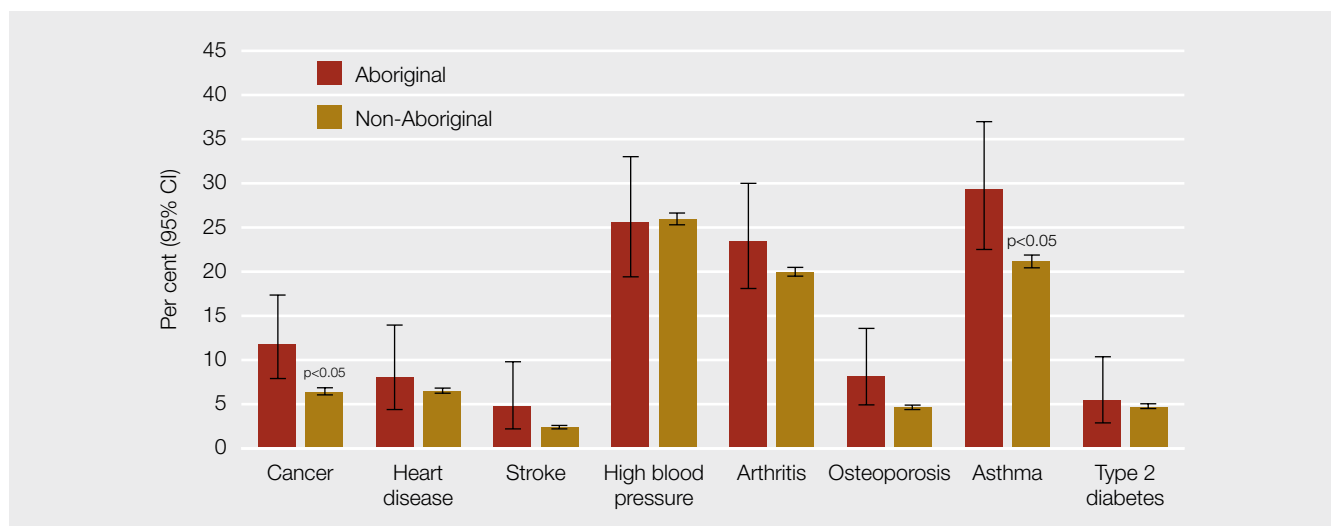
While it appears there were no significant differences between Aboriginal and non-Aboriginal Victorians in the prevalence of type 2 diabetes, this is not consistent with the national data (see below) and most likely reflects the low

power of the current survey to detect real differences between the two populations. Moreover, in Chapter 3 we reported a substantially higher prevalence of obesity in Aboriginal Victorians compared with their non-Aboriginal counterparts, which reached statistical significance in those who resided in rural Victoria. Obesity is the major risk factor for the development of type 2 diabetes.

The 2004–05 NATSIHS reported that 10 per cent of Aboriginal Victorians had diabetes or high sugar levels compared with the VPHS estimate of 5.5 per cent (RSE of 33 per cent). However, the estimates are not comparable because the VPHS specifically captured doctor-diagnosed type 2 diabetes and did not include respondents who reported having had high blood sugar levels.

Figure 5.4 summarises the lifetime prevalence of these diseases and conditions by Aboriginal status.

Figure 5.4: Prevalence of selected diseases and conditions, by Aboriginal status



Summary: Health outcomes

There were profound disparities in health outcomes where Aboriginal Victorians were significantly more likely to have a higher prevalence of:

- fair or poor self-reported health
- depression or anxiety
- cancer
- asthma.

By contrast, there were no differences between Aboriginal and non-Aboriginal Victorians in the prevalence of high blood pressure.

Some findings were equivocal, in that while there was a suggestion of differences between Aboriginal and non-Aboriginal Victorians on the basis that the estimates were substantially different, they did not reach statistical significance. It is possible that a future survey with a larger sample size might show that Aboriginal Victorians also have a higher prevalence of:

- heart disease
- stroke
- osteoporosis
- arthritis.

The current survey was not sufficiently powered to investigate the prevalence of type 2 diabetes in Aboriginal Victorians.

Appendix

Data items for the Victorian Population Health Survey 2008

Demographics

Age
Sex
Marital status
Country of birth
Main language spoken at home
Country of birth of mother
Country of birth of father
Highest level of education
Employment status
Main field of occupation
Household income
Housing tenure
Whether has private health insurance
Indigenous status
Area of state (local government area and Department of Health region)
Number of adults aged 18 years or over in household

Screening

Whether had blood pressure check in previous two years
Whether had cholesterol check in previous two years
Whether had a test for diabetes or high blood sugar levels in previous two years
Bowel cancer screening in previous two years
Recency of pap smear screening
Recency of breast cancer screening

Self-reported height and weight

Nutrition

Number of serves of vegetables eaten each day
Number of serves of fruit eaten each day
Amount of water consumed each day
Food security

Alcohol

Whether had an alcoholic drink of any kind in previous 12 months
Frequency of having an alcoholic drink of any kind
Amount of standard drinks consumed when drinking
Level of frequency of high-risk drinking

Smoking

Smoking status
Frequency of smoking
Smoking during pregnancy

Asthma

Asthma status

Blood pressure

High blood pressure status
Management of high blood pressure

Diabetes

Diabetes status
Age first diagnosed with diabetes
Type of diabetes

Social capital measures

Social networks and support structures
Social and community participation
Civic involvement and empowerment
Trust in people and social institutions
Tolerance of diversity

Physical activity

Whether walked continuously for at least 10 minutes in previous week
Amount of time spent walking continuously in previous week
Whether did any vigorous physical activity in previous week
Amount of time spent doing vigorous activity
Whether did any incidental physical activity for 10 or more minutes in previous week
Usual time of week spent doing incidental physical activity

Self-reported health status

Kessler 10 measure of psychological distress

Health conditions

Arthritis

Heart disease

Stroke

Cancer

Osteoporosis

Depression or anxiety

Mental health

Whether sought help for mental-health-related problem

Who professional help was sought from

Eye care

Change in vision in previous 12 months

Visits to eye specialists

Eye problems

Eye protection

Abbreviations

95% CI	95 per cent confidence interval
ABS	Australian Bureau of Statistics
AIHW	Australian Institute of Health and Welfare
BMI	body mass index
CATI	computer-assisted telephone interviews
DK/refused	don't know or refused to say
LGA	local government Area
TAFE	Technical and Further Education
NATSIHS	National Aboriginal and Torres Strait Islander Health Survey
NATSISS	National Aboriginal and Torres Strait Islander Social Survey
RSE	relative Standard Error
VIAF	<i>Victorian Indigenous affairs framework</i>
WHO	World Health Organization

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