

10. Social inequalities in health

ALPINE ARARAT BALLARAT BANYULE BASS COAST BAW BAW BAYSIDE BENALLA BOROONDARA BRIMBANK BULOKE CAMPASPE CARDINIA CASEY CENTRAL GOLDFIELDS COLAC-OTWAY CORANGAMITE DAREBIN EAST GIPPSLAND FRANKSTON GANNAWARRA GLEN EIRA GLENELG GOLDEN PLAINS GREATER BENDIGO GREATER DANDENONG GREATER GEELONG GREATER SHEPPARTON HEPBURN HINDMARSH HOBSONS BAY HORSHAM HUME INDIGO KINGSTON KNOX LATROBE LODDON MACEDON RANGES MANNINGHAM MANSFIELD MARIBYRNONG MAROONDAH MELBOURNE MELTON MILDURA MITCHELL MOIRA MONASH MOONEE VALLEY MOORABOOL MORELAND MORNINGTON PENINSULA MOUNT ALEXANDER MOYNE MURRINDINDI NILLUMBIK NORTHERN GRAMPIANS PORT PHILLIP PYRENEES QUEENSLIFFE SOUTHERN GRAMPIANS SOUTH GIPPSLAND STONNINGTON STRATHBOGIE SURF COAST SWAN HILL TOWONG WANGARATTA WARRNAMBOOL WELLINGTON WEST WIMMERA WHITEHORSE WHITTLESEA WODONGA WYNDHAM YARRA YARRA RANGES YARRIAMBIAK ALPINE ARARAT BALLARAT BANYULE BASS COAST BAW BAW BAYSIDE BENALLA BOROONDARA BRIMBANK BULOKE CAMPASPE CARDINIA CASEY CENTRAL GOLDFIELDS COLAC-OTWAY CORANGAMITE DAREBIN EAST GIPPSLAND FRANKSTON GANNAWARRA GLEN EIRA GLENELG GOLDEN PLAINS GREATER BENDIGO GREATER DANDENONG GREATER GEELONG GREATER SHEPPARTON HEPBURN HINDMARSH HOBSONS BAY HORSHAM HUME INDIGO KINGSTON KNOX LATROBE LODDON MACEDON RANGES MANNINGHAM MANSFIELD MARIBYRNONG MAROONDAH MELBOURNE MELTON MILDURA MITCHELL MOIRA MONASH MOONEE VALLEY MOORABOOL MORELAND MORNINGTON PENINSULA MOUNT ALEXANDER MOYNE MURRINDINDI NILLUMBIK NORTHERN GRAMPIANS PORT PHILLIP PYRENEES QUEENSLIFFE SOUTHERN GRAMPIANS SOUTH GIPPSLAND STONNINGTON STRATHBOGIE SURF COAST SWAN HILL TOWONG WANGARATTA WARRNAMBOOL WELLINGTON WEST WIMMERA WHITEHORSE WHITTLESEA WODONGA WYNDHAM YARRA YARRA RANGES YARRIAMBIAK ALPINE ARARAT BALLARAT BANYULE BASS COAST BAW BAW BAYSIDE BENALLA BOROONDARA BRIMBANK BULOKE CAMPASPE CARDINIA CASEY CENTRAL GOLDFIELDS COLAC-OTWAY CORANGAMITE DAREBIN EAST GIPPSLAND FRANKSTON GANNAWARRA GLEN EIRA GLENELG GOLDEN PLAINS GREATER BENDIGO GREATER DANDENONG GREATER GEELONG GREATER SHEPPARTON HEPBURN HINDMARSH HOBSONS BAY HORSHAM HUME INDIGO KINGSTON KNOX LATROBE LODDON MACEDON RANGES MANNINGHAM MANSFIELD MARIBYRNONG MAROONDAH MELBOURNE MELTON MILDURA MITCHELL MOIRA MONASH MOONEE VALLEY MOORABOOL MORELAND MORNINGTON PENINSULA MOUNT ALEXANDER MOYNE MURRINDINDI NILLUMBIK NORTHERN GRAMPIANS PORT PHILLIP PYRENEES QUEENSLIFFE SOUTHERN GRAMPIANS SOUTH GIPPSLAND STONNINGTON STRATHBOGIE SURF COAST SWAN HILL TOWONG WANGARATTA WARRNAMBOOL WELLINGTON WEST WIMMERA WHITEHORSE WHITTLESEA WODONGA WYNDHAM YARRA YARRA RANGES YARRIAMBIAK



10. Social inequalities in health

Introduction

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. However, these health gains have not been shared equally across the entire population; certain groups in our society have poorer health status 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 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 healthcare 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 (Kawachi, Subramanian & Almeida-Filho 2002; Whitehead 1991).

Health inequality is a generic term used to describe the differences in health between subpopulations, while health inequity refers to those inequalities in health that are deemed to be unfair and avoidable stemming from some form of injustice (Kawachi, Subramanian & Almeida-Filho 2002).

SES can be measured in many ways. Univariate or proxy measures include income (individual or household), educational attainment and occupation. Income provides individuals and families with necessary material resources and determines their purchasing power for accessing goods and services needed to maintain good health. 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 (Lahelma et al. 2004).

There are also composite measures of SES such as the Cambridge Social Interaction and Stratification Scale (CAMSIS), which relies on patterns of social interaction to determine the social structure and an individual's position in it (Bottero & Prandy 2003). There are also area-based composite measures

such as the Index of Relative Socio-Economic Disadvantage (IRSED), which was developed by the Australian Bureau of Statistics (ABS) as one of its Socio-Economic Indexes for Areas (SEIFA). SEIFA ranks areas in Australia according to relative socioeconomic advantage and disadvantage (ABS 2013). In the absence of individual-level data, SEIFA is a reasonable alternative, although it assumes that it represents every individual in the specified area and is therefore less sensitive than the individual-level measures. In short, there is no consensus definition of SES.

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. Throughout the preceding chapters of this report, total annual household income, from all sources before tax is taken out, has been used as a proxy measure of SES and each indicator has been analysed by SES. These findings are summarised in this chapter along with additional indicators of inequality including food insecurity.

Survey results

Risk factors and health outcomes

- Typical SES gradients (where the prevalent negative risk factors and outcomes decrease with increasing SES) were observed for the majority of risk factors discussed in the national and international literature. Reverse SES gradients were observed for the risk factors of alcohol consumption and overweight. All health outcomes showed typical SES gradients, with two notable exceptions.
- The proportion of men and women who abstained from consuming alcohol increased with decreasing SES in both men and women. By contrast men and women who consumed alcohol at least monthly at levels that put them at short-term risk of alcohol-related harm were significantly more likely to be of higher SES.
- Although obesity was clearly associated with disadvantage and hence showed a typical SES gradient, when the categories of obesity and overweight were combined, the residual SES gradient was a reverse gradient.
- No SES gradients were observed for men or women in the prevalence of asthma. By contrast while no SES gradient was observed for women in the prevalence of cancer, a reverse SES gradient was observed in men.

Food insecurity

- Overall, 4.6 per cent of Victorian adults reported that they had run out of food at some time in the 12 months preceding the survey and had been unable to afford to buy more.
- A higher proportion of women in rural Victoria reported that they had run out of food and could not afford to buy more compared with their metropolitan counterparts. No such difference was found in men who lived in rural Victoria.

- Of the possible reasons why people may not always have the quality or variety of food that they want, 21.3 per cent of people agreed that 'some foods are too expensive, in particular, fresh fruit and vegetables'; 19.8 per cent agreed with the statement 'I can't get food of the right quality'; 9.3 per cent agreed with the statement 'I can't get a variety of food, for example, a mixture of meat, vegetables, fruit, dairy, bread and pasta'; 4.2 per cent agreed that 'culturally appropriate foods aren't available such as kosher or "halal"' and 5.8 per cent agreed that inadequate and unreliable public transport makes it difficult to get to the shops.

Risk factors and health outcomes

Table 10.1 summarises the results of the analyses performed for each modifiable risk factor, by SES (total annual household income). Most negative risk factors and outcomes often show a gradient whereby their prevalence *decreases* with *increasing* SES (or conversely *increases* with *decreasing* SES); this is referred to as a *typical* SES gradient. By contrast occasionally the opposite is observed where the prevalence of a negative outcome or risk factor *increases* with *increasing* SES (or conversely *decreases* with *decreasing* SES); this is referred to as a *reverse* gradient. These definitions are used to describe the findings in this chapter.

Typical SES gradients were observed for the majority of risk factors; this is consistent with the national and international literature. However, *reverse* SES gradients were also observed for the risk factors of alcohol consumption and overweight.

The proportions of men and women who abstained from consuming alcohol increased with decreasing SES in both men and women. By contrast men and women who consumed alcohol at least monthly at levels that put them at short-term risk of alcohol-related harm were significantly more likely to be of higher SES. Moreover this reverse SES gradient was also observed in women, but not men, who engaged in risky drinking at least weekly.

The finding of a *reverse* SES gradient for risky drinking in the short term is consistent with the international literature (Bloomfield et al. 2006; Paljarvi et al. 2013). Higher SES groups were not only more likely to drink alcohol than their lower SES counterparts but also at levels that put them at risk of harm. However, the literature shows that while people of lower SES are less likely to drink than their higher SES counterparts, when they do they are more likely to drink at levels associated with adverse outcomes such as hospitalisation for alcohol-related injuries (Eldridge 2008). The data are consistent with the literature in that the *reverse* SES gradient in men (but not women) disappeared when excess consumption occurred on a weekly rather than monthly or yearly basis. Moreover no relationship with SES was observed for those who consumed alcohol at levels that put them at long-term risk of alcohol-related harm; this indicator of alcohol consumption relates to consumption of very large quantities of alcohol.

A reverse SES gradient for overweight was observed in the Victorian Population Health Survey 2008 (Markwick, Vaughan & Ansari 2013) and this finding was confirmed in the Victorian Population Health Survey 2011–12. Although obesity was clearly associated with disadvantage and hence showed a *typical* SES gradient, when the categories of obesity and overweight were combined, the residual SES gradient was a *reverse* gradient. This would be expected given that the prevalence of overweight was significantly greater than the prevalence of obesity and therefore had a greater impact. Similar findings have been reported in the United States (Kawachi I, personal communication, May 2013; Zhang & Wang 2004). Those who are overweight are different from those who are obese, the former being affluent while the latter are disadvantaged. This has important implications in that it suggests that combining the two populations into a single indicator of overweight and obesity masks important information that could potentially increase inequalities in health if the indicator were to be used to select communities for intervention.

Table 10.1: Prevalence of modifiable risk factors, by SES, Victoria, 2011–12

Indicator	Response option	Males	Females	Persons
Current smoker (daily and occasional)		↓	↓	↓
Short-term risk of alcohol-related harm ^a	Abstainer	↓	↓	↓
	Weekly	↔	↑	↔
	Monthly	↑	↑	↑
Long-term risk of alcohol-related harm ^a	Yes	↔	↔	↔
Fruit consumption ^b	Did not meet guideline	↓	↓	↓
Vegetable consumption ^b	Did not meet guideline	↔	↓	↓
Physical activity ^c	Sedentary	↓	↓	↓
	Insufficient	↓	↔	↓
Psychological distress ^d	High or very high	↓	↓	↓
Unhealthy body weight ^e	Underweight (BMI <18.5 kg/m ²)	↓	↔	↔
	Overweight (BMI 25.0-29.9 kg/m ²)	↔	↔	↑
	Obese (BMI ≥ 30 kg/m ²)	↓	↓	↓
	Overweight and obese (BMI ≥ 25 kg/m ²)	↔	↔	↑
Daily consumption of sugar-sweetened soft drinks		↔	↓	↓
Hypertensive ^f		↓	↓	↓
Did not wear a hat or sunglasses when out in the sun		↓	↓	↓

↑ Increases, ↓ decreases or ↔ does not change; with increasing total annual household income.

a. Based on national guidelines (NHMRC 2001).

b. Based on national guidelines (NHMRC 2003).

c. Based on national guidelines (DoHA 1999).

d. Based on the Kessler 10 scale for psychological distress.

e. Based on body mass index (BMI).

f. Classified as systolic blood pressure of 140 mmHg or more or diastolic blood pressure of 90 mmHg or more (Sutters 2007).

Data were age-standardised to the 2011 Victorian population.

Table 10.2 summarises the results of the analyses performed for each health outcome, by SES (total annual household income). With two notable exceptions, all health outcomes showed typical SES gradients. No SES gradients were observed for men or women in the prevalence of asthma. By contrast while no SES gradient was observed for women in the prevalence of cancer, a reverse SES gradient was observed in men.

Table 10.2: Prevalence of health outcomes, by SES, Victoria, 2011–12

Indicator	Response option	Males	Females	Persons
Self-reported health status	Excellent / very good	↑	↑	↑
	Fair / poor	↓	↓	↓
Self-rated dental health	Excellent / very good	↑	↑	↑
	Fair / poor	↓	↓	↓
	No natural teeth	↓	↓	↓
Depression or anxiety ^a		↓	↓	↓
Heart disease ^a		↓	↔	↓
Stroke ^a		↓	↓	↓
Cancer ^a		↑	↔	↑
Osteoporosis ^a		↓	↓	↓
Arthritis ^a		↓	↓	↓
Asthma ^b		↔	↔	↔
Type 2 diabetes ^a		↓	↓	↓

a. Reported ever being diagnosed with condition by a doctor.

b. Reported ever having been diagnosed with asthma by a doctor and have experienced symptoms (wheeze, coughing, shortness of breath or chest tightness) of asthma or taken treatment for asthma in the last 12 months.

Data were age-standardised to the 2011 Victorian population.

↑ Increases, ↓ decreases or ↔ does not change; with increasing total annual household income.

Food insecurity

Food insecurity is most commonly defined as the 'limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways' (Kendall & Kennedy 1998). To assess levels of food insecurity in Victoria, respondents were asked: 'In the last 12 months, were there any times that you ran out of food and couldn't afford to buy more?'

Table 10.3 shows the proportion of Victorian adults who ran out of food and could not afford to buy more, by age group and sex. Overall, 4.6 per cent of Victorian adults reported that they had run out of food in the previous 12 months and had been unable to afford to buy more. This finding was similar in men (4.2 per cent) and women (5.0 per cent), with the proportions decreasing with age.

Table 10.3: Ran out of food in the previous 12 months, by age group and sex, Victoria, 2011–12

Age group (years)	%	Yes 95% CI		%	No 95% CI		
		LL	UL		LL	UL	
Males							
18–24	8.4	5.3	13.0	91.5	86.9	94.6	
25–34	5.6	3.7	8.4	94.4	91.6	96.3	
35–44	4.4	3.3	5.8	95.6	94.1	96.7	
45–54	4.0	3.0	5.3	96.0	94.6	97.0	
55–64	2.0	1.5	2.7	97.8	97.0	98.4	
65+	1.3	0.9	1.9	98.5	97.9	98.9	
Total	4.2	3.5	5.1	95.7	94.8	96.4	
Females							
18–24	7.1	4.8	10.5	92.8	89.5	95.2	
25–34	6.7	5.1	8.7	93.3	91.2	94.9	
35–44	6.5	5.4	7.7	93.4	92.1	94.5	
45–54	4.9	4.1	5.8	94.9	94.0	95.7	
55–64	3.3	2.7	4.2	96.5	95.6	97.2	
65+	1.4	1.0	1.9	98.4	97.9	98.8	
Total	5.0	4.4	5.6	94.9	94.3	95.5	
Persons							
18–24	7.8	5.7	10.5	92.2	89.4	94.2	
25–34	6.1	4.8	7.8	93.8	92.2	95.2	
35–44	5.4	4.6	6.4	94.5	93.6	95.3	
45–54	4.4	3.8	5.2	95.4	94.7	96.1	
55–64	2.7	2.2	3.2	97.1	96.6	97.6	
65+	1.4	1.1	1.7	98.4	98.1	98.7	
Total	4.6	4.2	5.2	95.3	94.7	95.7	

Data are age-specific estimates, except for 'Total', which represent the estimates for Victoria and have been age-standardised to the 2011 Victorian population.

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

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

Table 10.4 shows the proportion of Victorian adults who ran out of food and could not afford to buy more, by Department of Health region and sex. A significantly higher proportion of women in rural Victoria had run out of food and could not afford to buy more compared with their metropolitan counterparts.

No such difference was found in men who lived in rural Victoria. A significantly higher proportion of men who lived in Gippsland Region and women who lived in Loddon Mallee Region had run out of food and could not afford to buy more compared with all Victorian men and women.

Table 10.4: Ran out of food in the previous 12 months, by Department of Health region and sex, Victoria, 2011–12

Region	Type 2 diabetes			High blood sugar		
	%	95% CI		%	95% CI	
		LL	UL		LL	UL
Males						
Eastern Metropolitan	5.2	3.5	7.5	94.8	92.4	96.4
North & West Metropolitan	3.8	2.8	5.2	96.2	94.8	97.2
Southern Metropolitan	2.9	1.8	4.5	97.0	95.4	98.0
Metropolitan males	3.9	3.1	4.8	96.1	95.1	96.8
Barwon-South Western	7.1*	3.3	14.7	92.9	85.3	96.7
Gippsland	7.8	5.3	11.3	92.2	88.7	94.7
Grampians	3.8	2.3	6.0	96.2	94.0	97.6
Hume	4.1	2.9	5.8	95.6	93.8	96.9
Loddon Mallee	5.5*	3.1	9.5	94.2	90.2	96.6
Rural males	5.8	4.1	8.1	94.1	91.8	95.8
Total	4.2	3.5	5.1	95.7	94.8	96.4
Females						
Eastern Metropolitan	3.6	2.4	5.2	96.4	94.8	97.5
North & West Metropolitan	4.6	3.8	5.6	95.2	94.2	96.0
Southern Metropolitan	5.4	4.1	7.0	94.4	92.8	95.7
Metropolitan females	4.6	3.9	5.3	95.3	94.6	95.9
Barwon-South Western	5.6	3.6	8.5	94.4	91.5	96.4
Gippsland	6.1	4.3	8.5	93.8	91.4	95.6
Grampians	4.4	3.4	5.8	95.5	94.1	96.5
Hume	6.9	5.2	9.0	93.0	90.9	94.7
Loddon Mallee	9.6	6.2	14.7	90.3	85.3	93.8
Rural females	6.6	5.3	8.0	93.4	91.9	94.6
Total	5.0	4.4	5.6	94.9	94.3	95.5
Persons						
Eastern Metropolitan	4.5	3.4	6.0	95.4	93.9	96.5
North & West Metropolitan	4.2	3.5	5.1	95.6	94.8	96.3
Southern Metropolitan	4.2	3.3	5.2	95.7	94.6	96.5
Metropolitan persons	4.2	3.7	4.8	95.7	95.1	96.2
Barwon-South Western	6.0*	3.5	10.1	94.0	89.9	96.5
Gippsland	6.9	5.3	8.9	93.1	91.0	94.7
Grampians	4.1	3.1	5.3	95.8	94.6	96.8
Hume	5.6	4.4	7.0	94.2	92.8	95.3
Loddon Mallee	7.7	5.2	11.3	92.1	88.6	94.7
Rural persons	6.1	5.1	7.5	93.7	92.4	94.8
Total	4.6	4.2	5.2	95.3	94.7	95.7

Data were age-standardised to the 2011 Victorian population.

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

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

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

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

Note that estimates may not add up to 100 per cent due to a proportion of 'don't know' or 'refused' responses, not reported here.

Table 10.5 shows the proportion of Victorian adults who ran out of food and could not afford to buy more, by LGA. Due to small numbers, only seven of the 79 LGAs had estimates of the proportion of people who ran out of food and could not afford to buy where the RSEs were less than 25 per cent, indicating reliability of the estimates. The estimates for three LGAs could not be reported because the RSEs were in excess of 50 per cent, indicating that the estimates are unreliable. The estimates for the remaining 69 LGAs had RSEs between 25 and 50 per cent, indicating that caution must be exercised in their interpretation. A significantly higher proportion of adults who lived in Bass Coast (S), Greater Bendigo (C) and Murrindindi (S) had run out of food in the 12 months prior to the survey and could not afford to buy more compared with all Victoria.

Table 10.5: Ran out of food in the previous 12 months, by LGA, Victoria, 2011–12

LGA	%	Yes 95% CI		%	No 95% CI	
		LL	UL		LL	UL
Alpine (S)	5.1*	3.0	8.5	94.9	91.5	97.0
Ararat (RC)	5.9*	3.4	10.2	94.0	89.7	96.5
Ballarat (C)	3.1*	1.7	5.6	96.9	94.4	98.3
Banyule (C)	2.4*	1.2	5.1	97.4	94.8	98.7
Bass Coast (S)	9.8*	5.5	16.9	90.2	83.1	94.5
Baw Baw (S)	5.5*	3.1	9.9	94.5	90.1	96.9
Bayside (C)	3.7*	1.8	7.2	96.1	92.5	98.0
Benalla (RC)	**	**	**	93.9	83.4	98.0
Boroondara (C)	**	**	**	98.3	92.6	99.6
Brimbank (C)	5.4	3.4	8.4	94.6	91.6	96.6
Buloke (S)	4.7*	2.2	9.6	91.5	81.7	96.3
Campaspe (S)	5.1*	3.0	8.5	94.9	91.5	97.0
Cardinia (S)	3.8*	2.2	6.6	96.0	93.2	97.7
Casey (C)	4.9*	2.6	8.9	95.1	91.1	97.4
Central Goldfields (S)	7.2*	4.1	12.3	92.8	87.7	95.8
Colac-Otway (S)	4.6*	2.2	9.0	95.4	91.0	97.8
Corangamite (S)	3.8*	1.8	7.6	96.2	92.4	98.2
Darebin (C)	3.6*	2.1	6.2	96.0	93.4	97.6
East Gippsland (S)	7.4*	4.1	13.0	92.5	86.9	95.8
Frankston (C)	3.9	2.5	6.2	96.1	93.8	97.5
Gannawarra (S)	3.7*	2.0	6.9	96.3	93.1	98.0
Glen Eira (C)	3.7*	1.8	7.7	96.3	92.3	98.2
Glenelg (S)	2.6*	1.5	4.7	97.4	95.3	98.5
Golden Plains (S)	4.4*	2.4	8.0	94.9	91.2	97.1
Greater Bendigo (C)	10.6*	5.6	19.2	89.4	80.8	94.4
Greater Dandenong (C)	5.5*	3.3	9.0	93.5	89.8	95.8
Greater Geelong (C)	6.8*	3.3	13.7	93.2	86.3	96.7
Greater Shepparton (C)	5.4*	2.6	11.0	94.1	88.6	97.0
Hepburn (S)	8.7*	3.5	20.0	91.2	79.9	96.4
Hindmarsh (S)	5.4*	3.2	9.1	94.1	90.3	96.4
Hobsons Bay (C)	3.2*	1.4	7.0	96.6	92.9	98.4
Horsham (RC)	3.1*	1.6	6.1	96.9	93.9	98.4
Hume (C)	7.6*	4.2	13.2	92.0	86.4	95.4
Indigo (S)	6.0*	3.1	11.3	94.0	88.7	96.9
Kingston (C)	2.0*	0.8	5.1	97.8	94.8	99.1
Knox (C)	6.3	3.8	10.2	93.5	89.6	96.0
Latrobe (C)	7.2*	4.3	11.9	92.8	88.1	95.7
Loddon (S)	7.2	4.6	11.1	92.4	88.4	95.1
Macedon Ranges (S)	4.0*	1.8	8.4	96.0	91.6	98.2
Manningham (C)	2.9*	1.4	5.9	97.1	94.1	98.6
Mansfield (S)	7.6*	3.5	15.7	92.3	84.2	96.4
Maribyrnong (C)	2.8*	1.4	5.5	97.2	94.5	98.6

Table 10.5: Ran out of food in the previous 12 months, by LGA, Victoria, 2011–12 (continued)

LGA	%	Yes 95% CI		%	No 95% CI	
		LL	UL		LL	UL
Maroondah (C)	6.5*	3.7	11.2	93.5	88.8	96.3
Melbourne (C)	2.8*	1.4	5.7	97.0	94.1	98.5
Melton (S)	3.1*	1.7	5.4	96.9	94.6	98.3
Mildura (RC)	5.1*	2.8	9.0	94.3	90.3	96.7
Mitchell (S)	5.0	3.1	7.9	94.6	91.6	96.6
Moira (S)	3.8*	2.1	6.8	96.2	93.2	97.9
Monash (C)	2.7*	1.1	6.4	97.2	93.5	98.8
Moonee Valley (C)	2.5*	1.2	5.2	97.5	94.8	98.8
Moorabool (S)	4.6*	2.7	7.8	95.4	92.2	97.3
Moreland (C)	2.4*	1.4	4.1	97.5	95.8	98.5
Mornington Peninsula (S)	7.3*	3.6	14.2	92.7	85.8	96.4
Mount Alexander (S)	3.5*	2.1	5.8	96.5	94.2	97.9
Moyne (S)	2.0*	0.8	5.0	98.0	95.0	99.2
Murrindindi (S)	14.7*	8.6	23.8	85.1	76.0	91.2
Nillumbik (S)	2.1*	1.1	4.1	97.9	95.9	98.9
Northern Grampians (S)	2.7*	1.5	4.9	97.2	95.1	98.4
Port Phillip (C)	3.0*	1.7	5.3	96.9	94.6	98.3
Pyrenees (S)	7.0*	4.1	11.8	93.0	88.2	95.9
Queenscliffe (B)	**	**	**	98.9	94.6	99.8
South Gippsland (S)	6.1*	2.9	12.5	93.9	87.5	97.1
Southern Grampians (S)	2.8*	1.3	6.2	97.2	93.8	98.7
Stonnington (C)	2.4*	1.0	5.3	97.6	94.7	99.0
Strathbogie (S)	2.2*	1.0	4.7	97.8	95.3	99.0
Surf Coast (S)	5.4*	2.6	11.0	94.5	89.0	97.4
Swan Hill (RC)	3.9*	2.1	7.1	96.0	92.8	97.8
Towong (S)	5.0*	2.9	8.3	94.9	91.6	97.0
Wangaratta (RC)	3.8*	1.8	7.9	96.0	91.9	98.1
Warrnambool (C)	5.0*	2.6	9.5	95.0	90.5	97.4
Wellington (S)	6.1*	2.9	12.6	93.7	87.3	97.0
West Wimmera (S)	3.5*	1.8	6.6	96.5	93.4	98.2
Whitehorse (C)	3.4*	1.5	7.7	96.6	92.3	98.5
Whittlesea (C)	6.3	3.9	10.0	93.7	90.0	96.1
Wodonga (RC)	6.7*	4.0	11.1	93.3	88.9	96.0
Wyndham (C)	6.4	4.3	9.5	93.6	90.5	95.7
Yarra (C)	2.7*	1.2	6.2	97.3	93.8	98.8
Yarra Ranges (S)	8.7*	4.5	16.1	91.3	83.9	95.5
Yarriambiack (S)	4.6*	2.0	9.9	95.4	90.1	98.0
Victoria	4.6	4.1	5.1	95.3	94.8	95.8

Data were age-standardised to the 2011 Victorian population, using 10-year age groups.

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

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

LGA= Local government area; B = Borough; C = City; S = Shire; RC = Rural City.

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

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

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

There are many reasons why people may not always have the quality or variety of food they want. Survey respondents were asked if any of the following statements applied to them:

- a) Some foods are too expensive, in particular, fresh fruit and vegetables.
- b) I can't get food of the right quality.
- c) I can't get a variety of food, for example, a mixture of meat, vegetables, fruit, dairy, bread and pasta.
- d) Culturally appropriate foods aren't available such as kosher or 'halal'.
- e) Inadequate and unreliable public transport makes it difficult for me to get to the shops.

The proportion of respondents agreeing with each of these statements is presented, by age group and sex, in Table 10.6.

Overall, 21.3 per cent of people agreed with the statement about some foods being too expensive; 19.8 per cent agreed with the statement 'I can't get food of the right quality'; 9.3 per cent agreed with the statement 'I can't get a variety of food, for example, a mixture of meat, vegetables, fruit, dairy, bread and pasta'; 4.2 per cent agreed that culturally appropriate foods aren't available; and 5.8 per cent agreed with the statement that 'Inadequate and unreliable public transport makes it difficult for me to get to the shops'.

The proportion of women who agreed with statements a and e (23.0 and 6.6 per cent, respectively) was significantly higher than the proportion of men (19.6 and 4.9 per cent, respectively). However, there was no significant difference between the sexes in the proportion who agreed with statements b, c and d.

A significantly higher proportion of women aged 18–24 years and people aged 25–34 years agreed with the statement about some foods being too expensive compared with all Victorian women and people, respectively. By contrast the proportion was significantly lower in men and people aged 55–64 years and women aged 55 years or over compared with all Victorian men people and women, respectively.

A significantly higher proportion of men and women aged 35–44 years and people aged 25–44 years agreed with the statement 'I can't get food of the right quality' compared with all Victorian men, women and people, respectively. In contrast, the proportion was significantly lower in men and people aged 55 years or over and women aged 65 years or over compared with all Victorian men, people and women, respectively.

A significantly higher proportion of adults aged 25–34 years agreed with the statement 'I can't get a variety of food, for example, a mixture of meat, vegetables, fruit, dairy, bread and pasta' compared with all Victorian adults.

A significantly higher proportion of women and people aged 25–34 years agreed that culturally appropriate foods aren't available compared with all Victorian women and people, respectively. By contrast the proportion was significantly lower in women and people aged 55 years or over compared with all Victorian women and people, respectively.

A significantly higher proportion of women and people aged 18–24 years agreed with the statement 'Inadequate and unreliable public transport makes it difficult for me to get to the shops' compared with all Victorian women and people, respectively. By contrast the proportion was significantly lower in women and people aged 45–54 years compared with all Victorian women and people, respectively.

Table 10.6: Reason for not having food they wanted, by age group and sex, Victoria, 2011–12

Age group (years)	Don't have type of food wanted because:															
	Some foods are too expensive			Can't get food of the right quality			Can't get a variety of food			Culturally appropriate foods aren't available			Inadequate and unreliable public transport			
	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL	
Males																
18–24	16.3	12.7	20.7	13.4	9.7	18.4	7.7	5.1	11.2	4.4*	2.6	7.6	6.3	4.3	9.1	
25–34	24.4	20.3	28.9	22.9	18.7	27.6	13.8	10.7	17.7	6.0	4.1	8.9	5.4	3.6	7.9	
35–44	20.6	18.0	23.4	22.9	20.2	25.7	10.7	8.9	12.8	5.4	4.0	7.3	4.8	3.6	6.5	
45–54	19.0	16.9	21.3	20.4	18.2	22.8	8.8	7.3	10.5	4.0	2.9	5.5	4.3	3.2	5.7	
55–64	14.7	12.9	16.7	15.3	13.5	17.3	8.6	7.2	10.2	3.9	3.0	5.2	4.5	3.5	5.7	
65+	19.3	17.7	21.1	15.8	14.3	17.5	8.8	7.6	10.1	4.0	3.2	5.0	4.7	4.0	5.6	
Total	19.6	18.3	20.9	18.7	17.5	20.1	10.0	9.1	11.0	4.7	4.1	5.5	4.9	4.3	5.6	
Females																
18–24	28.8	24.2	33.9	16.5	13.0	20.7	10.1	7.4	13.7	4.6*	2.5	8.3	10.3	7.3	14.3	
25–34	25.9	22.8	29.3	24.5	21.5	27.7	10.4	8.4	12.9	7.4	5.6	9.8	7.1	5.4	9.2	
35–44	24.8	22.7	26.9	24.4	22.5	26.5	8.1	6.9	9.5	3.6	2.7	4.6	5.0	4.1	6.2	
45–54	21.2	19.5	23.1	22.1	20.3	23.9	8.3	7.2	9.6	2.8	2.2	3.7	3.9	3.2	4.8	
55–64	18.5	16.9	20.3	19.2	17.6	20.9	7.2	6.2	8.4	1.6	1.3	2.1	5.0	4.2	6.0	
65+	19.4	18.1	20.9	15.9	14.7	17.3	7.3	6.4	8.3	2.5	1.9	3.2	7.5	6.6	8.5	
Total	23.0	21.9	24.1	20.8	19.8	21.8	8.6	7.9	9.4	3.8	3.3	4.4	6.6	6.0	7.3	
Persons																
18–24	22.4	19.4	25.8	14.9	12.2	18.1	8.8	6.9	11.3	4.5	3.0	6.7	8.2	6.4	10.6	
25–34	25.1	22.5	27.9	23.7	21.1	26.5	12.1	10.2	14.4	6.7	5.3	8.5	6.2	4.9	7.8	
35–44	22.7	21.1	24.4	23.7	22.0	25.4	9.4	8.3	10.6	4.5	3.6	5.5	4.9	4.1	5.9	
45–54	20.1	18.7	21.6	21.2	19.8	22.7	8.6	7.6	9.6	3.4	2.8	4.2	4.1	3.4	4.9	
55–64	16.7	15.5	18.0	17.3	16.1	18.6	7.9	7.0	8.9	2.8	2.2	3.4	4.7	4.1	5.5	
65+	19.4	18.3	20.5	15.9	14.9	16.9	8.0	7.2	8.8	3.2	2.7	3.8	6.2	5.6	6.9	
Total	21.3	20.5	22.2	19.8	19.0	20.6	9.3	8.7	10.0	4.2	3.8	4.7	5.8	5.3	6.3	

Data are age-specific estimates, except for 'Total', which represent the estimates for Victoria and were age-standardised to the 2011 Victorian population.

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

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

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

Table 10.7 shows the proportions of respondents who could not get the food they wanted, by reason, Department of Health region and sex.

A significantly higher proportion of men living in Barwon-South Western Region, women and people living in Gippsland Region, Loddon Mallee Region and the rural regions as a whole agreed with the statement 'I can't get food of the right quality' compared with all Victorian men, women and people, respectively. In contrast, the proportion was significantly lower in women living in Eastern Metropolitan Region compared with all Victorian women.

A significantly lower proportion of men and people living in Barwon-South Western Region agreed with the statement 'I can't get a variety of foods' compared with all Victorian men and people, respectively.

A significantly lower proportion of women living in Barwon-South Western Region and people living in Eastern Metropolitan Region, agreed that culturally appropriate foods aren't available compared with all Victorian women and people, respectively.

Table 10.7: Reason for not having the food they wanted, by Department of Health region and sex, Victoria, 2011–12

Region	Don't have type of food wanted because:																				
	Some foods are too expensive				Can't get food of the right quality				Can't get a variety of food				Culturally appropriate foods aren't available				Inadequate and unreliable public transport				
	%	95% CI	LL	UL	%	95% CI	LL	UL	%	95% CI	LL	UL	%	95% CI	LL	UL	%	95% CI	LL	UL	
Males																					
Eastern Metropolitan	17.5	14.7	20.7	20.7	17.5	14.7	20.6	20.6	10.4	8.1	13.2	13.2	3.1	2.1	4.4	4.4	3.6	2.4	5.4	5.4	
North & West Metropolitan	20.6	18.6	22.7	22.7	17.7	15.9	19.7	19.7	11.4	9.8	13.3	13.3	5.0	3.9	6.4	6.4	4.9	4.0	6.1	6.1	
Southern Metropolitan	20.2	17.6	23.1	23.1	18.6	16.1	21.3	21.3	9.6	7.8	11.9	11.9	5.7	4.3	7.7	7.7	5.2	3.8	7.0	7.0	
Metropolitan males	19.4	18.0	20.9	20.9	17.8	16.5	19.3	19.3	10.5	9.4	11.7	11.7	4.8	4.0	5.7	5.7	4.6	3.9	5.5	5.5	
Barwon-South Western	20.8	14.2	29.4	29.4	29.2	21.4	38.5	38.5	5.6	3.9	8.1	8.1	6.3*	2.9	13.2	13.2	5.8	3.8	8.8	8.8	
Gippsland	20.0	16.5	24.1	24.1	19.5	15.9	23.8	23.8	10.6	7.8	14.3	14.3	5.0	3.2	7.9	7.9	5.6	3.9	8.0	8.0	
Grampians	19.8	16.5	23.6	23.6	18.4	15.4	21.9	21.9	9.7	7.5	12.4	12.4	3.3	2.2	4.8	4.8	5.8	4.3	7.8	7.8	
Hume	20.1	16.5	24.4	24.4	18.0	15.1	21.4	21.4	8.2	6.4	10.4	10.4	4.3	3.0	6.0	6.0	5.7	4.4	7.6	7.6	
Loddon Mallee	21.6	16.9	27.1	27.1	20.8	16.4	26.1	26.1	10.2	7.9	13.2	13.2	3.6	2.3	5.7	5.7	6.7	4.4	10.2	10.2	
Rural males	20.6	17.9	23.4	23.4	22.0	19.0	25.3	25.3	8.6	7.5	9.9	9.9	4.6	3.3	6.2	6.2	5.8	4.8	6.9	6.9	
Total	19.6	18.3	20.9	20.9	18.7	17.5	20.1	20.1	10.0	9.1	11.0	11.0	4.7	4.1	5.5	5.5	4.9	4.3	5.6	5.6	

Data were age-standardised to the 2011 Victorian population.

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

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

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

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

Table 10.7: Reason for not having the food they wanted, by Department of Health region and sex, Victoria, 2011–12 (continued)

Region	Don't have type of food wanted because:																			
	Some foods are too expensive				Can't get food of the right quality				Can't get a variety of food				Culturally appropriate foods aren't available				Inadequate and unreliable public transport			
	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL		
Females																				
Eastern Metropolitan	19.9	17.2	22.9	16.5	14.2	19.0	6.5	5.0	8.5	2.1	1.4	3.3	5.0	3.6	6.9					
North & West Metropolitan	25.3	23.5	27.2	21.7	20.0	23.4	9.8	8.6	11.1	4.9	4.0	6.1	7.5	6.5	8.8					
Southern Metropolitan	22.2	19.8	24.7	19.7	17.7	22.0	8.4	7.0	10.2	4.2	2.9	6.1	6.0	4.6	7.7					
Metropolitan females	22.6	21.3	23.9	19.8	18.6	21.0	8.5	7.7	9.4	4.0	3.4	4.8	6.4	5.6	7.2					
Barwon-South Western	20.4	16.2	25.3	20.1	16.3	24.4	6.5	4.4	9.5	1.7*	1.0	3.0	6.5	4.1	10.1					
Gippsland	27.0	23.6	30.6	28.3	24.8	32.0	8.0	6.2	10.1	3.4	2.2	5.2	7.7	6.0	9.8					
Grampians	25.7	22.1	29.6	23.4	20.2	26.9	10.1	7.5	13.5	3.5	2.3	5.2	6.4	5.0	8.3					
Hume	26.1	23.4	29.0	23.5	20.8	26.4	9.9	8.2	11.8	3.6	2.5	5.3	6.8	5.3	8.7					
Loddon Mallee	26.6	22.3	31.3	27.9	23.8	32.3	11.9	8.6	16.2	2.7	2.0	3.6	8.1	5.2	12.4					
Rural females	24.8	23.0	26.8	24.5	22.6	26.4	9.0	7.7	10.4	2.9	2.4	3.5	7.2	6.0	8.7					
Total	23.0	21.9	24.1	20.8	19.8	21.8	8.6	7.9	9.4	3.8	3.3	4.4	6.6	6.0	7.3					

Data were age-standardised to the 2011 Victorian population.

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

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

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

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

Table 10.7: Reason for not having the food they wanted, by Department of Health region and sex, Victoria, 2011–12 (continued)

Region	Don't have type of food wanted because:																			
	Some foods are too expensive				Can't get food of the right quality				Can't get a variety of food				Culturally appropriate foods aren't available				Inadequate and unreliable public transport			
	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL	%	95% CI LL	95% CI UL		
Persons																				
Eastern Metropolitan	18.7	16.7	20.8	17.1	15.2	19.1	8.6	7.1	10.4	2.7	2.0	3.6	4.5	3.5	5.8					
North & West Metropolitan	22.9	21.5	24.3	19.7	18.5	21.0	10.6	9.5	11.7	5.0	4.2	5.8	6.3	5.5	7.1					
Southern Metropolitan	21.3	19.5	23.2	19.2	17.6	21.0	9.1	7.8	10.5	4.9	3.9	6.2	5.6	4.6	6.9					
Metropolitan persons	21.0	20.1	22.0	18.8	17.9	19.7	9.5	8.8	10.2	4.4	3.9	5.0	5.5	5.0	6.1					
Barwon-South Western	20.7	16.4	25.6	24.5	19.7	30.0	6.0	4.6	7.7	3.8*	2.1	6.7	6.2	4.4	8.6					
Gippsland	23.7	21.2	26.5	24.2	21.5	27.0	9.3	7.6	11.4	4.2	3.0	5.8	6.7	5.4	8.2					
Grampians	22.1	19.5	25.0	20.8	18.5	23.2	9.6	7.8	11.6	3.3	2.5	4.5	6.1	5.0	7.4					
Hume	23.1	20.8	25.6	20.7	18.7	22.9	9.0	7.7	10.4	3.9	3.0	5.0	6.2	5.2	7.5					
Loddon Mallee	24.5	20.8	28.7	25.1	21.4	29.3	11.1	8.7	14.1	3.2	2.4	4.4	7.5	5.3	10.4					
Rural persons	22.8	21.1	24.6	23.4	21.6	25.3	8.8	7.9	9.8	3.7	3.0	4.5	6.5	5.7	7.4					
Total	21.3	20.5	22.2	19.8	19.0	20.6	9.3	8.7	10.0	4.2	3.8	4.7	5.8	5.3	6.3					

Data were age-standardised to the 2011 Victorian population.

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

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

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

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

Social inequalities in health

Table 10.8 shows the proportions of respondents who could not get the food that they wanted, by reason and LGA.

The proportion of people who agreed that some foods are too expensive was significantly higher in those who lived in the LGAs of Bass Coast (S), Brimbank (C), Buloke (S), Greater Bendigo (C), Greater Dandenong (C), Hume (C), Melton (S), South Gippsland (S) and Whittlesea (C) compared with all Victorian people. In contrast, the proportion was significantly lower in those residing in Banyule (C), Boroondara (C), Macedon Ranges (S), Melbourne (C), Queenscliffe (B) and Southern Grampians (S) compared with all Victorian people.

The proportion of people who agreed with the statement 'I can't get food of the right quality' was significantly higher in those who lived in the LGAs of Bass Coast (S), Brimbank (C), Buloke (S), Greater Bendigo (C), Greater Dandenong (C), Hindmarsh (S), Loddon (S), Melton (S), Mitchell (S), Northern Grampians (S), Towong (S), West Wimmera (S), Whittlesea (C) and Yarriambiack (S) compared with all Victorian people. In contrast, the proportion was significantly lower in those who lived in Melbourne (C), Nillumbik (S), Port Phillip (C) and Yarra (C) compared with all Victorian people.

The proportion of people who agreed with the statement 'I can't get a variety of foods' was significantly higher in those who lived in the LGAs of Ararat (RC), Brimbank (C), Buloke (S), Greater Dandenong (C), Hindmarsh (S), Hume (C), Loddon (S), Melton (S), Murrindindi (S), Northern Grampians (S), West Wimmera (S), Whittlesea (C) and Yarriambiack (S) compared with all Victorian people. In contrast, the proportion was significantly lower in those who lived in Banyule (C), Greater Geelong (C), Moyne (S), Nillumbik (S) and Surf Coast (S) compared with all Victorian people.

The proportion of people who agreed that culturally appropriate foods aren't available was significantly higher in those who lived in the LGAs of Buloke (S), Casey (C), Greater Dandenong (C), Hume (C) and Moreland (C) compared with all Victorian people. In contrast, the proportion was significantly lower in those who lived in Boroondara (C), Central Goldfields (S), Macedon Ranges (S), Moonee Valley (C), Mornington Peninsula (S), Nillumbik (S), Port Phillip (C), Wangaratta (RC) and Yarra (C) compared with all Victorian people.

The proportion of people who agreed with the statement about inadequate and unreliable public transport was significantly higher in those who lived in the LGAs of Buloke (S), Golden Plains (S), Hepburn (S), Hindmarsh (S), Loddon (S), Southern Grampians (S), Towong (S), West Wimmera (S), Wyndham (C) and Yarriambiack (S) compared with all Victorian people. In contrast, the proportion was significantly lower in those who lived in Ballarat (C), Port Phillip (C) and Wangaratta (RC) compared with all Victorian people.

Table 10.8: Reason for not having the food they wanted, by LGA, Victoria, 2011–12

LGA	Don't have type of food wanted because:																			
	Some foods are too expensive				Can't get food of the right quality				Can't get a variety of food				Culturally appropriate foods aren't available				Inadequate and unreliable public transport			
	%	95% CI	LL	UL	%	95% CI	LL	UL	%	95% CI	LL	UL	%	95% CI	LL	UL	%	95% CI	LL	UL
Alpine (S)	19.7	13.0	28.8	18.8	12.3	27.5	27.5	27.5	10.8*	4.8	22.6	22.6	22.6	**	**	**	8.9*	4.3	17.5	17.5
Ararat (RC)	22.6	16.6	29.9	23.3	18.1	29.3	29.3	29.3	16.7	11.9	22.9	22.9	22.9	4.6*	2.6	8.1	3.6	2.4	5.6	5.6
Bairat (C)	21.3	16.6	26.9	15.3	11.6	19.8	19.8	19.8	6.3*	3.7	10.5	10.5	10.5	2.9*	1.6	5.2	1.8*	0.9	3.6	3.6
Banyule (C)	15.1	11.7	19.3	15.7	11.4	21.3	21.3	21.3	4.7	2.9	7.4	7.4	7.4	1.9*	0.9	3.9	3.9*	2.1	7.2	7.2
Bass Coast (S)	30.9	24.2	38.6	31.7	24.7	39.7	39.7	39.7	15.2	9.3	23.9	23.9	23.9	1.9*	0.8	4.0	10.5*	6.2	17.1	17.1
Baw Baw (S)	17.7	13.4	22.9	18.3	13.9	23.6	23.6	23.6	6.3*	3.6	10.7	10.7	10.7	2.4*	1.1	5.1	5.4*	3.1	9.2	9.2
Bayside (C)	16.1	10.9	23.3	17.4	11.4	25.5	25.5	25.5	5.5*	2.6	11.1	11.1	11.1	2.0*	0.8	5.2	6.9*	2.8	15.9	15.9
Benalla (RC)	16.1	12.1	21.0	13.4	9.9	18.0	18.0	18.0	11.4*	5.5	22.1	22.1	22.1	3.0*	1.2	7.0	5.0*	2.9	8.5	8.5
Boroondara (C)	11.3	7.5	16.6	10.1	6.8	14.8	14.8	14.8	5.3*	2.8	9.9	9.9	9.9	1.3*	0.6	2.7	3.0*	1.3	6.7	6.7
Brimbank (C)	29.2	24.2	34.7	25.4	20.9	30.5	30.5	30.5	14.2	10.8	18.4	18.4	18.4	7.6*	4.6	12.4	8.0	5.5	11.4	11.4
Buloke (S)	29.0	23.6	35.0	44.7	36.8	52.8	52.8	52.8	29.9	23.5	37.1	37.1	37.1	8.1	5.4	12.0	14.6	10.3	20.3	20.3
Campaspe (S)	20.7	16.0	26.3	24.8	19.0	31.7	31.7	31.7	9.8	6.7	14.2	14.2	14.2	3.2*	1.7	6.2	7.9*	4.5	13.6	13.6
Cardinia (S)	19.7	15.4	24.8	16.8	13.2	21.3	21.3	21.3	7.4	4.9	11.0	11.0	11.0	2.8*	1.4	5.6	6.2*	3.6	10.4	10.4
Casey (C)	23.8	18.9	29.5	24.1	19.5	29.5	29.5	29.5	12.7	9.2	17.3	17.3	17.3	9.3	5.8	14.4	9.7	6.3	14.6	14.6
Central Goldfields (S)	25.5	18.7	33.6	20.8	16.6	25.8	25.8	25.8	7.9	5.3	11.8	11.8	11.8	1.8*	0.9	3.3	7.1	4.6	10.8	10.8
Colac-Otway (S)	19.5	14.8	25.1	14.4	10.4	19.7	19.7	19.7	10.8	6.7	16.8	16.8	16.8	3.0*	1.5	5.8	6.8*	3.3	13.3	13.3
Corangamite (S)	19.1	13.5	26.3	23.5	17.8	30.4	30.4	30.4	10.6	6.8	16.0	16.0	16.0	4.5*	2.5	7.9	6.8	4.5	10.2	10.2
Darebin (C)	23.9	19.2	29.4	17.5	13.5	22.4	22.4	22.4	8.6	6.1	12.0	12.0	12.0	2.5*	1.1	5.6	4.0*	2.4	6.5	6.5
East Gippsland (S)	24.0	18.3	30.8	25.2	19.4	32.2	32.2	32.2	11.4	7.3	17.4	17.4	17.4	6.4*	3.5	11.2	8.8	5.6	13.6	13.6
Frankston (C)	23.3	18.5	28.9	21.5	17.0	26.9	26.9	26.9	8.2	5.1	12.8	12.8	12.8	2.6*	1.2	5.7	3.6*	2.1	6.1	6.1
Gannawarra (S)	17.8	13.8	22.7	24.4	17.6	32.7	32.7	32.7	13.3*	7.8	21.8	21.8	21.8	3.3*	1.9	5.7	4.1*	2.4	6.9	6.9
Glen Eira (C)	14.7	10.3	20.6	16.2	12.1	21.4	21.4	21.4	8.5	5.6	12.6	12.6	12.6	4.9*	2.6	9.0	4.8*	2.7	8.7	8.7
Glenelg (S)	20.1	15.8	25.4	25.1	18.7	32.9	32.9	32.9	8.2	6.0	11.3	11.3	11.3	2.1*	1.1	4.1	5.7	4.0	8.2	8.2

Table 10.8: Reason for not having the food they wanted, by LGA, Victoria, 2011–12 (continued)

LGA	Don't have type of food wanted because:														
	Some foods are too expensive			Can't get food of the right quality			Can't get a variety of food			Culturally appropriate foods aren't available			Inadequate and unreliable public transport		
	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Golden Plains (S)	23.8	17.5	31.5	21.4	16.5	27.2	7.7*	4.3	13.3	3.2*	1.5	6.7	10.5	7.1	15.3
Greater Bendigo (C)	29.5	22.5	37.7	28.7	21.4	37.3	14.3*	8.6	22.8	2.7*	1.2	6.2	8.6*	4.2	16.7
Greater Dandenong (C)	32.8	27.7	38.3	26.3	21.6	31.7	14.9	11.1	19.5	9.5	6.5	13.6	8.0	5.3	11.9
Greater Geelong (C)	20.8	14.9	28.3	27.1	20.2	35.4	4.5	2.8	7.1	3.9*	1.7	8.9	5.6*	3.3	9.5
Greater Shepparton (C)	23.6	17.5	31.0	17.9	13.2	23.8	7.5	4.8	11.4	4.4*	2.4	8.0	4.5*	2.7	7.3
Hepburn (S)	21.4	15.2	29.3	25.2	17.7	34.6	10.0*	5.8	16.7	4.2*	2.4	7.2	15.3*	8.7	25.4
Hindmarsh (S)	26.7	19.9	34.8	34.4	27.7	41.8	17.9	12.2	25.4	4.2*	2.4	7.4	13.0	7.9	20.6
Hobsons Bay (C)	21.3	16.5	27.0	17.0	12.9	22.0	8.8	5.9	13.0	5.1*	2.8	9.2	4.9*	2.9	8.2
Horsham (RC)	23.4	15.2	34.2	18.6	11.3	29.2	6.0	3.9	9.1	3.5*	1.9	6.6	**	**	**
Hume (C)	29.1	23.9	35.0	22.8	18.3	28.2	18.4	13.3	24.9	9.1	5.9	13.7	9.3	6.2	13.7
Indigo (S)	17.7	12.7	24.0	15.7	11.5	21.2	8.9	5.4	14.2	5.7*	2.8	11.5	7.8*	4.7	12.9
Kingston (C)	16.9	12.5	22.4	16.2	11.8	21.8	7.2	4.8	10.6	3.2*	1.6	6.5	2.9*	1.5	5.8
Knox (C)	23.5	18.7	29.2	19.7	15.2	25.0	10.7	7.2	15.5	3.5*	1.7	6.9	5.3*	2.8	9.9
Latrobe (C)	23.9	19.0	29.6	20.6	16.1	26.0	7.6	4.9	11.6	4.2*	2.3	7.8	3.8*	2.0	7.2
Loddon (S)	29.0	21.4	38.0	35.9	27.8	44.9	24.5	17.2	33.7	4.2	2.8	6.4	14.9	9.5	22.6
Macedon Ranges (S)	14.7	11.0	19.3	19.3	14.7	24.9	7.8	4.8	12.6	1.7*	0.9	3.3	5.8	3.6	9.2
Manningham (C)	19.6	14.4	26.2	18.9	13.7	25.6	9.1	5.6	14.4	3.3*	1.4	7.6	5.1*	2.5	10.1
Mansfield (S)	24.7	17.8	33.1	24.1	17.5	32.2	7.7	4.9	11.7	3.3*	1.8	6.1	8.4	5.5	12.5
Maribyrnong (C)	23.5	18.4	29.5	18.7	14.8	23.3	13.4	9.5	18.6	5.3*	2.8	9.6	6.5*	3.8	11.0

Data were age-standardised to the 2011 Victorian population, using 10-year age groups.

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

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

LGA= Local government area; B = Borough; C = City; S = Shire; RC = Rural City.

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

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

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

Table 10.8: Reason for not having the food they wanted, by LGA, Victoria, 2011–12 (continued)

LGA	Don't have type of food wanted because:																				
	Some foods are too expensive				Can't get food of the right quality				Can't get a variety of food				Culturally appropriate foods aren't available				Inadequate and unreliable public transport				
	%	95% CI	LL	UL	%	95% CI	LL	UL	%	95% CI	LL	UL	%	95% CI	LL	UL	%	95% CI	LL	UL	
Maroondah (C)	23.2	18.2	29.2	18.3	13.5	24.4	11.5	7.1	18.0	4.7*	2.1	10.1	6.5*	3.3	12.6						
Melbourne (C)	12.8	9.4	17.2	13.4	9.8	18.0	8.2	5.4	12.4	3.5*	1.9	6.3	3.6*	2.1	6.0						
Melton (S)	27.5	22.9	32.7	28.0	23.2	33.3	13.6	10.0	18.3	5.6	3.7	8.6	8.5	5.8	12.1						
Mildura (RC)	21.8	17.3	27.0	22.3	18.0	27.4	8.9	6.2	12.7	4.6*	2.6	7.9	3.7*	1.8	7.8						
Mitchell (S)	26.9	21.5	33.2	29.6	23.8	36.1	8.8	6.3	12.3	3.1*	1.7	5.5	6.5	4.2	9.9						
Moira (S)	21.6	15.8	28.9	26.1	19.6	33.9	8.6*	5.0	14.4	3.1*	1.4	6.9	5.3	3.3	8.4						
Monash (C)	20.9	16.0	26.9	18.5	14.7	23.1	7.6	5.4	10.8	3.9*	2.0	7.5	3.8*	2.3	6.3						
Moonee Valley (C)	17.3	13.1	22.5	17.4	13.3	22.4	8.9*	5.2	14.9	1.3*	0.6	2.6	5.2	3.2	8.3						
Moorabool (S)	20.3	15.7	25.8	21.5	16.4	27.7	9.2*	5.5	14.8	1.8*	0.8	4.1	8.7	5.4	13.8						
Moreland (C)	20.8	16.6	25.7	17.3	13.2	22.4	7.0	4.7	10.2	7.6	4.8	12.0	7.7	5.1	11.5						
Mornington Peninsula (S)	24.8	18.8	31.8	19.5	14.5	25.8	6.3*	3.6	10.9	1.1*	0.5	2.6	6.2*	3.2	11.8						
Mount Alexander (S)	22.6	16.8	29.7	17.6	12.4	24.4	6.3*	3.2	12.1	3.0*	1.4	6.2	4.9*	2.8	8.6						
Moyne (S)	16.9	12.3	22.9	17.3	12.5	23.4	5.7	3.7	8.6	**	**	**	6.6*	2.8	14.6						
Murrindindi (S)	22.7	15.9	31.2	25.6	19.0	33.6	17.2	11.1	25.6	6.3*	2.6	14.6	9.8	6.1	15.5						
Nillumbik (S)	17.8	12.5	24.8	11.1	8.0	15.2	2.6*	1.3	5.2	0.9*	0.4	2.2	3.4*	1.6	7.2						
Northern Grampians (S)	19.2	14.5	25.0	26.9	20.6	34.3	21.5*	12.7	34.2	3.2*	2.0	5.3	7.6*	4.5	12.7						
Port Phillip (C)	19.2	13.6	26.5	12.2	7.8	18.6	7.8*	4.1	14.2	1.5*	0.7	3.2	1.6*	0.9	2.8						
Pyrenees (S)	20.3	15.0	26.9	23.3	18.1	29.5	10.9	7.3	16.1	5.4*	2.8	10.1	9.0	5.9	13.5						
Queenscliffe (B)	8.4*	4.6	14.6	14.2	8.6	22.5	3.8*	1.6	9.1	**	**	**	7.2*	3.1	15.8						
South Gippsland (S)	32.9	26.0	40.6	32.2	25.5	39.8	12.2*	6.5	21.7	7.7*	3.0	18.4	8.5*	4.8	14.7						
Southern Grampians (S)	13.3	9.6	18.1	17.5	13.3	22.7	6.4	4.2	9.5	5.1*	1.9	13.0	15.1*	7.3	28.8						
Stonnington (C)	14.6	10.2	20.5	15.9	11.4	21.8	5.6*	2.9	10.4	4.6*	2.0	10.2	4.4*	2.3	8.4						
Strathbogie (S)	20.6	15.4	27.0	20.8	15.4	27.4	12.1	7.9	18.0	**	**	**	7.4	4.7	11.5						
Surf Coast (S)	22.8	16.2	31.2	19.8	13.7	27.8	4.3*	2.5	7.4	3.5*	1.3	8.8	9.3*	4.9	16.9						

Table 10.8: Reason for not having the food they wanted, by LGA, Victoria, 2011–12 (continued)

LGA	Don't have type of food wanted because:														
	Some foods are too expensive			Can't get food of the right quality			Can't get a variety of food			Culturally appropriate foods aren't available			Inadequate and unreliable public transport		
	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL	%	LL	UL
Swan Hill (RC)	22.6	17.3	28.8	18.6	14.2	24.0	9.4	6.5	13.5	4.4*	2.1	9.2	6.2	3.8	10.0
Towong (S)	27.3	20.9	34.8	30.0	23.7	37.2	12.3	9.1	16.6	4.2*	2.5	7.0	16.8	11.2	24.6
Wangaratta (RC)	25.7	19.8	32.7	17.6	12.6	24.0	6.1	4.1	9.2	2.1*	1.1	3.7	2.8*	1.7	4.6
Warrnambool (C)	20.8	15.6	27.3	18.3	13.8	23.9	9.0	5.5	14.3	**	**	**	3.9*	2.1	7.4
Wellington (S)	19.5	14.6	25.6	24.3	17.2	33.1	8.1*	4.8	13.3	3.2*	1.4	7.2	8.6*	5.2	14.0
West Wimmera (S)	24.2	18.9	30.4	37.4	31.3	44.0	19.9	15.2	25.6	6.9*	4.0	11.5	10.5	6.9	15.6
Whitehorse (C)	15.4	11.2	20.8	16.5	12.5	21.6	8.8	5.7	13.5	2.1*	0.8	5.0	3.1*	1.4	6.6
Whittlesea (C)	27.5	22.8	32.9	25.5	20.9	30.8	14.6	10.9	19.3	6.8	4.3	10.8	6.9	4.5	10.4
Wodonga (RC)	22.7	17.5	28.8	14.0	10.2	19.0	7.7	4.8	12.0	4.8*	2.2	10.2	5.5*	2.5	11.5
Wyndham (C)	26.5	22.0	31.6	21.8	17.8	26.5	10.0	7.2	13.6	6.8*	4.1	11.1	9.4	6.4	13.5
Yarra (C)	16.5	12.1	22.1	11.8	8.5	16.3	7.0*	3.5	13.4	1.3*	0.6	2.9	3.6	2.2	5.7
Yarra Ranges (S)	17.1	13.0	22.1	18.1	12.8	25.0	8.2*	4.3	15.0	1.8*	0.8	4.2	5.8*	3.4	9.6
Yarriambiack (S)	29.7	22.0	38.8	42.1	34.9	49.7	26.9	19.5	35.8	4.8	3.2	7.2	13.4	8.3	21.1
Victoria	21.3	20.5	22.2	19.7	18.9	20.5	9.3	8.7	9.9	4.3	3.8	4.8	5.8	5.4	6.3

Data were age-standardised to the 2011 Victorian population, using 10-year age groups.

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

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

LGA= Local government area; B = Borough; C = City; S = Shire; RC = Rural City.

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

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

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

Respondents who agreed with the statement 'Inadequate and unreliable public transport makes it difficult for me to get to the shops' were subsequently asked: 'Do you find it easy or difficult to get to and from shops to buy food using your normal mode of transport?'. The findings by age group and sex are presented in Table 10.9.

Overall, 2.1 per cent of people reported that it was difficult to access shops to buy food by their normal mode of transport; this was similar in men (1.9 per cent) and women (2.3 per cent). There was a significantly higher proportion of women aged 65 years or over who reported that it was difficult to access shops to buy food by their normal mode of transport compared with all Victorian women.

Table 10.9: Access to shops, by age group and sex, Victoria, 2011–12

Age group (years)	%	Easy 95% CI		%	Difficult 95% CI		
		LL	UL		LL	UL	
Males							
18–24	98.0	95.3	99.2	1.8*	0.7	4.6	
25–34	97.3	95.3	98.4	1.9*	1.0	3.6	
35–44	98.1	97.1	98.8	1.7	1.1	2.7	
45–54	97.9	96.9	98.5	1.8	1.2	2.7	
55–64	97.7	96.8	98.4	1.6	1.1	2.3	
65+	97.3	96.5	97.9	2.1	1.6	2.7	
Total	97.6	97.1	98.0	1.9	1.5	2.3	
Females							
18–24	97.3	95.2	98.5	2.2*	1.1	4.2	
25–34	98.8	97.9	99.3	1.2*	0.7	2.1	
35–44	98.1	97.4	98.6	1.7	1.2	2.3	
45–54	97.9	97.1	98.4	2.0	1.5	2.7	
55–64	97.2	96.4	97.8	2.5	2.0	3.2	
65+	95.6	94.9	96.2	3.7	3.1	4.4	
Total	97.3	96.9	97.6	2.3	2.0	2.7	
Persons							
18–24	97.7	96.2	98.6	2.0*	1.1	3.5	
25–34	98.0	97.0	98.7	1.6	1.0	2.4	
35–44	98.1	97.5	98.5	1.7	1.3	2.3	
45–54	97.9	97.3	98.3	1.9	1.5	2.5	
55–64	97.5	96.9	97.9	2.1	1.7	2.5	
65+	96.4	95.9	96.8	3.0	2.5	3.4	
Total	97.4	97.1	97.7	2.1	1.9	2.4	

Data are age-specific estimates, except for 'Total', which represent the estimates for Victoria and were age-standardised to the 2011 Victorian population. LL/UL 95% CI = lower/upper limit of 95 per cent confidence interval.

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

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

Table 10.10 shows ease of access to shops using a normal mode of transport, by Department of Health region and sex.

A significantly higher proportion of women who lived in Grampians Region reported that they found it difficult to get to and from the shops to buy food compared with all Victorian women.

Table 10.10: Access to shops, by Department of Health region and sex, Victoria, 2011–12

Region	%	Easy 95% CI		%	Difficult 95% CI		
		LL	UL		LL	UL	
Males							
Eastern Metropolitan	97.9	96.6	98.7	1.8*	1.1	3.0	
North & West Metropolitan	97.9	97.2	98.5	1.8	1.2	2.5	
Southern Metropolitan	97.3	95.9	98.3	1.8*	1.1	3.1	
Metropolitan males	97.8	97.2	98.2	1.7	1.4	2.3	
Barwon-South Western	95.4	88.2	98.3	**	**	**	
Gippsland	97.2	95.3	98.3	2.3*	1.3	4.2	
Grampians	97.5	96.3	98.3	1.8	1.2	2.9	
Hume	97.4	96.0	98.3	2.0*	1.2	3.4	
Loddon Mallee	97.7	96.4	98.6	1.8*	1.1	3.0	
Rural males	97.1	95.5	98.1	2.4*	1.4	4.0	
Total	97.6	97.1	98.0	1.9	1.5	2.3	
Females							
Eastern Metropolitan	97.5	96.3	98.3	2.2	1.4	3.3	
North & West Metropolitan	97.3	96.6	97.9	2.3	1.8	2.9	
Southern Metropolitan	97.3	96.5	97.9	2.3	1.7	3.0	
Metropolitan females	97.4	96.9	97.8	2.2	1.9	2.7	
Barwon-South Western	98.4	97.5	99.0	1.5	0.9	2.4	
Gippsland	96.9	95.3	98.0	2.8	1.7	4.4	
Grampians	94.8	91.2	97.0	4.9*	2.7	8.6	
Hume	96.6	95.4	97.4	3.0	2.2	4.1	
Loddon Mallee	97.3	96.3	98.0	2.6	1.9	3.5	
Rural females	97.0	96.3	97.6	2.8	2.2	3.5	
Total	97.3	96.9	97.6	2.3	2.0	2.7	
Persons							
Eastern Metropolitan	97.8	97.1	98.3	1.9	1.4	2.6	
North & West Metropolitan	97.6	97.1	98.0	2.0	1.7	2.5	
Southern Metropolitan	97.3	96.5	97.9	2.1	1.6	2.8	
Metropolitan persons	97.6	97.2	97.9	2.0	1.7	2.3	
Barwon-South Western	97.1	94.0	98.6	2.7*	1.2	5.9	
Gippsland	97.0	95.9	97.9	2.6	1.8	3.7	
Grampians	96.3	94.7	97.5	3.2	2.1	4.8	
Hume	96.9	96.1	97.6	2.6	1.9	3.4	
Loddon Mallee	97.5	96.7	98.1	2.2	1.7	2.8	
Rural persons	97.1	96.3	97.7	2.6	2.0	3.3	
Total	97.4	97.1	97.7	2.1	1.9	2.4	

Data were age-standardised to the 2011 Victorian population.

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

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

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

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

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

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Appendices

ALPINE ARARAT BALLARAT BANYULE BASS COAST BAW BAW BAYSIDE BENALLA BOROONDARA BRIMBANK BULOKE CAMPASPE CARDINIA CASEY CENTRAL GOLDFIELDS COLAC-OTWAY CORANGAMITE DAREBIN EAST GIPPSLAND FRANKSTON GANNAWARRA GLEN EIRA GLENELG GOLDEN PLAINS GREATER BENDIGO GREATER DANDENONG GREATER GEELONG GREATER SHEPPARTON HEPBURN HINDMARSH HOBSONS BAY HORSHAM HUME INDIGO KINGSTON KNOX LATROBE LODDON MACEDON RANGES MANNINGHAM MANSFIELD MARIBYRNONG MAROONDAH MELBOURNE MELTON MILDURA MITCHELL MOIRA MONASH MOONEE VALLEY MOORABOOL MORELAND MORNINGTON PENINSULA MOUNT ALEXANDER MOYNE MURRINDINDI NILLUMBIK NORTHERN GRAMPIANS PORT PHILLIP PYRENEES QUEENSCLIFFE SOUTHERN GRAMPIANS SOUTH GIPPSLAND STONNINGTON STRATHBOGIE SURF COAST SWAN HILL TOWONG WANGARATTA WARRNAMBOOL WELLINGTON WEST WIMMERA WHITEHORSE WHITTLESEA WODONGA WYNDHAM YARRA YARRA RANGES YARRIAMBIACK ALPINE ARARAT BALLARAT BANYULE BASS COAST BAW BAW BAYSIDE BENALLA BOROONDARA BRIMBANK BULOKE CAMPASPE CARDINIA CASEY CENTRAL GOLDFIELDS COLAC-OTWAY CORANGAMITE DAREBIN EAST GIPPSLAND FRANKSTON GANNAWARRA GLEN EIRA GLENELG GOLDEN PLAINS GREATER BENDIGO GREATER DANDENONG GREATER GEELONG GREATER SHEPPARTON HEPBURN HINDMARSH HOBSONS BAY HORSHAM HUME INDIGO KINGSTON KNOX LATROBE LODDON MACEDON RANGES MANNINGHAM MANSFIELD MARIBYRNONG MAROONDAH MELBOURNE MELTON MILDURA MITCHELL MOIRA MONASH MOONEE VALLEY MOORABOOL MORELAND MORNINGTON PENINSULA MOUNT ALEXANDER MOYNE MURRINDINDI NILLUMBIK NORTHERN GRAMPIANS PORT PHILLIP PYRENEES QUEENSCLIFFE SOUTHERN GRAMPIANS SOUTH GIPPSLAND STONNINGTON STRATHBOGIE SURF COAST SWAN HILL TOWONG WANGARATTA WARRNAMBOOL WELLINGTON WEST WIMMERA WHITEHORSE WHITTLESEA WODONGA WYNDHAM YARRA YARRA RANGES YARRIAMBIACK ALPINE ARARAT BALLARAT BANYULE BASS COAST BAW BAW BAYSIDE BENALLA BOROONDARA BRIMBANK BULOKE CAMPASPE CARDINIA CASEY CENTRAL GOLDFIELDS COLAC-OTWAY CORANGAMITE DAREBIN EAST GIPPSLAND FRANKSTON GANNAWARRA GLEN EIRA GLENELG GOLDEN PLAINS GREATER BENDIGO GREATER DANDENONG GREATER GEELONG GREATER SHEPPARTON HEPBURN HINDMARSH HOBSONS BAY HORSHAM HUME INDIGO KINGSTON KNOX LATROBE LODDON MACEDON RANGES MANNINGHAM MANSFIELD MARIBYRNONG MAROONDAH MELBOURNE MELTON MILDURA MITCHELL MOIRA MONASH MOONEE VALLEY MOORABOOL MORELAND MORNINGTON PENINSULA MOUNT ALEXANDER MOYNE MURRINDINDI NILLUMBIK NORTHERN GRAMPIANS PORT PHILLIP PYRENEES QUEENSCLIFFE SOUTHERN GRAMPIANS SOUTH GIPPSLAND STONNINGTON STRATHBOGIE SURF COAST SWAN HILL TOWONG WANGARATTA WARRNAMBOOL WELLINGTON WEST WIMMERA WHITEHORSE WHITTLESEA WODONGA WYNDHAM YARRA YARRA RANGES YARRIAMBIACK



Appendix 1: The Victorian Health Monitor

In 2009–10, the Department of Health conducted the Victorian Health Monitor (VHM), a statewide representative cross-sectional health measurement survey. The VHM collected physical and biomedical measurement data on diabetes, cardiovascular disease and related risk factors, such as obesity, dyslipidaemia and hypertension, from a sample of adults aged 18–75 years in Victoria. The VHM also collected food and nutrition information.

The specific objectives of the study were to:

- estimate the prevalence of the following conditions in the Victorian metropolitan and rural population
 - diabetes and other forms of abnormal glucose tolerance
 - cardiovascular disease
 - indicators for chronic kidney disease
 - cardiovascular disease risk factors, including obesity, hypertension and lipid profile abnormalities
- assess the distribution and relationships of cardiovascular disease risk factors
- explore relationships between the social determinants of health and chronic disease risk factors measured in the survey
- inform policy development and contribute to overall program planning for chronic disease prevention activities in Victoria
- inform state nutrition policy and contribute to the evidence base on healthy eating.

The study design involved an initial household visit to participants to collect demographic information, followed by a visit to a local test site to collect risk factor information and biomedical and physical measures. Participants were then asked to complete three 24-hour dietary recall interviews in their homes, which were conducted over a six-week period.

A stratified cluster sample was taken based on Census collection districts (CDs) within the eight Victorian Government Department of Health regions (www.health.vic.gov.au/regions). Fifty randomly selected CDs were included in the sample – 25 from metropolitan and 25 from rural Victoria. One eligible person (aged 18–75 years) from each household in each CD was randomly selected to participate. A final sample of 3,653 participants was achieved.

For further information see

<www.health.vic.gov.au/healthstatus/survey/vhm.htm>.

Appendix 2: Questionnaire items for the Victorian Population Health Survey 2011–12

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

Asthma

Asthma status (current and past)

Blood pressure

High blood pressure status
Management of high blood pressure

Body weight status

Self-reported height and weight

Chronic diseases

Osteoarthritis
Rheumatoid arthritis
Heart disease
Stroke
Cancer
Osteoporosis
Systemic lupus erythematosus (SLE)

Demographics

Age
Sex
Marital status
Household composition
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 (Department of Health region)

Diabetes

Diabetes status
Type of diabetes
Age first diagnosed with diabetes
Type of healthcare received in past year

Eye care

Change in vision in previous 12 months
Visits to eye healthcare professional
Selected eye diseases and conditions
Sun protection for eyes

Health checks

Whether had a blood pressure check in previous two years
Whether had a cholesterol check in previous two years
Whether had a test for diabetes or elevated blood glucose levels in previous two years
Examination for bowel cancer in previous two years
Participated in the National Bowel Cancer Screening program
Last time consulted a doctor about own health
Had a mammogram
Had a Pap test

Mental health

Psychological distress (Kessler 10 Psychological Distress Scale)
Whether sought help for mental health related problem
Type of mental health professional sought help from
Depression and/or anxiety

Nutrition

Daily vegetable consumption
Daily fruit consumption
Milk consumption
Water consumption
Food security
Consumption of sugar-sweetened soft drinks

Oral care

Self-rated dental health
Last visit to a dental health professional

Physical activity

Frequency and amount of vigorous physical activity in past week
Physical activity at work

Self-reported health status

Smoking

Smoking status
Frequency of smoking
Smoking in home

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