# 9. Social Inequalities in Health



# 9. Social Inequalities in Health

This section examines the distribution of selected diseases and conditions among selected social groups in Victoria. These data demonstrate a strong performance overall, but also a pattern of social and health inequalities that limit the life chances of many persons and create an economic burden for society. Building on a 2005 social action plan (Victorian Government 2005) to create opportunities and address disadvantage, including health inequalities, *A Fairer Victoria 2009* (Victorian Government 2009) continues the commitment to build strong people and strong communities to address disadvantage.

Governments have long recognised the importance of ensuring access to clean water, good housing and sanitation as prerequisites for good health. Advances in clinical practice, medical technology and epidemiology have also enabled health practitioners to better diagnose and treat many diseases and conditions, and their risk factors. Such advances have significantly increased life expectancy and improved population health over the past few decades. But these health gains have not been equally shared across the entire population; certain groups in our society have poorer health than others.

Some of these differences in health status are due to genetic or biological variations and/or result from lifestyle choices. Other disparities in people's health are not so easily explained. Despite significant achievements in public health in Victoria over the past century, the evidence on socioeconomic status (SES) and health in Australia is unequivocal: people lower in the socioeconomic hierarchy fare significantly worse in terms of their health. Specifically, those classified as having low SES have higher mortality rates for most major causes of death. Their morbidity profile indicates they experience more ill health (both physiological and psychosocial), and their use of health care services suggests they are less likely, or may have less opportunity, to act to prevent disease or detect it at an early stage. Moreover, socioeconomic differences in health are evident for both males and females at every stage of the life course (birth, infancy, childhood, adolescence and adulthood), and the relationship exists irrespective of how SES and health are measured (Turrell et al. 1999). The term 'health inequities' was coined to describe those health inequalities deemed to be unfair or stemming from some form of social injustice (Kawachi, Subramanian & Almeida-Filho 2002).

Socioeconomic status is typically measured by attributes that include educational attainment, occupational status and income. Greater levels of educational attainment are associated with higher levels of knowledge and other non-material resources likely to promote a healthy lifestyle. Education also provides formal qualifications that affect occupational status and associated income level. Occupational status reflects social status and power, and material conditions related to paid work. Income provides individuals and families with necessary material resources and determines their purchasing power for accessing goods and services needed to maintain good health (Lahelma et al. 2004).

To tackle health inequalities, it must be accepted that they exist, that they have significant social and economic consequences and that they can be prevented. The Victorian Population Health Survey provides valuable data in this regard because it measures socioeconomic differences and a range of health and behavioural variables.

## Survey results

- There were inequalities in health between males and females in 2008. While males had higher rates of diabetes mellitus, current smoking, overweight body weight, poorer nutrition and risk of harm from alcohol consumption, females had higher rates of psychological distress, depression and anxiety.
- Total household income was used as a proxy for socioeconomic status. The results of the survey showed self-reported health, high or very high levels of psychological distress, the prevalence of anxiety and depression, diabetes mellitus, current smoking rates, low levels of physical activity, poor nutrition and obesity all decreased for males and females as household income (or socioeconomic status) increased. In contrast, levels of short-term risk of harm from alcohol consumption increased for males and females with increasing household income.
- About one in 20 (5.6 per cent) persons surveyed in 2008 experienced food insecurity (that is, they had run out of food at least once and been unable to afford to buy more) in the previous 12 months. A higher proportion of females (6.5 per cent) reported experiencing food insecurity, compared with males (4.5 per cent).
- About one in 10 (11.5 per cent) persons were vulnerable to financial stress (that is, they were unable to raise \$2,000 within two days in an emergency) and the rate for females (12.1 per cent) was higher than the rate for males (10.1 per cent).

## Inequalities in health

This section presents total household income as a proxy for socioeconomic status, by sex. Respondents were asked to indicate the range into which their total annual household income would fall. Total annual household income includes all sources of income, such as wages, family tax benefits and child support payments. Given the sensitive nature of such information, 15.2 per cent of all respondents declined to answer, or did not know their total annual household income.

#### Self-reported health status

Self-reported health status has been shown to be a reliable predictor of ill health, future health care use and premature mortality, independent of other medical, behavioural or psychosocial risk factors (Idler & Benyami 1997, Miilunpalo et al. 1997, Burstrom & Fredlund 2001).

Figure 9.1 shows the proportion of males and females who reported being in fair or poor health, by total annual household income. For each household income category, the proportions of persons who reported being in fair or poor health did not differ between males and females. The proportion of males and females who reported being in fair or poor health decreased, however, with increasing total annual household income. That is, there was a socioeconomic gradient—as household income increased, overall health status improved for both males and females.

**Males Females** 45 45 40 40 35 35 30 30 cent 25 25 Per cent **a** 20 20 15 15 10 10 5 5 0 -\$40-60 \$60-80 \$80-100 >\$100 ≤\$20 \$20-40 \$40-60 \$60-80 \$80-100 >\$100 ≤\$20 \$20-40 Total annual household income (\$000) Total annual household income (\$000)

Figure 9.1: Proportion of males and females who reported being in fair or poor health, by household income, 2008

Data are age standardised to the 2006 Victorian population.

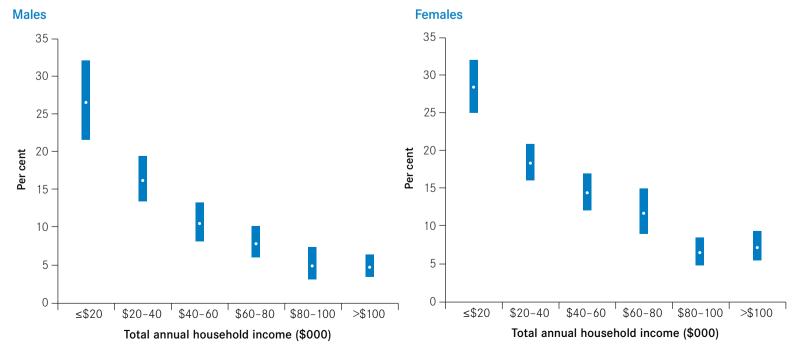
### Psychological distress

The survey included the Kessler 10 Psychological Distress Scale (K10) to measure the level of psychological distress experienced by the survey respondent in the four weeks previous to the survey. Studies that have investigated the sensitivity and specificity of the K10 have concluded that it is a useful screening instrument for identifying likely cases of anxiety and depression in the community (ABS 2001). The higher the K10 score, the higher is the level of psychological distress experienced and the more likely is the individual to be experiencing (or be at high risk of experiencing) anxiety and depression.

Figure 9.2 shows the proportion of males and females who experienced high or very high levels of psychological distress, by total annual household income. For each household income category, the proportion of persons who had experienced high or very high levels of psychological distress in the previous four weeks did not differ for males and females. In total, however, a higher proportion of females (13.1 per cent) had experienced high or very high psychological distress levels, compared with their male counterparts (9.7 per cent).

A socioeconomic gradient was evident, with the proportion of males and females who had experienced high or very high psychological distress levels decreasing with increasing household income.

Figure 9.2: Proportion of males and females who had experienced high or very high levels of psychological distress (K10 ≥22) in the previous four weeks, by household income, 2008



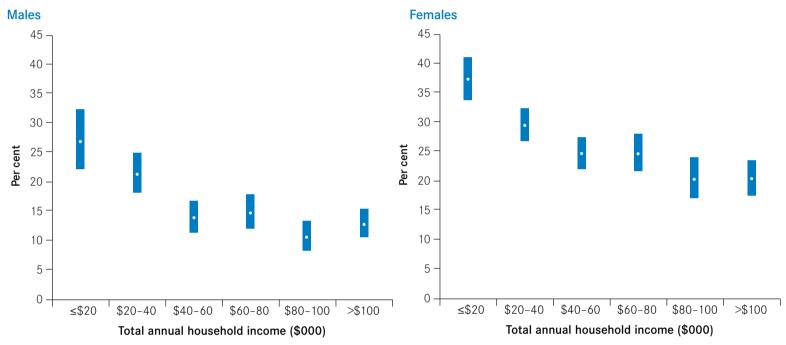
Data are age standardised to the 2006 Victorian population.

#### Depression and anxiety

Survey respondents were asked if they had ever been diagnosed with depression or anxiety by a doctor. Figure 9.3 shows the prevalence of depression and anxiety for males and females, by total annual household income.

The prevalence of doctor diagnosed depression and anxiety was higher for females than for males, for all levels of household income. Overall, 24.5 per cent of females had ever been diagnosed by a doctor with depression or anxiety, compared with 15.0 per cent of males. A strong socioeconomic gradient existed for both males and females, whereby the prevalence of depression and anxiety decreased with increasing household income.

Figure 9.3: Proportion of males and females who had ever been diagnosed by a doctor with depression or anxiety, by household income, 2008

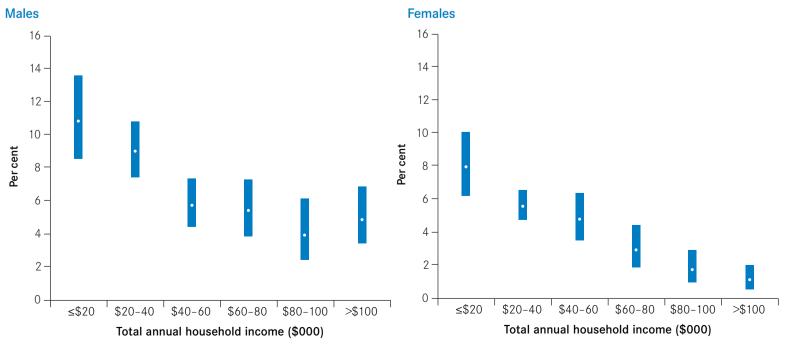


Data are age standardised to the 2006 Victorian population.

#### **Diabetes mellitus**

Figure 9.4 shows the prevalence of doctor diagnosed diabetes mellitus (excluding gestational diabetes) for males and females, by total annual household income. The prevalence of diabetes mellitus was higher for males who reported a total annual household income of greater than \$100,000, or \$20,000–\$40,000, compared with their female counterparts. In total, males (6.9 per cent) had a higher prevalence of diabetes than did females (4.9 per cent). A socioeconomic gradient existed for both males and females, whereby the prevalence of diabetes mellitus decreased with increasing household income.

Figure 9.4: Proportion of males and females who had ever been diagnosed by a doctor with diabetes mellitus (excluding gestational diabetes), by household income, 2008



Data are age standardised to the 2006 Victorian population.

Figure 9.5 shows the proportion of current smokers among males and females, by total annual household income. Overall, a higher proportion of males (21.4 per cent) were current smokers, compared with females (16.9 per cent). A strong socioeconomic gradient existed for both males and females, whereby the proportion of current smokers decreased with increasing household income.

Among those who reported a total annual household income of less than \$20,000, 36.5 per cent of males and 26.9 per cent of females were current smokers, compared with 16.5 per cent of males and 13.4 per cent of females with household income greater than \$100,000.

**Females** Males 45 45 40 40 35 35 30 30 cent cent 25 25 Per Per 20 20 15 15 10 10 5 5 0 0 \$40-60 \$60-80 \$80-100 ≤\$20 \$20-40 \$40-60 \$60-80 \ \$80-100 Total annual household income (\$000) Total annual household income (\$000)

Figure 9.5: Proportion of male and female current smokers, by household income, 2008

Data are age standardised to the 2006 Victorian population.

## Consumption of alcohol

Risk of alcohol-related harm has been categorised into short-term and long-term risk (NHMRC 2001). Short-term risk is the risk of harm associated with given levels of alcohol consumption on a single day that can result in injury and death due to trauma. Long-term risk is associated with regular daily patterns of drinking alcohol, defined in terms of the amount typically consumed each week. Long-term harm includes conditions such as cirrhosis of the liver, pancreas damage and heart and blood disorders.

Figure 9.6 shows the proportion of males and females at short-term risk of alcohol-related harm, by annual household income. A higher proportion of males overall (53.7 per cent) and at all levels of household income, were at short-term risk of alcohol-related harm, compared with females (37.2 per cent).

A reverse socioeconomic gradient was evident, however, whereby the proportion of males and females at short-term risk of alcohol-related harm increased with increasing total annual household income. The proportion of males and females at risk for short-term alcohol-related harm was 40.3 per cent and 27.0 per cent respectively for those reporting annual household income of less than \$20,000, compared with 62.5 per cent and 47.1 per cent of males and females respectively, who reported household income greater than \$100,000.

0 -

≤\$20

Data are age standardised to the 2006 Victorian population.

\$40-60

\$60-80

Total annual household income (\$000)

Figure 9.7 shows the proportion of males and females at long-term risk of alcohol-related harm, by total annual household income. Overall, a higher proportion of males (4.3 per cent) were at long-term risk of alcohol-related harm, compared with females (3.1 per cent). For both males and females, the risk did not change significantly with increasing household income.

0

≤\$20

\$20-40

\$40-60

Total annual household income (\$000)

\$60-80 \ \$80-100

>\$100

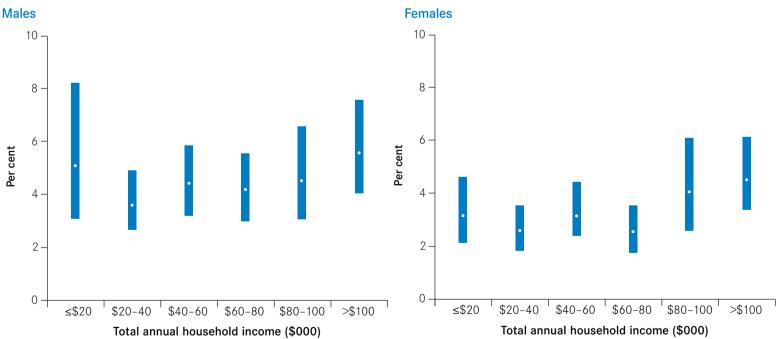


Figure 9.7: Proportion of males and females at long-term risk of harm due to alcohol consumption, by household income, 2008

Data are age standardised to the 2006 Victorian population.

## Physical activity

Figure 9.8 shows the proportion of males and females who did not meet the Australian guidelines for physical activity (DoHA 1999), by total annual household income. There was no difference between the proportion of males and females who failed to meet the guidelines for all income levels. In total, 32.6 per cent of males and females did not meet the guidelines.

A socioeconomic gradient existed, whereby the proportion of males and females who failed to meet the guidelines for physical activity decreased with increasing household income. Among those who did not meet the guidelines, 38.9 per cent of males and 38.2 per cent of females reported household income of \$20,000 or less, compared with 27.2 per cent of males and 28.5 per cent of females who reported household income greater than \$100,000.

Males **Females** 50 50 45 45 40 40 35 35 30 30 Per cent Per cent 25 25 20 20 15 15 10 10 5 5 0 0 ≤\$20 \$60-80 \$40-60 \$80-100 >\$100 \$20-40 \$40-60 \$60-80 \$80-100 Total annual household income (\$000) Total annual household income (\$000)

Figure 9.8: Proportion of males and females who did not meet the guidelines for sufficient physical activity, by household income, 2008

Data are age standardised to the 2006 Victorian population.

#### **Nutrition**

Figure 9.9 shows the proportion of males and females who did not meet the Australian guidelines for adequate daily consumption of fruit and vegetables (NHMRC 2003), by total annual household income. Overall, a higher proportion of males (54.8 per cent) did not meet the guidelines, compared with females (41.9 per cent). This pattern between the sexes was observed across all household income categories.

A socioeconomic gradient existed, whereby the proportion of males and females who did not meet the guidelines decreased with increasing household income. The figure shows 58.4 per cent of males and 49.6 per cent of females with a household income of \$20,000 or less did not meet the guidelines, compared with 48.7 per cent of males and 37.9 per cent of females with a household income of greater than \$100,000.

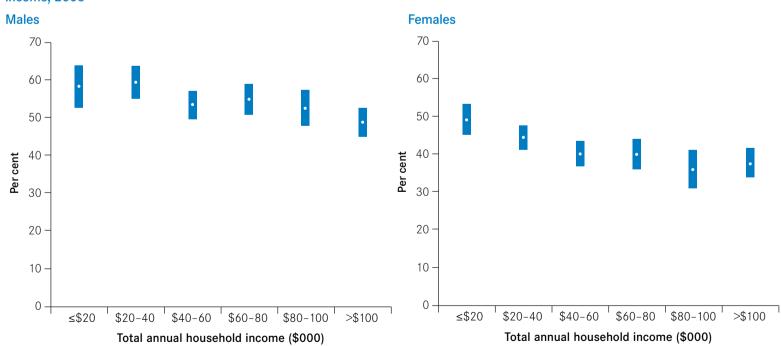


Figure 9.9: Proportion of males and females who did not meet the guidelines for fruit and vegetable consumption, by household income, 2008

Data are age standardised to the 2006 Victorian population.

## **Body weight status**

Being overweight or obese is a significant risk factor for a number of chronic diseases, including type 2 diabetes, certain types of cancer and cardiovascular disease. Figure 9.10 shows the proportion of males and females who were overweight, based on having a body mass index (BMI) of 25 or greater and less than 30, by total annual household income. A higher proportion of males (39.9 per cent) were overweight in total and for all levels of household income, compared with females (24.2 per cent).

A reverse socioeconomic gradient existed, whereby the proportion of overweight males increased with increasing household income. While a similar gradient appeared to exist for females, this was not statistically significant. The figure shows 30.7 per cent of males and 20.6 per cent of females who reported total annual household income less than \$20,000 were overweight, compared with 43.4 per cent of males and 25.2 per cent of females with household income greater than \$100,000.

Males 60 60 50 50 40 40 Per cent Per cent 20 20 10 10 0 0 \$60-80 \ \$80-100 ≤\$20 \$40-60 <\$20 \$40-60 \$60-80 \$80-100 >\$100

Figure 9.10: Proportion of overweight males and females, by household income, 2008

Data are age standardised to the 2006 Victorian population.

Figure 9.11 shows the proportion of males and females who were obese, based on having a BMI of 30 or greater, by total annual household income. Overall, the proportion of males (17.3 per cent) who were obese was similar to the proportion of females (16.1 per cent). A higher proportion of males (15.2 per cent) with household income greater than \$100,000 were obese, however, compared with their female counterparts (10.7 per cent).

Total annual household income (\$000)

In contrast to the trend observed for overweight persons, a socioeconomic gradient existed for both males and females, whereby higher levels of obesity were associated with lower levels of household income. The figure shows 19.8 per cent of males and 20.9 per cent of females with a total annual household income of \$20,000 or less were obese, compared with 15.2 per cent of males and 10.7 per cent of females who reported a household income greater than \$100,000.

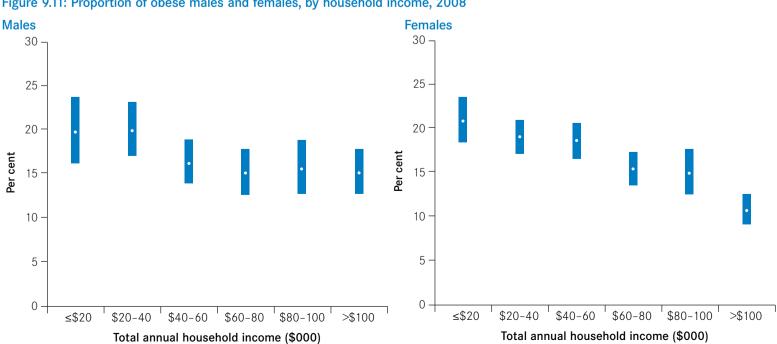


Figure 9.11: Proportion of obese males and females, by household income, 2008

Total annual household income (\$000)

Data are age standardised to the 2006 Victorian population.

The survey also asked respondents about food insecurity-that is, whether there were any times during the previous 12 months when they had run out of food and could not afford to buy more and about financial stress—that is, whether respondents could raise \$2000 within two days in an emergency.

## 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' (FAO 1996). Where this is not the case, 'food insecurity' is said to exist.

Table 9.1 shows there was an increase in the proportion of persons who ran out of food at least once in the previous 12 months and could not afford to buy more, between 2005 and 2008.

Table 9.1: Proportion of persons who ran out of food in the previous 12 months and could not afford to buy more, 2005-2008

	2005	2006	2007	2008
		Per	cent	
Males	4.3	4.4	4.8	4.5
Females	4.8	5.4	5.4	6.5
Persons	4.6	4.9	5.1	5.6

Data are age standardised to the 2006 Victorian population.

Ordinary least squares regression was used to test for trends over time.

Table 9.2 shows the proportion of persons, by sex and age group, who had experienced food insecurity in the previous 12 months. The results show approximately one in 20 (5.6 per cent) persons experienced food insecurity in 2008. A higher proportion of females (6.5 per cent) had experienced food insecurity in the previous 12 months, compared with males (4.5 per cent); among age groups, persons aged 25–34 years reported the highest rate of food insecurity.

Table 9.2: Proportion of persons who ran out of food in the previous 12 months and could not afford to buy more, by age group and sex, 2008

		Males			Females			Persons	
	%	Lower 95% Cl	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
18-24	5.3	3.6	7.8	9.7	7.4	12.5	7.5	6.0	9.3
25-34	8.7	6.5	11.5	7.5	6.2	9.0	8.1	6.8	9.6
35-44	4.9	3.8	6.3	8.5	7.4	9.7	6.7	5.9	7.6
45-54	3.9	2.9	5.1	7.0	5.9	8.2	5.4	4.7	6.3
55-64	2.0	1.4	2.7	3.6	2.9	4.5	2.8	2.4	3.3
65+	1.8	1.3	2.6	2.7	2.2	3.4	2.3	1.9	2.8
Total	4.5	3.9	5.2	6.5	6.0	7.1	5.6	5.2	6.0

95% CI = 95 per cent confidence interval.

Data are crude estimates, except for the totals, which represent the estimates for Victoria and have been age standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Table 9.3 shows the proportion of males and females who had experienced food insecurity in the previous 12 months, by Department of Health region. The rates reported were similar overall between rural and metropolitan areas. Across regions, the prevalence of food insecurity ranged from 4.3 per cent in the Barwon–South Western region to 7.1 per cent in the Loddon Mallee region.

A higher proportion of females had experienced food insecurity in the Barwon–South Western, Loddon Mallee, Gippsland, and North and West Metropolitan regions, compared with males. Almost one in 10 (9.7 per cent) females in the Loddon Mallee region reported having experienced food insecurity in the previous 12 months, which was higher than the rate for all females in Victoria (6.5 per cent). A higher proportion of males in the Hume region (7.6 per cent) had experienced food insecurity, compared with the overall state estimate for males (4.5 per cent).

Table 9.3: Proportion of persons who ran out of food in the previous 12 months and could not afford to buy more, by sex and Department of Health region, 2008

		Males			Females			Persons	
Region	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Barwon-South Western	1.8*	1.1	3.1	6.7	4.4	10.3	4.3	2.9	6.2
Eastern Metropolitan	4.3	2.9	6.4	5.2	4.1	6.6	4.8	3.8	6.0
Gippsland	3.5	2.3	5.2	8.2	6.5	10.3	5.8	4.8	7.1
Grampians	4.9	3.3	7.1	7.7	5.5	10.9	6.4	4.9	8.4
Hume	7.6	5.4	10.5	6.1	5.0	7.5	6.9	5.6	8.5
Loddon Mallee	4.5	3.1	6.4	9.7	7.9	12.0	7.1	5.9	8.5
North and West Metropolitan	4.7	3.7	5.9	6.9	6.0	7.9	5.8	5.1	6.6
Southern Metropolitan	4.8	3.5	6.4	6.2	5.2	7.5	5.5	4.6	6.5
Metropolitan	4.6	3.8	5.4	6.2	5.6	6.9	5.4	4.9	6.0
Rural	4.2	3.5	5.1	7.7	6.7	8.9	6.0	5.4	6.7
Total	4.5	3.9	5.2	6.5	6.0	7.1	5.6	5.2	6.0

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

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 Victoria are identified by colour as follows: above Victoria / below Victoria.

Table 9.4 and figure 9.12 show the proportion of persons who had experienced food insecurity in the previous 12 months, by local government area (LGA). The proportions of persons who had experienced food insecurity in the previous 12 months was higher than the proportion for Victoria (5.6 per cent) in the LGAs of Ararat (12.6 per cent), Loddon (11.2 per cent), Central Goldfields (11.1 per cent), Pyrenees (11.0 per cent), Moreland (10.1 per cent) and Mildura (9.3 per cent).

<sup>\*</sup> Estimate has a relative standard error of between 25 and 50 per cent and should be interpreted with caution.

Social Inequalities in Health

Table 9.4: Proportion of persons who ran out of food in the previous 12 months and couldn't afford to buy anymore, by LGA, 2008

		Yes				Yes	
LGA	%	Lower 95% CI	Upper 95% CI	LGA	%	Lower 95% CI	Upper 95% CI
Alpine (S)	7.4	4.8	11.5	Mansfield (S)	7.6	4.7	12.2
Ararat (RC)	12.6	8.3	18.7	Maribyrnong (C)	9.1	5.9	13.6
Ballarat (C)	7.3	4.6	11.4	Maroondah (C)	3.3*	1.8	5.9
Banyule (C)	4.7*	2.4	9.0	Melbourne (C)	5.1	3.1	8.2
Bass Coast (S)	6.1	3.8	9.6	Melton (S)	6.1	4.1	8.9
Baw Baw (S)	5.6	3.7	8.3	Mildura (RC)	9.3	6.3	13.4
Bayside (C)	1.6*	0.8	3.6	Mitchell (S)	5.0	3.2	7.7
Benalla (RC)	8.4	5.2	13.2	Moira (S)	7.0	4.3	11.2
Boroondara (C)	3.1*	1.7	5.6	Monash (C)	6.0*	3.6	9.9
Brimbank (C)	4.9	3.3	7.4	Moonee Valley (C)	4.3*	2.5	7.2
Buloke (S)	4.5	2.8	7.3	Moorabool (S)	4.2*	2.1	8.1
Campaspe (S)	3.9*	2.3	6.6	Moreland (C)	10.1	7.5	13.3
Cardinia (S)	9.4	6.0	14.5	Momington Peninsula (S)	8.7	5.5	13.7
Casey (C)	5.4	3.6	8.2	Mount Alexander (S)	8.3	5.2	13.0
Central Goldfields (S)	11.1	7.0	17.1	Moyne (S)	4.6*	2.1	9.5
Colac-Otway (S)	2.3*	1.1	4.7	Murrindindi (S)	7.8*	4.4	13.5
Corangamite (S)	4.5*	2.5	7.7	Nillumbik (S)	3.4*	1.9	6.2
Darebin (C)	4.3	2.8	6.7	Northern Grampians (S)	6.4	3.9	10.2
East Gippsland (S)	5.3*	2.6	10.3	Port Phillip (C)	5.8	3.7	9.0
Frankston (C)	8.6	5.8	12.6	Pyrenees (S)	11.0*	6.3	18.5
Gannawarra (S)	5.2*	3.1	8.4	Queenscliffe (B)	4.8*	1.9	11.5
Glen Eira (C)	2.7*	1.7	4.5	Southern Grampians (S)	2.9*	1.7	5.1
Glenelg (S)	6.8*	4.1	11.3	South Gippsland (S)	6.8	4.2	10.8
Golden Plains (S)	4.2*	2.3	7.7	Stonnington (C)	3.1*	1.7	5.4
Greater Bendigo (C)	7.6	5.1	11.1	Strathbogie (S)	4.5*	2.6	7.5
Greater Dandenong (C)	7.7	5.2	11.2	Surf Coast (S)	5.4	3.3	8.6
Greater Geelong (C)	3.9*	2.0	7.3	Swan Hill (RC)	5.2*	3.0	9.0
Greater Shepparton (C)	8.1*	4.6	14.1	Towong (S)	3.1*	1.7	5.4
Hepburn (S)	7.3	4.9	10.8	Wangaratta (RC)	6.4*	3.1	12.8
Hindmarsh (S)	4.8*	2.8	8.0	Warrnambool (C)	5.6*	3.4	9.2
Hobsons Bay (C)	3.5*	1.9	6.3	Wellington (S)	6.1*	3.7	10.0
Horsham (RC)	4.1*	2.4	6.9	West Wimmera (S)	4.5	2.8	7.0
Hume (C)	7.3	5.3	10.1	Whitehorse (C)	3.9*	2.1	7.1
Indigo (S)	8.4*	4.6	15.0	Whittlesea (C)	6.7	4.4	9.9
Kingston (C)	3.9*	1.9	7.6	Wodonga (RC)	6.4	4.2	9.6
Knox (C)	6.6*	3.9	11.1	Wyndham (C)	5.9	4.1	8.5
Latrobe (C)	6.0	4.0	8.8	Yarra (C)	7.8	5.0	12.0
Loddon (S)	11.2	7.6	16.1	Yarra Ranges (S)	6.3	4.2	9.4
Macedon Ranges (S)	5.3	3.2	8.5	Yarriambiack (S)	8.3*	4.7	14.3
Manningham (C)	2.6*	1.3	5.1	Total	5.6	5.2	6.0

Metropolitan and rural LGAs are identified by colour as follows: metropolitan / rural.

95% CI = 95 per cent confidence interval.

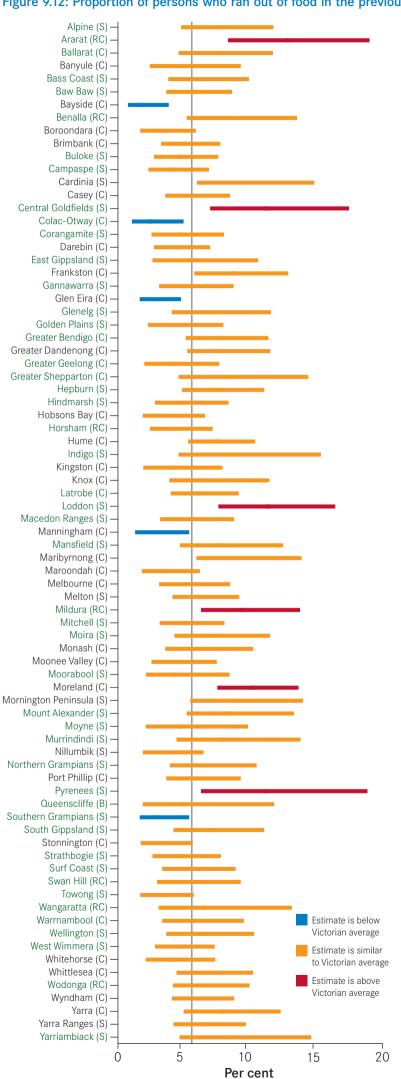
LGA = local government area

Data are age standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

<sup>\*</sup> Estimate has a relative standard error of between 25 and 50 per cent and should be interpreted with caution.

Figure 9.12: Proportion of persons who ran out of food in the previous 12 months and couldn't afford to buy anymore, by LGA, 2008



Metropolitan and rural LGAs are identified by colour as follows: metropolitan / rural. LGA = local government area.

Data are age standardised to the 2006 Victorian population.

Table 9.5: Proportion of persons who ran out of food in past 12 months, by frequency and sex, 2008

	Once	e a week or	more	Once	every two	weeks	C	nce a mon	th	Less t	han once a	month
Region	%			%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Males	12.0	8.2	17.2	14.9	11.1	19.7	17.6	13.6	22.3	54.6	48.5	60.6
Females	10.4	7.8	13.5	13.0	10.6	15.9	19.6	16.6	22.9	54.5	50.5	58.5
Persons	11.4	9.0	14.5	14.1	11.8	16.8	18.4	16.0	21.1	54.1	50.4	57.7

95% CI = 95 per cent confidence interval.

Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are age standardised to the 2006 Victorian population.

Table 9.6 shows the proportion of persons who reported having run out of food at least once in the previous 12 months, by how often they ran out of food and age group. There were no differences between the proportions for age groups and the state, for each time period. However, persons aged 45–54 years reported the highest rate (14.2 per cent) for running out of food once a week or more, persons aged 65 years and over had the highest rate (19.3 per cent) for running out of food once every two weeks, persons aged 55–64 years had the highest rate (25.6 per cent) for running out of food once a month and persons aged 18–24 years had the highest rate (65.7 per cent) for running out of food less than once a month.

Table 9.6: Proportion of persons who ran out of food in previous 12 months, by frequency and age group, 2008

	Once	e a week or	more	Once	every two	weeks	C	once a mon	th	Less t	han once a	month
Age group (years)	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
18-24	5.2*	2.6	9.8	12.4*	7.1	20.5	16.8	10.3	26.3	65.7	55.0	74.9
25-34	13.0*	6.6	23.9	15.5	9.6	24.2	13.3	8.9	19.5	57.0	47.5	66.0
35-44	8.9*	5.3	14.4	12.3	8.5	17.3	18.9	14.5	24.2	59.5	52.9	65.7
45-54	14.2	9.5	20.7	10.6	7.4	15.0	23.2	17.7	29.9	50.2	43.0	57.5
55-64	7.7*	4.7	12.4	16.8	11.3	24.4	25.6	17.6	35.6	47.4	38.8	56.2
65+	10.7*	6.1	18.1	19.3	12.7	28.4	19.0	12.6	27.6	46.3	37.1	55.8
Total	11.4	8.9	14.5	14.1	11.8	16.8	18.4	16.0	21.1	54.1	50.4	57.7

95% CI = 95 per cent confidence interval.

Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals, which represent the estimates for Victoria and have been age standardised to the 2006 Victorian population.

 $^{\star}$  Estimate has a relative standard error of between 25 and 50 per cent and should be interpreted with caution.

Table 9.7 shows regional differences in the frequency at which persons ran out of food and could not afford to buy more. Hume (22.2 per cent) was the only Department of Health region with a higher proportion of persons reporting having run out of food once every two weeks, compared with the average for the state (14.1 per cent). A lower proportion of persons from the Loddon Mallee region (3.8 per cent), compared with Victoria (11.4 per cent), reported running out of food once a week or more and 5.4 per cent of persons from the Barwon–South Western region reported running out of food once every two weeks, which was also lower than the average for the state (14.1 per cent). The rates for the frequency at which people ran out of food were too low to allow reliable analysis at the LGA level.

	Once	a week or	more	Once	every two	weeks	0	nce a mon	th	Less th	nan once a	month
Region	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Barwon-South Western	7.0*	3.6	13.1	5.4*	2.5	11.5	21.4	15.3	29.2	65.2	57.1	72.5
Eastern Metropolitan	11.7	8.0	16.8	14.3	9.5	20.9	16.9	11.5	24.1	53.5	45.1	61.7
Gippsland	8.2	5.3	12.4	10.5	6.8	15.9	18.3	11.9	26.9	62.3	53.8	70.1
Grampians	7.2	4.4	11.6	8.0*	4.6	13.4	17.7	13.1	23.6	63.9	56.1	71.0
Hume	9.0	5.9	13.6	22.2	17.2	28.1	14.4	10.1	20.2	51.4	44.8	57.9
Loddon Mallee	3.8*	2.1	6.6	13.4	9.9	17.9	24.9	18.9	32.1	57.0	49.6	64.0
North and West Metropolitan	10.2	6.5	15.6	14.1	10.5	18.6	18.0	14.1	22.7	55.5	49.5	61.4
Southern Metropolitan	13.3	9.3	18.8	14.0	9.6	19.9	20.5	15.7	26.4	51.3	44.5	58.1
Metropolitan	13.6	10.8	17.1	14.4	11.6	17.7	18.0	15.0	21.4	52.2	47.8	56.6
Rural	7.0	5.3	9.1	12.9	10.2	16.3	20.3	16.7	24.4	58.1	53.4	62.6
Total	11.4	8.9	14.5	14.1	11.8	16.8	18.4	16.0	21.1	54.1	50.4	57.7

95% CI = 95 per cent confidence interval.

Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are age standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

When asked about the reasons why they don't always have the quality or variety of food they wanted, 28.3 per cent of all survey respondents reported that some foods were too expensive, 25.5 per cent reported they could not always get food of the right quality, 10.9 per cent reported they could not always get the variety of food they wanted, 6.8 per cent reported they could not always get culturally appropriate foods and eight per cent reported inadequate or unreliable public transport made it difficult for them to get to the shops (table 9.8).

A higher proportion of females, compared with males, reported some foods were too expensive and that they could not always get the right quality of food.

<sup>\*</sup> Estimate has a relative standard error of between 25 and 50 per cent and should be interpreted with caution.

Table 9.8: Reasons why people don't always have the quality or variety of foods they want, by age group and sex, 2008

					I don	't always	have the	e type of	food I wa	nt becau	ıse				
		e foods ar expensive		Can't	always ge quality	et right	Can't	always ge variety	et right		n't always ally appro food			dequate eliable pu transport	ıblic
Age group (years)	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Males															
18-24	24.9	21.1	29.2	21.1	17.4	25.4	12.6	9.8	16.0	9.0	6.5	12.3	9.4	7.0	12.5
25-34	30.3	26.8	34.1	28.8	25.3	32.6	14.1	11.5	17.3	10.0	7.5	13.2	11.3	9.0	14.2
35-44	27.2	24.6	30.0	25.8	23.3	28.6	11.7	9.9	13.8	7.8	6.2	9.6	6.5	5.1	8.2
45-54	24.1	21.8	26.5	24.7	22.3	27.2	10.8	9.1	12.7	5.8	4.6	7.3	5.6	4.5	7.1
55-64	18.6	16.6	20.7	19.9	17.9	22.1	7.9	6.5	9.5	4.2	3.3	5.5	6.7	5.6	8.1
65+	22.1	20.2	24.1	18.6	16.8	20.4	9.2	7.9	10.6	5.0	4.1	6.1	5.9	4.9	7.0
Total	25.0	23.8	26.2	23.5	22.4	24.7	11.2	10.3	12.1	7.1	6.3	7.9	7.6	6.8	8.4
Females															
18-24	34.7	30.7	39.0	27.5	23.8	31.5	12.8	10.3	15.9	9.4	6.9	12.5	11.5	9.0	14.6
25-34	35.7	33.0	38.5	31.9	29.3	34.6	13.6	11.7	15.8	10.8	9.0	12.9	9.1	7.5	11.1
35-44	36.1	34.1	38.1	32.3	30.4	34.2	9.5	8.4	10.9	5.0	4.1	6.0	6.4	5.5	7.5
45-54	30.4	28.4	32.5	27.9	25.9	29.9	10.4	9.1	11.8	5.4	4.4	6.5	7.7	6.6	9.0
55-64	26.7	24.8	28.7	23.2	21.4	25.1	8.3	7.3	9.6	4.3	3.5	5.3	7.2	6.2	8.3
65+	24.7	23.1	26.4	19.8	18.3	21.4	9.4	8.3	10.6	4.5	3.8	5.4	9.3	8.2	10.5
Total	31.5	30.5	32.5	27.3	26.4	28.3	10.7	10.0	11.4	6.5	6.0	7.2	8.4	7.8	9.1
Persons															
18-24	29.8	26.9	32.7	24.2	21.6	27.1	12.7	10.7	14.9	9.2	7.4	11.4	10.4	8.6	12.6
25-34	33.0	30.8	35.3	30.4	28.2	32.7	13.9	12.2	15.7	10.4	8.8	12.2	10.2	8.8	11.9
35-44	31.7	30.0	33.4	29.1	27.5	30.7	10.6	9.5	11.8	6.4	5.5	7.4	6.5	5.6	7.4
45-54	27.3	25.7	28.9	26.3	24.7	27.9	10.6	9.5	11.8	5.6	4.8	6.5	6.7	5.8	7.6
55-64	22.7	21.3	24.1	21.6	20.2	23.0	8.1	7.2	9.1	4.3	3.6	5.0	7.0	6.2	7.8
65+	23.5	22.3	24.8	19.3	18.1	20.5	9.3	8.5	10.2	4.7	4.1	5.4	7.8	7.0	8.6
Total	28.3	27.5	29.0	25.5	24.7	26.2	10.9	10.4	11.5	6.8	6.3	7.3	8.0	7.6	8.5

95% CI = 95 per cent confidence interval.

Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals, which represent the estimates for Victoria and have been age standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Table 9.9 shows that there were three Department of Health regions (Loddon Mallee: 34.9 per cent, Grampians: 32.1 per cent, Hume: 32.0 per cent), all rural, where the proportion of persons reporting some foods were too expensive was higher than the proportion for the state (28.3 per cent).

There were two regions (Gippsland: 29.8 per cent, Hume: 28.5 per cent), both rural, where the proportion of persons reporting they could not always get food of the right quality was higher than the proportion for the state (25.5 per cent).

Gippsland (10.4 per cent) was the only region where the proportion of persons reporting inadequate and unreliable public transport as a reason for not always having the food they wanted, was higher than the proportion for the state (8.0 per cent).

Table 9.9: Reasons why people don't always have the quality or variety of foods they want, by frequency and Department of Health region, 2008

					l dor	n't always	have th	e type of	food I wa	nt becau	ıse				
	Som	e foods a		Can't	always ge quality	et right	Can't	always ge variety	et right		n't always rally appro food			adequate reliable pu transpor	ublic
Age group (years)	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Barwon-South Western	23.3	20.4	26.5	25.0	21.6	28.7	12.4	9.5	16.0	6.5	4.4	9.3	6.2	4.7	8.0
Eastern Metropolitan	24.8	22.8	26.8	22.5	20.6	24.6	9.7	8.3	11.3	6.1	4.9	7.6	7.3	6.1	8.7
Gippsland	31.4	28.9	34.1	29.8	27.3	32.5	10.6	8.9	12.6	5.7	4.5	7.1	10.4	8.9	12.2
Grampians	32.1	29.4	35.0	28.0	25.5	30.6	11.6	10.1	13.2	6.3	5.1	7.8	9.3	7.8	11.1
Hume	32.0	29.8	34.2	28.5	26.4	30.6	11.8	10.3	13.5	5.6	4.5	7.0	9.3	8.0	10.7
Loddon Mallee	34.9	32.4	37.5	27.0	24.8	29.3	11.7	10.1	13.6	6.2	5.1	7.5	8.3	6.9	9.8
North and West Metropolitan	30.1	28.8	31.5	27.3	26.0	28.7	11.5	10.6	12.5	7.7	6.9	8.6	8.4	7.6	9.3
Southern Metropolitan	27.4	25.7	29.1	24.4	22.7	26.0	11.1	9.9	12.4	6.7	5.7	7.8	7.7	6.7	8.9
Metropolitan	27.6	26.7	28.6	24.9	24.0	25.8	10.8	10.1	11.4	6.9	6.4	7.5	7.8	7.3	8.5
Rural	30.2	29.0	31.5	27.3	26.0	28.7	11.7	10.6	12.8	6.1	5.3	7.0	8.4	7.8	9.2
Total	28.3	27.5	29.0	25.5	24.7	26.2	10.9	10.4	11.5	6.8	6.3	7.3	8.0	7.6	8.5

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

95% CI = 95 per cent confidence interval.

Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are age standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Table 9.10: Reasons why people don't always have the quality or variety of foods they want, by frequency and LGA, 2008

					I don	t always	have the	type of	food I wa	ınt becaı	ıse				
		me foods o expens			ı't always ght quali			ı't always ght varie		ge	an't alway et cultura propriate (	lly	an	nadequat d unrelia blic trans	ble
LGA	%	Lower 95% CI	Upper 95% Cl	%	Lower 95% CI	Upper 95% Cl	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% Cl	%	Lower 95% CI	Upper 95% C
Alpine (S)	33.8	27.7	40.6	28.5	23.4	34.2	8.4	5.7	12.1	7.2*	4.0	12.6	12.8	9.1	17.8
Ararat (RC)	32.3	26.6	38.6	28.0	22.0	34.9	13.4	9.5	18.5	7.5	5.0	11.1	6.0	3.9	9.0
Ballarat (C)	30.9	25.8	36.6	21.6	17.3	26.6	10.5	7.7	14.1	6.1	4.0	9.2	8.3	5.6	12.0
Banyule (C)	25.0	20.1	30.6	20.4	15.9	25.8	7.2	4.6	11.3	5.9*	3.4	10.0	6.3*	3.7	10.7
Bass Coast (S)	33.5	26.7	41.1	33.6	26.9	41.1	13.2	9.2	18.5	8.5	5.3	13.5	12.7	9.5	16.9
Baw Baw (S)	27.3	22.1	33.2	22.0	16.7	28.4	7.8*	4.6	12.7	3.9*	2.0	7.7	11.3	7.7	16.2
Bayside (C)	21.9	17.4	27.3	17.6	13.4	22.8	4.5*	2.7	7.4	3.9*	2.1	7.3	5.4*	3.1	9.3
Benalla (RC)	33.1	27.0	39.8	26.4	21.6	31.8	10.1	6.7	14.8	5.7	3.7	8.7	7.8	5.5	11.2
Boroondara (C)	20.6	16.3	25.6	16.4	12.5	21.1	9.2	6.0	13.8	4.1*	2.3	7.2	7.1	4.5	11.1
Brimbank (C)	42.3	37.2	47.5	35.5	30.6	40.7	17.5	14.0	21.7	11.0	8.1	14.9	11.1	8.3	14.6
Buloke (S)	45.9	39.8	52.0	52.3	46.4	58.1	38.3	31.5	45.6	10.3	6.7	15.6	12.7	8.4	18.8
Campaspe (S)	36.5	30.8	42.6	26.3	21.4	31.9	9.7	6.8	13.7	3.2*	2.0	5.3	7.3	4.9	10.8
Cardinia (S)	26.6	21.9	31.8	22.3	18.0	27.3	7.8	5.3	11.2	2.8*	1.4	5.4	9.6	6.5	14.1
Casey (C)	35.0	30.2	40.1	31.5	26.7	36.6	14.8	11.3	19.1	8.8	6.0	12.5	12.2	8.9	16.4
Central Goldfields (S)	38.5	31.6	45.9	31.3	25.7	37.5	12.6	8.7	18.0	6.4	4.1	10.0	10.5	6.9	15.5
Colac-Otway (S)	33.0	27.5	39.0	23.9	18.3	30.5	8.1	5.2	12.3	6.8	4.2	10.9	8.9*	5.3	14.3
Corangamite (S)	24.2	19.9	29.1	26.7	22.1	31.9	11.7	8.5	16.0	6.9	4.7	10.1	9.3	6.1	13.9
Darebin (C)	31.8	26.6	37.5	28.0	23.1	33.6	10.1	7.3	13.8	7.6	5.3	10.7	6.3	4.2	9.6
East Gippsland (S)	28.5	23.1	34.7	33.2	28.3	38.5	8.8	5.6	13.7	5.4*	3.3	8.9	13.6	8.9	20.3
Frankston (C)	33.6	28.4	39.3	27.4	22.4	33.0	10.7	7.6	14.8	6.3*	3.7	10.5	5.4	3.3	8.5
Gannawarra (S)	34.7	29.0	40.8	30.9	25.3	37.2	12.6	8.6	18.1	7.3	4.8	11.1	11.3	8.6	14.6
Glen Eira (C)	23.0	18.7	27.9	18.9	14.8	23.8	11.8	8.5	16.3	7.5	5.1	10.9	4.0*	2.4	6.7
Glenelg (S)	35.5	29.8	41.7	30.1	25.1	35.6	13.6	9.8	18.7	8.6	5.6	13.1	7.5	5.1	10.9
Golden Plains (S)	36.5	31.2	42.1	28.5	23.5	34.2	6.1	4.3	8.5	4.7*	2.4	8.8	12.6	8.7	17.9
Greater Bendigo (C)	30.6	25.5	36.2	20.8	16.6	25.6	10.7	7.3	15.2	6.2	4.1	9.2	7.7	4.9	12.1
Greater Dandenong (C)	36.4	31.5	41.7	32.5	27.4	37.9	18.4	14.4	23.1	13.4	9.8	18.0	14.6	11.0	19.1
Greater Geelong (C)	20.8	16.5	25.9	25.3	20.2	31.2	14.2	9.8	20.0	6.9*	3.9	11.8	5.2*	3.1	8.4
Greater Shepparton (C)	33.7	28.0	39.8	29.8	24.5	35.8	11.2	7.7	16.0	7.5*	4.1	13.4	9.3	6.1	13.9
Hepburn (S)	30.6	25.0	36.9	37.3	31.9	43.0	12.1	7.7	18.4	6.5	4.3	9.9	16.1	11.1	22.6
Hindmarsh (S)	42.9	36.9	49.2	40.0	33.9	46.3	21.5	16.9	26.8	8.5	5.7	12.7	13.5	9.6	18.6
Hobsons Bay (C)	30.1	25.0	35.7	25.5	21.0	30.6	9.9	7.0	13.9	8.0	5.1	12.3	5.6*	3.3	9.3
Horsham (RC)	33.5	27.7	39.7	30.8	25.6	36.6	6.7	4.4	10.1	5.6*	3.3	9.4	3.2*	1.6	6.2
Hume (C)	33.7	29.2	38.6	34.1	29.3	39.2	13.7	10.6	17.5	10.0	7.4	13.4	9.6	7.1	12.9
Indigo (S)	22.5	17.9	27.9	24.6	19.0	31.2	7.9	5.4	11.4	3.4*	1.9	5.9	6.3	4.3	9.1
Kingston (C)	22.6	18.2	27.6	25.0	20.1	30.6	11.2	8.0	15.5	6.3*	3.7	10.5	4.6*	2.5	8.3
Knox (C)	25.4	20.8	30.7	25.6	20.8	31.1	10.2	7.0	14.8	4.7*	2.4	9.1	3.9*	2.2	6.8
Latrobe (C)	32.5	27.5	37.9	28.6	23.7	34.0	9.2	6.4	13.0	5.8	3.6	9.2	7.2	5.0	10.2
Loddon (S)	35.2	29.8	41.0	40.0	34.2	46.1	17.6	13.2	23.1	10.2	6.9	14.9	13.2	10.1	17.1
Macedon Ranges (S)	34.5	28.5	41.1	27.9	22.5	34.0	8.7	5.7	13.0	6.4*	3.5	11.4	10.0	7.0	13.9
Manningham (C)	20.3	16.0	25.4	22.2	17.4	27.9	8.3	5.7	13.2	6.8*	4.1	11.0	9.9	6.7	14.5
maningilani (O)	20.3	10.0	25.4	22.2	17.4	27.9	0.3	J.1	10.2	0.0	4.1	11.0	7.7	0.7	14.5

Metropolitan and rural LGAs are identified by colour as follows: metropolitan / rural. 95% CI = 95 per cent confidence interval.

LGA = local government area

Data are age standardised to the 2006 Victorian population.

Note that figures may not add to 100 per cent due to a proportion of 'don't know'

or 'refused' responses

Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

 $^{\star}$  Estimate has a relative standard error of between 25 and 50 per cent and should be interpreted with caution.

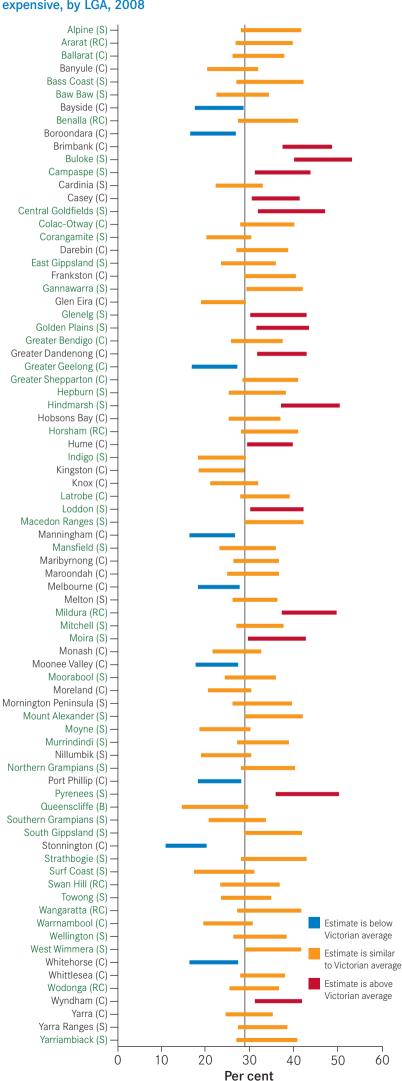
Table 9.10: Reasons why people don't always have the quality or variety of foods they want, by frequency and LGA, 2008 (continued)

					I don	t always	have the	e type of	food I wa	int becau	use				
		ne foods o expens			n't always ight quali	get	Car	n't always ight varie	get	C	an't alwa et cultura propriate t	lly	an	nadequat d unrelia blic trans	ble
LGA	%	Lower 95% CI	Upper 95% Cl	%	Lower 95% CI	Upper 95% Cl	%	Lower 95% CI	Upper 95% Cl	%	Lower 95% CI	Upper 95% Cl	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	28.4	22.9	34.7	27.8	21.4	35.2	10.1	6.6	15.2	5.8*	3.4	9.9	8.4	5.9	11.7
Maribyrnong (C)	30.5	26.0	35.4	29.1	24.5	34.3	12.4	9.2	16.4	10.5	7.7	14.2	12.9	9.6	17.2
Maroondah (C)	29.7	24.6	35.3	22.3	17.8	27.5	7.9	5.2	11.9	5.5	3.4	8.9	4.8*	2.7	8.5
Melbourne (C)	21.9	17.9	26.6	20.5	16.4	25.2	8.7	6.2	12.0	6.6	4.5	9.5	8.3	5.7	11.9
Melton (S)	30.3	25.9	35.1	28.7	24.4	33.4	10.1	7.3	13.7	6.8	4.4	10.5	9.8	7.1	13.4
Mildura (RC)	42.7	37.0	48.5	31.6	26.5	37.3	12.7	9.7	16.5	6.1	3.9	9.5	5.8	3.9	8.4
Mitchell (S)	31.4	26.8	36.4	35.8	30.5	41.4	15.1	11.1	20.1	3.2	2.0	4.9	9.5	6.5	13.6
Moira (S)	35.2	29.3	41.5	29.6	23.6	36.4	14.5	10.2	20.3	7.6*	4.6	12.4	8.8	5.6	13.7
Monash (C)	26.0	21.3	31.4	23.8	19.1	29.3	10.7	7.4	15.1	5.8*	3.5	9.6	10.1	6.7	14.9
Moonee Valley (C)	21.5	17.5	26.3	18.1	14.4	22.4	9.3	6.7	12.7	3.2	2.1	5.1	7.7	5.1	11.4
Moorabool (S)	29.1	24.0	34.8	28.7	23.6	34.4	10.6	7.5	14.9	5.9*	3.4	9.9	12.0	8.6	16.6
Moreland (C)	24.4	20.3	29.1	29.9	25.5	34.6	11.5	8.4	15.5	7.0	4.7	10.2	8.1	5.7	11.3
Momington Peninsula (S)	31.7	25.7	38.4	23.2	18.2	29.1	8.5	5.6	12.9	4.7*	2.7	7.9	9.6	6.4	14.0
Mount Alexander (S)	34.4	28.6	40.8	29.0	23.2	35.6	10.4	7.1	15.2	7.2*	4.2	11.9	12.6	8.7	17.9
Moyne (S)	23.3	18.4	29.0	26.3	21.3	32.1	11.8	8.1	16.9	3.3	2.0	5.4	7.1	4.9	10.4
Murrindindi (S)	32.0	26.8	37.6	24.3	18.6	31.2	12.0	7.7	18.3	4.1*	2.4	7.0	17.3	12.1	24.0
Nillumbik (S)	23.4	18.6	29.1	20.1	15.6	25.6	7.1*	4.1	11.9	5.0*	2.6	9.5	9.9	6.5	14.8
Northern Grampians (S)	33.1	27.7	39.1	36.4	30.1	43.2	18.7	13.3	25.5	4.0*	2.3	6.9	5.6*	3.0	10.4
Port Phillip (C)	22.1	17.9	26.8	19.5	15.9	23.9	8.6	5.7	12.9	5.1	3.2	8.1	5.5	3.5	8.6
Pyrenees (S)	42.2	35.7	49.0	39.7	33.4	46.4	25.0	18.8	32.3	12.3	7.5	19.5	16.4	11.7	22.4
Queenscliffe (B)	20.5	14.4	28.4	14.0	9.4	20.2	4.2*	2.1	8.2	3.0*	1.5	5.9	7.0*	3.8	12.6
Southern Grampians (S)	26.0	20.4	32.4	22.4	17.7	27.8	11.0	7.5	15.9	4.3	2.6	6.8	6.6	4.4	9.8
South Gippsland (S)	34.3	28.5	40.6	31.9	26.5	38.0	11.1	7.6	16.0	4.2*	2.4	7.3	10.2	7.2	14.3
Stonnington (C)	14.3	10.7	19.0	17.5	13.9	21.7	6.6	4.5	9.6	2.6*	1.3	4.9	2.0*	1.1	3.7
Strathbogie (S)	34.4	27.8	41.7	29.8	23.9	36.5	16.9	11.8	23.6	5.5*	2.9	10.4	12.4	8.3	18.1
Surf Coast (S)	22.9	17.2	29.8	23.2	17.4	30.3	10.7	6.6	17.0	5.3*	3.1	9.1	8.8	6.2	12.4
Swan Hill (RC)	28.9	23.1	35.5	27.7	22.3	33.7	13.5	9.1	19.6	8.2	5.2	12.9	9.4	6.4	13.7
Towong (S)	28.2	23.2	33.7	35.9	29.3	43.0	17.2	13.1	22.1	9.8*	5.8	16.1	13.9	9.1	20.7
Wangaratta (RC)	33.2	26.8	40.4	20.8	16.8	25.5	5.8	3.8	8.9	3.4*	1.9	6.2	9.0	5.9	13.7
Warrnambool (C)	23.9	19.1	29.4	22.0	17.3	27.4	5.2*	3.1	8.5	5.1*	2.8	9.0	5.7*	3.1	10.4
Wellington (S)	31.3	26.0	37.2	31.2	25.4	37.6	14.7	10.2	20.8	5.6	3.6	8.4	11.2	7.8	15.9
West Wimmera (S)	34.4	28.7	40.5	38.1	32.4	44.2	19.4	15.2	24.4	6.3	4.1	9.7	12.0	8.4	16.8
Whitehorse (C)	20.7	16.0	26.2	21.0	16.4	26.5	9.6	6.6	13.8	10.7	6.8	16.5	7.2*	4.2	12.1
Whittlesea (C)	32.0	27.5	36.8	27.6	23.3	32.3	12.3	9.2	16.2	7.3	5.0	10.6	8.4	6.0	11.6
Wodonga (RC)	30.0	25.2	35.4	27.3	22.5	32.7	12.3	8.7	17.0	6.0*	3.6	9.9	5.1	3.2	7.9
Wyndham (C)	35.6	30.8	40.6	33.6	29.1	38.6	12.6	9.6	16.4	8.3	5.9	11.6	8.6	6.3	11.7
Yarra (C)	28.9	24.2	34.1	26.2	21.4	31.6	12.8	9.5	16.9	5.7	3.5	9.1	6.0	3.7	9.6
Yarra Ranges (S)	31.9	27.0	37.3	26.6	22.1	31.5	10.5	7.5	14.4	4.8*	2.7	8.2	8.0	5.4	11.6
Yarriambiack (S)	32.9	26.8	39.6	44.8	39.1	50.6	22.2	17.6	27.6	13.0	8.7	19.1	14.4	9.9	20.3
Total	28.3	27.5	29.0	25.5	24.7	26.2	10.9	10.4	11.5	6.8	6.3	7.3	8.0	7.6	8.5

persons reporting some foods were too expensive was lower than

the proportion for the state.

Figure 9.13: Proportion of persons reporting some foods were too expensive, by LGA, 2008

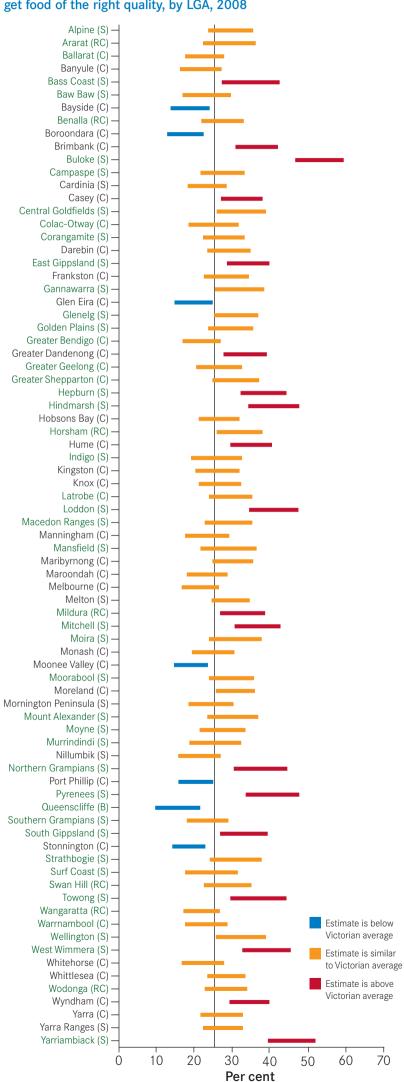


Metropolitan and rural LGAs are identified by colour as follows: metropolitan / rural. LGA = local government area.

Data are age standardised to the 2006 Victorian population.

The proportion of persons reporting they could not always get food of the right quality ranged from 14.0 per cent for Queenscliffe to 52.3 per cent for Buloke (figure 9.14). There were 19 LGAs where the proportion of persons reporting they could not always get food of the right quality was higher than the proportion for the state. Fourteen of these LGAs were in rural areas of Victoria and five were in metropolitan areas. There were seven LGAs where the proportion of persons reporting they could not always get food of the right quality was lower than the proportion for the state.

Figure 9.14: Proportion of persons reporting they could not always get food of the right quality, by LGA, 2008

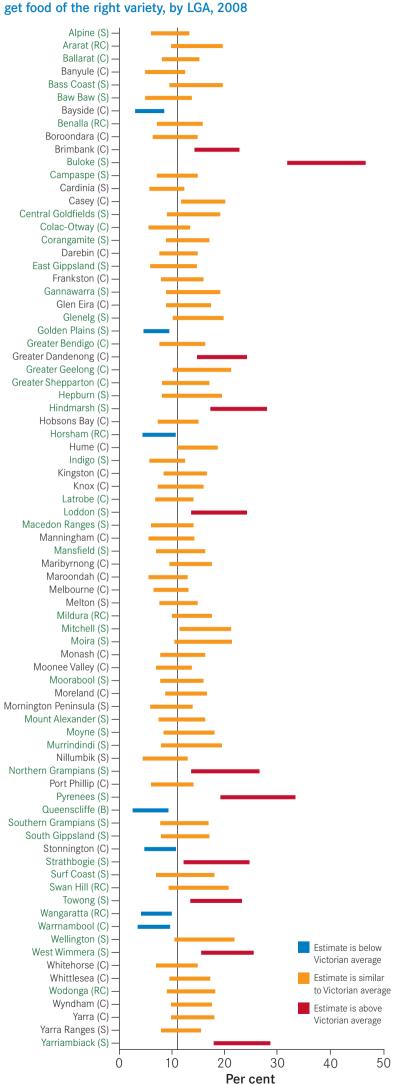


Metropolitan and rural LGAs are identified by colour as follows: metropolitan / rural. LGA = local government area.

Data are age standardised to the 2006 Victorian population.

than the proportion for the state.

Figure 9.15: Proportion of persons reporting they could not always get food of the right variety, by LGA, 2008

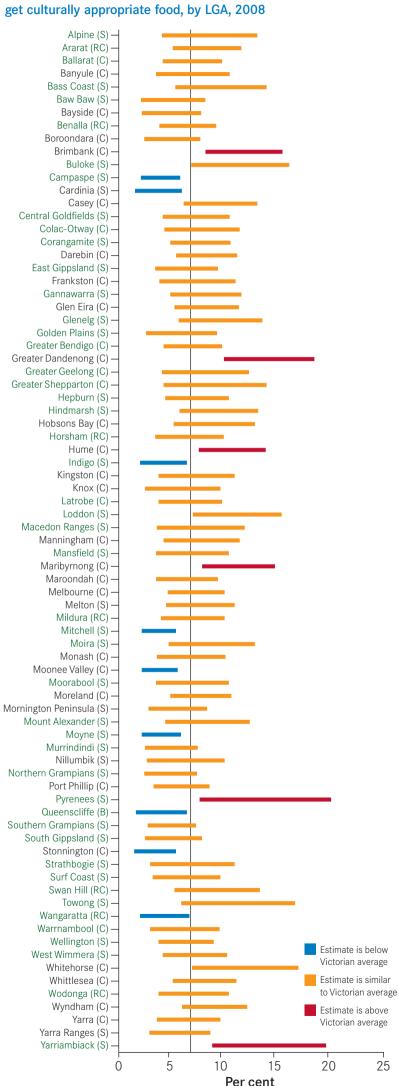


Metropolitan and rural LGAs are identified by colour as follows: metropolitan / rural. LGA = local government area.

Data are age standardised to the 2006 Victorian population.

The proportion of persons reporting they could not always get culturally appropriate food ranged from 2.6 per cent for Stonnington to 13.4 per cent for Greater Dandenong (figure 9.16). There were six LGAs where the proportion of persons reporting they could not always get culturally appropriate food was higher than the proportion for the state. Two of these LGAs were in rural areas of Victoria and four were in metropolitan areas. There were nine LGAs where the proportion of persons reporting they could not always get culturally appropriate food was lower than the proportion for the state.

Figure 9.16: Proportion of persons reporting they could not always get culturally appropriate food, by LGA, 2008

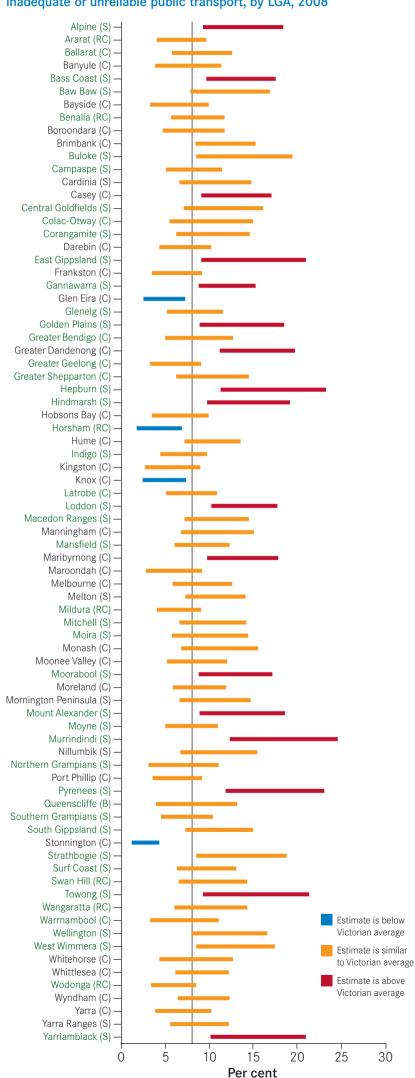


Metropolitan and rural LGAs are identified by colour as follows: metropolitan / rural. LGA = local government area.

Data are age standardised to the 2006 Victorian population.

for the state.

Figure 9.17: Proportion of persons reporting they don't always have the quality or variety of food they want because of inadequate or unreliable public transport, by LGA, 2008



Metropolitan and rural LGAs are identified by colour as follows: metropolitan / rural. LGA = local government area.

Data are age standardised to the 2006 Victorian population.

Table 9.11: Level of difficulty in getting to the shops to buy food, with normal mode of transport, by age group and sex, 2008

			Ma	les					Fem	ales					Pers	ons		
		Easy			Difficult			Easy			Difficult			Easy			Difficult	
Age group (years)	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% Cl	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
18-24	97.6	95.3	98.8	2.1*	1.0	4.4	96.4	94.2	97.8	3.4*	2.0	5.6	97.0	95.6	98.0	2.7	1.8	4.2
25-34	97.4	96.0	98.4	2.5	1.6	3.9	97.3	96.3	98.0	2.5	1.8	3.5	97.4	96.6	98.0	2.5	1.9	3.3
35-44	96.8	95.4	97.8	2.7	1.8	4.0	96.5	95.6	97.3	3.2	2.5	4.1	96.7	95.9	97.3	3.0	2.3	3.7
45-54	97.2	96.2	97.9	2.6	1.9	3.5	97.9	97.2	98.4	1.8	1.4	2.5	97.5	96.9	98.0	2.2	1.8	2.8
55-64	97.4	96.5	98.0	2.3	1.7	3.1	97.0	96.2	97.7	2.6	2.0	3.4	97.2	96.6	97.7	2.4	2.0	3.0
65+	96.1	95.1	96.9	3.2	2.5	4.1	93.1	92.0	94.0	5.6	4.8	6.6	94.5	93.7	95.1	4.5	3.9	5.2
Total	97.0	96.5	97.4	2.6	2.2	3.1	96.1	95.7	96.5	3.4	3.0	3.8	96.5	96.2	96.8	3.0	2.8	3.3

95% CI = 95 per cent confidence interval.

Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are crude estimates, except for the totals, which represent the estimates for Victoria and have been age standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Table 9.12 shows the level of difficulty reported by respondents, in getting to the shops to buy food with their normal mode of transport, by Department of Health region. Gippsland was the only region where the proportion of persons who reported difficulty getting to the shops with their normal mode of transport was above the average for the state. The results were too low to allow reliable analysis at the LGA level.

Table 9.12: Level of difficulty in getting to the shops to buy food, with normal mode of transport, by Department of Health region, 2008

		Easy		Difficult			
Region	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	
Barwon-South Western	97.7	96.9	98.4	2.0	1.4	2.9	
Eastern Metropolitan	97.1	96.2	97.7	2.6	2.0	3.5	
Gippsland	95.3	93.9	96.4	4.4	3.4	5.8	
Grampians	95.4	94.1	96.4	4.1	3.2	5.4	
Hume	95.8	94.6	96.8	3.4	2.5	4.5	
Loddon Mallee	96.4	95.3	97.2	3.0	2.3	4.1	
North and West Metropolitan	96.0	95.3	96.5	3.5	3.0	4.1	
Southern Metropolitan	96.9	96.2	97.5	2.7	2.1	3.4	
Metropolitan	96.6	96.2	96.9	3.0	2.6	3.4	
Rural	96.3	95.8	96.7	3.3	2.8	3.7	
Total	96.5	96.2	96.8	3.0	2.8	3.3	

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

95% CI = 95 per cent confidence interval.

Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are age standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

<sup>\*</sup> Estimate has a relative standard error of between 25 and 50 per cent and should be interpreted with caution.

#### **Financial stress**

Survey respondents were asked 'If you needed to, could you raise \$2000 within two days in an emergency–this includes accessing 'own' savings, borrowing money, or using a credit card / bank card?'. The question indicates financial stress, with those unable to raise \$2000 within two days in an emergency being particularly vulnerable. The proportion of both males and females who reported being unable to raise \$2000 in an emergency decreased between 2002 and 2008 (table 9.13).

Table 9.13: Proportion of persons who were unable to raise \$2000 within two days in an emergency, 2002-2008

	2002	2003	2004	2005	2006	2007	2008
				Per cent			
Males	13.3	13.2	11.7	10.6	9.2	7.4	10.1
Females	19.1	17.9	17.3	15.0	11.9	12.5	12.8
Persons	16.4	15.7	14.7	12.8	10.6	10.0	11.5

Data are age standardised to the 2006 Victorian population.

Ordinary least squares regression was used to test for trends over time.

Table 9.14 shows the proportion of persons unable to raise \$2000 within two days in an emergency, by sex and age group. The table shows a higher proportion of females (12.8 per cent), compared with males (10.1 per cent), were unable to raise \$2000 within two days in an emergency. The proportion of persons aged 18–24 years (14.8 per cent) who were unable to raise \$2000 within two days in an emergency was the highest proportion of any age group and significantly higher than that for all persons in Victoria (11.5 per cent).

Table 9.14: Proportion of persons who were unable to raise \$2000 within two days in an emergency, by age group and sex, 2008

		Males			Females		Persons		
Age group (years)	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
18-24	15.0	11.9	18.7	14.6	11.9	17.7	14.8	12.7	17.2
25-34	12.4	10.0	15.3	12.1	10.4	14.1	12.2	10.7	13.9
35-44	9.7	8.0	11.7	13.3	11.9	14.8	11.5	10.4	12.8
45-54	9.4	7.9	11.2	12.1	10.7	13.6	10.7	9.7	11.9
55-64	6.8	5.5	8.3	11.1	9.8	12.5	8.9	8.0	9.9
65+	8.0	6.8	9.3	13.9	12.6	15.4	11.3	10.3	12.3
Total	10.1	9.2	11.0	12.8	12.1	13.5	11.5	11.0	12.1

95% CI = 95 per cent confidence interval.

Data are crude estimates, except for the totals, which represent the estimates for Victoria and have been age standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Table 9.15 shows the proportion of persons who were unable to raise \$2000 within two days in an emergency, by Department of Health region. The table shows no difference in the overall rates for rural and metropolitan areas, but the proportions of persons from the Gippsland and North and West Metropolitan regions who reported being unable to raise \$2000 in an emergency were higher than the comparable rate for Victoria.

The table also shows a higher proportion of females, compared with males, were unable to raise \$2000 in the Grampians, Loddon Mallee and North and West Metropolitan regions.

Table 9.15: Proportion of persons who were unable to raise \$2000 within two days in an emergency, by sex and Department of Health region, 2008

	Males				Females		Persons		
Region	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Barwon-South Western	6.8	4.5	10.2	11.1	8.1	14.9	9.1	7.0	11.6
Eastern Metropolitan	7.7	5.9	10.1	9.1	7.6	10.9	8.5	7.3	9.9
Gippsland	14.2	11.2	18.0	14.2	12.0	16.7	14.4	12.4	16.6
Grampians	9.0	7.0	11.5	14.4	12.3	16.8	11.9	10.4	13.7
Hume	11.6	9.2	14.6	10.9	9.4	12.6	11.2	9.7	12.9
Loddon Mallee	9.3	7.0	12.2	14.9	12.6	17.5	12.1	10.5	14.1
North and West Metropolitan	11.2	9.7	12.9	15.5	14.2	16.9	13.5	12.4	14.5
Southern Metropolitan	11.1	9.2	13.3	12.6	11.1	14.2	11.9	10.7	13.3
Metropolitan	10.2	9.1	11.3	12.8	12.0	13.7	11.6	10.9	12.3
Rural	9.8	8.6	11.2	13.1	11.9	14.3	11.5	10.6	12.5
Total	10.1	9.2	11.0	12.8	12.1	13.5	11.5	11.0	12.1

Metropolitan and rural regions are identified by colour as follows: metropolitan / rural.

95% CI = 95 per cent confidence interval.

Data are age standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Table 9.16 and figure 9.18 show the proportion of persons who were unable to raise \$2000 within two days in an emergency, by LGA. About one in four persons from the LGAs of Pyrenees (25.5 per cent) and Greater Dandenong (24.9 per cent) were unable to raise \$2000 within two days in an emergency, which was higher than the proportion for Victoria (11.5 per cent).

Table 9.16: Proportion of persons who were unable to raise \$2000 within two days in an emergency, by LGA, 2008

LGA	%	Lower 95% CI	Upper 95% CI	LG	SA	%	Lower 95% CI	Upper 95% CI
Alpine (S)	12.7	8.6	18.5	Ma	ansfield (S)	8.5	5.5	13.1
Ararat (RC)	21.3	15.5	28.4	Ma	aribyrnong (C)	18.6	14.4	23.7
Ballarat (C)	11.4	8.6	15.0	Ma	aroondah (C)	7.9	5.4	11.4
Banyule (C)	10.9	7.7	15.1	Me	elbourne (C)	8.5	6.1	11.8
Bass Coast (S)	17.4	11.6	25.2	Me	elton (S)	14.0	10.8	18.0
Baw Baw (S)	11.1	7.7	15.6	Mi	Idura (RC)	14.0	10.6	18.2
Bayside (C)	3.6	1.9	6.6	Mi	tchell (S)	10.3	7.2	14.5
Benalla (RC)	14.2	10.1	19.7	Mo	oira (S)	10.9	7.6	15.4
Boroondara (C)	6.2	3.9	9.6	Mo	onash (C)	9.6	6.5	14.0
Brimbank (C)	18.9	15.4	23.1	Mo	oonee Valley (C)	12.1	9.0	16.1
Buloke (S)	10.4	7.2	14.9	Mo	porabool (S)	9.3	6.4	13.3
Campaspe (S)	10.1	7.2	14.0	Mo	oreland (C)	10.9	7.9	14.8
Cardinia (S)	11.7	8.5	15.8	Mo	omington Peninsula (S)	9.0	5.8	13.8
Casey (C)	17.3	13.4	22.0	Mo	ount Alexander (S)	9.1	6.3	13.0
Central Goldfields (S)	14.5*	10.7	19.3	Mo	oyne (S)	13.1	8.5	19.8
Colac-Otway (S)	10.4	7.1	15.1	Μι	urrindindi (S)	12	7.7	18.2
Corangamite (S)	8.2	5.6	11.9	Nil	llumbik (S)	8.0	5.3	11.8
Darebin (C)	14.8	11.0	19.6	No	orthern Grampians (S)	14.3	9.9	20.2
East Gippsland (S)	14.5	9.2	22.0	Ро	rt Phillip (C)	7.7	5.3	11.1
Frankston (C)	15.2	11.6	19.6	Ру	renees (S)	25.5	21.2	30.4
Gannawarra (S)	10.7	7.7	14.7	Qu	ueenscliffe (B)	7.9	4.0	14.9
Glen Eira (C)	6.4	4.3	9.4	So	outhern Grampians (S)	12.1	8.7	16.5
Glenelg (S)	10.8	7.6	15.3	So	outh Gippsland (S)	7.1*	4.8	10.4
Golden Plains (S)	12.6	9.0	17.4	Sto	onnington (C)	6.3	4.0	9.8
Greater Bendigo (C)	12.2	8.9	16.5	Sti	rathbogie (S)	8.4	5.7	12.3
Greater Dandenong (C)	24.9	20.5	30.0	Su	rf Coast (S)	5.1	2.9	8.6
Greater Geelong (C)	8.4	5.4	12.8	Sw	van Hill (RC)	14.1	10.0	19.4
Greater Shepparton (C)	13.0	8.8	18.7	To	wong (S)	7.9	5.1	12.0
Hepburn (S)	14.3	10.0	20.0	Wa	angaratta (RC)	6.5	4.2	10.0
Hindmarsh (S)	10.9	8.1	14.5	Wa	arrnambool (C)	13.5	9.9	18.1
Hobsons Bay (C)	11.3	8.0	15.7	We	ellington (S)	17.4	12.9	23.0
Horsham (RC)	9.4	6.5	13.3	We	est Wimmera (S)	11.5	8.6	15.3
Hume (C)	15.1*	11.8	19.0	Wł	nitehorse (C)	6.9	4.3	10.9
Indigo (S)	7.5	5.1	11.0	Wh	nittlesea (C)	13.6	10.6	17.3
Kingston (C)	9.1	6.5	12.7	Wo	odonga (RC)	13.7	10.3	17.9
Knox (C)	7.5	5.1	10.8	Wy	yndham (C)	14.3	11.2	18.2
Latrobe (C)	15.0	11.5	19.2	Ya	rra (C)	13.8	10.4	18.2
Loddon (S)	14.8	11.2	19.4	Ya	rra Ranges (S)	13.0	9.6	17.4
Macedon Ranges (S)	8.2	5.5	12.0	Ya	rriambiack (S)	15.1	10.5	21.2
Manningham (C)	7.0	4.7	10.3	То	tal	11.5	11.0	12.1

 $\label{lem:metropolitan} \mbox{Metropolitan and rural LGAs are identified by colour as follows: metropolitan / rural.}$ 

95% CI = 95 per cent confidence interval.

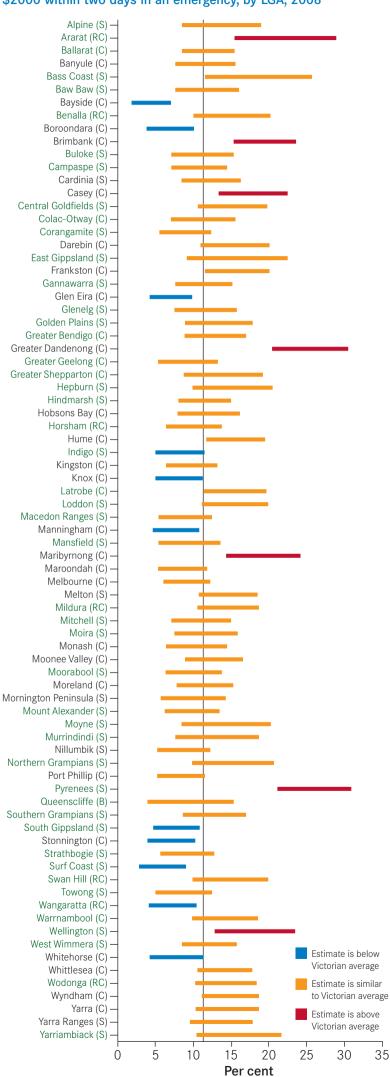
LGA = local government area

Data are age standardised to the 2006 Victorian population.

Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

<sup>\*</sup> Estimate has a relative standard error of between 25 and 50 per cent and should be interpreted with caution.

Figure 9.18: Proportion of persons who were unable to raise \$2000 within two days in an emergency, by LGA, 2008



Metropolitan and rural LGAs are identified by colour as follows: metropolitan / rural. LGA = local government area.

Data are age standardised to the 2006 Victorian population.

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