

# Victorian Population Health Survey report 2008





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June 2010

## Foreword

The Victorian Population Health Survey is an important component of the population health surveillance capacity of Victoria's Department of Health. This surveillance program was initiated by the Department in 1998 and the first survey of adult Victorians was conducted in 2001.

The survey is based on core question modules that are critical to informing decisions about public health priorities. Its findings fill a significant void in the accessible data needed to ensure public health programs are relevant and responsive to current and emerging health issues. This year, for the first time, the survey reports data at the local government area (LGA) level. For local governments developing municipal public health plans, this information will be invaluable.

The eighth in the annual series, this report contains the key findings from the Victorian Population Health Survey 2008. It presents information on health and lifestyle, including asthma, diabetes, alcohol and tobacco consumption, fruit and vegetable consumption, physical activity, adult obesity, mental health, selected chronic diseases, social inequalities in health and social networks.

The value of these survey data is increasing over time as it becomes possible to comment on trends for selected survey estimates. As our population ages, the number of people with a chronic disease is expected to rise, greatly affecting the health and wellbeing of the population. The survey findings give us important insights into the determinants of chronic disease and how we might better target public health interventions.

The survey series is an ongoing source of quality information on the health of Victorians. The latest data from the 2008 survey continue to underpin our public health efforts, especially in controlling chronic diseases.



**PROFESSOR JIM HYDE**  
Director, Prevention and Population Health  
Department of Health



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# Introduction



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 South Gippsland Southern Grampians 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 South Gippsland Southern Grampians 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 South Gippsland Southern Grampians 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

## Introduction

### What's new?

- The sample size for the Victorian Population Health Survey was expanded to 34,168 respondents in 2008, so information could be analysed and presented at the local government area level.
- Estimates have been age standardised throughout the report to eliminate the effect that differences in age structure may have on estimates from different population groups.
- Notes to the tables and figures indicate the statistical significance of differences between estimates. Significance has been determined by comparing 95 per cent confidence intervals and testing trends over time using ordinary least squares regression.
- The reliability of estimates has been determined using relative standard errors, and the tables and figures indicate the degree of reliability.

### How to interpret a table

- Time trends tables: estimates are presented for each year in which the survey was run where exactly the same question has been asked each time. Where a question about a health topic has changed over time, the period reported reflects the period from when the question change occurred. Ordinary least squares regression was used to test trends over time.
- Other tables: individual estimates have been compared to the total Victorian estimate. Where subgroups of the population are presented (for example, males and females), the estimates have been compared to the total Victorian estimate for that population subgroup (all Victorian males, all Victorian females). The significance of differences in estimates has been determined by comparing the 95 per cent confidence intervals of the estimates.

### About the survey

The Victorian Population Health Survey is an important component of the population health surveillance capacity of the Department of Health. The annual survey series is an ongoing source of quality information on the health of Victorians.

The aim of the survey is to provide quality, timely indicators of population health that directly apply to evidence-based policy development and strategic planning across the department and the wider community. The survey is based on core question modules that are critical to informing decisions about public health priorities. It fills a significant void in the accessible data needed to ensure public health programs are relevant and responsive to current and emerging health issues.

### About this report

The first chapter, 'Health and lifestyle', contains information on the prevalence of major risk-taking behaviours across the Victorian population, including the prevalence of smoking, fruit and vegetable intake, alcohol consumption, levels of physical activity and selected health and screening checks. This information is vital for targeting public health interventions and evaluating outcomes.

The report includes a chapter on self-reporting on health and selected chronic diseases, as well as separate chapters on body weight, asthma and diabetes, which are the subject of public health programs in Victoria and nationwide. These data complement the department's Victorian Burden of Disease Study and Victorian Ambulatory Care Sensitive Conditions Study, and identify aspects of prevention that are amenable to public health intervention.

The report also contains a chapter on mental health, examining levels of psychological distress, levels of psychological distress by selected health indicators, and whether a person sought help from a professional for a mental health-related problem in the preceding year.

Last are a chapter covering social inequalities in health, which identifies health differences between selected social groups in Victoria, and a chapter titled 'Connections with others', which presents information on levels of social support, community participation, social attitudes and social capital.

### Methods

The Victorian Population Health Survey has been conducted each year since 2001, and previously was based on a sample of 7500 adults aged 18 years and over, randomly selected from households from each of the eight Department of Health regions in the state. In 2008, computer-assisted telephone interviewing was undertaken between August and December, and the sample was expanded to 34,168 and taken at the local government area level (LGA).

The following box explains how local governments can use the LGA-level data.

### How is local government involved in public health?

The Victorian Government has long developed policy, programs and resources that encourage preventive health practices across all levels of government, non-government agencies and the private sector and it has further committed to preventive health through the *Public Health and Wellbeing Act 2008*. This Act requires all government departments and levels of government in Victoria to be responsible for public health and wellbeing. This approach is necessary, because the environment in which we live influences many of the factors that affect our health and wellbeing.

Our state focus on strong preventative action is mirrored nationally. From 2009, the Council of Australian Governments (COAG) has committed to a six year program of investment in prevention through the National Partnership Agreement on Preventive Health. The program focuses on healthy workers, healthy children and healthy communities. The recently released National Preventative Health Strategy highlights that such a prevention focus will avoid hundreds of thousands of premature deaths and reduce the strain on the health system. So what does this mean for local government? The program involves the funding of ongoing prevention activities but has a significant emphasis on new preventive health initiatives. In particular, the initiatives represent a major preventive health investment.

### How can this survey help local government?

Local government is ideally placed to develop local policies and influence actions related to key health determinants. It can encourage physical activity and social networks, for example, by its work in a range of areas, including transport, roads, parks, land use, housing and urban planning, recreation and cultural activities, and the creation of safe public places. And now, because the Victorian Population Health Survey data are available at the local government area level, councils can confidently plan for public health and wellbeing. With the *Public Health and Wellbeing Act 2008* strengthening the role of local government in municipal public health and wellbeing planning, local level planners can use the survey data to produce and evaluate evidence-informed plans.

Municipal public health and wellbeing planning is likely to be increasingly effective in promoting public health and wellbeing as policies and planning practices across government, non-government and business sectors evolve in line with the intentions of the *Public Health and Wellbeing Act 2008*. As part of its support for municipal public health and wellbeing planning, Victoria's Department of Health will assist councils to use the survey data to set and evaluate their planning priorities.

The Department of Health reviewed the survey content and gave priority to new and emerging issues, areas with high demand for information, and areas in which a public health response is likely to be effective in improving health or reducing inequalities in health. Chapter 1 presents further detail on the survey methods.

## Summary of findings

### Fruit intake

Almost half (47.4 per cent) of all persons surveyed met the recommended minimum daily intake levels for fruit (three or more serves for those aged 18 years and two or more serves for those aged 19 years and over) (table 1.1).

### Vegetable intake

Less than one in 10 adults (7.9 per cent) in 2008 met the recommended minimum daily intake for vegetables (four or more serves for those aged 18 years and five or more serves for those aged 19 years and over).

### Alcohol intake

The proportion of males and females drinking alcohol at levels for short-term risk of harm did not vary significantly over the period 2002–2008. In 2008, approximately 13.6 per cent of males and 6.9 per cent of females reported drinking alcohol weekly at levels for short-term risk.

### Smoking

Approximately one in five adults aged 18 years or over (19.1 per cent) were current smokers in 2008, down from a high of 24.1 per cent in 2001.

### Physical activity

The proportion of persons undertaking adequate physical activity (measured in both sufficient time and sessions) to meet the national guidelines, was 60.3 per cent in 2008. This figure has not changed significantly since 2002.

### Self-reported health

The proportion of persons reporting their health as excellent, very good or good was 81.5 per cent in 2008. This figure did not change significantly over the period 2005–2008.

### Body weight

Measures of height and weight were collected for the first time in 2002 to calculate body mass index. The proportion of persons categorised as overweight or obese according to their body mass index increased from 45.1 per cent in 2002 to 48.6 per cent in 2008.

### Asthma

The prevalence of current asthma (experienced asthma symptoms in the previous 12 months) among adults was 10.7 per cent in 2008, down from 12.1 per cent in 2001.

## Diabetes

The prevalence of type 2 diabetes was 4.8 per cent for all Victorians in 2008. Although the prevalence of type 2 diabetes did not change significantly between 2005 and 2008 for females, there was an increase in prevalence for males.

## Psychological distress

The proportion of persons with very high levels of psychological stress, as determined using the Kessler 10 measure of psychological distress, remained steady at 2–4 per cent over the period 2001–2008.

## Health checks and screening

In 2008, more than three quarters (79.5 per cent) of all persons surveyed reported having had their blood pressure checked, more than half (56.5 per cent) reported having had a blood cholesterol test and more than half (52.2 per cent) reported having had a blood glucose test, in the past two years.

More than a quarter (29.4 per cent) of all persons aged 50 years and over reported having had a test to detect bowel cancer in the past two years.

Among the female population, aged 20–69 years, almost three quarters (71.1 per cent) reported having had a Pap smear in the past two years.

Among the female population, aged 50–69 years, more than three quarters (75.9 per cent) reported having had a mammogram in the past two years.

## Connections with others

In 2008, almost one in three persons aged 18 years and over (32.4 per cent) reported having helped out a local group as a volunteer and more than half (52.9 per cent) had attended a local community event in the past six months. Most persons could get help from friends, family or neighbours when needed.

More than three out of four persons (76.2 per cent) felt multiculturalism made life in their area better, 81.5 per cent felt valued by society and 74.0 per cent felt they had an opportunity to have a say on issues that were important to them.

## Social inequalities in health

The proportion of persons who ran out of food at least once in the previous 12 months and could not afford to buy more increased between 2005 (4.6 per cent) and 2008 (5.6 per cent).

The proportion of persons unable to raise \$2000 within two days in an emergency decreased from 16.4 per cent in 2002 to 11.5 per cent in 2008.

Table 1.1: Health and lifestyle of adult(a) Victorians, selected findings, 2001–2008

Lifestyle behaviours	2001	2002	2003	2004	2005	2006	2007	2008	Measure
	Per cent								
Fruit intake	..	54.5	49.8	51.4	49.9	46.3	45.2	47.4	Proportion meeting recommended daily intake levels
Vegetable intake	..	12.3	11.5	7.0	9.6	10.1	7.8	7.9	
Alcohol intake – Males	..	14.2	14.2	16.0	13.1	14.4	13.6	13.6	Proportion drinking weekly at levels for short term risk of harm
Alcohol intake – Females	..	6.1	6.3	7.2	6.6	6.3	6.8	6.9	
Smoking	24.1	23.9	22.1	22.0	20.5	20.4	19.9	19.1	Proportion of current smokers
Physical activity	..	..	..	..	63.6	63.5	62.5	60.3	Adequate physical activity – sufficient time and sessions
<b>Health Status</b>									
Self rated health	..	..	..	..	82.2	84.3	83.6	81.5	Proportion reporting excellent/very good/good health
Obesity/overweight	..	45.1	45.2	46.4	47.8	47.4	48.2	48.6	Proportion of persons obese/overweight according to Body Mass Index
Asthma	12.1	12.6	11.6	10.4	11.3	10.6	10.4	10.7	Proportion experienced asthma symptoms in last 12 months (current asthma)
Diabetes	..	..	..	..	3.8	4.0	4.1	4.8	Proportion diagnosed with type 2 diabetes
Psychological distress	4.0	2.7	2.6	3.4	3.2	2.8	2.4	3.1	Proportion having very high psychological distress scores (>=30)
<b>Health checks and screening</b>									
Blood pressure check	79.3	79.5	77.2	79.0	79.1	78.1	78.6	79.5	Proportion of persons aged 18 years and over who had a test in the past two years
Cholesterol checks	46.2	47.3	48.7	50.0	50.8	50.5	52.7	56.5	
Blood sugar test	45.2	44.3	46.6	47.1	47.3	47.4	48.9	52.2	Proportion of persons aged 50 years and over who had a test in the past two years
Bowel screen	..	..	..	..	..	25.6	27.6	29.4	
Cervical screen	..	..	..	..	..	..	..	71.1	Proportion of females aged 20–69 years having a test in the past two years
Breast screen	..	..	..	..	..	..	..	75.9	Proportion of females aged 50–69 years who had a test in the past two years
<b>Social networks and participation</b>									
Attended a local community event in the past six months	..	..	52.2	49.4	53.9	52.9	51.3	52.9	Proportion of persons aged 18 years and over
Member of a sports group	..	28.4	28.2	29.3	27.2	27.0	26.0	26.0	
Member of a church group	..	18.8	18.0	18.9	18.2	16.5	16.6	16.4	
Member of a school group	..	14.7	14.3	15.4	15.3	12.7	11.6	11.2	
Member of community or action group	..	25.1	21.8	20.8	19.6	20.0	18.5	19.0	
Member of a professional group or academic society	..	21.1	21.6	21.2	23.0	22.0	22.0	22.5	

Table 1.1: Health and lifestyle of adult(a) Victorians, selected findings, 2001–2008 (continued)

Lifestyle behaviours	2001	2002	2003	2004	2005	2006	2007	2008	Measure
	Per cent								
<b>Social networks and participation (continued)</b>									
Help out a local group as a volunteer	31.9	33.4	34.0	31.0	34.9	33.5	35.1	32.4	
Can get help from friends when needed	94.2	94.0	94.2	93.2	93.1	94.4	94.1	94.3	
Can get help from family when needed	92.6	92.8	94.1	92.9	93.3	92.4	92.2	92.2	
Can get help from neighbours when needed	77.8	71.7	71.2	67.7	71.3	71.3	70.4	71.6	Proportion of aggregated responses 'Yes definitely' and 'Sometimes'
Feel multiculturalism makes life in area better	85.5	86.6	85.6	85.5	79.7	74.9	76.1	76.2	
Feel valued by society	78.4	83.8	85.1	79.4	82.5	81.1	82.7	81.5	
Feel they have an opportunity to have a say on issues that are important to them	70.0	73.4	74.8	72.3	72.6	72.7	73.3	74.0	
<b>Social inequalities in health</b>									
Ran out of food at least once in past 12 months and couldn't afford to buy more	..	..	..	..	4.6	4.9	5.1	5.6	
Unable to raise \$2,000 in two days in an emergency	..	16.4	15.7	14.7	12.8	10.6	10.0	11.5	Proportion of persons aged 18 years and over

(a) Aged 18 years and over unless otherwise specified

.. Not available

Data are age standardised to the 2006 Victorian population.

For the Victorian Population Health Survey 2008, each one of the 169 interviewers spoke to more than 40 people every day of the survey. It was the Victorian Government's largest ever health survey, asking more than 34,000 Victorians from 79 local government areas about their health and wellbeing.

*'My most amazing interview was with a woman who had to hang up because she had gone into labour while answering my questions. I wish I knew if the baby was a boy or a girl!'*

Interviewer 87

*'A respondent who stands out for me was an on-the-ball 85-year-old woman, who got up each morning, drank a glass of water and then cycled 20 kilometres! Funnily enough, I've now started to drink water in the mornings and to cycle to and from work!'*

Interviewer 92

*'I interviewed the oldest respondent, who was 96 years old. He took his time, but he answered every question. I often wonder how he's going.'*

Interviewer 141

*'My calls were real glimpses into the day-to-day lives of Victorians, like the farmer who answered the phone half way through delivering a calf. I learnt a lot about who lives in my state, in my city, in my neighbourhood.'*

Interviewer 23

*'So many people were expressive of their AFL football allegiances, saying things such as 'go Pies' at the end of a call. And when asked about being part of a sporting club, they made a point of wanting to be put down as a member of their respective football clubs.'*

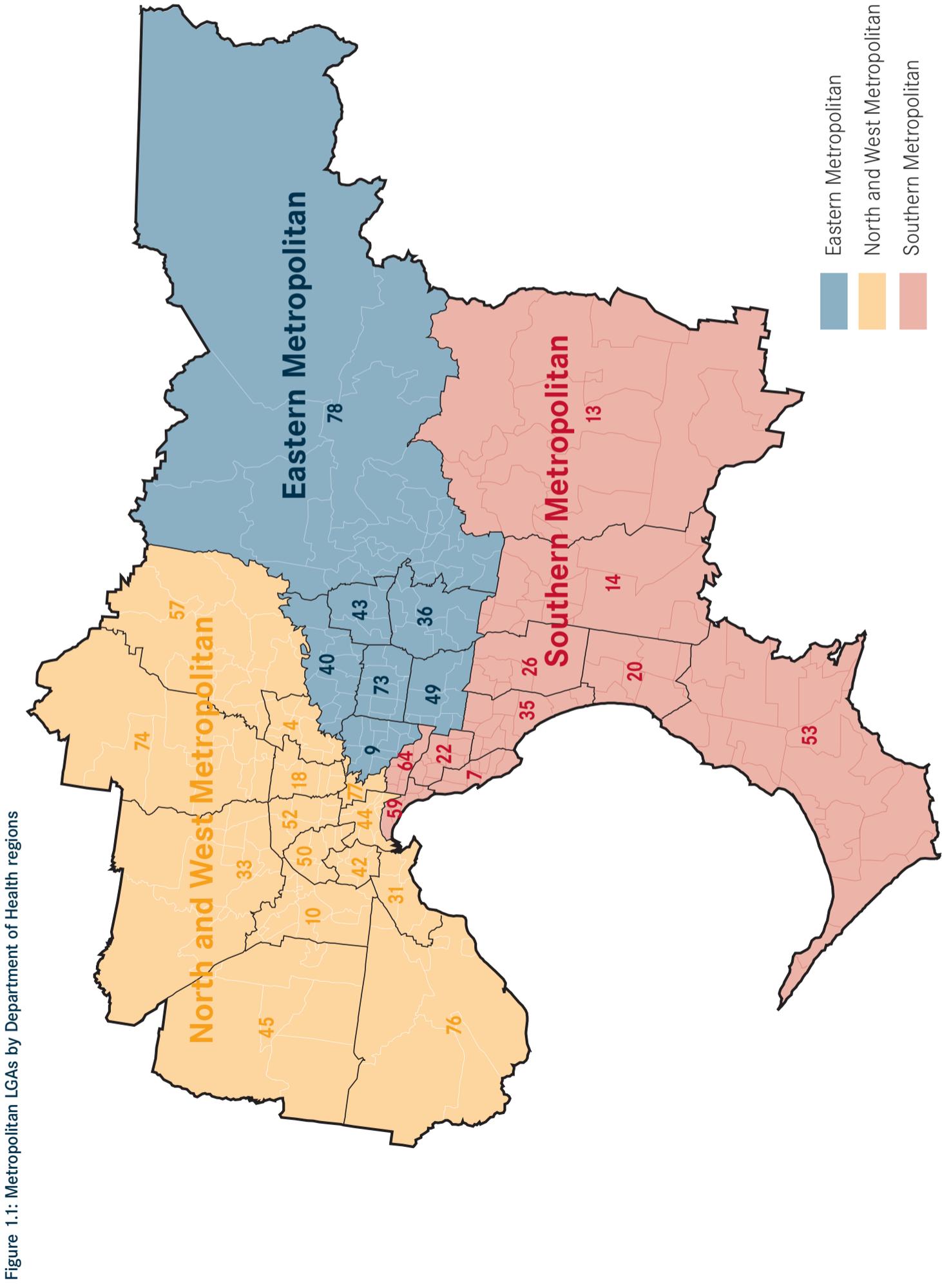
Interviewer 7

*'I spoke to a lovely older lady who lived in a town of about 30 people. One of her friends had done the survey, and when she received our letter, she had her husband help her move the couch near the phone so she could last the 15 minutes of the interview. After random selection of household members her husband was selected for the interview. She was really disappointed.'*

Interviewer 108

*'One woman I spoke to was involved in every group possible, so she was really busy. But she had specifically set aside 15 minutes for us. She took every question seriously, making sure answers were correct by using her calculator for some questions. Then we got to the demographics, and I discovered she had 10 children!'*

Interviewer 82



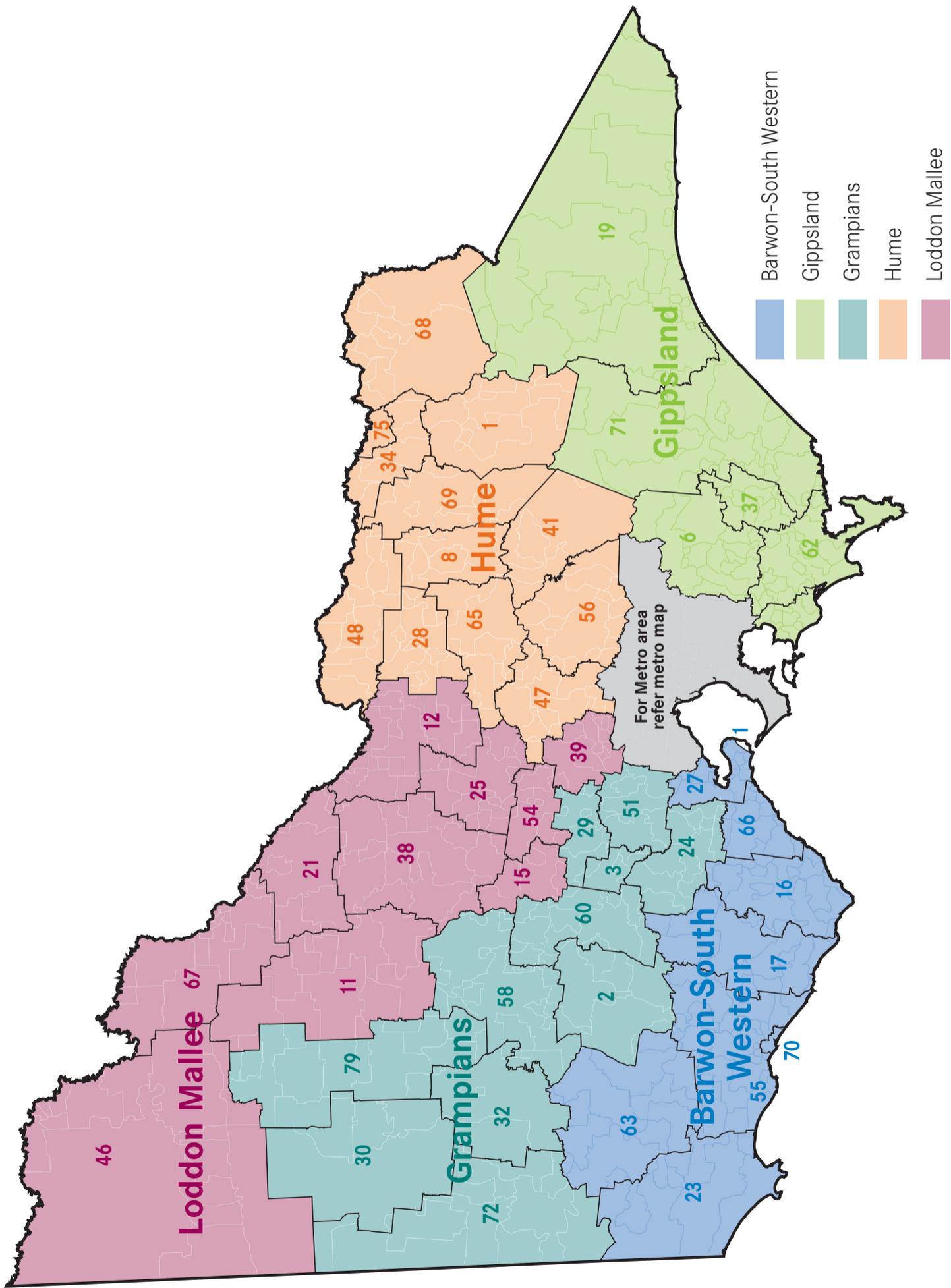
Region	LGA ID Number*	LGA Name
<b>North and West Metropolitan</b>	4	Banyule
	10	Brimbank
	18	Darebin
	31	Hobsons Bay
	33	Hume
	42	Maribyrnong
	44	Melbourne
	45	Melton
	50	Moonee Valley
	52	Moreland
	57	Nillumbik
	74	Whittlesea
	76	Wyndham
	77	Yarra

Region	LGA ID Number*	LGA Name
<b>Southern Metropolitan</b>	7	Bayside
	13	Cardinia
	14	Casey
	20	Frankston
	22	Glen Eira
	26	Greater Dandenong
	35	Kingston
	53	Mornington Peninsula
	59	Port Phillip
	64	Stonnington

Region	LGA ID Number*	LGA Name
<b>Eastern Metropolitan</b>	9	Boroondara
	36	Knox
	40	Manningham
	43	Maroondah
	49	Monash
	73	Whitehorse
	78	Yarra Ranges

\* LGA ID is based on the alphabetical order of local government area names  
See table 1.2.

Figure 1.2: Rural LGAs by Department of Health regions



Region	LGA ID Number*	LGA Name
Barwon-South Western	16	Colac Otway
	17	Corangamite
	23	Glenelg
	27	Greater Geelong
	55	Moyne
	61	Queenscliffe
	63	Southern Grampians
	66	Surf Coast
	70	Warrnambool

Region	LGA ID Number*	LGA Name
Grampians	2	Ararat
	3	Ballarat
	24	Golden Plains
	29	Hepburn
	30	Hindmarsh
	32	Horsham
	51	Moorabool
	58	Northern Grampians
	60	Pyrenees
	72	West Wimmera
	79	Yarriambiack

Region	LGA ID Number*	LGA Name
Loddon Mallee	11	Buloke
	12	Campaspe
	15	Central Goldfields
	21	Gannawarra
	25	Greater Bendigo
	38	Loddon
	39	Macedon Ranges
	46	Mildura
	54	Mount Alexander
	67	Swan Hill

Region	LGA ID Number*	LGA Name
Hume	1	Alpine
	8	Benalla
	28	Greater Shepparton
	34	Indigo
	41	Mansfield
	47	Mitchell
	48	Moira
	56	Murrindindi
	65	Strathbogie
	68	Towong
	69	Wangaratta
	75	Wodonga

Region	LGA ID Number*	LGA Name
Gippsland	5	Bass Coast
	6	Baw Baw
	19	East Gippsland
	37	Latrobe
	62	South Gippsland
	71	Wellington

\* LGA ID is based on the alphabetical order of local government area names  
See table 1.2.

Table 1.2: Local government area names &amp; Department of Health regions

	Region	Local government area name*	LGA ID No.		Region	Local government area name*	LGA ID No.
	Hume	Alpine (S)	1		Hume	Mansfield (S)	41
	Grampians	Ararat (RC)	2		North and West Metropolitan	Maribyrnong (C)	42
	Grampians	Ballarat (C)	3		Eastern Metropolitan	Maroondah (C)	43
	North and West Metropolitan	Banyule (C)	4		North and West Metropolitan	Melbourne (C)	44
	Gippsland	Bass Coast (S)	5		North and West Metropolitan	Melton (S)	45
	Gippsland	Baw Baw (S)	6		Loddon Mallee	Mildura (RC)	46
	Southern Metropolitan	Bayside (C)	7		Hume	Mitchell (S)	47
	Hume	Benalla (RC)	8		Hume	Moira (S)	48
	Eastern Metropolitan	Boroondara (C)	9		Eastern Metropolitan	Monash (C)	49
	North and West Metropolitan	Brimbank (C)	10		North and West Metropolitan	Moonee Valley (C)	50
	Loddon Mallee	Buloke (S)	11		Grampians	Moorabool (S)	51
	Loddon Mallee	Campaspe (S)	12		North and West Metropolitan	Moreland (C)	52
	Southern Metropolitan	Cardinia (S)	13		Southern Metropolitan	Mornington Peninsula (S)	53
	Southern Metropolitan	Casey (C)	14		Loddon Mallee	Mount Alexander (S)	54
	Loddon Mallee	Central Goldfields (S)	15		Barwon-South Western	Moyne (S)	55
	Barwon-South Western	Colac-Otway (S)	16		Hume	Murrindindi (S)	56
	Barwon-South Western	Corangamite (S)	17		North and West Metropolitan	Nillumbik (S)	57
	North and West Metropolitan	Darebin (C)	18		Grampians	Northern Grampians (S)	58
	Gippsland	East Gippsland (S)	19		Southern Metropolitan	Port Phillip (C)	59
	Southern Metropolitan	Frankston (C)	20		Grampians	Pyrenees (S)	60
	Loddon Mallee	Gannawarra (S)	21		Barwon-South Western	Queenscliffe (B)	61
	Southern Metropolitan	Glen Eira (C)	22		Gippsland	Southern Grampians (S)	62
	Barwon-South Western	Glenelg (S)	23		Barwon-South Western	South Gippsland (S)	63
	Grampians	Golden Plains (S)	24		Southern Metropolitan	Stonnington (C)	64
	Loddon Mallee	Greater Bendigo (C)	25		Hume	Strathbogie (S)	65
	Southern Metropolitan	Greater Dandenong (C)	26		Barwon-South Western	Surf Coast (S)	66
	Barwon-South Western	Greater Geelong (C)	27		Loddon Mallee	Swan Hill (RC)	67
	Hume	Greater Shepparton (C)	28		Hume	Towong (S)	68
	Grampians	Hepburn (S)	29		Hume	Wangaratta (RC)	69
	Grampians	Hindmarsh (S)	30		Barwon-South Western	Warrnambool (C)	70
	North and West Metropolitan	Hobsons Bay (C)	31		Gippsland	Wellington (S)	71
	Grampians	Horsham (RC)	32		Grampians	West Wimmera (S)	72
	North and West Metropolitan	Hume (C)	33		Eastern Metropolitan	Whitehorse (C)	73
	Hume	Indigo (S)	34		North and West Metropolitan	Whittlesea (C)	74
	Southern Metropolitan	Kingston (C)	35		Hume	Wodonga (RC)	75
	Eastern Metropolitan	Knox (C)	36		North and West Metropolitan	Wyndham (C)	76
	Gippsland	Latrobe (C)	37		North and West Metropolitan	Yarra (C)	77
	Loddon Mallee	Loddon (S)	38		Eastern Metropolitan	Yarra Ranges (S)	78
	Loddon Mallee	Macedon Ranges (S)	39		Grampians	Yarriambiack (S)	79
	Eastern Metropolitan	Manningham (C)	40				

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

# 1. Methods



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 South Gippsland Southern Grampians 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 South Gippsland Southern Grampians 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 South Gippsland Southern Grampians 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

## 1. Methods

### 1.1 Background

Population health surveys based on computer-assisted telephone interviews (CATI) are used to collect key population health surveillance data because they provide time series data, use collection procedures that are acceptable to respondents, use an adequate sample size, use current technology and provide high quality data (especially through greater supervision of interviewers, computer data entry and question sequencing). Further, they allow for data collection that is timely, cost-effective (especially in rural and metropolitan areas) and adaptable to changing and emerging information needs. CATI surveys also fill strategic information gaps—that is, they can be used to gather information not available from other sources—and provide data for further analysis and interpretation.

### 1.2 Method

The Victorian Population Health Survey 2008 followed a method developed over several years to collect relevant, timely and valid health information for policy, planning and decision making. The survey team administered CATI on a representative sample of persons aged 18 years and over who resided in private dwellings in Victoria. The Department of Health Human Research Ethics Committee approved the survey method and questionnaire content.

For the first time in 2008, the VPHS was undertaken at the local government area (LGA) level. All previous surveys in the series were undertaken at the state-wide level.

The department outsourced the fieldwork data collection to a market research organisation, which department staff supervised. All data were self-reported and stored directly in the CATI system.

### 1.3 Stratification

There are five rural and three metropolitan Department of Health regions in Victoria that are comprised of 79 LGAs. The survey sample was stratified by LGA in 2008, with a target sample of 426 interviews per LGA. The total sample achieved was 34,168 completed interviews, including 808 (2.4 per cent) in languages other than English.

### 1.4 Sampling frame

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

#### 1.4.1 Sample generation

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

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

### 1.5 Data collection

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

### 1.6 Call routine

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

Call attempts were spread over different times of the day and different days of the week, and were controlled by a customised call algorithm in the survey management system. Except for engaged numbers at the first call attempt, a non-contact in any specific time block was automatically scheduled for call back in a different time block as per the call back routine. A scripted message was left at the first and second calls to an answering machine, encouraging respondents to contact the 1800 number. After establishing contact, interviewers could make calls, by appointment, outside the time block hours.

After contacting a household, an interviewer would select for interview the person aged 18 years and over with the most recent birthday.

### 1.7 Interviewing in languages other than English

Interviews were conducted in eight community languages. As for previous surveys in the series, the department provided translated survey questionnaires in Italian, Greek, Mandarin, Cantonese, Vietnamese and Arabic. Turkish and Serbo-Croatian were added for the VPHS 2008, with a view to achieving a more representative sample in those LGAs with a relatively high proportion of speakers of these languages.

CATI interviewers were recruited to undertake the interviews in these other languages as required.

### 1.8 Fieldwork period

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

### 1.9 Participation

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

## 1.10 Weighting

The survey data was weighted to reflect:

(i) The probability of selection of the respondent within the household.

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

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

$$sw = nah/npl$$

where:

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

*npl* = the number of telephone lines in the household.

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

- *Age group*: 18–24, 25–34, 35–44, 45–54, 55–64 and 65 years or over
- *Sex*: male, female
- *Geography*: 79 LGAs

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

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

where:

*i* = the *i*<sup>th</sup> cross-cell

*j* = the *j*<sup>th</sup> person in the cross-cell

*N<sub>i</sub>* = the population of the *i*<sup>th</sup> cross-cell

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

### Calculating the person weight to be applied

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

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

where:

*i* = the *i*<sup>th</sup> cross-cell

*j* = the *j*<sup>th</sup> person in the cross-cell.

## 1.11 Statistical analysis

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

### Crude rates

A crude rate is an estimate of a proportion of a population that experiences a specific event over a specified period. It is calculated by dividing the number of events recorded for a given period by the number at risk of the event in the population. Crude rates (percentages) have been presented wherever estimates have been broken down by age group (age-specific rates).

### Age standardisation

The percentages presented in this report have been standardised, or adjusted for age. They are based on the direct method of standardization. This method adjusts for effects of differences in the age composition of different populations (eg LGAs) and allows for comparison between these populations. The direct age standardized percentages presented are based upon the weighted sum of age-specific (five-year age group) rates in the population. The weights that have been used in the calculation (the 'standard' population) are population ratios for five-year age groups derived from the estimated resident mid-year 2006 Victorian population.

### Standard error

The standard error is a measure of the variation in an estimate, produced by sampling a population. The standard error can be used to calculate confidence intervals and relative standard errors, providing the likely range of the true value of an estimate and an indication of the reliability of an estimate.

### Confidence intervals (95% CI)

A confidence interval is a computed interval with a given probability (for example, 95%) that a true value of a variable, such as a percentage, is contained within the interval. So, the confidence interval is the likely range of the true value for a percentage.

Throughout the report, 95% confidence intervals have been included in tables and graphs.

$$95\% \text{ confidence interval} = \text{point estimate} \pm \text{standard error} \times 1.96$$

### Statistical significance

The only trends and patterns in the data that are discussed in the report are statistically significant trends and patterns. Statistical significance provides an indication of how likely a result is due to chance. With the exception of time trends, significant differences between estimates were deemed to exist where confidence intervals for percentages did not overlap.

Ordinary least squares linear regression on the logarithms of age standardized percentages, was used to test for trends over time. If the 95 per cent confidence interval for the regression coefficient did not include the value 0, the trend was considered to be statistically significant.

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

### Relative standard error (RSE)

A relative standard error (RSE) provides an indication of the reliability of an estimate. Estimates with RSEs less than 25 per cent are generally regarded as 'reliable' for general use. The percentages presented in tables and graphs in this report have RSEs less than 25 per cent, unless otherwise stated. Rates that have an RSE between 25 and 50 per cent have been marked with an asterisk (\*) and should be interpreted with caution. For the purposes of this report, percentages with RSEs over 50 per cent were not considered reliable estimates and have not been presented. A double asterisk (\*\*) has been included in tables and graphs where the percentage would otherwise appear, indicating the relevant RSE was greater than 50 per cent.

$$\text{Relative Standard Error (\%)} = \text{Standard error} / \text{Point estimate} \times 100$$

### 1.12 Profile of survey respondents

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

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

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

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

i ABS 2007a.

ii ABS 2007b. The 'never married' category is not directly comparable between the census and the *Victorian Population Health Survey 2006* because the survey collected an extra category—'living with a partner'. Benchmark figures apply to persons aged 15 years or over.

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

iv ABS 2007d. Benchmark figures apply to persons aged 15 years and over.

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

## References

ABS (Australian Bureau of Statistics) 2007a, *Population by age and sex, Victoria, Jun 2007*, cat. no. 3201.0, ABS, Canberra.

ABS (Australian Bureau of Statistics) 2007b, *2006 Census tables, Victoria: Registered marital status by age by sex*, table no. 20680, ABS, Canberra.

ABS (Australian Bureau of Statistics) 2007c, *2006 Census tables, Victoria: Country of birth by age by sex*, table no. 20680, ABS, Canberra.

ABS (Australian Bureau of Statistics) 2007d, *Labour force, Victoria, Mar 2007*, cat. no. 6202.2, ABS, Canberra.

PHIAC (Private Health Insurance Administration Council) 2007, *Private health insurance coverage statistics, 30 June 2007*, PHIAC, Canberra, viewed 26 November 2009, [www.phiac.gov.au](http://www.phiac.gov.au).



## 2. Health and Lifestyle



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 South Gippsland Southern Grampians 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 South Gippsland Southern Grampians 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 South Gippsland Southern Grampians 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

## 2. Health and lifestyle

A range of lifestyle behaviours influence the health status and health risk profile of individuals. Lifestyle related risk factors contribute significantly to the burden of disease in Australia, influencing the onset, maintenance and prognosis of a variety of health conditions and their complications. The risk factors associated with health and lifestyle behaviours are largely avoidable or modifiable, providing considerable scope for health gain. This section presents information on lifestyle behaviours that influence health, including intake of fruit and vegetables, alcohol consumption, tobacco use and physical activity, as well as participation in health screening programs and eye checks.

### Survey results

#### Nutrition

##### • Vegetable consumption

- Most Victorians (56.9 per cent) consumed one to two serves of vegetables per day. Almost two-thirds (64.5 per cent) of males and almost half (49.6 per cent) of the female population aged 18 years and over consumed one to two serves of vegetables per day. More than twice as many females (10.5 per cent) as males (4.9 per cent) consumed five or more serves of vegetables per day.
- Older persons were more likely than younger persons to consume five or more serves of vegetables per day. Males aged 65 years and over were more than twice as likely as males aged 18–24 years to consume five or more serves of vegetables a day (7.8 per cent and 2.9 per cent respectively). Similarly, the proportion of females aged 65 years and over who consumed five or more serves of vegetables per day was higher than the proportion of females aged 18–24 years (12.5 per cent and 6.0 per cent respectively).
- The proportion of persons reporting that they consumed five or more serves of vegetables a day was higher for persons living in rural areas (9.8 per cent), compared with the metropolitan area (7.0 per cent).
- The proportion of persons who reported that they did not consume any serves of vegetables on a daily basis was significantly above the average for Victoria (5.8 per cent) in two LGAs: Colac–Otway (9.6 per cent) and Greater Dandenong (12.4 per cent).
- The proportion of persons who reported that they consume five or more serves of vegetables a day was significantly above the Victorian average (7.7 per cent) for eight rural local government areas: Bass Coast, Glenelg, Greater Bendigo, Latrobe, Queenscliffe, South Gippsland, Wangaratta and Wellington.

##### • Fruit consumption

- Most persons (48.6 per cent) aged 18 years and over reported that they consumed two or more serves of fruit per day. More than half of the female population (54.6 per cent) reported consuming two or more serves of fruit daily in 2008, compared with 42.3 per cent of the male population.
- More than one in six males (17.9 per cent) reported no daily intake of fruit, compared with approximately one in ten females (10.8 per cent).

- The proportion of males and females who consumed two or more serves of fruit each day was similar for younger and older age groups. The proportion of females reporting a daily intake of two or more serves of fruit was greater across all age groups compared with males.
- The proportion of persons reporting that they consumed two or more serves of fruit a day was similar to the average for Victoria (48.6 per cent) for persons living in metropolitan and rural areas of Victoria.
- The proportion of persons reporting that they consumed two or more serves of fruit each day was significantly above the Victorian average (48.6 per cent) for seven local government areas, five metropolitan (Banyule, Bayside, Kingston, Melbourne, Moonee Valley) and two rural (Queenscliffe and Surf Coast).
- The proportion of persons who did not consume any fruit was above the average for Victoria (14.3 per cent) in 12 LGAs (10 rural and two metropolitan).

##### • Fruit and vegetable guidelines

- Nine out of 10 persons (90.0 per cent) aged 18 years and over did not meet the guidelines for vegetable intake (four or more serves for those aged 18 years and five or more serves daily for those aged 19 years and over) in 2008.
- A higher proportion of males (92.7 per cent) than females (87.4 per cent) did not meet the guidelines for the number of daily serves of vegetables.
- Less than half (47.4 per cent) of persons aged 18 years and over met the guidelines for fruit intake (three or more serves per day for those aged 18 years and two or more serves daily for those aged 19 years and over).
- More than half (53.5 per cent) of all females reported sufficient serves of fruit to meet the guidelines compared with 41.0 per cent of males. Persons from older age groups were more likely than younger persons to meet the guidelines.
- In 2008, less than one in ten females (8.0 per cent) and 3.2 per cent of males met both the guidelines for fruit and vegetables.
- The proportion of persons who met the guidelines for both fruit and vegetable consumption decreased from 9.0 per cent in 2002 to 5.7 per cent in 2008.
- The proportion of persons who met the guidelines for fruit consumption decreased between 2002 and 2008, but the proportion of persons who met the guidelines for vegetable consumption remained constant over this period.

## Alcohol consumption

- Less than one in five Victorians (18.0 per cent) aged 18 years and over were abstainers or non drinkers in 2008.
- A higher proportion of females (23.0 per cent) than males (12.6 per cent) were abstainers or non drinkers.
- **Short-term risk of harm**
  - Less than half (45.2 per cent) of all respondents reported that they consumed alcohol (weekly, monthly or yearly) at levels regarded as risky or high risk for harm in the short-term (based on the NHMRC 2001 guidelines).
  - A higher proportion of males (53.7 per cent) than females (37.2 per cent) consumed alcohol (weekly, monthly or yearly) at levels that are risky or high risk for short term harm.
  - Drinking alcohol at risky or high risk levels at least weekly was greatest among males and females aged 18–24 years (21.0 per cent and 17.1 per cent respectively). Except for those aged 18–24 years, the proportion of males who consumed alcohol at risky or high risk levels at least once each week was higher than for females across all age groups.
  - The proportion of males at risk of short-term harm was greater for those living in rural areas compared with the metropolitan area (61.2 per cent and 51.1 per cent respectively). Similarly, the proportion of females at risk of short-term harm from alcohol consumption was higher for those living in rural parts of Victoria (42.7 per cent) than for those living in the metropolitan area (35.4 per cent).
  - The proportion of persons who were at risk of short-term harm (weekly consumption) was higher than the average for Victoria (10.2 per cent) in 12 LGAs: Bass Coast, Corangamite, Indigo, Mansfield, Mildura, Moira, Mornington Peninsula, Port Phillip, Southern Grampians, Strathbogie, Surf Coast and Yarra. With the exception of Mornington Peninsula, Port Phillip and Yarra, these LGAs are located in rural areas.
  - The proportion of males and females who consumed alcohol at risky or high risk levels for short-term harm (weekly, monthly and yearly consumption) remained constant between 2002 and 2008.
- **Long-term risk of harm**
  - Most persons aged 18 years and over (95.5 per cent) were not at risk of long-term harm, based on their frequency and volume of alcohol consumption. The proportion of persons aged 18 years and over whose pattern of alcohol consumption was associated with long-term risk of harm (based on the NHMRC 2001 guidelines) was low, at 3.7 per cent.
  - The proportion of males who were at risk of long-term harm from alcohol consumption was higher than for females (4.3 per cent and 3.1 per cent respectively).
  - There were three LGAs where the proportion of persons who were not at risk of long-term harm was below the average for Victoria (95.5 per cent): Greater Geelong, Pyrenees and Yarra.

## Smoking

- Less than one fifth (19.1 per cent) of Victorians aged 18 years and over were current smokers. On average, approximately one in five males (21.4 per cent) in Victoria reported that they smoked daily or occasionally, compared with 16.9 per cent of females.
- Males in the 25–34 year age group were found to have the highest prevalence of current smoking (31.7 per cent). For females, the highest prevalence of current smoking was in the 18–24 year age group, at 22.2 per cent.
- Most persons who were current smokers smoked on a daily basis, as opposed to smoking occasionally. For males aged 18–24 years the prevalence of occasional smoking (9.3 per cent) was similar to the prevalence of daily smoking (13.1 per cent). For females the prevalence of occasional smoking (7.4 per cent) was highest for those aged 18–24 years.
- The proportion of males who were current smokers was similar for rural (22.0 per cent) and metropolitan (21.2 per cent) areas of Victoria.
- The prevalence of current smoking was above the average for Victoria (19.1 per cent) in six LGAs. Four of these LGAs were located in rural areas (Greater Shepparton, Latrobe, Moira and Pyrenees). The two remaining LGAs were in the metropolitan area: Hume and Knox.
- There were four metropolitan LGAs, Bayside, Melbourne, Port Phillip and Stonnington, and three rural LGAs, Horsham, Surf Coast and Wangaratta, where the proportion of persons who were current smokers was below the average for Victoria.
- **Smoking during pregnancy**
  - Among females, aged 18 to 49 years, who reported they were currently pregnant, 6.3 per cent were current smokers, compared with 21.4 per cent of females in this age group who were not pregnant.

## Physical activity

- **Physical activity for health benefits**
  - More than six in 10 persons (60.3 per cent) aged 19 years and over reported undertaking sufficient levels of physical activity to meet the national guidelines (DoHA 1999). In 2008, the proportion of males and females who undertook sufficient physical activity was similar (61.0 per cent and 59.7 per cent respectively), as was the proportion who were sedentary or physically inactive (5.1 per cent and 5.4 per cent respectively).
  - A higher proportion of younger persons than older persons undertook sufficient physical activity. Approximately half (50.1 per cent) of males aged 65 years and over compared with 70.5 per cent of males aged 19–24 years. Similarly, among females aged 19–24 years, 69.6 per cent did sufficient physical activity, compared with 42.1 per cent of females aged 65 years and over.

- The proportion of males aged 19 years and over who undertook a sufficient level of physical activity was similar for the rural (60.7 per cent) and metropolitan (61.2 per cent) areas of Victoria. For the female population, the proportion who did sufficient physical activity was also similar between rural (60.4 per cent) and metropolitan areas (59.5 per cent) of Victoria.
- There were 10 LGAs where the proportion of persons undertaking sufficient physical activity levels was above the average for Victoria. Five of these LGAs were located in rural areas of the state: Mount Alexander, Murrindindi, Queenscliffe, Southern Grampians and Surf Coast. The remaining five metropolitan LGAs were Bayside, Boroondara, Melbourne, Port Phillip and Stonnington.
- There were seven LGAs where the proportion of persons who did sufficient physical activity was below the average for Victoria: Brimbank, Casey, Gannawarra, Greater Dandenong, Hindmarsh, Hume and Mitchell.

#### • Incidental physical activity

- Walking or cycling for transport, especially for short trips, is described as incidental physical activity. More than six in 10 persons (61.7 per cent) reported that they did not walk or cycle for transport for trips taking longer than 10 minutes on any day during the past week. Almost one-tenth of the population (9.6 per cent) reported undertaking some incidental physical activity on 4–5 days per week. Patterns of incidental physical activity were similar for males and females.
- Older persons were more likely not to undertake any incidental physical activity. For example, almost half (47.9 per cent) of persons aged 18–24 years reported that they did not walk or cycle to get from place to place (for example, to school, work, the shops or the train station), compared to almost a third (66.2 per cent) of persons aged 65 years and over.
- There were 28 LGAs where the proportion of persons who reported doing no incidental physical activity was above the average for Victoria (61.7 per cent).
- Among persons aged 18 years and over with children at primary or secondary school, more than three quarters (75.4 per cent) did not walk or cycle all or part of the way to school with their child/children.

#### • Physical activity at work

- Slightly less than two-thirds of employed persons (64.2 per cent) mostly sat or stood when doing their work. A higher proportion of females (69.5 per cent) than males (60.3 per cent) reported that their work-related activities involved mostly sitting or standing.
- Approximately one in every five employed persons (20.5 per cent) indicated that their work activities involved mostly walking.
- More than one in ten (13.3 per cent) employed persons indicated that their work activities involved mostly labour or physically demanding work.

## Eye health

### • Sun protective behaviour

- Almost three quarters (74.0 per cent) of all persons reported usually wearing sunglasses and more than half (52.6 per cent) reported usually wearing a hat, when out in the sun.
- Females were more likely than males to report wearing sunglasses (79.7 per cent and 68.0 per cent respectively) and males were more likely than females to report wearing a hat (62.5 per cent and 43.2 per cent respectively).
- The proportion of persons reporting that they usually wear a hat when out in the sun was higher for persons living in rural (59.5 per cent) areas of the state, compared with the metropolitan area (50.2 per cent).
- The proportion of persons reporting that they usually wear sunglasses when out in the sun was higher for persons living in rural (76.1 per cent) areas of the state, compared with the metropolitan area (73.5 per cent).
- There were three LGAs, all in the metropolitan area, where the proportion of persons who did not wear either a hat or sunglasses was higher than the average for Victoria (14.1 per cent): Brimbank (22.6 per cent), Greater Dandenong (22.5 per cent) and Melbourne (22.4 per cent).

### • Change in vision

- More than four in ten (41.0 per cent) persons reported having noticed a change in their vision in the past 12 months.
- Females (43.6 per cent) were more likely than males (38.5 per cent) to report having noticed a change in their vision in the past 12 months.
- Among persons aged 18–49 years, more than a third (33.6 per cent) reported having noticed a change in their vision in the past 12 months, compared with more than half (52.3 per cent) of persons aged 50 years and over.
- There were no differences between the metropolitan area and rural areas of the state in the proportion of persons who reported having noticed a change in their vision in the past 12 months.
- There was one LGA where the proportion of persons aged 18–49 years who reported a change in vision was higher than the average for Victoria (33.6 per cent) – Central Goldfields.
- There was one LGA where the proportion of persons aged 50 years and over who reported a change in vision was higher than the average for Victoria (52.3 per cent) – Knox.

### • Use of health care services

- More than three quarters (77.7 per cent) of all persons surveyed had consulted an eye care specialist or attended an eye clinic at least once in their lifetime, whilst more than one in five (22.3 per cent) persons had never visited an eye care specialist or attended an eye clinic.
- A higher proportion of females (81.0 per cent) reported having ever consulted an eye care specialist or attended an eye clinic, compared with males (74.3 per cent).
- The proportion of persons who reported having ever consulted an eye care specialist or attended an eye clinic, was similar between metropolitan and rural areas of the state.

- The proportion of persons who reported having ever consulted an eye care specialist or attended an eye clinic, was lower than the average for Victoria in the LGAs of Brimbank, Murrindindi, Towong and Wyndham.
- More than one in five (21.1 per cent) persons had visited an eye care specialist or attended an eye clinic in the past six months and 19.7 per cent had visited a specialist or clinic between six months to one year before the survey. A further 15.4 per cent of persons reported having visited an eye care specialist or attended an eye clinic more than one year, but less than two years before the survey, 13.0 per cent of persons reported having visited a specialist or clinic between two and five years before the survey and 8.3 per cent reported having visited an eye care specialist or attended an eye clinic more than five years before the survey.

- **Selected eye conditions**

- Less than one in ten (8.3 per cent) persons who had ever seen an eye care specialist or visited an eye clinic had ever had a cataract, 2.3 per cent reported having had glaucoma, 2.1 per cent reported having macular degeneration and 0.6 per cent reported having been diagnosed with diabetic retinopathy.

## Health checks

- **Blood pressure checks**

- In 2008, 79.5 per cent of persons aged 18 years and over reported having had their blood pressure checked in the past two years.
- Females (83.5 per cent) were more likely than their male (75.6 per cent) counterparts to report having had their blood pressure checked in the past two years.
- The proportion of persons who reported having had a blood pressure check in the past two years was similar between metropolitan and rural areas of the state.
- The proportion of persons aged 50 years and over who had had their blood pressure checked was below the average for Victoria (93.1 per cent) in the LGAs of Mansfield (88.9 per cent), Colac-Otway (88.2 per cent), Yarra Ranges (86.5 per cent) and Melbourne (85.5 per cent).
- The proportion of persons aged 18–49 years who had had their blood pressure checked in the past two years was below the average for Victoria (70.6 per cent) in the LGAs of Mansfield (60.0 per cent), Loddon (57.8 per cent), Colac-Otway (57.7 per cent) and Northern Grampians (57.7 per cent).

- **Cholesterol checks**

- More than half (56.5 per cent) of all persons aged 18 years and over reported having had a blood cholesterol test in the past two years.
- A higher proportion of males than females reported that they had had a blood cholesterol test in the past two years (57.9 per cent and 55.2 per cent respectively).
- A higher proportion of persons from the metropolitan area (57.7 per cent) reported that they had had a blood cholesterol check in the past two years, compared with persons from rural areas (52.8 per cent) of Victoria.
- There were 15 LGAs where the proportion of persons aged 18–49 years who reported having had a cholesterol check was below the average for Victoria.
- There were 13 LGAs where the proportion of persons aged 50 years and over who reported having had a cholesterol check was below the average for Victoria.

- **Blood glucose checks**

- More than half (52.2 per cent) of all persons aged 18 years and over reported having had a blood glucose test in the past two years.
- Females aged 18–49 years were more likely to report having had their blood glucose checked in the past two years than males aged 18–49 years, and among those aged 50 years and over, males were more likely than females to have had their blood glucose checked.
- The proportion of persons aged 50 years and over living in the metropolitan area (73.1 per cent), who had had their blood glucose checked in the past two years, was higher than the proportion living in rural areas (69.8 per cent) of Victoria.
- There were eight LGAs where the proportion of persons, aged 50 years and over, who had had a blood glucose check, was below the average for Victoria.
- There were four LGAs where the proportion of persons aged 18–49 years was above the average for Victoria.

## Cancer screening

### • Bowel cancer screening

- More than a quarter (29.4 per cent) of all persons aged 50 years and over reported having had a test to detect bowel cancer in the past two years.
- Males (33.5 per cent) were more likely to report having had a test to detect bowel cancer than females (25.6 per cent).
- Almost one in five (19.2 per cent) persons aged 50 years and over who had had a test to detect bowel cancer in the past two years had had a colonoscopy and more than one in ten (11.3 per cent) had had a faecal occult blood test (FOBT).
- The proportion of the male population aged 50 years and over who had had a test to detect bowel cancer was similar between the metropolitan area and rural areas of Victoria (33.0 per cent and 34.2 per cent respectively).
- There were three LGAs where the proportion of persons aged 50 years and over, who had had a test to detect bowel cancer, was below the average for Victoria (29.4 per cent)– Horsham, Maribyrnong and Moorabool.

### • Cervical screening

- In 2008, 87.2 per cent of all females reported having ever had at least one Pap smear in their lifetime and more than one in ten (12.4 per cent) reported never having had a Pap smear.
- Among the female population, aged 20–69 years, for whom two-yearly Pap smears are applicable, almost three quarters (71.1 per cent) reported having had a Pap smear in the past two years and more than a quarter (28.4 per cent) reported not having had a Pap smear in the past two years.
- The proportion of the female population, aged 20–69 years, who had had a Pap smear in the past two years was similar between rural and metropolitan areas of Victoria (71.4 per cent and 71.2 per cent respectively).
- There were three LGAs where the proportion of females, aged 20–69 years, who reported having had a Pap smear in the past two years was lower than the average for Victoria (71.1 per cent)– Central Goldfields, Greater Dandenong and Hume.
- There were three LGAs where the proportion of females, aged 20–69 years, who reported not having had a Pap smear was higher than the average for Victoria (28.4 per cent)– Central Goldfields, Greater Dandenong and Wyndham.

### • Breast screening

- In 2008, 87.7 per cent of all females aged 50 years and over reported having had a mammogram at least once in their lifetime and more than one in ten (11.9 per cent) reported never having had a mammogram.
- Among the female population, aged 50–69 years, for whom two-yearly mammograms are applicable, more than three quarters (75.9 per cent) reported having had a mammogram in the past two years and 23.6 per cent reported not having had a mammogram in the past two years.
- The proportion of the female population, aged 50–69 years, who had had a mammogram in the past two years was similar between rural and metropolitan areas of Victoria (74.4 per cent and 76.5 per cent respectively).
- There were two LGAs where the proportion of females, aged 50–69 years, who reported having had a mammogram in the past two years was lower than the average for Victoria (75.9 per cent)– Central Goldfields and Pyrenees.

## Fruit and vegetable intake

The current Australian guidelines recommend a minimum daily vegetable intake of four serves for persons aged 12–18 years and five serves for persons aged 19 years and over, where a serve is defined as half a cup of cooked vegetables or a cup of salad vegetables (NHMRC 2003a, 2003b). The recommended minimum daily fruit intake is three serves for persons aged 12–18 years and two serves for persons aged 19 years and over, where a serve is defined as one medium piece or two small pieces of fruit or one cup of diced pieces (table 2.1).

**Table 2.1: Recommended daily intake of fruit and vegetables**

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

Source: NHMRC 2003a, 2003b.

(a) Excludes pregnant or breastfeeding women.

Table 2.2 and figure 2.1 show vegetable consumption by age group for males. The data show that males in older age groups had higher levels of vegetable consumption than males in younger age groups. Fewer than three in one hundred males (2.9 per cent) aged 18–24 years consumed five or more serves of vegetables per day, compared with less than eight in one hundred males (7.8 per cent) aged 65 years and over who consumed the recommended number of serves of vegetables each day. Across all age groups, males most commonly consumed one or two serves of vegetables per day.

**Table 2.2: Daily vegetable consumption, by age group, males, 2008**

Age group (years)	Serves <sup>(a)</sup> per day											
	None			1–2 serves			3–4 serves			5 or more serves		
	%	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	9.0	6.5	12.3	69.0	64.4	73.3	17.5	14.1	21.6	2.9	1.7	4.8
25–34	9.3	6.8	12.7	67.7	63.8	71.4	18.4	15.7	21.5	3.8	2.6	5.4
35–44	7.1	5.7	8.9	68.1	65.3	70.8	20.1	17.8	22.6	3.3	2.4	4.4
45–54	5.3	4.3	6.7	66.1	63.4	68.7	22.6	20.3	25.0	5.0	3.9	6.4
55–64	5.9	4.7	7.4	58.7	56.1	61.3	26.9	24.6	29.3	7.3	6.0	8.8
65+	4.0	3.3	4.9	56.5	54.3	58.8	28.5	26.4	30.6	7.8	6.7	9.1
<b>Total</b>	<b>6.8</b>	<b>6.1</b>	<b>7.6</b>	<b>64.5</b>	<b>63.2</b>	<b>65.7</b>	<b>22.2</b>	<b>21.2</b>	<b>23.3</b>	<b>4.9</b>	<b>4.4</b>	<b>5.4</b>

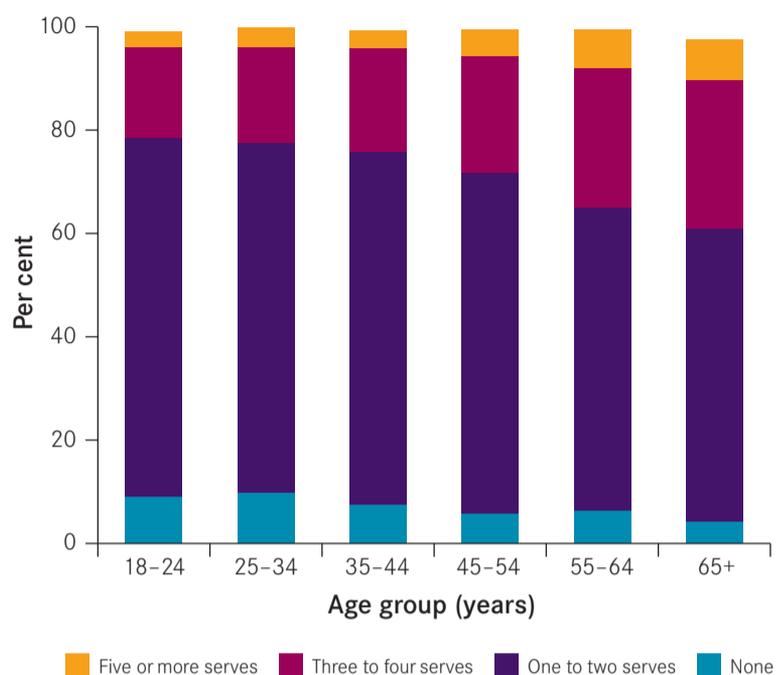
(a) A serve is half a cup of cooked vegetables or a cup of salad vegetables.

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 from the corresponding estimate for Victoria are identified by colour as follows: **above Victoria** / **below Victoria**.

Figure 2.1: Daily vegetable consumption<sup>(a)</sup>, by age group, males, 2008

(a) A serve is half a cup of cooked vegetables or a cup of salad vegetables.

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, they have not been age standardised.

Table 2.3 and figure 2.2 show vegetable consumption by age group for females. The data show that females across all age groups most commonly consumed one or two serves of vegetables per day. Similar to the pattern for males, higher levels of vegetable consumption were higher among females in older age groups, compared with females in younger age groups. The proportion of females who reported a daily vegetable intake of five or more serves was greater than for males across all age groups, with the exception of the age group 18-24 years.

Table 2.3: Daily vegetable consumption, by age group, females, 2008

Age group (years)	Serves <sup>(a)</sup> per day											
	None			1-2 serves			3-4 serves			5 or more serves		
	%	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	7.4	5.5	10.0	57.9	53.5	62.3	27.5	23.6	31.7	6.0	4.3	8.3
25-34	4.5	3.4	5.9	57.2	54.3	60.0	30.3	27.7	33.0	7.6	6.2	9.3
35-44	4.6	3.8	5.6	52.2	50.1	54.3	33.3	31.4	35.3	9.1	7.9	10.4
45-54	4.7	3.8	5.8	44.2	42.0	46.5	37.3	35.1	39.5	12.8	11.4	14.4
55-64	3.5	2.8	4.4	41.4	39.2	43.5	38.1	36.0	40.2	16.1	14.6	17.7
65+	3.8	3.1	4.5	43.3	41.4	45.2	36.9	35.1	38.8	12.5	11.3	13.7
<b>Total</b>	<b>4.7</b>	<b>4.3</b>	<b>5.3</b>	<b>49.6</b>	<b>48.5</b>	<b>50.6</b>	<b>33.9</b>	<b>32.9</b>	<b>34.9</b>	<b>10.5</b>	<b>9.9</b>	<b>11.1</b>

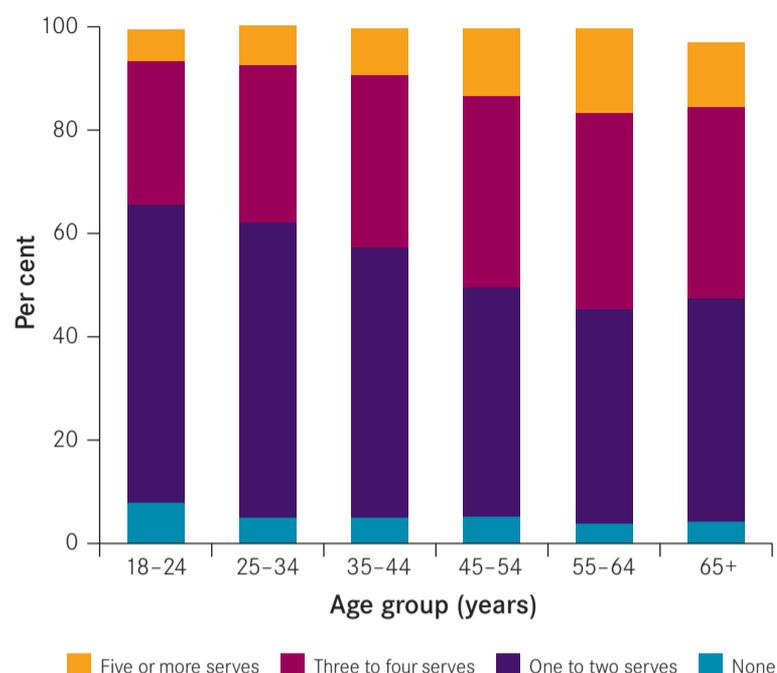
(a) A serve is half a cup of cooked vegetables or a cup of salad vegetables.

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

**Figure 2.2: Daily vegetable consumption<sup>(a)</sup>, by age group, females, 2008**

(a) A serve is half a cup of cooked vegetables or a cup of salad vegetables.

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, they have not been age standardised.

Table 2.4 shows the proportion of males, females and persons who reported consuming a given number of serves of vegetables each day. These data are age standardised to the 2006 population to allow for comparison with other groups within the population that may have a different age structure. More than half of all persons (56.9 per cent) reported consuming one or two serves of vegetables daily. A small proportion (5.8 per cent) of persons reported consuming no serves of vegetables on a daily basis and 28.2 per cent reported consuming three or four serves of vegetables per day.

More than nine in ten females (83.5 per cent) reported consuming one to four serves of vegetables daily in 2008 (table 2.4). More than six in 10 males (64.5 per cent) reported consuming one or two serves of vegetables. Approximately twice as many females as males (10.5 per cent compared with 4.9 per cent) reported consuming five or more serves of vegetables per day.

**Table 2.4: Daily vegetable consumption, by sex, 2008**

Serves <sup>(a)</sup>	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
None	6.8	6.1	7.6	4.7	4.3	5.3	5.8	5.3	6.2
One or two serves	64.5	63.2	65.7	49.6	48.5	50.6	56.9	56.0	57.7
Three or four serves	22.2	21.2	23.3	33.9	32.9	34.9	28.2	27.4	28.9
Five or more serves	4.9	4.4	5.4	10.5	9.9	11.1	7.7	7.4	8.2

(a) A serve is half a cup of cooked vegetables or a cup of salad vegetables.

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.

The proportion of persons reporting that they consumed five or more serves of vegetables a day was higher for persons living in rural areas (9.8 per cent) of the state, compared with the metropolitan area (7.0 per cent) (table 2.5). The proportion of males in the Gippsland region (7.9 per cent) who reported consuming five or more serves of vegetables per day was significantly higher than the Victorian average (4.9 per cent) for males. The proportion of females who reported consuming five or more serves of vegetables per day was significantly higher than the Victorian average (10.5 per cent) in three rural regions: Gippsland (15.2 per cent), Barwon-South Western (14.1 per cent) and Loddon Mallee (13.5 per cent). The proportion of females who consumed five or more serves of vegetables per day was below the Victorian average for females in the North and West Metropolitan region (8.3 per cent).

Table 2.5: Daily vegetable consumption, by sex and Department of Health region, 2008

Region	Serves <sup>(a)</sup> per day											
	None			1–2 serves			3–4 serves			5 or more serves		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
Barwon-South Western	8.5	5.4	13.2	60.2	54.7	65.4	25.3	21.4	29.7	5.4	3.6	7.9
Eastern Metropolitan	6.5	4.9	8.7	66.0	62.7	69.1	21.2	18.7	23.9	5.1	3.8	6.7
Gippsland	4.5	2.9	6.9	63.8	59.4	68.0	22.8	19.3	26.6	7.9	5.7	10.8
Grampians	5.0	3.8	6.6	60.7	56.3	65.0	26.9	22.9	31.3	5.4	4.0	7.1
Hume	5.4	3.8	7.6	64.0	60.6	67.2	23.7	21.0	26.6	5.4	4.2	6.9
Loddon Mallee	6.0	4.1	8.7	63.9	59.9	67.8	22.2	19.1	25.6	6.1	4.5	8.2
North and West Metropolitan	7.8	6.5	9.2	64.3	62.0	66.6	21.1	19.3	23.1	4.8	3.9	5.9
Southern Metropolitan	6.5	5.2	8.2	65.5	62.6	68.2	22.8	20.5	25.4	3.6	2.8	4.6
<b>Metropolitan</b>	7.0	6.2	7.9	65.2	63.6	66.7	21.7	20.4	23.0	4.5	3.9	5.1
<b>Rural</b>	6.3	4.8	8.2	62.3	60.0	64.5	24.1	22.4	25.9	6.0	5.1	6.9
<b>Total</b>	6.8	6.1	7.6	64.5	63.2	65.7	22.2	21.2	23.3	4.9	4.4	5.4
<b>Females</b>												
Barwon-South Western	4.7	3.0	7.4	44.2	39.5	49.1	35.6	31.1	40.3	14.1	11.4	17.3
Eastern Metropolitan	3.7	2.8	4.9	49.5	46.7	52.2	35.1	32.5	37.8	10.6	9.2	12.2
Gippsland	3.3	2.2	4.8	44.5	41.2	47.8	36.1	33.0	39.4	15.2	13.2	17.5
Grampians	3.9	2.5	5.9	43.0	39.3	46.8	40.0	36.2	43.9	11.4	9.8	13.3
Hume	3.6	2.5	5.1	45.7	43.1	48.4	37.3	34.7	40.0	12.1	10.6	13.7
Loddon Mallee	4.2	3.0	6.0	46.8	43.7	49.8	35.0	32.2	37.9	13.5	11.7	15.6
North and West Metropolitan	5.7	4.9	6.6	53.7	51.9	55.6	30.4	28.7	32.2	8.3	7.3	9.3
Southern Metropolitan	5.4	4.3	6.7	49.5	47.1	51.9	34.5	32.3	36.7	9.5	8.3	10.9
<b>Metropolitan</b>	5.0	4.5	5.7	51.2	49.9	52.5	33.0	31.7	34.2	9.3	8.6	10.1
<b>Rural</b>	4.0	3.3	4.8	44.9	43.1	46.7	36.6	34.9	38.3	13.4	12.4	14.5
<b>Total</b>	4.7	4.3	5.3	49.6	48.5	50.6	33.9	32.9	34.9	10.5	9.9	11.1
<b>Persons</b>												
Barwon-South Western	6.7	4.5	9.7	52.0	48.2	55.8	30.6	27.4	33.9	9.8	8.1	11.9
Eastern Metropolitan	5.1	4.1	6.4	57.5	55.4	59.7	28.2	26.4	30.2	7.9	6.9	9.0
Gippsland	4.0	2.9	5.3	54.0	51.2	56.7	29.5	27.1	32.0	11.6	10.0	13.4
Grampians	4.4	3.5	5.7	51.6	48.7	54.5	33.6	30.7	36.5	8.5	7.4	9.8
Hume	4.5	3.4	5.8	54.7	52.5	56.9	30.7	28.7	32.7	8.8	7.8	9.8
Loddon Mallee	5.1	3.9	6.7	55.2	52.6	57.8	28.7	26.5	30.9	9.9	8.6	11.3
North and West Metropolitan	6.7	5.9	7.5	59.1	57.6	60.6	25.8	24.5	27.1	6.5	5.9	7.3
Southern Metropolitan	5.9	5.1	6.9	57.4	55.5	59.2	28.7	27.0	30.4	6.6	5.8	7.5
<b>Metropolitan</b>	6.0	5.5	6.5	58.1	57.1	59.1	27.4	26.5	28.3	7.0	6.5	7.4
<b>Rural</b>	5.1	4.3	6.2	53.4	52.0	54.8	30.5	29.2	31.7	9.8	9.1	10.5
<b>Total</b>	5.8	5.3	6.2	56.9	56.0	57.7	28.2	27.4	28.9	7.7	7.4	8.2

(a) A serve is half a cup of cooked vegetables or a cup of salad vegetables.

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.

Most Victorians (56.9 per cent) consumed one or two serves of vegetables per day. As shown in table 2.6 and figure 2.3, in two LGAs (Colac-Otway and Greater Dandenong), the proportion of persons who reported that they did not consume any serves of vegetables on a daily basis (9.6 per cent and 12.4 per cent respectively) was above the average for Victoria (5.8 per cent). Figure 2.4 shows that the proportion of persons who reported that they consumed five or more serves of vegetables a day was above the Victorian average (7.7 per cent) for several LGAs: Bass Coast (13.9 per cent), Queenscliffe (13.1 per cent), Wangaratta (12.6 per cent), Greater Bendigo (12.4 per cent), South Gippsland (11.9 per cent), Glenelg (11.7 per cent), Wellington (11.7 per cent) and Latrobe (11.5 per cent).

Table 2.6: Daily vegetable consumption, by LGA, 2008

LGA	Serves <sup>(a)</sup> per day											
	None			1–2 serves			3–4 serves			5 or more serves		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	1.1*	0.5	2.3	54.8	48.2	61.2	34.7	28.6	41.4	7.8	5.5	10.8
Ararat (RC)	9.4*	5.0	16.8	50.7	43.1	58.2	30.3	25.1	36.1	6.5	4.5	9.2
Ballarat (C)	4.0*	2.3	6.6	48.4	42.9	53.9	37.4	32.1	43.0	7.6	5.5	10.5
Banyule (C)	6.0	3.7	9.4	54.8	48.8	60.7	30.5	25.4	36.2	6.2	4.1	9.4
Bass Coast (S)	5.3*	2.7	10.1	55.7	48.2	63.0	24.2	18.3	31.1	13.9	10.1	18.9
Baw Baw (S)	3.0*	1.6	5.4	53.0	46.9	58.9	34.2	28.6	40.2	9.2	6.8	12.5
Bayside (C)	4.6*	2.2	9.3	55.0	48.8	61.0	31.4	26.2	37.1	8.9	6.1	12.7
Benalla (RC)	2.9*	1.4	6.1	51.4	44.7	58.0	35.9	29.8	42.5	9.1	6.5	12.5
Boroondara (C)	5.1	3.0	8.6	56.5	50.8	62.0	28.8	24.0	34.1	8.3	5.8	11.9
Brimbank (C)	7.5	5.4	10.3	62.0	56.9	66.8	22.4	18.4	27.0	6.3	4.2	9.4
Buloke (S)	1.9*	1.1	3.2	55.9	49.7	61.9	33.4	27.7	39.6	8.0	5.5	11.6
Campaspe (S)	3.0*	1.8	5.0	60.8	55.1	66.2	25.1	20.7	30.2	10.6	7.6	14.6
Cardinia (S)	4.2*	2.6	6.9	53.7	47.6	59.7	30.6	25.7	36.0	8.7	5.6	13.4
Casey (C)	5.9	3.9	8.8	60.1	54.9	65.0	27.1	22.7	31.8	5.0	3.4	7.5
Central Goldfields (S)	5.1*	3.0	8.5	51.0	44.3	57.6	34.1	27.9	40.8	9.3	6.5	13.1
Colac-Otway (S)	9.6	6.3	14.4	48.3	41.9	54.7	31.7	26.6	37.4	8.8	6.5	11.9
Corangamite (S)	4.0*	2.1	7.3	50.7	43.6	57.7	32.9	26.2	40.3	10.4	7.7	13.8
Darebin (C)	5.6	3.7	8.5	60.2	54.7	65.4	27.2	22.6	32.3	4.9	3.1	7.6
East Gippsland (S)	1.2*	0.6	2.5	57.0	49.5	64.2	27.8	23.1	33.1	12.9	8.1	19.9
Frankston (C)	5.0*	2.8	8.8	61.6	56.2	66.7	26.8	22.5	31.6	6.3	4.4	8.8
Gannawarra (S)	7.9	5.7	10.9	55.3	49.8	60.5	27.4	22.9	32.4	8.8	6.4	12.0
Glen Eira (C)	4.0*	2.3	6.9	58.2	52.7	63.6	30.1	25.2	35.5	5.9	4.0	8.6
Glenelg (S)	4.8*	2.6	8.5	53.1	46.6	59.5	30.0	24.2	36.4	11.7	8.9	15.3
Golden Plains (S)	3.4	2.1	5.4	58.8	53.2	64.2	28.1	23.2	33.6	9.0	6.9	11.7
Greater Bendigo (C)	6.3	4.0	9.8	52.7	47.0	58.3	28.1	23.7	33.1	12.4	9.4	16.1
Greater Dandenong (C)	12.4	9.0	16.9	60.4	55.1	65.5	21.2	17.3	25.7	2.8*	1.7	4.7
Greater Geelong (C)	7.6*	4.5	12.4	52.7	46.6	58.6	28.7	23.8	34.1	10.0	7.4	13.6
Greater Shepparton (C)	5.9*	3.2	10.6	56.6	50.8	62.3	27.5	23.1	32.5	7.7	5.5	10.7
Hepburn (S)	4.0*	2.3	6.7	55.0	48.5	61.4	30.7	24.8	37.3	9.0	6.7	11.9
Hindmarsh (S)	7.4*	4.2	12.5	57.7	51.4	63.8	24.3	20.1	29.0	8.4	6.3	11.2
Hobsons Bay (C)	5.1*	3.1	8.4	65.0	59.9	69.7	22.7	18.6	27.3	6.5	4.5	9.2
Horsham (RC)	2.4*	1.1	4.9	58.3	52.7	63.7	29.5	24.9	34.5	9.0	6.0	13.1
Hume (C)	8.5	5.6	12.8	61.2	55.8	66.4	20.6	16.8	25.0	7.3	5.1	10.5
Indigo (S)	1.4*	0.6	3.1	53.0	46.2	59.7	34.3	28.3	40.8	11.0	7.3	16.3
Kingston (C)	5.4	3.4	8.4	54.7	48.4	60.8	32.2	26.5	38.4	7.0	4.7	10.3
Knox (C)	3.9*	2.2	6.7	60.4	55.2	65.5	26.7	22.5	31.4	7.8	5.6	10.9
Latrobe (C)	4.8*	2.8	8.2	56.1	50.8	61.3	26.7	22.2	31.6	11.5	8.7	15.0
Loddon (S)	4.9*	2.7	8.7	57.6	51.6	63.3	27.1	22.4	32.3	9.1	6.3	13.0
Macedon Ranges (S)	3.1	1.8	5.3	54.7	48.0	61.3	32.2	26.1	38.9	9.6	6.6	13.6
Manningham (C)	3.7	2.0	7.0	53.7	47.9	59.4	33.0	27.9	38.6	8.0	5.7	11.1

(a) A serve is half a cup of cooked vegetables or a cup of salad vegetables. Metropolitan and rural LGAs are identified by colour as follows: metropolitan / rural. 95% CI = 95 per cent confidence interval. LGA = local government area. 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. \* Estimate has a relative standard error between 25 and 50 per cent and should be interpreted with caution. \*\* Estimate has a relative standard error of greater than 50 per cent and is not reported as it is unreliable for general use.

Table 2.6: Daily vegetable consumption, by LGA, 2008 (continued)

LGA	Serves <sup>(a)</sup> per day											
	None			1–2 serves			3–4 serves			5 or more serves		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	3.1	1.2	8.1	53.6	46.6	60.5	33.7	26.6	41.8	9.2	6.1	13.7
Maribyrnong (C)	8.9	5.9	13.2	59.5	54.1	64.6	23.2	19.3	27.6	6.5	4.1	10.1
Maroondah (C)	5.5*	3.3	9.2	57.0	51.3	62.6	27.7	22.9	33.0	8.8	6.3	12.1
Melbourne (C)	4.6	2.8	7.3	57.6	52.3	62.8	30.3	25.8	35.3	5.5	3.6	8.3
Melton (S)	7.2	4.9	10.5	61.9	56.5	67.0	23.1	19.1	27.8	6.5	4.3	9.7
Mildura (RC)	5.2*	3.1	8.8	57.9	52.3	63.3	28.0	23.4	33.1	7.2	5.1	10.0
Mitchell (S)	5.0	3.0	8.0	58.6	53.0	63.9	28.6	24.1	33.6	6.4	4.3	9.4
Moira (S)	**			51.8	45.0	58.6	36.5	30.2	43.3	8.0	5.8	11.0
Monash (C)	7.9	5.0	12.2	59.1	53.4	64.6	24.5	20.4	29.0	7.2	4.8	10.7
Moonee Valley (C)	5.5	3.6	8.3	55.8	50.5	61.0	29.3	24.7	34.4	7.5	5.2	10.6
Moorabool (S)	5.1	3.3	7.8	50.5	44.4	56.5	34.1	28.4	40.3	9.5	6.9	12.9
Moreland (C)	6.7	4.5	9.9	59.4	54.3	64.3	24.8	20.6	29.6	7.3	5.2	10.2
Mornington Peninsula (S)	5.9*	3.4	10.3	60.9	54.5	66.9	24.5	19.7	30.1	8.0	5.5	11.4
Mount Alexander (S)	2.2*	1.1	4.3	49.0	42.4	55.5	38.0	31.7	44.6	10.0	7.7	13.0
Moyne (S)	6.7*	3.7	11.8	52.4	45.6	59.0	32.3	26.7	38.4	7.5	4.9	11.5
Murrindindi (S)	7.3*	3.1	16.1	50.8	43.8	57.7	31.0	25.4	37.3	10.5	7.7	14.3
Nillumbik (S)	3.4*	1.7	5.9	59.8	54.8	51.5	28.1	24.1	30.5	8.1	5.6	11.2
Northern Grampians (S)	5.9	3.7	9.3	51.5	45.5	57.5	30.5	25.3	36.3	11.2	8.2	15.1
Port Phillip (C)	6.3	4.1	9.4	54.6	49.6	59.6	31.7	27.3	36.4	6.9	4.9	9.6
Pyrenees (S)	2.7*	1.5	4.9	53.2	47.2	59.2	32.1	26.6	38.2	9.7	7.3	12.9
Queenscliffe (B)	**			54.5	46.4	62.4	30.4	24.0	37.7	13.1	8.6	19.7
Southern Grampians (S)	5.0	2.6	9.3	48.0	42.1	54.0	36.0	30.4	42.1	10.5	7.8	14.0
South Gippsland (S)	**			55.6	49.5	61.5	30.2	24.7	36.3	11.9	9.0	15.6
Stonnington (C)	3.4	2.0	5.7	53.4	48.2	58.5	34.4	29.6	39.5	8.0	5.7	11.2
Strathbogie (S)	1.7*	0.8	3.3	53.6	46.5	60.6	36.1	29.5	43.2	7.2	5.1	10.1
Surf Coast (S)	1.7*	0.9	3.5	51.3	44.5	58.0	36.0	29.6	42.9	9.8	7.4	12.8
Swan Hill (RC)	6.0*	3.3	10.7	57.2	50.5	63.6	23.6	19.3	28.5	8.4	6.0	11.5
Towong (S)	1.1*	0.4	2.9	51.8	45.0	58.6	36.0	29.6	42.9	9.2	6.7	12.5
Wangaratta (RC)	3.3*	1.7	6.3	50.5	43.7	57.3	33.0	26.7	39.9	12.6	9.0	17.5
Warrnambool (C)	5.5	3.2	9.1	49.0	43.1	54.9	36.2	30.8	41.9	8.5	6.1	11.6
Wellington (S)	5.6*	3.2	9.8	49.4	43.4	55.4	32.2	27.1	37.7	11.7	8.9	15.3
West Wimmera (S)	1.7*	1.0	2.9	57.5	51.5	63.4	31.0	25.6	37.0	8.2	6.0	11.2
Whitehorse (C)	4.0*	2.2	7.1	58.7	52.9	64.2	28.4	23.4	33.9	7.6	5.6	10.3
Whittlesea (C)	8.1	5.6	11.6	59.8	54.7	64.7	21.9	18.0	26.2	7.5	5.3	10.6
Wodonga (RC)	7.6	4.9	11.5	57.5	52.2	62.7	24.4	20.5	28.8	9.1	6.6	12.4
Wyndham (C)	7.3	5.1	10.3	57.5	52.5	62.4	28.8	24.5	33.5	5.0	3.3	7.4
Yarra (C)	4.5	2.7	7.2	53.1	47.6	58.6	34.1	28.9	39.8	7.2	5.0	10.3
Yarra Ranges (S)	4.4	2.8	6.9	53.2	47.9	58.4	33.1	28.3	38.2	8.2	5.8	11.3
Yarriambiack (S)	4.8	3.2	7.2	53.5	47.1	59.8	32.6	26.8	39.0	8.6	6.0	12.1
<b>Total</b>	<b>5.8</b>	<b>5.3</b>	<b>6.2</b>	<b>56.9</b>	<b>56.0</b>	<b>57.7</b>	<b>28.2</b>	<b>27.4</b>	<b>28.9</b>	<b>7.7</b>	<b>7.4</b>	<b>8.2</b>

Figure 2.3: No serves<sup>(a)</sup> of vegetables per day, by LGA, 2008

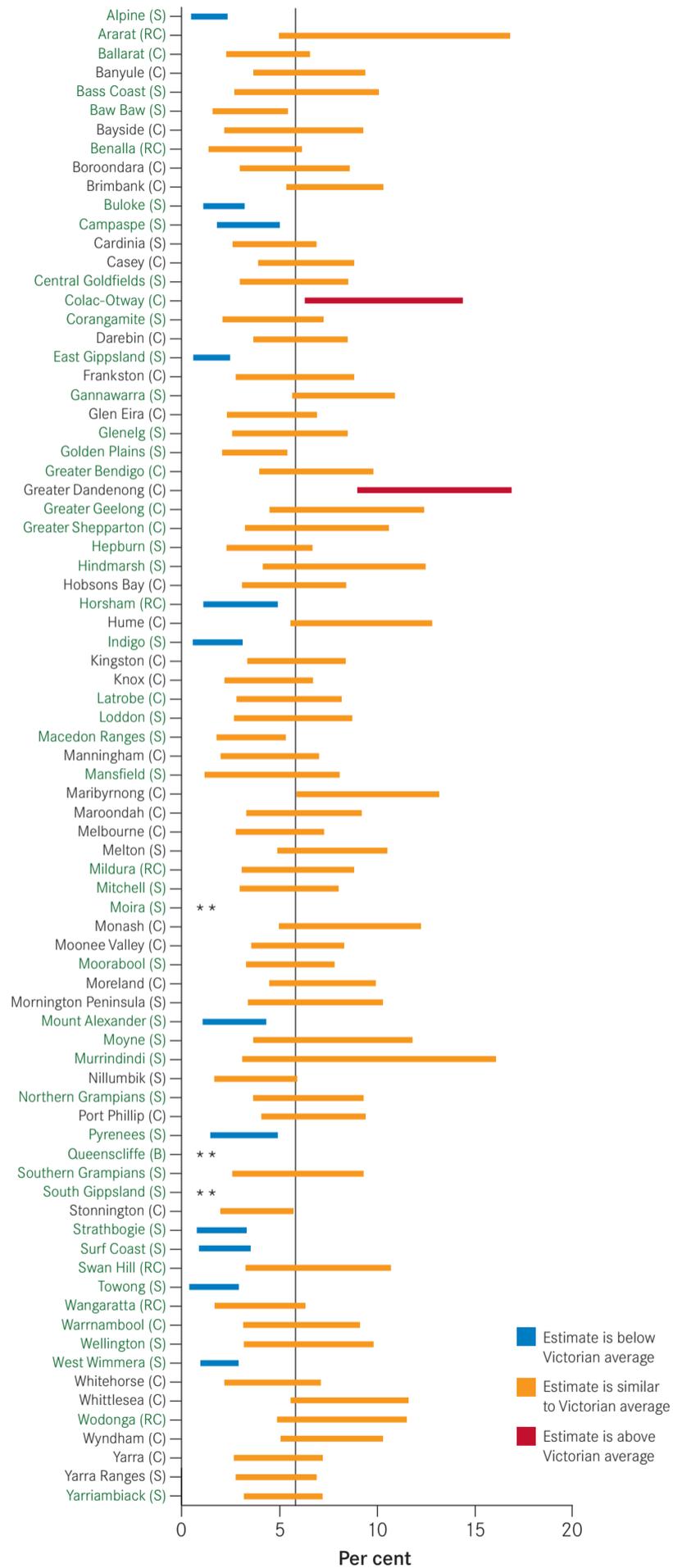
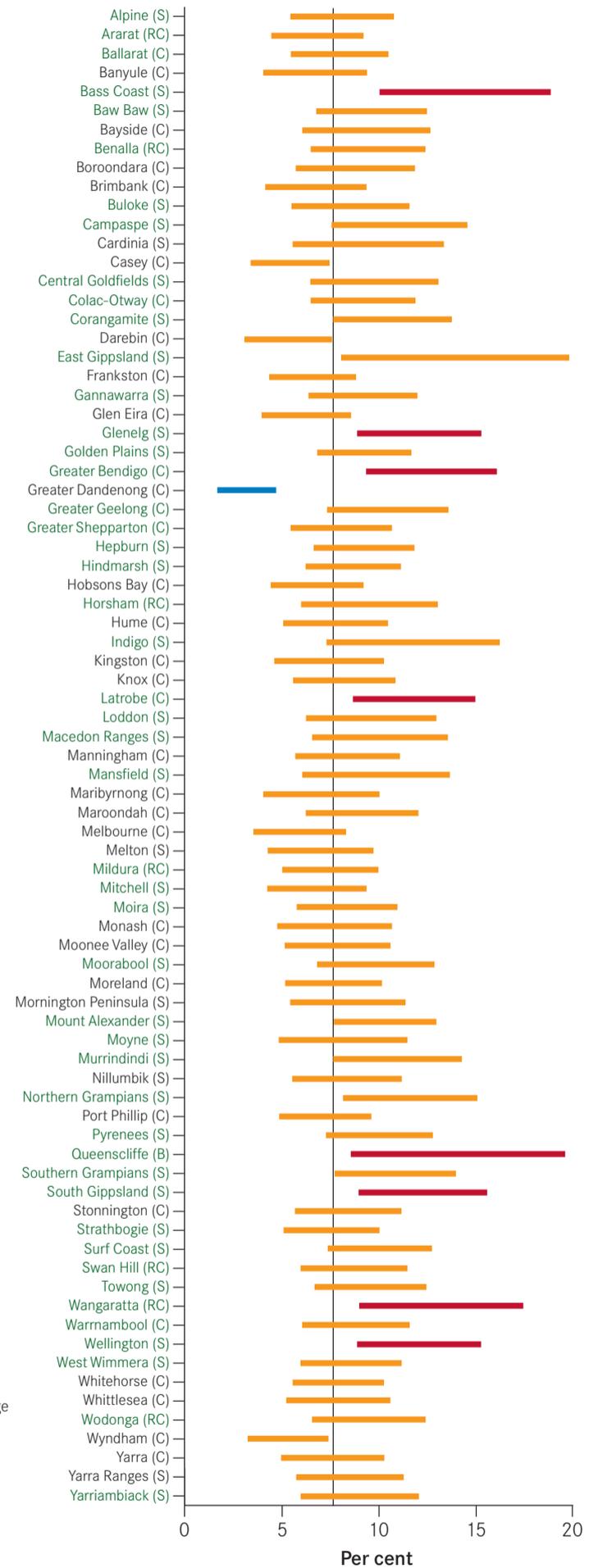


Figure 2.4: Five or more serves<sup>(a)</sup> of vegetables per day, by LGA, 2008



(a) A serve is half a cup of cooked vegetables or a cup of salad vegetables.

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 line on the graph is the Victorian estimate, it does not show the 95% CI. See relevant table for 95% CI for Victoria (Total).

\*\* Estimate has a relative standard error of greater than 50 per cent and is not shown as it is unreliable for general use.

Table 2.7 and figure 2.5 show daily fruit consumption by age group for males. More than four in ten (42.3 per cent) males reported consumption of two or more serves of fruit a day. Males aged 65 years and over were less likely to report no daily intake of fruit (13.6 per cent) and more likely to report consuming two or more serves a day (47.0 per cent), compared with the averages for all males in Victoria (17.9 per cent and 42.3 per cent respectively).

**Table 2.7: Daily fruit consumption<sup>(a)</sup>, by age group, males, 2008**

Age group (years)	Serves <sup>(a)</sup> per day								
	None			1 serve			2 or more serves		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
18-24	16.2	12.9	20.0	40.9	36.3	45.7	42.4	37.7	47.2
25-34	21.1	18.0	24.7	40.4	36.5	44.4	37.5	33.7	41.4
35-44	17.5	15.5	19.8	37.0	34.1	39.9	44.0	41.0	47.0
45-54	20.9	18.6	23.3	37.8	35.1	40.5	40.8	38.1	43.6
55-64	17.3	15.4	19.3	38.1	35.5	40.7	44.0	41.3	46.6
65+	13.6	12.1	15.2	38.0	35.8	40.2	47.0	44.7	49.3
<b>Total</b>	<b>17.9</b>	<b>16.8</b>	<b>18.9</b>	<b>38.8</b>	<b>37.4</b>	<b>40.1</b>	<b>42.3</b>	<b>41.0</b>	<b>43.7</b>

(a) A serve is one medium piece or two small pieces of fruit, or one cup of diced pieces.

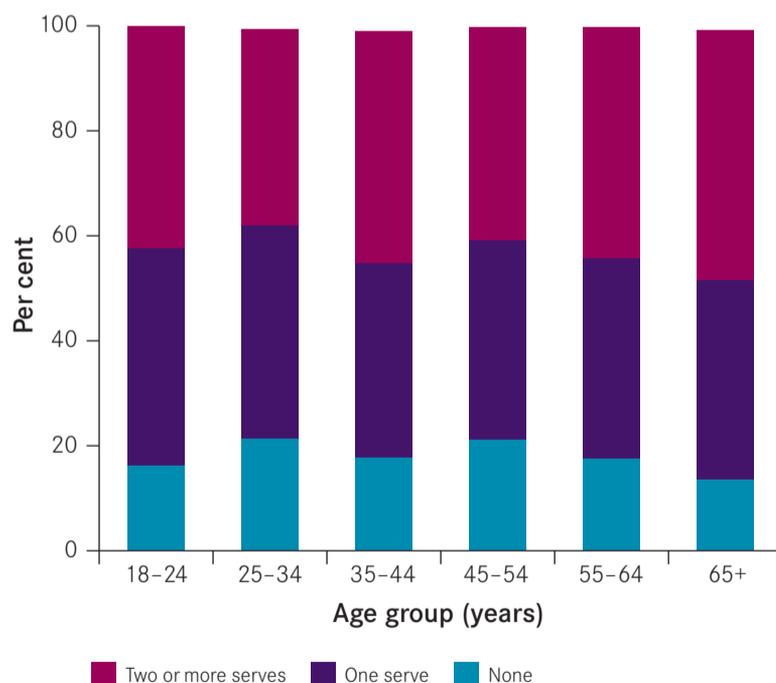
95% CI = 95 per cent confidence interval.

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

**Figure 2.5: Daily fruit consumption<sup>(a)</sup>, by age group, males, 2008**



(a) A serve is one medium piece or two small pieces of fruit, or one cup of diced pieces.

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, they have not been age standardised.

Table 2.8 and figure 2.6 show daily fruit consumption by age group for females. The proportion of females reporting a daily intake of two or more serves of fruit was greater across all age groups, compared with males.

**Table 2.8: Daily fruit consumption, by age group, females, 2008**

Age group (years)	Serves <sup>(a)</sup> per day								
	None			1 serve			2 or more serves		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
18–24	10.6	8.2	13.5	36.1	32.0	40.4	53.1	48.7	57.5
25–34	10.7	9.1	12.4	37.6	34.9	40.5	50.7	47.8	53.6
35–44	12.2	10.9	13.7	36.0	34.0	38.0	51.0	48.9	53.1
45–54	11.6	10.3	13.0	31.9	29.8	34.1	55.5	53.2	57.7
55–64	10.1	8.9	11.5	29.1	27.2	31.1	60.1	58.0	62.2
65+	9.2	8.1	10.3	30.2	28.5	32.0	59.4	57.4	61.2
<b>Total</b>	<b>10.8</b>	<b>10.1</b>	<b>11.4</b>	<b>33.8</b>	<b>32.8</b>	<b>34.8</b>	<b>54.6</b>	<b>53.5</b>	<b>55.6</b>

(a) A serve is one medium piece or two small pieces of fruit, or one cup of diced pieces.

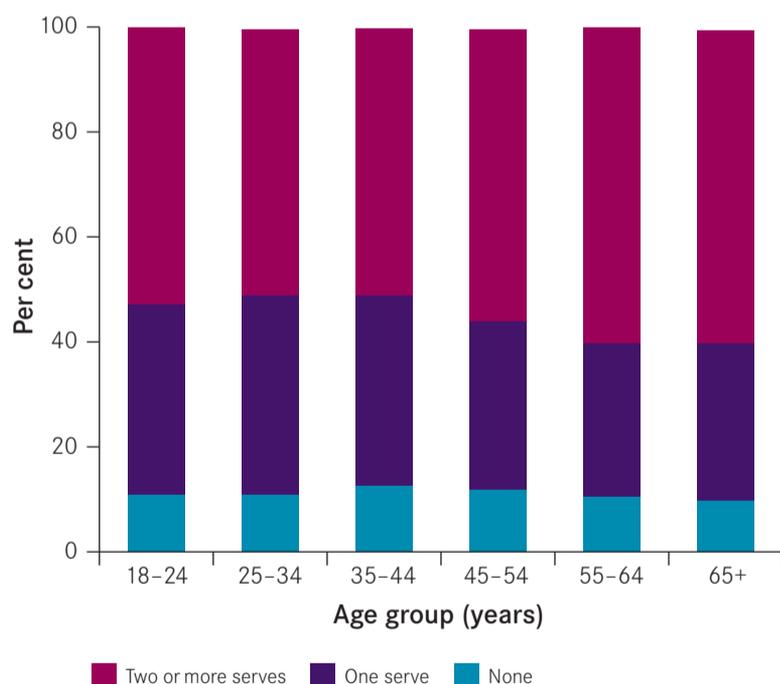
95% CI = 95 per cent confidence interval.

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

**Figure 2.6: Daily fruit consumption<sup>(a)</sup>, by age group, females, 2008**



(a) A serve is one medium piece or two small pieces of fruit, or one cup of diced pieces.

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, they have not been age standardised.

Table 2.9 shows the proportion of males, females and persons who reported consuming a given number of serves of fruit each day. These data are age standardised to the 2006 population to adjust for any differences in the age structure of the populations being compared. In 2008, less than half (48.6 per cent) of all persons reported consuming two or more serves of fruit daily. More than one in 10 persons (14.3 per cent) reported that they consume no serves of fruit and 36.1 per cent reported consuming a single serve of fruit each day.

More than half of the female population (54.6 per cent) reported consuming two or more serves of fruit daily in 2008 (table 2.9), compared with 42.3 per cent of the male population. More than one in six males (17.9 per cent) reported no daily intake of fruit, compared with approximately one in ten (10.8 per cent) females.

**Table 2.9: Daily fruit consumption, by sex, 2008**

Serves <sup>(a)</sup>	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
None	<b>17.9</b>	16.8	18.9	<b>10.8</b>	10.1	11.4	<b>14.3</b>	13.7	14.9
One serve	<b>38.8</b>	37.4	40.1	<b>33.8</b>	32.8	34.8	<b>36.1</b>	35.3	37.0
Two or more serves	<b>42.3</b>	41.0	43.7	<b>54.6</b>	53.5	55.6	<b>48.6</b>	47.8	49.5

(a) A serve is one medium piece or two small pieces of fruit, or one cup of diced pieces.

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.

The proportion of persons reporting that they consumed two or more serves of fruit a day was similar to the average for Victoria (48.6 per cent) for persons living in the metropolitan and rural areas of Victoria (table 2.10). A higher proportion of males (24.2 per cent) in the Grampians region than the average for Victoria (17.9 per cent) reported no daily intake of fruit. The proportion of males who consumed two or more serves was similar across all regions. The proportion of females reporting that they consumed two or more serves of fruit each day was significantly below the Victorian average in two rural regions: Loddon Mallee (47.5 per cent) and Grampians (47.2 per cent). A higher proportion of persons (16.3 per cent) living in the rural areas of the state did not consume fruit, compared with the average for Victoria (14.3 per cent).

Table 2.10: Daily fruit consumption, by sex and Department of Health region, 2008

Region	Serves <sup>(a)</sup> per day								
	None			One serve			Two or more serves		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>									
Barwon-South Western	16.2	12.3	21.1	34.7	29.8	40.0	47.5	41.4	53.6
Eastern Metropolitan	16.9	14.3	19.9	38.4	35.0	41.9	44.0	40.6	47.5
Gippsland	22.2	18.6	26.2	34.9	30.8	39.3	42.8	38.5	47.3
Grampians	24.2	20.8	28.0	35.4	31.5	39.4	38.9	34.7	43.3
Hume	21.5	18.5	24.8	38.5	35.2	41.9	38.8	35.4	42.2
Loddon Mallee	20.5	17.3	24.3	40.4	36.4	44.5	38.0	34.0	42.2
North and West Metropolitan	17.7	15.9	19.7	38.0	35.7	40.4	43.3	41.0	45.6
Southern Metropolitan	16.7	14.6	19.1	39.7	36.9	42.7	42.2	39.3	45.2
<b>Metropolitan</b>	17.0	15.8	18.3	39.0	37.4	40.6	42.9	41.3	44.6
<b>Rural</b>	20.3	18.6	22.1	36.8	34.7	39.0	41.8	39.5	44.1
<b>Total</b>	17.9	16.8	18.9	38.8	37.4	40.1	42.3	41.0	43.7
<b>Females</b>									
Barwon-South Western	11.7	9.1	14.9	30.7	26.5	35.3	56.7	51.8	61.4
Eastern Metropolitan	8.6	7.2	10.2	34.5	31.9	37.3	55.9	53.1	58.7
Gippsland	10.4	8.6	12.4	37.6	34.3	40.9	51.3	48.0	54.6
Grampians	13.4	10.9	16.3	38.8	35.1	42.7	47.2	43.5	51.0
Hume	11.7	10.0	13.6	32.3	29.8	34.8	55.1	52.3	57.7
Loddon Mallee	14.7	12.3	17.3	37.1	34.0	40.4	47.5	44.4	50.5
North and West Metropolitan	11.0	9.9	12.1	33.0	31.2	34.8	55.0	53.1	56.9
Southern Metropolitan	11.0	9.6	12.7	32.9	30.7	35.2	55.5	53.1	57.8
<b>Metropolitan</b>	10.4	9.6	11.2	33.3	32.0	34.5	55.5	54.2	56.8
<b>Rural</b>	12.3	11.2	13.5	35.1	33.4	36.8	51.8	50.0	53.6
<b>Total</b>	10.8	10.1	11.4	33.8	32.8	34.8	54.6	53.5	55.6
<b>Persons</b>									
Barwon-South Western	13.9	11.4	16.9	32.7	29.3	36.3	52.1	48.1	56.0
Eastern Metropolitan	12.7	11.2	14.5	36.3	34.1	38.5	50.1	47.9	52.3
Gippsland	16.2	14.1	18.5	36.2	33.6	39.0	47.2	44.4	49.9
Grampians	18.6	16.4	21.1	37.1	34.3	40.0	43.3	40.4	46.2
Hume	16.6	14.8	18.5	35.3	33.1	37.5	47.1	44.8	49.3
Loddon Mallee	17.5	15.4	19.7	38.7	36.1	41.3	42.9	40.4	45.6
North and West Metropolitan	14.3	13.3	15.4	35.4	34.0	36.9	49.2	47.7	50.7
Southern Metropolitan	13.8	12.5	15.3	36.1	34.3	38.0	49.1	47.2	51.0
<b>Metropolitan</b>	13.7	12.9	14.4	36.0	35.0	37.0	49.4	48.3	50.4
<b>Rural</b>	16.3	15.2	17.3	35.8	34.5	37.2	46.9	45.5	48.4
<b>Total</b>	14.3	13.7	14.9	36.1	35.3	37.0	48.6	47.8	49.5

(a) A serve is one medium piece or two small pieces of fruit, or one cup of diced pieces.

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 2.11 shows the proportion of persons who reported consuming either no serves, one serve or two or more serves of fruit per day by local government area. The proportion of persons reporting that they consumed two or more serves of fruit each day was significantly higher than the Victorian average (48.6 per cent) for seven local government areas: Surf Coast (61.5 per cent), Queenscliffe (57.5 per cent), Bayside (56.9 per cent), Banyule (56.6 per cent), Kingston (56.1 per cent), Moonee Valley (55.4 per cent) and Melbourne (54.7 per cent). The proportion of persons reporting a daily intake of two or more serves of fruit was below the state average for Melton (41.9 per cent), Hindmarsh (41.5 per cent), Northern Grampians (40.8 per cent), Ballarat (40.7 per cent), Wyndham (39.4 per cent), Campaspe (39.3 per cent), Greater Bendigo (37.9 per cent), Ararat (37.8 per cent) and Ganawarra (34.6 per cent). The proportion of persons who did not consume any fruit was above the average for Victoria (14.3 per cent) in 12 LGAs (10 rural and two metropolitan),

Figures 2.7 and 2.8 summarise the data shown in table 2.11 for the proportion of persons reporting that they did not consume any serves of fruit and the proportion of persons who consumed two or more serves of fruit a day, by LGA.

Table 2.11: Daily fruit consumption, by LGA , 2008

LGA	Serves <sup>(a)</sup> per day								
	None			One serve			Two or more serves		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	15.6	11.1	21.4	34.7	28.6	41.2	48.3	41.7	54.9
Ararat (RC)	18.3	12.3	26.3	42.8	35.7	50.3	37.8	32.5	43.4
Ballarat (C)	19.9	15.7	24.9	38.3	32.9	44.0	40.7	35.3	46.4
Banyule (C)	11.6	8.3	16.1	31.6	26.2	37.4	56.6	50.6	62.4
Bass Coast (S)	17.4	11.5	25.3	32.9	26.1	40.6	49.3	40.7	57.9
Baw Baw (S)	14.4	10.2	19.7	37.1	31.4	43.2	48.2	42.4	54.1
Bayside (C)	9.7	6.3	14.8	33.3	27.7	39.5	56.9	50.9	62.8
Benalla (RC)	10.3	7.1	14.8	37.1	31.1	43.5	51.9	45.5	58.3
Boroondara (C)	12.9	9.3	17.7	33.2	27.9	38.8	51.8	46.3	57.3
Brimbank (C)	12.5	9.6	16.3	32.4	27.9	37.3	53.4	48.5	58.2
Buloke (S)	14.4	10.4	19.4	37.8	31.8	44.3	47.1	40.9	53.5
Campaspe (S)	17.3	12.9	22.7	43.0	37.0	49.2	39.3	33.6	45.3
Cardinia (S)	16.0	12.2	20.7	37.5	32.1	43.3	46.2	40.2	52.2
Casey (C)	17.5	13.8	22.0	35.8	30.9	40.9	43.7	38.6	49.0
Central Goldfields (S)	22.0	16.8	28.3	30.7	24.8	37.4	46.8	40.0	53.7
Colac-Otway (S)	18.2	13.5	24.2	37.3	31.4	43.7	43.5	36.8	50.4
Corangamite (S)	12.8	9.7	16.8	39.5	33.8	45.6	46.2	40.2	52.3
Darebin (C)	13.4	10.3	17.2	36.4	31.2	42.1	49.9	44.4	55.4
East Gippsland (S)	12.9	9.1	18.1	36.1	29.3	43.6	50.1	42.4	57.9
Frankston (C)	21.0	16.5	26.5	34.0	28.8	39.6	44.8	39.2	50.5
Gannawarra (S)	24.8	19.5	30.9	39.1	33.2	45.3	34.6	29.6	39.9
Glen Eira (C)	7.0	4.7	10.4	41.2	35.8	46.9	50.8	45.2	56.4
Glenelg (S)	16.2	12.3	21.1	36.0	30.1	42.5	46.8	40.7	53.1
Golden Plains (S)	16.1	12.4	20.6	38.0	32.5	43.9	45.1	39.2	51.2
Greater Bendigo (C)	17.1	13.0	22.1	44.1	38.4	50.1	37.9	32.3	43.9
Greater Dandenong (C)	15.8	12.2	20.3	38.4	33.3	43.7	43.8	38.7	49.0
Greater Geelong (C)	13.5	9.6	18.6	30.3	25.1	36.0	54.7	48.4	60.8
Greater Shepparton (C)	19.4	14.4	25.7	33.8	28.4	39.6	44.0	38.7	49.4
Hepburn (S)	20.8	15.7	27.1	28.2	22.3	35.1	50.3	42.8	57.9
Hindmarsh (S)	20.6	15.6	26.7	37.4	31.3	43.8	41.5	35.5	47.7
Hobsons Bay (C)	13.9	10.8	17.8	34.5	29.2	40.2	50.6	44.9	56.4
Horsham (RC)	16.6	12.5	21.7	36.1	30.2	42.4	46.5	40.2	52.9
Hume (C)	17.1	13.0	22.1	33.8	28.9	38.9	48.0	42.5	53.6
Indigo (S)	18.5	13.0	25.5	31.9	26.0	38.5	49.0	42.0	56.1
Kingston (C)	8.1	5.7	11.5	34.6	29.3	40.4	56.1	50.2	61.8
Knox (C)	13.9	10.3	18.5	38.8	33.5	44.4	47.0	41.4	52.6
Latrobe (C)	20.1	15.8	25.2	36.1	30.9	41.6	43.4	38.0	49.0
Loddon (S)	16.5	12.3	21.8	40.2	34.0	46.7	41.8	35.6	48.2
Macedon Ranges (S)	11.7	7.9	17.0	33.7	28.1	39.9	54.3	47.6	60.9
Manningham (C)	10.1	7.0	14.3	35.2	29.8	41.0	54.4	48.4	60.2

(a) A serve is one medium piece or two small pieces of fruit, or one cup of diced pieces.

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

LGA = local government area.

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 2.11: Daily fruit consumption, by LGA , 2008 (continued)

LGA	Serves <sup>(a)</sup> per day								
	None			One serve			Two or more serves		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	16.0	11.4	21.9	36.9	29.6	44.8	46.5	39.1	54.1
Maribyrnong (C)	18.0	13.9	23.1	38.5	33.4	43.9	42.7	37.5	48.1
Maroondah (C)	12.3	9.1	16.4	36.6	30.9	42.6	50.6	44.7	56.5
Melbourne (C)	8.5	6.1	11.8	36.4	31.6	41.5	54.7	49.6	59.7
Melton (S)	17.9	14.1	22.6	39.9	34.5	45.5	41.9	36.7	47.2
Mildura (RC)	21.0	16.4	26.5	34.3	29.1	40.0	43.2	37.9	48.7
Mitchell (S)	16.5	12.6	21.3	33.5	28.5	39.0	49.7	44.1	55.4
Moira (S)	18.0	13.4	23.8	39.0	32.3	46.3	42.2	35.4	49.3
Monash (C)	15.3	11.3	20.5	38.4	32.9	44.3	45.7	40.3	51.2
Moonee Valley (C)	8.3	5.7	11.8	34.3	29.2	39.9	55.4	49.9	60.8
Moorabool (S)	13.3	9.9	17.7	40.7	35.0	46.7	45.5	39.6	51.6
Moreland (C)	14.8	11.3	19.0	33.4	28.7	38.5	50.6	45.5	55.6
Mornington Peninsula (S)	15.1	11.1	20.1	34.6	28.9	40.9	50.1	44.3	56.0
Mount Alexander (S)	11.9	8.4	16.6	31.9	26.0	38.5	55.6	49.1	61.9
Moyne (S)	13.4	9.6	18.4	38.8	32.3	45.7	45.7	39.1	52.4
Murrindindi (S)	19.4	14.1	26.0	34.5	27.9	41.8	46.0	38.6	53.7
Nillumbik (S)	13.0	9.4	17.7	34.3	28.9	40.2	52.4	46.6	58.1
Northern Grampians (S)	22.8	18.0	28.5	35.9	30.0	42.1	40.8	34.5	47.4
Port Phillip (C)	12.7	9.5	16.6	37.0	31.7	42.6	49.7	44.2	55.3
Pyrenees (S)	18.4	14.0	23.9	37.6	30.8	44.8	43.1	36.3	50.1
Queenscliffe (B)	10.6	6.6	16.5	31.8	25.0	39.4	57.5	49.7	65.0
Southern Grampians (S)	16.1	11.4	22.2	33.8	28.2	39.8	49.2	42.7	55.8
South Gippsland (S)	16.1	12.0	21.2	33.6	28.1	39.6	50.3	44.3	56.4
Stonnington (C)	14.4	10.7	19.3	31.4	26.4	36.9	53.8	48.2	59.4
Strathbogie (S)	12.7	9.1	17.5	41.3	34.8	48.1	45.8	39.2	52.6
Surf Coast (S)	5.8	3.8	8.7	32.1	25.7	39.2	61.5	54.3	68.2
Swan Hill (RC)	21.8	16.5	28.2	35.0	29.0	41.5	42.0	36.2	48.1
Towong (S)	12.4	8.3	18.2	35.0	29.1	41.3	51.7	44.7	58.6
Wangaratta (RC)	11.8	8.4	16.4	32.1	26.1	38.7	55.9	49.0	62.6
Warrnambool (C)	19.8	14.9	25.8	36.4	30.8	42.3	43.1	37.5	48.9
Wellington (S)	14.0	9.9	19.2	36.8	30.6	43.4	49.2	43.3	55.1
West Wimmera (S)	15.9	11.9	20.9	40.6	34.6	46.8	42.0	36.1	48.1
Whitehorse (C)	10.7	7.5	15.0	35.3	29.9	41.0	53.4	47.5	59.3
Whittlesea (C)	17.8	14.1	22.3	35.8	30.9	41.1	45.1	40.0	50.3
Wodonga (RC)	18.8	14.9	23.5	35.3	30.0	40.9	45.0	39.7	50.5
Wyndham (C)	19.6	15.8	24.1	39.7	34.9	44.7	39.4	34.8	44.2
Yarra (C)	13.1	9.9	17.3	32.8	27.9	38.2	52.1	46.4	57.7
Yarra Ranges (S)	11.7	8.8	15.5	35.3	30.3	40.7	51.5	46.1	56.7
Yarriambiack (S)	20.2	15.0	26.7	34.4	28.3	41.0	44.1	37.7	50.8
<b>Total</b>	<b>14.3</b>	<b>13.7</b>	<b>14.9</b>	<b>36.1</b>	<b>35.3</b>	<b>37.0</b>	<b>48.6</b>	<b>47.8</b>	<b>49.5</b>

Figure 2.7: No serves<sup>(a)</sup> of fruit per day by LGA, 2008

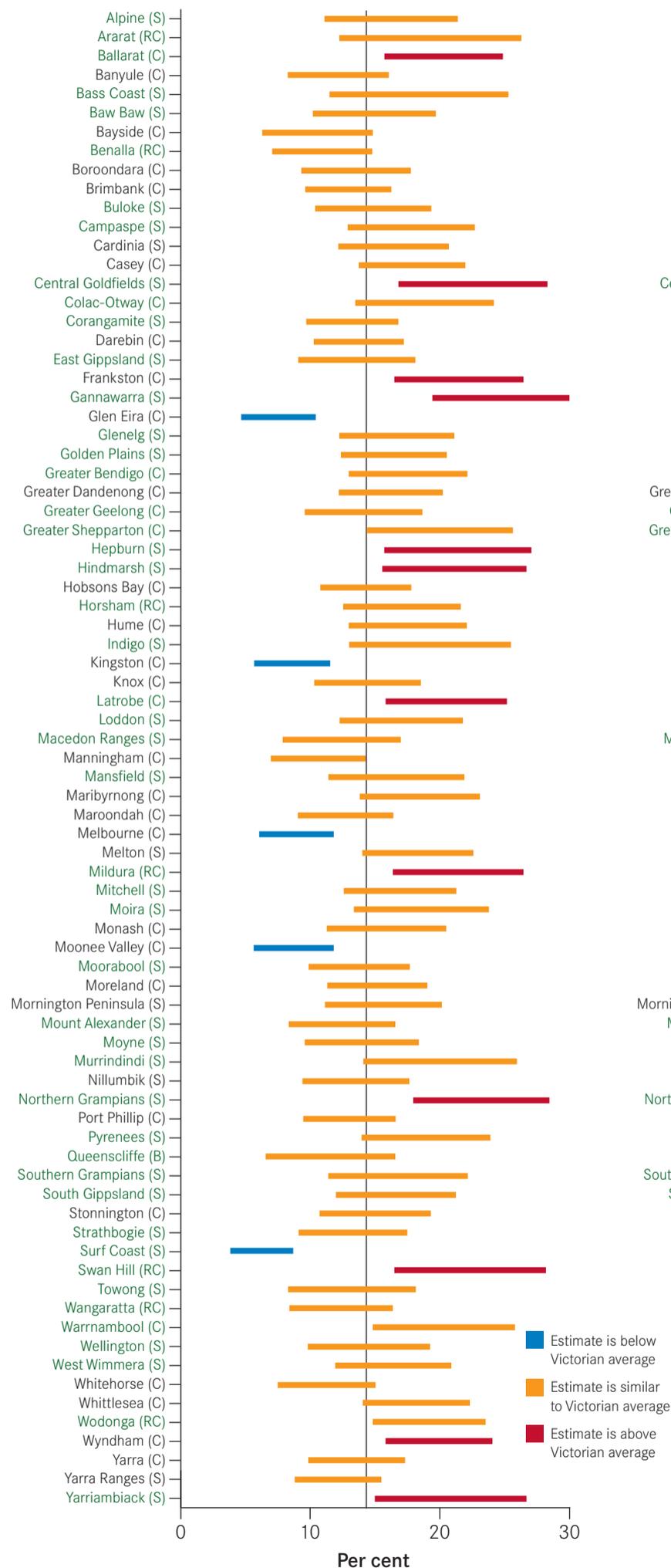
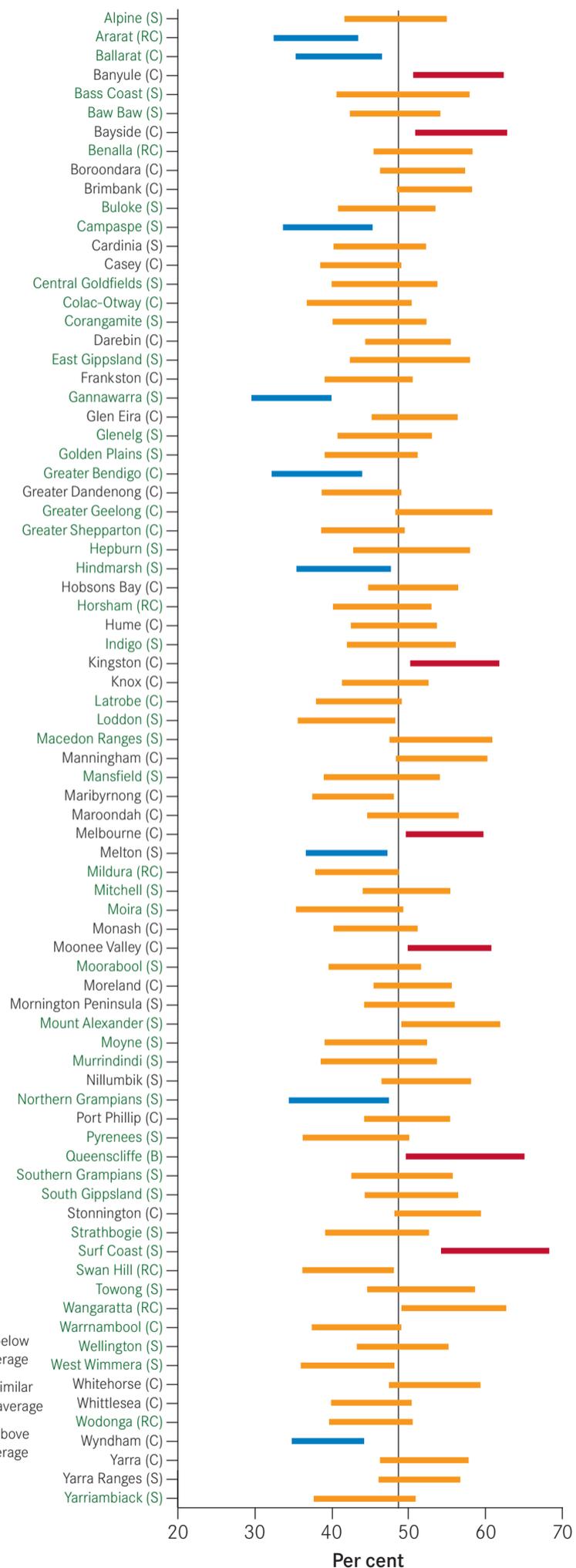


Figure 2.8: Two or more serves<sup>(a)</sup> of fruit per day, by LGA, 2008



(a) A serve is one medium piece or two small pieces of fruit, or one cup of diced pieces.

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 line on the graph is the Victorian estimate, it does not show the 95% CI. See relevant table for 95% CI for Victoria (Total).

Table 2.12 shows the proportion of persons who met the guidelines (summarised in table 2.1) for daily fruit and vegetable consumption. The table is divided into two parts. Part A shows the proportion of persons who met the guidelines for both daily fruit and vegetable consumption, the proportion who met only one guideline (fruit, but not vegetables; or, vegetables, but not fruit), and the proportion who met neither of the guidelines for fruit and vegetable consumption. Fewer than one in ten females (8.0 per cent) and 3.2 per cent of males aged 18 years and over met the guidelines for both fruit and vegetable daily intake in 2008. Older adults (7.1 per cent) aged 65 years and over were more likely to meet the recommended daily intake for fruit and vegetables than younger adults aged 18–24 years (3.7 per cent).

Part B shows the overall proportion of persons who met the fruit guidelines and the overall proportion who met the vegetable guidelines. A higher proportion of females (10.7 per cent) than males (5.0 per cent) met the vegetable guidelines. The proportion of females who met the fruit guidelines in 2008 was also higher than the proportion of males (53.5 per cent and 41.0 per cent respectively).

Table 2.12: Meeting guidelines<sup>(a)</sup> for consumption of fruit and vegetables, by age group and sex, 2008

## Part A

Age group (years)	Both guidelines			Vegetable guidelines only <sup>(b)</sup>			Fruit guidelines only <sup>(c)</sup>			Neither fruit or vegetable guidelines		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
18–24 years	<b>2.2*</b>	1.3	3.8	<b>2.4*</b>	1.2	4.4	<b>32.8</b>	28.5	37.5	<b>60.7</b>	56.0	65.3
25–34 years	<b>2.5</b>	1.6	4.0	<b>1.2*</b>	0.7	2.2	<b>34.9</b>	31.2	38.8	<b>60.1</b>	56.1	63.9
35–44 years	<b>2.2</b>	1.6	3.2	<b>1.0*</b>	0.6	1.9	<b>41.1</b>	38.2	44.1	<b>53.2</b>	50.2	56.2
45–54 years	<b>3.5</b>	2.6	4.8	<b>1.5</b>	0.9	2.3	<b>37.0</b>	34.3	39.8	<b>56.6</b>	53.8	59.4
55–64 years	<b>4.6</b>	3.6	5.8	<b>2.7</b>	1.9	3.7	<b>39.0</b>	36.4	41.6	<b>51.9</b>	49.2	54.5
65+	<b>4.3</b>	3.5	5.3	<b>3.3</b>	2.6	4.2	<b>40.9</b>	38.7	43.2	<b>47.3</b>	45.0	49.6
<b>Total</b>	<b>3.2</b>	<b>2.8</b>	<b>3.6</b>	<b>1.9</b>	<b>1.6</b>	<b>2.2</b>	<b>37.8</b>	<b>36.5</b>	<b>39.2</b>	<b>54.8</b>	<b>53.5</b>	<b>56.2</b>
<b>Females</b>												
18–24 years	<b>5.3</b>	3.6	7.7	<b>3.1*</b>	1.8	5.2	<b>42.3</b>	38.0	46.8	<b>48.1</b>	43.7	52.6
25–34 years	<b>5.4</b>	4.2	6.9	<b>2.1</b>	1.4	3.1	<b>45.2</b>	42.3	48.1	<b>46.0</b>	43.1	48.9
35–44 years	<b>6.8</b>	5.8	8.0	<b>2.2</b>	1.7	3.0	<b>43.9</b>	41.9	46.1	<b>45.6</b>	43.5	47.7
45–54 years	<b>10.2</b>	8.9	11.6	<b>2.6</b>	2.0	3.4	<b>45.0</b>	42.8	47.3	<b>40.5</b>	38.3	42.8
55–64 years	<b>12.6</b>	11.2	14.0	<b>3.5</b>	2.8	4.3	<b>47.0</b>	44.8	49.1	<b>35.6</b>	33.5	37.7
65+	<b>9.3</b>	8.2	10.4	<b>3.2</b>	2.6	3.9	<b>48.5</b>	46.6	50.4	<b>34.9</b>	33.1	36.8
<b>Total</b>	<b>8.0</b>	<b>7.5</b>	<b>8.6</b>	<b>2.6</b>	<b>2.3</b>	<b>3.0</b>	<b>45.5</b>	<b>44.4</b>	<b>46.5</b>	<b>41.9</b>	<b>40.9</b>	<b>43.0</b>
<b>Persons</b>												
18–24 years	<b>3.7</b>	2.7	5.1	<b>2.7</b>	1.8	4.1	<b>37.5</b>	34.4	40.7	<b>54.5</b>	51.3	57.8
25–34 years	<b>4.0</b>	3.2	5.0	<b>1.6</b>	1.2	2.3	<b>40.0</b>	37.6	42.4	<b>53.1</b>	50.6	55.5
35–44 years	<b>4.5</b>	3.9	5.3	<b>1.6</b>	1.3	2.1	<b>42.6</b>	40.8	44.4	<b>49.3</b>	47.5	51.2
45–54 years	<b>6.9</b>	6.1	7.8	<b>2.0</b>	1.6	2.6	<b>41.1</b>	39.3	42.8	<b>48.5</b>	46.7	50.3
55–64 years	<b>8.6</b>	7.7	9.6	<b>3.1</b>	2.6	3.7	<b>43.0</b>	41.3	44.7	<b>43.6</b>	41.9	45.3
65+	<b>7.1</b>	6.4	7.8	<b>3.2</b>	2.7	3.8	<b>45.1</b>	43.6	46.6	<b>40.4</b>	39.0	41.9
<b>Total</b>	<b>5.7</b>	<b>5.3</b>	<b>6.0</b>	<b>2.2</b>	<b>2.0</b>	<b>2.5</b>	<b>41.8</b>	<b>40.9</b>	<b>42.6</b>	<b>48.2</b>	<b>47.3</b>	<b>49.1</b>

(a) Based on national guidelines (NHMRC 2003).

(b) Includes those who met the guidelines for vegetables but did not meet the guidelines for fruit.

(c) Includes those who met the guidelines for fruit but did not meet the guidelines for vegetables.

(d) Includes all those who met the guidelines for serves of vegetables per day.

(e) Includes all those who met the guidelines for serves of fruit per day.

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 from the corresponding estimate for Victoria are identified by colour as follows: **above Victoria** / **below Victoria**.

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

**Table 2.12: Meeting guidelines<sup>(a)</sup> for consumption of fruit and vegetables, by age group and sex, 2008 (continued)****Part B**

Age group (years)	Vegetable guidelines <sup>(d)</sup>			Fruit guidelines <sup>(e)</sup>		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
18–24 years	4.6	3.0	6.9	35.0	30.6	39.7
25–34 years	3.8	2.6	5.4	37.4	33.7	41.3
35–44 years	3.3	2.4	4.4	43.4	40.4	46.4
45–54 years	5.0	3.9	6.4	40.5	37.8	43.3
55–64 years	7.3	6.0	8.8	43.6	40.9	46.2
65+	7.6	6.5	8.9	45.3	43.0	47.6
<b>Total</b>	<b>5.0</b>	<b>4.5</b>	<b>5.6</b>	<b>41.0</b>	<b>39.7</b>	<b>42.4</b>
<b>Females</b>						
18–24 years	8.4	6.2	11.2	47.6	43.2	52.1
25–34 years	7.5	6.1	9.1	50.6	47.7	53.5
35–44 years	9.0	7.9	10.3	50.8	48.6	52.9
45–54 years	12.8	11.4	14.4	55.2	53.0	57.5
55–64 years	16.0	14.5	17.6	59.5	57.4	61.6
65+	12.4	11.3	13.7	57.7	55.8	59.6
<b>Total</b>	<b>10.7</b>	<b>10.1</b>	<b>11.3</b>	<b>53.5</b>	<b>52.4</b>	<b>54.6</b>
<b>Persons</b>						
18–24 years	6.4	5.0	8.2	41.2	38.0	44.5
25–34 years	5.6	4.7	6.7	44.0	41.6	46.4
35–44 years	6.2	5.4	7.0	47.1	45.3	48.9
45–54 years	8.9	8.0	10.0	48.0	46.2	49.8
55–64 years	11.7	10.7	12.8	51.6	49.9	53.3
65+	10.3	9.5	11.2	52.2	50.7	53.6
<b>Total</b>	<b>7.9</b>	<b>7.5</b>	<b>8.3</b>	<b>47.4</b>	<b>46.6</b>	<b>48.3</b>

Table 2.13 shows the proportion of persons who achieved the guidelines for fruit consumption, vegetable consumption and for both fruit and vegetable consumption between 2002 and 2008. The proportion of persons who met the guidelines for both fruit and vegetable consumption (summarised in table 2.12) decreased from 9.0 per cent in 2002 to 5.7 per cent in 2008. The proportion of persons who met the guidelines for fruit consumption decreased between 2002 and 2008, but the proportion of persons who met the guidelines for vegetable consumption remained constant over this period.

**Table 2.13: Meeting guidelines<sup>(a)</sup> for consumption of fruit and vegetables, 2002–2008**

	2002	2003	2004	2005	2006	2007	2008
	Per cent						
Fruit guidelines	54.5	49.8	51.4	49.9	46.3	45.2	47.4
Vegetable guidelines	12.3	11.5	7.0	9.6	10.1	7.8	7.9
Both fruit and vegetable guidelines	9.0	8.0	5.7	7.2	7.1	5.3	5.7

(a) Based on national guidelines (NHMRC 2003).

Data are age standardised to the 2006 Victorian population.

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

The proportion of persons who did not meet the guidelines for the number of serves of fruit per day was similar for persons residing in metropolitan and rural areas of the state (table 2.14). There were two regions, Loddon Mallee (55.8 per cent) and Grampians (55.2 per cent), where the proportion of persons who did not meet the fruit guidelines was higher than the average for Victoria (50.5 per cent). The proportion of persons living in rural areas who did not meet the vegetable guidelines (88.2 per cent) was less than the proportion for the metropolitan area (90.6 per cent). The proportion of persons who did not meet either the fruit or the vegetable guidelines was similar for metropolitan and rural areas (47.7 per cent and 49.3 per cent respectively).

Table 2.14: Not meeting guidelines<sup>(a)</sup> for consumption of fruit and/or vegetables, by sex and Department of Health region, 2008

Region	Did not meet ...								
	Fruit guidelines			Vegetable guidelines			Either fruit or vegetable guidelines		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>									
Barwon-South Western	51.3	45.2	57.3	92.5	89.6	94.6	49.1	43.0	55.2
Eastern Metropolitan	55.2	51.7	58.6	92.9	91.2	94.4	53.0	49.6	56.5
Gippsland	57.5	53.0	61.8	90.8	87.8	93.1	55.1	50.6	59.5
Grampians	59.4	55.2	63.6	91.3	88.2	93.7	57.7	53.4	61.9
Hume	60.5	57.0	63.9	92.3	90.5	93.8	58.9	55.4	62.3
Loddon Mallee	60.2	56.0	64.3	91.1	88.6	93.2	57.9	53.7	62.0
North and West Metropolitan	56.0	53.6	58.3	92.5	91.2	93.6	54.3	51.9	56.6
Southern Metropolitan	56.8	53.8	59.7	94.0	92.5	95.3	55.3	52.3	58.2
<b>Metropolitan</b>	56.1	54.5	57.7	93.1	92.2	93.8	54.4	52.7	56.0
<b>Rural</b>	57.2	54.9	59.5	91.7	90.5	92.7	55.1	52.8	57.4
<b>Total</b>	56.7	55.4	58.0	92.7	92.0	93.3	54.8	53.5	56.2
<b>Females</b>									
Barwon-South Western	42.3	37.7	47.1	84.0	80.7	86.8	39.4	34.8	44.2
Eastern Metropolitan	43.1	40.3	45.9	87.2	85.4	88.8	40.5	37.8	43.3
Gippsland	48.4	45.1	51.6	83.1	80.7	85.2	43.8	40.5	47.1
Grampians	51.3	47.5	55.1	86.3	84.1	88.2	47.6	43.9	51.5
Hume	44.6	41.9	47.3	85.9	84.2	87.5	41.7	39.0	44.4
Loddon Mallee	51.9	48.8	54.9	85.4	83.3	87.2	47.6	44.5	50.7
North and West Metropolitan	43.7	41.8	45.6	88.6	87.4	89.8	41.3	39.5	43.2
Southern Metropolitan	44.1	41.8	46.5	89.0	87.5	90.3	42.3	40.0	44.7
<b>Metropolitan</b>	43.6	42.3	44.9	88.4	87.5	89.1	41.3	40.0	42.6
<b>Rural</b>	47.4	45.7	49.2	84.9	83.7	85.9	43.8	42.0	45.5
<b>Total</b>	44.5	43.5	45.6	87.4	86.7	88.0	41.9	40.9	43.0
<b>Persons</b>									
Barwon-South Western	46.8	42.9	50.8	88.2	86.0	90.1	44.2	40.3	48.2
Eastern Metropolitan	49.0	46.7	51.2	90.0	88.8	91.1	46.6	44.4	48.9
Gippsland	52.8	50.0	55.6	86.9	85.0	88.6	49.3	46.5	52.0
Grampians	55.2	52.3	58.1	88.7	86.9	90.3	52.5	49.6	55.4
Hume	52.4	50.1	54.7	89.1	87.9	90.3	50.2	47.9	52.5
Loddon Mallee	55.8	53.2	58.4	88.2	86.5	89.6	52.5	49.9	55.1
North and West Metropolitan	49.7	48.2	51.2	90.6	89.7	91.4	47.7	46.2	49.2
Southern Metropolitan	50.2	48.3	52.1	91.4	90.4	92.4	48.6	46.7	50.5
<b>Metropolitan</b>	49.7	48.6	50.7	90.6	90.1	91.2	47.7	46.6	48.7
<b>Rural</b>	52.2	50.7	53.6	88.2	87.4	89.0	49.3	47.8	50.8
<b>Total</b>	50.5	49.6	51.3	90.0	89.5	90.4	48.2	47.3	49.1

(a) Based on national guidelines (NHMRC 2003).

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.

Approximately one half (50.5 per cent) of Victorians did not consume the recommended number of serves of fruit per day (table 2.15). The proportion of persons who did not meet the fruit guidelines was above the Victorian average for a number of local government areas: Gannawarra (63.8 per cent), Greater Bendigo (61.3 per cent), Campaspe (60.3 per cent), Ararat (60.1 per cent), Wyndham (59.5 per cent), Northern Grampians (59.0 per cent), Hindmarsh (57.8 per cent), Melton (57.6 per cent) and Ballarat (57.0 per cent). There were six LGAs where the proportion of persons not meeting the fruit guidelines was below the average for Victoria. Among these LGAs, one was located in rural Victoria – Surf Coast (39.0 per cent) – and the remaining five were distributed across the metropolitan area – Brimbank (44.6 per cent), Melbourne (44.3 per cent), Bayside (43.3 per cent), Kingston (43.3 per cent) and Moonee Valley (43.1 per cent).

Nine in 10 Victorians (90.0 per cent) did not consume the recommended number of serves of vegetables per day. There were two rural LGAs where the proportion of persons who did not meet the vegetable guidelines was below the average for Victoria: Greater Bendigo (86.2 per cent) and Bass Coast (84.9 per cent).

Figures 2.9, 2.10 and 2.11 show the proportion of persons aged 18 years and over from each LGA who did not meet the fruit guidelines, the vegetable guidelines and both guidelines, relative to the average for Victoria.

Table 2.15: Not meeting guidelines<sup>(a)</sup> for consumption of fruit and/or vegetables, by LGA, 2008

LGA	Did not meet ...								
	Fruit guidelines			Vegetable guidelines			Either fruit or vegetable guidelines		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	50.0	43.4	56.6	90.0	86.5	92.6	48.5	41.9	55.2
Ararat (RC)	60.1	54.0	65.8	89.3	84.6	92.8	57.6	51.6	63.4
Ballarat (C)	57.0	51.4	62.5	88.6	84.7	91.6	55.0	49.3	60.5
Banyule (C)	44.5	38.7	50.5	89.3	85.5	92.2	41.6	35.8	47.8
Bass Coast (S)	51.5	43.1	59.7	84.9	79.9	88.8	47.9	39.7	56.2
Baw Baw (S)	51.4	45.5	57.2	89.8	86.5	92.4	49.0	43.1	54.9
Bayside (C)	43.3	37.4	49.3	90.9	87.1	93.7	42.6	36.7	48.6
Benalla (RC)	47.5	41.2	54.0	89.9	86.4	92.6	45.0	38.6	51.5
Boroondara (C)	46.2	40.7	51.9	89.1	85.3	92.0	42.4	37.0	48.0
Brimbank (C)	44.6	39.8	49.5	90.7	87.2	93.3	43.4	38.7	48.3
Buloke (S)	53.1	46.7	59.3	90.5	86.9	93.2	51.0	44.6	57.4
Campaspe (S)	60.3	54.3	66.0	88.8	84.7	91.8	57.2	51.2	63.0
Cardinia (S)	52.5	46.5	58.4	88.3	83.4	91.9	50.5	44.6	56.4
Casey (C)	53.6	48.4	58.8	91.6	88.4	94.1	51.9	46.7	57.1
Central Goldfields (S)	52.6	45.7	59.4	89.7	85.8	92.6	49.8	42.9	56.6
Colac-Otway (S)	54.5	47.6	61.2	89.1	85.6	91.8	52.1	45.2	58.8
Corangamite (S)	52.6	46.6	58.5	85.9	81.3	89.5	50.0	43.9	56.0
Darebin (C)	50.2	44.4	55.9	93.0	89.9	95.1	49.4	43.7	55.1
East Gippsland (S)	49.8	42.2	57.5	85.4	78.3	90.4	47.4	39.8	55.1
Frankston (C)	55.3	49.6	60.9	92.5	89.6	94.7	52.9	47.2	58.5
Gannawarra (S)	63.8	58.2	69.2	89.1	85.1	92.1	60.3	54.5	65.8
Glen Eira (C)	48.4	42.9	54.0	91.5	88.5	93.8	47.0	41.5	52.5
Glenelg (S)	52.0	45.7	58.1	86.9	83.3	89.9	49.6	43.3	55.8
Golden Plains (S)	54.0	48.0	60.0	89.5	86.6	91.9	51.0	44.9	57.0
Greater Bendigo (C)	61.3	55.4	66.9	86.2	82.3	89.3	56.1	50.2	61.8
Greater Dandenong (C)	54.4	49.2	59.5	93.0	89.9	95.2	53.1	47.9	58.2
Greater Geelong (C)	44.1	38.0	50.4	87.7	83.9	90.7	41.4	35.2	47.8
Greater Shepparton (C)	54.8	49.3	60.2	89.1	85.8	91.7	53.9	48.4	59.4
Hepburn (S)	48.8	41.3	56.4	89.2	85.8	91.8	46.1	38.6	53.7
Hindmarsh (S)	57.8	51.6	63.8	89.0	85.4	91.8	55.4	49.2	61.4
Hobsons Bay (C)	48.4	42.7	54.2	91.8	88.8	94.1	46.6	40.9	52.4
Horsham (RC)	52.9	46.5	59.2	89.5	85.3	92.7	50.2	43.8	56.6
Hume (C)	50.2	44.7	55.7	89.5	86.0	92.2	47.3	41.9	52.8
Indigo (S)	50.5	43.4	57.6	88.2	82.9	92.0	46.6	39.7	53.6
Kingston (C)	43.3	37.5	49.2	91.2	87.6	93.9	42.1	36.4	48.1
Knox (C)	52.4	46.8	58.0	90.9	87.7	93.3	51.0	45.4	56.6
Latrobe (C)	56.0	50.4	61.4	87.0	83.3	90.0	52.2	46.6	57.7
Loddon (S)	56.5	50.1	62.8	88.8	84.8	91.8	53.0	46.4	59.4
Macedon Ranges (S)	46.0	39.4	52.6	89.7	85.7	92.7	43.8	37.3	50.5
Manningham (C)	44.4	38.6	50.4	90.1	86.9	92.6	42.6	36.9	48.6

95% CI = 95 per cent confidence interval.

(a) Based on national guidelines (NHMRC 2003).

Data are age standardised to the 2006 Victorian population.

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

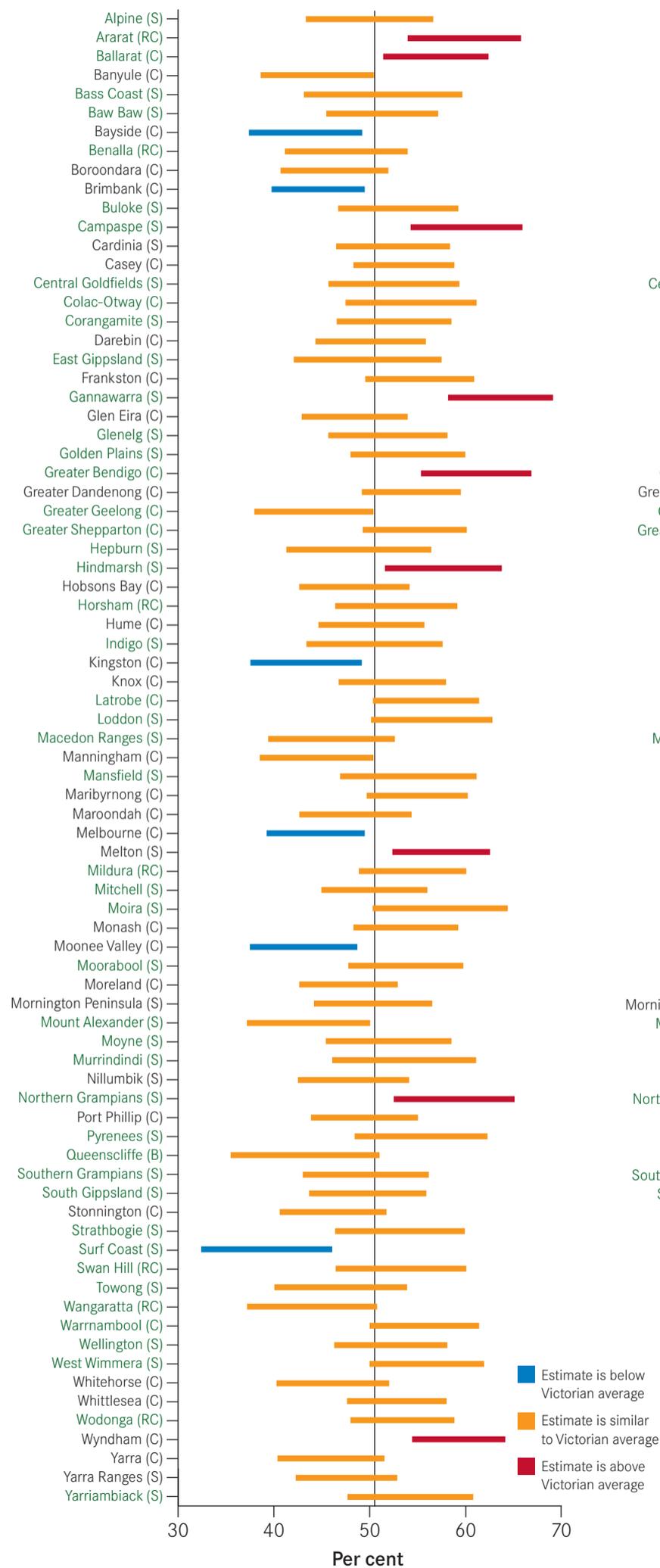
Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

LGA = local government area.

Table 2.15: Not meeting guidelines<sup>(a)</sup> for consumption of fruit and/or vegetables, by LGA, 2008 (continued)

LGA	Did not meet ...								
	Fruit guidelines			Vegetable guidelines			Either fruit or vegetable guidelines		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	54.2	47.0	61.2	89.8	85.3	93.0	51.4	44.3	58.5
Maribyrnong (C)	55.1	49.7	60.3	91.0	87.3	93.6	52.3	46.9	57.7
Maroondah (C)	48.5	42.7	54.4	89.2	85.6	92.0	45.3	39.5	51.2
Melbourne (C)	44.3	39.3	49.5	92.4	89.3	94.6	42.7	37.7	47.8
Melton (S)	57.6	52.4	62.6	91.7	88.1	94.2	54.9	49.6	60.0
Mildura (RC)	54.6	48.9	60.1	89.5	85.9	92.2	53.2	47.5	58.7
Mitchell (S)	50.5	45.0	56.0	91.0	87.1	93.7	48.4	42.8	54.0
Moira (S)	57.6	50.4	64.4	89.5	85.9	92.2	55.0	47.9	62.0
Monash (C)	53.8	48.4	59.2	91.3	87.8	93.9	52.4	47.0	57.8
Moonee Valley (C)	43.1	37.6	48.7	88.4	84.5	91.4	41.0	35.6	46.6
Moorabool (S)	53.8	47.8	59.8	89.6	86.1	92.3	50.6	44.7	56.6
Moreland (C)	47.8	42.7	52.9	90.0	86.8	92.5	46.5	41.4	51.6
Mornington Peninsula (S)	50.4	44.2	56.5	91.3	87.9	93.9	48.6	42.7	54.6
Mount Alexander (S)	43.5	37.2	50.0	88.8	85.7	91.3	40.9	34.7	47.4
Moyne (S)	52.1	45.5	58.6	89.9	84.9	93.4	50.8	44.2	57.3
Murrindindi (S)	53.7	46.1	61.1	89.1	85.3	92.0	49.6	42.0	57.1
Nillumbik (S)	48.4	42.6	54.1	91.0	87.5	93.6	46.8	41.1	52.7
Northern Grampians (S)	59.0	52.5	65.1	88.0	84.0	91.0	54.1	47.5	60.5
Port Phillip (C)	49.4	43.9	55.0	92.0	89.1	94.2	48.0	42.5	53.6
Pyrenees (S)	55.5	48.5	62.3	87.4	83.8	90.3	51.4	44.5	58.3
Queenscliffe (B)	43.1	35.5	51.0	85.2	78.4	90.2	39.6	32.1	47.6
Southern Grampians (S)	49.7	43.1	56.2	88.3	84.7	91.1	47.6	41.1	54.2
South Gippsland (S)	49.8	43.7	55.9	86.7	82.8	89.9	46.1	40.2	52.2
Stonnington (C)	46.1	40.6	51.8	90.9	87.7	93.4	43.6	38.0	49.3
Strathbogie (S)	53.2	46.4	59.9	91.3	88.0	93.8	50.7	43.9	57.4
Surf Coast (S)	39.0	32.4	46.1	88.5	85.3	91.1	37.1	30.6	44.2
Swan Hill (RC)	53.4	46.5	60.1	86.7	80.2	91.3	51.5	44.6	58.3
Towong (S)	46.9	40.1	53.9	88.1	84.3	91.1	44.9	38.1	51.9
Wangaratta (RC)	43.8	37.2	50.8	86.8	82.0	90.5	41.9	35.2	48.8
Warrnambool (C)	55.8	50.0	61.4	89.9	86.6	92.5	53.1	47.3	58.7
Wellington (S)	52.2	46.3	58.1	86.6	82.8	89.7	47.7	41.7	53.8
West Wimmera (S)	56.1	50.0	62.0	88.9	85.4	91.7	54.5	48.5	60.4
Whitehorse (C)	46.1	40.3	52.0	89.9	86.7	92.5	44.4	38.6	50.3
Whittlesea (C)	52.9	47.7	58.0	89.2	85.7	91.8	49.7	44.6	54.9
Wodonga (RC)	53.5	48.0	58.9	88.6	85.1	91.4	50.6	45.2	56.1
Wyndham (C)	59.5	54.5	64.2	92.3	89.3	94.6	57.1	52.2	61.9
Yarra (C)	46.0	40.4	51.6	90.9	87.5	93.4	44.7	39.2	50.4
Yarra Ranges (S)	47.6	42.3	52.9	88.2	84.5	91.1	43.6	38.4	48.9
Yarriambiack (S)	54.3	47.7	60.8	89.2	85.2	92.2	50.5	43.9	57.0
<b>Total</b>	<b>50.5</b>	<b>49.6</b>	<b>51.3</b>	<b>90.0</b>	<b>89.5</b>	<b>90.4</b>	<b>48.2</b>	<b>47.3</b>	<b>49.1</b>

Figure 2.9: Not meeting fruit guidelines<sup>(a)</sup>, by LGA, 2008

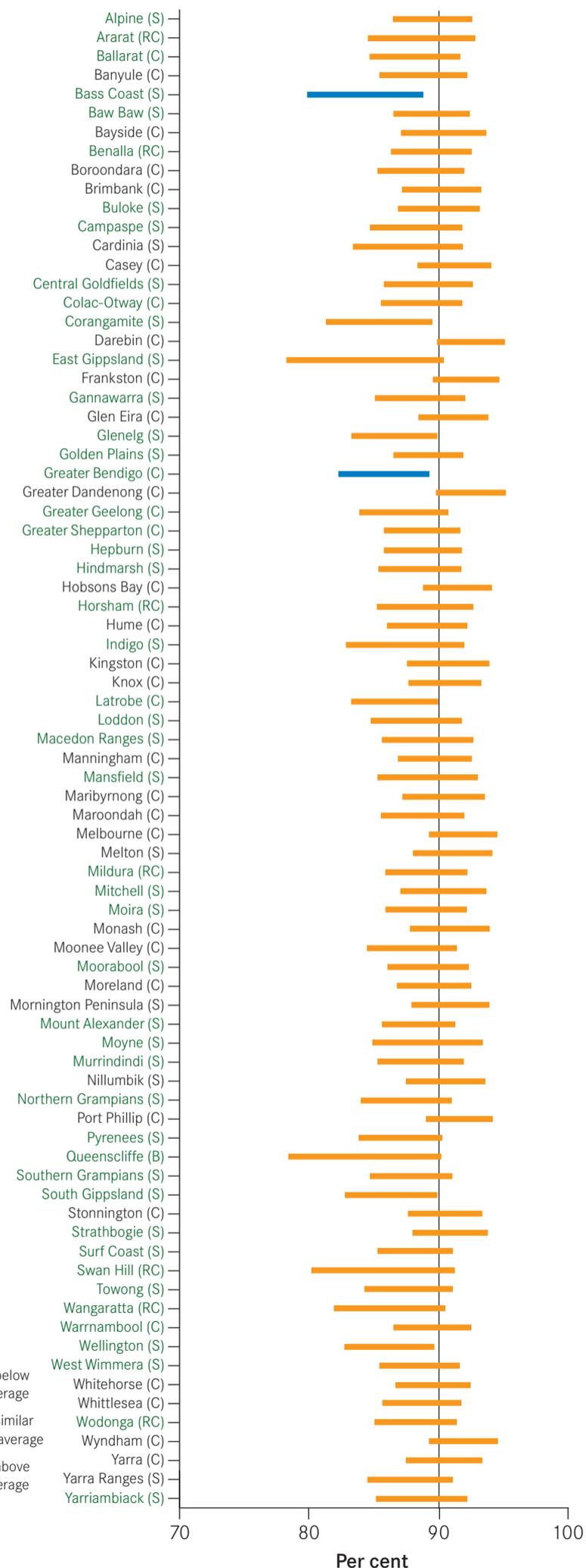


(a) Based on national guidelines (NHMRC 2003).

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

LGA = local government area.

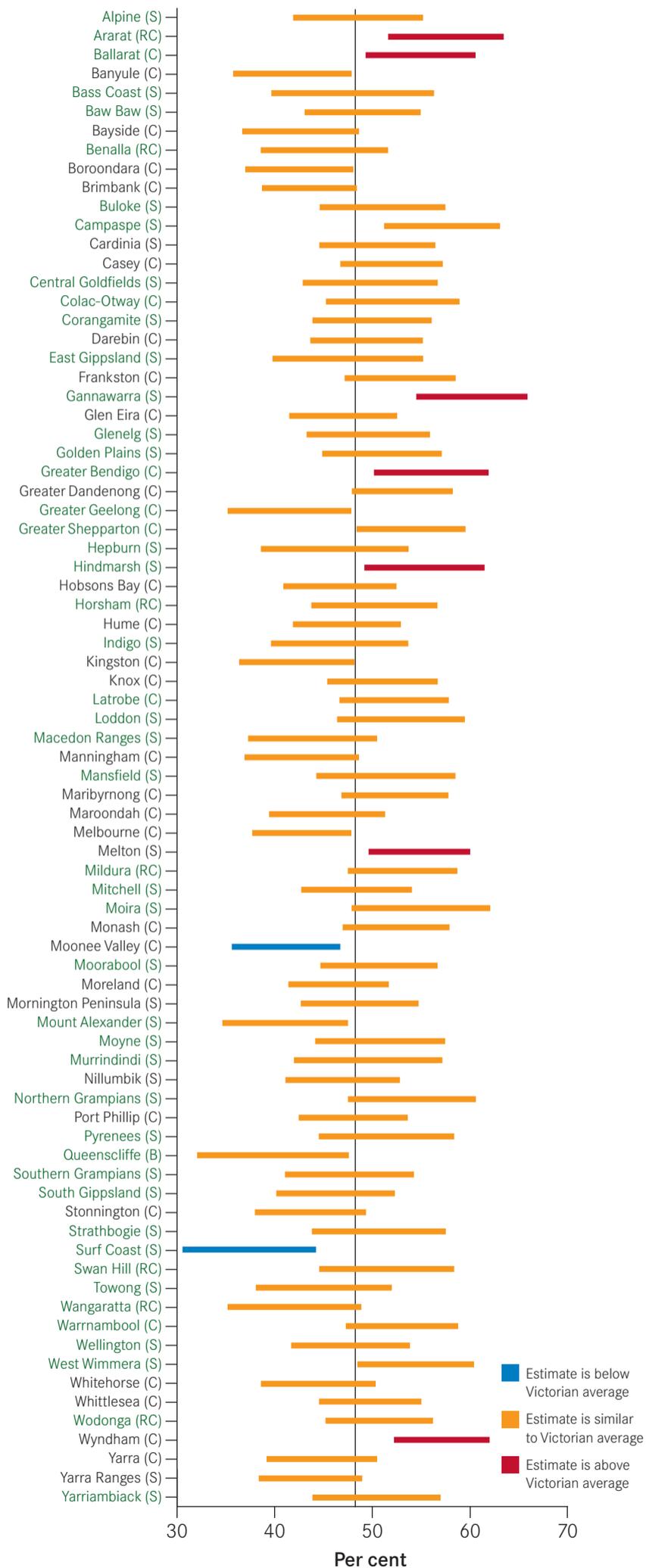
Figure 2.10: Not meeting vegetable guidelines<sup>(a)</sup>, by LGA, 2008



Data are age standardised to the 2006 Victorian population.

The line on the graph is the Victorian estimate, it does not show the 95% CI.  
See relevant table for 95% CI for Victoria (Total).

Figure 2.11 Not meeting either fruit or vegetable guidelines<sup>(a)</sup>, by LGA, 2008



### Consumption of recommended daily intake of fruit and vegetables, by selected health indicators

Table 2.16 shows the proportion of the population who reported meeting the dietary guidelines for fruit (three or more serves for those aged 18 years, and two or more serves for those aged 19 years and over), vegetables (three or more serves for those aged 18 years, and five or more serves for those aged 19 years and over) and both fruit and vegetables combined, by selected health indicators.

The data in the table show that there were differences in the proportion of persons meeting the guidelines for fruit and vegetable consumption across health indicators. For instance, persons who were current smokers were more likely than ex-smokers and non-smokers to meet neither of the dietary guidelines (60.5 per cent, 49.2 per cent and 43.9 per cent respectively). Compared to abstainers, those who consumed alcohol at levels regarded as risky or high risk in terms of the potential for short and long-term harm, were more likely to meet neither guideline.

Persons who were sedentary were less likely than persons who participated in sufficient time and sessions in physical activity, to consume the recommended number of serves of fruit per day (39.6 per cent and 52.3 per cent respectively).

**Table 2.16: Meeting guidelines<sup>(a)</sup> for consumption of fruit and vegetables, by selected health indicators, 2008**

	Fruit guidelines			Vegetables guidelines			Both guidelines <sup>(b)</sup>			Neither fruit or vegetable guidelines <sup>(c)</sup>		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Smoking status</b>												
Current smoker	33.6	31.6	35.7	6.0	5.2	7.0	3.4	2.8	4.1	60.5	58.4	62.6
Ex-smoker	46.5	44.3	48.7	7.8	7.0	8.8	5.6	5.0	6.3	49.2	47.0	51.5
Non-smoker	52.0	50.9	53.1	8.3	7.8	8.9	6.2	5.8	6.7	43.9	42.8	45.0
<b>Alcohol consumption<sup>(d)</sup></b>												
At risk or high risk of long-term harm	35.0	31.0	39.3	9.2	7.1	11.8	4.9	3.5	6.8	59.0	54.7	63.3
At risk or high risk of short-term <sup>(e)</sup> harm	43.8	42.4	45.1	7.9	7.3	8.6	5.4	4.8	5.9	51.8	50.5	53.1
Abstainer from alcohol	48.3	46.1	50.4	7.8	6.8	8.9	5.9	5.1	6.8	45.9	43.8	48.1
<b>Physical activity levels<sup>(f)</sup></b>												
Sufficient time and sessions	52.3	51.2	53.5	9.1	8.5	9.7	6.9	6.4	7.5	44.2	43.1	45.4
Insufficient time and/or sessions	41.3	39.6	43.0	5.0	4.5	5.6	3.3	2.8	3.7	55.0	53.2	56.7
Sedentary	39.6	35.2	44.2	8.9	5.8	13.4	6.2	3.7	10.2	53.6	48.7	58.3
<b>Body weight status</b>												
Underweight	47.9	42.5	53.4	10.0	7.3	13.5	8.2	5.8	11.6	47.7	42.3	53.3
Healthy weight	49.4	48.2	50.7	8.8	8.2	9.5	6.4	5.8	6.9	46.2	45.0	47.5
Overweight	47.7	46.1	49.4	7.4	6.7	8.2	5.4	4.8	6.1	48.6	47.0	50.3
Obese	44.6	42.2	46.9	6.7	5.8	7.7	4.6	3.9	5.4	50.8	48.5	53.2
<b>Self-rated health</b>												
Excellent/very good	53.9	52.6	55.2	10.0	9.3	10.7	7.4	6.8	8.0	42.1	40.9	43.4
Good	44.2	42.8	45.5	6.7	6.1	7.3	4.6	4.1	5.1	51.8	50.5	53.2
Fair/poor	38.5	36.5	40.5	5.6	4.8	6.5	3.7	3.0	4.4	55.7	53.7	57.8
<b>Level of psychological distress<sup>(g)</sup></b>												
Low (10–15)	49.5	48.4	50.6	8.5	8.0	9.0	6.3	5.9	6.8	46.7	45.6	47.8
Moderate (16–21)	45.5	43.8	47.3	7.1	6.3	8.0	4.4	3.8	5.1	49.9	48.1	51.6
High (22–29)	43.1	40.4	45.9	7.2	6.0	8.6	4.9	3.9	6.2	52.6	49.8	55.4
Very high (30–50)	36.4	32.3	40.8	4.7	3.0	7.1	3.7	2.2	6.1	56.4	51.8	60.9
<b>Total</b>	<b>47.4</b>	<b>47.0</b>	<b>48.8</b>	<b>7.9</b>	<b>7.3</b>	<b>8.1</b>	<b>5.7</b>	<b>5.3</b>	<b>6.0</b>	<b>48.2</b>	<b>47.3</b>	<b>49.1</b>

(a) Based on national guidelines (NHMRC 2003).

(b) Includes those who met both guidelines i.e., recommended number of serves of fruit and recommended number of serves of vegetables per day.

(c) Includes those who did not meet either of the guidelines for fruit and vegetable consumption.

(d) Based on national guidelines (NHMRC 2001).

(e) Includes all those who consumed alcohol at levels defined as short-term risky/high risk of harm (weekly/monthly/yearly).

(f) Based on national guidelines (DoHA 1999) and excludes adults aged less than 19 years.

(g) Based on Kessler 10 Psychological Distress Scale (K10). 95% CI = 95 per cent confidence interval.

Data are age standardised to the 2006 Victorian population.

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

## Alcohol consumption

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

The 2001 *Australian Alcohol Guidelines: Health Risks and Benefits* (NHMRC 2001), which were current when the VPHS 2008 was conducted, emphasise patterns of drinking as opposed to levels of consumption (the average amount consumed). The concept of drinking patterns refers to aspects of drinking behaviour other than the level of drinking, and includes when, where and with whom drinking behaviour occurs, the type of drinks consumed, the number of heavy drinking occasions undertaken and the norms associated with drinking behaviour. The 2001 guidelines identified two main patterns of drinking behaviour as creating a risk to an individual's health:

1. excessive alcohol intake on a particular occasion; and,
2. consistent high-level intake over months and years.

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

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

In March 2009, the NHMRC introduced a new set of guidelines for alcohol, based on the best current evidence available. The 2009 guidelines were based on a process that included a systematic search and analysis of the research on the health effects and risks of alcohol consumption published between 2001 and 2007.

The data reported in this section have been analysed relative to the 2001 guidelines which were current when interviews for the VPHS 2008 were conducted. Tables 2.17 and 2.18 summarise the 2001 Australian alcohol guidelines. For the purpose of determining the risk of alcohol-related harm, the 2001 guidelines define short-term risk in terms of the number of standard drinks consumed per drinking occasion. The guidelines for the whole population indicate that males who drink up to six standard drinks and females who drink up to four standard drinks are at *low risk* of alcohol related harm in the short-term. Males who drink 11 or more drinks and females who consume seven or more drinks are categorised as being at *high risk* of alcohol related harm. Between these levels, alcohol consumption behaviour is classified as risky in the short-term.

**Table 2.17: 2001 Australian alcohol guidelines for risk to health in the short-term<sup>(a)</sup>**

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

(a) Quantities in standard drinks.

Source: NHMRC 2001.

Based on the 2001 guidelines, long-term risk of harm due to alcohol consumption is associated with regular daily patterns of drinking alcohol, defined in terms of the amount typically consumed each week. The 2001 guidelines indicate that males are at high risk of long-term harm if they consume seven or more drinks on an average day, or more than 43 drinks per week (table 2.18). For females, high risk of long-term harm is associated with the consumption of five or more standard drinks on an average day, or more than 29 drinks per week. Alcohol consumption is considered risky in the long-term if males consume 5–6 drinks on an average day (29–42 per week) and if females consume more than 3–4 drinks daily (15–28 per week).

**Table 2.18: 2001 Australian alcohol guidelines for risk to health in the long term<sup>(a)</sup>**

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

(a) Based on a standard drink containing 10 grams or 12.5 millilitres of alcohol.

Source: NHMRC 2001.

Abstainers from alcohol are those persons who reported that they did not drink, or who had a drink in the past 12 months, but reported that they no longer drink (recent abstainers). Females were more likely to be abstainers than males and older persons were more likely to be abstainers than younger persons (table 2.19). The proportion of males and females who were abstainers was similar for those aged 18–24 years. Among persons aged 65 years and over, females (36.5 per cent) were almost twice as likely to be abstainers as males (18.7 per cent).

**Table 2.19: Abstainers<sup>(a)</sup> from alcohol consumption, by age group and sex, 2008**

Age group (years)	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
18–24	10.4	7.8	13.7	13.5	10.7	17.0	11.9	9.9	14.2
25–34	11.7	9.1	14.8	22.6	20.3	25.2	17.1	15.4	19.1
35–44	10.5	8.6	12.6	18.5	16.8	20.2	14.5	13.3	15.8
45–54	11.4	9.7	13.2	20.3	18.5	22.3	15.9	14.6	17.2
55–64	10.9	9.4	12.6	24.4	22.5	26.3	17.7	16.5	19.0
65+	18.7	17.0	20.6	36.5	34.7	38.4	28.5	27.2	29.9
<b>Total</b>	<b>12.6</b>	<b>11.7</b>	<b>13.5</b>	<b>23.0</b>	<b>22.2</b>	<b>23.9</b>	<b>18.0</b>	<b>17.4</b>	<b>18.6</b>

(a) Includes both long-term and recent abstainers (i.e. those who had a drink in the past 12 months but reported they no longer drink).

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.

The frequency with which persons consume alcohol at above the recommended short term risk levels by sex and age group is shown in table 2.20. The prevalence of drinking alcohol at risky or high risk levels, at least weekly, was highest among males and females aged 18–24 years (21.0 per cent and 17.1 per cent respectively). Except for those aged 18–24 years, the proportion of males who consumed alcohol at risky or high risk levels at least once each week was higher than for females across all age groups. More than one-fifth of persons aged less than 55 years consumed alcohol at levels associated with some risk of short-term harm at least once a year.

Table 2.20: Frequency of drinking alcohol at above short-term risk<sup>(a)</sup> levels, by age group and sex, 2008

Age group (years)	Risky or high risk											
	Low risk <sup>(b)</sup>			At least yearly			At least monthly			At least weekly		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
18–24 years	16.9	13.5	21.0	25.5	21.6	29.9	25.8	21.9	30.1	21.0	17.4	25.2
25–34 years	20.6	17.7	23.9	27.5	24.2	31.1	21.5	18.3	25.2	18.4	15.5	21.7
35–44 years	29.9	27.2	32.7	29.6	26.9	32.4	16.4	14.3	18.7	13.3	11.5	15.4
45–54 years	34.1	31.5	36.8	26.4	23.9	29.1	13.3	11.6	15.3	14.5	12.7	16.5
55–64 years	43.7	41.1	46.4	20.9	18.9	23.2	12.6	11.0	14.4	11.2	9.7	12.8
65+	53.8	51.5	56.1	14.4	12.9	16.0	7.2	6.0	8.5	4.9	4.0	6.0
<b>Total</b>	<b>33.3</b>	<b>32.1</b>	<b>34.4</b>	<b>24.3</b>	<b>23.1</b>	<b>25.2</b>	<b>15.8</b>	<b>14.8</b>	<b>16.9</b>	<b>13.6</b>	<b>12.7</b>	<b>14.6</b>
<b>Females</b>												
18–24 years	22.1	18.6	26.0	23.7	20.2	27.7	23.2	19.8	27.1	17.1	13.9	20.8
25–34 years	29.4	26.9	32.2	26.1	23.7	28.7	12.1	10.4	14.1	8.7	7.2	10.5
35–44 years	38.4	36.4	40.5	25.9	24.1	27.7	10.2	9.0	11.5	6.8	5.8	7.9
45–54 years	42.5	40.2	44.7	22.1	20.3	24.0	8.9	7.7	10.2	5.8	4.9	6.9
55–64 years	50.2	48.0	52.4	13.7	12.2	15.2	7.8	6.8	9.0	3.5	2.9	4.3
65+	52.2	50.3	54.1	6.9	6.0	7.8	2.6	2.0	3.3	1.1	0.8	1.6
<b>Total</b>	<b>39.2</b>	<b>38.2</b>	<b>40.2</b>	<b>19.9</b>	<b>19.0</b>	<b>20.8</b>	<b>10.4</b>	<b>9.7</b>	<b>11.1</b>	<b>6.9</b>	<b>6.3</b>	<b>7.6</b>
<b>Persons</b>												
18–24 years	19.5	17.0	22.2	24.7	21.9	27.6	24.5	21.9	27.4	19.1	16.6	21.8
25–34 years	25.0	23.0	27.1	26.8	24.7	29.0	16.8	14.9	18.9	13.6	11.9	15.4
35–44 years	34.2	32.5	35.9	27.7	26.1	29.4	13.2	12.0	14.5	10.0	8.9	11.1
45–54 years	38.3	36.6	40.1	24.2	22.7	25.9	11.1	10.0	12.2	10.1	9.1	11.2
55–64 years	47.0	45.3	48.7	17.3	16.0	18.6	10.2	9.2	11.2	7.3	6.5	8.2
65+	52.9	51.4	54.4	10.2	9.4	11.1	4.6	4.0	5.3	2.8	2.4	3.4
<b>Total</b>	<b>36.2</b>	<b>35.5</b>	<b>37.0</b>	<b>22.0</b>	<b>21.3</b>	<b>22.7</b>	<b>13.0</b>	<b>12.4</b>	<b>13.7</b>	<b>10.2</b>	<b>9.7</b>	<b>10.8</b>

(a) Based on national guidelines (NHMRC 2001).

(b) Drinkers who consumed alcohol at levels that did not expose them to risk of short-term of harm were classified as low risk.

95% CI = 95 per cent confidence interval.

Note that figures may not add to 100 per cent (excluding abstainers) 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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Table 2.21 shows the frequency at which males and females consumed alcohol above the recommended short term risk levels between 2002 and 2008. Patterns of alcohol consumption that may lead to short-term harm did not change over this period. For both males and females, the proportion who consumed alcohol at risky or high risk levels at least yearly, monthly or weekly, remained constant between 2002 and 2008.

**Table 2.21: Frequency of drinking alcohol at above short-term risk<sup>(a)</sup> levels, by sex, 2002–2008**

	2002	2003	2004	2005	2006	2007	2008
	Per cent						
<b>Males</b>							
Low risk <sup>(b)</sup>	30.5	31.9	31.5	31.6	31.7	34.4	33.3
Risky or high risk							
At least yearly	25.1	23.9	23.9	23.7	25.4	22.9	24.3
At least monthly	17.1	17.2	14.7	15.8	15.8	14.6	15.8
At least weekly	14.2	14.2	16.0	13.1	14.4	13.6	13.6
<b>Females</b>							
Low risk <sup>(b)</sup>	38.7	40.1	37.2	39.5	40.0	39.4	39.2
Risky or high risk							
At least yearly	20.6	19.5	22.6	20.4	21.7	21.1	19.9
At least monthly	11.2	11.3	10.3	11.0	9.6	9.2	10.4
At least weekly	6.1	6.3	7.2	6.6	6.3	6.8	6.9

(a) Based on national guidelines (NHMRC 2001).

(b) Drinkers who consumed alcohol at levels that did not expose them to risk of short-term of harm were classified as low risk.

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

Data are age standardised to the 2006 Victorian population.

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

The quantity/frequency method was used to estimate the proportion of the population drinking at long-term risky or high risk levels. This method combined information on how often respondents usually had an alcoholic drink of any kind with information on the number of standard drinks that respondents usually had on a day when they consumed an alcoholic drink.

In 2008, the majority of males and females aged 18 years and over were at low risk of long-term harm, based on their frequency and volume of alcohol consumption (table 2.22). The proportion of persons who drank alcohol at levels that were risky or high risk was similar across age groups. However, younger persons were more likely to be at low risk than older persons. Among those aged 65 years and over, a higher proportion of males (76.6 per cent) than females (60.6 per cent) were at low risk of long-term harm.

Table 2.22: Long-term risk<sup>(a)</sup> of alcohol-related harm, by age group and sex, 2008

Age group (years)	Risky or high risk								
	Low risk <sup>(b)</sup>			Risky			High risk		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>									
18–24 years	<b>84.1</b>	80.3	87.3	<b>2.7</b>	1.5	4.7	<b>1.4</b>	0.6	3.0
25–34 years	<b>83.2</b>	79.7	86.2	<b>2.7</b>	1.7	4.2	<b>1.4</b>	0.6	3.1
35–44 years	<b>84.5</b>	82.1	86.6	<b>2.9</b>	2.0	4.1	<b>1.2</b>	0.8	2.0
45–54 years	<b>82.9</b>	80.7	84.9	<b>3.6</b>	2.7	4.6	<b>1.5</b>	1.0	2.4
55–64 years	<b>83.5</b>	81.5	85.3	<b>3.5</b>	2.7	4.6	<b>1.2</b>	0.8	1.9
65+	<b>76.6</b>	74.7	78.5	<b>2.7</b>	2.1	3.6	<b>0.9</b>	0.5	1.5
<b>Total</b>	<b>82.2</b>	<b>81.1</b>	<b>83.2</b>	<b>3.0</b>	<b>2.6</b>	<b>3.4</b>	<b>1.3</b>	<b>1.0</b>	<b>1.7</b>
<b>Females</b>									
18–24 years	<b>82.6</b>	78.9	85.8	<b>1.8</b>	0.9	3.4	<b>0.8</b>	0.3	2.1
25–34 years	<b>73.0</b>	70.4	75.6	<b>2.2</b>	1.5	3.3	<b>1.1</b>	0.6	2.2
35–44 years	<b>78.3</b>	76.5	80.1	<b>2.0</b>	1.5	2.7	<b>0.8</b>	0.5	1.3
45–54 years	<b>75.1</b>	73.1	77.1	<b>3.2</b>	2.5	4.0	<b>0.8</b>	0.5	1.2
55–64 years	<b>71.3</b>	69.2	73.2	<b>3.4</b>	2.8	4.3	<b>0.3</b>	0.2	0.5
65+	<b>60.6</b>	58.7	62.5	<b>1.7</b>	1.2	2.3	<b>0.4</b>	0.2	0.8
<b>Total</b>	<b>73.2</b>	<b>72.2</b>	<b>74.1</b>	<b>2.3</b>	<b>2.0</b>	<b>2.7</b>	<b>0.7</b>	<b>0.5</b>	<b>1.0</b>
<b>Persons</b>									
18–24 years	<b>83.4</b>	80.8	85.7	<b>2.2</b>	1.4	3.4	<b>1.1</b>	0.6	2.0
25–34 years	<b>78.1</b>	76.0	80.1	<b>2.5</b>	1.8	3.3	<b>1.3</b>	0.8	2.2
35–44 years	<b>81.4</b>	79.9	82.8	<b>2.4</b>	1.9	3.1	<b>1.0</b>	0.7	1.4
45–54 years	<b>79.0</b>	77.5	80.4	<b>3.4</b>	2.8	4.0	<b>1.2</b>	0.8	1.6
55–64 years	<b>77.3</b>	75.9	78.7	<b>3.5</b>	2.9	4.1	<b>0.8</b>	0.5	1.1
65+	<b>67.8</b>	66.4	69.2	<b>2.1</b>	1.7	2.6	<b>0.6</b>	0.4	0.9
<b>Total</b>	<b>77.5</b>	<b>76.8</b>	<b>78.2</b>	<b>2.6</b>	<b>2.4</b>	<b>2.9</b>	<b>1.0</b>	<b>0.8</b>	<b>1.2</b>

(a) Based on national guidelines (NHMRC 2001).

(b) Drinkers who consumed alcohol at levels that did not expose them to risk of long-term of harm were classified as low risk.

95% CI = 95 per cent confidence interval.

Note that figures may not add to 100 per cent (excluding abstainers) 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 from the corresponding estimate for Victoria are identified by colour as follows: **above Victoria** / **below Victoria**.

Table 2.23 shows the proportion of persons who reported consuming alcohol at risky or high risk levels in the short and long-term, by sex and Department of Health region. As reflected in tables 2.20 and 2.21, the frequency with which individuals consumed alcohol at levels associated with exposure to the risks of short-term harm ranged from at least once a year to at least once a week. The proportion of persons who reported consuming alcohol at levels associated with short-term risk of harm was above the average for Victoria (45.2 per cent) for all rural regions. The proportion of males exposed to any (weekly, monthly or yearly) risk of short-term harm was greater for those living in rural areas of the state compared with the metropolitan area (61.2 per cent and 51.1 per cent respectively). In all rural regions (except Hume), the proportion of males who reported consuming more than the recommended number of standard drinks on at least one drinking occasion each year (short-term risk) was higher than the average for Victoria (53.7 per cent).

A similar pattern of results was observed for females. The proportion of females exposed to the (weekly, monthly or yearly) risk of short-term harm was greater for those living in rural areas of the state compared with the metropolitan area (42.7 per cent and 35.4 per cent respectively). In all rural regions (except Loddon Mallee), the proportion of females who reported consuming more than the recommended number of standard drinks on at least one drinking occasion each year (short-term risk) was higher than the average for Victoria (37.2 per cent).

The proportion of males (8.2 per cent) in the Barwon–South Western region reporting alcohol consumption at levels associated with risk of long-term harm was higher than the Victorian average (4.3 per cent). Among females, there was one rural region– Gippsland (19.1 per cent), and one metropolitan region– Southern Metropolitan (19.2 per cent), that had a lower proportion of abstainers than the Victorian average (23.0 per cent). Only the North and West Metropolitan region (29.8 per cent) had a higher than average proportion of abstainers in the female population. The proportion of males who were abstainers was similar across all regions.

Table 2.23: Risk<sup>(a)</sup> of alcohol-related harm, by sex and Department of Health region, 2008

Region	Risky or high risk pattern of alcohol consumption leading to ...								
	Abstainer <sup>(b)</sup>			Short-term risk			Long-term risk		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>									
Barwon-South Western	10.9	8.2	14.4	66.1	61.6	70.3	8.2	5.3	12.4
Eastern Metropolitan	11.7	9.5	14.3	52.3	48.9	55.7	4.9	3.6	6.7
Gippsland	10.5	8.1	13.4	59.7	55.6	63.7	6.1	4.4	8.4
Grampians	12.5	10.0	15.6	59.6	55.9	63.2	3.5	2.4	5.1
Hume	12.7	10.2	15.7	58.5	55.0	61.9	5.0	3.7	6.5
Loddon Mallee	13.8	11.2	17.0	60.2	56.4	63.8	3.6	2.6	4.9
North and West Metropolitan	14.7	13.1	16.4	50.4	48.1	52.7	3.7	2.9	4.6
Southern Metropolitan	11.2	9.4	13.3	50.9	48.1	53.8	3.2	2.4	4.4
<b>Metropolitan</b>	12.7	11.6	13.8	51.1	49.6	52.7	3.8	3.2	4.4
<b>Rural</b>	12.1	10.8	13.6	61.2	59.2	63.0	5.5	4.5	6.8
<b>Total</b>	12.6	11.7	13.5	53.7	52.4	55.0	4.3	3.8	4.9
<b>Females</b>									
Barwon-South Western	19.2	16.2	22.6	43.4	38.7	48.2	4.3	2.7	6.7
Eastern Metropolitan	21.0	18.8	23.3	36.7	34.1	39.3	2.8	2.0	3.9
Gippsland	19.1	16.9	21.5	43.9	40.8	47.0	4.7	3.1	6.9
Grampians	20.0	17.7	22.5	42.4	39.0	45.9	2.8	1.9	3.9
Hume	20.5	18.6	22.6	43.7	41.1	46.4	2.4	1.8	3.3
Loddon Mallee	22.3	19.8	25.1	40.1	37.0	43.3	3.7	2.7	4.9
North and West Metropolitan	29.8	28.2	31.5	31.9	30.3	33.6	2.7	2.1	3.4
Southern Metropolitan	19.2	17.5	21.1	38.7	36.5	41.0	3.3	2.6	4.1
<b>Metropolitan</b>	23.9	22.8	25.0	35.4	34.2	36.6	2.9	2.5	3.3
<b>Rural</b>	20.3	19.1	21.6	42.7	40.9	44.4	3.6	2.9	4.3
<b>Total</b>	23.0	22.2	23.9	37.2	36.2	38.2	3.1	2.7	3.4
<b>Persons</b>									
Barwon-South Western	15.2	13.1	17.7	54.5	51.0	58.0	6.1	4.4	8.4
Eastern Metropolitan	16.6	15.0	18.3	44.2	42.0	46.3	3.9	3.1	4.9
Gippsland	15.0	13.3	16.9	51.4	48.7	54.0	5.3	4.1	6.8
Grampians	16.4	14.6	18.3	50.8	48.3	53.4	3.2	2.4	4.2
Hume	16.9	15.2	18.7	51.0	48.8	53.2	3.7	3.0	4.5
Loddon Mallee	18.2	16.4	20.3	50.0	47.5	52.5	3.6	2.9	4.5
North and West Metropolitan	22.5	21.3	23.7	41.0	39.6	42.4	3.2	2.7	3.8
Southern Metropolitan	15.4	14.1	16.7	44.7	42.9	46.5	3.2	2.7	3.9
<b>Metropolitan</b>	18.5	17.7	19.3	43.1	42.1	44.1	3.3	3.0	3.7
<b>Rural</b>	16.4	15.4	17.3	51.7	50.4	53.1	4.5	3.9	5.2
<b>Total</b>	18.0	17.4	18.6	45.2	44.4	46.1	3.7	3.3	4.0

(a) Based on national guidelines (NHMRC 2001).

(b) Includes both long-term and recent abstainers (i.e. those who had a drink in the past 12 months but reported they no longer drink).

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 (excluding abstainers) 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 2.24 shows the proportion of persons who reported that they consumed alcohol at least yearly, monthly or weekly at levels regarded as risky or high risk in the short-term, by LGA. Figure 2.13 shows the proportion of persons who consumed alcohol on one or more occasion per year, at levels associated with short-term harm. On average, 45.2 per cent of the population drank alcohol at levels that were risky or high risk in the short-term on one or more occasion per year. There were 26 local government areas (four metropolitan LGAs and 22 rural LGAs) for which this summary indicator was significantly above the Victorian average (45.2 per cent). The rural LGAs with a higher than average proportion of persons exposed to some risk of short-term harm from alcohol consumption were: Alpine (59.7 per cent), Surf Coast (59.5 per cent), Bass Coast (59.2 per cent), Queenscliffe (58.8 per cent), Indigo (57.6 per cent), Buloke (56.8 per cent), Mitchell (56.5 per cent), Mildura (56.3 per cent), Mansfield (56.1 per cent), East Gippsland (55.7 per cent), Colac-Otway (55.4 per cent), Murrindindi (55.4 per cent), Greater Geelong (55.1 per cent), Moyne (54.6 per cent), Pyrenees (54.6 per cent), Moira (54.0 per cent), Warrnambool (53.6 per cent), Southern Grampians (53.1 per cent), Ballarat (53.0 per cent), Strathbogie (52.7 per cent), Campaspe (52.5 per cent) and Hindmarsh (51.7 per cent). The four metropolitan local government areas with a higher than average proportion of persons who consumed alcohol at risky or high risk levels at least once per year were Yarra (55.4 per cent), Mornington Peninsula (53.9 per cent), Port Phillip (53.4 per cent) and Bayside (53.0 per cent).

Figure 2.12 shows the proportion of persons who consumed alcohol at least weekly, at levels associated with short-term harm. The proportion of persons who drank on at least one occasion per week and were at risk of short-term harm was higher than the average for Victoria (10.2 per cent) in 12 LGAs: Indigo (19.7 per cent), Strathbogie (18.1 per cent), Bass Coast (17.2 per cent), Moira (17.2 per cent), Mansfield (17.1 per cent), Mornington Peninsula (16.8 per cent), Corangamite (16.4 per cent), Southern Grampians (16.4 per cent), Surf Coast (16.3 per cent), Yarra (16.0 per cent), Mildura (15.4 per cent) and Port Phillip (14.9 per cent). With the exception of Yarra, Port Phillip and Mornington Peninsula, these LGAs are all located in rural areas.

Table 2.25 shows the proportion of persons who were not at risk of long term harm due to alcohol consumption based on the 2001 guidelines, by LGA. Figure 2.14 shows these data relative to the Victoria average (95.5 per cent). Among the 79 LGAs, there was only one LGA for which the proportion of persons not at risk of long-term harm was higher than the average for Victoria- Moorabool (98.1 per cent). There were three LGAs with a below average proportion of adults not at risk of long-term harm from alcohol- Greater Geelong (92.1 per cent), Pyrenees (91.8 per cent) and Yarra (91.4 per cent).

Table 2.24: Frequency of drinking alcohol at above short-term risk<sup>(a)</sup> levels, by LGA, 2008

LGA	Risky or high risk														
	Low risk <sup>(b)</sup>			At least yearly			At least monthly			At least weekly			Short-term risk <sup>(c)</sup>		
	%	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
Alpine (S)	32.3	27.7	37.3	31.8	26.4	37.8	16.3	12.3	21.3	11.6	7.9	16.6	59.7	54.7	64.4
Ararat (RC)	29.2	24.8	34.0	26.9	21.0	33.7	15.1	10.0	22.3	10.0	6.9	14.3	52.0	45.8	58.2
Ballarat (C)	31.7	27.4	36.4	25.0	20.3	30.4	16.5	12.3	21.9	11.5	8.1	16.1	53.0	48.1	57.8
Banyule (C)	32.3	27.5	37.5	25.9	20.6	32.0	12.6	8.8	17.7	10.6	7.1	15.4	49.1	44.0	54.2
Bass Coast (S)	26.8	22.7	31.4	23.9	17.5	31.8	18.1	11.7	26.8	17.2	11.8	24.5	59.2	52.5	65.7
Baw Baw (S)	34.9	29.6	40.6	25.8	21.0	31.4	10.5	6.9	15.7	11.0	8.0	14.9	47.3	41.9	52.8
Bayside (C)	39.4	34.1	44.9	21.7	17.3	26.8	17.8	13.3	23.4	13.5	9.7	18.7	53.0	47.4	58.6
Benalla (RC)	35.3	29.7	41.4	26.2	20.7	32.5	13.5	9.5	18.8	9.3	6.1	14.1	49.0	43.1	54.9
Boroondara (C)	38.8	34.0	43.9	24.8	20.0	30.4	17.0	13.1	21.8	6.2	4.0	9.6	48.1	42.6	53.7
Brimbank (C)	34.8	30.2	39.7	21.3	17.3	25.9	8.0	5.6	11.3	4.7*	2.8	7.6	34.0*	29.4	38.8
Buloke (S)	28.1	23.4	33.2	26.3	20.7	32.8	21.0	16.0	26.9	9.5	5.9	15.1	56.8	51.2	62.2
Campaspe (S)	28.3	24.2	32.8	26.8	21.7	32.7	13.0	9.2	18.1	12.6	9.0	17.4	52.5	46.8	58.0
Cardinia (S)	35.9	31.2	40.8	25.9	21.0	31.5	11.4	7.5	17.0	10.4	6.9	15.5	47.7	42.2	53.3
Casey (C)	42.8	37.8	47.9	19.8	16.0	24.2	7.2	4.8	10.5	10.7	7.7	14.8	37.7	33.0	42.6
Central Goldfields (S)	30.1	25.2	35.6	22.6	16.9	29.5	13.5	9.3	19.3	13.1	8.9	18.8	49.2	42.9	55.6
Colac-Otway (S)	30.3	25.7	35.4	24.4	19.1	30.7	19.2	14.0	25.7	11.7	7.5	17.9	55.4	49.6	61.0
Corangamite (S)	31.6	26.3	37.4	17.4	13.3	22.5	14.3	10.2	19.8	16.4	11.8	22.3	48.2	42.5	53.9
Darebin (C)	40.1	34.8	45.7	21.9	17.5	27.0	7.7	5.3	11.1	11.2	7.8	15.8	40.7	35.3	46.4
East Gippsland (S)	31.2	26.0	36.9	20.9	14.8	28.8	20.0	14.1	27.4	14.9	10.0	21.4	55.7	49.0	62.3
Frankston (C)	37.6	32.4	43.0	21.2	17.0	26.1	13.4	9.7	18.3	12.2	8.6	16.8	46.8	41.5	52.2
Gannawarra (S)	31.7	27.4	36.3	18.4	14.3	23.3	17.3	12.9	22.8	13.9	9.7	19.4	49.5	44.3	54.7
Glen Eira (C)	43.6	38.3	49.0	19.2	15.4	23.8	11.9	8.5	16.4	6.9	4.5	10.5	38.1	32.9	43.5
Glenelg (S)	31.9	26.4	37.9	20.9	16.6	26.1	12.4	8.9	16.9	14.0	9.2	20.6	47.3	41.5	53.2
Golden Plains (S)	34.8	29.7	40.3	23.2	18.5	28.6	14.3	10.3	19.5	10.4	7.2	14.9	47.8	42.2	53.6
Greater Bendigo (C)	33.1	28.5	38.2	24.9	20.1	30.6	9.8	6.7	14.3	11.6	7.7	17.0	46.3	40.8	52.0
Greater Dandenong (C)	41.0	35.9	46.2	13.9	10.6	18.0	7.0	4.5	10.8	7.2	4.7	10.7	28.1	23.4	33.2
Greater Geelong (C)	30.2	25.5	35.3	23.9	18.8	29.9	19.3	14.0	26.0	11.9	8.5	16.6	55.1	49.4	60.8
Greater Shepparton (C)	33.6	28.5	39.1	19.1	15.1	23.8	11.9	8.2	17.0	12.1	8.3	17.5	43.2	37.3	49.3
Hepburn (S)	35.9	29.8	42.3	25.3	20.0	31.5	10.7	7.0	15.9	11.0	6.7	17.6	47.0	40.4	53.8
Hindmarsh (S)	28.7	24.0	33.9	26.3	20.9	32.5	16.7	12.2	22.3	8.8	5.4	13.9	51.7	46.6	56.8
Hobsons Bay (C)	34.2	29.6	39.2	22.3	18.4	26.7	10.8	7.3	15.7	11.3	7.8	15.9	44.4	39.0	49.9
Horsham (RC)	33.7	28.9	38.9	25.1	20.2	30.8	14.5	10.6	19.6	9.8	6.5	14.3	49.4	43.6	55.2
Hume (C)	34.9	29.9	40.3	16.3	12.8	20.6	11.0	7.6	15.6	5.9	3.8	9.1	33.2	28.0	38.8
Indigo (S)	28.8	24.1	34.0	24.7	19.0	31.5	13.2	8.8	19.2	19.7	14.1	26.8	57.6	52.2	62.8
Kingston (C)	38.3	32.8	44.1	22.0	17.7	27.0	14.5	10.2	20.1	9.4	6.2	14.0	45.8	40.2	51.6
Knox (C)	34.9	30.0	40.2	22.6	18.4	27.3	10.9	7.9	15.0	13.4	9.7	18.2	46.9	41.7	52.1
Latrobe (C)	32.7	27.9	37.8	22.9	18.5	28.1	16.8	12.8	21.7	9.7	6.6	13.9	49.3	44.1	54.6
Loddon (S)	31.5	26.6	36.9	22.2	17.3	27.9	12.4	8.3	18.2	12.1	8.4	17.1	46.7	41.0	52.5
Macedon Ranges (S)	34.7	29.6	40.1	25.7	19.9	32.5	12.8	8.9	17.9	10.0	6.4	15.1	48.4	42.0	54.9
Manningham (C)	41.1	36.0	46.5	21.7	17.1	27.2	9.2	6.4	13.1	5.2*	2.9	9.1	36.1	30.6	41.9

(a) Based on national guidelines (NHMRC 2001).

(b) Drinkers who consumed alcohol at levels that did not expose them to risk of short-term of harm were classified as low risk.

(c) Includes those who consumed alcohol at risky or high risk levels weekly, monthly or yearly. Metropolitan and rural LGAs are identified by colour as follows: metropolitan / rural.

95% CI = 95% confidence interval.

LGA = Local government area.

Note that figures (for low risk and risky or high risk) may not add to 100 per cent (excluding abstainers) due to a proportion of 'don't know' or 'refused' responses.

Data are age standardised to the 2006 Victorian population.

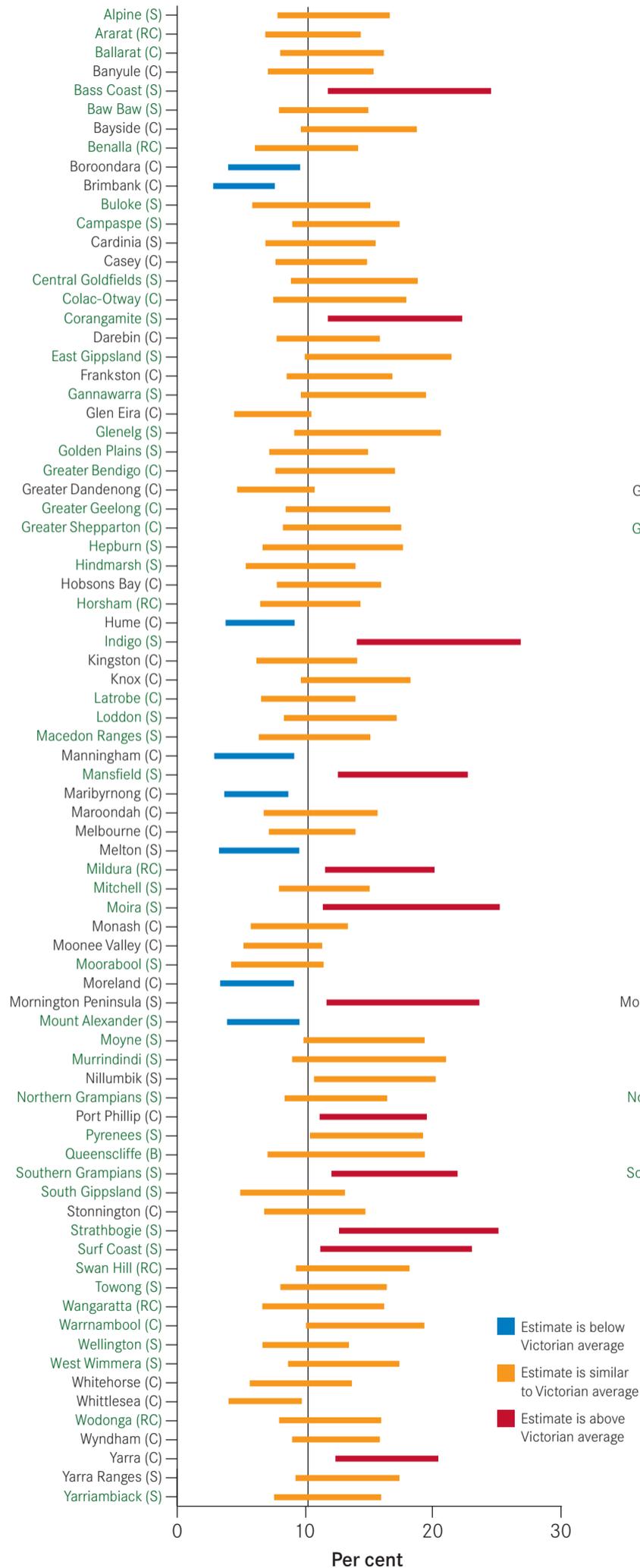
Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

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

Table 2.24: Frequency of drinking alcohol at above short-term risk<sup>(a)</sup> levels, by LGA, 2008 (continued)

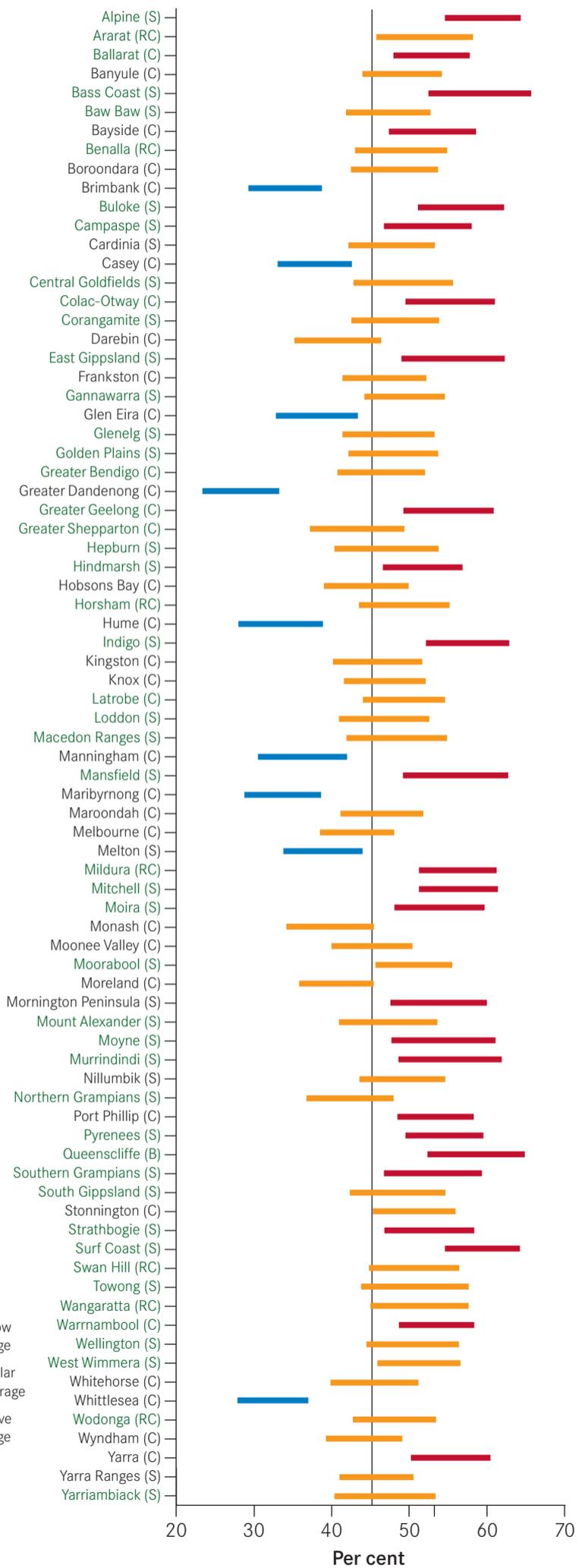
LGA	Risky or high risk														
	Low risk <sup>(b)</sup>			At least yearly			At least monthly			At least weekly			Short-term risk <sup>(c)</sup>		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	33.1	26.8	40.0	25.5	18.8	33.5	13.6	9.1	19.7	17.1	12.6	22.7	56.1	49.3	62.7
Maribyrnong (C)	38.0	33.0	43.2	17.4	13.8	21.8	10.5	7.7	14.1	5.6	3.7	8.6	33.5	28.8	38.6
Maroondah (C)	39.2	34.1	44.6	22.0	17.6	27.3	13.9	10.1	18.9	10.4	6.8	15.6	46.4	41.1	51.8
Melbourne (C)	39.3	34.6	44.3	20.4	16.5	24.8	12.8	9.8	16.5	10.1	7.2	13.9	43.2	38.6	48.0
Melton (S)	38.1	33.5	43.0	21.5	16.9	26.9	11.7	8.4	16.1	5.7	3.3	9.5	38.8	33.9	44.0
Mildura (RC)	27.3	23.0	32.0	22.3	17.7	27.6	18.7	14.1	24.3	15.4	11.6	20.1	56.3	51.3	61.2
Mitchell (S)	27.2	23.3	31.5	26.7	22.0	32.2	18.7	14.6	23.5	11.0	8.0	15.0	56.5	51.3	61.4
Moira (S)	30.9	25.7	36.7	24.1	18.9	30.1	12.7	8.3	19.0	17.2	11.4	25.2	54.0	48.2	59.7
Monash (C)	43.6	38.2	49.2	18.7	14.5	23.6	12.3	8.7	17.1	8.9	5.8	13.3	39.8	34.3	45.5
Moonee Valley (C)	35.6	30.9	40.6	24.4	19.7	29.9	13.1	9.6	17.6	7.7	5.2	11.3	45.2	40.0	50.4
Moorabool (S)	33.9	29.2	38.9	26.6	21.5	32.3	17.0	12.3	23.0	7.0*	4.2	11.4	50.6	45.7	55.5
Moreland (C)	36.1	31.4	41.0	21.2	17.6	25.4	13.6	10.3	17.7	5.6*	3.4	9.1	40.4	35.7	45.3
Mornington Peninsula (S)	35.5	30.1	41.3	19.9	15.9	24.6	17.1	12.6	23.0	16.8	11.7	23.6	53.9	47.7	60.0
Mount Alexander (S)	36.3	30.5	42.6	27.4	21.8	33.8	13.8	9.4	19.9	6.1	3.9	9.5	47.3	41.1	53.6
Moyne (S)	31.5	25.5	38.2	22.3	17.6	27.8	18.4	12.9	25.4	13.9	9.9	19.3	54.6	47.8	61.1
Murrindindi (S)	28.6	24.3	33.3	27.5	22.1	33.6	14.0	9.2	20.8	13.9	9.0	21.0	55.4	48.7	61.9
Nilumbik (S)	41.4	36.0	47.0	20.7	16.5	25.6	13.5	10.3	17.6	14.9	10.7	20.2	49.1	43.7	54.5
Northern Grampians (S)	37.7	31.6	44.3	16.4	12.3	21.6	14.1	10.4	18.7	11.8	8.4	16.4	42.3	36.8	48.0
Port Phillip (C)	36.8	32.1	41.7	22.8	18.3	27.9	15.7	12.3	19.8	14.9	11.2	19.5	53.4	48.5	58.2
Pyrenees (S)	28.5	23.7	33.7	26.5	21.2	32.6	13.8	9.9	19.0	14.3	10.4	19.2	54.6	49.6	59.6
Queenscliffe (B)	31.0	25.4	37.3	27.6	20.9	35.4	19.3	13.8	26.3	11.9*	7.1	19.3	58.8	52.4	64.9
Southern Grampians (S)	33.7	28.2	39.6	24.3	19.4	29.8	12.4	8.6	17.6	16.4	12.1	21.9	53.1	46.8	59.3
South Gippsland (S)	34.0	29.4	38.9	24.3	19.5	30.0	16.1	11.6	22.0	8.1	4.9	13.1	48.5	42.4	54.7
Stonnington (C)	38.8	33.7	44.3	22.2	18.0	27.1	18.4	14.3	23.3	10.1	6.8	14.7	50.7	45.4	56.0
Strathbogie (S)	27.5	23.1	32.4	20.3	14.9	27.1	14.3	9.4	21.1	18.1	12.7	25.1	52.7	46.9	58.4
Surf Coast (S)	30.8	26.1	35.9	24.3	18.6	31.0	19.0	14.3	24.6	16.3	11.2	23.0	59.5	54.6	64.3
Swan Hill (RC)	28.3	23.6	33.5	24.1	18.1	31.2	13.5	9.1	19.5	13.1	9.3	18.1	50.7	44.9	56.4
Towong (S)	30.9	25.6	36.8	25.5	19.4	32.7	13.7	9.7	18.8	11.6	8.1	16.4	50.8	43.9	57.6
Wangaratta (RC)	30.9	25.3	37.1	24.8	19.9	30.5	16.1	11.1	22.7	10.5	6.7	16.1	51.4	45.1	57.6
Warrnambool (C)	25.0	21.1	29.4	28.4	23.2	34.1	11.1	7.7	15.8	14.1	10.1	19.3	53.6	48.8	58.3
Wellington (S)	35.5	29.9	41.5	25.2	20.9	30.0	15.8	11.6	21.1	9.5	6.7	13.4	50.5	44.6	56.4
West Wimmera (S)	30.6	26.3	35.2	20.5	15.8	26.2	18.4	13.7	24.1	12.4	8.7	17.3	51.3	45.9	56.6
Whitehorse (C)	37.5	32.5	42.9	26.5	21.2	32.6	10.0	6.6	14.9	8.9	5.7	13.6	45.4	39.9	51.1
Whittlesea (C)	40.3	35.5	45.4	19.2	15.4	23.7	6.8	4.6	9.9	6.2	4.0	9.7	32.3	28.0	36.9
Wodonga (RC)	33.4	28.8	38.3	23.7	19.4	28.6	13.0	9.4	17.8	11.3	8.0	15.9	48.1	42.8	53.4
Wyndham (C)	33.0	28.7	37.7	21.2	17.3	25.8	10.9	8.1	14.6	12.0	9.0	15.8	44.1	39.4	49.0
Yarra (C)	26.6	22.3	31.3	19.3	15.6	23.7	20.1	16.0	24.8	16.0	12.4	20.4	55.4	50.3	60.4
Yarra Ranges (S)	34.6	30.1	39.3	20.1	15.9	24.9	12.8	9.3	17.5	12.8	9.3	17.3	45.7	41.0	50.5
Yarriambiack (S)	28.8	24.1	34.1	13.6	9.8	18.5	22.1	16.7	28.6	11.1	7.6	15.9	46.8	40.4	53.3
<b>Total</b>	<b>36.2</b>	<b>35.5</b>	<b>37.0</b>	<b>22.0</b>	<b>21.3</b>	<b>22.7</b>	<b>13.0</b>	<b>12.4</b>	<b>13.7</b>	<b>10.2</b>	<b>9.7</b>	<b>10.8</b>	<b>45.2</b>	<b>44.4</b>	<b>46.1</b>

Figure 2.12: Risky or high risk levels of alcohol consumption (at least weekly) for short-term risk<sup>(a)</sup> of harm, by LGA, 2008



(a) Based on national guidelines (NHMRC 2001).  
Metropolitan and rural LGAs are identified by colour as follows:  
metropolitan / rural.

Figure 2.13: Risky or high risk levels of alcohol consumption (at least weekly, monthly or yearly) for short-term risk<sup>(a)</sup> of harm, by LGA, 2008



LGA = local government area.

Data are age standardised to the 2006 Victorian population.

The line on the graph is the Victorian estimate, it does not show the 95% CI. See relevant table for 95% CI for Victoria (Total).



Table 2.25: Did not consume alcohol at above long-term risk<sup>(a)</sup> levels, by LGA, 2008

LGA	Not at long-term risk of harm			LGA	Not at long-term risk of harm		
	%	Lower 95% CI	Upper 95% CI		%	Lower 95% CI	Upper 95% CI
Alpine (S)	96.8	94.7	98.1	Mansfield (S)	93.7	90.4	96.0
Ararat (RC)	94.9	90.8	97.2	Maribyrnong (C)	97.6	95.6	98.6
Ballarat (C)	95.0	91.7	97.1	Maroondah (C)	95.6	92.9	97.3
Banyule (C)	94.0	89.5	96.6	Melbourne (C)	96.6	94.1	98.1
Bass Coast (S)	92.9	89.5	95.3	Melton (S)	96.0	92.4	98.0
Baw Baw (S)	95.2	92.4	97.0	Mildura (RC)	92.6	88.4	95.3
Bayside (C)	95.6	92.9	97.4	Mitchell (S)	95.4	92.6	97.2
Benalla (RC)	93.1	88.2	96.0	Moira (S)	96.2	93.3	97.9
Boroondara (C)	96.7	94.0	98.2	Monash (C)	95.5	92.2	97.5
Brimbank (C)	96.0	93.1	97.7	Moonee Valley (C)	96.9	94.3	98.3
Buloke (S)	96.2	93.4	97.8	Moorabool (S)	98.1	96.5	99.0
Campaspe (S)	95.9	93.4	97.4	Moreland (C)	96.1	93.6	97.6
Cardinia (S)	94.2	90.0	96.7	Mornington Peninsula (S)	97.0	94.8	98.3
Casey (C)	97.5	95.6	98.6	Mount Alexander (S)	96.6	94.7	97.8
Central Goldfields (S)	96.9	94.4	98.3	Moyne (S)	91.9	86.7	95.2
Colac-Otway (S)	96.2	93.3	97.9	Murrindindi (S)	93.0	87.1	96.3
Corangamite (S)	94.0	90.0	96.4	Nilumbik (S)	95.7	92.4	97.6
Darebin (C)	97.6	95.5	98.7	Northern Grampians (S)	95.9	93.1	97.6
East Gippsland (S)	94.8	91.9	96.8	Port Phillip (C)	96.6	94.6	98.0
Frankston (C)	96.2	93.3	97.9	Pyrenees (S)	91.8	88.0	94.5
Gannawarra (S)	95.9	93.2	97.5	Queenscliffe (B)	92.9	87.3	96.2
Glen Eira (C)	96.5	94.2	97.9	Southern Grampians (S)	93.9	90.7	96.0
Glenelg (S)	97.4	92.7	99.1	South Gippsland (S)	95.5	92.9	97.1
Golden Plains (S)	95.2	92.3	97.0	Stonnington (C)	92.9	88.9	95.5
Greater Bendigo (C)	96.2	94.0	97.6	Strathbogie (S)	95.7	93.0	97.4
Greater Dandenong (C)	97.5	95.6	98.6	Surf Coast (S)	95.8	93.6	97.2
Greater Geelong (C)	92.1	88.1	94.8	Swan Hill (RC)	94.1	91.1	96.2
Greater Shepparton (C)	96.7	94.2	98.1	Towong (S)	94.9	91.5	97.0
Hepburn (S)	94.7	91.6	96.7	Wangaratta (RC)	95.9	92.6	97.7
Hindmarsh (S)	96.0	93.4	97.6	Warrnambool (C)	95.2	92.4	97.0
Hobsons Bay (C)	95.4	92.9	97.0	Wellington (S)	95.6	93.0	97.3
Horsham (RC)	97.2	95.3	98.4	West Wimmera (S)	97.5	95.2	98.8
Hume (C)	93.6	88.9	96.4	Whitehorse (C)	96.5	94.1	98.0
Indigo (S)	94.1	88.0	97.2	Whittlesea (C)	97.7	95.0	99.0
Kingston (C)	95.2	91.9	97.2	Wodonga (RC)	95.3	92.2	97.2
Knox (C)	92.9	89.2	95.4	Wyndham (C)	96.0	93.6	97.5
Latrobe (C)	92.9	88.9	95.6	Yarra (C)	91.4	87.3	94.3
Loddon (S)	96.2	93.4	97.9	Yarra Ranges (S)	96.0	93.3	97.6
Macedon Ranges (S)	96.3	93.5	97.9	Yarriambiack (S)	95.6	92.1	97.5
Manningham (C)	94.4	90.2	96.9	<b>Total</b>	<b>95.5</b>	<b>95.1</b>	<b>95.9</b>

(a) Based on national guidelines (NHMRC 2001). Includes those who were abstainers (non-drinkers) and those at low risk of long-term harm.

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

95% CI = 95% confidence interval.

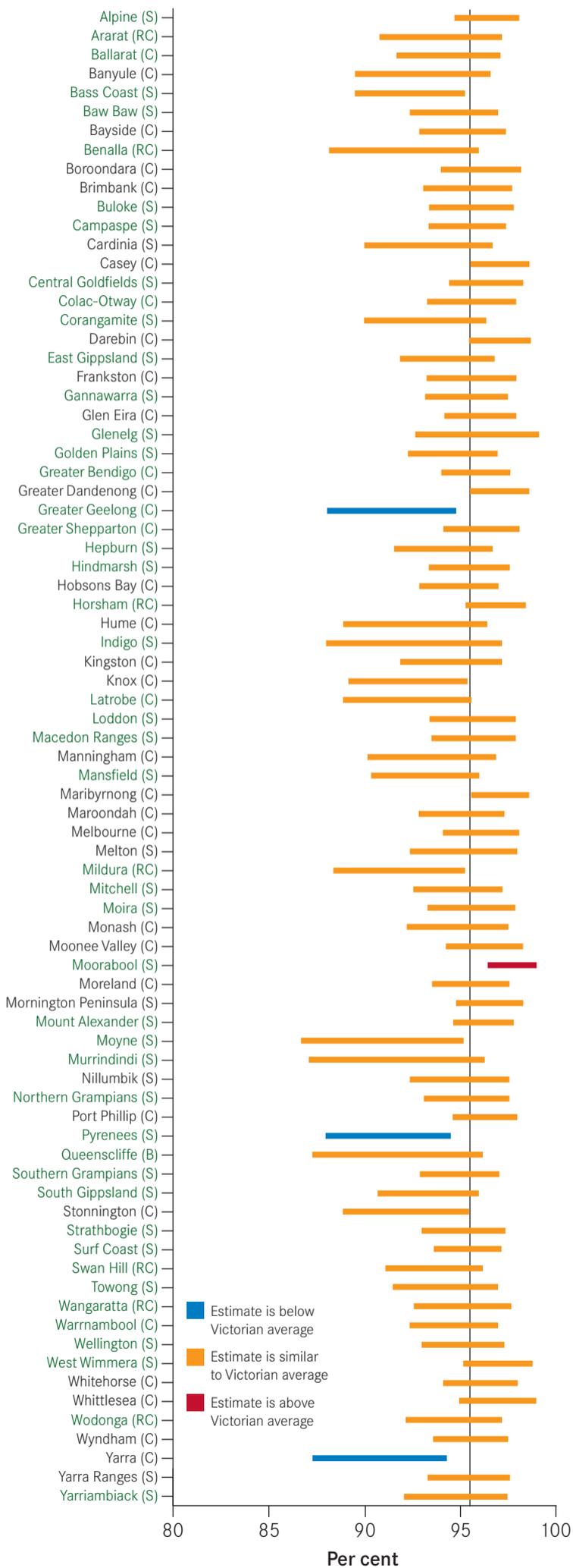
LGA = Local government area.

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.

Figure 2.14: Not at long-term risk<sup>(a)</sup> of harm from alcohol consumption, LGA, 2008



(a) Based on national guidelines (NHMRC 2001). Includes those who were abstainers (non-drinkers) and those at low risk of long-term harm.

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 line on the graph is the Victorian estimate, it does not show the 95% CI. See relevant table for 95% CI for Victoria (Total).

### Risk of harm from risky or high risk alcohol consumption levels, by selected health indicators

The following table shows selected health indicators by the proportion of persons who reported alcohol consumption levels that entailed risk of short and long-term harm, based on the definitions of risky or high risk levels of drinking from the 2001 guidelines. Table 2.26 also includes results for abstainers (persons who reported that they do not drink, or who had a drink in the past 12 months, but reported they no longer drink).

Current smokers were more likely to be risky or high risk drinkers at short and long-term risk of harm than non-smokers. The table also shows that individuals who participated in sufficient physical activity to achieve the national guidelines were more likely to be at short-term risk of harm than those who did not do sufficient physical activity. Individuals with very high levels of psychological distress were less likely than those with low or moderate levels of psychological distress to drink alcohol at risky or high risk levels, with respect to short-term risk of harm.

**Table 2.26: Risk<sup>(a)</sup> of alcohol-related harm, by selected health indicators, 2008**

	Short-term risk <sup>(b)</sup>			Long-term risk			Abstainers <sup>(c)</sup>		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Smoking status</b>									
Current smoker	58.5	56.6	60.3	8.8	7.7	10.1	14.1	12.6	15.6
Ex-smoker	54.4	52.3	56.5	4.8	3.9	6.0	11.9	10.5	13.4
Non-smoker	36.3	35.2	37.3	1.5	1.3	1.8	22.5	21.6	23.5
<b>Nutrition<sup>(d)</sup></b>									
Met the guidelines for fruit consumption	42.4	41.2	43.6	2.7	2.3	3.1	18.2	17.3	19.1
Met the guidelines for vegetable consumption	44.6	41.7	47.6	4.1	3.1	5.6	17.6	15.5	20.0
Met the guidelines for fruit & vegetable consumption	43.4	40.0	46.7	3.0	2.1	4.2	18.8	16.3	21.7
<b>Physical activity levels<sup>(e)</sup></b>									
Sufficient time and sessions	48.4	47.4	49.5	4.0	3.5	4.5	15.1	14.3	15.9
Insufficient time and/or sessions	40.8	39.1	42.5	2.9	2.4	3.4	20.5	19.1	22.0
Sedentary	38.1	33.8	42.5	4.2	2.9	6.0	24.8	21.5	28.5
<b>Body weight status</b>									
Underweight	37.1	32.3	42.3	6.2	3.9	9.6	23.7	19.5	28.5
Healthy weight	42.9	41.7	44.1	3.5	3.0	4.0	17.8	16.9	18.8
Overweight	50.3	48.8	51.8	4.0	3.4	4.7	14.7	13.7	15.8
Obese	45.1	42.9	47.3	3.6	2.7	4.6	20.1	18.5	21.8
<b>Self-rated health</b>									
Excellent/very good	45.8	44.6	47.1	2.7	2.4	3.2	15.5	14.6	16.5
Good	46.5	45.1	47.8	4.1	3.6	4.8	17.9	16.9	18.9
Fair/poor	41.5	39.5	43.5	5.1	4.2	6.1	23.3	21.7	25.1
<b>Level of psychological distress<sup>(f)</sup></b>									
Low (10–15)	46.3	45.3	47.4	3.2	2.9	3.6	15.9	15.1	16.7
Moderate (16–21)	45.1	43.4	46.8	4.1	3.4	4.9	18.4	17.1	19.8
High (22–29)	43.3	40.9	45.9	5.1	3.8	6.7	23.7	21.5	26.0
Very high (30–50)	37.3	33.0	41.7	5.7	4.0	8.0	32.5	28.6	36.7
<b>Total</b>	<b>45.2</b>	<b>44.4</b>	<b>46.1</b>	<b>3.7</b>	<b>3.3</b>	<b>4.0</b>	<b>18.0</b>	<b>17.4</b>	<b>18.6</b>

(a) Based on national guidelines (NHMRC 2001).

(b) Includes those who consumed alcohol at risky or high risk levels weekly, monthly or yearly.

(c) Includes both long-term and recent abstainers (i.e. those who had a drink in the past 12 months but reported they no longer drink).

(d) Based on national guidelines (NHMRC 2003).

(e) Based on national guidelines (DoHA 1999) and excludes adults aged less than 19 years.

(f) Based on Kessler 10 Psychological Distress Scale (K10).

95% CI = 95 per cent confidence interval.

Data are age standardised to the 2006 Victorian population.

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

## Smoking

Current smokers were defined as those persons who reported smoking daily or occasionally. Table 2.27 shows smoking status, by age group and sex. Males aged 25–34 years were found to have the highest prevalence of current smoking, at 31.7 per cent, followed by males aged 35–44 years, at 26.1 per cent. For females, the highest prevalence of current smoking was in the 18–24 years age group, at 22.2 per cent, closely followed by females aged 25–34 years, at 21.3 per cent. For both males and females, the highest prevalence of non-smokers was in the 18–24 years age group (71.6 per cent for males and 72.2 per cent for females).

**Table 2.27: Smoking status<sup>(a)</sup>, by age group and sex, 2008**

Age group (years)	Current smoker			Ex-smoker			Non-smoker		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>									
18–24 years	22.4	18.7	26.6	5.8	4.0	8.4	71.6	67.1	75.7
25–34 years	31.7	27.9	35.7	15.9	13.3	19.0	52.3	48.2	56.3
35–44 years	26.1	23.5	28.8	21.1	18.8	23.6	52.7	49.7	55.7
45–54 years	21.4	19.1	23.7	32.1	29.5	34.8	46.5	43.7	49.3
55–64 years	15.7	14.0	17.7	39.2	36.6	41.8	44.9	42.2	47.6
65+	8.7	7.5	10.1	49.9	47.6	52.2	40.7	38.5	43.0
<b>Total</b>	<b>21.4</b>	<b>20.2</b>	<b>22.6</b>	<b>27.6</b>	<b>26.6</b>	<b>28.7</b>	<b>50.7</b>	<b>49.4</b>	<b>52.0</b>
<b>Females</b>									
18–24 years	22.2	18.8	26.1	5.5	3.9	7.6	72.2	68.2	75.9
25–34 years	21.3	19.0	23.6	16.0	14.1	18.2	62.6	59.8	65.3
35–44 years	20.0	18.3	21.7	24.7	22.9	26.5	55.2	53.1	57.3
45–54 years	18.5	16.8	20.3	25.5	23.6	27.5	55.7	53.4	57.9
55–64 years	13.2	11.8	14.6	24.2	22.4	26.0	62.4	60.3	64.4
65+	6.6	5.7	7.6	23.7	22.1	25.4	69.0	67.2	70.7
<b>Total</b>	<b>16.9</b>	<b>16.1</b>	<b>17.8</b>	<b>20.4</b>	<b>19.6</b>	<b>21.1</b>	<b>62.4</b>	<b>61.4</b>	<b>63.4</b>
<b>Persons</b>									
18–24 years	22.3	19.7	25.1	5.6	4.4	7.2	71.9	68.9	74.7
25–34 years	26.5	24.3	28.8	16.0	14.3	17.8	57.4	55.0	59.9
35–44 years	23.0	21.5	24.6	22.9	21.4	24.4	54.0	52.1	55.8
45–54 years	19.9	18.5	21.4	28.8	27.2	30.5	51.1	49.3	52.9
55–64 years	14.4	13.3	15.6	31.6	30.0	33.2	53.8	52.0	55.5
65+	7.5	6.8	8.4	35.4	34.0	36.9	56.3	54.8	57.7
<b>Total</b>	<b>19.1</b>	<b>18.4</b>	<b>19.9</b>	<b>23.8</b>	<b>23.1</b>	<b>24.4</b>	<b>56.8</b>	<b>56.0</b>	<b>57.7</b>

(a) A person who smoked daily or occasionally was categorised as a current smoker.

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Table 2.28 shows the proportion of persons who smoked tobacco on a daily or occasional basis, by sex and age group. Most persons who were current smokers smoked on a daily basis, as opposed to smoking occasionally. For males aged 18–24 years the prevalence of occasional smoking (9.3 per cent) was similar to the prevalence of daily smoking (13.1 per cent). For females the prevalence of occasional smoking was highest for those aged 18–24 years (7.4 per cent). The proportion of females who smoked daily was greater than the proportion of females who smoked occasionally across all age groups.

Table 2.28: Frequency of current smoking behaviour<sup>(a),(b)</sup>, 2008

Age group (years)	Daily			Occasional		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
18–24 years	13.1	10.2	16.7	9.3	6.8	12.5
25–34 years	23.2	19.9	27.0	8.4	6.4	11.1
35–44 years	20.2	17.9	22.7	5.9	4.7	7.5
45–54 years	17.2	15.2	19.3	4.2	3.1	5.6
55–64 years	13.1	11.5	14.9	2.6	1.9	3.6
65+	8.0	6.8	9.3	0.7*	0.4	1.2
<b>Total</b>	<b>16.2</b>	<b>15.2</b>	<b>17.2</b>	<b>5.2</b>	<b>4.6</b>	<b>5.9</b>
<b>Females</b>						
18–24 years	14.8	12.1	18.0	7.4	5.3	10.3
25–34 years	16.7	14.7	18.9	4.5	3.5	5.8
35–44 years	16.6	15.2	18.3	3.3	2.6	4.2
45–54 years	15.8	14.3	17.4	2.7	2.0	3.6
55–64 years	11.7	10.4	13.1	1.5	1.1	2.1
65+	5.5	4.7	6.4	1.1	0.8	1.6
<b>Total</b>	<b>13.6</b>	<b>12.9</b>	<b>14.4</b>	<b>3.3</b>	<b>2.9</b>	<b>3.8</b>
<b>Persons</b>						
18–24 years	13.9	11.9	16.3	8.4	6.7	10.4
25–34 years	20.0	18.0	22.1	6.5	5.3	7.9
35–44 years	18.4	17.0	19.9	4.6	3.9	5.5
45–54 years	16.5	15.2	17.8	3.4	2.8	4.2
55–64 years	12.4	11.4	13.5	2.0	1.6	2.6
65+	6.6	5.9	7.4	0.9	0.7	1.3
<b>Total</b>	<b>14.9</b>	<b>14.3</b>	<b>15.5</b>	<b>4.3</b>	<b>3.9</b>	<b>4.7</b>

(a) A person who smoked daily or occasionally was categorised as a current smoker.

(b) The term 'occasional' was defined by the respondent who chose the response option 'I smoke occasionally' when asked which of a number of alternative response options (including 'I smoke daily') best described their smoking status.

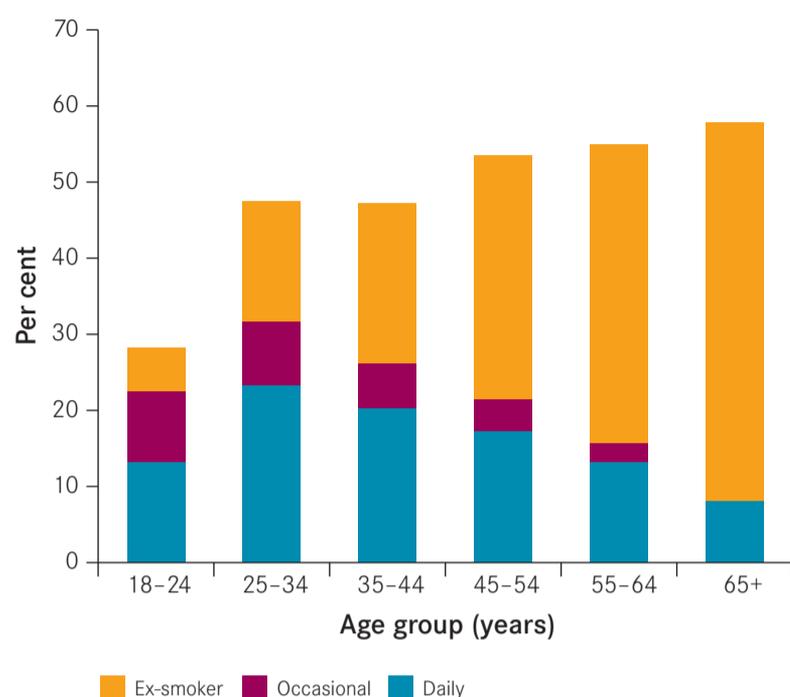
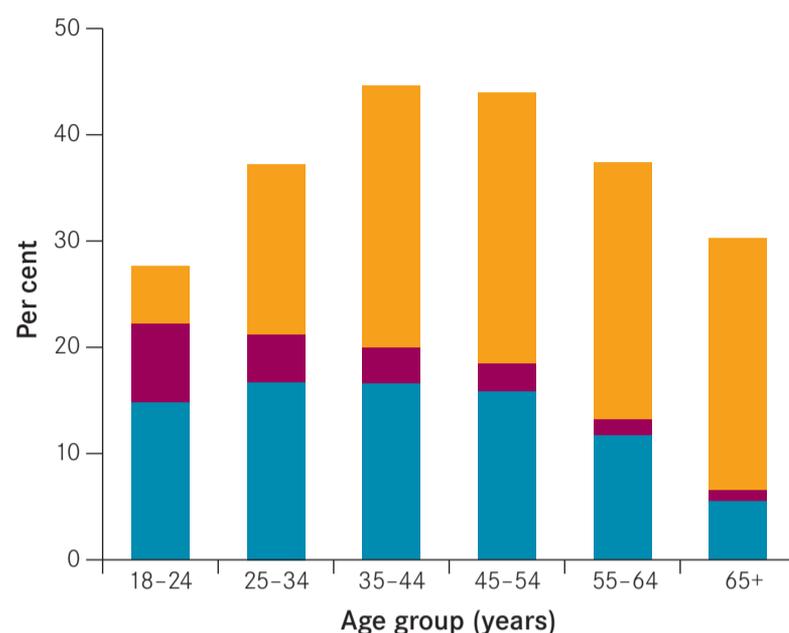
95% CI = 95 per cent confidence interval.

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 from the corresponding estimate for Victoria are identified by colour as follows: **above Victoria** / **below Victoria**.

Figures 2.15 and 2.16 show the proportion of males and females who had ever smoked (those who smoke currently and ex-smokers) by age group. The proportion of ex-smokers among those aged 65 years and over largely reflects the male–female differential with past patterns of smoking behaviour.

Figure 2.15: Smoking status<sup>(a),(b)</sup>, by age group, males, 2008Figure 2.16: Smoking status<sup>(a),(b)</sup>, by age group, females, 2008

(a) A person who smoked daily or occasionally was categorised as a current smoker.

(b) The term 'occasional' was defined by the respondent who chose the response option 'I smoke occasionally' when asked which of a number of alternative response options (including 'I smoke daily') best described their smoking status.

Data are crude estimates, they have not been age standardised.

Table 2.29 shows the smoking status of the Victorian population for the period 2001–2008, by sex. The proportion of males and females who were current smokers decreased over this period for Victoria.

Table 2.29: Smoking status<sup>(a)</sup>, by sex, 2001–2008

	2001	2002	2003	2004	2005	2006	2007	2008
	Per cent							
<b>Males</b>								
Current smoker	27.4	25.7	24.0	24.1	21.8	22.3	21.7	21.4
Ex-smoker	31.8	27.8	28.1	29.1	29.1	28.5	26.2	27.6
Non-smoker	40.8	46.2	47.5	46.7	49.0	49.1	52.0	50.7
<b>Females</b>								
Current smoker	20.9	22.2	20.2	19.8	19.1	18.5	18.1	16.9
Ex-smoker	23.4	20.1	19.9	22.4	20.8	20.6	20.1	20.4
Non-smoker	55.8	57.6	59.6	57.7	59.9	60.6	61.6	62.4
<b>Persons</b>								
Current smoker	24.1	23.9	22.1	22.0	20.5	20.4	19.9	19.1
Ex-smoker	27.2	23.5	23.4	25.3	24.6	24.3	22.9	23.8
Non-smoker	48.7	52.5	54.1	52.6	54.8	55.1	57.0	56.8

(a) A person who smoked daily or occasionally was categorised as a current smoker.

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.

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

Table 2.30 shows smoking status by sex and Department of Health region. Approximately one in five males (21.4 per cent) in Victoria reported that they smoked daily or occasionally in 2008. The proportion of males who were current smokers was similar for rural (22.0 per cent) and metropolitan (21.2 per cent) areas of Victoria. There was a higher than average proportion of males who were ex-smokers in the Southern Metropolitan region (31.2 per cent). On average, one in six females (16.9 per cent) in Victoria reported that they were current smokers in 2008. For females, the proportion of current smokers was higher in rural areas (19.1 per cent), compared with the metropolitan area (16.3 per cent). One rural region, Gippsland, had a higher proportion of current smokers among females (22.7 per cent) than the Victorian average (16.9 per cent). The proportion of females who identified as non-smokers was higher for the metropolitan area (63.7 per cent), compared with rural areas (58.3 per cent), with females from the Eastern Metropolitan region (67.5 per cent) reporting a higher proportion of non-smokers than average (62.4 per cent). There was a higher proportion of female ex-smokers in the Hume region (23.4 per cent) compared with the average for Victoria (20.4 per cent).

Table 2.30: Smoking status<sup>(a)</sup>, by sex and Department of Health region, 2008

Region	Current smoker			Ex-smoker			Non-smoker		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>									
Barwon-South Western	21.3	16.1	27.6	24.7	21.0	28.7	53.3	47.4	59.1
Eastern Metropolitan	21.6	18.7	24.9	25.1	22.5	27.8	53.0	49.5	56.5
Gippsland	24.1	20.5	28.2	28.4	25.2	31.9	47.0	42.8	51.3
Grampians	21.7	18.1	25.7	25.4	22.6	28.4	52.8	48.5	57.1
Hume	23.0	19.9	26.4	27.7	25.2	30.4	49.1	45.6	52.5
Loddon Mallee	20.3	17.0	24.0	27.3	24.3	30.6	52.2	48.0	56.3
North and West Metropolitan	23.1	21.1	25.1	27.5	25.6	29.4	49.2	46.9	51.5
Southern Metropolitan	19.0	16.7	21.5	31.2	28.8	33.7	49.7	46.8	52.6
<b>Metropolitan</b>	21.2	19.8	22.6	28.0	26.7	29.3	50.6	49.0	52.2
<b>Rural</b>	22.0	19.9	24.1	26.6	25.0	28.2	51.1	48.8	53.3
<b>Total</b>	21.4	20.2	22.6	27.6	26.6	28.7	50.7	49.4	52.0
<b>Females</b>									
Barwon-South Western	15.8	12.8	19.3	23.6	20.2	27.4	60.5	56.1	64.7
Eastern Metropolitan	14.1	12.2	16.2	18.3	16.5	20.2	67.5	64.9	70.0
Gippsland	22.7	19.9	25.8	22.9	20.5	25.5	54.2	50.9	57.4
Grampians	20.1	17.1	23.6	21.5	19.0	24.2	58.1	54.4	61.7
Hume	19.1	17.0	21.4	23.4	21.2	25.7	57.1	54.4	59.8
Loddon Mallee	18.8	16.5	21.5	20.4	18.4	22.5	60.2	57.2	63.1
North and West Metropolitan	16.8	15.5	18.3	18.5	17.2	19.9	64.3	62.5	66.1
Southern Metropolitan	17.5	15.8	19.4	22.2	20.6	24.0	60.0	57.7	62.2
<b>Metropolitan</b>	16.3	15.3	17.3	19.7	18.8	20.7	63.7	62.5	65.0
<b>Rural</b>	19.1	17.7	20.5	22.3	21.1	23.7	58.3	56.6	59.9
<b>Total</b>	16.9	16.1	17.8	20.4	19.6	21.1	62.4	61.4	63.4
<b>Persons</b>									
Barwon-South Western	18.5	15.3	22.2	24.0	21.4	26.8	57.1	53.3	60.8
Eastern Metropolitan	17.8	16.0	19.7	21.5	19.9	23.1	60.5	58.3	62.7
Gippsland	23.2	20.8	25.8	25.4	23.4	27.5	51.1	48.3	53.8
Grampians	20.9	18.5	23.6	23.2	21.3	25.2	55.7	52.8	58.5
Hume	21.0	19.1	23.1	25.4	23.7	27.1	53.3	51.0	55.5
Loddon Mallee	19.5	17.4	21.8	23.7	21.8	25.6	56.4	53.9	59.0
North and West Metropolitan	20.0	18.8	21.2	22.6	21.4	23.8	57.2	55.7	58.7
Southern Metropolitan	18.3	16.8	19.8	26.5	25.0	28.0	55.1	53.2	56.9
<b>Metropolitan</b>	18.7	17.9	19.6	23.6	22.8	24.4	57.5	56.5	58.5
<b>Rural</b>	20.5	19.2	21.8	24.3	23.3	25.3	54.9	53.5	56.3
<b>Total</b>	19.1	18.4	19.9	23.8	23.1	24.4	56.8	56.0	57.7

(a) A person who smoked daily or occasionally was categorised as a current smoker.

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 2.31 and figure 2.17 show the prevalence of current smoking for persons aged 18 years and over, by LGA. Fewer than one in five persons (19.1 per cent) in Victoria were current smokers in 2008. The prevalence of current smoking was above the average for Victoria in six LGAs. Four of these LGAs were located in rural areas: Pyrenees (31.4 per cent), Latrobe (29.6 per cent), Moira (27.1 per cent) and Greater Shepparton (25.4 per cent). The remaining two LGAs, located in the metropolitan area, were Knox (26.7 per cent) and Hume (24.5 per cent). There were also seven LGAs for which the proportion of current smokers among persons aged 18 years and over was below the Victorian average. Four of the LGAs with a below average prevalence of current smokers were metropolitan: Port Phillip (13.3 per cent), Bayside (13.2 per cent), Stonnington (12.9 per cent) and Melbourne (12.3 per cent). The three rural LGAs for which the prevalence of current smoking was lower than the Victorian average were Surf Coast (14.0 per cent), Horsham (13.3 per cent) and Wangaratta (11.6 per cent).

Table 2.31: Smoking status<sup>(a)</sup>, by LGA, 2008

LGA	Current smoker			Ex-smoker			Non-smoker		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	19.7	15.0	25.4	24.8	20.4	29.7	55.3	49.1	61.3
Ararat (RC)	20.9	15.7	27.3	21.1	17.4	25.5	57.7	51.3	64.0
Ballarat (C)	23.6	19.1	28.9	19.9	16.3	24.2	56.3	50.7	61.8
Banyule (C)	18.0	13.3	24.0	25.1	20.7	30.1	56.8	50.7	62.7
Bass Coast (S)	19.4	14.8	25.1	33.0	26.6	40.1	47.2	40.2	54.4
Baw Baw (S)	17.6	13.2	23.0	27.8	22.5	33.8	54.5	48.1	60.7
Bayside (C)	13.2	9.3	18.3	24.9	20.6	29.7	61.8	55.8	67.5
Benalla (RC)	17.4	13.3	22.5	24.5	20.1	29.4	58.0	52.4	63.4
Boroondara (C)	13.6	9.9	18.5	21.9	17.9	26.6	63.7	58.0	69.1
Brimbank (C)	22.0	18.0	26.6	19.6	16.2	23.6	58.0	52.9	63.0
Buloke (S)	23.2	17.7	29.8	21.6	17.0	27.0	54.4	47.5	61.0
Campaspe (S)	23.4	18.6	29.1	22.3	18.5	26.7	53.8	47.9	59.6
Cardinia (S)	19.0	14.6	24.5	30.0	25.3	35.3	50.8	44.8	56.8
Casey (C)	20.1	16.3	24.5	24.5	20.6	28.8	55.1	50.1	60.0
Central Goldfields (S)	21.6	16.1	28.4	24.7	20.2	29.7	53.5	46.8	60.1
Colac-Otway (S)	21.5	16.3	27.8	25.7	21.0	31.0	52.7	45.7	59.5
Corangamite (S)	14.3	10.5	19.2	22.4	18.3	27.2	63.2	57.5	68.5
Darebin (C)	23.5	19.2	28.5	21.5	17.6	26.0	54.5	49.2	59.8
East Gippsland (S)	22.1	16.6	28.8	28.4	23.2	34.2	49.4	43.7	55.2
Frankston (C)	24.1	19.6	29.4	29.3	24.7	34.3	46.6	41.1	52.2
Gannawarra (S)	23.2	18.0	29.4	20.0	16.3	24.2	56.5	50.3	62.6
Glen Eira (C)	14.9	11.2	19.6	24.6	20.7	29.0	60.5	55.2	65.6
Glenelg (S)	20.6	15.9	26.3	25.4	21.0	30.3	53.9	47.6	60.0
Golden Plains (S)	16.7	13.0	21.3	24.9	20.3	30.2	57.9	52.5	63.2
Greater Bendigo (C)	19.6	15.2	24.9	25.6	21.4	30.3	54.3	48.5	60.0
Greater Dandenong (C)	22.9	18.3	28.2	25.0	20.6	29.9	52.2	46.8	57.5
Greater Geelong (C)	18.0	13.2	24.2	23.1	19.0	27.8	58.2	52.1	64.1
Greater Shepparton (C)	25.4	20.0	31.7	23.6	19.5	28.3	51.0	44.9	57.1
Hepburn (S)	17.8	14.1	22.4	30.4	24.1	37.6	51.7	44.4	58.8
Hindmarsh (S)	22.5	17.5	28.5	20.7	16.8	25.1	56.6	50.4	62.5
Hobsons Bay (C)	18.0	13.7	23.3	25.1	20.9	29.8	56.8	51.1	62.3
Horsham (RC)	13.3	9.5	18.3	25.9	21.7	30.7	60.8	54.8	66.4
Hume (C)	24.5	20.2	29.3	25.2	21.1	29.8	49.6	44.3	54.9
Indigo (S)	19.8	14.4	26.6	25.3	20.7	30.5	54.9	48.0	61.7
Kingston (C)	15.3	11.4	20.2	22.4	18.7	26.6	62.0	56.5	67.3
Knox (C)	26.7	22.0	32.0	22.6	18.6	27.2	50.7	45.2	56.1
Latrobe (C)	29.6	24.7	34.9	22.1	18.1	26.7	47.9	42.1	53.6
Loddon (S)	20.4	15.9	25.7	21.7	17.5	26.6	57.6	51.8	63.1
Macedon Ranges (S)	17.1	12.8	22.4	21.4	17.5	25.8	61.4	55.4	67.0
Manningham (C)	14.6	10.4	20.0	15.2	11.8	19.4	70.1	64.3	75.4

(a) A person who smoked daily or occasionally was categorised as a current smoker.

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

95% CI = 95% confidence interval.

LGA = Local government area.

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.

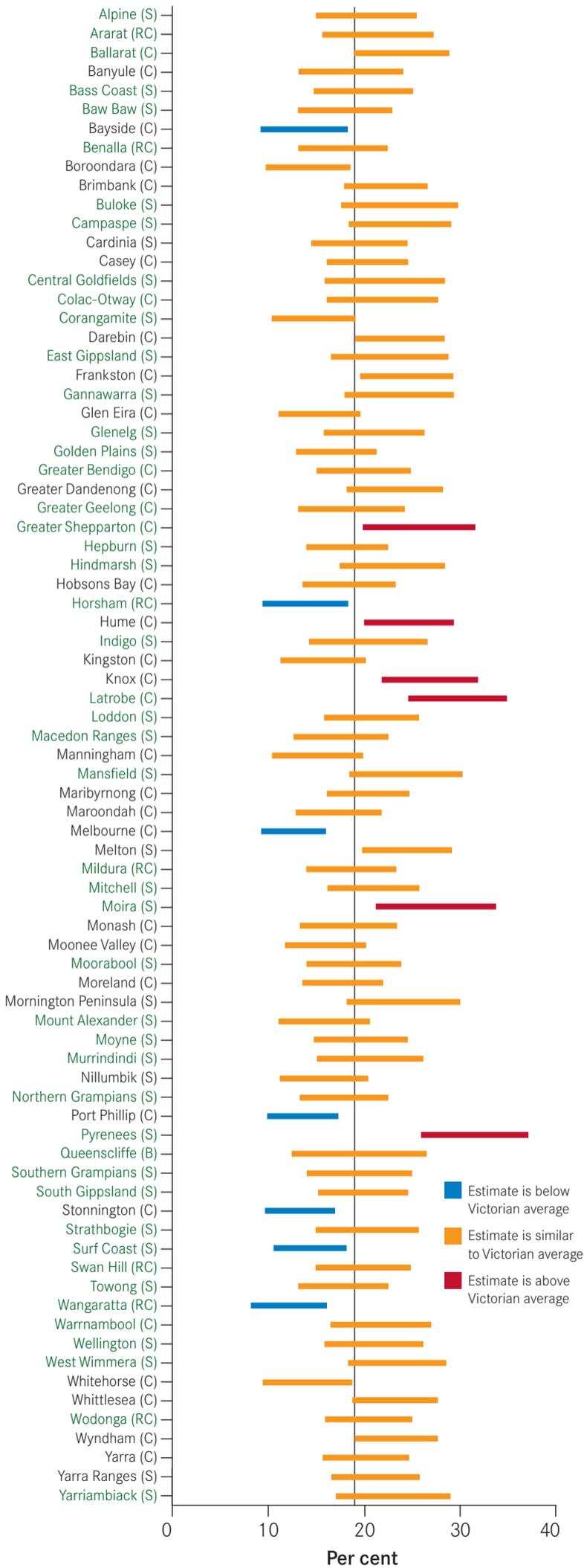
Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows:

above Victoria / below Victoria.

Table 2.31: Smoking status<sup>(a)</sup>, by LGA, 2008 (continued)

LGA	Current smoker			Ex-smoker			Non-smoker		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	24.0	18.6	30.4	29.7	24.6	35.3	46.0	40.0	52.2
Maribyrnong (C)	20.1	16.2	24.7	24.1	19.9	28.9	55.4	50.1	60.6
Maroondah (C)	17.1	13.0	22.1	23.1	19.3	27.5	59.6	54.3	64.8
Melbourne (C)	12.3	9.4	16.0	23.0	19.4	27.0	64.6	59.7	69.1
Melton (S)	24.2	19.9	29.1	22.1	18.3	26.5	53.7	48.4	58.9
Mildura (RC)	18.2	14.1	23.3	23.1	19.3	27.3	58.3	52.6	63.7
Mitchell (S)	20.6	16.2	25.7	31.8	27.1	36.8	47.3	41.7	53.0
Moira (S)	27.1	21.3	33.7	23.0	18.0	29.0	49.9	43.1	56.6
Monash (C)	17.9	13.4	23.4	20.6	16.9	24.9	61.3	55.5	66.8
Moonee Valley (C)	15.5	11.8	20.1	21.1	17.1	25.7	63.0	57.6	68.0
Moorabool (S)	18.4	14.1	23.8	28.3	23.8	33.3	52.9	46.8	58.9
Moreland (C)	17.5	13.7	22.0	22.6	19.0	26.7	59.8	54.8	64.6
Mornington Peninsula (S)	23.7	18.3	30.1	33.0	27.2	39.4	43.1	37.2	49.2
Mount Alexander (S)	15.3	11.1	20.7	25.3	21.1	29.9	59.0	53.0	64.8
Moyne (S)	19.2	14.8	24.6	23.8	20.0	28.2	56.9	51.2	62.5
Murrindindi (S)	20.2	15.2	26.2	26.2	20.5	32.9	53.2	47.3	59.1
Nillumbik (S)	15.3	11.3	20.4	26.0	21.4	31.2	57.7	51.9	63.3
Northern Grampians (S)	17.5	13.5	22.4	21.6	17.9	25.9	60.8	55.3	66.0
Port Phillip (C)	13.3	10.1	17.3	27.6	23.5	32.2	58.5	53.4	63.4
Pyrenees (S)	31.4	26.2	37.2	28.0	23.3	33.2	39.9	34.6	45.4
Queenscliffe (B)	18.6	12.6	26.7	20.4	16.4	25.0	59.4	51.4	66.9
Southern Grampians (S)	19.0	14.1	25.1	29.5	24.1	35.6	51.2	44.9	57.5
South Gippsland (S)	19.5	15.3	24.5	23.7	19.9	27.9	56.6	51.2	61.8
Stonnington (C)	12.9	9.7	17.0	28.2	24.0	32.9	58.5	53.2	63.5
Strathbogie (S)	19.8	15.0	25.6	27.6	21.6	34.5	51.9	44.6	59.2
Surf Coast (S)	14.0	10.6	18.2	26.8	22.2	32.0	59.1	53.6	64.4
Swan Hill (RC)	19.6	15.1	24.9	22.9	18.8	27.7	57.2	51.3	62.9
Towong (S)	17.4	13.2	22.4	23.8	19.1	29.3	58.4	52.3	64.2
Wangaratta (RC)	11.6	8.3	16.0	24.0	19.9	28.7	63.5	58.0	68.7
Warrnambool (C)	21.4	16.6	27.1	22.1	18.5	26.3	56.4	50.5	62.1
Wellington (S)	20.6	15.9	26.2	24.7	20.5	29.4	54.6	48.5	60.4
West Wimmera (S)	23.2	18.5	28.6	22.1	17.9	27.1	54.4	48.7	60.1
Whitehorse (C)	13.6	9.6	18.8	23.0	19.1	27.3	63.4	57.7	68.8
Whittlesea (C)	23.1	18.9	27.8	21.8	18.1	26.2	55.0	49.8	60.0
Wodonga (RC)	20.2	16.1	24.9	24.6	20.5	29.2	54.9	49.4	60.3
Wyndham (C)	23.1	19.2	27.7	21.6	17.9	25.7	55.2	50.1	60.1
Yarra (C)	19.9	15.8	24.7	22.8	18.7	27.5	56.8	51.3	62.2
Yarra Ranges (S)	21.0	16.8	25.8	23.5	19.6	27.9	55.5	50.2	60.8
Yarriambiack (S)	22.5	17.2	29.0	24.9	20.5	29.9	52.2	45.6	58.7
<b>Total</b>	<b>19.1</b>	<b>18.4</b>	<b>19.9</b>	<b>23.8</b>	<b>23.1</b>	<b>24.4</b>	<b>56.8</b>	<b>56.0</b>	<b>57.7</b>

Figure 2.17: Current smokers<sup>(a)</sup>, by LGA, 2008



(a) A person who smoked daily or occasionally was categorised as a current smoker.  
 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 line on the graph is the Victorian estimate, it does not show the 95% CI.  
 See relevant table for 95% CI for Victoria (Total).

### Smoking status, by selected health indicators

Table 2.32 shows smoking status by selected health indicators. Individuals at risk of harm from the consumption of alcohol in the short and long-term, those who were sedentary, underweight, those who reported good, fair or poor health and those with high or very high psychological distress levels were more likely to be current smokers, compared with the average for Victoria.

**Table 2.32: Smoking status<sup>(a)</sup>, by selected health indicators, 2008**

	Current smoker			Ex-smoker			Non-smoker		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Nutrition<sup>(b)</sup></b>									
Met the guidelines for fruit consumption	13.9	13.0	14.9	23.5	22.6	24.5	62.3	61.1	63.5
Met the guidelines for vegetable consumption	16.1	13.6	19.0	24.6	22.6	26.7	59.0	55.9	62.1
Met the guidelines for fruit & vegetable consumption	13.0	10.4	16.2	24.7	22.4	27.2	62.1	58.5	65.5
<b>Alcohol consumption<sup>(c)</sup></b>									
At risk or high risk of long-term harm	46.2	42.1	50.3	30.1	26.6	34.0	23.4	20.0	27.1
At risk or high risk of short-term harm	24.8	23.8	26.0	30.9	29.8	32.1	43.9	42.7	45.2
Abstainer from alcohol	13.0	11.7	14.5	15.5	14.2	17.0	71.2	69.4	73.0
<b>Physical activity levels<sup>(d)</sup></b>									
Sufficient time and sessions	18.2	17.3	19.1	24.8	23.9	25.7	56.8	55.7	57.9
Insufficient time and/or sessions	18.9	17.5	20.3	23.0	21.8	24.4	57.8	56.1	59.5
Sedentary	26.8	23.3	30.6	22.5	19.6	25.7	50.4	46.4	54.3
<b>Body weight status</b>									
Underweight	28.6	24.0	33.7	17.4	13.8	21.7	53.5	48.0	58.9
Healthy weight	18.6	17.6	19.7	21.3	20.3	22.3	59.8	58.6	61.0
Overweight	19.6	18.2	21.1	26.7	25.5	28.0	53.5	51.9	55.1
Obese	19.9	18.0	22.0	25.4	23.7	27.2	54.3	52.0	56.5
<b>Self-rated health</b>									
Excellent/very good	14.0	13.1	15.0	22.9	21.9	23.8	62.9	61.6	64.1
Good	21.3	20.1	22.5	24.0	22.9	25.1	54.4	53.0	55.7
Fair/poor	27.2	25.3	29.1	25.2	23.6	26.9	47.5	45.4	49.6
<b>Level of psychological distress<sup>(e)</sup></b>									
Low (10–15)	16.3	15.5	17.2	24.0	23.1	24.8	59.4	58.3	60.5
Moderate (16–21)	21.0	19.6	22.6	24.4	23.0	25.7	54.3	52.6	56.1
High (22–29)	28.2	25.7	30.8	23.5	21.4	25.7	48.1	45.3	50.9
Very high (30–50)	35.9	31.6	40.4	17.5	14.7	20.7	46.5	42.1	51.1
<b>Total</b>	<b>19.1</b>	<b>18.4</b>	<b>19.9</b>	<b>23.8</b>	<b>23.1</b>	<b>24.4</b>	<b>56.8</b>	<b>56.0</b>	<b>57.7</b>

(a) A person who smoked daily or occasionally was categorised as a current smoker.

(b) Based on national guidelines (NHMRC 2003).

(c) Based on national guidelines (NHMRC 2001).

(d) Based on national guidelines (DoHA 1999) and excludes adults aged less than 19 years.

(e) Based on Kessler 10 Psychological Distress Scale (K10).

95% CI = 95 per cent confidence interval.

Data are age standardised to the 2006 Victorian population.

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

## Smoking during pregnancy

In 2008, 3.8 per cent of females aged 18 to 49 years reported that they were currently pregnant. As table 2.33 shows, the prevalence of current smoking among pregnant women (6.3 per cent) aged 18–49 years was lower than the prevalence of current smoking among women in this age group who were not pregnant (21.4 per cent). The proportion of non smokers was similar among women aged 18 to 49 years who were and were not pregnant (67.0 per cent and 60.7 per cent).

**Table 2.33: Smoking and pregnancy, females aged 18–49 years, 2008**

	Current smoker			Ex-smoker			Non-smoker		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Currently pregnant	<b>6.3</b>	3.5	11.1	<b>26.6</b>	18.1	37.3	<b>67.0</b>	56.6	76.0
Not currently pregnant	<b>21.4</b>	20.1	22.7	<b>17.8</b>	16.8	18.8	<b>60.7</b>	59.2	62.2
<b>Total</b>	<b>20.9</b>	<b>19.7</b>	<b>22.2</b>	<b>18.0</b>	<b>17.0</b>	<b>19.1</b>	<b>60.9</b>	<b>59.5</b>	<b>62.4</b>

(a) A person who smoked daily or occasionally was categorised as a current smoker.

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**.

## Physical activity

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

### Physical activity to achieve health benefits

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

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

Data were collected on the number of sessions and the duration of each type of physical activity. Table 2.34 shows the proportion of persons who were sedentary and those who had undertaken different types of physical activity in the past week, by age group and sex. Younger males and females were more likely to engage in a combination of walking and vigorous activity. Among males and females aged 65 years and over the proportion who engaged in walking as their only form of physical activity was similar to the proportion who engaged in walking and some form of vigorous physical activity. Figures 2.18 and 2.19 show the differences in these types of physical activity with increasing age group for males and females.

Table 2.34: Types of physical activity undertaken during the past week, by age group<sup>(a)</sup> and sex, 2008

Age group (years)	Types of physical activity											
	No physical activity			Walking only			Vigorous activity only			Walking and vigorous activity		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
18–24 years	1.4*	0.8	2.6	15.9	12.8	19.6	3.3	2.1	4.9	77.1	73.1	80.7
25–34 years	2.7	1.8	4.1	20.0	16.9	23.5	6.8	5.0	9.3	66.7	62.8	70.4
35–44 years	4.3	3.2	5.6	24.6	21.9	27.4	5.6	4.4	7.1	62.3	59.3	65.2
45–54 years	6.2	5.0	7.7	30.0	27.4	32.7	5.6	4.4	7.0	55.4	52.6	58.2
55–64 years	4.6	3.7	5.7	34.8	32.2	37.4	5.0	4.0	6.3	52.0	49.3	54.7
65+	9.4	8.2	10.8	41.7	39.5	44.0	4.5	3.7	5.5	38.7	36.5	41.0
<b>Total</b>	<b>5.1</b>	<b>4.6</b>	<b>5.6</b>	<b>27.9</b>	<b>26.7</b>	<b>29.0</b>	<b>5.3</b>	<b>4.7</b>	<b>5.9</b>	<b>58.1</b>	<b>56.8</b>	<b>59.4</b>
<b>Females</b>												
18–24 years	1.3*	0.6	2.9	20.1	16.7	24.0	3.7	2.4	5.8	72.7	68.6	76.5
25–34 years	3.3	2.4	4.5	19.0	16.8	21.3	4.3	3.4	5.6	70.5	67.8	73.0
35–44 years	3.9	3.1	4.8	20.3	18.6	22.1	5.6	4.7	6.6	67.6	65.6	69.6
45–54 years	4.6	3.7	5.6	23.4	21.5	25.4	4.9	4.1	6.0	63.0	60.8	65.1
55–64 years	5.4	4.5	6.5	31.1	29.1	33.1	5.5	4.6	6.7	54.1	51.9	56.3
65+	11.7	10.5	13.0	37.1	35.2	38.9	5.0	4.2	5.8	40.3	38.4	42.2
<b>Total</b>	<b>5.4</b>	<b>5.0</b>	<b>5.8</b>	<b>25.0</b>	<b>24.1</b>	<b>25.9</b>	<b>4.9</b>	<b>4.5</b>	<b>5.4</b>	<b>61.1</b>	<b>60.1</b>	<b>62.0</b>
<b>Persons</b>												
18–24 years	1.4	0.8	2.2	18.0	15.6	20.6	3.5	2.6	4.7	75.0	72.1	77.6
25–34 years	3.0	2.3	3.9	19.5	17.6	21.6	5.6	4.5	6.9	68.6	66.2	70.9
35–44 years	4.1	3.4	4.9	22.4	20.8	24.1	5.6	4.8	6.5	65.0	63.2	66.8
45–54 years	5.4	4.6	6.3	26.6	25.0	28.3	5.3	4.5	6.1	59.2	57.5	61.0
55–64 years	5.0	4.3	5.8	32.9	31.3	34.5	5.3	4.5	6.1	53.1	51.3	54.8
65+	10.7	9.8	11.6	39.1	37.7	40.6	4.8	4.2	5.4	39.6	38.2	41.1
<b>Total</b>	<b>5.3</b>	<b>4.9</b>	<b>5.6</b>	<b>26.4</b>	<b>25.6</b>	<b>27.1</b>	<b>5.1</b>	<b>4.8</b>	<b>5.5</b>	<b>59.6</b>	<b>58.8</b>	<b>60.4</b>

(a) Based on the population aged 18 years and over.

95% CI = 95 per cent confidence interval.

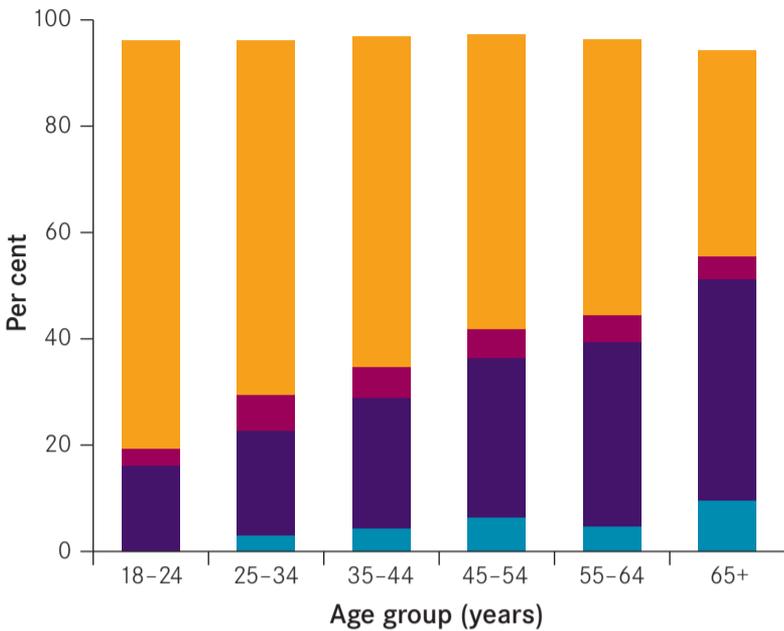
Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

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

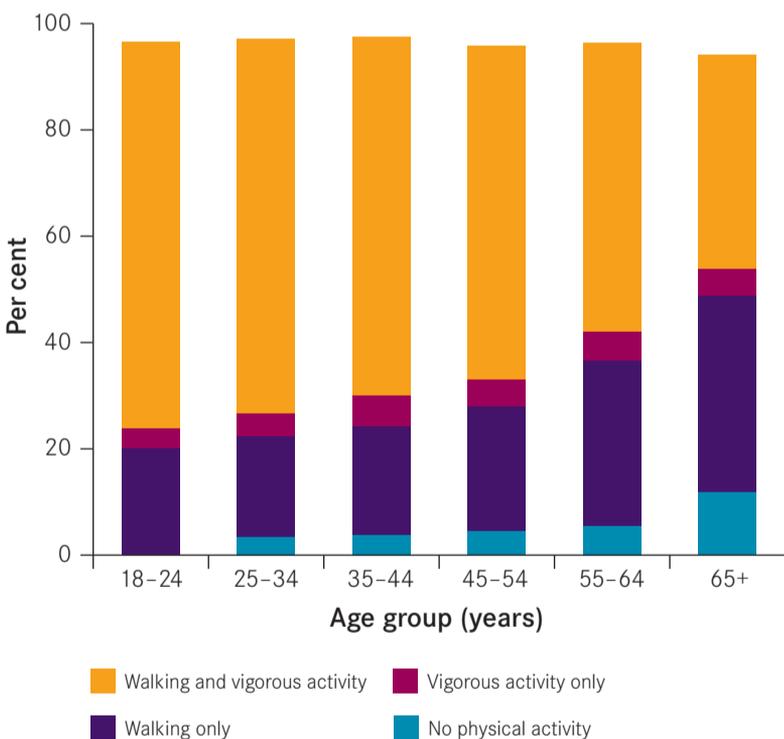
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

\* Estimate has a relative standard error of between 25 and 50 per cent and should be used with caution.

**Figure 2.18: Types of physical activity undertaken during the past week, by age group<sup>(a)</sup>, males, 2008**



**Figure 2.19: Types of physical activity undertaken during the past week, by age group<sup>(a)</sup>, females, 2008**



(a) Based on the population aged 18 years and over.

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, they have not been age standardised.

The level of health benefit achieved from physical activity partly depends on the intensity of the activity. In general, to obtain a health benefit from physical activity requires participation in moderate intensity activities (at least). Accruing 150 or more minutes of moderate intensity physical activity (such as walking) on a regular basis over one week is believed to be 'sufficient' for health benefits and is the recommended threshold of physical activity according to the *National Physical Activity Guidelines for Australians* (DoHA 1999).

For those who achieve an adequate baseline level of fitness, extra health benefits may be gained by undertaking at least 30 minutes of regular vigorous exercise on three to four days per week.

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

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

A person who satisfied both criteria (time and number of sessions) was classified as doing 'sufficient' physical activity to achieve an added health benefit in the analysis that follows (table 2.35).

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

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

The *National Physical Activity Guidelines For Adults* (DoHA 1999) have been applied to all respondents (persons aged 18 years and over) in previous VPHS reports to provide information about the prevalence of different levels of physical activity, including sufficient physical activity to achieve a health benefit. Subsequently, the Australian government has established physical activity recommendations for children aged 12-18 years (DoHA 2004) and devised recommendations on physical activity for health for older adults (persons aged 65 years and over, and Aboriginal and Torres Strait Islanders aged over 55 years) (DoHA 2006). Whereas the latter set of recommendations were developed to complement the existing guidelines, the recommendations for children pertain to both undertaking physical activity and limiting time spent on non-educational activities that involve sitting still for a long period of time (e.g. watching TV, videos or DVDs, internet use and playing computer games).

**Table 2.35: Definition of sufficient physical activity time and sessions per week**

Physical activity category	Time and sessions per week
Sedentary	0 minutes
Insufficient time and/or sessions	Less than 150 minutes or 150 or more minutes, but fewer than 5 sessions.
Sufficient time & sessions	150 minutes and five or more sessions

Table 2.36 shows the prevalence of physical activity for persons aged 19 years and over, by physical activity level, sex and age group. The proportion of males and females who participated in sufficient physical activity each week was similar for males and females across all age groups, except those aged 65 years and over, where a higher proportion of males than females (50.1 per cent and 42.1 per cent respectively) engaged in sufficient physical activity. Figures 2.20 and 2.21 show the distribution of sedentary, insufficient and sufficient physical activity by age group and sex.

**Table 2.36: Physical activity levels<sup>(a)</sup>, by age group and sex, 2008**

Age group (years)	Sedentary			Insufficient time and/or session			Sufficient time and sessions		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>									
19–24 years	1.6*	0.8	3.0	22.0	17.9	26.7	70.5	65.4	75.0
25–34 years	2.7	1.8	4.1	25.2	21.9	28.8	65.5	61.6	69.2
35–44 years	4.3	3.2	5.6	26.4	23.7	29.2	63.9	61.0	66.8
45–54 years	6.2	5.0	7.7	28.6	26.1	31.2	60.3	57.5	63.1
55–64 years	4.6	3.7	5.7	29.7	27.2	32.2	58.8	56.1	61.4
65+	9.4	8.2	10.8	31.5	29.4	33.7	50.1	47.8	52.4
<b>Total</b>	<b>5.1</b>	<b>4.6</b>	<b>5.6</b>	<b>27.5</b>	<b>26.3</b>	<b>28.7</b>	<b>61.0</b>	<b>59.7</b>	<b>62.3</b>
<b>Females</b>									
19–24 years	1.6*	0.7	3.5	23.4	19.5	27.8	69.6	64.9	73.8
25–34 years	3.3	2.4	4.5	24.9	22.5	27.5	66.0	63.3	68.7
35–44 years	3.9	3.1	4.8	26.8	25.0	28.7	64.1	62.0	66.1
45–54 years	4.6	3.7	5.6	25.9	23.9	27.9	62.5	60.3	64.7
55–64 years	5.4	4.5	6.5	28.8	26.8	30.8	57.7	55.5	59.8
65+	11.7	10.5	13.0	33.0	31.2	34.8	42.1	40.2	44.0
<b>Total</b>	<b>5.4</b>	<b>5.0</b>	<b>5.9</b>	<b>27.2</b>	<b>26.3</b>	<b>28.2</b>	<b>59.7</b>	<b>58.7</b>	<b>60.7</b>
<b>Persons</b>									
19–24 years	1.6*	0.9	2.6	22.7	19.8	25.9	70.0	66.6	73.2
25–34 years	3.0	2.3	3.9	25.1	23.0	27.3	65.8	63.4	68.1
35–44 years	4.1	3.4	4.9	26.6	25.0	28.3	64.0	62.2	65.8
45–54 years	5.4	4.6	6.3	27.2	25.6	28.9	61.4	59.7	63.2
55–64 years	5.0	4.3	5.8	29.2	27.6	30.8	58.2	56.5	59.9
65+	10.7	9.8	11.6	32.3	31.0	33.7	45.7	44.2	47.2
<b>Total</b>	<b>5.3</b>	<b>4.9</b>	<b>5.6</b>	<b>27.4</b>	<b>26.6</b>	<b>28.2</b>	<b>60.3</b>	<b>59.4</b>	<b>61.1</b>

(a) Based on national guidelines (DoHA 1999) and excludes adults aged less than 19 years.

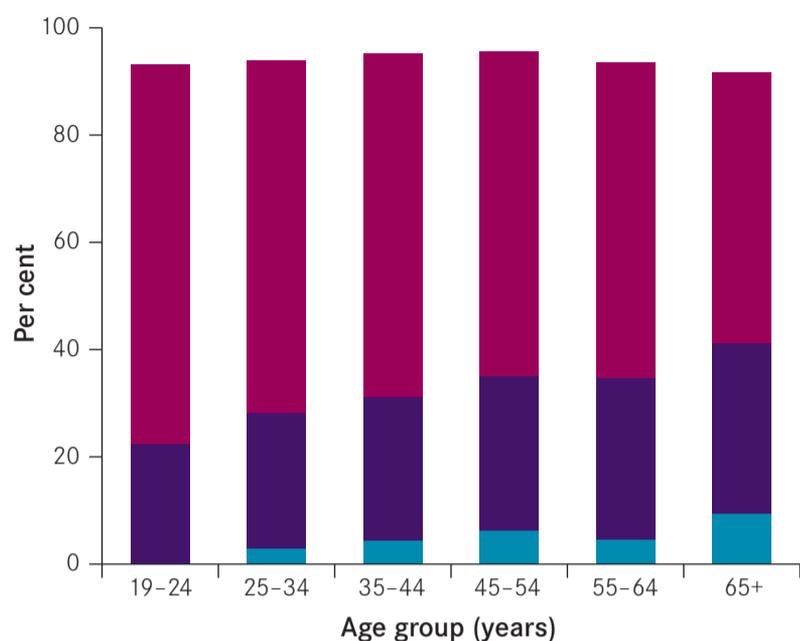
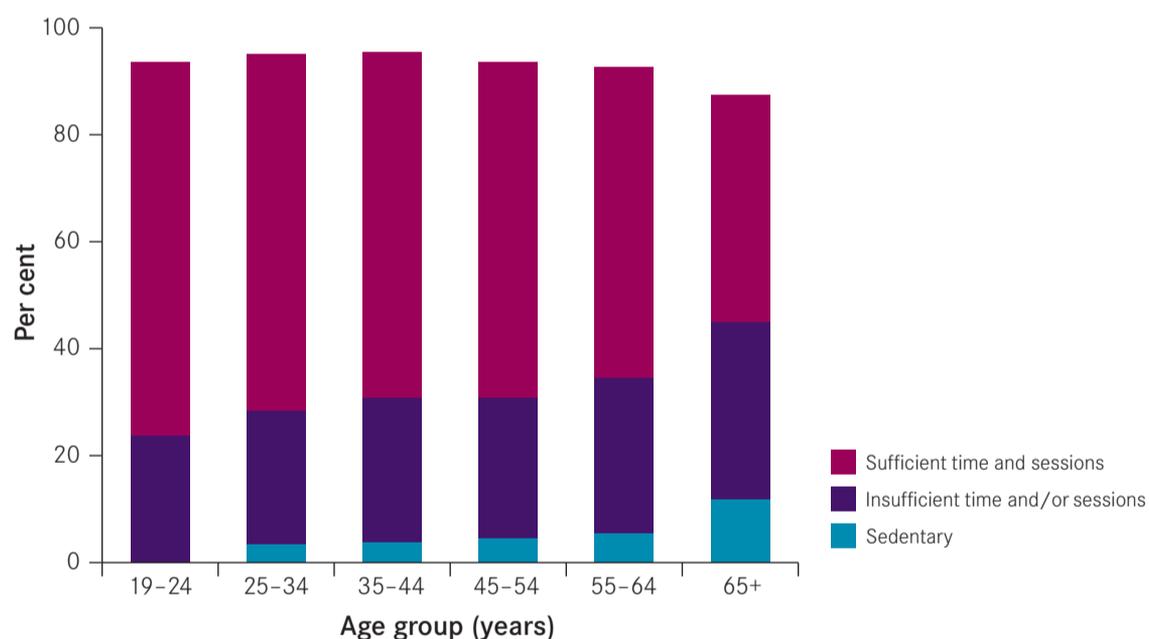
95% CI = 95 per cent confidence interval.

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

\* Estimate has a relative standard error of between 25 and 50 per cent and should be used with caution.

Figure 2.20: Physical activity levels<sup>(a)</sup>, by age group, males, 2008Figure 2.21: Physical activity levels<sup>(a)</sup>, by age group, females, 2008

(a) Based on national guidelines (DoHA 1999) and excludes adults aged less than 19 years.

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, they have not been age standardised.

Six in ten persons (60.3 per cent) aged 19 years and over engaged in sufficient physical activity during the week before the survey to meet the national guidelines (table 2.36). Almost one third (27.4 per cent insufficient time and/or sessions and 5.3 per cent sedentary) of persons aged 19 years and over engaged in insufficient levels of activity to confer a health benefit or were sedentary. The proportion of persons reporting sufficient time and sessions was similar for males (61.0 per cent) and females (59.7 per cent).

Table 2.37: Physical activity levels<sup>(a)</sup>, by sex, 2008

Serves	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Sedentary	5.1	4.6	5.6	5.4	5.0	5.9	5.3	4.9	5.6
Insufficient	27.5	26.3	28.7	27.2	26.3	28.2	27.4	26.6	28.2
Sufficient	61.0	59.7	62.3	59.7	58.7	60.7	60.3	59.4	61.1

(a) Based on national guidelines (DoHA 1999) and excludes adults aged less than 19 years.

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 2.38 shows physical activity levels for the period 2005–2008. The proportion of males and females reporting sufficient time and sessions of physical activity to meet the guidelines remained constant between 2005 and 2008. However, the proportion of males and females reporting sedentary behaviour decreased over this time period.

**Table 2.38: Physical activity levels<sup>(a)</sup>, by sex, 2005–2008**

	2005	2006	2007	2008
	Per cent			
<b>Males</b>				
Sedentary	6.5	5.0	4.8	5.1
Insufficient time and/or sessions	28.0	27.7	28.1	27.5
Sufficient time and sessions	63.5	63.5	63.8	61.0
<b>Females</b>				
Sedentary	5.4	5.6	4.9	5.4
Insufficient time and/or sessions	28.8	28.0	29.7	27.2
Sufficient time and sessions	63.5	63.7	61.3	59.7
<b>Persons</b>				
Sedentary	5.9	5.4	4.8	5.3
Insufficient time and/or sessions	28.4	27.8	28.9	27.4
Sufficient time and sessions	63.6	63.5	62.5	60.3

(a) Based on national guidelines (DoHA 1999) and excludes adults aged less than 19 years.

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.

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

Table 2.39 and figure 2.22 show levels of physical activity by sex and self-reported health status. Persons with higher levels of self-reported health status were more likely to report higher levels of physical activity than those with lower levels of self-reported health. The data in table 2.39 show similar results for males and females. More than seven in 10 (72.8 per cent) persons aged 19 years and over who reported their health as excellent also reported undertaking sufficient levels of physical activity, compared with 38.5 per cent of those who reported their health as poor. Similarly, 2.7 per cent of those who reported their health as excellent were categorised as sedentary, whilst 14.7 per cent of those who reported their health as poor reported sedentary behaviour.

**Table 2.39: Physical activity levels<sup>(a)</sup>, by self-reported health and sex, 2008**

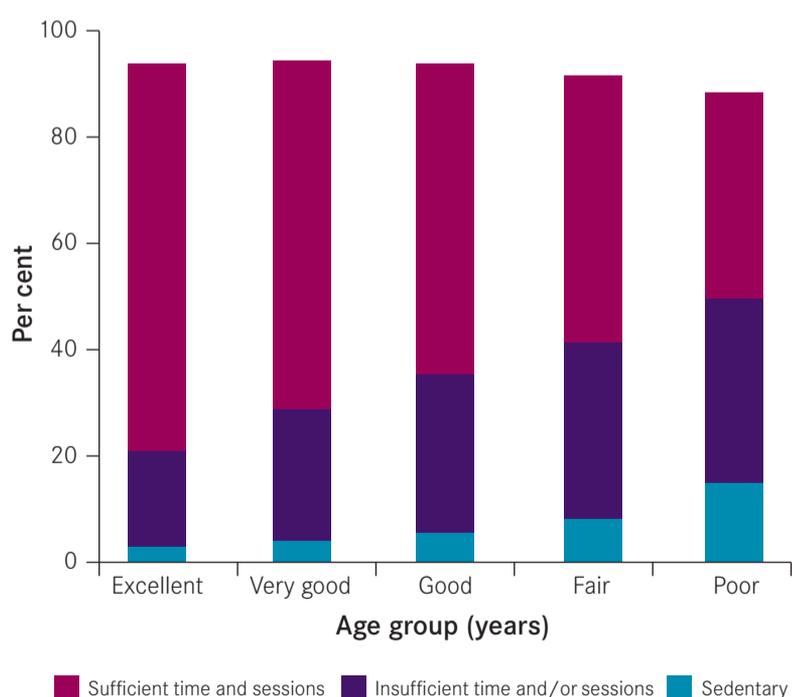
	Excellent			Very good			Good			Fair			Poor		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>															
Sedentary	2.8	1.8	4.3	3.2	2.5	4.0	5.1	4.3	6.0	7.3	5.9	8.9	16.6	12.1	22.5
Insufficient time and/or sessions	16.8	14.0	20.0	24.0	21.9	26.2	29.7	27.8	31.7	34.6	31.2	38.2	38.6	31.0	46.9
Sufficient time and sessions	74.1	70.5	77.4	67.1	64.7	69.4	59.1	57.0	61.1	50.1	46.4	53.7	37.1	30.1	44.7
<b>Females</b>															
Sedentary	2.7	2.0	3.6	4.1	3.5	4.9	5.1	4.5	5.8	8.5	7.1	10.1	15.1	11.3	19.9
Insufficient time and/or sessions	18.6	16.2	21.4	25.1	23.6	26.8	30.4	28.7	32.0	31.5	28.8	34.3	30.8	25.1	37.2
Sufficient time and sessions	72.2	69.4	74.9	64.2	62.5	66.0	57.2	55.4	58.9	50.4	47.4	53.3	38.1	32.3	44.2
<b>Persons</b>															
Sedentary	2.7	2.1	3.5	3.7	3.2	4.3	5.1	4.6	5.7	8.0	7.0	9.2	14.7	11.8	18.3
Insufficient time and/or sessions	17.8	15.9	19.8	24.7	23.4	26.0	30.0	28.8	31.3	32.9	30.7	35.2	34.7	29.8	40.0
Sufficient time and sessions	72.8	70.5	75.0	65.5	64.1	66.9	58.1	56.7	59.4	50.2	47.8	52.6	38.5	33.7	43.5

(a) Based on national guidelines (DoHA 1999) and excludes adults aged less than 19 years.

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.

**Figure 2.22: Physical activity levels<sup>(a)</sup>, by self-reported health, 2008**

(a) Based on national guidelines (DoHA 1999) and excludes adults aged less than 19 years.

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 2.40 shows levels of physical activity for the population aged 19 years and over, by sex and Department of Health region. The proportion of males who participated in sufficient physical activity was similar for rural (60.7 per cent) and metropolitan (61.2 per cent) areas of Victoria. There were no differences by region in the proportion of males who did sufficient physical activity compared with the average for Victoria (61.0 per cent). For the female population, the proportion who did sufficient physical activity was similar in rural areas (60.4 per cent) and the metropolitan area (59.5 per cent). The proportion of females aged 19 years and over who reported a sufficient level of activity was below the average for Victoria (59.7 per cent) for the North and West Metropolitan region (56.3 per cent). There were no differences across regions in the proportion of males or females who were classified as sedentary, compared with the Victorian averages (5.1 per cent and 5.4 per cent respectively).

Table 2.40: Physical activity levels<sup>(a)</sup>, Department of Health region and sex, 2008

Region	Sedentary			Insufficient time and/or sessions			Sufficient time and sessions		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>									
Barwon-South Western	4.1	2.6	6.5	24.6	20.9	28.6	62.2	56.9	67.2
Eastern Metropolitan	4.5	3.4	5.8	26.3	23.4	29.5	64.6	61.3	67.8
Gippsland	5.5	4.0	7.4	25.4	21.5	29.8	60.1	55.4	64.7
Grampians	6.7	5.1	8.8	24.3	21.1	27.7	60.8	56.8	64.6
Hume	4.6	3.4	6.1	25.4	22.5	28.6	60.7	57.3	64.1
Loddon Mallee	5.7	4.3	7.5	26.8	23.0	31.0	60.4	56.1	64.6
North and West Metropolitan	6.1	5.1	7.3	29.0	26.8	31.3	59.1	56.7	61.4
Southern Metropolitan	4.2	3.3	5.3	28.0	25.5	30.7	61.3	58.5	64.1
<b>Metropolitan</b>	5.0	4.4	5.7	28.1	26.6	29.6	61.2	59.6	62.8
<b>Rural</b>	5.2	4.5	6.1	25.5	23.7	27.3	60.7	58.5	62.9
<b>Total</b>	5.1	4.6	5.6	27.5	26.3	28.7	61.0	59.7	62.3
<b>Females</b>									
Barwon-South Western	5.0	2.9	8.5	24.4	20.6	28.6	62.7	57.9	67.2
Eastern Metropolitan	4.9	4.0	6.0	27.3	24.9	29.9	61.5	58.8	64.1
Gippsland	4.6	3.5	6.0	25.9	23.0	29.0	61.9	58.6	65.1
Grampians	5.4	4.4	6.6	27.0	23.9	30.4	58.6	55.1	62.0
Hume	5.0	4.2	6.1	25.2	22.9	27.5	61.9	59.4	64.5
Loddon Mallee	4.5	3.7	5.6	29.1	26.2	32.3	56.5	53.2	59.6
North and West Metropolitan	6.8	5.9	7.7	28.3	26.6	30.1	56.3	54.4	58.1
Southern Metropolitan	5.0	4.1	6.0	26.9	24.7	29.1	61.5	59.1	63.8
<b>Metropolitan</b>	5.6	5.1	6.2	27.5	26.3	28.7	59.5	58.2	60.8
<b>Rural</b>	4.9	4.1	5.8	26.3	24.7	27.9	60.4	58.6	62.1
<b>Total</b>	5.4	5.0	5.9	27.2	26.3	28.2	59.7	58.7	60.7
<b>Persons</b>									
Barwon-South Western	4.6	3.2	6.7	24.5	21.8	27.5	62.4	58.8	65.8
Eastern Metropolitan	4.7	4.0	5.5	26.9	24.9	28.9	62.9	60.8	65.0
Gippsland	5.1	4.1	6.2	25.9	23.3	28.5	60.7	57.8	63.5
Grampians	6.0	5.0	7.1	25.7	23.3	28.1	59.7	57.0	62.3
Hume	4.8	4.1	5.7	25.4	23.5	27.4	61.3	59.1	63.4
Loddon Mallee	5.1	4.3	6.1	28.0	25.5	30.6	58.3	55.5	61.0
North and West Metropolitan	6.5	5.8	7.3	28.6	27.2	30.1	57.5	56.0	59.0
Southern Metropolitan	4.6	3.9	5.3	27.5	25.8	29.2	61.3	59.5	63.2
<b>Metropolitan</b>	5.4	5.0	5.8	27.8	26.9	28.8	60.2	59.2	61.2
<b>Rural</b>	5.0	4.5	5.7	25.9	24.7	27.1	60.5	59.1	61.9
<b>Total</b>	5.3	4.9	5.6	27.4	26.6	28.2	60.3	59.4	61.1

(a) Based on national guidelines (DoHA 1999) and excludes adults aged less than 19 years.

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 2.41 and figure 2.23 show levels of physical activity by LGA. On average, six in 10 (60.3 percent) persons in Victoria reported that they had undertaken sufficient physical activity in the past week. There were 10 LGAs with sufficient physical activity levels above the average for Victoria. Five of these LGAs were located in rural areas of the state: Queenscliffe (73.7 per cent), Surf Coast (69.9 per cent), Murrindindi (69.6 per cent), Mount Alexander (68.2 per cent) and Southern Grampians (67.2 per cent). The remaining five metropolitan LGAs where the proportion of persons undertaking sufficient physical activity was above the average for Victoria were: Bayside (73.4 per cent), Port Phillip (69.7 per cent), Melbourne (69.3 per cent), Stonnington (67.8 per cent) and Boroondara (67.3 per cent). There were seven LGAs where the proportion of persons participating in sufficient physical activity was below the average for Victoria: Casey (53.5 per cent), Mitchell (53.5 per cent), Hume (52.3 per cent), Gannawarra (52.3 per cent), Greater Dandenong (48.9 per cent), Brimbank (48.3 per cent) and Hindmarsh (45.7 per cent).

Table 2.41: Physical activity levels<sup>(a)</sup>, by LGA, 2008

LGA	Sedentary			Insufficient time and/or sessions			Sufficient time and sessions		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	3.2*	2.0	5.2	26.1	20.5	32.6	63.7	57.1	69.8
Ararat (RC)	5.3	3.4	8.1	28.2	23.6	33.3	55.0	49.6	60.2
Ballarat (C)	5.5	3.7	7.9	24.4	20.1	29.3	62.3	57.2	67.1
Banyule (C)	4.3*	2.6	7.1	27.0	22.2	32.6	62.1	56.2	67.7
Bass Coast (S)	7.2*	4.3	11.9	20.3	14.1	28.4	64.8	56.9	72.0
Baw Baw (S)	3.1*	1.8	5.3	29.7	23.8	36.3	61.8	55.3	68.0
Bayside (C)	2.7*	1.5	4.8	20.1	15.5	25.7	73.4	67.6	78.5
Benalla (RC)	5.0*	3.0	8.3	28.2	22.5	34.7	58.0	51.3	64.4
Boroondara (C)	2.1*	1.2	3.5	27.7	22.9	33.0	67.3	61.9	72.3
Brimbank (C)	11.4	8.9	14.4	31.3	26.7	36.2	48.3	43.3	53.3
Buloke (S)	5.8*	3.4	9.8	26.0	20.7	32.2	61.2	54.9	67.2
Campaspe (S)	5.5	3.4	8.7	30.1	24.8	36.0	55.7	49.8	61.5
Cardinia (S)	4.5	3.0	6.9	30.4	24.9	36.5	56.7	50.6	62.5
Casey (C)	5.5	3.7	8.1	31.2	26.6	36.3	53.5	48.3	58.6
Central Goldfields (S)	6.6*	3.4	12.6	21.7	17.2	27.2	61.8	55.3	67.9
Colac-Otway (S)	4.5*	2.4	8.2	26.1	20.3	32.9	60.2	53.6	66.5
Corangamite (S)	10.7*	6.5	17.2	20.5	16.5	25.1	56.8	50.2	63.3
Darebin (C)	7.5	5.3	10.5	26.3	21.7	31.4	58.0	52.7	63.1
East Gippsland (S)	4.8	3.1	7.5	29.4	22.8	37.1	60.0	52.5	67.2
Frankston (C)	4.2	2.7	6.5	28.8	23.9	34.2	59.2	53.5	64.6
Gannawarra (S)	6.9	4.7	10.0	26.1	21.6	31.2	52.3	46.1	58.4
Glen Eira (C)	2.8*	1.7	4.6	27.7	23.1	32.9	63.7	58.5	68.6
Glenelg (S)	4.7	3.1	7.1	31.6	25.5	38.6	54.5	47.9	60.9
Golden Plains (S)	5.1*	3.0	8.7	21.6	17.7	26.1	63.2	57.1	68.9
Greater Bendigo (C)	5.2	3.5	7.5	31.1	25.8	37.0	56.6	50.8	62.3
Greater Dandenong (C)	7.5	5.2	10.7	34.7	29.8	40.0	48.9	43.5	54.2
Greater Geelong (C)	4.4*	2.3	8.2	23.9	19.8	28.4	63.6	58.1	68.8
Greater Shepparton (C)	4.3	2.7	6.8	24.4	19.8	29.7	61.9	56.3	67.2
Hepburn (S)	6.9*	4.0	11.6	23.8	19.5	28.6	64.1	58.1	69.6
Hindmarsh (S)	9.1	6.2	13.3	32.7	27.1	38.9	45.7	39.3	52.1
Hobsons Bay (C)	5.2	3.7	7.4	30.8	25.7	36.5	57.3	51.6	62.8
Horsham (RC)	5.7	3.9	8.1	29.6	24.5	35.3	53.6	47.5	59.6
Hume (C)	6.1	4.1	9.1	32.2	27.5	37.3	52.3	47.2	57.4
Indigo (S)	2.8*	1.7	4.7	24.1	18.7	30.4	63.3	56.9	69.2
Kingston (C)	6.0	4.1	8.7	24.3	19.9	29.2	64.2	59.2	68.9
Knox (C)	5.3	3.6	7.5	25.5	21.1	30.5	64.4	59.3	69.2
Latrobe (C)	5.4	3.4	8.4	26.9	22.1	32.3	60.7	55.0	66.1
Loddon (S)	5.9	4.0	8.8	23.5	18.4	29.4	60.6	54.3	66.6
Macedon Ranges (S)	3.6*	2.1	5.9	22.9	18.4	28.2	64.4	58.2	70.2
Manningham (C)	4.7	3.1	7.1	28.5	23.5	34.0	62.1	56.4	67.5

(a) Based on national guidelines (DoHA 1999) and excludes adults aged less than 19 years.

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

95% CI = 95 per cent confidence interval.

LGA = local government area.

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.

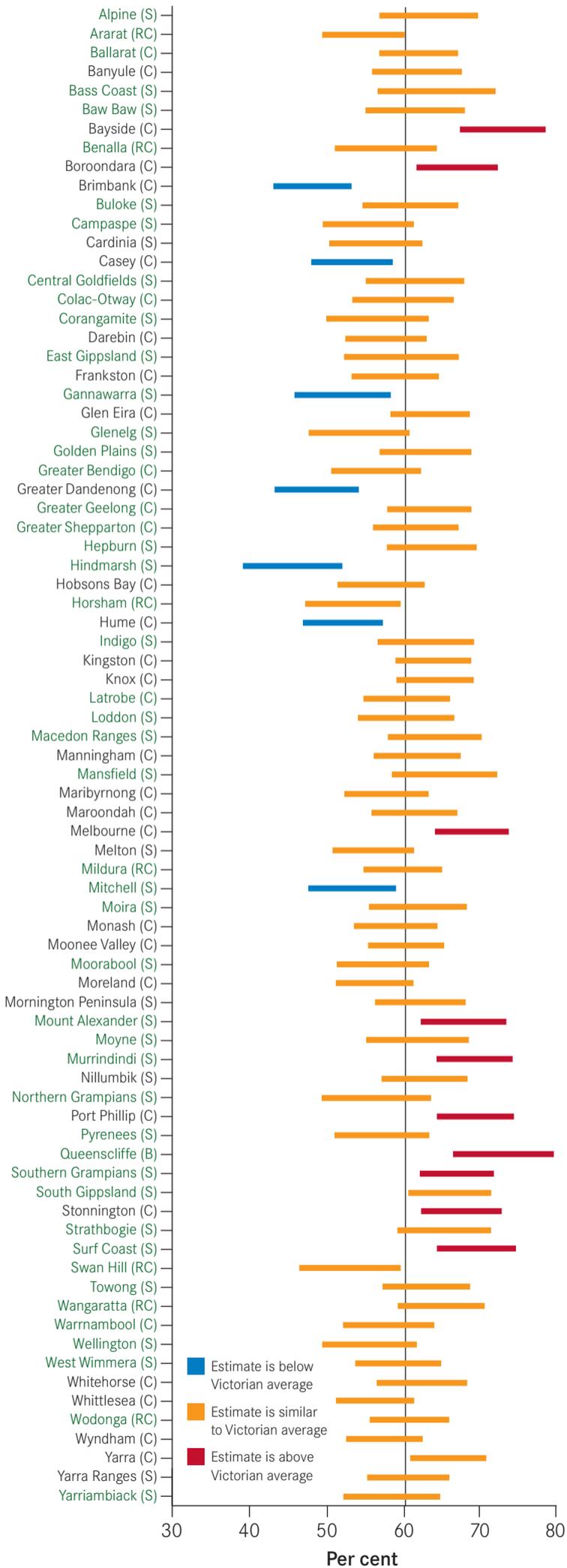
Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

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

Table 2.41: Physical activity levels<sup>(a)</sup>, by LGA, 2008 (continued)

LGA	Sedentary			Insufficient time and/or sessions			Sufficient time and sessions		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	3.8*	2.2	6.4	21.0	15.5	27.7	65.8	58.7	72.2
Maribyrnong (C)	9.9	7.0	13.8	25.9	21.5	30.9	58.1	52.6	63.3
Maroondah (C)	4.6	2.8	7.4	26.7	22.0	32.1	61.7	56.1	67.0
Melbourne (C)	3.5*	2.0	5.9	20.4	16.6	24.9	69.3	64.4	73.7
Melton (S)	7.0	4.7	10.2	29.2	24.4	34.6	56.3	51.1	61.4
Mildura (RC)	5.4	3.5	8.3	27.9	23.6	32.8	60.1	55.0	65.0
Mitchell (S)	2.9*	1.7	4.9	35.3	30.0	40.9	53.5	47.9	59.1
Moira (S)	5.1	3.5	7.3	25.1	19.7	31.4	62.2	55.8	68.2
Monash (C)	3.8	2.5	5.9	28.5	23.8	33.7	59.3	53.8	64.5
Moonee Valley (C)	5.6	3.7	8.3	27.3	22.6	32.5	60.5	55.6	65.3
Moorabool (S)	4.6*	2.5	8.1	28.7	23.3	34.7	57.6	51.6	63.3
Moreland (C)	5.5	3.5	8.6	29.9	25.4	34.8	56.4	51.4	61.3
Mornington Peninsula (S)	4.8	3.1	7.3	28.2	22.9	34.2	62.5	56.5	68.1
Mount Alexander (S)	3.9	2.4	6.4	19.6	15.5	24.4	68.2	62.5	73.4
Moyne (S)	2.9	1.9	4.6	24.2	18.7	30.8	62.1	55.4	68.5
Murrindindi (S)	3.9	2.5	5.8	18.4	14.5	23.1	69.6	64.5	74.2
Nillumbik (S)	5.8*	3.2	10.4	26.4	21.6	31.9	63.1	57.5	68.4
Northern Grampians (S)	8.6	6.1	12.1	28.8	22.6	36.0	56.7	49.6	63.6
Port Phillip (C)	3.2*	1.8	5.6	21.5	17.3	26.4	69.7	64.6	74.4
Pyrenees (S)	4.4	3.0	6.6	27.9	22.4	34.2	57.5	51.3	63.4
Queenscliffe (B)	2.0	1.2	3.3	18.1	12.8	24.9	73.7	66.7	79.7
Southern Grampians (S)	4.0	2.6	6.2	20.9	17.1	25.4	67.2	62.4	71.8
South Gippsland (S)	4.4	2.9	6.6	18.5	14.5	23.3	66.4	60.9	71.5
Stonnington (C)	1.9*	1.0	3.7	25.6	21.0	30.9	67.8	62.5	72.8
Strathbogie (S)	6.0	4.0	8.8	21.7	16.7	27.7	65.7	59.5	71.4
Surf Coast (S)	3.4*	2.1	5.6	18.1	14.1	22.9	69.9	64.6	74.7
Swan Hill (RC)	5.8	3.9	8.6	28.9	23.9	34.5	53.3	46.7	59.7
Towong (S)	6.1	3.9	9.6	21.3	16.9	26.6	63.3	57.5	68.7
Wangaratta (RC)	6.5	4.2	9.9	21.6	17.1	26.9	65.3	59.5	70.6
Warrnambool (C)	5.3	3.6	7.6	29.9	24.6	35.8	58.3	52.4	64.0
Wellington (S)	5.4	3.5	8.1	24.0	19.5	29.1	55.9	49.8	61.8
West Wimmera (S)	7.0	5.2	9.5	21.4	17.1	26.5	59.5	53.9	64.9
Whitehorse (C)	6.5	4.4	9.6	25.9	20.9	31.6	62.8	56.8	68.3
Whittlesea (C)	7.9	5.8	10.8	29.9	25.4	34.7	56.5	51.5	61.4
Wodonga (RC)	6.2	4.0	9.6	25.4	21.0	30.3	60.9	55.8	65.9
Wyndham (C)	5.7	3.8	8.6	28.7	24.4	33.4	57.7	52.8	62.5
Yarra (C)	4.2*	2.5	7.0	24.9	20.4	30.0	66.1	61.1	70.8
Yarra Ranges (S)	5.9	4.0	8.9	26.3	21.8	31.4	60.9	55.5	66.0
Yarriambiack (S)	8.0*	4.8	12.9	21.5	17.2	26.4	58.8	52.4	64.8
<b>Total</b>	<b>5.3</b>	<b>4.9</b>	<b>5.6</b>	<b>27.4</b>	<b>26.6</b>	<b>28.1</b>	<b>60.3</b>	<b>59.5</b>	<b>61.1</b>

Figure 2.23: Sufficient time and sessions of physical activity<sup>(a)</sup>, by LGA, 2008



(a) Based on national guidelines (DoHA 1999) and excludes adults aged less than 19 years.

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 line on the graph is the Victorian estimate, it does not show the 95% CI. See relevant table for 95% CI for Victoria (Total).

Table 2.42 presents levels of physical activity by selected health indicators. The data show that persons who reported low or moderate levels of psychological distress were more likely than people who reported very high levels of psychological distress to meet the national physical activity guidelines. Similarly, persons who reported excellent, very good or good health were more likely than persons with fair or poor health to report undertaking sufficient physical activity to meet the guidelines. Individuals who were classified as risky or high risk drinkers at risk of short and long-term harm were more likely to undertake sufficient physical activity than abstainers.

Those who met the guidelines for fruit and vegetable consumption were more likely to undertake sufficient physical activity, compared with the average for Victoria. Conversely, current smokers, abstainers, those with high or very high levels of psychological distress and persons who rated their health as fair or poor were more likely to be sedentary, compared with the average for Victoria.

**Table 2.42: Physical activity levels<sup>(a)</sup>, by selected health indicators, 2008**

	Sedentary			Insufficient time and/or sessions			Sufficient time and sessions		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Smoking status</b>									
Current smoker	7.8	6.7	9.0	27.6	25.7	29.6	56.4	54.3	58.4
Ex-smoker	4.9	4.2	5.6	26.3	24.2	28.5	62.7	60.3	64.9
Non-smoker	4.8	4.4	5.2	27.8	26.8	28.9	60.3	59.2	61.4
<b>Nutrition<sup>(b)</sup></b>									
Met the guidelines for fruit consumption	4.3	3.9	4.8	23.7	22.6	24.8	65.7	64.5	66.9
Met the guidelines for vegetable consumption	5.3	3.6	7.6	16.9	15.0	19.0	71.1	68.2	73.8
Met the guidelines for fruit & vegetable consumption	5.3	3.3	8.3	14.9	13.0	17.0	73.6	70.2	76.8
<b>Alcohol consumption<sup>(c)</sup></b>									
At risk or high risk of long-term harm	3.9	3.4	4.4	25.1	23.9	26.3	64.8	63.6	66.1
At risk or high risk of short-term harm	6.1	4.5	8.3	21.3	18.0	24.9	65.7	61.5	69.6
Abstainer from alcohol	7.3	6.4	8.2	31.7	29.6	34.0	50.5	48.2	52.8
<b>Body weight status</b>									
Underweight	3.8	2.5	5.8	24.8	20.5	29.7	65.3	60.2	70.2
Healthy weight	4.5	4.1	5.1	25.5	24.4	26.6	62.8	61.6	64.0
Overweight	5.1	4.6	5.8	27.1	25.6	28.6	61.7	60.1	63.3
Obese	6.2	5.4	7.1	31.0	28.8	33.3	55.7	53.3	58.0
<b>Self-rated health</b>									
Excellent/very good	3.5	3.1	3.9	22.9	21.8	24.0	67.4	66.2	68.6
Good	5.1	4.6	5.7	30.0	28.8	31.3	58.1	56.7	59.4
Fair/poor	9.2	8.3	10.3	33.0	31.0	35.1	48.2	46.0	50.3
<b>Level of psychological distress<sup>(d)</sup></b>									
Low (10–15)	4.5	4.1	4.9	27.1	26.1	28.2	62.4	61.4	63.5
Moderate (16–21)	5.0	4.4	5.7	28.2	26.6	29.8	59.5	57.8	61.2
High (22–29)	8.4	7.1	10.1	28.1	25.5	30.8	54.8	52.0	57.6
Very high (30–50)	11.3	8.9	14.4	29.0	24.9	33.5	50.2	45.7	54.7
<b>Total</b>	<b>5.3</b>	<b>4.9</b>	<b>5.6</b>	<b>27.4</b>	<b>26.6</b>	<b>28.2</b>	<b>60.3</b>	<b>59.4</b>	<b>61.1</b>

(a) Based on national guidelines (DoHA 1999) and excludes adults aged less than 19 years.

(b) Based on national guidelines (NHMRC 2003).

(c) Based on national guidelines (NHMRC 2001).

(d) Based on Kessler 10 Psychological Distress Scale (K10).

95% CI = 95 per cent confidence interval.

Data are age standardised to the 2006 Victorian population.

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

## Incidental physical activity

Modern lifestyles allow us to sit to get everywhere we want to go, and once we get there, we may end up sitting again. Walking or cycling for transport, especially for short trips, provides an opportunity to reduce or break up sitting time. Walking, in particular, is regarded as a form of physical activity that most people can do, no matter what their age, weight, health problems or abilities, as part of everyday life. To explore the extent to which the Victorian population includes physical activity in their everyday activities to get from place to place (for example, to school, work, the shops or the train station), the VPHS 2008 asked respondents about the number of days on which they walked or cycled for transport for trips taking longer than 10 minutes. Table 2.43 and figures 2.24 and 2.25 show the proportion of the population involved in incidental physical activity by sex and age group.

In 2008, 6.3 per cent of persons reported undertaking at least 10 minutes of incidental physical activity on each day of the week. The results were similar for males and females, however, the proportion of persons who did not engage in any incidental activity was highest for those aged 45 years and over, compared with those aged 18–24 years.

**Table 2.43: Incidental physical activity (days), by age group and sex, 2008**

Age group (years)	None			One			Two			Three		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
18–24 years	<b>47.1</b>	42.3	51.9	<b>7.7</b>	5.6	10.6	<b>9.0</b>	6.6	12.3	<b>9.3</b>	6.8	12.6
25–34 years	<b>54.9</b>	50.8	58.8	<b>7.1</b>	5.3	9.5	<b>7.9</b>	6.0	10.3	<b>6.3</b>	4.3	9.3
35–44 years	<b>59.1</b>	56.0	62.0	<b>7.2</b>	5.8	9.0	<b>8.3</b>	6.7	10.3	<b>5.7</b>	4.5	7.2
45–54 years	<b>66.8</b>	64.2	69.4	<b>5.4</b>	4.3	6.8	<b>6.6</b>	5.3	8.1	<b>5.6</b>	4.4	7.2
55–64 years	<b>67.3</b>	64.8	69.8	<b>5.2</b>	4.2	6.5	<b>6.7</b>	5.6	8.1	<b>5.9</b>	4.8	7.3
65+	<b>65.8</b>	63.6	67.9	<b>4.6</b>	3.7	5.6	<b>7.5</b>	6.3	8.8	<b>6.0</b>	5.0	7.3
<b>Total</b>	<b>60.7</b>	<b>59.4</b>	<b>62.1</b>	<b>6.1</b>	<b>5.5</b>	<b>6.8</b>	<b>7.6</b>	<b>6.9</b>	<b>8.4</b>	<b>6.3</b>	<b>5.6</b>	<b>7.1</b>
<b>Females</b>												
18–24 years	<b>48.7</b>	44.3	53.2	<b>9.6</b>	7.3	12.6	<b>9.4</b>	6.9	12.7	<b>7.1</b>	5.2	9.7
25–34 years	<b>56.5</b>	53.6	59.3	<b>7.8</b>	6.4	9.4	<b>9.4</b>	7.7	11.3	<b>6.8</b>	5.4	8.4
35–44 years	<b>64.2</b>	62.2	66.2	<b>6.9</b>	5.9	8.0	<b>8.5</b>	7.4	9.8	<b>6.2</b>	5.3	7.3
45–54 years	<b>68.2</b>	66.0	70.2	<b>5.2</b>	4.3	6.3	<b>6.4</b>	5.4	7.6	<b>5.6</b>	4.6	6.8
55–64 years	<b>67.9</b>	65.8	69.9	<b>6.0</b>	5.1	7.2	<b>7.6</b>	6.5	8.9	<b>5.7</b>	4.8	6.8
65+	<b>66.5</b>	64.7	68.3	<b>6.9</b>	6.0	8.1	<b>7.7</b>	6.7	8.8	<b>6.7</b>	5.8	7.7
<b>Total</b>	<b>62.7</b>	<b>61.6</b>	<b>63.7</b>	<b>6.9</b>	<b>6.3</b>	<b>7.5</b>	<b>8.1</b>	<b>7.5</b>	<b>8.7</b>	<b>8.1</b>	<b>7.5</b>	<b>8.7</b>
<b>Persons</b>												
18–24 years	<b>47.9</b>	44.6	51.2	<b>8.7</b>	7.0	10.7	<b>9.2</b>	7.4	11.4	<b>8.2</b>	6.6	10.2
25–34 years	<b>55.7</b>	53.2	58.1	<b>7.4</b>	6.2	8.8	<b>8.6</b>	7.3	10.1	<b>6.5</b>	5.2	8.1
35–44 years	<b>61.7</b>	59.9	63.5	<b>7.0</b>	6.2	8.1	<b>8.4</b>	7.4	9.5	<b>6.0</b>	5.2	6.9
45–54 years	<b>67.5</b>	65.8	69.2	<b>5.3</b>	4.6	6.2	<b>6.5</b>	5.7	7.4	<b>5.6</b>	4.8	6.6
55–64 years	<b>67.6</b>	66.0	69.2	<b>5.6</b>	4.9	6.5	<b>7.2</b>	6.4	8.1	<b>5.8</b>	5.1	6.7
65+	<b>66.2</b>	64.8	67.6	<b>5.9</b>	5.2	6.6	<b>7.6</b>	6.8	8.4	<b>6.4</b>	5.7	7.2
<b>Total</b>	<b>61.7</b>	<b>60.9</b>	<b>62.6</b>	<b>6.5</b>	<b>6.1</b>	<b>7.0</b>	<b>7.8</b>	<b>7.4</b>	<b>8.3</b>	<b>6.3</b>	<b>5.9</b>	<b>6.8</b>

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 from the corresponding estimate for Victoria are identified by colour as follows: **above Victoria** / **below Victoria**.

\* Estimate has a relative standard error of between 25 and 50 per cent and should be used with caution.

Table 2.43: Incidental physical activity (days), by age group and sex, 2008 (continued)

Age group (years)	Four			Five			Six			Seven		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
18–24 years	4.4	2.9	6.6	9.8	7.2	13.2	2.6*	1.5	4.5	9.6	7.2	12.6
25–34 years	3.1	2.1	4.5	11.6	9.2	14.5	1.4*	0.8	2.5	7.4	5.6	9.6
35–44 years	4.5	3.4	6.1	8.1	6.6	9.9	1.7	1.1	2.8	5.1	3.9	6.6
45–54 years	2.6	1.9	3.6	6.5	5.2	8.1	1.0	0.6	1.6	5.1	4.1	6.3
55–64 years	3.0	2.2	3.9	4.1	3.2	5.3	1.2*	0.8	2.0	6.2	5.1	7.5
65+	3.4	2.7	4.3	3.1	2.3	4.1	1.2*	0.8	1.8	8.0	6.8	9.3
<b>Total</b>	<b>3.5</b>	<b>3.0</b>	<b>4.0</b>	<b>7.2</b>	<b>6.4</b>	<b>8.0</b>	<b>1.5</b>	<b>1.2</b>	<b>1.9</b>	<b>6.7</b>	<b>6.1</b>	<b>7.4</b>
<b>Females</b>												
18–24 years	5.0	3.4	7.4	7.6	5.6	10.1	2.1*	1.2	3.9	10.0	7.6	13.2
25–34 years	3.5	2.6	4.6	6.7	5.4	8.2	1.1*	0.6	2.0	8.4	6.8	10.2
35–44 years	3.3	2.6	4.0	5.5	4.6	6.5	0.5	0.3	0.9	4.4	3.6	5.4
45–54 years	3.7	3.0	4.7	5.0	4.1	6.0	1.1	0.7	1.7	4.5	3.6	5.5
55–64 years	3.7	2.9	4.6	3.2	2.5	4.1	0.8*	0.5	1.4	4.6	3.8	5.5
65+	3.0	2.4	3.7	2.6	2.1	3.3	1.1	0.8	1.7	4.3	3.7	5.1
<b>Total</b>	<b>3.6</b>	<b>3.2</b>	<b>4.0</b>	<b>5.1</b>	<b>4.6</b>	<b>5.6</b>	<b>1.1</b>	<b>0.9</b>	<b>1.4</b>	<b>5.9</b>	<b>5.4</b>	<b>6.5</b>
<b>Persons</b>												
18–24 years	4.7	3.5	6.2	8.7	7.0	10.8	2.4	1.6	3.6	9.8	8.0	11.9
25–34 years	3.3	2.6	4.1	9.2	7.8	10.8	1.2*	0.8	1.9	7.9	6.7	9.3
35–44 years	3.9	3.2	4.7	6.8	5.9	7.8	1.1	0.8	1.6	4.8	4.0	5.6
45–54 years	3.2	2.6	3.9	5.7	4.9	6.6	1.0	0.7	1.4	4.8	4.1	5.5
55–64 years	3.3	2.8	4.0	3.7	3.1	4.4	1.0	0.7	1.5	5.4	4.7	6.2
65+	3.2	2.7	3.7	2.8	2.3	3.4	1.2	0.9	1.6	6.0	5.3	6.7
<b>Total</b>	<b>3.5</b>	<b>3.2</b>	<b>3.9</b>	<b>6.1</b>	<b>5.7</b>	<b>6.6</b>	<b>1.3</b>	<b>1.1</b>	<b>1.5</b>	<b>6.3</b>	<b>5.8</b>	<b>6.7</b>

**Figure 2.24: Incidental physical activity (days)<sup>(a)</sup>, by age group, males, 2008**

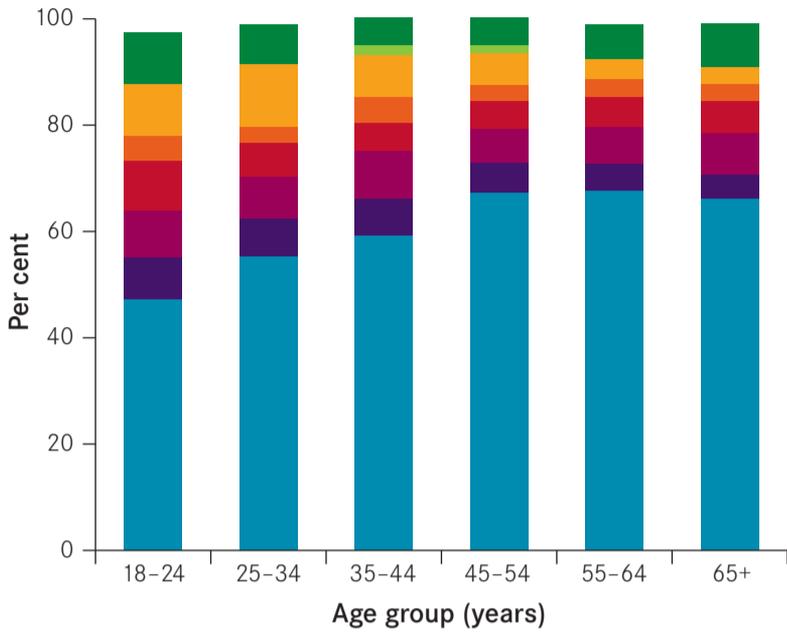
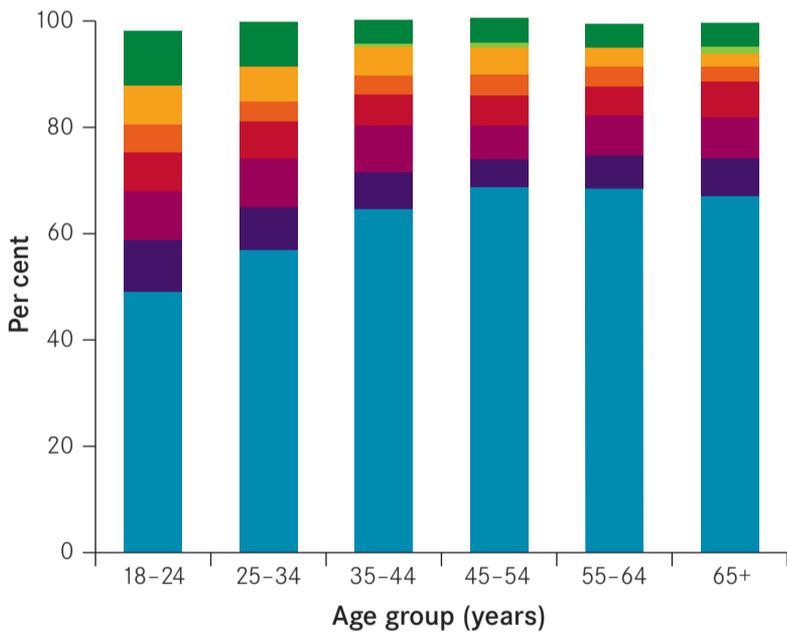


Table 2.44 shows the proportion of the population who walked or cycled for transport for at least 10 minutes in the past week, by sex and Department of Health region. More than six in 10 Victorians (61.7 per cent) reported that they did not walk or cycle for transport for trips taking longer than 10 minutes on any day during the past week. The proportion of persons reporting that they did not undertake any incidental physical activity during the past week was higher for persons living in the rural areas of the state (66.4 per cent), compared with the metropolitan area (60.1 per cent). In the North and West Metropolitan region, the proportion of females who walked or cycled for transport on 4-5 days in the past week (10.8 per cent) was higher than the average for Victoria (8.6 per cent).

**Figure 2.25: Incidental physical activity (days)<sup>(a)</sup>, by age group, females, 2008**



■ Seven    ■ Six    ■ Five    ■ Four  
■ Three    ■ Two    ■ One    ■ None

(a) Number of days per week on which individuals walked or cycled for transport for trips longer than 10 minutes.

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, they have not been age standardised.

Table 2.44: Incidental physical activity (days), by Department of Health region and sex, 2008

Region	Number of days on which individuals walked or cycled for transport for trips longer than 10 minutes														
	None			1–2 days			3 days			4–5 days			6–7 days		
	%	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
<b>Males</b>															
Barwon-South Western	59.1	52.7	65.2	18.7	13.8	24.8	7.7*	4.4	13.1	6.3	4.2	9.3	8.1	5.7	11.4
Eastern Metropolitan	61.2	57.7	64.5	14.4	12.0	17.1	5.7	4.4	7.5	10.9	8.9	13.4	7.5	5.8	9.6
Gippsland	67.7	63.6	71.6	15.4	12.1	19.4	3.2	2.3	4.5	6.6	4.8	9.1	5.9	4.5	7.9
Grampians	66.5	62.3	70.5	12.2	9.6	15.3	5.9	4.2	8.4	9.0	6.3	12.8	6.2	4.6	8.2
Hume	65.4	61.9	68.7	12.7	10.2	15.7	5.5	3.9	7.9	7.0	5.2	9.2	9.0	6.9	11.8
Loddon Mallee	68.2	64.5	71.8	13.6	10.9	16.7	3.9	2.7	5.5	7.4	5.2	10.5	6.6	5.1	8.4
North and West Metropolitan	57.4	55.1	59.7	13.5	12.0	15.1	6.3	5.2	7.6	13.0	11.4	14.8	9.3	8.1	10.7
Southern Metropolitan	60.2	57.4	63.0	13.2	11.3	15.3	7.6	6.1	9.4	10.9	9.2	12.9	7.8	6.4	9.5
<b>Metropolitan</b>	59.2	57.6	60.8	13.6	12.5	14.8	6.6	5.8	7.5	11.8	10.8	13.0	8.4	7.6	9.3
<b>Rural</b>	65.1	62.7	67.4	14.7	13.0	16.7	5.4	4.1	7.2	7.1	6.0	8.4	7.2	6.3	8.4
<b>Total</b>	60.7	59.4	62.1	13.7	12.8	14.7	6.3	5.6	7.1	10.6	9.8	11.6	8.2	7.5	8.9
<b>Females</b>															
Barwon-South Western	63.7	58.9	68.3	20.1	16.1	24.9	4.8	3.1	7.4	5.2	3.9	6.7	5.9*	3.6	9.7
Eastern Metropolitan	65.7	63.0	68.3	14.5	12.5	16.7	6.5	5.2	8.0	7.2	5.9	8.7	5.6	4.4	7.1
Gippsland	69.1	65.9	72.1	14.9	12.5	17.5	4.3	3.3	5.5	6.3	4.7	8.4	5.1	3.9	6.8
Grampians	67.8	64.0	71.5	15.3	12.3	18.8	5.8	4.6	7.4	5.7	4.5	7.2	4.9	3.6	6.5
Hume	68.1	65.4	70.6	12.6	10.7	14.7	6.6	5.4	8.2	7.5	6.1	9.2	5.0	3.9	6.5
Loddon Mallee	70.4	67.4	73.2	13.3	11.2	15.7	4.8	3.6	6.3	6.0	4.8	7.4	5.1	4.0	6.6
North and West Metropolitan	58.5	56.7	60.3	15.1	13.8	16.5	6.5	5.6	7.4	10.8	9.7	12.1	8.4	7.4	9.6
Southern Metropolitan	60.4	58.1	62.6	15.1	13.5	16.8	7.3	6.1	8.7	9.5	8.2	11.0	7.5	6.3	8.9
<b>Metropolitan</b>	60.9	59.6	62.1	14.9	14.0	15.9	6.7	6.1	7.4	9.5	8.8	10.3	7.5	6.8	8.3
<b>Rural</b>	67.7	65.9	69.4	15.5	14.0	17.1	5.2	4.5	6.0	6.1	5.4	6.8	5.2	4.4	6.2
<b>Total</b>	62.7	61.6	63.7	14.9	14.2	15.8	6.3	5.8	6.8	8.6	8.1	9.3	7.0	6.4	7.6
<b>Persons</b>															
Barwon-South Western	61.5	57.4	65.4	19.3	16.0	23.2	6.2	4.1	9.3	5.7	4.4	7.4	7.0	5.2	9.5
Eastern Metropolitan	63.6	61.4	65.7	14.4	12.9	16.1	6.1	5.1	7.2	8.9	7.7	10.4	6.4	5.4	7.7
Gippsland	68.7	66.1	71.2	14.9	12.9	17.3	3.7	3.0	4.6	6.4	5.1	7.9	5.5	4.5	6.8
Grampians	67.2	64.3	69.9	13.8	11.8	16.2	5.8	4.7	7.2	7.3	5.7	9.4	5.5	4.4	6.7
Hume	66.7	64.4	68.8	12.7	11.1	14.5	6.1	5.0	7.4	7.2	6.1	8.6	7.0	5.7	8.6
Loddon Mallee	69.4	66.9	71.7	13.4	11.7	15.4	4.4	3.5	5.5	6.6	5.3	8.3	5.8	4.9	7.0
North and West Metropolitan	57.9	56.5	59.3	14.3	13.3	15.4	6.4	5.7	7.2	11.9	10.9	13.0	8.8	8.0	9.8
Southern Metropolitan	60.2	58.4	62.0	14.2	12.9	15.5	7.4	6.5	8.6	10.3	9.1	11.5	7.6	6.7	8.7
<b>Metropolitan</b>	60.1	59.0	61.1	14.3	13.6	15.0	6.7	6.2	7.2	10.6	10.0	11.3	7.9	7.4	8.5
<b>Rural</b>	66.4	64.9	67.8	15.2	14.0	16.4	5.3	4.5	6.2	6.6	5.9	7.3	6.2	5.5	6.9
<b>Total</b>	61.7	60.9	62.6	14.4	13.7	15.0	6.3	5.9	6.8	9.6	9.1	10.2	7.5	7.1	8.0

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

95% CI = 95% 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.

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

Table 2.45 and figure 2.26 show the proportion of persons who did not walk or cycle for at least 10 minutes on any days during the past week, by local government area. There were 28 LGAs where the proportion of persons who reported doing no incidental physical activity for transport was higher than the average for Victoria. In 2008, the proportion of persons who did not walk or cycle for transport on any day during the past week was highest for Golden Plains (79.3 per cent), followed by Moyne (75.9 per cent) and Murrindindi (75.7 per cent), where three out of every four persons aged 18 years and over reported doing no incidental physical activity in the past week.

There were 12 LGAs where the proportion of persons who reported doing no incidental physical activity was lower than the average for Victoria (61.7 per cent). One of these 12 LGAs was in rural Victoria (Queenscliffe) and the remaining 11 were in the metropolitan area (Bayside, Boroondara, Darebin, Glen Eira, Maribyrnong, Melbourne, Moonee Valley, Moreland, Port Phillip, Stonnington and Yarra). The proportion of persons who did not walk or cycle for transport was lowest in the LGA of Yarra (29.2 per cent), followed by Melbourne (31.9 per cent).

**Table 2.45: No days of incidental physical activity, by LGA, 2008**

LGA	%	Lower 95% CI	Upper 95% CI
Alpine (S)	64.6	58.3	70.4
Ararat (RC)	63.0	56.2	69.4
Ballarat (C)	68.4	63.0	73.3
Banyule (C)	58.2	52.2	63.9
Bass Coast (S)	69.5	62.2	76.0
Baw Baw (S)	67.0	61.3	72.3
Bayside (C)	54.7	48.8	60.4
Benalla (RC)	63.2	56.5	69.4
Boroondara (C)	52.5	46.8	58.0
Brimbank (C)	62.2	57.2	66.9
Buloke (S)	65.1	58.4	71.3
Campaspe (S)	70.4	64.6	75.7
Cardinia (S)	76.3	70.8	81.1
Casey (C)	69.8	64.8	74.4
Central Goldfields (S)	65.6	58.2	72.3
Colac-Otway (S)	62.5	55.5	69.0
Corangamite (S)	69.7	62.2	76.3
Darebin (C)	50.0	44.8	55.2
East Gippsland (S)	68.6	61.2	75.2
Frankston (C)	68.6	62.9	73.7
Gannawarra (S)	71.1	64.9	76.6
Glen Eira (C)	48.8	43.5	54.0
Glenelg (S)	70.1	64.0	75.6
Golden Plains (S)	79.3	74.4	83.4
Greater Bendigo (C)	71.7	66.4	76.5
Greater Dandenong (C)	64.6	59.3	69.6
Greater Geelong (C)	58.1	51.6	64.3
Greater Shepparton (C)	63.9	58.2	69.2
Hepburn (S)	67.4	60.5	73.7
Hindmarsh (S)	65.0	58.5	70.9
Hobsons Bay (C)	55.7	49.8	61.4
Horsham (RC)	62.4	56.3	68.1
Hume (C)	72.6	67.7	77.1
Indigo (S)	68.1	61.1	74.4
Kingston (C)	62.9	57.0	68.4
Knox (C)	67.7	62.2	72.8
Latrobe (C)	70.7	65.2	75.6
Loddon (S)	72.0	65.7	77.5
Macedon Ranges (S)	70.1	63.9	75.6
Manningham (C)	67.2	61.6	72.5

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

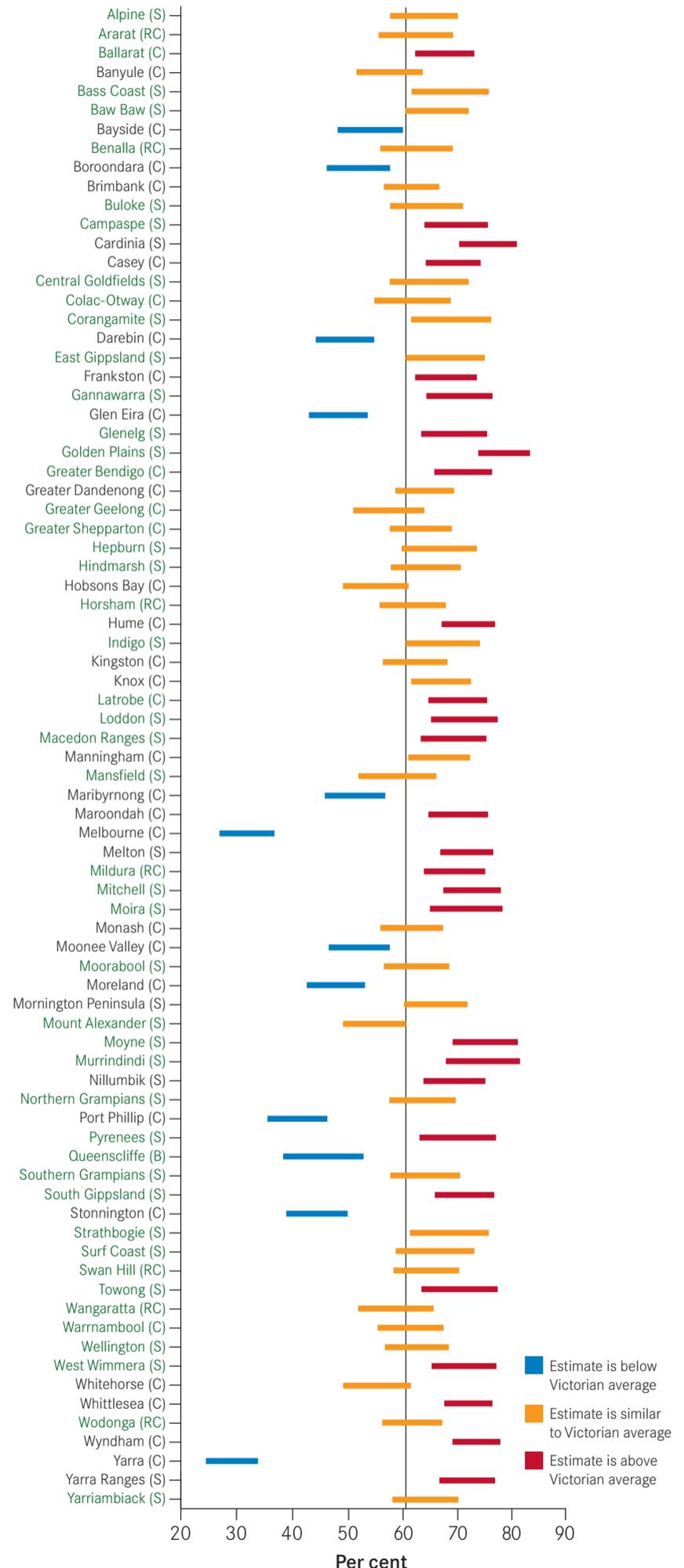
95% CI = confidence interval.

LGA = local government area.

**Table 2.45: No days of incidental physical activity, by LGA, 2008 (continued)**

LGA	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	59.6	52.5	66.4
Maribyrnong (C)	51.8	46.5	57.1
Maroondah (C)	70.8	65.3	75.8
Melbourne (C)	31.9	27.3	36.9
Melton (S)	72.4	67.4	76.8
Mildura (RC)	70.1	64.4	75.3
Mitchell (S)	73.3	67.9	78.1
Moira (S)	72.4	65.5	78.3
Monash (C)	62.3	56.5	67.8
Moonee Valley (C)	52.6	47.0	58.1
Moorabool (S)	63.2	57.2	68.8
Moreland (C)	48.4	43.2	53.5
Mornington Peninsula (S)	66.8	61.0	72.1
Mount Alexander (S)	55.5	49.8	61.0
Moyne (S)	75.9	69.6	81.2
Murrindindi (S)	75.7	68.6	81.7
Nillumbik (S)	70.2	64.5	75.3
Northern Grampians (S)	64.3	58.2	70.0
Port Phillip (C)	41.2	36.0	46.6
Pyrenees (S)	70.9	63.7	77.2
Queenscliffe (B)	45.9	38.8	53.2
Southern Grampians (S)	64.9	58.4	70.8
South Gippsland (S)	71.9	66.4	76.9
Stonnington (C)	44.8	39.4	50.3
Strathbogie (S)	69.4	61.9	76.0
Surf Coast (S)	66.7	59.3	73.3
Swan Hill (RC)	64.9	58.9	70.5
Towong (S)	71.2	64.0	77.5
Wangaratta (RC)	59.3	52.5	65.8
Warrnambool (C)	62.0	56.0	67.7
Wellington (S)	63.1	57.4	68.6
West Wimmera (S)	71.9	65.8	77.3
Whitehorse (C)	55.9	49.8	61.8
Whittlesea (C)	72.5	68.1	76.5
Wodonga (RC)	62.4	56.9	67.5
Wyndham (C)	74.0	69.6	78.0
Yarra (C)	29.2	24.8	33.9
Yarra Ranges (S)	72.5	67.3	77.1
Yarriambiack (S)	64.8	58.7	70.5
<b>Total</b>	<b>61.7</b>	<b>60.9</b>	<b>62.6</b>

**Figure 2.26: No days of incidental physical activity, by LGA, 2008**



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.

## Active transport to school

A more specific question about incidental physical activity was asked of respondents with children at primary or secondary school in 2008. These respondents were asked how many days, if any, in a typical week they walked or cycled with their child/children all or part of the way to and/or from school. Almost one quarter (25.4 per cent) of all respondents had children attending school. Table 2.46 shows the proportion of this population who reported walking or cycling with their children to and/or from school, by selected health and demographic indicators. On average, more than three quarters (75.4 per cent) of persons with a child/children at school did not walk or cycle with them all or part of the way to school. The proportion of parents who did not engage in active transport to school on any weekday was higher than average for parents who did a sufficient level of physical activity. The proportion of parents who reported walking or cycling with their children to school on 3 days and 4–5 days per week was higher than average for those who were unemployed.

**Table 2.46: Walking or cycling with children to school, by selected health and demographic indicators, 2008**

Indicator	Number of days walk or cycle with children to/from school											
	None			1-2 days			3 days			4-5 days		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Sex</b>												
Males	77.1	69.4	83.3	9.4	7.5	11.9	2.4	1.5	3.8	10.4	5.5	19.0
Females	71.8	68.2	75.1	7.4	6.4	8.7	3.1	2.3	4.4	16.1	13.3	19.3
<b>Country of birth</b>												
Australia	69.1	62.2	75.2	8.3	6.4	10.8	3.6	2.3	5.5	16.8	11.8	23.3
Overseas	75.9	72.3	79.1	9.1	7.6	10.9	2.7	1.9	3.7	11.7	8.7	15.6
<b>Speaks language other than English at home</b>												
Yes	69.4	62.2	75.8	9.7	7.4	12.6	4.0	2.5	6.2	14.8	9.9	21.6
No	75.6	72.0	78.8	9.4	7.6	11.5	2.7	1.9	3.9	11.6	8.7	15.4
<b>Employment status</b>												
Employed	79.8	75.0	83.9	10.7	8.3	13.6	2.6	1.8	3.8	6.2	3.5	10.9
Unemployed	61.8	55.7	67.6	4.0	2.4	6.6	10.6	7.1	15.7	22.7	18.4	27.8
Not in the labour force	70.5	65.8	74.7	7.5	5.9	9.3	3.0	2.1	4.2	17.6	14.0	21.9
<b>Household income per year</b>												
Less than \$20,000	60.6	55.0	66.0	10.5	7.2	15.2	7.5	3.0	17.5	20.9	13.8	30.2
\$20,001–\$40,000	78.5	73.1	83.1	8.4	6.1	11.4	1.3	0.5	2.9	10.6	7.1	15.5
\$40,001–\$60,000	74.3	68.2	79.5	9.5	7.5	11.9	5.0	2.9	8.7	10.3	6.4	16.1
\$60,001–\$80,000	79.7	75.3	83.4	8.1	6.6	10.0	3.3	2.2	5.0	8.3	5.4	12.4
\$80,001–\$100,000	70.6	66.3	74.5	11.3	7.9	15.8	2.1	1.3	3.3	14.6	13.6	15.6
More than \$100,000	81.0	77.1	84.4	10.5	7.4	14.7	2.9	1.8	4.6	4.9	3.4	7.0
<b>Area of state</b>												
Metropolitan	80.1	75.7	83.9	8.3	6.7	10.4	2.1	1.5	2.9	9.1	6.1	13.3
Rural	73.1	68.6	77.2	9.1	7.5	11.0	3.4	2.4	4.7	12.9	9.6	17.1
<b>Physical activity<sup>(a)</sup></b>												
Sufficient time and sessions	86.1	79.9	90.7	5.3	3.6	7.9	0.4	0.1	0.9	3.4	1.9	6.0
Insufficient time and/or sessions	80.5	75.3	84.8	8.4	6.2	11.4	4.3	2.1	8.7	5.3	4.0	7.0
Sedentary	73.4	69.5	77.0	9.9	8.4	11.8	2.6	1.9	3.3	13.4	10.4	17.3
<b>Self-rated health</b>												
Excellent/very good	68.6	65.0	72.0	11.6	8.7	15.3	3.3	2.2	4.8	15.9	12.1	20.6
Good	76.6	72.1	80.6	8.4	6.9	10.0	2.9	1.8	4.6	9.4	6.8	12.9
Fair/poor	81.2	75.8	85.7	6.5	4.6	9.2	2.6	1.3	5.2	9.3	6.0	14.3
<b>Total</b>	<b>75.4</b>	<b>71.8</b>	<b>78.6</b>	<b>8.9</b>	<b>7.6</b>	<b>10.3</b>	<b>3.0</b>	<b>2.3</b>	<b>4.0</b>	<b>11.6</b>	<b>8.9</b>	<b>14.9</b>

(a) Based on national guidelines (DoHA 1999) and excludes adults aged less than 19 years.

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.

## Physical activity at work

Respondents to the VPHS 2008 who were employed were asked whether their work activities were best described as mostly sitting or standing, mostly walking, or mostly heavy labour or physically demanding work. In 2008, 60.5 per cent of respondents reported that they were employed, 35.5 per cent were classified as not participating in the labour force and 3.6 per cent were unemployed. Table 2.47 shows the proportion of individuals who reported being employed and did work that involved different levels of physical activity, by age group and sex. The table shows that almost two thirds (64.2 per cent) of respondents employed reported mostly sitting or standing at work, about one in five (20.5 per cent) reported mostly walking and more than one in ten (13.3 per cent) reported doing mostly heavy labour or physically demanding work. Males (18.4 per cent) were more likely to do mostly heavy labour or physically demanding work than females (6.4 per cent), and a higher proportion of males aged 18–24 years (32.6 per cent) did mostly heavy labour or physically demanding work, compared to males in other age groups.

**Table 2.47: Occupational physical activity<sup>(a)</sup>, by age group and sex, 2008**

Age group (years)	Mostly sitting or standing			Mostly walking			Mostly heavy labour or physically demanding work		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>									
18–24 years	<b>42.4</b>	36.3	48.7	<b>22.2</b>	17.3	27.9	<b>32.6</b>	27.1	38.6
25–34 years	<b>59.0</b>	54.6	63.2	<b>17.8</b>	14.8	21.4	<b>21.8</b>	18.2	25.8
35–44 years	<b>67.6</b>	64.6	70.4	<b>15.9</b>	13.7	18.3	<b>15.6</b>	13.5	17.9
45–54 years	<b>65.0</b>	62.1	67.8	<b>18.2</b>	15.9	20.8	<b>15.3</b>	13.3	17.5
55–64 years	<b>64.8</b>	61.6	67.9	<b>18.8</b>	16.3	21.5	<b>13.6</b>	11.6	16.0
65+	<b>59.3</b>	53.2	65.0	<b>20.3</b>	16.0	25.3	<b>17.8</b>	13.4	23.1
<b>Total</b>	<b>60.3</b>	<b>58.1</b>	<b>62.5</b>	<b>19.0</b>	<b>17.3</b>	<b>20.9</b>	<b>18.4</b>	<b>17.0</b>	<b>19.8</b>
<b>Females</b>									
18–24 years	<b>60.6</b>	54.3	66.5	<b>28.5</b>	23.3	34.4	<b>9.9</b>	6.8	14.4
25–34 years	<b>71.9</b>	68.5	75.0	<b>21.1</b>	18.2	24.2	<b>5.3</b>	3.9	7.0
35–44 years	<b>73.0</b>	70.6	75.2	<b>19.4</b>	17.5	21.5	<b>6.3</b>	5.2	7.7
45–54 years	<b>67.4</b>	64.9	69.8	<b>23.6</b>	21.4	25.9	<b>7.1</b>	5.9	8.5
55–64 years	<b>70.5</b>	67.6	73.3	<b>20.3</b>	17.9	23.0	<b>6.9</b>	5.6	8.6
65+	<b>66.6</b>	59.4	73.1	<b>26.8</b>	20.9	33.8	<b>4.8</b>	2.6	8.5
<b>Total</b>	<b>69.5</b>	<b>67.6</b>	<b>71.4</b>	<b>22.3</b>	<b>20.6</b>	<b>24.0</b>	<b>6.4</b>	<b>5.6</b>	<b>7.3</b>
<b>Persons</b>									
18–24 years	<b>50.4</b>	45.9	54.9	<b>25.0</b>	21.3	29.0	<b>22.6</b>	19.1	26.6
25–34 years	<b>64.4</b>	61.5	67.2	<b>19.2</b>	17.0	21.6	<b>14.8</b>	12.6	17.3
35–44 years	<b>69.9</b>	67.9	71.8	<b>17.4</b>	15.9	19.0	<b>11.6</b>	10.3	13.0
45–54 years	<b>66.1</b>	64.2	68.0	<b>20.7</b>	19.1	22.4	<b>11.5</b>	10.3	12.8
55–64 years	<b>67.3</b>	65.1	69.4	<b>19.5</b>	17.7	21.4	<b>10.8</b>	9.4	12.3
65+	<b>61.8</b>	57.1	66.2	<b>22.5</b>	19.0	26.5	<b>13.3</b>	10.3	17.1
<b>Total</b>	<b>64.2</b>	<b>62.6</b>	<b>65.7</b>	<b>20.5</b>	<b>19.2</b>	<b>21.8</b>	<b>13.3</b>	<b>12.4</b>	<b>14.2</b>

(a) Includes only those persons who reported that they were currently employed.

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 from the corresponding estimate for Victoria are identified by colour as follows: **above Victoria** / **below Victoria**.

Table 2.48 shows differences between the metropolitan and rural areas of Victoria, particularly in the proportion of persons who reported that their work activities involved mostly sitting or standing or mostly heavy labour or physically demanding work. Among working males, 26.7 per cent of those living in rural areas of the state were involved in physically demanding work, compared with 15.0 per cent of those living in the metropolitan area. The work activities of almost two-thirds of working males (66.2 per cent) from the metropolitan area involved mostly sitting or standing, compared with almost one half (49.2 per cent) for rural dwelling males. The work activities of almost seven in 10 (68.2 per cent) working males from the Eastern Metropolitan region involved mostly sitting or standing. For females in rural areas, 57.8 per cent did work that involved mostly sitting or standing, compared with 73.6 per cent of those living in the metropolitan area. The occupational physical activity of 9.1 per cent of females from rural areas was reported to be mostly heavy labour or physically demanding work, compared with 5.4 per cent of those from the metropolitan area.

Table 2.48: Occupational physical activity<sup>(a)</sup>, by Department of Health region and sex, 2008

Region	Mostly sitting or standing			Mostly walking			Mostly heavy labour or physically demanding work		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>									
Barwon-South Western	54.2	48.1	60.3	16.3	13.0	20.3	27.0	21.5	33.2
Eastern Metropolitan	68.2	64.4	71.9	15.7	12.9	19.0	14.9	12.2	17.9
Gippsland	45.5	40.5	50.7	20.9	17.0	25.4	29.6	25.3	34.2
Grampians	47.4	42.7	52.1	21.0	16.8	25.9	29.5	25.1	34.3
Hume	47.8	43.6	52.0	21.5	18.5	24.8	27.5	23.8	31.6
Loddon Mallee	51.4	46.5	56.3	23.4	19.5	27.7	21.5	17.9	25.6
North and West Metropolitan	65.3	62.4	68.1	19.1	16.5	21.9	14.0	11.7	16.7
Southern Metropolitan	60.6	57.0	64.1	18.0	14.9	21.5	18.3	15.6	21.4
<b>Metropolitan</b>	<b>66.2</b>	<b>63.9</b>	<b>68.3</b>	<b>16.9</b>	<b>15.2</b>	<b>18.7</b>	<b>15.0</b>	<b>13.6</b>	<b>16.6</b>
<b>Rural</b>	<b>49.2</b>	<b>46.2</b>	<b>52.1</b>	<b>21.2</b>	<b>19.0</b>	<b>23.4</b>	<b>26.7</b>	<b>24.2</b>	<b>29.4</b>
<b>Total</b>	<b>60.3</b>	<b>58.1</b>	<b>62.5</b>	<b>19.0</b>	<b>17.3</b>	<b>20.9</b>	<b>18.4</b>	<b>17.0</b>	<b>19.8</b>
<b>Females</b>									
Barwon-South Western	60.6	54.1	66.8	29.7	24.1	36.1	8.5	6.4	11.2
Eastern Metropolitan	73.7	70.0	77.1	18.9	16.0	22.2	5.5	3.8	7.9
Gippsland	57.3	53.0	61.5	31.8	28.1	35.7	10.2	7.5	13.7
Grampians	64.0	58.6	69.1	24.8	20.4	29.8	9.2	6.7	12.7
Hume	59.4	55.3	63.4	29.5	25.8	33.5	9.9	8.0	12.1
Loddon Mallee	56.5	51.9	61.0	30.4	26.2	35.0	9.0	6.8	11.7
North and West Metropolitan	73.1	70.3	75.8	20.8	18.3	23.5	4.6	3.5	6.1
Southern Metropolitan	72.6	68.8	76.0	19.5	16.5	22.9	6.4	4.7	8.7
<b>Metropolitan</b>	<b>73.6</b>	<b>71.6</b>	<b>75.5</b>	<b>19.3</b>	<b>17.6</b>	<b>21.0</b>	<b>5.4</b>	<b>4.5</b>	<b>6.6</b>
<b>Rural</b>	<b>57.8</b>	<b>55.1</b>	<b>60.5</b>	<b>29.4</b>	<b>26.8</b>	<b>32.1</b>	<b>9.1</b>	<b>7.9</b>	<b>10.4</b>
<b>Total</b>	<b>69.5</b>	<b>67.6</b>	<b>71.4</b>	<b>22.3</b>	<b>20.6</b>	<b>24.0</b>	<b>6.4</b>	<b>5.6</b>	<b>7.3</b>
<b>Persons</b>									
Barwon-South Western	57.5	52.8	62.0	21.7	18.3	25.5	18.9	15.3	23.3
Eastern Metropolitan	70.5	67.8	73.1	17.2	15.1	19.5	10.7	9.0	12.8
Gippsland	50.4	46.1	54.8	25.9	22.6	29.5	20.9	18.0	24.2
Grampians	54.0	50.3	57.7	22.1	18.9	25.6	21.9	18.9	25.2
Hume	52.6	49.6	55.6	25.1	22.6	27.8	19.8	17.4	22.5
Loddon Mallee	53.2	49.2	57.1	26.0	22.7	29.5	16.9	14.3	19.8
North and West Metropolitan	69.6	67.5	71.6	19.3	17.5	21.3	9.5	8.2	11.1
Southern Metropolitan	65.9	63.2	68.6	18.3	16.1	20.8	13.4	11.5	15.6
<b>Metropolitan</b>	<b>69.3</b>	<b>67.7</b>	<b>70.8</b>	<b>17.9</b>	<b>16.7</b>	<b>19.2</b>	<b>11.0</b>	<b>10.0</b>	<b>12.1</b>
<b>Rural</b>	<b>53.0</b>	<b>50.9</b>	<b>55.1</b>	<b>25.2</b>	<b>23.4</b>	<b>27.1</b>	<b>19.2</b>	<b>17.6</b>	<b>21.0</b>
<b>Total</b>	<b>64.2</b>	<b>62.6</b>	<b>65.7</b>	<b>20.5</b>	<b>19.2</b>	<b>21.8</b>	<b>13.3</b>	<b>12.4</b>	<b>14.2</b>

(a) Includes only those persons who reported that they were currently employed.

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 2.49, figure 2.27 and figure 2.28 present occupational physical activity data by LGA. Consistent with Table 2.48, there were metropolitan-rural differences in the proportion of workers aged 18 years and over who described their work-based activity as involving mainly sitting or standing, mainly walking or mostly heavy labour or physically demanding work. The proportion of persons who reported mainly sitting or standing when at work was highest in Yarra (84.7 per cent) and lowest in Moyne (36.5 per cent), where 29.9 per cent of employed persons also reported that their work involved mostly heavy labour or physically demanding activity. The proportion of employed persons who did mainly physically demanding labour when at work was highest in the Northern Grampians (30.8 per cent).

Table 2.49: Occupational physical activity<sup>(a)</sup>, by LGA, 2008

LGA	Mostly sitting or standing			Mostly walking			Mostly heavy labour or physically demanding work		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	46.3	38.8	54.0	24.7	18.3	32.4	23.8	17.2	32.0
Ararat (RC)	51.0	42.2	59.8	30.1	22.4	39.1	14.1	9.0	21.4
Ballarat (C)	63.2	56.8	69.2	22.2	17.0	28.5	13.8	9.7	19.3
Banyule (C)	70.3	63.1	76.6	15.8	10.9	22.4	12.9	9.0	18.2
Bass Coast (S)	51.2	43.5	58.8	19.6	13.4	27.9	28.8	20.5	38.8
Baw Baw (S)	54.4	47.8	60.8	27.2	22.0	33.2	17.5	12.4	24.0
Bayside (C)	81.4	75.0	86.5	12.5	8.3	18.5	4.6*	2.4	8.5
Benalla (RC)	54.6	47.3	61.7	26.6	20.5	33.9	18.3	13.3	24.8
Boroondara (C)	78.5	72.2	83.7	13.7	9.5	19.3	6.9*	3.8	12.3
Brimbank (C)	65.0	58.5	71.0	19.8	15.1	25.5	13.8	9.7	19.4
Buloke (S)	48.5	42.0	55.0	24.9	18.5	32.7	24.3	19.2	30.3
Campaspe (S)	48.6	41.2	56.0	32.5	26.2	39.5	18.1	12.9	24.9
Cardinia (S)	58.6	51.4	65.6	20.3	15.5	26.0	16.8	11.6	23.8
Casey (C)	54.9	49.0	60.7	18.4	14.5	23.1	24.9	19.7	31.0
Central Goldfields (S)	52.1	44.2	60.0	19.8	14.4	26.5	25.6	19.0	33.6
Colac-Otway (S)	56.3	49.4	63.0	15.1	10.8	20.8	24.8	19.4	31.1
Corangamite (S)	38.6	31.8	45.8	30.4	23.2	38.7	29.2	22.1	37.4
Darebin (C)	71.2	64.0	77.5	20.4	15.1	26.9	6.4*	3.8	10.8
East Gippsland (S)	50.8	44.2	57.3	31.9	26.9	37.3	15.6	11.1	21.5
Frankston (C)	59.0	51.6	66.0	22.6	17.1	29.2	16.8	12.0	23.0
Gannawarra (S)	42.8	36.4	49.5	26.3	20.3	33.2	28.9	23.5	35.0
Glen Eira (C)	65.1	58.5	71.1	18.3	13.8	24.0	11.9	7.6	18.3
Glenelg (S)	39.8	33.3	46.8	22.3	16.9	28.8	29.0	22.5	36.6
Golden Plains (S)	48.5	41.1	56.0	29.4	23.4	36.3	19.2	13.3	26.9
Greater Bendigo (C)	58.1	50.9	65.1	23.7	18.3	30.2	15.0	10.1	21.9
Greater Dandenong (C)	62.7	56.0	68.9	20.7	15.8	26.8	14.5	10.2	20.2
Greater Geelong (C)	63.1	55.8	69.9	18.9	14.3	24.6	16.9	11.8	23.7
Greater Shepparton (C)	62.5	56.3	68.2	22.8	17.7	28.9	14.2	10.1	19.5
Hepburn (S)	60.5	51.2	69.1	18.8	13.5	25.5	19.7	13.0	28.7
Hindmarsh (S)	51.3	43.3	59.2	18.8	13.8	25.1	24.7	18.2	32.6
Hobsons Bay (C)	57.7	51.3	63.8	25.9	20.1	32.7	12.2	7.8	18.8
Horsham (RC)	57.7	50.4	64.6	20.1	15.0	26.4	20.2	14.4	27.6
Hume (C)	56.7	49.8	63.3	29.3	23.3	36.2	13.4	9.2	19.1
Indigo (S)	59.2	51.1	66.7	19.6	14.8	25.5	18.5	12.7	26.2
Kingston (C)	62.3	55.8	68.3	24.4	18.7	31.3	12.8	9.4	17.2
Knox (C)	62.2	55.6	68.3	25.0	20.0	30.8	11.0	7.3	16.1
Latrobe (C)	55.9	49.2	62.5	20.8	16.0	26.5	22.3	17.0	28.6
Loddon (S)	45.5	38.1	53.2	17.9	12.6	24.9	27.4	20.8	35.2
Macedon Ranges (S)	56.7	48.3	64.8	29.9	23.6	37.1	12.8	8.1	19.5
Manningham (C)	67.6	60.2	74.1	19.9	14.4	26.7	10.2	6.2	16.3

(a) Includes only those persons who reported that they were currently employed.

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

95% CI = 95 per cent confidence interval.

LGA = local government area.

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.

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

Table 2.49: Occupational physical activity<sup>(a)</sup>, by LGA, 2008 (continued)

LGA	Mostly sitting or standing			Mostly walking			Mostly heavy labour or physically demanding work		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	41.4	33.2	50.1	37.8	29.2	47.1	17.9	12.9	24.3
Maribyrnong (C)	72.5	66.8	77.6	13.9	10.4	18.4	11.5	7.8	16.7
Maroondah (C)	63.5	55.8	70.5	18.6	13.3	25.2	16.8	12.1	22.9
Melbourne (C)	84.1	78.7	88.4	13.3	9.3	18.6	2.1*	1.0	4.4
Melton (S)	64.5	57.7	70.8	22.7	17.2	29.3	11.2	7.7	16.2
Mildura (RC)	56.1	48.1	63.8	20.4	15.2	26.9	18.7	13.6	25.1
Mitchell (S)	53.3	47.0	59.5	23.0	18.0	28.9	20.6	15.9	26.3
Moira (S)	45.0	37.0	53.2	24.2	17.8	32.1	28.9	21.2	38.1
Monash (C)	73.0	66.4	78.7	15.9	11.6	21.4	8.9	5.5	14.0
Moonee Valley (C)	76.6	71.4	81.2	13.1	9.3	17.9	8.6	6.2	11.8
Moorabool (S)	57.6	50.8	64.2	17.1	12.7	22.6	23.2	18.1	29.1
Moreland (C)	73.3	67.5	78.3	19.0	14.6	24.2	5.5*	3.3	8.8
Mornington Peninsula (S)	55.4	47.3	63.1	19.1	14.4	25.0	24.2	17.6	32.3
Mount Alexander (S)	49.0	41.0	56.9	34.3	27.1	42.2	12.0	7.8	18.0
Moyne (S)	36.5	29.9	43.7	28.0	21.6	35.5	29.9	23.7	37.1
Murrindindi (S)	41.2	35.1	47.6	26.9	19.8	35.4	28.3	20.8	37.3
Nillumbik (S)	63.3	56.1	69.9	22.3	16.7	29.2	11.5	7.2	18.0
Northern Grampians (S)	47.6	39.8	55.6	18.8	14.0	24.7	30.8	23.4	39.4
Port Phillip (C)	79.9	74.6	84.3	14.4	10.4	19.6	4.7*	2.9	7.6
Pyrenees (S)	39.3	32.5	46.7	27.7	20.2	36.5	30.1	21.8	39.9
Queenscliffe (B)	69.6	60.4	77.5	21.1	15.1	28.6	8.4	4.1	16.5
Southern Grampians (S)	45.0	37.4	52.8	26.8	20.6	34.1	26.6	20.4	33.9
South Gippsland (S)	47.9	40.6	55.3	26.2	21.5	31.5	24.6	18.1	32.5
Stonnington (C)	79.9	74.0	84.6	11.6	7.8	17.0	6.7*	3.7	12.0
Strathbogie (S)	45.1	36.8	53.6	23.3	17.2	30.8	25.8	19.4	33.5
Surf Coast (S)	52.0	43.8	60.1	30.5	24.4	37.3	15.7	10.2	23.3
Swan Hill (RC)	49.4	41.8	57.0	25.9	20.2	32.5	20.0	14.8	26.4
Towong (S)	45.4	37.5	53.6	22.1	17.0	28.3	29.9	22.1	39.0
Wangaratta (RC)	55.9	48.3	63.3	28.9	22.7	36.1	12.0	7.6	18.6
Warrnambool (C)	52.8	45.4	60.0	33.2	26.8	40.2	13.5	9.5	18.8
Wellington (S)	50.8	44.1	57.5	21.3	15.8	28.0	23.8	18.4	30.2
West Wimmera (S)	41.5	34.8	48.5	25.0	19.4	31.6	27.0	20.8	34.1
Whitehorse (C)	72.4	64.7	78.9	17.4	12.2	24.1	10.1*	5.9	16.9
Whittlesea (C)	60.6	54.5	66.4	27.6	22.4	33.5	9.3	6.1	13.9
Wodonga (RC)	61.5	54.6	67.9	23.3	18.5	28.8	14.2	9.5	20.6
Wyndham (C)	58.6	52.7	64.3	24.0	18.9	30.1	15.1	10.9	20.4
Yarra (C)	84.7	79.5	88.8	10.9	7.3	15.9	3.4	2.0	5.9
Yarra Ranges (S)	63.9	57.4	69.9	18.0	13.7	23.3	16.0	11.6	21.7
Yarriambiack (S)	54.0	44.4	63.3	16.7	12.6	21.8	24.7	17.0	34.5
<b>Total</b>	<b>64.2</b>	<b>62.6</b>	<b>65.7</b>	<b>20.5</b>	<b>19.2</b>	<b>21.8</b>	<b>13.3</b>	<b>12.4</b>	<b>14.2</b>

Figure 2.27: Mostly sitting or standing work activity<sup>(a)</sup>, by LGA, 2008

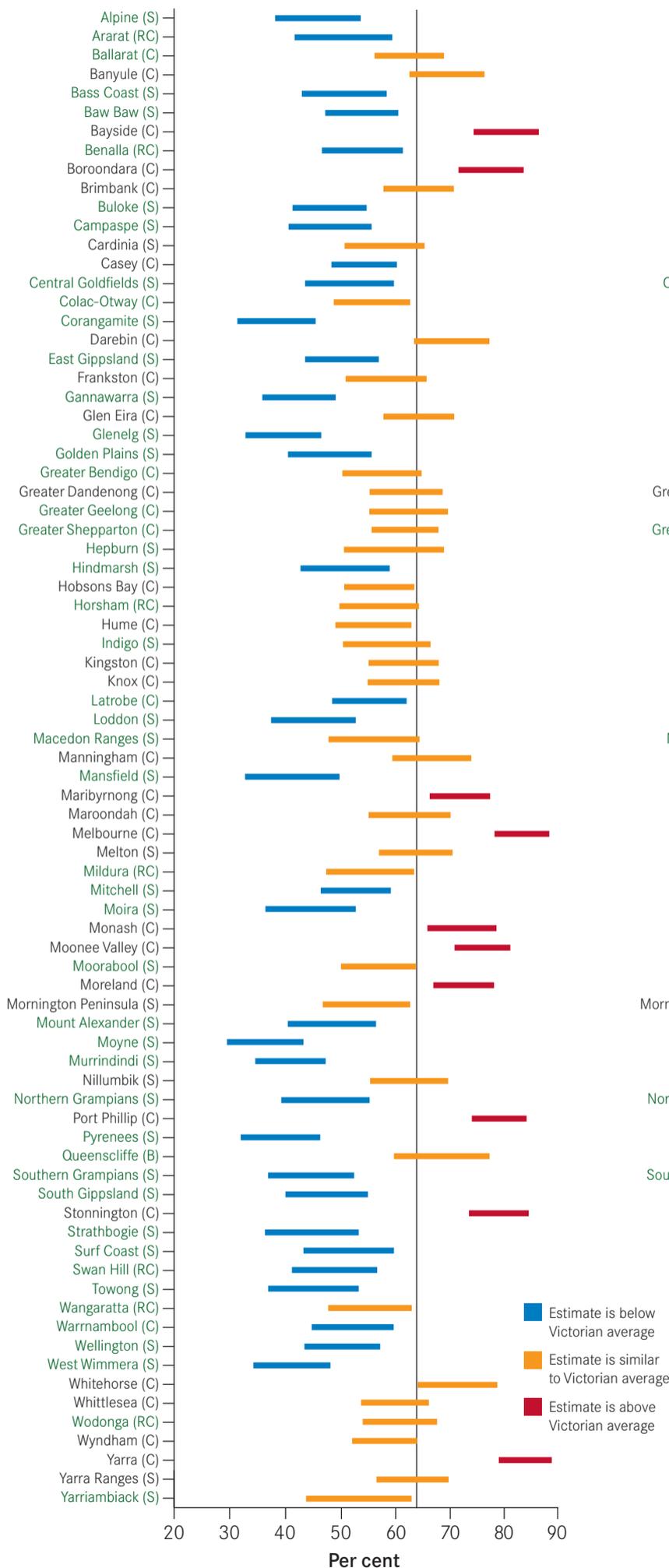
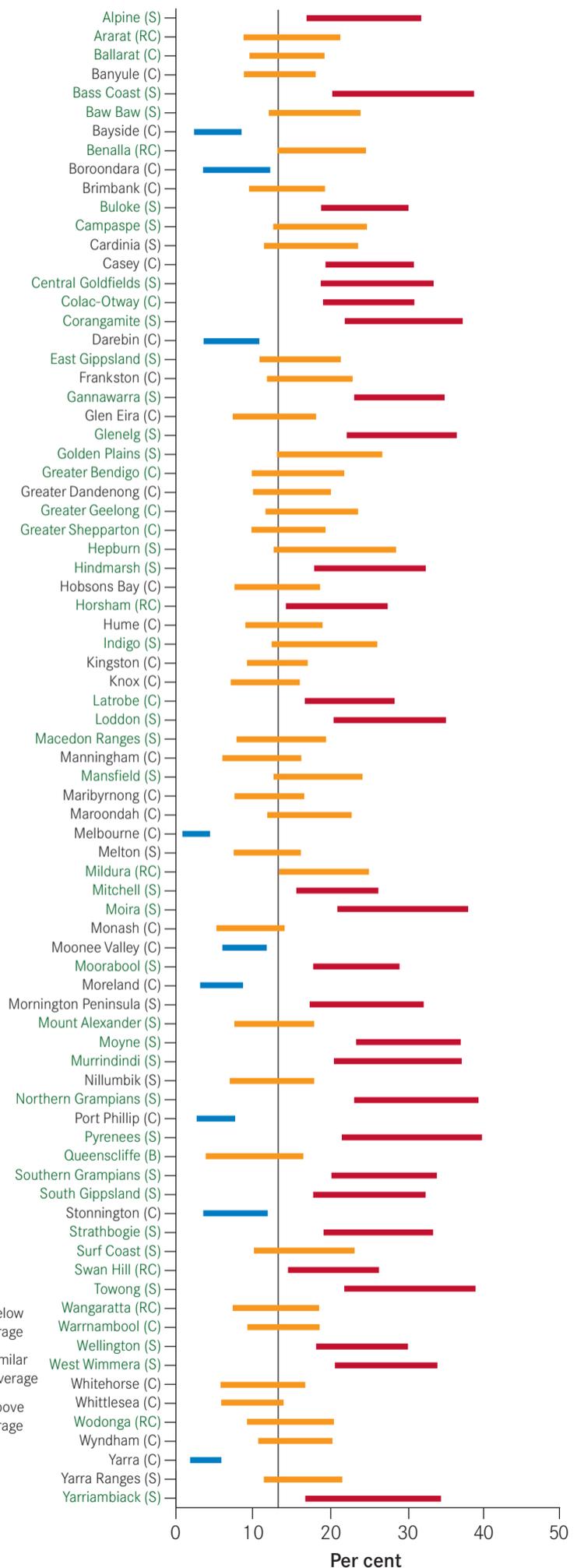


Figure 2.28: Mostly heavy labour or physically demanding work activity<sup>(a)</sup>, by LGA, 2008



(a) Includes only those persons who reported that they were currently employed.

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 line on the graph is the Victorian estimate, it does not show the 95% CI. See relevant table for 95% CI for Victoria (Total).

## Eye health

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

In 2008, survey respondents were asked a series of questions about eye health including whether respondents had ever seen an eye specialist, the timing of their last visit, whether they had been diagnosed with a specific eye condition and whether they usually wore a hat or sunglasses when out in the sun.

### Sun protective behaviour

Damage to the eye can occur from exposure to high levels of ultra violet (UV) radiation. Therefore, the risk of eye injury can be reduced by protecting the eyes or face when out in the sun. Table 2.50 shows the proportion of persons who reported wearing a hat or sunglasses when going out in the sun, by age group and sex. Almost three quarters (74.0 per cent) of all persons reported usually wearing sunglasses, and more than half (52.6 per cent) reported usually wearing a hat, when out in the sun.

There were differences between males and females with respect to the sun protective behaviours that can help prevent damage to eyes. Females were more likely than males to report wearing sunglasses (79.7 per cent and 68.0 per cent respectively) and males were more likely than females to report wearing a hat (62.5 per cent and 43.2 per cent respectively). These differences between males and females were observed across different age groups. For example, among those aged 18–24 years, 73.8 per cent of females and 59.0 per cent of males reported that they usually wear sunglasses when out in the sun. Similarly, 75.1 per cent of females and 58.3 per cent of males aged 65 years and over reported that they usually wear sunglasses when out in the sun.

There were also differences in the proportion of persons who reported wearing a hat by age group, with younger persons less likely to report wearing a hat than older persons. Almost a third (31.5 per cent) of persons aged 18–24 years reported wearing a hat when out in the sun, compared with almost two thirds (64.9 per cent) of older persons aged 65 years and over.

**Table 2.50: Sun protective behaviours, by age group and sex, 2008**

Age group (years)	Sun protective behaviour					
	Usually wear a hat			Usually wear sunglasses		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
18–24 years	40.9	36.2	45.7	59.0	54.2	63.6
25–34 years	47.2	43.3	51.2	69.9	66.1	73.4
35–44 years	64.4	61.4	67.3	74.4	71.6	76.9
45–54 years	67.8	65.1	70.4	73.7	71.1	76.1
55–64 years	72.2	69.7	74.6	69.2	66.7	71.5
65+	79.6	77.6	81.4	58.3	56.1	60.6
<b>Total</b>	<b>62.5</b>	<b>61.2</b>	<b>63.8</b>	<b>68.0</b>	<b>66.7</b>	<b>69.2</b>
<b>Females</b>						
18–24 years	21.7	18.2	25.8	73.8	69.6	77.6
25–34 years	36.3	33.6	39.1	81.3	79.0	83.5
35–44 years	45.6	43.5	47.7	84.2	82.6	85.7
45–54 years	47.2	44.9	49.4	82.8	81.1	84.4
55–64 years	52.2	50.0	54.3	79.3	77.5	81.0
65+	53.0	51.1	54.9	75.1	73.3	76.7
<b>Total</b>	<b>43.2</b>	<b>42.2</b>	<b>44.2</b>	<b>79.7</b>	<b>78.8</b>	<b>80.6</b>
<b>Persons</b>						
18–24 years	31.5	28.4	34.7	66.2	63.0	69.3
25–34 years	41.8	39.4	44.2	75.6	73.4	77.7
35–44 years	54.9	53.1	56.7	79.3	77.8	80.8
45–54 years	57.4	55.6	59.2	78.3	76.8	79.8
55–64 years	62.1	60.4	63.7	74.3	72.8	75.8
65+	64.9	63.5	66.3	67.6	66.2	68.9
<b>Total</b>	<b>52.6</b>	<b>51.7</b>	<b>53.4</b>	<b>74.0</b>	<b>73.2</b>	<b>74.8</b>

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 2.51 shows the proportion of persons aged 18 years and over who reported wearing a hat or sunglasses when going out in the sun, by Department of Health region and sex. The proportion of persons reporting that they usually wear a hat when out in the sun was higher for persons living in rural (59.5 per cent) areas of the state, compared with the metropolitan area (50.2 per cent). In all rural areas (except Barwon–South Western), the proportion of persons who usually wore a hat was higher than the average for Victoria. More than seven in 10 males (70.7 per cent) and almost half (48.9 per cent) of all females from rural areas usually wore a hat, compared with 59.8 per cent of males and 41.2 per cent of females from the metropolitan area.

There was also a metropolitan-rural difference in the propensity to wear sunglasses. More than seven in 10 (73.5 per cent) persons living in the metropolitan area usually wore sunglasses when out in the sun, compared with more than three quarters (76.1 per cent) of persons living in rural areas. Among those living in rural areas, 80.4 per cent of females and 71.6 per cent of males reported that they usually wear sunglasses when out in the sun. In the metropolitan area, more than two thirds of males (67.0 per cent) and almost eight in 10 (79.5 per cent) females reported they usually wear sunglasses.

Table 2.51: Sun protective behaviours, by Department of Health region and sex, 2008

Region	Usually wear a hat			Usually wear sunglasses		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
Barwon-South Western	67.5	61.3	73.1	78.2	74.6	81.4
Eastern Metropolitan	61.8	58.4	65.2	69.2	65.9	72.3
Gippsland	69.4	65.0	73.4	67.7	63.6	71.6
Grampians	74.0	69.8	77.7	67.0	62.7	71.0
Hume	74.3	70.8	77.5	68.8	65.3	72.1
Loddon Mallee	69.8	65.4	73.9	72.3	68.8	75.6
North and West Metropolitan	60.0	57.7	62.2	63.6	61.3	65.9
Southern Metropolitan	57.8	54.9	60.6	69.4	66.6	72.1
<b>Metropolitan</b>	<b>59.8</b>	<b>58.2</b>	<b>61.4</b>	<b>67.0</b>	<b>65.4</b>	<b>68.5</b>
<b>Rural</b>	<b>70.7</b>	<b>68.3</b>	<b>72.9</b>	<b>71.6</b>	<b>69.8</b>	<b>73.3</b>
<b>Total</b>	<b>62.5</b>	<b>61.2</b>	<b>63.8</b>	<b>68.0</b>	<b>66.7</b>	<b>69.2</b>
<b>Females</b>						
Barwon-South Western	46.8	42.1	51.6	82.4	78.7	85.6
Eastern Metropolitan	41.8	39.2	44.5	81.3	78.9	83.4
Gippsland	48.2	45.2	51.2	79.6	76.8	82.2
Grampians	47.7	44.1	51.3	79.0	75.4	82.2
Hume	52.8	50.1	55.6	81.2	79.2	83.1
Loddon Mallee	49.9	46.8	53.0	79.5	76.7	81.9
North and West Metropolitan	39.5	37.8	41.3	77.3	75.7	78.9
Southern Metropolitan	42.6	40.3	44.9	80.6	78.5	82.5
<b>Metropolitan</b>	<b>41.2</b>	<b>40.0</b>	<b>42.4</b>	<b>79.5</b>	<b>78.5</b>	<b>80.6</b>
<b>Rural</b>	<b>48.9</b>	<b>47.2</b>	<b>50.6</b>	<b>80.4</b>	<b>79.0</b>	<b>81.8</b>
<b>Total</b>	<b>43.2</b>	<b>42.2</b>	<b>44.2</b>	<b>79.7</b>	<b>78.8</b>	<b>80.6</b>
<b>Persons</b>						
Barwon-South Western	56.6	52.7	60.5	80.4	77.8	82.8
Eastern Metropolitan	51.4	49.2	53.6	75.4	73.3	77.3
Gippsland	58.5	55.8	61.1	73.4	70.8	75.9
Grampians	60.6	57.7	63.4	73.1	70.3	75.7
Hume	63.4	61.1	65.6	74.9	72.8	77.0
Loddon Mallee	59.7	57.0	62.3	76.0	73.8	78.1
North and West Metropolitan	49.4	47.9	50.9	70.7	69.2	72.1
Southern Metropolitan	50.0	48.1	51.8	75.2	73.5	76.9
<b>Metropolitan</b>	<b>50.2</b>	<b>49.2</b>	<b>51.2</b>	<b>73.5</b>	<b>72.5</b>	<b>74.4</b>
<b>Rural</b>	<b>59.5</b>	<b>58.1</b>	<b>61.0</b>	<b>76.1</b>	<b>74.9</b>	<b>77.2</b>
<b>Total</b>	<b>52.6</b>	<b>51.7</b>	<b>53.4</b>	<b>74.0</b>	<b>73.2</b>	<b>74.8</b>

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 2.52 shows whether survey respondents reported wearing either a hat or sunglasses when out in the sun, by LGA. There were three LGAs, all in the metropolitan area, where the proportion of persons who did not wear either a hat or sunglasses was higher than the average for Victoria (14.1 per cent): Brimbank (22.6 per cent), Greater Dandenong (22.5 per cent) and Melbourne (22.4 per cent).

More than four in 10 persons (41.0 per cent) usually wore both a hat and sunglasses. There were seven LGAs (all metropolitan) where the proportion of persons aged 18 years and over who wore both a hat and sunglasses when out in the sun was lower than the average for Victoria. There were 22 rural LGAs and one metropolitan LGA where the proportion of persons aged 18 years and over who wore both a hat and sunglasses when out in the sun was higher than the average for Victoria.

Figures 2.30 and 2.31 show the proportion of persons who reported usually wearing a hat and usually wearing sunglasses when out in the sun.

Table 2.52: Sun protective behaviours, by LGA, 2008

LGA	Sun protective behaviour											
	Usually wear a hat			Usually wear sunglasses			Usually wear both a hat and sunglasses			Wear neither a hat nor sunglasses		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	71.2	65.2	76.6	76.7	70.5	81.9	56.9	50.3	63.2	8.9	5.6	13.8
Ararat (RC)	68.3	61.1	74.8	71.3	64.9	77.0	50.2	43.3	57.1	10.4	6.4	16.4
Ballarat (C)	59.7	54.1	65.1	74.5	69.1	79.3	46.3	40.9	51.9	12.0	8.4	16.9
Banyule (C)	44.6	39.1	50.3	74.9	69.6	79.5	35.0	29.6	40.8	15.3	11.5	20.1
Bass Coast (S)	58.5	50.8	65.9	76.8	69.4	82.8	49.0	41.5	56.6	13.5	8.4	21.1
Baw Baw (S)	62.2	55.6	68.4	73.4	67.5	78.5	45.3	39.2	51.6	9.7	6.0	15.2
Bayside (C)	55.0	49.0	60.8	82.9	78.0	87.0	46.2	40.5	52.1	7.7	5.2	11.3
Benalla (RC)	60.9	54.4	67.0	74.2	68.5	79.2	49.5	43.2	55.8	14.2	10.0	19.8
Boroondara (C)	48.2	42.9	53.6	77.1	71.7	81.7	38.8	33.7	44.2	13.5	9.8	18.2
Brimbank (C)	45.4	40.6	50.2	66.2	61.1	71.0	34.7	30.2	39.5	22.6	18.4	27.5
Buloke (S)	68.9	61.7	75.2	82.1	77.7	85.8	58.6	51.5	65.4	7.6	5.0	11.5
Campaspe (S)	61.7	56.0	67.0	76.7	71.6	81.2	48.2	42.5	53.9	9.8	6.8	14.0
Cardinia (S)	51.4	46.0	56.8	66.7	61.0	72.0	37.8	32.8	43.1	19.3	14.6	25.1
Casey (C)	44.4	39.5	49.5	72.6	67.4	77.3	35.1	30.6	40.0	17.6	13.6	22.4
Central Goldfields (S)	64.2	57.7	70.3	72.6	65.4	78.7	47.7	40.7	54.7	10.5	7.2	15.0
Colac-Otway (S)	56.9	50.1	63.5	72.4	66.5	77.7	44.3	37.6	51.3	14.9	10.7	20.3
Corangamite (S)	60.7	54.9	66.2	68.2	61.1	74.6	42.5	37.0	48.2	13.4	8.8	19.9
Darebin (C)	55.0	49.5	60.4	70.0	64.7	74.8	39.6	34.4	45.1	14.5	11.2	18.5
East Gippsland (S)	60.1	53.6	66.3	68.8	62.1	74.8	44.3	38.8	50.0	15.1	10.0	22.2
Frankston (C)	52.5	47.1	57.8	76.8	71.9	81.1	42.1	36.8	47.6	12.8	9.4	17.2
Gannawarra (S)	67.7	61.8	73.1	76.4	70.3	81.5	55.4	49.4	61.3	11.1	7.3	16.6
Glen Eira (C)	52.3	47.0	57.6	74.0	68.8	78.6	39.8	35.0	44.8	13.1	9.7	17.6
Glenelg (S)	65.1	59.3	70.4	77.8	73.1	81.9	51.2	45.3	57.2	8.1	5.8	11.2
Golden Plains (S)	60.1	54.4	65.7	70.2	64.5	75.4	43.1	37.6	48.9	12.5	8.8	17.5
Greater Bendigo (C)	52.5	46.7	58.3	78.2	73.9	81.9	43.1	37.4	49.0	12.3	9.2	16.2
Greater Dandenong (C)	45.0	39.9	50.3	66.7	61.3	71.7	34.5	29.5	39.9	22.5	18.2	27.4
Greater Geelong (C)	54.7	48.6	60.7	83.5	79.4	87.0	47.9	41.9	54.0	9.6	6.9	13.3
Greater Shepparton (C)	58.1	52.1	63.9	73.3	67.1	78.7	44.4	39.1	49.8	12.9	9.0	18.4
Hepburn (S)	62.5	57.1	67.7	69.1	63.2	74.4	43.1	37.3	49.1	11.3	8.4	14.9
Hindmarsh (S)	59.0	52.7	65.1	72.9	66.8	78.2	45.6	39.4	51.9	13.3	9.2	18.8
Hobsons Bay (C)	56.6	50.9	62.2	68.6	62.9	73.8	40.4	35.2	45.9	15.0	11.2	19.9
Horsham (RC)	56.9	50.9	62.7	77.8	72.6	82.2	45.6	40.0	51.4	10.8	8.1	14.2
Hume (C)	47.9	42.6	53.3	71.9	66.8	76.6	36.5	31.2	42.1	16.6	12.9	21.1
Indigo (S)	69.9	62.8	76.1	81.2	77.2	84.7	58.3	51.3	65.1	7.0	4.7	10.4
Kingston (C)	53.7	47.5	59.8	80.8	75.7	85.0	45.5	39.8	51.4	10.7	7.7	14.6
Knox (C)	54.0	48.3	59.5	73.7	68.4	78.4	41.7	36.1	47.5	13.8	10.3	18.2
Latrobe (C)	53.0	47.5	58.4	77.5	72.5	81.8	44.0	38.4	49.7	13.4	10.1	17.6
Loddon (S)	69.4	63.0	75.1	68.5	62.6	73.9	47.6	41.3	54.0	8.1	5.6	11.6
Macedon Ranges (S)	63.9	57.6	69.7	74.8	68.7	80.1	48.3	41.7	54.9	9.6	6.6	13.7
Manningham (C)	45.5	40.2	50.8	76.8	71.3	81.5	36.9	31.9	42.2	14.4	10.6	19.4

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 to the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

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

Table 2.52: Sun protective behaviours, by LGA, 2008 (continued)

LGA	Sun protective behaviour											
	Usually wear a hat			Usually wear sunglasses			Usually wear both a hat and sunglasses			Wear neither a hat nor sunglasses		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	67.4	59.6	74.4	78.6	74.6	82.2	53.7	46.3	60.9	7.6	4.8	11.9
Maribyrnong (C)	49.8	44.3	55.2	68.6	63.0	73.6	35.6	30.6	40.9	17.2	13.3	21.9
Maroondah (C)	53.5	47.9	59.1	78.6	73.7	82.8	44.5	39.1	50.1	11.9	8.7	16.1
Melbourne (C)	43.0	38.1	48.1	66.8	61.6	71.6	32.2	27.6	37.2	22.4	18.6	26.7
Melton (S)	45.9	40.5	51.3	72.9	67.3	77.8	34.3	29.6	39.3	15.4	11.7	20.0
Mildura (RC)	61.0	55.3	66.4	76.6	71.5	81.1	48.4	42.8	54.2	10.6	7.5	14.8
Mitchell (S)	61.8	56.3	67.1	72.1	67.1	76.7	44.3	39.1	49.7	10.3	7.5	14.1
Moira (S)	66.7	60.0	72.8	74.5	68.2	80.0	50.8	44.2	57.3	9.5	6.0	14.8
Monash (C)	49.4	43.7	55.1	74.6	69.2	79.2	37.8	32.5	43.3	13.3	9.6	18.2
Moonee Valley (C)	52.3	47.0	57.6	72.0	66.3	77.1	37.9	32.9	43.2	12.7	9.4	16.9
Moorabool (S)	58.4	52.5	64.1	75.4	69.9	80.1	45.8	39.9	51.8	11.5	8.2	15.9
Moreland (C)	47.9	43.0	52.8	69.3	64.2	73.9	33.8	29.4	38.6	16.6	13.0	20.9
Mornington Peninsula (S)	58.3	51.9	64.5	77.8	71.6	82.9	49.7	43.4	56.1	13.5	9.3	19.2
Mount Alexander (S)	67.8	61.6	73.5	71.6	65.6	76.9	49.4	43.0	55.9	9.6	6.6	13.7
Moyne (S)	57.6	51.5	63.6	75.5	69.0	81.0	44.9	38.9	51.1	11.5	7.5	17.3
Murrindindi (S)	67.5	60.3	74.0	70.2	62.9	76.7	49.6	44.2	55.0	11.7	7.4	18.0
Nillumbik (S)	54.5	49.1	59.7	71.6	65.8	76.6	39.4	34.6	44.5	12.8	9.0	17.8
Northern Grampians (S)	57.6	50.7	64.2	70.4	63.6	76.4	40.1	34.6	46.0	12.2	8.8	16.6
Port Phillip (C)	41.2	36.2	46.5	73.2	68.1	77.7	33.4	28.6	38.5	18.2	14.1	23.1
Pyrenees (S)	72.9	66.1	78.8	75.0	68.9	80.3	59.3	52.5	65.8	11.3	7.1	17.5
Queenscliffe (B)	67.1	60.1	73.5	85.5	79.6	89.9	56.5	49.5	63.3	3.8*	2.2	6.4
Southern Grampians (S)	67.0	60.5	72.8	77.9	73.2	81.9	50.9	44.4	57.3	5.8	4.0	8.4
South Gippsland (S)	65.3	59.4	70.8	68.9	62.8	74.4	45.7	39.6	52.0	11.3	8.0	15.7
Stonnington (C)	48.8	43.5	54.2	78.0	73.5	82.0	40.9	35.7	46.3	13.9	10.8	17.8
Strathbogie (S)	70.1	63.2	76.2	71.7	65.0	77.6	50.4	43.6	57.2	8.1	5.0	12.8
Surf Coast (S)	63.0	56.4	69.2	76.4	68.9	82.5	48.9	42.0	55.8	8.8	5.4	14.0
Swan Hill (RC)	63.8	58.4	68.8	72.1	65.5	77.9	47.4	41.7	53.1	11.5	7.3	17.5
Towong (S)	70.4	63.3	76.7	73.3	66.5	79.1	52.0	46.0	58.0	8.3	5.6	12.1
Wangaratta (RC)	65.7	59.0	71.8	75.8	69.4	81.3	52.0	45.3	58.6	10.1	6.2	15.9
Warrnambool (C)	49.9	44.1	55.8	78.3	73.2	82.8	41.0	35.5	46.8	12.7	9.0	17.7
Wellington (S)	56.8	51.5	62.0	70.7	64.5	76.2	44.5	39.3	49.8	16.7	12.5	22.0
West Wimmera (S)	67.7	61.6	73.2	68.0	62.0	73.5	49.1	43.2	55.1	13.4	9.8	18.0
Whitehorse (C)	56.9	50.9	62.8	74.0	68.1	79.1	43.2	37.4	49.2	11.4	7.9	16.1
Whittlesea (C)	52.6	47.5	57.7	73.8	68.8	78.2	41.7	36.8	46.8	15.2	11.6	19.6
Wodonga (RC)	58.9	53.4	64.2	79.8	74.9	83.9	46.2	40.9	51.6	7.4	5.1	10.6
Wyndham (C)	51.9	47.0	56.7	75.7	71.2	79.8	41.5	37.0	46.2	13.8	10.6	17.8
Yarra (C)	48.9	43.6	54.1	71.7	66.6	76.3	37.0	32.1	42.2	16.4	12.8	20.9
Yarra Ranges (S)	50.7	45.9	55.4	75.9	71.3	79.9	40.9	36.2	45.8	13.3	10.2	17.1
Yarriambiack (S)	63.6	57.1	69.7	73.2	67.6	78.2	48.0	41.5	54.5	10.9	7.3	15.8
<b>Total</b>	<b>52.6</b>	<b>51.7</b>	<b>53.4</b>	<b>74.0</b>	<b>73.2</b>	<b>74.8</b>	<b>41.0</b>	<b>40.2</b>	<b>41.8</b>	<b>14.1</b>	<b>13.5</b>	<b>14.8</b>

Figure 2.30: Usually wear a hat when going out in the sun, by LGA, 2008

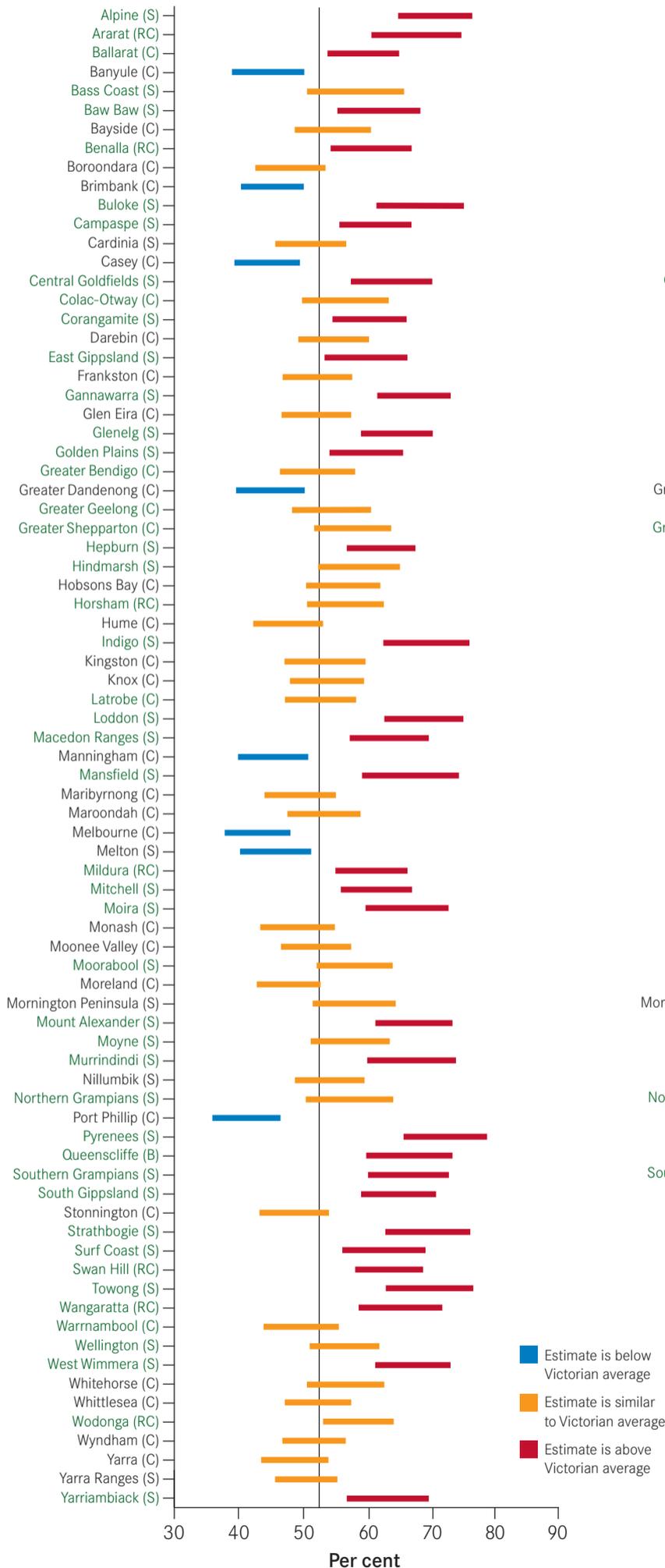
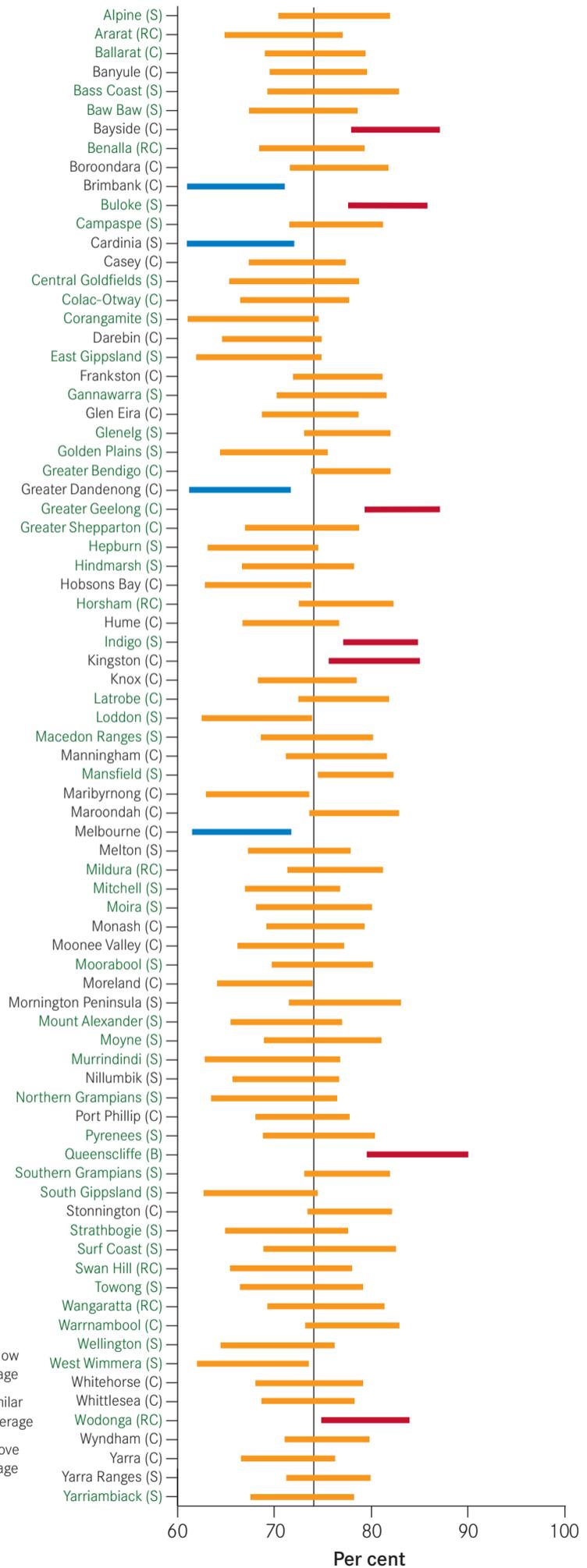


Figure 2.31: Usually wear sunglasses when going out in the sun, by LGA, 2008



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 line on the graph is the Victorian estimate, it does not show the 95% CI. See relevant table for 95% CI for Victoria (Total).

## Change in vision

In addition to protecting the face and eyes from exposure to UV radiation by wearing a hat and sunglasses, it is recommended that individuals who are at risk of specific eye conditions should have regular eye examinations to detect problems and allow for treatment at an early stage (DoHA 2010a). Individuals who have noticed a recent change in their vision are also advised to see a health professional or visit their eye specialist.

Table 2.53 shows that more than four in ten (41.0 per cent) persons had noticed a change in their vision in the past 12 months. Females (43.6 per cent) were more likely than males (38.5 per cent) to report having noticed a change, and persons aged 45–54 years (68.0 per cent) were more likely to report having noticed a change in their vision than persons in any other age group.

**Table 2.53: Noticed a change in vision in past 12 months, by sex, 2008**

Age group (years)	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
18–24 years	22.6	18.8	26.9	77.3	72.9	81.1
25–34 years	21.1	18.0	24.4	78.8	75.4	81.8
35–44 years	29.1	26.4	31.9	70.8	67.9	73.4
45–54 years	65.4	62.7	68.1	34.3	31.7	37.0
55–64 years	46.9	44.3	49.6	52.9	50.2	55.5
65+	44.5	42.2	46.8	55.0	52.7	57.3
<b>Total</b>	<b>38.5</b>	<b>37.3</b>	<b>39.7</b>	<b>61.3</b>	<b>60.2</b>	<b>62.8</b>
<b>Females</b>						
18–24 years	27.3	23.6	31.5	72.3	68.2	76.2
25–34 years	27.4	24.9	30.0	72.5	69.8	75.0
35–44 years	35.1	33.1	37.1	64.9	62.8	66.9
45–54 years	70.5	68.4	72.5	29.5	27.4	31.6
55–64 years	50.9	48.7	53.1	48.9	46.7	51.1
65+	48.7	46.8	50.6	51.1	49.1	53.0
<b>Total</b>	<b>43.6</b>	<b>42.6</b>	<b>44.5</b>	<b>56.3</b>	<b>55.0</b>	<b>57.1</b>
<b>Persons</b>						
18–24 years	24.9	22.2	27.9	74.8	71.9	77.6
25–34 years	24.2	22.2	26.3	75.6	73.5	77.6
35–44 years	32.1	30.4	33.8	67.8	66.1	69.5
45–54 years	68.0	66.3	69.7	31.9	30.2	33.6
55–64 years	49.0	47.2	50.7	50.9	49.1	52.6
65+	46.8	45.3	48.3	52.8	51.4	54.3
<b>Total</b>	<b>41.0</b>	<b>40.3</b>	<b>41.8</b>	<b>58.8</b>	<b>57.9</b>	<b>59.6</b>

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Table 2.54 shows that there were no differences between metropolitan and rural areas of the state in the proportion of males, females or persons aged 18 years and over who had noticed a change in vision in the past 12 months.

Table 2.54: Noticed a change in vision in past 12 months, by Department of Health region and sex, 2008

Region	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
Barwon-South Western	35.7	31.4	40.1	64.2	59.7	68.4
Eastern Metropolitan	40.2	37.1	43.5	59.6	56.3	62.7
Gippsland	36.0	32.6	39.5	63.9	60.4	67.3
Grampians	36.8	33.2	40.5	62.8	59.0	66.4
Hume	37.7	35.0	40.5	62.2	59.4	64.9
Loddon Mallee	40.0	36.2	43.8	60.0	56.1	63.7
North and West Metropolitan	38.9	36.7	41.1	60.9	58.7	63.1
Southern Metropolitan	37.4	34.9	40.0	62.3	59.7	64.9
<b>Metropolitan</b>	<b>38.8</b>	<b>37.3</b>	<b>40.3</b>	<b>61.0</b>	<b>59.5</b>	<b>62.5</b>
<b>Rural</b>	<b>37.2</b>	<b>35.4</b>	<b>39.0</b>	<b>62.7</b>	<b>60.9</b>	<b>64.4</b>
<b>Total</b>	<b>38.5</b>	<b>37.3</b>	<b>39.7</b>	<b>61.3</b>	<b>60.1</b>	<b>62.5</b>
<b>Females</b>						
Barwon-South Western	40.5	37.4	43.8	59.4	56.2	62.6
Eastern Metropolitan	43.4	40.8	46.0	56.5	53.9	59.1
Gippsland	45.1	42.0	48.2	54.8	51.8	57.9
Grampians	45.4	41.9	49.1	53.5	49.7	57.3
Hume	43.0	40.4	45.5	56.7	54.1	59.2
Loddon Mallee	44.3	41.3	47.2	55.7	52.7	58.6
North and West Metropolitan	43.8	42.0	45.5	56.1	54.4	57.9
Southern Metropolitan	43.6	41.4	45.8	56.3	54.0	58.5
<b>Metropolitan</b>	<b>43.5</b>	<b>42.2</b>	<b>44.7</b>	<b>56.4</b>	<b>55.2</b>	<b>57.6</b>
<b>Rural</b>	<b>43.4</b>	<b>41.9</b>	<b>44.9</b>	<b>56.3</b>	<b>54.8</b>	<b>57.8</b>
<b>Total</b>	<b>43.6</b>	<b>42.6</b>	<b>44.5</b>	<b>56.3</b>	<b>55.3</b>	<b>57.3</b>
<b>Persons</b>						
Barwon-South Western	38.1	35.4	41.0	61.8	58.9	64.5
Eastern Metropolitan	41.9	39.8	44.0	58.0	55.9	60.0
Gippsland	40.5	38.2	42.9	59.4	57.0	61.7
Grampians	41.2	38.6	43.8	58.1	55.3	60.7
Hume	40.4	38.5	42.3	59.4	57.5	61.3
Loddon Mallee	42.1	39.7	44.6	57.8	55.3	60.2
North and West Metropolitan	41.3	39.9	42.7	58.6	57.1	60.0
Southern Metropolitan	40.4	38.7	42.2	59.4	57.6	61.1
<b>Metropolitan</b>	<b>41.1</b>	<b>40.2</b>	<b>42.1</b>	<b>58.7</b>	<b>57.7</b>	<b>59.6</b>
<b>Rural</b>	<b>40.4</b>	<b>39.2</b>	<b>41.5</b>	<b>59.4</b>	<b>58.2</b>	<b>60.6</b>
<b>Total</b>	<b>41.0</b>	<b>40.3</b>	<b>41.8</b>	<b>58.8</b>	<b>58.0</b>	<b>59.6</b>

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.

Table 2.55 shows the proportion of persons aged 18 years and over who reported having noticed a change in vision in the past 12 months, by age group and LGA. Among persons aged 18–49 years, slightly more than a third (33.6 per cent) reported having noticed a change in their vision in the past 12 months, compared with more than half (52.3 per cent) of persons aged 50 years and over. There was one LGA where the proportion of persons aged 18–49 years who reported a change in vision was higher than the average for Victoria– Central Goldfields (47.2 per cent). The only LGA where a higher than average proportion of persons aged 50 years and over reported noticing a change in vision was Knox, where more than six in 10 persons (61.6 per cent) reported noticing a change in their vision in the past 12 months.

Figure 2.32 shows the proportion of persons aged 50 years and over who had noticed a change in their vision in the past 12 months, by LGA.

Table 2.55: Noticed a change in vision in past 12 months, by LGA and age group, 2008

LGA	Age group								
	18–49 years			50 years and over			Total		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	24.2	18.7	30.7	54.1	47.8	60.2	36.0	31.8	40.5
Ararat (RC)	31.5	23.3	41.0	51.8	45.2	58.3	39.6	33.8	45.7
Ballarat (C)	32.1	25.4	39.6	56.1	49.1	62.8	41.6	36.6	46.8
Banyule (C)	35.3	27.6	43.9	56.8	50.5	62.8	43.8	38.4	49.4
Bass Coast (S)	37.8	26.4	50.6	54.2	47.9	60.5	44.3	36.7	52.2
Baw Baw (S)	27.8	22.3	34.1	49.9	43.6	56.3	36.6	32.3	41.1
Bayside (C)	26.6	20.4	33.8	46.4	39.9	53.0	34.5	29.8	39.4
Benalla (RC)	37.3	29.8	45.5	58.9	52.4	65.1	45.9	40.6	51.3
Boroondara (C)	36.2	29.4	43.7	45.8	39.4	52.4	40.0	35.1	45.2
Brimbank (C)	36.1	29.8	42.9	50.6	43.1	58.2	41.9	37.0	46.9
Buloke (S)	27.0	20.1	35.3	55.1	49.4	60.7	38.2	33.2	43.4
Campaspe (S)	30.4	23.8	38.0	50.7	44.5	56.9	38.5	33.6	43.6
Cardinia (S)	24.0	18.8	29.9	58.5	51.4	65.3	37.7	33.4	42.1
Casey (C)	32.6	26.6	39.2	51.5	44.1	58.7	40.1	35.4	45.0
Central Goldfields (S)	47.2	37.0	57.6	51.1	44.6	57.6	48.8	42.0	55.6
Colac-Otway (S)	34.6	26.2	44.1	54.7	47.7	61.5	42.6	36.6	48.8
Corangamite (S)	27.0	20.3	34.8	54.6	47.8	61.2	37.9	33.0	43.2
Darebin (C)	29.5	23.0	37.0	54.6	47.0	62.0	39.5	34.4	44.8
East Gippsland (S)	27.0	20.4	34.7	53.5	47.5	59.4	37.5	32.7	42.6
Frankston (C)	40.4	32.7	48.5	51.1	44.5	57.6	44.6	39.2	50.1
Gannawarra (S)	28.3	21.9	35.8	52.8	46.8	58.7	38.0	33.3	43.0
Glen Eira (C)	30.3	23.8	37.6	47.2	40.5	54.0	37.0	32.2	42.1
Glenelg (S)	28.7	21.4	37.2	55.0	48.5	61.3	39.1	33.8	44.7
Golden Plains (S)	31.3	24.7	38.6	49.1	42.4	55.8	38.3	33.5	43.5
Greater Bendigo (C)	37.1	29.8	45.0	52.5	46.0	59.0	43.2	38.0	48.6
Greater Dandenong (C)	39.0	31.7	46.7	53.3	45.7	60.7	44.6	39.3	50.1
Greater Geelong (C)	25.1	19.4	31.9	55.9	49.8	61.8	37.3	33.0	41.9
Greater Shepparton (C)	33.1	26.8	40.1	50.3	43.3	57.3	39.9	35.1	44.9
Hepburn (S)	34.8	25.0	46.2	56.1	49.8	62.2	43.3	36.5	50.3
Hindmarsh (S)	24.8	19.2	31.3	47.5	40.9	54.2	33.8	29.4	38.5
Hobsons Bay (C)	33.5	26.4	41.5	54.1	47.0	61.0	41.7	36.5	47.2
Horsham (RC)	29.5	22.3	37.8	53.2	46.7	59.6	38.9	33.7	44.4
Hume (C)	41.6	34.7	48.9	51.2	43.2	59.2	45.4	40.1	50.8
Indigo (S)	35.7	26.3	46.5	51.1	44.8	57.4	41.8	35.4	48.6
Kingston (C)	27.1	21.2	34.1	48.5	41.6	55.4	35.6	31.0	40.5
Knox (C)	35.8	29.0	43.2	61.6	54.9	68.0	46.1	41.1	51.1
Latrobe (C)	35.9	29.2	43.2	55.1	47.1	62.9	43.5	38.3	48.9
Loddon (S)	33.2	25.5	42.0	49.0	42.9	55.2	39.5	34.1	45.2
Macedon Ranges (S)	34.8	26.6	43.9	60.1	53.1	66.7	44.8	39.0	50.8
Manningham (C)	38.0	30.2	46.5	54.9	48.4	61.2	44.7	39.2	50.4

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

95% CI = 95 per cent confidence interval.

LGA = local government area

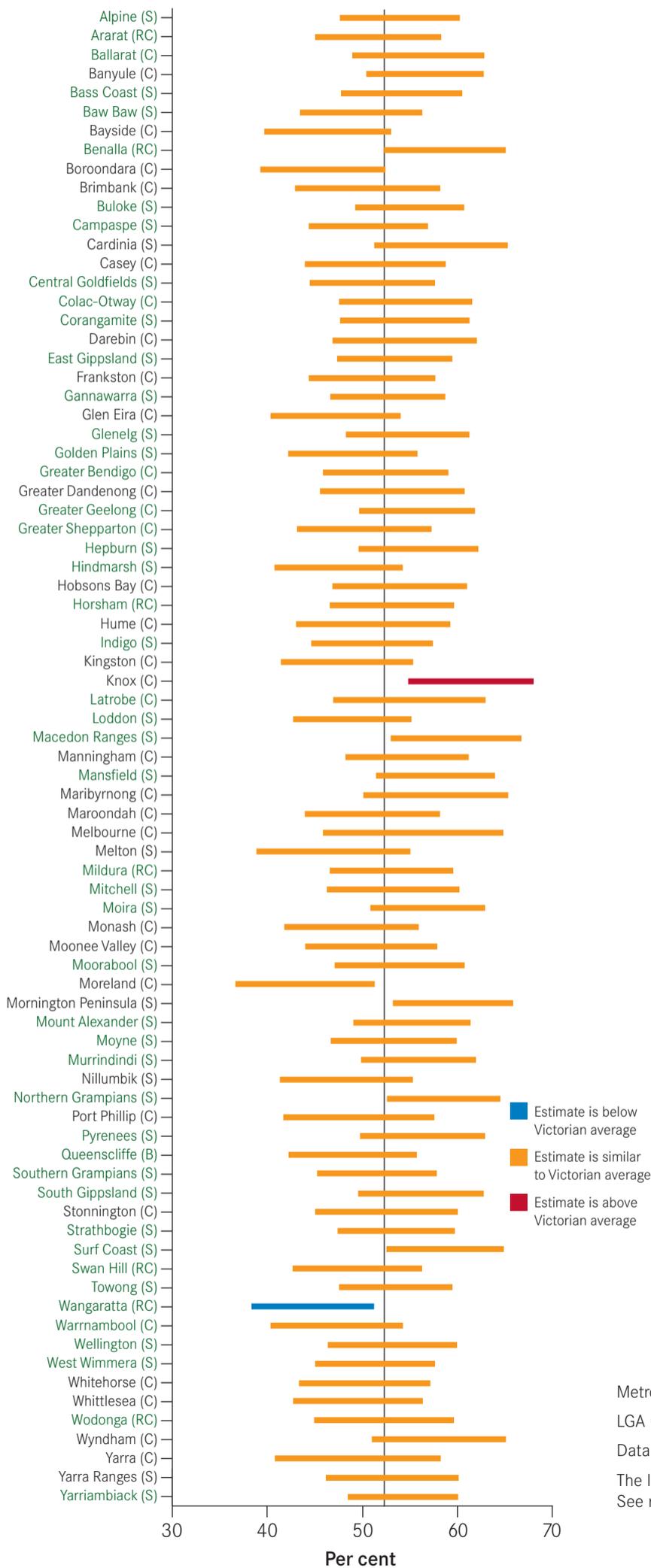
Data are age standardised to the 2006 Victorian population.

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

Table 2.55: Noticed a change in vision in past 12 months, by LGA and age group, 2008 (continued)

LGA	Age group								
	18–49 years			50 years and over			Total		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	45.4	34.1	57.2	57.9	51.6	64.0	50.4	42.9	57.8
Maribyrnong (C)	31.6	25.7	38.3	58.0	50.2	65.4	42.1	37.3	47.0
Maroondah (C)	33.3	26.4	41.0	51.1	44.1	58.1	40.4	35.3	45.7
Melbourne (C)	36.5	31.0	42.3	55.7	46.0	64.9	44.1	39.1	49.3
Melton (S)	27.0	21.8	32.9	47.0	39.0	55.1	34.9	30.4	39.7
Mildura (RC)	37.7	30.0	46.0	53.2	46.7	59.6	43.8	38.4	49.4
Mitchell (S)	33.1	26.3	40.8	53.4	46.4	60.3	41.2	36.1	46.5
Moira (S)	31.0	23.6	39.5	57.1	51.0	62.9	41.4	36.1	46.8
Monash (C)	35.9	28.7	43.8	48.8	41.9	55.9	41.0	35.8	46.5
Moonee Valley (C)	33.1	26.7	40.2	51.1	44.2	57.9	40.2	35.4	45.2
Moorabool (S)	36.1	28.9	44.1	54.1	47.2	60.8	43.3	38.0	48.7
Moreland (C)	38.5	32.5	44.8	43.9	36.8	51.3	40.6	36.0	45.4
Mornington Peninsula (S)	36.9	28.5	46.2	59.8	53.3	65.9	46.0	40.1	52.0
Mount Alexander (S)	29.0	21.3	38.2	55.4	49.2	61.4	39.5	34.0	45.3
Moyne (S)	24.4	19.1	30.6	53.4	46.8	59.9	35.9	31.7	40.4
Murrindindi (S)	28.4	21.7	36.2	56.0	50.0	61.9	39.4	34.5	44.5
Nillumbik (S)	31.3	24.1	39.4	48.4	41.5	55.3	38.1	32.8	43.6
Northern Grampians (S)	28.6	21.5	37.0	58.7	52.7	64.5	40.6	35.5	45.9
Port Phillip (C)	34.4	27.9	41.5	49.7	41.8	57.6	40.5	35.4	45.8
Pyrenees (S)	36.4	26.6	47.5	56.5	49.9	62.9	44.4	37.6	51.4
Queenscliffe (B)	23.5	18.0	30.2	49.0	42.3	55.7	33.7	29.2	38.4
Southern Grampians (S)	34.5	26.5	43.4	51.6	45.4	57.8	41.3	35.7	47.1
South Gippsland (S)	30.9	24.7	37.8	56.4	49.7	62.8	41.0	36.3	45.8
Stonnington (C)	31.4	24.5	39.2	52.7	45.2	60.0	39.9	34.7	45.3
Strathbogie (S)	27.8	21.2	35.6	53.6	47.5	59.7	38.1	33.2	43.2
Surf Coast (S)	27.7	21.0	35.5	58.9	52.6	64.9	40.1	35.2	45.2
Swan Hill (RC)	27.2	20.5	35.0	49.5	42.8	56.2	36.0	31.1	41.3
Towong (S)	31.9	25.2	39.4	53.6	47.7	59.5	40.5	35.7	45.5
Wangaratta (RC)	28.8	22.7	35.8	44.8	38.5	51.2	35.1	30.6	40.0
Warrnambool (C)	27.8	21.5	35.1	47.3	40.5	54.2	35.6	30.8	40.6
Wellington (S)	28.3	22.6	34.7	53.3	46.5	59.9	38.2	33.8	42.9
West Wimmera (S)	29.3	22.6	37.0	51.4	45.2	57.6	38.1	33.2	43.2
Whitehorse (C)	38.2	30.1	47.1	50.3	43.5	57.1	43.0	37.3	48.9
Whittlesea (C)	32.2	26.6	38.3	49.6	42.9	56.3	39.1	34.8	43.6
Wodonga (RC)	34.8	28.5	41.6	52.4	45.1	59.6	41.8	37.0	46.8
Wyndham (C)	34.0	28.4	40.1	58.3	51.2	65.1	43.7	39.2	48.2
Yarra (C)	38.6	32.3	45.2	49.4	40.8	58.2	42.9	37.8	48.2
Yarra Ranges (S)	29.9	23.9	36.8	53.2	46.3	60.0	39.2	34.5	44.0
Yarriambiack (S)	37.8	28.8	47.7	54.4	48.6	60.0	44.4	38.3	50.6
<b>Total</b>	<b>33.6</b>	<b>32.5</b>	<b>34.7</b>	<b>52.3</b>	<b>51.3</b>	<b>53.3</b>	<b>41.0</b>	<b>40.3</b>	<b>41.8</b>

Figure 2.32: Noticed a change in vision in past 12 months, 50 years and over, 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 line on the graph is the Victorian estimate, it does not show the 95% CI. See relevant table for 95% CI for Victoria (Total).

## Use of health care services

Table 2.56 shows that more than three quarters (77.7 per cent) of all persons surveyed reported having ever consulted an eye care specialist or attended an eye clinic. A higher proportion of females (81.0 per cent) reported having ever consulted an eye care specialist or attended an eye clinic, compared with males (74.3 per cent). There were differences between age groups, with older persons more likely to report having ever consulted an eye care specialist or attended an eye clinic, than younger persons. More than six in 10 (63.3 per cent) persons aged 18–24 years reported that they had seen an eye care specialist or attended an eye clinic, compared with 95.9 per cent of persons aged 65 years and over.

**Table 2.56: Ever consulted an eye care specialist or attended an eye clinic, by age group and sex, 2008**

Age group (years)	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
18–24 years	61.6	56.8	66.1	38.4	33.9	43.2
25–34 years	59.1	55.2	63.0	40.9	37.0	44.8
35–44 years	62.3	59.4	65.2	37.7	34.8	40.6
45–54 years	78.8	76.5	80.9	21.2	19.1	23.5
55–64 years	92.3	90.9	93.5	7.7	6.5	9.1
65+	95.1	94.1	96.0	4.9	4.0	5.9
<b>Total</b>	<b>74.3</b>	<b>73.1</b>	<b>75.5</b>	<b>25.6</b>	<b>24.5</b>	<b>26.9</b>
<b>Females</b>						
18–24 years	65.1	60.6	69.3	34.9	30.7	39.4
25–34 years	69.2	66.4	71.9	30.8	28.1	33.6
35–44 years	72.7	70.7	74.5	27.3	25.5	29.3
45–54 years	88.3	86.8	89.7	11.7	10.3	13.2
55–64 years	94.1	93.0	95.0	5.9	5.0	7.0
65+	96.5	95.8	97.2	3.5	2.8	4.2
<b>Total</b>	<b>81.0</b>	<b>80.1</b>	<b>81.9</b>	<b>19.0</b>	<b>18.1</b>	<b>19.9</b>
<b>Persons</b>						
18–24 years	63.3	60.1	66.4	36.7	33.6	39.9
25–34 years	64.2	61.7	66.5	35.8	33.5	38.3
35–44 years	67.6	65.8	69.3	32.4	30.7	34.2
45–54 years	83.6	82.2	84.9	16.4	15.1	17.8
55–64 years	93.2	92.4	94.0	6.8	6.0	7.6
65+	95.9	95.3	96.4	4.1	3.6	4.7
<b>Total</b>	<b>77.7</b>	<b>76.9</b>	<b>78.4</b>	<b>22.3</b>	<b>21.5</b>	<b>23.0</b>

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Table 2.57 shows that the proportion of persons who reported having ever consulted an eye care specialist or attended an eye clinic, was similar between metropolitan and rural areas of the state. However, the proportion of females (75.8 per cent) from the Barwon–South Western region who reported having ever consulted an eye care specialist or attended an eye clinic, was lower than the average for Victorian females (81.0 per cent).

Table 2.57: Ever consulted an eye care specialist or attended an eye clinic, by Department of Health region and sex, 2008

Region	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
Barwon-South Western	75.9	69.8	81.0	24.1	18.9	30.1
Eastern Metropolitan	74.8	71.6	77.8	25.0	22.0	28.2
Gippsland	76.9	72.7	80.7	23.1	19.3	27.3
Grampians	73.6	69.5	77.4	26.4	22.6	30.5
Hume	70.2	66.6	73.5	29.8	26.5	33.4
Loddon Mallee	78.0	74.3	81.3	22.0	18.7	25.7
North and West Metropolitan	72.6	70.4	74.6	27.4	25.4	29.5
Southern Metropolitan	75.7	73.1	78.2	24.3	21.8	26.9
<b>Metropolitan</b>	<b>74.2</b>	<b>72.7</b>	<b>75.6</b>	<b>25.7</b>	<b>24.3</b>	<b>27.2</b>
<b>Rural</b>	<b>75.2</b>	<b>73.1</b>	<b>77.2</b>	<b>24.8</b>	<b>22.8</b>	<b>26.9</b>
<b>Total</b>	<b>74.3</b>	<b>73.1</b>	<b>75.5</b>	<b>25.6</b>	<b>24.5</b>	<b>26.9</b>
<b>Females</b>						
Barwon-South Western	75.8	71.5	79.6	24.2	20.4	28.5
Eastern Metropolitan	81.8	79.3	84.1	18.2	15.9	20.7
Gippsland	81.8	78.7	84.5	18.2	15.5	21.3
Grampians	82.9	79.3	86.0	17.1	14.0	20.7
Hume	81.7	79.3	83.8	18.2	16.0	20.5
Loddon Mallee	82.7	80.0	85.2	17.2	14.7	19.9
North and West Metropolitan	80.5	78.9	82.0	19.5	18.0	21.1
Southern Metropolitan	81.3	79.3	83.1	18.7	16.9	20.7
<b>Metropolitan</b>	<b>81.1</b>	<b>80.0</b>	<b>82.1</b>	<b>18.9</b>	<b>17.9</b>	<b>20.0</b>
<b>Rural</b>	<b>80.7</b>	<b>79.0</b>	<b>82.2</b>	<b>19.3</b>	<b>17.7</b>	<b>21.0</b>
<b>Total</b>	<b>81.0</b>	<b>80.1</b>	<b>81.9</b>	<b>19.0</b>	<b>18.1</b>	<b>19.9</b>
<b>Persons</b>						
Barwon-South Western	76.0	72.3	79.4	24.0	20.6	27.7
Eastern Metropolitan	78.4	76.4	80.3	21.5	19.6	23.5
Gippsland	79.4	76.9	81.7	20.6	18.3	23.1
Grampians	78.4	75.7	80.9	21.6	19.1	24.3
Hume	75.9	73.7	78.0	24.0	22.0	26.2
Loddon Mallee	80.4	78.1	82.5	19.5	17.4	21.8
North and West Metropolitan	76.6	75.3	77.9	23.4	22.1	24.7
Southern Metropolitan	78.5	76.8	80.1	21.5	19.9	23.2
<b>Metropolitan</b>	<b>77.7</b>	<b>76.7</b>	<b>78.5</b>	<b>22.3</b>	<b>21.4</b>	<b>23.2</b>
<b>Rural</b>	<b>78.0</b>	<b>76.7</b>	<b>79.3</b>	<b>22.0</b>	<b>20.7</b>	<b>23.3</b>
<b>Total</b>	<b>77.7</b>	<b>76.9</b>	<b>78.4</b>	<b>22.3</b>	<b>21.6</b>	<b>23.1</b>

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Table 2.58 and figure 2.33 show the proportion of persons who reported having ever consulted an eye care specialist or attended an eye clinic, by LGA. The table and figure show the proportion of persons who reported having ever consulted an eye care specialist or attended an eye clinic, was lower than the average for Victoria (77.7 per cent) in two metropolitan (Brimbank: 72.1 per cent, Wyndham: 70.9 per cent) and two rural (Towong: 70.9 per cent, Murrindindi: 67.0 per cent) LGAs.

Table 2.58: Ever consulted an eye care specialist or attended an eye clinic, by LGA, 2008

LGA	Yes			No			LGA	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI		%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	73.7	67.1	79.3	25.8	20.2	32.4	Mansfield (S)	79.8	73.6	84.9	20.2	15.1	26.5
Ararat (RC)	73.9	66.2	80.3	26.1	19.7	33.8	Maribyrnong (C)	75.8	70.8	80.2	24.2	19.8	29.2
Ballarat (C)	79.8	74.5	84.2	20.2	15.8	25.5	Maroondah (C)	77.8	72.4	82.4	22.2	17.6	27.6
Banyule (C)	75.9	70.6	80.6	24.1	19.5	29.4	Melbourne (C)	76.1	71.7	79.9	23.9	20.1	28.3
Bass Coast (S)	77.0	68.4	83.8	23.0	16.2	31.6	Melton (S)	74.6	69.3	79.2	25.4	20.8	30.7
Baw Baw (S)	79.1	72.6	84.4	20.9	15.6	27.4	Mildura (RC)	80.2	75.0	84.5	19.8	15.5	25.0
Bayside (C)	77.9	72.1	82.9	22.1	17.2	27.9	Mitchell (S)	77.0	71.9	81.5	23.0	18.5	28.1
Benalla (RC)	76.8	70.6	82.0	23.2	18.0	29.4	Moira (S)	78.0	71.0	83.7	22.0	16.3	29.1
Boroondara (C)	77.6	72.3	82.2	22.4	17.8	27.7	Monash (C)	77.7	72.4	82.2	21.6	17.1	26.8
Brimbank (C)	72.1	67.5	76.3	27.9	23.7	32.5	Moonee Valley (C)	76.6	71.2	81.3	23.4	18.7	28.8
Buloke (S)	74.7	68.1	80.4	25.3	19.6	31.9	Moorabool (S)	77.0	71.4	81.7	23.0	18.3	28.6
Campaspe (S)	78.3	72.5	83.2	21.7	16.8	27.5	Moreland (C)	76.4	72.2	80.0	23.7	20.0	27.8
Cardinia (S)	78.9	73.3	83.6	21.1	16.4	26.7	Mornington Peninsula (S)	80.3	74.3	85.1	19.7	14.9	25.7
Casey (C)	78.6	74.0	82.6	21.4	17.4	26.0	Mount Alexander (S)	82.1	76.6	86.5	17.7	13.3	23.2
Central Goldfields (S)	84.9	79.1	89.4	15.1	10.6	20.9	Moyne (S)	72.7	66.3	78.2	27.3	21.8	33.7
Colac-Otway (S)	76.8	70.3	82.3	23.2	17.7	29.7	Murrindindi (S)	67.0	59.3	74.0	32.9	25.9	40.6
Corangamite (S)	75.4	68.8	81.0	24.5	18.9	31.2	Nillumbik (S)	77.1	71.5	81.9	22.9	18.2	28.6
Darebin (C)	78.8	73.5	83.3	21.2	16.7	26.5	Northern Grampians (S)	76.6	70.5	81.8	23.4	18.2	29.6
East Gippsland (S)	86.2	80.1	90.6	13.8	9.4	19.9	Port Phillip (C)	81.1	76.7	84.8	18.9	15.2	23.3
Frankston (C)	78.6	73.5	83.0	21.4	17.0	26.6	Pyrenees (S)	73.9	67.0	79.8	26.1	20.2	33.0
Gannawarra (S)	73.7	67.4	79.2	26.3	20.8	32.6	Queenscliffe (B)	73.4	66.0	79.7	26.5	20.2	33.9
Glen Eira (C)	76.8	71.6	81.2	23.1	18.7	28.3	Southern Grampians (S)	78.9	72.8	84.0	21.1	16.0	27.2
Glenelg (S)	79.8	74.2	84.5	20.2	15.5	25.8	South Gippsland (S)	76.5	70.4	81.6	23.5	18.4	29.5
Golden Plains (S)	77.3	71.4	82.2	22.7	17.8	28.6	Stonnington (C)	83.4	79.0	87.0	16.6	13.0	21.0
Greater Bendigo (C)	83.2	78.5	87.1	16.6	12.7	21.3	Strathbogie (S)	71.9	64.8	78.1	28.1	21.9	35.3
Greater Dandenong (C)	72.9	68.1	77.3	27.1	22.7	32.0	Surf Coast (S)	74.5	67.1	80.7	25.5	19.3	32.9
Greater Geelong (C)	75.2	69.1	80.4	24.8	19.6	30.8	Swan Hill (RC)	76.4	70.9	81.1	23.6	18.9	29.1
Greater Shepparton (C)	74.3	68.0	79.7	25.5	20.1	31.8	Towong (S)	70.9	64.7	76.4	29.1	23.6	35.3
Hepburn (S)	75.6	69.7	80.6	24.5	19.4	30.3	Wangaratta (RC)	73.5	66.5	79.5	26.2	20.3	33.3
Hindmarsh (S)	74.4	68.1	79.8	25.6	20.2	31.9	Warrnambool (C)	79.0	73.5	83.6	21.0	16.4	26.5
Hobsons Bay (C)	77.5	72.2	82.1	22.5	17.9	27.8	Wellington (S)	80.6	75.0	85.2	19.4	14.8	25.0
Horsham (RC)	77.4	71.2	82.6	22.6	17.4	28.8	West Wimmera (S)	76.1	69.9	81.3	24.0	18.7	30.1
Hume (C)	77.4	72.8	81.5	22.6	18.6	27.2	Whitehorse (C)	81.1	76.1	85.3	18.9	14.7	23.9
Indigo (S)	81.1	74.0	86.5	19.0	13.5	26.0	Whittlesea (C)	79.2	74.7	83.1	20.5	16.7	24.9
Kingston (C)	78.3	72.1	83.4	21.7	16.6	27.9	Wodonga (RC)	79.8	75.1	83.9	20.2	16.1	24.9
Knox (C)	78.2	73.2	82.5	21.8	17.5	26.8	Wyndham (C)	70.9	66.3	75.2	29.1	24.8	33.8
Latrobe (C)	77.9	72.7	82.3	22.1	17.7	27.3	Yarra (C)	85.7	81.6	89.0	14.3	11.0	18.4
Loddon (S)	71.9	65.4	77.6	27.9	22.2	34.4	Yarra Ranges (S)	76.0	71.0	80.3	24.0	19.7	29.0
Macedon Ranges (S)	78.3	71.7	83.7	21.7	16.3	28.3	Yarriambiack (S)	84.9	80.3	88.5	15.1	11.5	19.7
Manningham (C)	82.9	77.6	87.2	17.1	12.8	22.4	<b>Total</b>	<b>77.7</b>	<b>76.9</b>	<b>78.4</b>	<b>22.3</b>	<b>21.6</b>	<b>23.1</b>

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

95% CI = 95 per cent confidence interval.

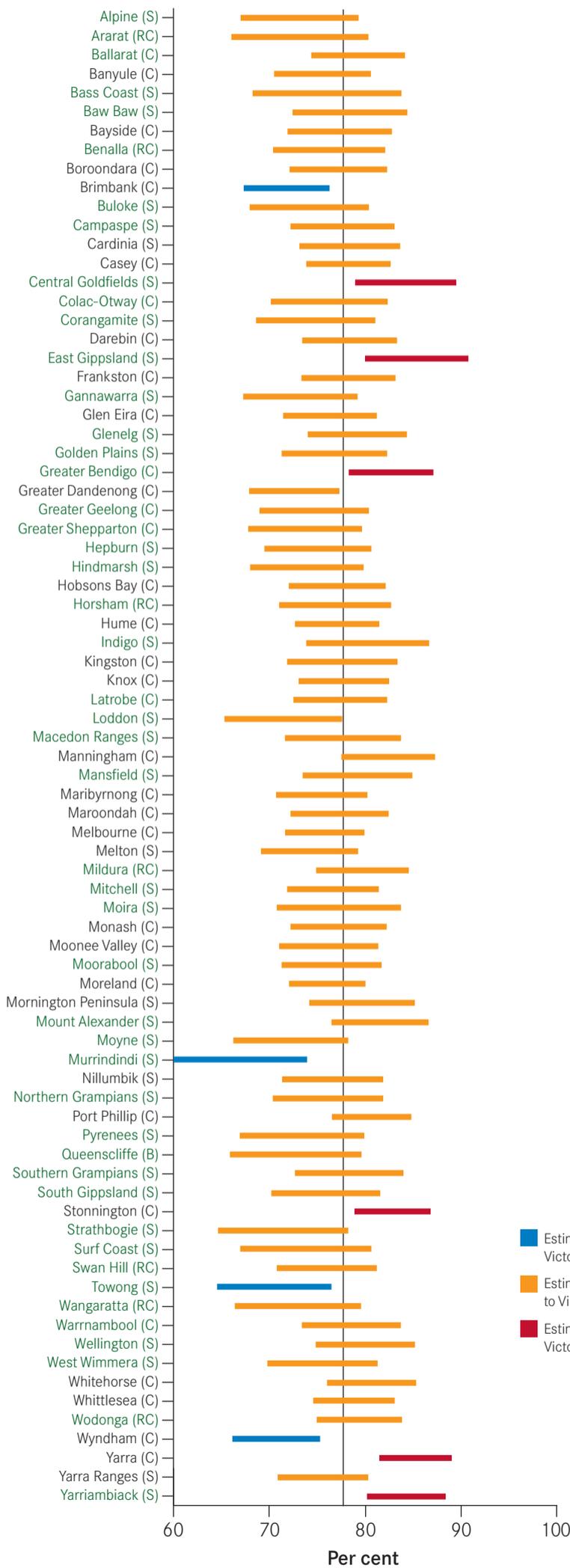
LGA = local government area.

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.

Figure 2.33: Consulted an eye care specialist or attended an eye clinic at least once in lifetime, by LGA, 2008



■ Estimate is below Victorian average  
■ Estimate is similar to Victorian average  
■ Estimate is above Victorian average

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 line on the graph is the Victorian estimate, it does not show the 95% CI. See relevant table for 95% CI for Victoria (Total).

Table 2.59 shows the timing of the most recent visit to an eye care specialist or attendance at an eye clinic, by age group and sex. The table shows that more than one in five (22.3 per cent) persons had never visited an eye care specialist or attended an eye clinic. Males (25.6 per cent) were more likely than females (19.0 per cent) to have never visited an eye care specialist or attended an eye clinic. Persons aged less than 45 years were more likely to have never visited an eye care specialist or attended an eye clinic than persons aged 45 years and over.

More than one in five (21.1 per cent) persons had visited an eye care specialist or attended an eye clinic in the past six months and 19.7 per cent had visited a specialist or clinic between six months to one year before the survey. A further 15.4 per cent reported having visited an eye care specialist or attended an eye clinic more than one year, but less than two years before the survey, whilst 13.0 per cent of persons reported having visited a specialist or clinic between two and five years before the survey and 8.3 per cent reported having visited an eye care specialist or attended an eye clinic more than five years before the survey.

**Table 2.59: Most recent visit to eye care specialist or eye clinic, by age group and sex, 2008**

Age group (years)	Have visited an eye care specialist/eye clinic and most recent visit was...								
	Never visited an eye care specialist/ eye clinic			Less than 6 months ago			Between 6 months and one year ago		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>									
18–24 years	38.4	33.9	43.2	13.2	10.1	16.9	11.7	9.1	14.9
25–34 years	40.7	36.8	44.6	11.8	9.6	14.4	10.6	8.4	13.1
35–44 years	37.7	34.8	40.6	13.7	11.7	15.9	12.5	10.6	14.7
45–54 years	21.2	19.1	23.5	19.9	17.7	22.3	22.4	20.1	24.9
55–64 years	7.6	6.4	9.0	25.3	23.1	27.8	26.0	23.7	28.4
65+	4.8	4.0	5.9	33.1	31.0	35.2	26.4	24.5	28.5
<b>Total</b>	<b>25.6</b>	<b>24.5</b>	<b>26.9</b>	<b>19.5</b>	<b>18.6</b>	<b>20.5</b>	<b>18.0</b>	<b>17.0</b>	<b>18.9</b>
<b>Females</b>									
18–24 years	34.9	30.7	39.4	17.4	14.3	21.1	14.5	11.6	17.8
25–34 years	30.8	28.1	33.6	14.3	12.4	16.4	16.2	14.3	18.4
35–44 years	27.3	25.4	29.2	16.4	14.9	18.1	15.6	14.2	17.2
45–54 years	11.7	10.3	13.2	25.8	23.9	27.9	26.9	25.0	28.9
55–64 years	5.9	4.9	7.0	26.6	24.8	28.6	27.3	25.4	29.3
65+	3.4	2.8	4.2	35.3	33.5	37.1	28.7	27.0	30.5
<b>Total</b>	<b>19.0</b>	<b>18.1</b>	<b>19.9</b>	<b>22.6</b>	<b>21.8</b>	<b>23.5</b>	<b>21.4</b>	<b>20.6</b>	<b>22.2</b>
<b>Persons</b>									
18–24 years	36.7	33.6	39.9	15.3	13.0	17.8	13.1	11.1	15.3
25–34 years	35.7	33.4	38.2	13.0	11.5	14.7	13.4	11.9	15.0
35–44 years	32.4	30.7	34.2	15.1	13.8	16.4	14.1	12.9	15.4
45–54 years	16.4	15.1	17.8	22.9	21.4	24.5	24.7	23.1	26.3
55–64 years	6.7	6.0	7.6	26.0	24.5	27.5	26.6	25.2	28.2
65+	4.0	3.5	4.7	34.3	32.9	35.7	27.7	26.4	29.0
<b>Total</b>	<b>22.3</b>	<b>21.5</b>	<b>23.0</b>	<b>21.1</b>	<b>20.4</b>	<b>21.8</b>	<b>19.7</b>	<b>19.1</b>	<b>20.3</b>

95% CI = 95 per cent confidence interval.

Note that figures may not add to 100 per cent (excluding abstainers) 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 from the corresponding estimate for Victoria are identified by colour as follows: **above Victoria** / **below Victoria**.

Table 2.59: Most recent visit to eye care specialist or eye clinic, by age group and sex, 2008 (continued)

Age group (years)	Have visited an eye care specialist/eye clinic and most recent visit was...								
	More than one year and less than two years ago			More than two years and less than five years ago			Five years or more ago		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>									
18–24 years	11.4	8.8	14.7	11.1	8.5	14.4	13.8	10.6	17.7
25–34 years	9.1	6.9	11.9	13.8	11.3	16.7	13.9	11.1	17.2
35–44 years	10.8	9.1	12.8	12.6	10.7	14.8	12.4	10.6	14.4
45–54 years	19.2	17.1	21.6	12.6	10.8	14.6	4.5	3.6	5.6
55–64 years	19.6	17.6	21.8	15.7	13.8	17.8	5.6	4.4	7.0
65+	16.9	15.2	18.7	13.4	11.9	15.1	5.1	4.1	6.2
<b>Total</b>	<b>14.2</b>	<b>13.3</b>	<b>15.2</b>	<b>13.1</b>	<b>12.3</b>	<b>14.1</b>	<b>9.2</b>	<b>8.4</b>	<b>10.1</b>
<b>Females</b>									
18–24 years	11.6	9.0	14.7	11.8	9.5	14.7	9.8	7.4	12.8
25–34 years	14.4	12.5	16.6	12.9	11.1	14.8	11.4	9.7	13.3
35–44 years	14.0	12.7	15.6	15.0	13.5	16.6	11.5	10.3	12.9
45–54 years	19.4	17.7	21.3	12.0	10.6	13.6	4.0	3.2	5.0
55–64 years	22.2	20.4	24.0	14.4	12.9	16.1	3.4	2.7	4.2
65+	17.8	16.3	19.3	11.3	10.1	12.6	2.7	2.1	3.4
<b>Total</b>	<b>16.5</b>	<b>15.8</b>	<b>17.3</b>	<b>12.9</b>	<b>12.2</b>	<b>13.6</b>	<b>7.3</b>	<b>6.7</b>	<b>7.9</b>
<b>Persons</b>									
18–24 years	11.5	9.6	13.7	11.5	9.7	13.6	11.8	9.8	14.2
25–34 years	11.7	10.2	13.4	13.3	11.8	15.1	12.6	11.0	14.5
35–44 years	12.5	11.3	13.7	13.8	12.6	15.1	11.9	10.8	13.2
45–54 years	19.3	17.9	20.8	12.3	11.1	13.5	4.2	3.6	5.0
55–64 years	20.9	19.5	22.3	15.1	13.9	16.4	4.5	3.8	5.3
65+	17.4	16.3	18.5	12.2	11.3	13.3	3.8	3.2	4.4
<b>Total</b>	<b>15.4</b>	<b>14.8</b>	<b>16.0</b>	<b>13.0</b>	<b>12.5</b>	<b>13.6</b>	<b>8.3</b>	<b>7.7</b>	<b>8.8</b>

Table 2.60 summarises the most recent visit to an eye care specialist or eye clinic, by sex and Department of Health region. There were no differences between metropolitan and rural areas of the state in the proportion of persons who had not accessed specialist eye care. However, a higher proportion of females from Barwon-South Western (24.2 per cent) reported never having accessed specialist eye care compared with the average for Victoria (19.0 per cent).

Males from rural areas (17.2 per cent) were less likely to have accessed specialist eye care in the past six months, compared with all males in Victoria (19.5 per cent). In particular, males from the rural regions of Grampians (15.7 per cent) and Hume (16.0 per cent) were less likely to have accessed specialist eye care in the past six months, compared with all males in Victoria (19.5 per cent).

Table 2.60: Most recent visit to eye care specialist or eye clinic, by Department of Health region and sex, 2008

Region	Have visited an eye care specialist/eye clinic and most recent visit was...								
	Never visited an eye care specialist/ eye clinic			Less than 6 months ago			Between 6 months and one year ago		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>									
Barwon–South Western	24.1	18.9	30.1	15.8	12.9	19.4	17.1	14.1	20.8
Eastern Metropolitan	25.0	22.0	28.2	20.2	17.8	22.8	19.6	17.0	22.5
Gippsland	23.1	19.3	27.3	18.8	16.0	22.0	19.3	16.2	22.8
Grampians	26.4	22.6	30.5	15.7	13.4	18.4	16.5	13.7	19.8
Hume	29.8	26.5	33.4	16.0	14.1	18.1	17.5	15.2	20.0
Loddon Mallee	22.0	18.7	25.7	19.9	17.1	23.1	19.1	16.1	22.4
North and West Metropolitan	27.4	25.4	29.5	19.2	17.5	21.0	17.3	15.6	19.0
Southern Metropolitan	24.3	21.8	26.9	21.4	19.2	23.9	17.7	15.8	19.8
<b>Metropolitan</b>	25.7	24.3	27.2	20.3	19.1	21.6	18.0	16.8	19.2
<b>Rural</b>	24.8	22.8	26.9	17.2	15.9	18.5	17.9	16.5	19.5
<b>Total</b>	25.6	24.5	26.9	19.5	18.6	20.5	18.0	17.0	18.9
<b>Females</b>									
Barwon–South Western	24.2	20.4	28.5	20.0	17.3	23.1	18.7	16.3	21.5
Eastern Metropolitan	18.2	15.9	20.7	23.1	20.9	25.6	23.6	21.4	25.9
Gippsland	18.2	15.5	21.2	23.3	20.9	26.0	21.0	18.5	23.6
Grampians	17.1	14.0	20.7	23.0	19.6	26.9	19.7	17.6	21.9
Hume	18.2	16.0	20.5	22.1	20.0	24.4	19.4	17.8	21.1
Loddon Mallee	17.2	14.7	19.9	20.4	18.3	22.7	22.7	20.0	25.7
North and West Metropolitan	19.5	18.0	21.1	22.9	21.5	24.5	20.7	19.3	22.3
Southern Metropolitan	18.7	16.9	20.7	22.9	21.1	24.9	21.2	19.4	23.0
<b>Metropolitan</b>	18.9	17.9	20.0	22.9	21.9	24.0	21.6	20.6	22.7
<b>Rural</b>	19.3	17.7	21.0	21.6	20.4	23.0	20.4	19.2	21.6
<b>Total</b>	19.0	18.1	19.9	22.6	21.8	23.5	21.4	20.6	22.2
<b>Persons</b>									
Barwon–South Western	24.0	20.6	27.7	18.1	15.9	20.4	18.0	15.9	20.4
Eastern Metropolitan	21.5	19.6	23.5	21.7	20.0	23.4	21.7	19.9	23.5
Gippsland	20.6	18.3	23.1	21.1	19.2	23.1	20.1	18.1	22.3
Grampians	21.6	19.1	24.3	19.4	17.2	21.9	18.1	16.3	20.0
Hume	24.0	21.9	26.2	19.0	17.5	20.5	18.5	17.1	20.0
Loddon Mallee	19.5	17.4	21.8	20.1	18.3	22.1	20.9	18.9	23.1
North and West Metropolitan	23.4	22.1	24.7	21.1	20.0	22.3	19.0	17.9	20.2
Southern Metropolitan	21.5	19.9	23.2	22.2	20.7	23.7	19.5	18.1	20.8
<b>Metropolitan</b>	22.3	21.4	23.2	21.6	20.8	22.4	19.9	19.1	20.6
<b>Rural</b>	22.0	20.7	23.3	19.5	18.5	20.4	19.2	18.2	20.1
<b>Total</b>	22.3	21.5	23.0	21.1	20.4	21.8	19.7	19.1	20.3

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.

Table 2.60: Most recent visit to eye care specialist or eye clinic, by Department of Health region and sex, 2008 (continued)

Region	Have visited an eye care specialist/eye clinic and most recent visit was...								
	More than one year and less than two years ago			More than two years and less than five years ago			Five years or more ago		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>									
Barwon–South Western	15.3	11.1	20.7	15.7	12.0	20.2	11.9	7.7	17.8
Eastern Metropolitan	12.8	10.9	15.0	13.1	10.9	15.6	9.0	7.1	11.3
Gippsland	16.1	13.1	19.7	13.2	10.3	16.7	9.5	7.1	12.6
Grampians	13.9	11.4	16.8	13.5	10.6	17.1	13.9	10.7	17.9
Hume	13.8	11.7	16.3	13.0	10.8	15.6	9.8	7.7	12.5
Loddon Mallee	13.0	10.9	15.5	16.0	12.8	19.8	9.1	6.8	12.0
North and West Metropolitan	14.6	13.0	16.4	12.7	11.2	14.4	8.5	7.2	9.9
Southern Metropolitan	14.5	12.7	16.6	12.6	10.8	14.6	9.2	7.5	11.3
<b>Metropolitan</b>	14.1	13.1	15.3	12.8	11.7	13.9	8.8	7.8	9.8
<b>Rural</b>	14.4	12.8	16.2	14.6	13.0	16.4	10.9	9.2	12.9
<b>Total</b>	14.2	13.3	15.2	13.1	12.3	14.1	9.2	8.4	10.1
<b>Females</b>									
Barwon–South Western	15.5	12.8	18.6	12.5	10.1	15.3	9.0	6.0	13.3
Eastern Metropolitan	15.4	13.6	17.4	12.5	10.9	14.4	6.9	5.7	8.5
Gippsland	15.7	13.8	17.9	12.0	10.0	14.3	9.8	7.7	12.4
Grampians	17.0	14.5	19.9	13.8	11.6	16.5	8.9	6.9	11.5
Hume	19.1	17.0	21.4	12.5	10.7	14.6	8.4	6.9	10.2
Loddon Mallee	15.8	13.8	18.0	15.8	13.5	18.4	7.8	6.2	9.9
North and West Metropolitan	16.9	15.6	18.4	13.0	11.8	14.4	6.5	5.7	7.5
Southern Metropolitan	16.6	14.9	18.5	13.0	11.5	14.7	7.4	6.1	8.9
<b>Metropolitan</b>	16.4	15.5	17.4	12.9	12.0	13.7	6.9	6.3	7.7
<b>Rural</b>	16.5	15.4	17.6	13.2	12.2	14.4	8.8	7.6	10.1
<b>Total</b>	16.5	15.8	17.3	12.9	12.2	13.6	7.3	6.7	7.9
<b>Persons</b>									
Barwon–South Western	15.4	12.7	18.5	14.0	11.7	16.7	10.5	7.7	14.0
Eastern Metropolitan	14.1	12.7	15.6	12.8	11.4	14.3	8.0	6.8	9.4
Gippsland	16.0	14.1	18.1	12.5	10.7	14.6	9.7	8.0	11.6
Grampians	15.5	13.6	17.5	13.7	11.8	15.9	11.4	9.4	13.7
Hume	16.4	14.9	18.1	12.8	11.3	14.5	9.1	7.7	10.7
Loddon Mallee	14.4	13.0	16.1	15.9	13.9	18.3	8.5	7.0	10.2
North and West Metropolitan	15.7	14.7	16.9	12.9	11.9	13.9	7.5	6.7	8.3
Southern Metropolitan	15.6	14.3	17.0	12.8	11.6	14.1	8.3	7.2	9.6
<b>Metropolitan</b>	15.3	14.6	16.0	12.8	12.1	13.5	7.8	7.3	8.5
<b>Rural</b>	15.4	14.5	16.5	13.9	12.9	15.0	9.8	8.8	11.0
<b>Total</b>	15.4	14.8	16.0	13.0	12.5	13.6	8.3	7.7	8.8



Table 2.61 summarises the most recent visit to an eye care specialist or eye clinic, by LGA. Persons from the rural LGAs of Northern Grampians (16.5 per cent), Buloke (15.9 per cent), Murrindindi (15.8 per cent), Swan Hill (15.8 per cent), Pyrenees (15.1 per cent) and Surf Coast (14.8 per cent) and the metropolitan LGA of Brimbank (15.7 per cent), were less likely to have accessed specialist eye care in the past six months, compared with all persons in Victoria (21.1 per cent).

Between six months and one year, there were four LGAs where the proportion of persons who reported visiting an eye care specialist or eye clinic was lower than the average for Victoria (19.7 per cent). Two of these LGAs were metropolitan– Greater Dandenong (14.9 per cent) and Wyndham (13.2 per cent)– and two were rural– Hepburn (15.2 per cent) and Loddon (14.1 per cent).

Figures 2.34 and 2.35 show the proportion of persons who reported visiting an eye care specialist or eye clinic in the past six months and between six months and one year ago respectively.

Table 2.61: Most recent visit to eye care specialist or eye clinic, by LGA, 2008

LGA	Have visited an eye care specialist/eye clinic and most recent visit was...								
	Never visited an eye care specialist/ eye clinic			Less than 6 months ago			Between 6 months and one year ago		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	26.3	20.7	32.9	17.3	13.8	21.4	17.7	14.4	21.6
Ararat (RC)	26.1	19.7	33.8	18.7	14.3	23.9	18.0	14.5	22.2
Ballarat (C)	20.2	15.8	25.5	20.8	16.7	25.7	17.9	14.3	22.1
Banyule (C)	24.1	19.5	29.4	19.7	15.6	24.5	16.0	12.6	20.3
Bass Coast (S)	23.0	16.2	31.6	21.1	16.2	27.0	18.5	14.1	23.8
Baw Baw (S)	20.9	15.6	27.4	19.7	15.7	24.5	19.3	15.9	23.3
Bayside (C)	22.1	17.2	27.9	18.6	14.7	23.3	17.1	13.8	20.9
Benalla (RC)	23.2	18.0	29.4	18.3	14.7	22.5	19.0	15.0	23.8
Boroondara (C)	22.4	17.8	27.7	22.3	18.2	26.9	24.7	20.2	29.8
Brimbank (C)	27.9	23.7	32.5	15.7	12.6	19.3	19.9	16.3	24.1
Buloke (S)	25.3	19.6	31.9	15.9	12.2	20.3	17.4	14.0	21.4
Campaspe (S)	21.7	16.8	27.5	19.0	15.1	23.7	27.8	23.0	33.2
Cardinia (S)	21.1	16.4	26.7	21.1	17.1	25.7	19.3	15.1	24.3
Casey (C)	21.4	17.4	26.0	24.7	20.3	29.6	17.0	13.6	21.0
Central Goldfields (S)	15.1	10.6	20.9	24.4	19.3	30.5	24.1	18.3	31.0
Colac-Otway (S)	23.2	17.7	29.7	24.1	19.1	29.9	17.6	13.2	23.0
Corangamite (S)	24.6	19.0	31.3	21.9	17.8	26.5	18.4	13.9	24.0
Darebin (C)	21.2	16.7	26.5	24.3	20.1	29.1	19.3	15.3	24.1
East Gippsland (S)	13.8	9.4	19.9	23.8	18.9	29.4	26.1	20.4	32.7
Frankston (C)	21.4	17.0	26.6	19.6	15.6	24.2	18.0	14.3	22.4
Gannawarra (S)	26.3	20.8	32.6	17.9	13.6	23.2	18.5	15.1	22.5
Glen Eira (C)	23.2	18.8	28.4	22.0	18.2	26.5	22.5	18.5	27.1
Glenelg (S)	20.2	15.5	25.8	21.0	16.7	26.0	23.7	19.3	28.8
Golden Plains (S)	22.7	17.8	28.6	16.1	12.3	20.7	18.9	15.4	23.0
Greater Bendigo (C)	16.8	12.9	21.5	18.8	15.0	23.2	20.4	16.2	25.3
Greater Dandenong (C)	27.1	22.7	32.0	26.7	22.3	31.5	14.9	11.7	18.7
Greater Geelong (C)	24.8	19.7	30.9	16.5	13.2	20.5	17.2	13.9	20.9
Greater Shepparton (C)	25.7	20.3	32.0	19.4	15.5	23.9	16.8	13.6	20.6
Hepburn (S)	24.5	19.4	30.3	17.2	13.8	21.1	15.2	12.2	18.8
Hindmarsh (S)	25.6	20.2	31.9	17.1	13.8	20.9	15.5	11.7	20.2
Hobsons Bay (C)	22.5	17.9	27.8	22.2	17.9	27.2	21.9	18.0	26.4
Horsham (RC)	22.6	17.4	28.8	18.8	15.0	23.3	20.8	16.8	25.4
Hume (C)	22.6	18.6	27.2	25.6	21.3	30.5	16.6	13.3	20.5
Indigo (S)	19.0	13.5	26.0	20.5	15.5	26.6	19.8	15.9	24.4
Kingston (C)	21.7	16.6	27.9	21.8	18.1	26.1	16.6	13.2	20.6
Knox (C)	21.8	17.5	26.8	21.3	17.3	25.9	19.7	16.4	23.6
Latrobe (C)	22.1	17.7	27.3	22.2	18.1	26.8	20.6	16.5	25.4
Loddon (S)	28.1	22.4	34.6	17.7	13.7	22.7	14.1	10.9	18.1
Macedon Ranges (S)	21.7	16.3	28.3	20.3	16.3	25.0	18.5	14.8	22.8
Manningham (C)	17.1	12.8	22.4	17.9	14.3	22.1	24.9	20.0	30.5

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

95% CI = 95 per cent confidence interval.

LGA = local government area.

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.

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

Table 2.61: Most recent visit to eye care specialist or eye clinic, by LGA, 2008 (continued)

LGA	Have visited an eye care specialist/eye clinic and most recent visit was...								
	Never visited an eye care specialist/ eye clinic			Less than 6 months ago			Between 6 months and one year ago		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	20.2	15.1	26.5	22.7	17.0	29.6	15.5	11.6	20.2
Maribyrnong (C)	24.2	19.8	29.2	20.6	16.8	25.0	22.6	18.5	27.4
Maroondah (C)	22.2	17.6	27.6	24.4	20.1	29.2	18.5	14.8	22.8
Melbourne (C)	23.9	20.1	28.3	27.2	22.8	32.1	18.5	14.8	22.9
Melton (S)	25.4	20.8	30.7	17.1	13.7	21.2	22.5	18.6	27.1
Mildura (RC)	19.8	15.5	25.0	25.2	20.8	30.1	21.1	16.7	26.2
Mitchell (S)	23.0	18.5	28.1	17.9	14.5	21.8	17.8	13.8	22.8
Moira (S)	22.0	16.3	29.1	20.1	16.1	24.8	16.7	12.9	21.4
Monash (C)	22.3	17.8	27.6	26.2	21.6	31.4	22.7	18.0	28.1
Moonee Valley (C)	23.4	18.7	28.8	23.4	19.2	28.3	17.6	14.1	21.6
Moorabool (S)	23.0	18.3	28.6	19.9	16.0	24.5	17.3	13.6	21.7
Moreland (C)	23.7	20.0	27.8	19.7	16.1	23.7	20.3	16.6	24.6
Mornington Peninsula (S)	19.7	14.9	25.7	17.7	13.9	22.3	21.3	17.1	26.1
Mount Alexander (S)	17.9	13.5	23.4	24.7	20.2	29.9	16.6	12.6	21.5
Moyne (S)	27.3	21.8	33.7	18.5	15.4	22.0	17.4	13.9	21.7
Murrindindi (S)	33.0	26.1	40.7	15.8	12.3	20.1	15.2	11.8	19.5
Nillumbik (S)	22.9	18.2	28.6	17.4	14.0	21.4	18.8	14.9	23.5
Northern Grampians (S)	23.4	18.2	29.6	16.5	13.4	20.3	16.9	13.5	21.0
Port Phillip (C)	18.9	15.2	23.3	22.3	18.3	27.0	22.8	18.6	27.5
Pyrenees (S)	26.1	20.2	33.0	15.1	11.8	19.1	20.1	15.7	25.3
Queenscliffe (B)	26.6	20.3	34.0	19.4	15.5	23.8	17.5	13.1	23.0
Southern Grampians (S)	21.1	16.0	27.2	17.5	14.4	21.1	18.6	14.7	23.3
South Gippsland (S)	23.6	18.4	29.6	18.1	14.7	22.0	16.5	13.2	20.4
Stonnington (C)	16.6	13.0	21.0	25.2	20.6	30.4	23.5	19.5	28.2
Strathbogie (S)	28.1	21.9	35.3	17.2	14.0	21.0	19.8	15.6	25.0
Surf Coast (S)	25.5	19.3	32.9	14.8	12.0	18.1	19.2	15.4	23.7
Swan Hill (RC)	23.6	18.9	29.1	15.8	12.1	20.3	15.8	12.8	19.4
Towong (S)	29.1	23.6	35.3	18.1	14.6	22.2	18.0	14.4	22.3
Wangaratta (RC)	26.5	20.5	33.5	17.6	14.7	20.9	17.4	14.0	21.5
Warrnambool (C)	21.0	16.4	26.5	21.6	17.6	26.3	20.9	17.0	25.4
Wellington (S)	19.4	14.8	25.0	20.3	16.3	25.1	18.1	14.6	22.3
West Wimmera (S)	24.0	18.7	30.1	17.1	13.7	21.2	20.1	16.4	24.4
Whitehorse (C)	18.9	14.7	23.9	24.1	19.5	29.3	21.6	17.5	26.3
Whittlesea (C)	20.8	17.0	25.3	20.2	16.5	24.6	17.8	14.5	21.8
Wodonga (RC)	20.2	16.1	24.9	20.1	16.3	24.6	24.3	20.0	29.2
Wyndham (C)	29.1	24.8	33.8	22.5	18.9	26.6	13.2	10.3	16.7
Yarra (C)	14.3	11.0	18.4	25.6	21.1	30.7	21.9	17.6	27.0
Yarra Ranges (S)	24.0	19.7	29.0	17.2	13.9	21.2	20.8	16.9	25.3
Yarriambiack (S)	15.1	11.5	19.7	23.1	17.9	29.3	19.5	15.0	25.0
<b>Total</b>	<b>22.3</b>	<b>21.6</b>	<b>23.1</b>	<b>21.1</b>	<b>20.5</b>	<b>21.8</b>	<b>19.7</b>	<b>19.1</b>	<b>20.3</b>

Table 2.61: Most recent visit to eye care specialist or eye clinic, by LGA, 2008 (continued)

LGA	Have visited an eye care specialist/eye clinic and most recent visit was...								
	More than one year and less than two years ago			More than two years and less than five years ago			Five years or more ago		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	12.4	9.7	15.7	14.8	11.0	19.6	11.2	7.0	17.4
Ararat (RC)	14.0	10.7	18.0	13.8	9.2	20.2	9.3	6.3	13.7
Ballarat (C)	14.1	10.8	18.2	12.3	9.0	16.6	14.4	10.6	19.1
Banyule (C)	17.8	13.8	22.7	14.3	10.3	19.6	8.1	5.2	12.3
Bass Coast (S)	15.5	10.4	22.5	11.8	7.6	17.9	10.1*	5.8	17.0
Baw Baw (S)	17.6	13.8	22.2	14.6	10.0	20.9	7.8	4.9	12.2
Bayside (C)	17.0	13.1	21.7	17.1	12.9	22.3	8.2	5.5	12.1
Benalla (RC)	15.7	12.1	20.2	15.6	11.1	21.6	7.6*	4.4	12.8
Boroondara (C)	13.0	9.8	17.0	12.5	9.3	16.7	5.1	3.1	8.3
Brimbank (C)	16.4	12.9	20.7	13.0	10.0	16.8	6.1	3.9	9.4
Buloke (S)	21.0	16.8	26.0	16.1	11.5	22.0	4.3*	2.5	7.3
Campaspe (S)	14.7	11.0	19.3	8.6	6.2	11.9	7.9	4.9	12.4
Cardinia (S)	16.6	12.6	21.5	13.5	10.3	17.5	7.9	5.1	12.1
Casey (C)	14.7	11.4	18.8	13.5	10.4	17.3	8.6	6.0	12.4
Central Goldfields (S)	14.5	10.3	20.0	9.9	7.1	13.6	12.0	7.4	18.9
Colac-Otway (S)	12.1	9.2	15.6	18.2	13.3	24.4	4.9	3.0	7.8
Corangamite (S)	14.9	11.2	19.7	13.4	9.4	18.7	6.8	4.2	10.9
Darebin (C)	13.1	9.9	17.1	12.7	9.4	16.9	9.2	6.3	13.4
East Gippsland (S)	13.0	9.4	17.7	13.9	9.5	20.0	9.5*	5.4	16.1
Frankston (C)	14.2	10.9	18.3	15.2	11.6	19.7	11.2	7.7	16.0
Gannawarra (S)	14.6	11.6	18.2	14.5	11.1	18.6	8.1	5.4	12.2
Glen Eira (C)	13.9	10.4	18.4	11.2	8.3	15.0	7.0	4.4	11.1
Glenelg (S)	13.9	10.8	17.7	13.5	9.8	18.3	7.7*	4.7	12.6
Golden Plains (S)	18.1	13.8	23.5	16.0	12.2	20.8	7.2	4.9	10.5
Greater Bendigo (C)	15.4	12.1	19.4	20.1	15.8	25.3	7.8	5.1	11.7
Greater Dandenong (C)	16.0	12.6	20.0	10.1	7.4	13.5	5.2	3.4	7.8
Greater Geelong (C)	15.8	11.6	21.1	13.7	10.3	18.0	12.0	8.0	17.7
Greater Shepparton (C)	15.4	12.1	19.4	14.4	10.8	18.9	8.2*	4.8	13.9
Hepburn (S)	12.4	9.4	16.1	17.8	13.1	23.8	12.6	8.6	18.1
Hindmarsh (S)	15.7	12.1	20.2	13.1	9.5	17.7	13.1	9.0	18.6
Hobsons Bay (C)	12.4	9.6	15.7	11.9	8.7	16.0	8.7	6.1	12.2
Horsham (RC)	18.4	14.5	23.1	11.5	8.4	15.7	7.6	5.1	11.1
Hume (C)	17.7	13.6	22.8	11.2	8.3	14.8	6.2	4.0	9.3
Indigo (S)	15.9	12.5	20.1	14.4	9.9	20.5	10.0	6.5	15.1
Kingston (C)	18.4	14.1	23.8	11.8	8.7	15.8	9.5	6.0	14.7
Knox (C)	15.5	12.2	19.5	13.1	9.7	17.4	8.5	5.8	12.4
Latrobe (C)	13.6	10.5	17.4	11.5	8.3	15.7	10.1	7.2	14.0
Loddon (S)	19.8	15.2	25.4	10.4	7.6	14.0	9.7	6.4	14.4
Macedon Ranges (S)	14.3	10.9	18.6	16.5	12.2	22.0	8.4*	5.0	13.8
Manningham (C)	18.4	14.3	23.2	12.2	9.2	16.0	9.4	6.2	14.0

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

95% CI = 95 per cent confidence interval.

LGA = local government area.

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.

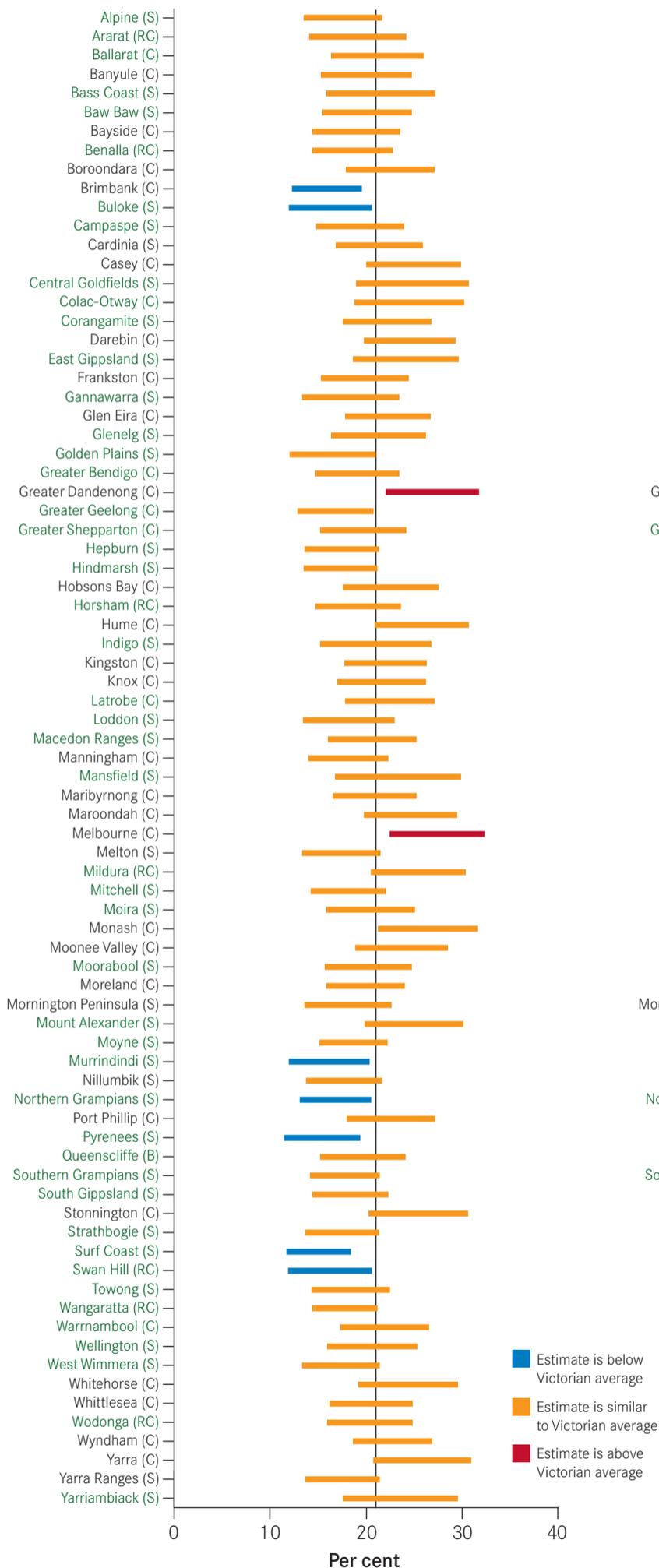
Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

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

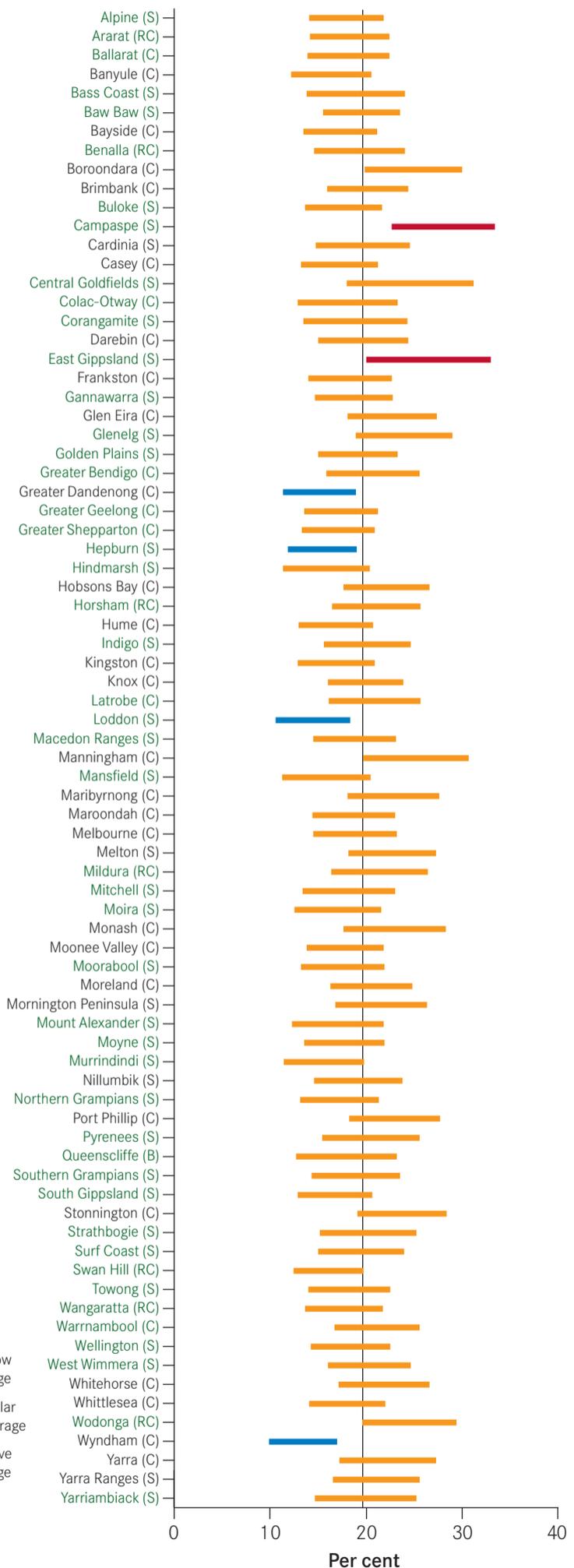
Table 2.61: Most recent visit to eye care specialist or eye clinic, by LGA, 2008 (continued)

LGA	Have visited an eye care specialist/eye clinic and most recent visit was...								
	More than one year and less than two years ago			More than two years and less than five years ago			Five years or more ago		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	15.3	11.9	19.5	11.4	8.3	15.4	14.9	9.6	22.4
Maribyrnong (C)	13.7	10.5	17.6	12.0	8.9	16.1	6.4	4.3	9.5
Maroondah (C)	13.8	10.2	18.4	12.1	9.0	16.1	8.8	6.0	12.9
Melbourne (C)	15.0	11.4	19.4	10.6	8.1	13.7	4.4	2.8	7.0
Melton (S)	13.7	10.8	17.4	14.3	11.0	18.5	6.6	4.2	10.3
Mildura (RC)	11.6	8.7	15.4	13.6	9.8	18.6	8.4	5.5	12.7
Mitchell (S)	20.4	16.2	25.3	10.2	7.5	13.8	10.7	7.6	14.8
Moira (S)	14.4	11.3	18.3	13.4	8.5	20.4	13.4	8.9	19.6
Monash (C)	14.1	10.9	17.9	10.1	7.0	14.3	4.7	2.9	7.4
Moonee Valley (C)	16.9	13.3	21.2	12.7	9.4	17.1	6.0	3.7	9.6
Moorabool (S)	16.2	12.4	20.9	17.0	12.8	22.2	6.7	4.1	10.7
Moreland (C)	17.8	14.1	22.1	10.7	8.2	13.9	7.7	5.4	10.9
Mornington Peninsula (S)	13.9	10.2	18.7	16.5	11.6	23.0	10.5	7.0	15.5
Mount Alexander (S)	17.8	13.0	23.8	13.2	9.4	18.3	9.4	5.9	14.6
Moyne (S)	12.9	9.8	16.8	17.4	12.5	23.7	6.4	4.0	10.3
Murrindindi (S)	14.6	10.1	20.5	12.0	9.0	15.7	9.5	5.8	15.2
Nillumbik (S)	17.2	13.7	21.3	16.0	12.2	20.6	7.5	4.9	11.4
Northern Grampians (S)	16.7	12.4	22.1	16.2	11.9	21.7	10.2	6.7	15.3
Port Phillip (C)	17.1	13.4	21.6	11.7	8.4	16.0	7.3	5.1	10.2
Pyrenees (S)	13.1	10.1	16.9	13.7	9.5	19.3	11.8	7.2	18.8
Queenscliffe (B)	12.8	9.1	17.7	15.0	10.3	21.4	8.0*	4.6	13.6
Southern Grampians (S)	19.4	14.7	25.3	13.0	9.4	17.7	10.2	6.8	15.1
South Gippsland (S)	15.5	12.4	19.2	15.8	11.7	21.0	10.0	6.5	15.0
Stonnington (C)	14.1	10.9	18.2	12.5	9.3	16.5	7.7	5.0	11.7
Strathbogie (S)	14.6	11.2	18.8	12.0	8.7	16.2	8.2*	4.6	14.2
Surf Coast (S)	14.8	11.8	18.5	9.6	6.5	14.0	16.0	10.4	23.9
Swan Hill (RC)	12.8	9.6	16.8	20.6	15.2	27.2	11.2	7.0	17.5
Towong (S)	15.5	10.8	21.8	9.2	6.2	13.3	10.2*	6.1	16.4
Wangaratta (RC)	17.9	13.5	23.4	13.2	8.8	19.2	7.5	4.7	11.6
Warrnambool (C)	13.7	10.5	17.8	16.9	12.5	22.4	5.3*	3.0	9.3
Wellington (S)	22.3	17.1	28.5	10.2	7.2	14.2	9.7	6.3	14.6
West Wimmera (S)	15.0	11.5	19.3	12.9	9.3	17.6	10.9	7.4	15.6
Whitehorse (C)	10.8	8.1	14.3	12.9	9.6	17.0	10.9	7.2	16.1
Whittlesea (C)	14.9	11.7	18.7	16.7	13.1	20.9	8.9	6.3	12.2
Wodonga (RC)	17.2	13.2	22.1	10.7	7.9	14.4	7.5	5.1	11.0
Wyndham (C)	14.2	11.3	17.9	12.5	9.8	16.0	8.0	5.5	11.5
Yarra (C)	14.0	10.9	17.9	12.7	9.4	16.9	11.5	8.5	15.3
Yarra Ranges (S)	12.4	9.6	16.0	16.3	12.7	20.7	9.2	6.6	12.7
Yarriambiack (S)	21.6	16.5	27.7	11.1	7.8	15.8	8.9	5.9	13.2
<b>Total</b>	<b>15.4</b>	<b>14.8</b>	<b>16.0</b>	<b>13.0</b>	<b>12.5</b>	<b>13.6</b>	<b>8.3</b>	<b>7.7</b>	<b>8.8</b>

**Figure 2.34: Most recent visit to eye care specialist or eye clinic was less than six months ago, by LGA, 2008**



**Figure 2.35: Most recent visit to eye care specialist or eye clinic was between six months and one year ago, 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 line on the graph is the Victorian estimate, it does not show the 95% CI. See relevant table for 95% CI for Victoria (Total).

## Selected eye conditions

Persons aged 18 years and over who reported having ever seen an eye care specialist or visited an eye clinic, were asked if they had ever had a cataract, glaucoma, macular degeneration or if they were diabetic and had been diagnosed with diabetic retinopathy. Table 2.62 shows that less than one in ten (8.3 per cent) persons had ever had a cataract. Females (9.2 per cent) were more likely than males (7.2 per cent) to report having ever had a cataract.

In 2008, 2.3 per cent of persons reported having had glaucoma, 2.1 per cent reported having macular degeneration and 0.6 per cent reported having been diagnosed with diabetic retinopathy. There were no differences in the prevalence of these conditions between males and females.

**Table 2.62: Selected eye conditions, by sex, 2008**

	Cataract			Glaucoma			Macular degeneration			Diabetic retinopathy <sup>(a)</sup>		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Sex</b>												
Males	7.2	6.7	7.6	2.2	1.9	2.5	2.1	1.8	2.4	0.8	0.6	1.1
Females	9.2	8.9	9.7	2.3	2.1	2.6	2.2	1.9	2.4	0.4*	0.3	0.6
<b>Persons</b>	<b>8.3</b>	<b>8.0</b>	<b>8.6</b>	<b>2.3</b>	<b>2.1</b>	<b>2.5</b>	<b>2.1</b>	<b>1.9</b>	<b>2.4</b>	<b>0.6</b>	<b>0.5</b>	<b>0.7</b>

(a) Only persons aged 18 years and over who reported they had been diagnosed with diabetes (excluding gestational) and had seen an eye care specialist or visited an eye clinic were asked whether they had been diagnosed with diabetic retinopathy.

95% CI = 95 per cent confidence interval.

Data are age standardised to the 2006 Victorian population.

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

## Health checks

The 2008 survey collected information about health checks from males and females aged 18 years and over. In particular, the survey asked about blood pressure checks, cholesterol checks and diabetes or high blood sugar (glucose) level checks in the past two years.

### Blood pressure checks

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

Table 2.63 shows the proportion of persons aged 18 years and over who reported having had a blood pressure check in the past two years, by age group and sex. Females (83.5 per cent) were more likely than their male (75.6 per cent) counterparts to report having had their blood pressure checked in the past two years. This was largely due to a higher proportion of females aged less than 45 years of age, compared with males, who reported having had a blood pressure check. The proportion of persons who had had their blood pressure checked increased with age group, from 53.9 per cent of persons aged 18–24 years to 96.6 per cent of persons aged 75 years and over.

**Table 2.63: Blood pressure check in the past two years, by age group and sex, 2008**

Age group (years)	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
18–24	44.8	40.1	49.6	63.5	59.1	67.6	53.9	50.7	57.2
25–34	59.3	55.4	63.2	78.9	76.4	81.3	69.1	66.7	71.4
35–44	72.6	69.8	75.2	79.7	78.0	81.4	76.2	74.6	77.7
45–54	84.9	82.7	86.8	86.9	85.3	88.3	85.9	84.6	87.1
55–64	93.6	92.2	94.7	92.1	90.9	93.2	92.8	91.9	93.6
65–74	95.1	93.7	96.2	96.5	95.5	97.2	95.8	95.1	96.5
75+	96.3	94.3	97.6	96.7	95.5	97.6	96.6	95.5	97.4
<b>Total</b>	<b>75.6</b>	<b>74.4</b>	<b>76.8</b>	<b>83.5</b>	<b>82.6</b>	<b>84.3</b>	<b>79.5</b>	<b>78.8</b>	<b>80.3</b>

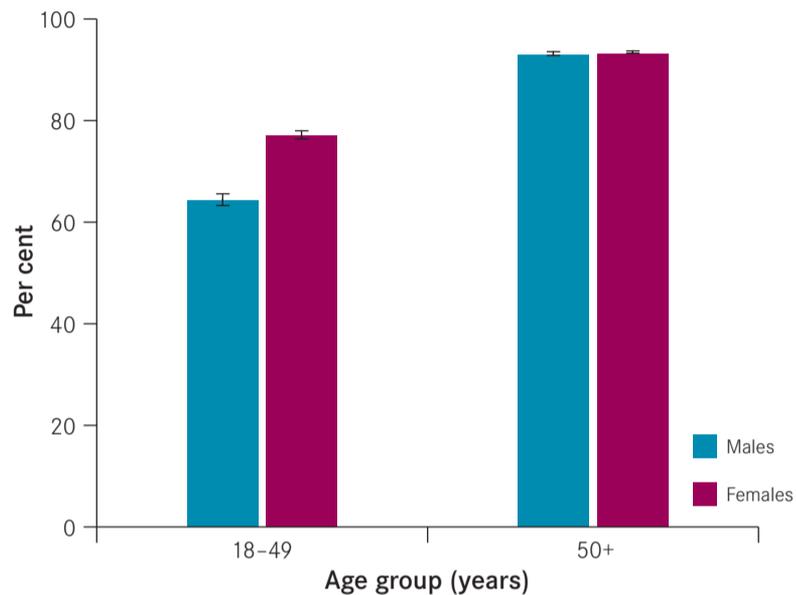
95% CI = 95 per cent confidence interval.

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.

Figure 2.36 shows the proportion of males and females who had had their blood pressure checked in the past two years for two age groups— those aged 18–49 years and 50 years and over. Consistent with the data reported in table 2.63, females, aged 18–49 years (77.0 per cent), were more likely to report having their blood pressure checked in the past two years than males, aged 18–49 years (64.2 per cent). The proportions of males and females, aged 50 years and over, who reported having had blood pressure checks were very similar (93.0 per cent and 93.2 per cent respectively).

**Figure 2.36: Blood pressure check in the past two years, by age group and sex, 2008**



Data are age standardised to the 2006 Victorian population.

Table 2.64 shows the proportion of persons who reported that they had had a blood pressure check in the past two years, by Department of Health region and age group. There were no significant differences between regions and the state average for males and females, aged 18–49 years and 50 years and over. However, the proportions of females, aged 18–49 years, who had had a blood pressure check in the past two years were higher than the corresponding proportions for males in the Eastern Metropolitan, Gippsland, Hume, Loddon Mallee, North and West Metropolitan and Southern Metropolitan regions.

Table 2.64: Blood pressure check in the past two years, by Department of Health region, sex and age group, 2008

Region	Age group (years)								
	18–49			50+			Total		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>									
Barwon–South Western	62.6	53.7	70.8	88.6	83.7	92.2	73.0	67.2	78.1
Eastern Metropolitan	62.4	57.3	67.2	92.8	90.5	94.6	74.5	71.3	77.5
Gippsland	60.0	53.4	66.2	93.0	90.0	95.2	73.1	68.9	76.9
Grampians	61.8	55.5	67.7	93.8	91.1	95.7	74.5	70.5	78.1
Hume	66.4	61.1	71.4	91.5	88.4	93.9	76.4	72.9	79.5
Loddon Mallee	66.1	60.5	71.3	94.1	92.0	95.6	77.2	73.7	80.4
North and West Metropolitan	65.6	62.5	68.6	93.8	92.2	95.1	76.8	74.9	78.7
Southern Metropolitan	64.3	60.1	68.2	93.4	91.2	95.1	75.8	73.2	78.3
<b>Metropolitan</b>	<b>64.3</b>	<b>62.1</b>	<b>66.5</b>	<b>92.0</b>	<b>90.4</b>	<b>93.4</b>	<b>75.9</b>	<b>74.4</b>	<b>77.2</b>
<b>Rural</b>	<b>63.7</b>	<b>60.3</b>	<b>66.9</b>	<b>93.4</b>	<b>92.2</b>	<b>94.3</b>	<b>74.9</b>	<b>72.8</b>	<b>76.9</b>
<b>Total</b>	<b>64.2</b>	<b>62.3</b>	<b>66.0</b>	<b>93.0</b>	<b>92.1</b>	<b>93.8</b>	<b>75.6</b>	<b>74.4</b>	<b>76.8</b>
<b>Females</b>									
Barwon–South Western	75.1	68.9	80.5	92.5	89.6	94.7	82.0	78.1	85.4
Eastern Metropolitan	77.4	73.7	80.7	92.4	90.4	94.0	83.4	81.0	85.5
Gippsland	79.8	75.7	83.4	91.1	88.8	93.0	84.3	81.7	86.6
Grampians	71.6	65.3	77.2	94.7	93.3	95.9	80.8	76.9	84.2
Hume	80.9	77.6	83.7	93.3	91.7	94.6	85.8	83.8	87.6
Loddon Mallee	76.8	72.1	80.8	93.1	91.3	94.5	83.2	80.4	85.8
North and West Metropolitan	77.5	75.2	79.6	94.7	93.3	95.7	84.3	82.9	85.7
Southern Metropolitan	76.9	73.8	79.7	92.9	91.2	94.3	83.3	81.3	85.1
<b>Metropolitan</b>	<b>77.1</b>	<b>75.5</b>	<b>78.7</b>	<b>93.4</b>	<b>92.5</b>	<b>94.2</b>	<b>83.6</b>	<b>82.6</b>	<b>84.6</b>
<b>Rural</b>	<b>76.7</b>	<b>74.3</b>	<b>79.0</b>	<b>92.9</b>	<b>91.9</b>	<b>93.7</b>	<b>83.1</b>	<b>81.6</b>	<b>84.5</b>
<b>Total</b>	<b>77.0</b>	<b>75.6</b>	<b>78.3</b>	<b>93.2</b>	<b>92.5</b>	<b>93.9</b>	<b>83.5</b>	<b>82.6</b>	<b>84.3</b>
<b>Persons</b>									
Barwon–South Western	68.9	63.1	74.1	90.6	87.8	92.9	77.5	73.9	80.8
Eastern Metropolitan	69.9	66.7	72.9	92.6	91.2	93.9	78.9	76.9	80.8
Gippsland	69.7	65.5	73.7	92.0	90.1	93.6	78.6	75.9	81.1
Grampians	66.7	62.2	71.0	94.3	92.8	95.5	77.7	74.9	80.3
Hume	73.6	70.4	76.5	92.5	90.6	94.0	81.1	79.0	83.0
Loddon Mallee	71.5	67.8	75.0	93.6	92.3	94.7	80.3	77.9	82.4
North and West Metropolitan	71.6	69.6	73.4	94.2	93.2	95.1	80.6	79.3	81.7
Southern Metropolitan	70.5	67.9	73.0	93.1	91.8	94.3	79.5	77.8	81.1
<b>Metropolitan</b>	<b>70.7</b>	<b>69.3</b>	<b>72.1</b>	<b>93.4</b>	<b>92.7</b>	<b>94.0</b>	<b>79.7</b>	<b>78.8</b>	<b>80.6</b>
<b>Rural</b>	<b>70.2</b>	<b>68.1</b>	<b>72.2</b>	<b>92.4</b>	<b>91.5</b>	<b>93.3</b>	<b>79.0</b>	<b>77.7</b>	<b>80.3</b>
<b>Total</b>	<b>70.6</b>	<b>69.4</b>	<b>71.7</b>	<b>93.1</b>	<b>92.6</b>	<b>93.6</b>	<b>79.5</b>	<b>78.8</b>	<b>80.3</b>

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.



Table 2.65 and figure 2.37 show the proportion of persons who had a blood pressure check in the past two years by age group (18–49 years and 50 years and over) and LGA. The proportion of persons aged 50 years and over who had had their blood pressure checked was below the average for Victoria (93.1 per cent) in two rural LGAs– Mansfield (88.9 per cent) and Colac–Otway (88.2 per cent), and in two metropolitan LGAs– Yarra Ranges (86.5 per cent) and Melbourne (85.5 per cent). The proportion of persons aged 50 years and over who had had a blood pressure check in the past two years was above the average for Victoria in two LGAs– Whittlesea (97.1 per cent) and Moorabool (96.9 per cent).

The proportion of persons, aged 18–49 years, who had had their blood pressure checked in the past two years was below the average for Victoria (70.6 per cent) in four rural LGAs– Mansfield (60.0 per cent), Loddon (57.8 per cent), Colac–Otway (57.7 per cent) and Northern Grampians (57.7 per cent). There were also two LGAs– Wangaratta (82.7 per cent) and Stonnington (80.2 per cent)– where the proportion of persons, aged 18–49 years, who had had a blood pressure check was higher than the Victorian average.

Table 2.65: Blood pressure check in the past two years, by age group and LGA, 2008

LGA	Age group (years)								
	18–49			50+			Total		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	69.5	59.3	78.1	91.4	87.0	94.4	78.2	71.8	83.6
Ararat (RC)	65.4	54.0	75.3	92.8	88.8	95.4	76.3	69.1	82.3
Ballarat (C)	64.1	55.9	71.6	95.0	90.8	97.3	76.4	71.1	81.0
Banyule (C)	73.0	63.7	80.7	95.8	92.0	97.9	82.1	76.2	86.8
Bass Coast (S)	65.9	51.6	77.8	94.9	91.5	97.0	77.4	68.3	84.5
Baw Baw (S)	69.7	59.3	78.4	92.3	88.2	95.1	78.7	72.1	84.1
Bayside (C)	63.8	54.8	71.9	93.0	88.8	95.7	75.4	69.6	80.4
Benalla (RC)	75.4	66.5	82.6	96.1	93.0	97.8	83.6	78.1	88.0
Boroondara (C)	71.2	62.8	78.4	94.2	90.1	96.7	80.4	75.0	84.8
Brimbank (C)	67.1	60.7	72.9	95.8	91.8	97.9	78.5	74.4	82.1
Buloke (S)	69.2	56.9	79.2	91.3	87.3	94.2	78.0	70.3	84.2
Campaspe (S)	75.0	65.9	82.4	91.0	86.5	94.2	81.4	75.6	86.1
Cardinia (S)	67.0	58.1	74.9	93.1	87.4	96.3	77.4	71.5	82.3
Casey (C)	72.0	64.8	78.2	94.9	90.0	97.5	81.1	76.5	85.1
Central Goldfields (S)	78.5	68.0	86.2	89.6	84.3	93.2	82.9	76.3	87.9
Colac-Otway (S)	57.7	47.6	67.2	88.2	82.5	92.2	69.8	63.2	75.7
Corangamite (S)	72.9	63.5	80.6	92.8	88.7	95.5	80.8	74.9	85.6
Darebin (C)	67.9	62.2	73.1	94.4	90.5	96.7	78.4	74.7	81.7
East Gippsland (S)	65.6	53.2	76.2	92.4	88.5	95.0	76.2	68.4	82.6
Frankston (C)	64.5	56.1	72.1	93.4	88.9	96.2	76.0	70.6	80.7
Gannawarra (S)	66.5	58.2	73.9	94.2	90.4	96.6	77.5	72.2	82.0
Glen Eira (C)	72.3	64.7	78.8	91.0	86.3	94.2	79.7	74.8	83.9
Glenelg (S)	75.7	65.5	83.7	92.2	87.6	95.1	82.3	75.8	87.3
Golden Plains (S)	63.7	54.6	71.9	93.8	89.7	96.4	75.7	69.8	80.7
Greater Bendigo (C)	69.6	62.0	76.3	94.1	90.3	96.5	79.4	74.5	83.5
Greater Dandenong (C)	64.4	56.6	71.4	95.4	91.8	97.5	76.7	71.7	81.0
Greater Geelong (C)	69.0	59.7	77.0	89.7	84.8	93.2	77.2	71.3	82.3
Greater Shepparton (C)	74.8	66.0	81.9	91.0	85.2	94.7	81.2	75.5	85.9
Hepburn (S)	74.5	63.8	82.9	92.2	88.4	94.8	81.5	74.8	86.7
Hindmarsh (S)	66.2	56.7	74.5	96.0	92.3	97.9	78.0	72.0	83.0
Hobsons Bay (C)	76.4	68.5	82.8	93.0	88.5	95.8	83.0	78.0	87.1
Horsham (RC)	70.7	61.8	78.3	92.7	88.4	95.5	79.5	73.8	84.2
Hume (C)	77.5	71.2	82.7	94.2	89.9	96.7	84.1	80.1	87.5
Indigo (S)	68.6	56.7	78.5	91.9	87.4	94.9	77.9	70.3	83.9
Kingston (C)	76.2	67.0	83.5	92.4	88.0	95.2	82.6	76.8	87.3
Knox (C)	72.4	64.3	79.3	95.1	91.6	97.2	81.4	76.3	85.7
Latrobe (C)	72.6	64.5	79.4	91.2	85.4	94.8	80.0	74.7	84.4
Loddon (S)	57.8	49.2	65.9	92.4	87.9	95.3	71.5	66.0	76.5
Macedon Ranges (S)	74.9	67.6	81.0	93.7	89.8	96.2	82.4	77.7	86.2
Manningham (C)	67.4	58.4	75.2	91.2	86.7	94.3	76.9	71.1	81.7

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

95% CI = 95 per cent confidence interval.

LGA = local government area.

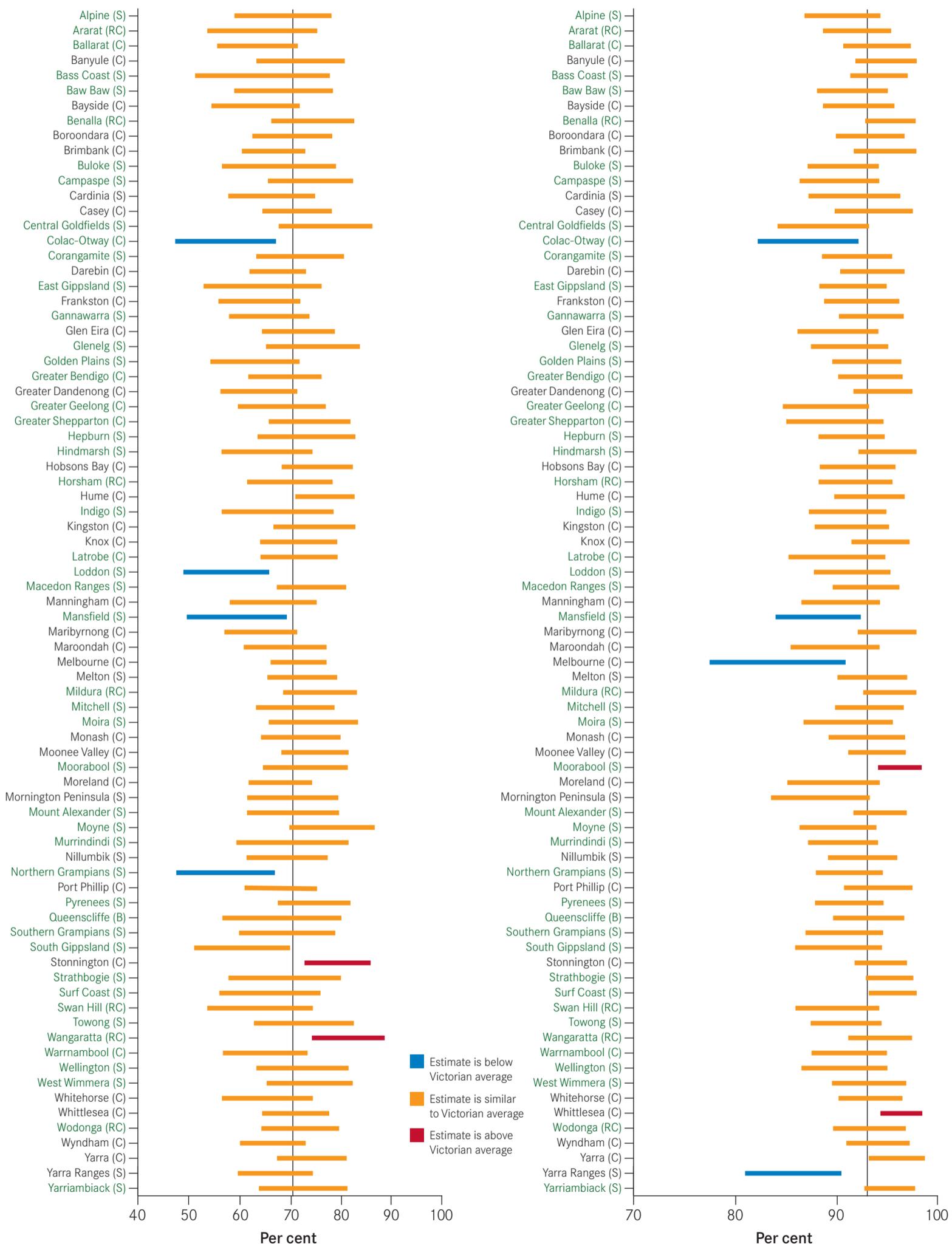
Data are age standardised to the 2006 Victorian population.

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

Table 2.65: Blood pressure check in the past two years, by age group and LGA, 2008 (continued)

LGA	Age group (years)								
	18–49			50+			Total		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	60.0	49.9	69.3	88.9	84.1	92.4	71.5	65.0	77.2
Maribyrnong (C)	64.7	57.3	71.4	95.9	92.2	97.9	77.1	72.4	81.2
Maroondah (C)	69.7	61.1	77.1	90.8	85.6	94.3	78.1	72.5	82.8
Melbourne (C)	72.1	66.4	77.1	85.5	77.6	90.9	77.4	73.0	81.3
Melton (S)	73.1	65.8	79.3	94.6	90.2	97.0	81.6	76.9	85.5
Mildura (RC)	76.8	68.9	83.2	96.1	92.8	97.9	84.5	79.5	88.4
Mitchell (S)	71.7	63.5	78.8	94.1	90.0	96.6	80.6	75.4	85.0
Moira (S)	75.7	66.0	83.4	92.3	86.9	95.6	82.3	76.1	87.2
Monash (C)	73.0	64.5	80.0	94.1	89.4	96.8	81.4	76.0	85.8
Moonee Valley (C)	75.7	68.6	81.5	94.8	91.3	96.9	83.3	78.8	86.9
Moorabool (S)	73.9	64.8	81.4	96.9	94.2	98.4	83.1	77.4	87.6
Moreland (C)	68.5	62.0	74.4	90.8	85.3	94.3	77.4	73.0	81.2
Mornington Peninsula (S)	71.5	61.8	79.6	89.4	83.7	93.3	78.6	72.4	83.8
Mount Alexander (S)	71.6	61.8	79.7	95.0	91.8	97.0	80.9	74.8	85.8
Moyne (S)	79.6	70.1	86.7	90.9	86.5	94.0	84.1	78.2	88.6
Murrindindi (S)	71.8	59.6	81.5	91.3	87.3	94.1	79.6	71.9	85.5
Nillumbik (S)	70.2	61.7	77.4	93.4	89.3	96.0	79.4	74.0	83.9
Northern Grampians (S)	57.7	47.8	66.9	91.9	88.1	94.6	71.3	65.0	76.9
Port Phillip (C)	68.8	61.3	75.3	95.2	90.9	97.5	79.3	74.5	83.3
Pyrenees (S)	75.5	67.8	81.9	91.9	88.0	94.6	82.0	77.1	86.1
Queenscliffe (B)	69.7	56.9	80.1	94.2	89.8	96.7	79.4	71.3	85.7
Southern Grampians (S)	70.4	60.2	78.9	91.2	86.1	94.5	78.7	72.2	84.0
South Gippsland (S)	61.0	51.3	70.0	91.6	87.1	94.6	73.2	66.9	78.6
Stonnington (C)	80.2	73.1	85.9	95.0	91.9	97.0	86.1	81.6	89.6
Strathbogie (S)	70.1	58.0	79.9	95.9	93.1	97.6	80.4	72.8	86.3
Surf Coast (S)	66.8	56.3	76.0	96.2	93.3	97.9	78.5	71.8	84.0
Swan Hill (RC)	64.9	54.0	74.5	90.9	86.1	94.2	75.3	68.2	81.1
Towong (S)	74.0	63.1	82.5	91.7	87.6	94.5	81.0	74.2	86.3
Wangaratta (RC)	82.7	74.6	88.6	95.2	91.3	97.4	87.6	82.6	91.4
Warrnambool (C)	65.7	57.0	73.5	92.1	87.7	95.0	76.2	70.6	81.0
Wellington (S)	73.5	63.6	81.5	91.7	86.7	95.0	80.7	74.4	85.8
West Wimmera (S)	74.9	65.6	82.4	94.3	89.7	96.9	82.6	76.7	87.3
Whitehorse (C)	66.2	56.8	74.4	94.1	90.3	96.5	77.3	71.4	82.3
Whittlesea (C)	71.7	64.8	77.7	97.1	94.5	98.5	81.8	77.5	85.4
Wodonga (RC)	72.8	64.5	79.8	94.3	89.8	96.9	81.4	76.1	85.7
Wyndham (C)	67.0	60.4	73.0	94.9	91.1	97.2	78.1	73.9	81.8
Yarra (C)	75.0	67.6	81.1	97.0	93.3	98.7	83.7	79.1	87.5
Yarra Ranges (S)	67.7	60.0	74.5	86.5	81.1	90.5	75.2	70.1	79.6
Yarriambiack (S)	73.6	64.1	81.3	95.9	92.9	97.7	82.5	76.5	87.2
<b>Total</b>	<b>70.6</b>	<b>69.4</b>	<b>71.7</b>	<b>93.1</b>	<b>92.6</b>	<b>93.6</b>	<b>79.5</b>	<b>78.8</b>	<b>80.3</b>

**Figure 2.37: Blood pressure check in the past two years, by age group<sup>(a)</sup> and LGA, 2008**  
**18–49 years** **50 years and over**



(a) Note that the scale differs for the two parts of the graph. 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 line on the graph is the Victorian estimate, it does not show the 95% CI. See relevant table for 95% CI for Victoria (Total).

## Cholesterol checks

Elevated blood cholesterol is an important risk factor for coronary heart disease, stroke and peripheral vascular disease (AIHW 2004).

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

Table 2.66 shows the proportion of persons aged 18 years and over who reported having had a blood cholesterol check in the past two years, by age group and sex. The table shows that a higher proportion of males than females reported that they had had a blood cholesterol test in the past two years (57.9 per cent and 55.2 per cent respectively). For both males and females, the proportions of those who had had their blood cholesterol checked increased with age group to 65–74 years. The proportion of males who had had a cholesterol check in the past two years ranged from 14.0 per cent of those aged 18–24 years to 89.3 per cent of males aged 65–74 years. The proportion of females who had had a cholesterol check ranged from 20.2 per cent of those aged 18–24 years to 85.2 per cent of those aged 65–74 years.

**Table 2.66: Blood test for cholesterol in the past two years, by age group and sex, 2008**

Age group (years)	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
18–24	14.0	11.0	17.7	20.2	16.8	24.2	17.1	14.7	19.7
25–34	31.5	27.9	35.4	32.1	29.5	34.9	31.8	29.6	34.2
35–44	53.0	50.0	56.0	46.5	44.4	48.6	49.7	47.9	51.6
45–54	74.8	72.4	77.1	68.7	66.7	70.8	71.8	70.2	73.3
55–64	85.3	83.3	87.0	79.4	77.6	81.0	82.3	81.0	83.5
65–74	89.3	87.3	90.9	85.2	83.4	86.8	87.1	85.8	88.3
75+	86.3	83.3	88.8	83.1	80.7	85.2	84.4	82.6	86.1
<b>Total</b>	<b>57.9</b>	<b>56.7</b>	<b>59.0</b>	<b>55.2</b>	<b>54.3</b>	<b>56.2</b>	<b>56.5</b>	<b>55.7</b>	<b>57.2</b>

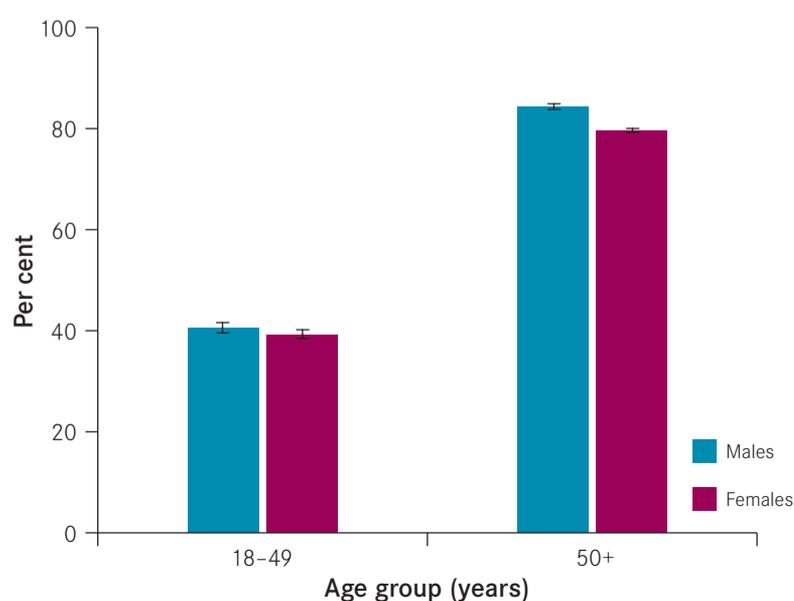
95% CI = 95 per cent confidence interval.

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 s follows: **above Victoria** / **below Victoria**.

The data in figure 2.38 show the proportion of males and females who had had a cholesterol check in the past two years for two age groups—those aged 18–49 years and 50 years and over. Males aged 50 years and over were more likely to have reported having had their blood cholesterol checked in the past two years than females (84.3 per cent and 79.6 per cent respectively). The proportion of persons who reported having had their blood cholesterol checked in the past two years was similar for males and females in the younger age group (18–49 years) (40.5 percent and 39.1 per cent respectively).

**Figure 2.38: Blood test for cholesterol in the past two years, by age group and sex, 2008**



Data are age standardised to the 2006 Victorian population.

A higher proportion of persons aged 18–49 years from the metropolitan area (41.0 per cent) reported that they had had a blood cholesterol check in the past two years, compared with persons from rural areas (35.6 per cent) of Victoria (table 2.67). Persons aged 50 years and over from the metropolitan area were also more likely to have had a blood cholesterol check in the past two years compared with those from rural areas (83.1 per cent and 79.0 per cent respectively). A higher proportion of males aged 50 years and over than females reported having had a cholesterol check in three Department of Health regions: Gippsland (83.4 per cent of males compared with 75.3 per cent of females), Loddon Mallee (85.3 per cent of males compared with 77.3 per cent of females) and Southern Metropolitan (85.7 per cent of males compared with 78.3 per cent of females).

Table 2.67: Blood test for cholesterol in the past two years, by Department of Health region, sex and age group, 2008

Region	Age group (years)								
	18-49			50+			Total		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>									
Barwon-South Western	36.9	28.7	46.0	79.4	73.6	84.1	53.8	48.1	59.4
Eastern Metropolitan	41.5	37.0	46.2	83.4	80.1	86.2	58.2	55.1	61.1
Gippsland	36.3	31.1	41.7	83.4	79.7	86.5	55.0	51.5	58.4
Grampians	33.0	27.9	38.6	77.5	73.4	81.2	50.7	47.1	54.3
Hume	40.0	34.8	45.5	83.9	80.9	86.6	57.5	54.0	60.9
Loddon Mallee	40.2	34.6	46.0	85.3	82.4	87.8	58.1	54.5	61.6
North and West Metropolitan	41.6	38.9	44.5	86.4	84.0	88.5	59.4	57.5	61.3
Southern Metropolitan	41.7	37.9	45.6	85.7	82.9	88.0	59.2	56.6	61.7
<b>Metropolitan</b>	41.5	39.5	43.6	85.3	83.7	86.7	58.9	57.5	60.3
<b>Rural</b>	37.4	34.3	40.6	82.0	80.1	83.8	55.1	53.1	57.1
<b>Total</b>	40.5	38.8	42.2	84.3	83.1	85.4	57.9	56.7	59.0
<b>Females</b>									
Barwon-South Western	35.3	30.0	40.9	73.0	68.8	76.9	50.3	46.6	53.9
Eastern Metropolitan	38.4	34.8	42.2	78.7	75.9	81.3	54.4	52.0	56.9
Gippsland	31.0	27.0	35.5	75.3	72.0	78.3	48.6	45.8	51.5
Grampians	32.2	26.9	38.0	74.5	71.2	77.5	49.0	45.4	52.6
Hume	36.1	32.6	39.8	80.1	77.8	82.2	53.6	51.2	55.9
Loddon Mallee	33.7	29.8	37.9	77.3	74.5	80.0	51.0	48.4	53.7
North and West Metropolitan	43.1	40.7	45.5	85.4	83.5	87.2	59.9	58.3	61.5
Southern Metropolitan	39.2	36.1	42.3	78.3	75.8	80.7	54.7	52.6	56.8
<b>Metropolitan</b>	40.7	39.0	42.4	81.0	79.6	82.3	56.7	55.6	57.9
<b>Rural</b>	33.8	31.6	36.1	76.1	74.5	77.6	50.6	49.1	52.1
<b>Total</b>	39.1	37.7	40.6	79.6	78.5	80.6	55.2	54.3	56.2
<b>Persons</b>									
Barwon-South Western	36.1	31.0	41.6	76.2	72.7	79.5	52.1	48.6	55.5
Eastern Metropolitan	39.9	37.0	42.9	81.1	78.9	83.0	56.3	54.3	58.2
Gippsland	33.4	30.1	36.9	79.4	76.9	81.7	51.7	49.4	53.9
Grampians	32.6	28.7	36.7	76.1	73.4	78.6	49.9	47.3	52.5
Hume	38.0	34.8	41.4	82.0	80.1	83.7	55.5	53.4	57.6
Loddon Mallee	36.9	33.4	40.5	81.3	79.2	83.1	54.5	52.2	56.8
North and West Metropolitan	42.2	40.3	44.0	85.9	84.4	87.3	59.5	58.3	60.8
Southern Metropolitan	40.4	37.9	42.8	81.8	79.9	83.5	56.8	55.2	58.4
<b>Metropolitan</b>	41.0	39.7	42.3	83.1	82.1	84.1	57.7	56.8	58.6
<b>Rural</b>	35.6	33.7	37.5	79.0	77.8	80.2	52.8	51.6	54.1
<b>Total</b>	39.7	38.6	40.8	81.9	81.1	82.7	56.5	55.7	57.2

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 2.68 and figure 2.39 show the proportion of persons who reported having had a cholesterol check in the past two years by age group (18–49 years and 50 years and over) and LGA. There was considerable variation across LGAs in the proportion of persons aged 50 years and over who had had their blood cholesterol checked in the past two years, ranging from 68.8 per cent of persons in Northern Grampians to 90.5 per cent in Brimbank. There were 13 LGAs where the proportion of persons aged 50 years and over who reported having had a cholesterol check, was below the average for Victoria (81.9 per cent). Of these 13 LGAs, one was located in the metropolitan area– Mornington Peninsula (75.4 per cent). The other 12 LGAs were located in rural Victoria and distributed across five rural Department of Health regions– Horsham (75.9 per cent), Greater Geelong (75.4 per cent), Pyrenees (74.8 per cent), Golden Plains (74.7 per cent), Central Goldfields (73.7 per cent), Ballarat (73.1 per cent), Mansfield (73.1 per cent), Ararat (72.1 per cent), Moyne (71.9 per cent), Swan Hill (71.7 per cent), Colac–Otway (71.2 per cent) and Northern Grampians (68.8 per cent).

Among persons aged 18–49 years, the proportion reporting that they had had a cholesterol check within the past two years ranged from 22.6 per cent in Colac–Otway to 50.6 per cent in Brimbank. The proportion of persons aged 18–49 years who had had a cholesterol check in the past two years was below the average for Victoria (39.7 per cent) in 15 LGAs– Nillumbik (31.3 per cent), Horsham (29.7 per cent), South Gippsland (29.5 per cent), Mansfield (29.4 per cent), Surf Coast (29.3 per cent), Mount Alexander (28.4 per cent), Hindmarsh (28.1 per cent), Baw Baw (28.0 per cent), Golden Plains (27.9 per cent), Swan Hill (26.9 per cent), Indigo (26.7 per cent), Ararat (26.0 per cent), Alpine (25.8 per cent), Queenscliffe (23.1 per cent) and Colac–Otway (22.6 per cent).

Table 2.68: Blood test for cholesterol in the past two years, by age group and LGA, 2008

LGA	Age group (years)								
	18-49			50+			Total		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	25.8	19.7	33.2	77.3	71.3	82.3	46.3	41.7	50.9
Ararat (RC)	26.0	20.0	33.0	72.1	65.3	78.0	44.3	39.7	49.0
Ballarat (C)	31.7	24.7	39.7	73.1	66.3	79.0	48.2	43.0	53.4
Banyule (C)	36.0	28.5	44.3	86.6	81.5	90.4	56.1	51.0	61.1
Bass Coast (S)	34.0	25.2	44.0	86.2	81.5	89.9	54.7	48.7	60.6
Baw Baw (S)	28.0	21.8	35.0	75.8	69.5	81.1	47.0	42.4	51.6
Bayside (C)	31.3	24.2	39.4	79.2	73.3	84.0	50.3	45.3	55.4
Benalla (RC)	40.8	31.5	50.8	81.7	76.3	86.1	57.0	50.7	63.1
Boroondara (C)	31.9	25.6	39.1	80.0	73.9	85.0	51.0	46.4	55.7
Brimbank (C)	50.6	45.1	56.2	90.5	85.3	94.0	66.5	62.6	70.1
Buloke (S)	39.4	31.2	48.2	80.0	74.8	84.4	55.5	50.0	60.9
Campaspe (S)	44.5	36.5	52.9	81.4	76.1	85.8	59.2	53.8	64.4
Cardinia (S)	34.5	28.4	41.1	79.2	72.8	84.4	52.3	47.8	56.7
Casey (C)	45.4	38.7	52.3	87.6	81.5	91.8	62.2	57.5	66.7
Central Goldfields (S)	35.0	26.7	44.4	73.7	67.4	79.1	50.4	44.5	56.2
Colac-Otway (S)	22.6	16.9	29.7	71.2	64.2	77.3	41.9	37.3	46.6
Corangamite (S)	38.3	30.7	46.5	79.2	73.1	84.3	54.5	49.2	59.7
Darebin (C)	42.3	35.9	48.9	86.5	81.6	90.3	59.9	55.5	64.1
East Gippsland (S)	34.0	24.6	44.9	78.7	73.4	83.2	51.8	45.3	58.2
Frankston (C)	37.8	30.4	45.9	81.6	75.8	86.2	55.2	50.0	60.3
Gannawarra (S)	32.9	26.4	40.2	86.5	81.7	90.2	54.2	49.7	58.7
Glen Eira (C)	34.8	28.8	41.3	80.4	74.3	85.4	52.9	48.5	57.3
Glenelg (S)	40.2	32.3	48.6	80.2	74.5	84.8	56.1	50.7	61.4
Golden Plains (S)	27.9	21.9	34.7	74.7	67.6	80.7	46.5	41.9	51.2
Greater Bendigo (C)	37.8	30.0	46.2	83.2	77.7	87.6	55.8	50.5	61.1
Greater Dandenong (C)	46.0	39.7	52.4	89.3	84.5	92.7	63.2	59.0	67.3
Greater Geelong (C)	37.3	29.2	46.2	75.4	69.2	80.6	52.4	46.7	58.0
Greater Shepparton (C)	42.9	34.1	52.1	81.1	74.7	86.2	58.1	52.0	63.8
Hepburn (S)	36.3	25.7	48.3	78.0	72.4	82.8	52.8	45.6	60.0
Hindmarsh (S)	28.1	21.2	36.1	77.1	70.8	82.3	47.5	42.5	52.6
Hobsons Bay (C)	42.7	35.3	50.4	80.2	73.9	85.3	57.6	52.4	62.6
Horsham (RC)	29.7	23.3	36.9	75.9	70.1	80.9	48.0	43.4	52.7
Hume (C)	47.6	41.2	54.1	90.2	85.2	93.7	64.6	60.2	68.7
Indigo (S)	26.7	20.8	33.5	75.8	69.4	81.3	46.2	41.8	50.8
Kingston (C)	37.8	31.3	44.8	80.7	75.1	85.4	54.9	50.3	59.4
Knox (C)	42.8	34.8	51.1	81.8	76.1	86.4	58.3	52.9	63.5
Latrobe (C)	35.1	28.8	42.1	80.1	72.7	85.9	53.0	48.2	57.7
Loddon (S)	30.9	23.8	39.2	77.0	71.3	81.9	49.2	44.1	54.4
Macedon Ranges (S)	41.7	34.0	49.8	84.3	78.8	88.6	58.6	53.4	63.7
Manningham (C)	47.6	39.3	55.9	80.3	74.4	85.0	60.6	55.0	65.9

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

95% CI = 95 per cent confidence interval.

LGA = local government area.

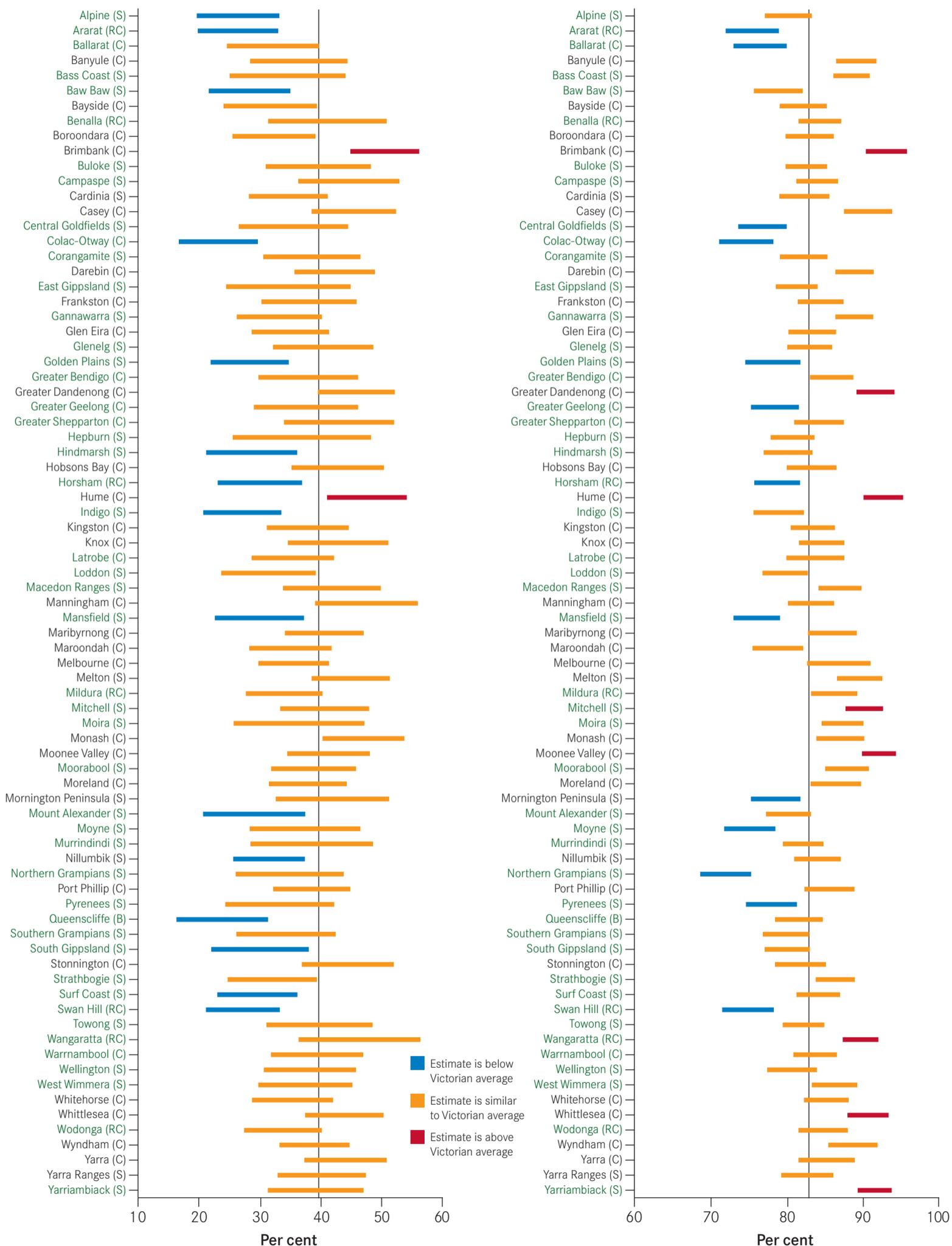
Data are age standardised to the 2006 Victorian population.

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

Table 2.68: Blood test for cholesterol in the past two years, by age group and LGA, 2008 (continued)

LGA	Age group (years)								
	18–49			50+			Total		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	29.4	22.7	37.2	73.1	67.1	78.3	46.7	41.9	51.7
Maribyrnong (C)	40.5	34.3	47.0	82.9	76.6	87.8	57.4	52.9	61.7
Maroondah (C)	34.8	28.5	41.7	75.6	69.1	81.2	51.0	46.4	55.7
Melbourne (C)	35.4	30.0	41.3	82.8	74.6	88.7	54.3	49.8	58.6
Melton (S)	44.9	38.7	51.3	86.7	80.9	91.0	61.5	57.1	65.7
Mildura (RC)	33.8	27.9	40.3	83.3	77.4	87.9	53.5	49.2	57.7
Mitchell (S)	40.6	33.5	48.0	87.8	83.0	91.4	59.3	54.6	63.9
Moira (S)	35.8	25.9	47.1	84.7	79.4	88.9	55.3	48.5	61.8
Monash (C)	47.0	40.4	53.7	84.0	77.8	88.7	61.7	57.0	66.1
Moonee Valley (C)	41.2	34.6	48.1	90.0	85.7	93.1	60.6	56.2	64.9
Moorabool (S)	38.6	32.0	45.7	85.1	79.5	89.3	57.1	52.5	61.6
Moreland (C)	37.8	31.7	44.3	83.3	76.9	88.3	55.9	51.4	60.2
Mornington Peninsula (S)	41.7	32.7	51.2	75.4	69.0	80.8	55.1	48.9	61.1
Mount Alexander (S)	28.4	20.8	37.4	77.4	71.6	82.2	47.9	42.5	53.3
Moyne (S)	37.1	28.6	46.5	71.9	65.3	77.6	50.9	45.0	56.8
Murrindindi (S)	38.1	28.6	48.6	79.6	74.4	84.0	54.6	48.2	60.9
Nillumbik (S)	31.3	25.8	37.3	81.1	75.1	86.0	51.1	47.0	55.2
Northern Grampians (S)	34.4	26.2	43.8	68.8	62.3	74.6	48.1	42.3	54.0
Port Phillip (C)	38.4	32.3	44.9	82.3	75.7	87.5	55.9	51.4	60.3
Pyrenees (S)	32.7	24.5	42.2	74.8	68.3	80.4	49.4	43.6	55.3
Queenscliffe (B)	23.1	16.5	31.3	78.6	72.5	83.7	45.2	40.2	50.2
Southern Grampians (S)	33.9	26.3	42.4	77.0	71.1	82.1	51.0	45.7	56.4
South Gippsland (S)	29.5	22.1	38.0	77.2	71.4	82.2	48.4	43.2	53.7
Stonnington (C)	44.4	37.1	52.0	78.6	72.1	83.9	58.0	52.8	63.0
Strathbogie (S)	31.7	24.9	39.4	83.9	78.9	87.9	52.4	47.7	57.1
Surf Coast (S)	29.3	23.2	36.2	81.5	76.0	86.1	50.1	45.6	54.5
Swan Hill (RC)	26.9	21.4	33.3	71.7	65.1	77.5	44.7	40.4	49.1
Towong (S)	39.5	31.2	48.5	79.5	74.1	84.0	55.4	49.7	61.0
Wangaratta (RC)	46.3	36.5	56.4	87.4	82.8	90.9	62.6	56.1	68.7
Warrnambool (C)	39.2	32.0	47.0	81.0	75.5	85.6	55.9	50.8	60.7
Wellington (S)	38.0	30.7	45.9	77.6	71.3	82.8	53.7	48.5	58.8
West Wimmera (S)	37.3	30.0	45.2	83.4	77.6	87.9	55.6	50.5	60.6
Whitehorse (C)	35.1	28.8	41.9	82.4	76.7	87.0	53.9	49.4	58.3
Whittlesea (C)	43.8	37.5	50.3	88.1	82.9	91.8	61.4	57.1	65.5
Wodonga (RC)	33.5	27.4	40.2	81.7	75.5	86.6	52.7	48.2	57.1
Wyndham (C)	38.9	33.4	44.7	85.6	79.3	90.2	57.4	53.3	61.4
Yarra (C)	44.0	37.4	50.8	81.7	74.5	87.3	59.0	54.1	63.7
Yarra Ranges (S)	40.0	33.1	47.4	79.4	72.7	84.8	55.6	50.6	60.5
Yarriambiack (S)	39.0	31.4	47.1	89.5	85.3	92.6	59.1	54.0	63.9
<b>Total</b>	<b>39.7</b>	<b>38.6</b>	<b>40.8</b>	<b>81.9</b>	<b>81.1</b>	<b>82.7</b>	<b>56.5</b>	<b>55.7</b>	<b>57.2</b>

Figure 2.39: Blood test for cholesterol in the past two years, by age group<sup>(a)</sup> and LGA, 2008



(a) Note that the scale differs for the two parts of the graph.

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 line on the graph is the Victorian estimate, it does not show the 95% CI.  
See relevant table for 95% CI for Victoria (Total).

## Blood glucose checks

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

Table 2.69 shows the proportion of persons aged 18 years and over who reported having had a test for diabetes or a blood glucose check in the past two years, by sex and age group. Overall, there was no difference between the proportion of males and females who reported having had a blood glucose check in the past two years. However, for both males and females, the proportion of those who had had their blood glucose checked was higher for those in older age groups than for those in younger age groups. Younger males were less likely than younger females to have had their blood glucose checked. For example, among those aged 18–24 years, 15.0 per cent of males and 23.3 per cent of females had had their blood glucose checked in the past two years. Similarly, among those aged 25–34 years, a higher proportion of females (46.4 per cent) than males (28.6 per cent) had had their blood glucose checked.

**Table 2.69: Test for diabetes or blood glucose check in the past two years, by age group and sex, 2008**

Age group (years)	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
18–24	15.0	11.8	18.8	23.3	19.8	27.1	19.0	16.6	21.7
25–34	28.6	25.2	32.2	46.4	43.6	49.3	37.5	35.2	39.9
35–44	44.6	41.7	47.7	46.6	44.5	48.7	45.6	43.8	47.5
45–54	63.5	60.8	66.2	59.1	56.9	61.3	61.3	59.6	63.0
55–64	76.3	74.0	78.4	68.0	65.9	70.0	72.1	70.5	73.6
65–74	79.6	77.2	81.8	75.6	73.4	77.7	77.5	75.8	79.0
75+	78.3	74.9	81.3	73.8	71.0	76.5	75.8	73.6	77.8
<b>Total</b>	<b>51.2</b>	<b>50.0</b>	<b>52.4</b>	<b>53.4</b>	<b>52.4</b>	<b>54.4</b>	<b>52.2</b>	<b>51.5</b>	<b>53.0</b>

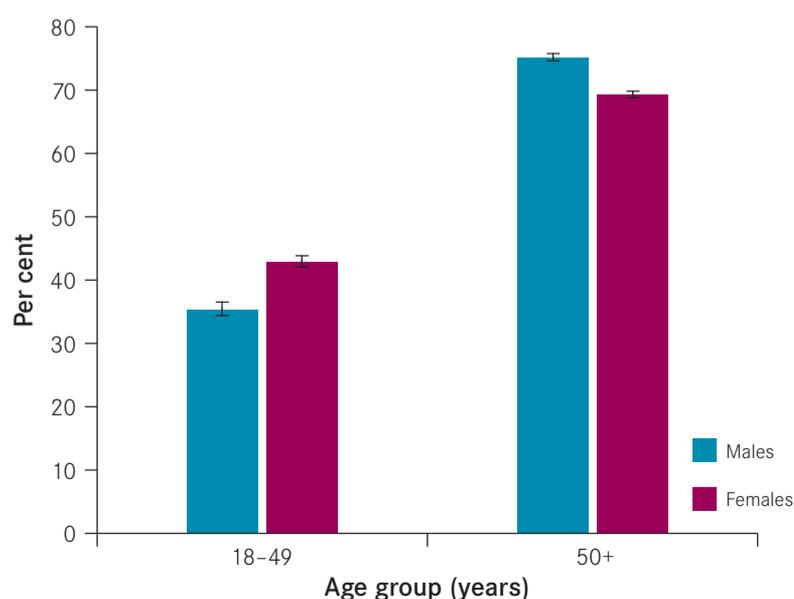
95% CI = 95 per cent confidence interval.

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.

Figure 2.40 shows the proportion of males and females who had had their blood glucose checked in the past two years for two age groups—those aged 18–49 years and 50 years and over. Males and females aged 50 years and over were more likely to report having had their blood glucose checked in the past two years than males and females aged 18–49 years. Females aged 18–49 years were more likely to report having had their blood glucose checked in the past two years than males aged 18–49 years (42.9 per cent and 35.4 per cent respectively), however, among those aged 50 years and over, males were more likely than females to have had their blood glucose checked (75.1 per cent and 69.3 per cent respectively).

**Figure 2.40: Test for diabetes or blood glucose check in the past two years, by age group and sex, 2008**



Data are age standardised to the 2006 Victorian population.

Table 2.70 and figure 2.41 show the proportion of persons, aged 18–49 years and 50 years and over, who reported having had a blood glucose check, by sex and body mass index (BMI). The data in this table show that among males aged 18–49 years, a higher proportion of those classified as obese (45.9 per cent) had had a blood glucose check in the past two years than those classified as overweight (36.0 per cent) or normal weight (31.5 per cent). Females aged 18–49 years, who were classified as overweight or obese (48.1 per cent and 57.8 per cent respectively), were also more likely to have had a blood glucose check than those of a normal weight or who were underweight (37.9 per cent and 34.0 per cent respectively). Among persons aged 50 years and over, those who were overweight or obese were more likely to have had a blood glucose check in the last two years (73.3 per cent and 81.5 per cent respectively) than those who were classified as being underweight, or having a normal weight (63.3 per cent and 66.4 per cent respectively).

**Table 2.70: Test for diabetes or blood glucose check in the past two years, by age group, sex and BMI<sup>(a)</sup>, 2008**

	Age group (years)								
	18–49			50+			Total		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>									
Underweight	28.3*	15.2	46.5	53.9	39.5	67.6	38.5	28.0	50.1
Normal weight	31.5	28.9	34.3	69.9	67.2	72.5	46.8	44.8	48.7
Overweight	36.0	33.3	38.8	75.9	73.8	78.0	51.9	50.0	53.7
Obese	45.9	40.7	51.2	82.7	79.6	85.3	60.5	57.1	63.8
<b>Total</b>	<b>35.4</b>	<b>33.7</b>	<b>37.2</b>	<b>75.1</b>	<b>73.7</b>	<b>76.5</b>	<b>51.2</b>	<b>50.0</b>	<b>52.4</b>
<b>Females</b>									
Underweight	34.0	27.4	41.3	65.8	56.5	74.0	46.6	41.2	52.2
Normal weight	37.9	36.0	39.8	64.0	62.0	66.0	48.3	46.9	49.7
Overweight	48.1	44.8	51.4	69.5	67.1	71.8	56.6	54.4	58.8
Obese	57.8	53.3	62.1	80.9	78.6	83.1	67.0	64.1	69.7
<b>Total</b>	<b>42.9</b>	<b>41.5</b>	<b>44.4</b>	<b>69.3</b>	<b>68.1</b>	<b>70.5</b>	<b>53.4</b>	<b>52.4</b>	<b>54.4</b>
<b>Persons</b>									
Underweight	32.2	26.1	39.0	63.3	54.5	71.3	44.6	39.5	49.8
Normal weight	35.0	33.4	36.6	66.4	64.8	68.0	47.5	46.3	48.6
Overweight	40.4	38.2	42.6	73.3	71.7	74.9	53.5	52.0	54.9
Obese	51.4	47.9	55.0	81.5	79.5	83.3	63.4	61.1	65.6
<b>Total</b>	<b>39.1</b>	<b>38.0</b>	<b>40.3</b>	<b>72.1</b>	<b>71.2</b>	<b>73.0</b>	<b>52.2</b>	<b>51.5</b>	<b>53.0</b>

(a) Based on Body Mass Index (BMI) score.

95% CI = 95 per cent confidence interval.

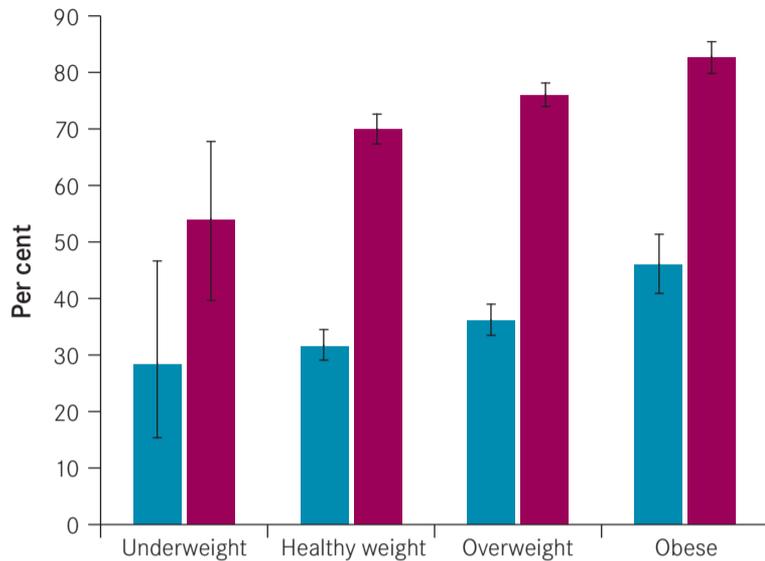
Data are age standardised to the 2006 Victorian population.

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

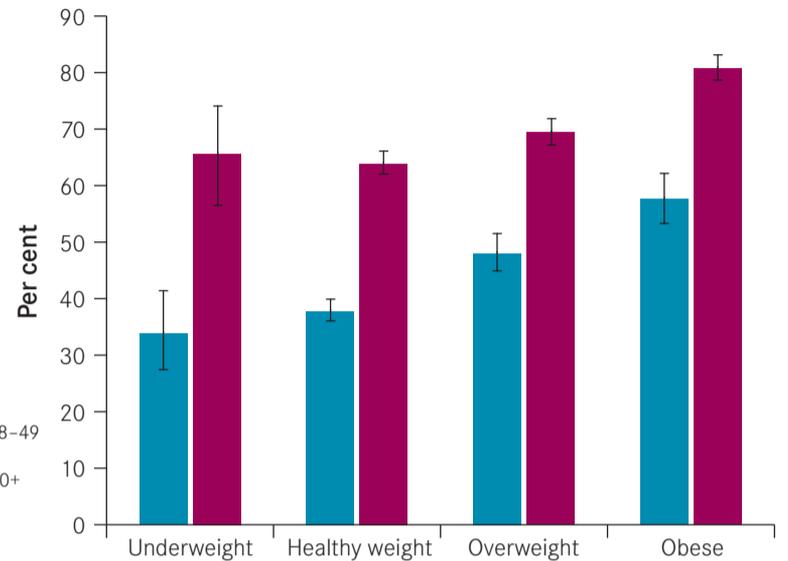
\* Estimate has a relative standard error of between 25 and 50 per cent and should be interpreted with caution.

Figure 2.41: Test for diabetes or blood glucose check in the past two years, by age group, sex and BMI<sup>(a)</sup>, 2008

Males



Females



(a) Based on Body Mass Index (BMI) score.

Data are age standardised to the 2006 Victorian population.

The proportion of persons aged 50 years and over living in the metropolitan area (73.1 per cent), who had had their blood glucose checked in the past two years, was higher than the proportion living in rural areas (69.8 per cent) of Victoria (table 2.71). The proportion of persons aged 50 years and over in the North and West Metropolitan region (75.7 per cent) who reported having had a blood glucose check in the past two years, was above the average for Victoria (72.1 per cent). There were two regions– Barwon-South Western (66.5 per cent) and Grampians (68.3 per cent)– with a lower proportion of persons who reported having had a blood glucose check, compared with the average for Victoria.

The proportion of persons aged 18-49 years who had had their blood glucose checked in the past two years was similar between metropolitan and rural areas of Victoria.

Table 2.71: Test for diabetes or blood glucose check in the past two years, by Department of Health region, sex and age group, 2008

Region	Age group (years)								
	18–49			50+			Total		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>									
Barwon–South Western	28.5	22.9	34.8	71.4	65.5	76.6	45.5	41.4	49.8
Eastern Metropolitan	38.6	34.0	43.5	76.1	72.4	79.4	53.5	50.3	56.7
Gippsland	33.4	28.3	38.8	73.0	68.6	77.0	49.1	45.5	52.7
Grampians	31.1	25.7	37.0	70.9	66.5	75.0	46.9	43.1	50.7
Hume	37.3	32.1	42.9	75.7	72.3	78.7	52.5	49.0	56.0
Loddon Mallee	38.5	32.3	45.2	75.5	71.9	78.8	53.2	49.1	57.4
North and West Metropolitan	35.4	32.7	38.3	76.7	73.8	79.4	51.8	49.8	53.9
Southern Metropolitan	35.2	31.5	39.1	74.8	71.5	77.9	50.9	48.3	53.6
<b>Metropolitan</b>	<b>36.0</b>	<b>33.9</b>	<b>38.1</b>	<b>75.9</b>	<b>74.1</b>	<b>77.7</b>	<b>51.9</b>	<b>50.4</b>	<b>53.3</b>
<b>Rural</b>	<b>33.5</b>	<b>30.7</b>	<b>36.4</b>	<b>73.3</b>	<b>71.3</b>	<b>75.3</b>	<b>49.3</b>	<b>47.4</b>	<b>51.2</b>
<b>Total</b>	<b>35.4</b>	<b>33.7</b>	<b>37.2</b>	<b>75.1</b>	<b>73.7</b>	<b>76.5</b>	<b>51.2</b>	<b>50.0</b>	<b>52.4</b>
<b>Females</b>									
Barwon–South Western	42.7	36.3	49.3	62.4	57.6	67.0	50.5	46.1	54.8
Eastern Metropolitan	42.1	38.3	46.0	69.3	66.0	72.3	52.9	50.2	55.5
Gippsland	41.6	36.9	46.4	67.5	64.0	70.9	51.9	48.7	55.1
Grampians	37.1	31.7	42.8	65.6	62.1	68.9	48.4	44.8	52.0
Hume	45.1	41.0	49.3	71.0	68.5	73.4	55.4	52.7	58.1
Loddon Mallee	44.7	40.2	49.4	67.6	64.4	70.7	53.8	50.8	56.8
North and West Metropolitan	44.9	42.5	47.2	74.9	72.5	77.1	56.8	55.1	58.5
Southern Metropolitan	42.2	39.1	45.5	66.9	64.0	69.6	52.0	49.8	54.2
<b>Metropolitan</b>	<b>43.2</b>	<b>41.5</b>	<b>44.9</b>	<b>70.5</b>	<b>68.9</b>	<b>72.1</b>	<b>54.0</b>	<b>52.8</b>	<b>55.3</b>
<b>Rural</b>	<b>42.6</b>	<b>40.1</b>	<b>45.2</b>	<b>66.5</b>	<b>64.8</b>	<b>68.2</b>	<b>52.1</b>	<b>50.4</b>	<b>53.8</b>
<b>Total</b>	<b>42.9</b>	<b>41.5</b>	<b>44.4</b>	<b>69.3</b>	<b>68.1</b>	<b>70.5</b>	<b>53.4</b>	<b>52.4</b>	<b>54.4</b>
<b>Persons</b>									
Barwon–South Western	35.6	30.4	41.1	66.5	62.7	70.1	47.9	44.3	51.4
Eastern Metropolitan	40.3	37.3	43.4	72.6	70.2	74.9	53.1	51.1	55.2
Gippsland	37.3	33.7	41.0	70.2	67.4	72.9	50.4	47.9	52.8
Grampians	34.2	30.3	38.4	68.3	65.5	71.0	47.8	45.1	50.4
Hume	41.2	37.8	44.6	73.4	71.3	75.4	54.0	51.8	56.2
Loddon Mallee	41.7	37.8	45.7	71.5	69.1	73.8	53.6	51.0	56.1
North and West Metropolitan	40.2	38.3	42.1	75.7	73.9	77.5	54.3	53.0	55.6
Southern Metropolitan	38.7	36.2	41.2	70.6	68.4	72.7	51.4	49.6	53.1
<b>Metropolitan</b>	<b>39.6</b>	<b>38.2</b>	<b>40.9</b>	<b>73.1</b>	<b>71.9</b>	<b>74.3</b>	<b>52.9</b>	<b>52.0</b>	<b>53.8</b>
<b>Rural</b>	<b>38.1</b>	<b>36.1</b>	<b>40.1</b>	<b>69.8</b>	<b>68.5</b>	<b>71.2</b>	<b>50.7</b>	<b>49.4</b>	<b>52.0</b>
<b>Total</b>	<b>39.1</b>	<b>38.0</b>	<b>40.3</b>	<b>72.1</b>	<b>71.2</b>	<b>73.0</b>	<b>52.2</b>	<b>51.5</b>	<b>53.0</b>

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 2.72 and figure 2.42 show the proportion of persons who reported having had a blood glucose check in the past two years by age group (18–49 years and 50 years and over) and LGA. There were eight LGAs where the proportion of persons, aged 50 years and over, who had had a blood glucose check was below the average for Victoria (72.1 per cent). Of these eight LGAs, two were located in the metropolitan area– Bayside and Mornington Peninsula– and six were located in rural Victoria– Ararat, Colac–Otway, Indigo, Moyne, Northern Grampians and Southern Grampians. There were two LGAs– Brimbank and Whittlesea– with an above average proportion of persons aged 50 years and over who had had a blood glucose check in the past two years.

There were four LGAs where the proportion of persons aged 18–49 years was above the average for Victoria (39.1 per cent). Three of these LGAs were in rural Victoria– Mildura, Pyrenees and Wangaratta– and one was in the metropolitan area (Brimbank). There were two LGAs– Colac–Otway and Queenscliffe– where the proportion of persons reporting having had a blood glucose check was below the average for Victoria.

Table 2.72: Test for diabetes or blood glucose check in the past two years, by age group and LGA, 2008

LGA	Age group (years)								
	18–49			50+			Total		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	34.2	25.4	44.4	73.2	67.4	78.3	49.7	43.6	55.9
Ararat (RC)	39.0	29.2	49.9	60.7	53.9	67.1	47.6	40.9	54.5
Ballarat (C)	31.4	24.3	39.4	67.0	60.5	72.9	45.5	40.4	50.7
Banyule (C)	38.7	31.4	46.6	68.3	61.6	74.3	50.5	45.2	55.7
Bass Coast (S)	34.7	25.1	45.8	72.6	66.9	77.6	49.8	43.1	56.4
Baw Baw (S)	35.1	27.4	43.7	65.6	58.9	71.7	47.2	41.7	52.8
Bayside (C)	31.3	24.2	39.3	64.2	57.6	70.4	44.4	39.2	49.6
Benalla (RC)	45.4	35.9	55.2	72.0	66.0	77.4	56.0	49.6	62.1
Boroondara (C)	34.5	28.1	41.5	67.1	60.1	73.4	47.4	42.6	52.3
Brimbank (C)	49.3	43.6	55.1	84.9	78.9	89.4	63.5	59.3	67.4
Buloke (S)	41.8	32.6	51.6	73.2	67.7	78.1	54.3	48.1	60.4
Campaspe (S)	47.6	38.8	56.5	71.4	65.2	76.8	57.0	51.1	62.8
Cardinia (S)	35.0	28.2	42.4	68.4	61.5	74.6	48.2	43.2	53.3
Casey (C)	44.1	37.5	51.0	75.4	68.1	81.5	56.6	51.6	61.4
Central Goldfields (S)	35.6	26.9	45.4	72.5	65.9	78.2	50.3	44.2	56.4
Colac-Otway (S)	27.8	20.7	36.1	62.6	55.6	69.0	41.6	36.3	47.1
Corangamite (S)	40.5	31.3	50.3	72.1	65.6	77.9	53.1	46.8	59.2
Darebin (C)	41.2	34.3	48.4	76.1	69.4	81.8	55.1	50.1	59.9
East Gippsland (S)	42.5	32.1	53.6	67.2	61.2	72.7	52.3	45.4	59.2
Frankston (C)	45.7	37.4	54.1	70.7	64.2	76.4	55.6	49.9	61.1
Gannawarra (S)	34.2	25.8	43.7	77.4	71.9	82.2	51.4	45.6	57.1
Glen Eira (C)	33.2	27.1	39.9	70.2	63.3	76.3	47.9	43.3	52.6
Glenelg (S)	42.8	33.8	52.4	73.9	67.9	79.2	55.2	49.1	61.2
Golden Plains (S)	31.9	24.7	40.0	66.5	59.8	72.6	45.6	40.4	50.9
Greater Bendigo (C)	37.8	30.0	46.2	67.8	61.4	73.7	49.7	44.2	55.2
Greater Dandenong (C)	45.5	38.3	52.8	79.0	71.8	84.7	58.8	53.6	63.8
Greater Geelong (C)	34.0	26.0	43.0	66.0	59.7	71.9	46.7	41.1	52.5
Greater Shepparton (C)	42.5	33.5	52.0	76.3	69.6	81.9	55.9	49.7	61.9
Hepburn (S)	42.4	31.3	54.4	67.6	61.2	73.4	52.4	44.9	59.8
Hindmarsh (S)	38.1	29.4	47.6	72.2	65.6	77.8	51.6	45.6	57.6
Hobsons Bay (C)	44.2	36.7	52.1	73.9	67.0	79.8	56.0	50.6	61.2
Horsham (RC)	35.3	27.9	43.5	69.5	63.1	75.2	48.9	43.6	54.2
Hume (C)	43.1	36.6	49.7	76.7	69.9	82.4	56.4	51.7	61.0
Indigo (S)	39.0	31.2	47.4	64.7	58.2	70.8	49.2	43.7	54.8
Kingston (C)	35.0	27.9	42.9	69.1	62.3	75.3	48.6	43.4	53.8
Knox (C)	43.9	36.2	51.9	76.1	69.8	81.4	56.7	51.3	61.9
Latrobe (C)	38.2	31.7	45.2	71.5	64.9	77.3	51.5	46.7	56.2
Loddon (S)	40.1	31.7	49.1	72.4	66.4	77.7	52.9	47.1	58.6
Macedon Ranges (S)	43.7	35.2	52.7	74.9	68.3	80.4	56.1	50.2	61.9
Manningham (C)	48.2	39.6	56.9	74.6	68.4	79.9	58.7	52.8	64.3

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

95% CI = 95 per cent confidence interval.

LGA = local government area.

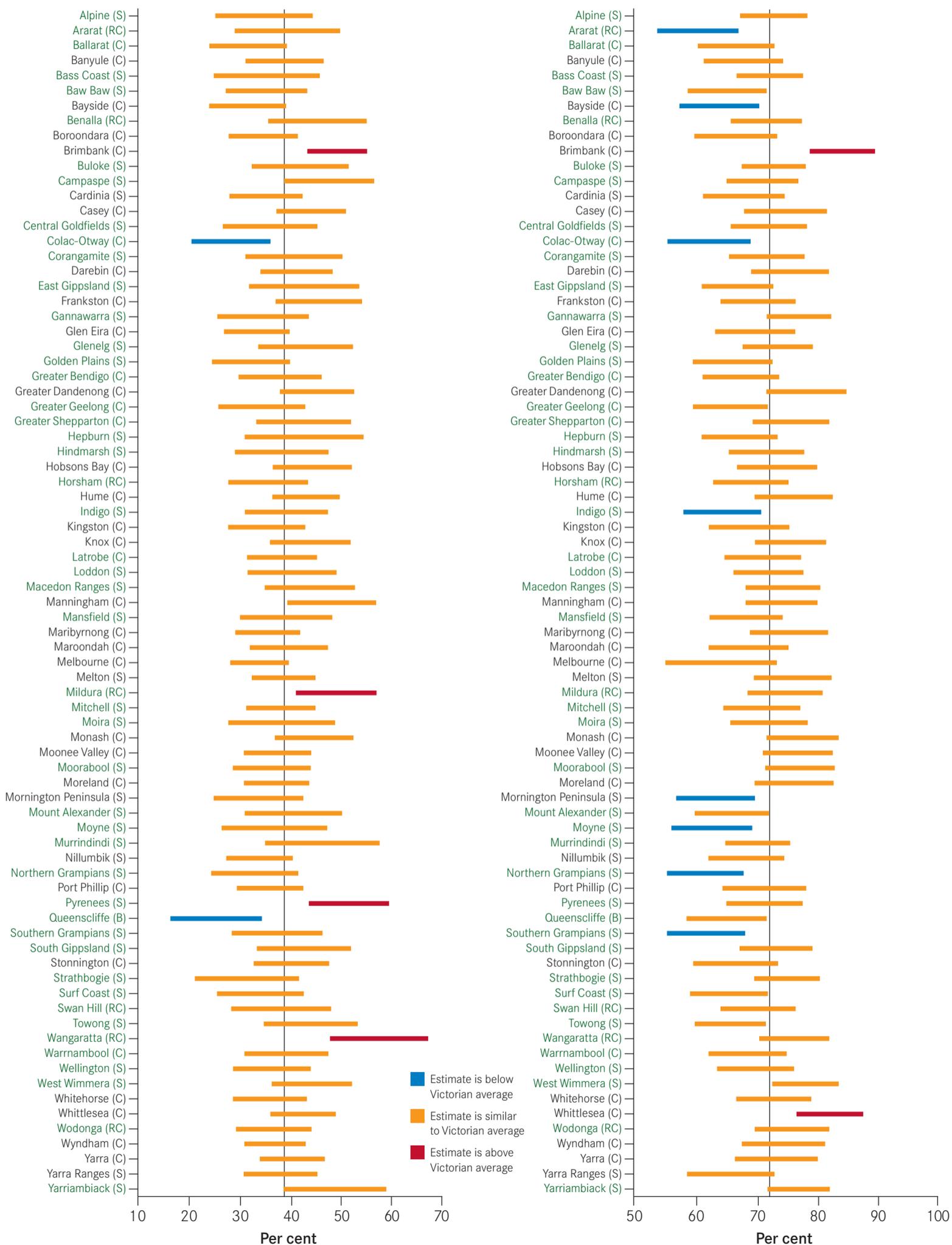
Data are age standardised to the 2006 Victorian population.

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

Table 2.72: Test for diabetes or blood glucose check in the past two years, by age group and LGA, 2008 (continued)

LGA	Age group (years)								
	18–49			50+			Total		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	38.9	30.2	48.3	68.7	62.6	74.3	50.7	44.7	56.7
Maribyrnong (C)	35.4	29.4	41.9	76.0	69.1	81.8	51.5	47.0	56.1
Maroondah (C)	39.5	32.2	47.3	69.1	62.3	75.2	51.3	46.0	56.5
Melbourne (C)	33.8	28.4	39.7	64.8	55.3	73.3	46.1	41.2	51.1
Melton (S)	38.6	32.6	44.9	76.6	69.7	82.3	53.7	49.2	58.2
Mildura (RC)	49.2	41.3	57.0	75.3	68.8	80.8	59.5	54.1	64.8
Mitchell (S)	38.0	31.5	45.0	71.4	64.7	77.2	51.3	46.5	56.0
Moira (S)	37.8	28.0	48.8	72.6	65.9	78.4	51.7	44.8	58.4
Monash (C)	44.7	37.2	52.4	78.1	71.8	83.4	58.0	52.8	63.0
Moonee Valley (C)	37.3	31.0	44.1	77.3	71.1	82.5	53.2	48.6	57.7
Moorabool (S)	36.1	28.9	44.0	77.7	71.6	82.8	52.6	47.5	57.7
Moreland (C)	37.2	31.1	43.8	76.8	69.9	82.6	52.9	48.3	57.5
Mornington Peninsula (S)	33.3	25.1	42.6	63.6	57.0	69.7	45.3	39.5	51.3
Mount Alexander (S)	40.3	31.1	50.2	66.4	60.1	72.1	50.6	44.4	56.9
Moyne (S)	36.4	26.7	47.3	63.1	56.4	69.3	47.0	40.3	53.8
Murrindindi (S)	46.3	35.3	57.6	70.5	65.0	75.5	55.9	48.7	62.9
Nillumbik (S)	33.6	27.5	40.4	68.7	62.3	74.5	47.6	43.0	52.2
Northern Grampians (S)	32.5	24.6	41.5	61.9	55.5	67.9	44.1	38.5	49.9
Port Phillip (C)	35.8	29.6	42.5	71.8	64.5	78.1	50.1	45.4	54.8
Pyrenees (S)	51.7	43.8	59.4	71.7	65.1	77.5	59.6	54.2	64.9
Queenscliffe (B)	24.4	16.6	34.3	65.5	58.7	71.7	40.7	34.9	46.8
Southern Grampians (S)	42.5	33.6	52.0	62.0	55.6	68.1	50.3	44.1	56.4
South Gippsland (S)	37.0	28.6	46.3	73.7	67.4	79.1	51.6	45.7	57.4
Stonnington (C)	40.1	33.0	47.7	67.0	59.8	73.5	50.8	45.6	56.0
Strathbogie (S)	30.5	21.3	41.7	75.4	69.7	80.3	48.4	41.8	54.9
Surf Coast (S)	33.7	25.7	42.7	65.9	59.3	71.9	46.5	40.8	52.2
Swan Hill (RC)	37.8	28.5	48.0	70.7	64.2	76.4	50.9	44.5	57.2
Towong (S)	43.9	34.9	53.2	66.0	60.0	71.6	52.7	46.6	58.7
Wangaratta (RC)	58.0	48.1	67.2	76.6	70.4	81.8	65.3	58.9	71.3
Warrnambool (C)	38.9	31.1	47.4	68.9	62.3	74.9	50.8	45.3	56.4
Wellington (S)	36.0	28.8	43.9	70.3	63.6	76.2	49.6	44.4	54.8
West Wimmera (S)	44.1	36.5	52.1	78.6	72.6	83.5	57.8	52.5	62.9
Whitehorse (C)	35.6	28.8	43.2	73.4	66.9	79.0	50.6	45.7	55.6
Whittlesea (C)	42.5	36.3	48.9	82.7	76.7	87.4	58.5	54.0	62.7
Wodonga (RC)	36.5	29.5	44.1	76.4	69.8	81.9	52.4	47.3	57.3
Wyndham (C)	36.9	31.2	43.0	75.1	67.7	81.2	52.0	47.6	56.5
Yarra (C)	40.3	34.1	46.8	73.9	66.6	80.1	53.7	48.9	58.3
Yarra Ranges (S)	37.9	31.0	45.4	66.2	58.8	72.9	49.1	44.0	54.3
Yarriambiack (S)	48.8	38.9	58.9	77.3	71.8	82.0	60.1	53.6	66.4
<b>Total</b>	<b>39.1</b>	<b>38.0</b>	<b>40.3</b>	<b>72.1</b>	<b>71.2</b>	<b>73.0</b>	<b>52.2</b>	<b>51.5</b>	<b>53.0</b>

Figure 2.42: Test for diabetes or blood glucose check in the past two years, by age group<sup>(a)</sup> and LGA, 2008



(a) Note that the scale differs for the two parts of the graph. 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 line on the graph is the Victorian estimate, it does not show the 95% CI. See relevant table for 95% CI for Victoria (Total).

## Cancer screening

The 2008 survey included a series of questions about screening for bowel, cervical and breast cancer. In particular, information was collected about bowel cancer screening by males and females aged 50 years and over, participation in cervical cancer screening (Pap smears) by females aged 18 years and over, and participation in breast cancer screening (mammograms) by females aged 50 years and over.

### Bowel cancer screening

Bowel (colon and rectum) cancer was the second most common new cancer in Victoria in 2006, with 3,516 new cases (14 per cent of all cancers) diagnosed (Cancer Council Victoria 2009). Bowel cancer can be treated successfully if detected in its early stages, but currently, less than 40 per cent of bowel cancers are detected early (DoHA 2010b).

In July 2008, the National Bowel Cancer Screening Program began mailing invitations to people in the community to participate in the screening program, with a faecal occult blood test (FOBT) kit to complete and send back to a pathology lab for analysis. The invitations are sent to persons turning 50 years of age between January 2008 and December 2010, and those turning 55 or 65 between July 2008 and December 2010.

The 2008 survey asked respondents aged 50, 55, 56, 65 and 66 years if they had received an invitation to participate and if they had completed and returned the FOBT kit for testing. Overall, 68.0 per cent of all persons of relevant ages reported having received an invitation and test kit, when surveyed in 2008. Among those who had received the kit, 52.8 per cent reported having completed and returned the FOBT kit for testing.

The survey also asked respondents aged 50 years and over whether they had had a bowel examination to detect bowel cancer in the past two years. Persons who indicated that they had had a bowel cancer check were also asked which of the following tests they had had in the past two years: colonoscopy, FOBT, flexible sigmoidoscopy or barium enema.

Table 2.73 shows the proportion of persons, aged 50 years and over, who reported having had a test to detect bowel cancer in the past two years, by age group and sex. Overall, males (33.5 per cent) were more likely to report having had a test to detect bowel cancer than females (25.6 per cent). Persons aged 65–69 years were more likely to report having had a test to detect bowel cancer than persons in other age groups.

**Table 2.73: Test to detect bowel cancer in the past two years<sup>(a),(b)</sup>, by age group and sex, 2008**

Age group (years)	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
50–54	26.8	26.1	27.6	20.4	19.8	20.9	23.7	23.2	24.2
55–59	33.7	33.0	34.5	26.1	25.6	26.7	29.8	29.3	30.2
60–64	35.9	35.4	36.5	24.3	23.9	24.7	30.2	29.9	30.6
65–69	39.6	39.2	40.1	32.1	31.7	32.5	35.5	35.2	35.9
70–74	37.0	36.6	37.5	31.2	30.8	31.5	33.8	33.6	34.1
75+	32.8	32.0	33.5	24.6	24.0	25.1	28.2	27.8	28.7
<b>Total</b>	<b>33.5</b>	<b>31.9</b>	<b>35.0</b>	<b>25.6</b>	<b>24.4</b>	<b>26.7</b>	<b>29.4</b>	<b>28.4</b>	<b>30.3</b>

(a) Only respondents aged 50 years and over were asked whether they had had a test for bowel cancer in the past two years.

(b) Based on persons for whom a bowel examination to detect bowel cancer was applicable at the time of the survey.

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 2.74 shows that almost one in five (19.2 per cent) persons aged 50 years and over who had had a test to detect bowel cancer in the past two years had had a colonoscopy and more than one in ten (11.3 per cent) had had an FOBT. These are the most common types of tests undertaken to detect bowel cancer. The table also shows that 1.1 per cent of persons aged 50 years and over who had had a test to detect bowel cancer in the past two years had had a flexible sigmoidoscopy and less than one per cent (0.9 per cent) had had a barium enema.

**Table 2.74: Test to detect bowel cancer in the past two years<sup>(a),(b),(c)</sup>, by test type and sex, 2008**

	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Colonoscopy	<b>20.9</b>	19.6	22.3	<b>17.7</b>	16.7	18.7	<b>19.2</b>	18.4	20.1
FOBT	<b>12.8</b>	11.8	13.9	<b>9.9</b>	9.2	10.7	<b>11.3</b>	10.7	12.0
Flexible sigmoidoscopy	<b>1.5</b>	1.2	2.0	<b>0.7</b>	0.5	1.0	<b>1.1</b>	0.9	1.4
Barium enema	<b>1.2</b>	0.9	1.6	<b>0.7</b>	0.5	1.0	<b>0.9</b>	0.8	1.2
Other	<b>4.6</b>	3.9	5.4	<b>1.5</b>	1.3	1.9	<b>3.0</b>	2.6	3.4

(a) Only respondents aged 50 years and over were asked whether they had had a test for bowel cancer in the past two years.

(b) Based on persons for whom a bowel examination to detect bowel cancer was applicable at the time of the survey.

(c) Respondents were able to indicate whether they had more than one type of bowel cancer test (multit-response).

95% CI = 95 per cent confidence interval.

Data are age standardised to the 2006 Victorian population.

Table 2.75 shows that the proportion of the male population aged 50 years and over who had had a test to detect bowel cancer was similar between the metropolitan area and rural areas of Victoria (33.0 per cent and 34.2 per cent respectively). The data in the table also show that similar proportions of females had had a test to detect bowel cancer in the metropolitan (25.4 per cent) area and rural (26.0 per cent) areas of the state, although these proportions were lower than for males.

**Table 2.75: Test to detect bowel cancer in the past two years<sup>(a),(b)</sup>, by Department of Health region and sex, 2008**

Region	%	Lower 95% CI	Upper 95% CI
<b>Males</b>			
Barwon–South Western	34.3	28.8	40.4
Eastern Metropolitan	33.0	29.2	37.0
Gippsland	34.4	30.2	38.9
Grampians	31.9	27.7	36.4
Hume	33.4	30.4	36.7
Loddon Mallee	36.9	33.1	40.9
North and West Metropolitan	32.7	29.6	35.9
Southern Metropolitan	33.5	30.1	37.1
<b>Metropolitan</b>	<b>33.0</b>	<b>31.1</b>	<b>35.1</b>
<b>Rural</b>	<b>34.2</b>	<b>32.2</b>	<b>36.4</b>
<b>Total</b>	<b>33.5</b>	<b>31.9</b>	<b>35.0</b>
<b>Females</b>			
Barwon–South Western	29.6	25.5	34.0
Eastern Metropolitan	26.9	24.0	29.9
Gippsland	23.5	20.5	26.8
Grampians	24.3	21.4	27.4
Hume	25.5	23.1	28.0
Loddon Mallee	26.0	23.3	28.8
North and West Metropolitan	24.6	22.3	27.0
Southern Metropolitan	25.3	22.8	27.9
<b>Metropolitan</b>	<b>25.4</b>	<b>23.9</b>	<b>26.9</b>
<b>Rural</b>	<b>26.0</b>	<b>24.5</b>	<b>27.6</b>
<b>Total</b>	<b>25.6</b>	<b>24.4</b>	<b>26.7</b>
<b>Persons</b>			
Barwon–South Western	31.6	28.2	35.3
Eastern Metropolitan	29.9	27.5	32.4
Gippsland	28.5	26.0	31.3
Grampians	27.9	25.2	30.6
Hume	29.4	27.4	31.4
Loddon Mallee	31.3	28.9	33.8
North and West Metropolitan	28.3	26.4	30.3
Southern Metropolitan	29.2	27.1	31.4
<b>Metropolitan</b>	<b>29.1</b>	<b>27.8</b>	<b>30.3</b>
<b>Rural</b>	<b>30.0</b>	<b>28.7</b>	<b>31.3</b>
<b>Total</b>	<b>29.4</b>	<b>28.4</b>	<b>30.3</b>

(a) Only respondents aged 50 years and over were asked whether they had had a test for bowel cancer in the past two years.

(b) Based on persons for whom a bowel examination to detect bowel cancer was applicable at the time of the survey.

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.

Table 2.76 and figure 2.43 show the proportion of the population aged 50 years and over, who reported having had a test to detect bowel cancer in the past two years, by LGA. There were three LGAs where the proportion of persons aged 50 years and over, who had had a test to detect bowel cancer, was below the average for Victoria (29.4 per cent). One of these LGAs was located in the metropolitan area– Maribyrnong (20.5 per cent)– and two were located in rural Victoria– Horsham (21.7 per cent) and Moorabool (18.5 per cent). There were four LGAs where an above average proportion of persons aged 50 years and over reported having had a test to detect bowel cancer– Surf Coast (42.5 per cent), Boroondara (37.9 per cent), Banyule (37.2 per cent) and Moynes (36.8 per cent).

Table 2.76: Test to detect bowel cancer in the past two years<sup>(a),(b)</sup>, by LGA, 2008

LGA	%	Lower 95% CI	Upper 95% CI	LGA	%	Lower 95% CI	Upper 95% CI
Alpine (S)	28.4	23.0	34.4	Mansfield (S)	31.4	25.4	38.1
Ararat (RC)	36.5	30.3	43.1	Maribyrnong (C)	20.5	14.9	27.6
Ballarat (C)	29.3	23.2	36.3	Maroondah (C)	29.9	23.9	36.7
Banyule (C)	37.2	31.1	43.7	Melbourne (C)	30.0	22.4	38.8
Bass Coast (S)	26.3	21.4	31.8	Melton (S)	25.8	19.7	33.0
Baw Baw (S)	31.2	25.3	37.9	Mildura (RC)	35.8	29.3	42.9
Bayside (C)	36.1	29.9	42.7	Mitchell (S)	31.5	25.2	38.5
Benalla (RC)	30.3	25.0	36.1	Moira (S)	27.8	22.5	33.7
Boroondara (C)	37.9	31.0	45.3	Monash (C)	30.8	24.8	37.5
Brimbank (C)	28.3	22.5	35.0	Moonee Valley (C)	25.9	20.3	32.5
Buloke (S)	30.0	24.7	35.8	Moorabool (S)	18.5	13.7	24.4
Campaspe (S)	33.3	27.7	39.4	Moreland (C)	22.5	16.9	29.4
Cardinia (S)	33.2	27.0	40.0	Mornington Peninsula (S)	28.9	23.1	35.5
Casey (C)	24.8	19.1	31.5	Mount Alexander (S)	30.3	24.7	36.5
Central Goldfields (S)	30.4	25.0	36.4	Moyne (S)	36.8	30.5	43.5
Colac-Otway (S)	29.6	24.0	35.9	Murrindindi (S)	28.8	23.7	34.5
Corangamite (S)	33.8	27.9	40.3	Neillumbik (S)	29.8	24.0	36.3
Darebin (C)	35.2	28.2	42.8	Northern Grampians (S)	29.2	23.5	35.6
East Gippsland (S)	30.6	25.3	36.5	Port Phillip (C)	27.4	20.9	35.0
Frankston (C)	32.1	25.9	38.9	Pyrenees (S)	28.2	23.0	34.0
Gannawarra (S)	32.8	27.0	39.1	Queenscliffe (B)	34.2	27.9	41.0
Glen Eira (C)	30.4	24.3	37.2	Southern Grampians (S)	28.4	22.9	34.6
Glenelg (S)	33.4	27.4	39.9	South Gippsland (S)	26.0	20.8	31.9
Golden Plains (S)	28.1	22.3	34.6	Stonnington (C)	31.7	25.4	38.8
Greater Bendigo (C)	29.1	23.7	35.2	Strathbogie (S)	31.6	26.2	37.7
Greater Dandenong (C)	28.2	21.7	35.8	Surf Coast (S)	42.5	35.7	49.6
Greater Geelong (C)	29.8	24.2	36.1	Swan Hill (RC)	32.2	26.1	39.0
Greater Shepparton (C)	27.6	22.3	33.5	Towong (S)	25.2	20.4	30.8
Hepburn (S)	32.1	26.5	38.3	Wangaratta (RC)	35.4	29.1	42.4
Hindmarsh (S)	28.9	23.1	35.5	Warrnambool (C)	33.0	26.9	39.8
Hobsons Bay (C)	23.9	18.5	30.4	Wellington (S)	30.3	24.5	36.9
Horsham (RC)	21.7	16.9	27.5	West Wimmera (S)	29.0	23.5	35.2
Hume (C)	25.9	19.5	33.7	Whitehorse (C)	28.7	23.0	35.2
Indigo (S)	25.5	20.2	31.6	Whittlesea (C)	23.2	17.4	30.2
Kingston (C)	29.1	23.1	35.9	Wodonga (RC)	30.3	24.2	37.3
Knox (C)	28.7	22.8	35.6	Wyndham (C)	33.4	26.5	41.0
Latrobe (C)	26.3	19.7	34.1	Yarra (C)	26.1	19.7	33.8
Loddon (S)	29.7	24.2	35.8	Yarra Ranges (S)	24.7	19.5	30.9
Macedon Ranges (S)	28.0	22.3	34.6	Yarriambiack (S)	32.0	26.8	37.7
Manningham (C)	26.0	20.4	32.5	<b>Total</b>	<b>29.4</b>	<b>28.4</b>	<b>30.3</b>

(a) Only respondents aged 50 years and over were asked whether they had had a test for bowel cancer in the past two years.

(b) Based on persons for whom a bowel examination to detect bowel cancer was applicable at the time of the survey.

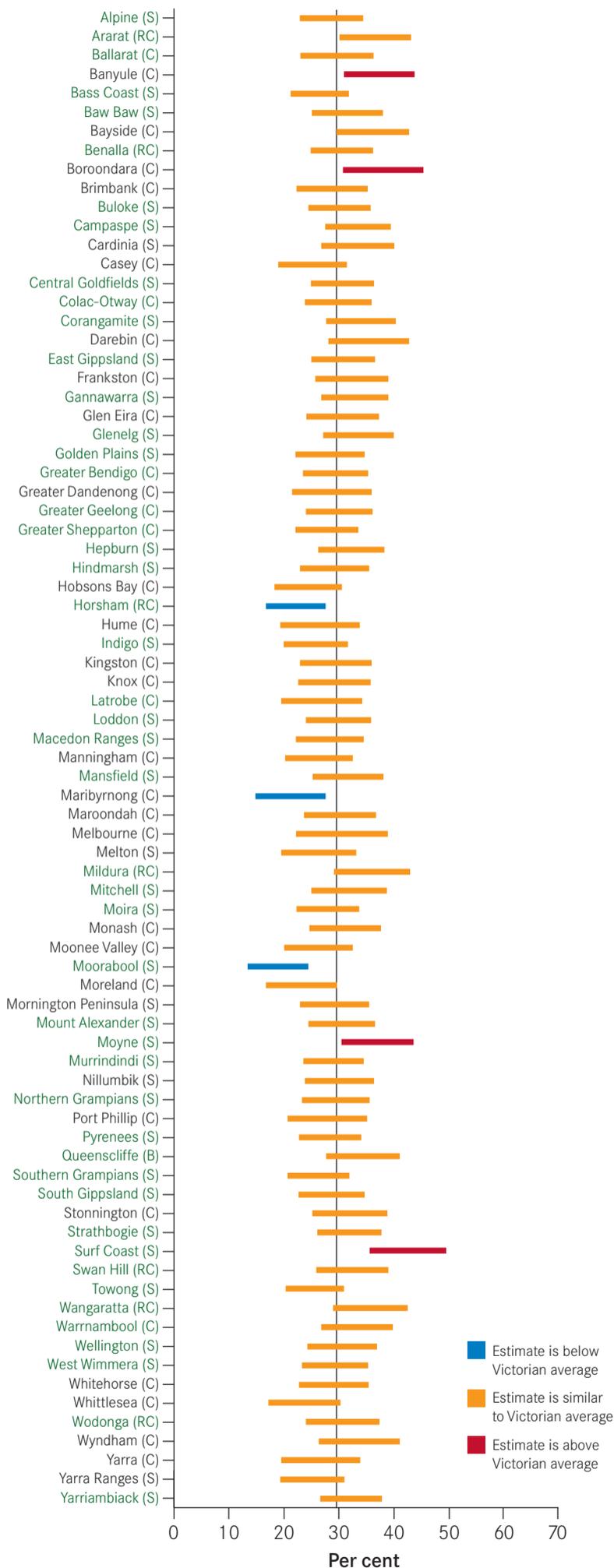
Metropolitan and rural LGAs are identified by colour as follows: metropolitan / rural.  
95% CI = 95 per cent confidence interval.

LGA = local government area.

Data are age standardised to the 2006 Victorian population.

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

Figure 2.43: Test to detect bowel cancer in the past two years<sup>(a),(b)</sup>, by LGA, 2008



(a) Only respondents aged 50 years and over were asked whether they had had a test for bowel cancer in the past two years.

(b) Based on persons for whom a bowel examination to detect bowel cancer was applicable at the time of the survey.

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 line on the graph is the Victorian estimate, it does not show the 95% CI. See relevant table for 95% CI for Victoria (Total).

## Cervical screening

There were 160 new cases of cancer of the cervix in Victoria in 2006 (Cancer Council Victoria 2009). Cervical cancer can be treated successfully if detected in its early stages. The National Cervical Screening Program aims to reduce the burden of cervical cancer, through early detection of disease and an organised approach to screening (DoHA 2010c). The program encourages women in the target population to have regular Pap smears. The national policy provides guidelines about which women need screening and how often Pap smears should be taken.

The target population for the program includes all women who have ever been sexually active. The National Cervical Screening Program recommends that screening begins between the ages of 18–20 years, or one or two years after first sexual intercourse, whichever is later; and ends at age 69 years for women who have had two normal Pap smears within the last five years. The policy recommends that women over 70 years who have never had a Pap smear, or who request a Pap smear, should be screened. Pap smears are recommended for all females in the target population, every two years, including those who have been vaccinated against several types of human papilloma virus (HPV). The 2008 survey asked all female respondents whether they had ever had a Pap smear and, if so, whether they had had a Pap smear within the last two years.

Table 2.77 shows the proportion of females who reported ever having had a Pap smear, by age group. The prevalence of ever having had a Pap smear was highest among females in the 40–44 years age group (98.5 per cent) and was above 90 per cent for all age groups between 30–34 years and 70–74 years.

More than eight in 10 females (84.0 per cent) aged 18–19 years had not had a Pap smear. More than one in ten (14.4 per cent) females aged 75 years and over and 6.6 per cent of females aged 70–74 years had never had a Pap smear.

**Table 2.77: Ever had a Pap smear, by age group<sup>(a)</sup>, 2008**

Age group (years)	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
18–19	14.6	10.4	20.2	84.0	78.0	88.5
20–24	54.4	49.0	59.8	45.2	39.8	50.7
25–29	78.5	74.0	82.4	21.2	17.4	25.6
30–34	94.7	92.7	96.2	5.1	3.6	7.0
35–39	97.4	96.4	98.2	2.3	1.6	3.3
40–44	98.5	97.5	99.1	1.1*	0.7	1.9
45–49	98.4	97.5	99.0	1.6*	1.0	2.5
50–54	97.9	96.8	98.6	1.8	1.1	2.8
55–59	97.1	95.8	98.0	2.8	1.9	4.1
60–64	97.8	96.9	98.4	1.9	1.3	2.8
65–69	95.0	93.2	96.4	4.9	3.6	6.8
70–74	93.4	91.3	95.0	6.6	5.0	8.6
75+	84.5	82.3	86.4	14.4	12.5	16.5
<b>Total</b>	<b>87.2</b>	<b>86.5</b>	<b>88.0</b>	<b>12.4</b>	<b>11.7</b>	<b>13.2</b>

(a) Estimates are based on responses from all females in the survey.

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 from the corresponding estimate for Victoria are identified by colour as follows: **above Victoria** / **below Victoria**.

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

Table 2.78 shows whether female respondents had had a Pap smear in the past two years, by age group. Females were able to reply 'not applicable' to this question if they had had their cervix removed or had had a hysterectomy. The total in the table is based on responses from females aged 20–69 years. Almost three quarters (71.1 per cent) reported having had a Pap smear in the past two years.

More than a quarter (28.4 per cent) of females aged 20–69 years reported not having had a Pap smear in the past two years. Non-participation was high among females aged less than 30 years and females aged 55–69 years.

**Table 2.78: Had a Pap smear in the past two years<sup>(a)</sup>, by age group, 2008**

Age group (years)	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
18–19	13.5	9.5	19.0	85.1	79.2	89.5
20–24	47.3	42.0	52.7	52.4	47.0	57.7
25–29	66.7	62.0	71.0	32.9	28.6	37.6
30–34	79.3	76.1	82.2	19.9	17.0	23.1
35–39	81.0	78.6	83.1	18.6	16.5	21.0
40–44	80.3	77.9	82.6	19.0	16.8	21.4
45–49	76.4	73.6	79.0	23.4	20.8	26.3
50–54	76.1	73.2	78.7	23.2	20.7	26.0
55–59	71.2	68.3	74.0	28.2	25.4	31.0
60–64	65.1	62.0	68.0	34.0	31.1	37.0
65–69	59.0	55.4	62.5	40.5	36.9	44.1
70–74	44.4	40.5	48.4	54.9	50.9	58.8
75+	12.4	10.4	14.8	85.5	83.1	87.7
<b>Total (20–69 years)</b>	<b>71.1</b>	<b>70.0</b>	<b>72.2</b>	<b>28.4</b>	<b>27.3</b>	<b>29.5</b>

(a) Female survey participants were able to select 'not applicable' as a response to this question. They have been excluded from the denominator when calculating estimates.

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.

Table 2.79 shows whether female respondents had had a Pap smear in the past two years, by age group and Department of Health region. The data in the table is based on responses from females aged 20–69 years. The table shows that the proportion of females aged 20–69 years who had had a Pap smear in the past two years was similar between rural and metropolitan areas of Victoria (71.4 per cent and 71.2 per cent respectively). The proportion of females aged 50–69 years from the Gippsland (36.2 per cent) region who reported not having had a Pap smear in the past two years was higher than the average for the state (30.1 per cent).

**Table 2.79: Had a Pap smear in the past two years<sup>(a)</sup>, by age group and Department of Health region, 2008**

Region	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>20–40 years</b>						
Barwon–South Western	75.5	69.6	80.6	23.4	18.6	29.1
Eastern Metropolitan	73.2	69.1	76.9	26.5	22.8	30.6
Gippsland	74.2	69.3	78.6	25.5	21.2	30.4
Grampians	70.1	63.8	75.8	28.5	22.9	34.7
Hume	77.8	74.2	81.1	22.0	18.7	25.7
Loddon Mallee	71.9	67.2	76.1	27.9	23.7	32.6
North and West Metropolitan	71.0	68.5	73.3	28.4	26.1	30.8
Southern Metropolitan	71.4	68.1	74.4	28.5	25.4	31.7
<b>Metropolitan</b>	<b>71.7</b>	<b>69.9</b>	<b>73.3</b>	<b>28.0</b>	<b>26.3</b>	<b>29.7</b>
<b>Rural</b>	<b>73.9</b>	<b>71.5</b>	<b>76.2</b>	<b>25.4</b>	<b>23.2</b>	<b>27.8</b>
<b>Total</b>	<b>72.0</b>	<b>70.6</b>	<b>73.4</b>	<b>27.5</b>	<b>26.1</b>	<b>29.0</b>
<b>50–69 years</b>						
Barwon–South Western	65.2	59.4	70.7	34.6	29.2	40.5
Eastern Metropolitan	72.8	68.9	76.4	26.3	22.8	30.1
Gippsland	63.3	58.8	67.6	36.2	32.0	40.7
Grampians	67.9	63.4	72.0	31.1	27.1	35.5
Hume	69.4	66.1	72.5	30.3	27.2	33.6
Loddon Mallee	66.4	62.3	70.3	33.2	29.3	37.4
North and West Metropolitan	66.4	63.3	69.4	33.0	30.0	36.1
Southern Metropolitan	72.5	69.1	75.6	26.5	23.4	29.9
<b>Metropolitan</b>	<b>70.3</b>	<b>68.3</b>	<b>72.2</b>	<b>28.9</b>	<b>27.0</b>	<b>30.8</b>
<b>Rural</b>	<b>66.3</b>	<b>64.2</b>	<b>68.4</b>	<b>33.2</b>	<b>31.2</b>	<b>35.4</b>
<b>Total</b>	<b>69.1</b>	<b>67.6</b>	<b>70.6</b>	<b>30.1</b>	<b>28.7</b>	<b>31.6</b>
<b>Total (20–69 years)</b>						
Barwon–South Western	72.2	67.8	76.1	27.1	23.2	31.2
Eastern Metropolitan	73.1	70.1	75.8	26.4	23.7	29.4
Gippsland	70.7	67.1	74.0	29.0	25.7	32.5
Grampians	69.4	64.9	73.5	29.3	25.3	33.7
Hume	75.1	72.4	77.6	24.7	22.2	27.3
Loddon Mallee	70.1	66.7	73.3	29.6	26.4	33.0
North and West Metropolitan	69.5	67.6	71.3	29.9	28.0	31.8
Southern Metropolitan	71.7	69.3	74.1	27.8	25.5	30.3
<b>Metropolitan</b>	<b>71.2</b>	<b>69.9</b>	<b>72.5</b>	<b>28.3</b>	<b>27.0</b>	<b>29.6</b>
<b>Rural</b>	<b>71.4</b>	<b>69.7</b>	<b>73.2</b>	<b>28.0</b>	<b>26.3</b>	<b>29.7</b>
<b>Total</b>	<b>71.1</b>	<b>70.0</b>	<b>72.2</b>	<b>28.4</b>	<b>27.3</b>	<b>29.5</b>

(a) Female survey participants were able to select 'not applicable' as a response to this question. They have been excluded from the denominator when calculating estimates.

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 2.80 shows whether female respondents, aged 20-69 years, had had a Pap smear in the past two years, by LGA. The table shows that the proportion of females who reported having had a Pap smear ranged from 58.7 per cent for Greater Dandenong to 84.5 per cent for Wangaratta. There were three LGAs where the proportion of females who reported having had a Pap smear in the past two years was lower than the average for Victoria (71.1 per cent)– Hume (63.1 per cent), Central Goldfields (61.4 per cent) and Greater Dandenong (58.7 per cent).

There were three LGAs where the proportion of females who reported not having had a Pap smear was higher than the average for Victoria (28.4 per cent)– Greater Dandenong (40.7 per cent), Central Goldfields (38.4 per cent) and Wyndham (35.5 per cent).

Figure 2.44 shows the proportion of females, aged 20-69 years, who reported having had a Pap smear in the past two years, by LGA.

Table 2.80: Had a Pap smear in the past two years<sup>(a)</sup>, females aged 20–69 years, by LGA, 2008

LGA	Yes			No			LGA	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI		%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	76.3	68.6	82.6	23.4	17.1	31.1	Mansfield (S)	69.7	62.1	76.3	30.3	23.7	37.9
Ararat (RC)	67.0	57.5	75.2	32.9	24.6	42.4	Maribyrnong (C)	71.6	64.4	77.9	28.1	21.9	35.3
Ballarat (C)	67.6	59.2	75.0	30.0	22.8	38.3	Maroondah (C)	71.8	63.5	78.9	26.7	19.8	35.1
Banyule (C)	64.1	56.6	70.9	35.2	28.4	42.6	Melbourne (C)	69.2	61.4	76.0	29.8	23.1	37.6
Bass Coast (S)	74.6	65.3	82.1	25.2	17.8	34.6	Melton (S)	72.2	66.1	77.6	26.9	21.6	33.0
Baw Baw (S)	72.6	65.8	78.6	27.4	21.4	34.2	Mildura (RC)	72.1	64.7	78.6	26.9	20.6	34.4
Bayside (C)	79.4	72.2	85.1	20.4	14.7	27.7	Mitchell (S)	75.0	66.2	82.1	24.5	17.4	33.3
Benalla (RC)	79.1	73.6	83.7	20.9	16.3	26.4	Moira (S)	74.3	67.0	80.4	25.4	19.3	32.7
Boroondara (C)	76.0	68.1	82.4	24.1	17.6	31.9	Monash (C)	73.1	66.0	79.2	26.6	20.6	33.7
Brimbank (C)	69.6	63.4	75.2	30.4	24.8	36.6	Moonee Valley (C)	64.4	57.3	70.8	34.5	28.2	41.4
Buloke (S)	80.3	74.4	85.2	19.7	14.8	25.7	Moorabool (S)	73.3	65.6	79.7	26.7	20.3	34.4
Campaspe (S)	77.8	71.0	83.4	21.8	16.3	28.6	Moreland (C)	70.6	63.4	76.8	29.0	22.8	36.2
Cardinia (S)	71.9	63.8	78.9	27.9	21.0	36.0	Mornington Peninsula (S)	75.9	68.6	82.0	24.0	17.9	31.3
Casey (C)	70.2	63.6	76.0	29.8	24.0	36.4	Mount Alexander (S)	69.9	60.2	78.1	30.1	21.9	39.9
Central Goldfields (S)	61.4	54.6	67.8	38.4	32.0	45.2	Moyne (S)	68.9	59.4	76.9	30.6	22.5	40.0
Colac-Otway (S)	72.7	65.3	79.1	27.3	20.9	34.7	Murrindindi (S)	72.0	61.8	80.3	26.9	18.7	37.1
Corangamite (S)	69.5	60.2	77.5	30.5	22.5	39.8	Nillumbik (S)	70.2	62.9	76.6	28.9	22.5	36.2
Darebin (C)	63.9	56.9	70.4	35.1	28.7	42.2	Northern Grampians (S)	71.9	64.2	78.5	28.1	21.5	35.9
East Gippsland (S)	72.6	65.4	78.8	27.0	20.8	34.2	Port Phillip (C)	80.1	73.9	85.2	19.4	14.4	25.6
Frankston (C)	71.5	63.9	78.0	28.2	21.7	35.8	Pyrenees (S)	70.5	61.5	78.2	28.8	21.2	37.9
Gannawarra (S)	75.2	66.9	81.9	24.8	18.1	33.1	Queenscliffe (B)	82.8	72.2	89.9	17.2*	10.1	27.8
Glen Eira (C)	72.8	65.9	78.7	25.3	19.6	32.1	Southern Grampians (S)	69.5	60.9	76.8	30.5	23.2	39.1
Glenelg (S)	67.8	60.3	74.5	32.2	25.5	39.7	South Gippsland (S)	75.9	69.0	81.7	23.6	17.8	30.4
Golden Plains (S)	63.1	54.6	70.9	35.7	28.0	44.2	Stonnington (C)	76.3	69.7	81.9	23.5	18.0	30.2
Greater Bendigo (C)	69.0	62.0	75.2	30.6	24.4	37.6	Strathbogie (S)	76.1	68.0	82.7	23.9	17.3	32.0
Greater Dandenong (C)	58.7	51.7	65.4	40.7	34.0	47.7	Surf Coast (S)	76.3	69.0	82.3	22.8	16.9	30.1
Greater Geelong (C)	71.4	64.5	77.4	27.6	21.8	34.2	Swan Hill (RC)	68.3	59.7	75.9	31.7	24.1	40.3
Greater Shepparton (C)	74.8	67.6	80.9	25.2	19.1	32.4	Towong (S)	67.8	59.5	75.2	31.1	23.8	39.5
Hepburn (S)	74.4	66.7	80.9	24.8	18.3	32.5	Wangaratta (RC)	84.5	76.7	90.0	15.3	9.8	23.0
Hindmarsh (S)	74.8	68.1	80.5	25.0	19.3	31.7	Warrnambool (C)	80.1	74.2	85.0	19.5	14.7	25.4
Hobsons Bay (C)	75.8	67.4	82.5	23.6	17.0	31.9	Wellington (S)	67.7	59.9	74.7	31.2	24.4	39.1
Horsham (RC)	70.4	61.8	77.7	29.3	22.0	37.9	West Wimmera (S)	73.5	63.7	81.4	25.6	17.8	35.3
Hume (C)	63.1	56.1	69.6	35.4	28.9	42.6	Whitehorse (C)	73.6	64.3	81.3	24.4	17.0	33.8
Indigo (S)	75.0	66.9	81.6	25.1	18.4	33.1	Whittlesea (C)	78.4	72.8	83.0	21.2	16.6	26.7
Kingston (C)	70.7	61.3	78.6	28.8	20.9	38.1	Wodonga (RC)	69.3	62.5	75.3	30.7	24.7	37.5
Knox (C)	73.9	67.1	79.8	26.1	20.3	32.9	Wyndham (C)	64.3	57.9	70.3	35.5	29.5	41.9
Latrobe (C)	69.9	62.4	76.5	30.1	23.5	37.6	Yarra (C)	77.6	70.7	83.2	22.4	16.8	29.3
Loddon (S)	67.7	58.3	75.8	32.1	24.0	41.5	Yarra Ranges (S)	72.6	65.0	79.1	27.4	20.9	35.0
Macedon Ranges (S)	66.5	59.5	72.8	33.5	27.2	40.5	Yarriambiack (S)	64.8	57.6	71.5	35.2	28.5	42.5
Manningham (C)	72.0	63.8	79.0	28.0	21.0	36.2	<b>Total</b>	<b>71.1</b>	<b>70.0</b>	<b>72.2</b>	<b>28.4</b>	<b>27.3</b>	<b>29.5</b>

(a) Female survey participants were able to select 'not applicable' as a response to this question. They have been excluded from the denominator when calculating estimates.

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

95% CI = 95 per cent confidence interval.

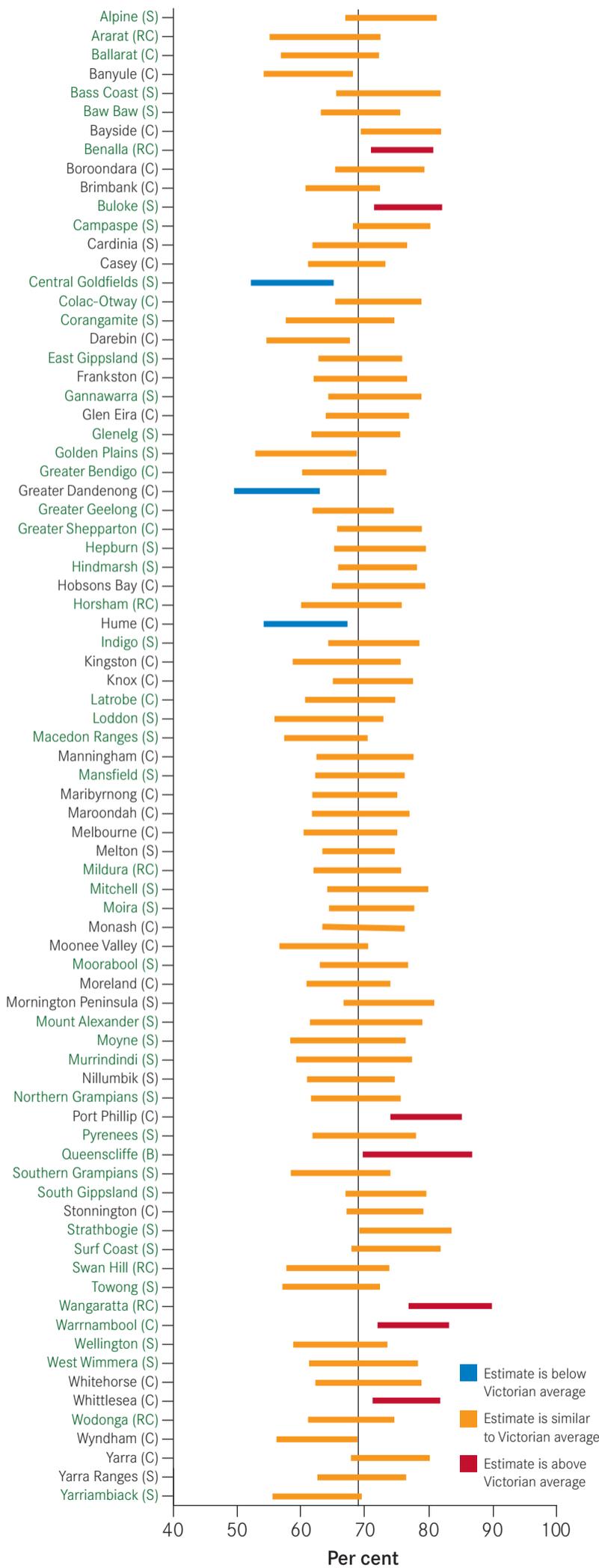
Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

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**.

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

Figure 2.44: Had a Pap smear in the past two years<sup>(a)</sup>, females aged 20–69 years, by LGA, 2008



(a) Female survey participants were able to select 'not applicable' as a response to this question. They have been excluded from the denominator when calculating estimates.  
 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 line on the graph is the Victorian estimate, it does not show the 95% CI.  
 See relevant table for 95% CI for Victoria (Total).

## Breast screening

Breast cancer was the third most common new cancer in Victoria in 2006, accounting for 13 per cent (3,182) of new cases and 28 per cent of all female cancers (Cancer Council Victoria 2009). The burden of the disease can be reduced if breast cancer is detected early and the BreastScreen Australia Program actively recruits and screens women aged 50–69 years (DoHA 2010d). More specifically, BreastScreen Australia is targeted at well women without symptoms aged 50–69 years, although women aged 40–49 years and 70 years and over are able to be screened. The 2008 survey asked all female respondents aged 50 years and over whether they had ever had a mammogram and, if so, whether they had had a mammogram in the past two years.

Table 2.81 shows the proportion of females aged 50 years and over who reported ever having had a mammogram to detect breast cancer, by age group. The prevalence of ever having had a mammogram was highest among females in the 60–64 years age group (95.1 per cent). More than one in ten (11.9 per cent) females aged 50 years and over reported never having had a mammogram and almost a fifth (18.6 per cent) of females aged 50–54 years reported that they had never had a mammogram.

**Table 2.81: Ever had a mammogram, by age group<sup>(a)</sup>, 2008**

Age group (years)	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
50–54	<b>81.0</b>	78.4	83.3	<b>18.6</b>	16.3	21.1
55–59	<b>91.8</b>	90.0	93.3	<b>8.2</b>	6.7	10.0
60–64	<b>95.1</b>	93.7	96.1	<b>4.7</b>	3.7	6.1
65–69	<b>92.6</b>	90.6	94.3	<b>7.3</b>	5.7	9.4
70–74	<b>92.1</b>	89.8	93.9	<b>7.5</b>	5.8	9.7
75+	<b>83.3</b>	81.0	85.3	<b>16.0</b>	14.0	18.2
<b>Total</b>	<b>87.7</b>	<b>86.8</b>	<b>88.6</b>	<b>11.9</b>	<b>11.1</b>	<b>12.8</b>

(a) Estimates are based on responses from all females aged 50 years and over in the survey.

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 from the corresponding estimate for Victoria are identified by colour as follows: **above Victoria** / **below Victoria**.

Table 2.82 shows the proportion of female respondents who had had a mammogram in the past two years, by age group. Females were able to reply 'not applicable' to this question if warranted. The total in the table is based on responses from females aged 50–69 years. More than three quarters (75.9 per cent) reported having had a mammogram in the past two years, but more than one in five (23.6 per cent) reported not having had a mammogram in the past two years.

**Table 2.82: Had a mammogram in the past two years<sup>(a)</sup>, by age group, 2008**

Age group (years)	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
50–54	<b>64.8</b>	61.6	67.8	<b>34.3</b>	31.3	37.5
55–59	<b>81.0</b>	78.5	83.2	<b>18.8</b>	16.5	21.2
60–64	<b>82.9</b>	80.5	85.0	<b>16.7</b>	14.5	19.0
65–69	<b>78.0</b>	75.0	80.8	<b>21.2</b>	18.5	24.2
70–74	<b>71.7</b>	68.2	75.0	<b>26.9</b>	23.7	30.3
75+	<b>35.7</b>	33.0	38.6	<b>63.1</b>	60.2	65.9
<b>Total (50–69 years)</b>	<b>75.9</b>	<b>74.5</b>	<b>77.2</b>	<b>23.6</b>	<b>22.2</b>	<b>24.9</b>

(a) Female survey participants were able to select 'not applicable' as a response to this question. They have been excluded from the denominator when calculating estimates.

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.

Table 2.83 shows that the proportion of females aged 50–69 years who had had a mammogram in the past two years was similar between metropolitan and rural areas of Victoria (76.5 per cent and 74.4 per cent respectively).

**Table 2.83: Had a mammogram in the past two years<sup>(a)</sup>, by Department of Health region, females aged 50-69 years, 2008**

Region	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Barwon-South Western	74.2	68.6	79.1	25.6	20.7	31.2
Eastern Metropolitan	79.2	75.5	82.4	20.6	17.4	24.2
Gippsland	74.6	70.5	78.3	24.7	21.0	28.7
Grampians	71.6	67.5	75.3	27.1	23.4	31.1
Hume	76.7	73.7	79.4	22.7	20.0	25.7
Loddon Mallee	74.4	70.5	77.9	25.6	22.0	29.4
North and West Metropolitan	75.8	73.0	78.4	23.4	20.9	26.2
Southern Metropolitan	75.0	71.7	78.0	24.3	21.3	27.6
<b>Metropolitan</b>	<b>76.5</b>	<b>74.6</b>	<b>78.2</b>	<b>22.9</b>	<b>21.2</b>	<b>24.7</b>
<b>Rural</b>	<b>74.4</b>	<b>72.3</b>	<b>76.3</b>	<b>25.1</b>	<b>23.2</b>	<b>27.1</b>
<b>Total (50-69 years)</b>	<b>75.9</b>	<b>74.5</b>	<b>77.2</b>	<b>23.6</b>	<b>22.2</b>	<b>24.9</b>

(a) Female survey participants were able to select 'not applicable' as a response to this question. They have been excluded from the denominator when calculating estimates.

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.

Table 2.84 shows whether female respondents aged 50–69 years had had a mammogram in the past two years, by LGA. The table shows that the proportion of females who reported having had a mammogram ranged from 65.7 per cent for Pyrenees to 89.1 per cent for Knox. There were two LGAs where the proportion of females who reported having had a mammogram in the past two years was lower than the average for Victoria (75.9 per cent)– Central Goldfields (66.3 per cent) and Pyrenees (65.7 per cent). There was only one LGA– Knox (89.1 per cent)– where the proportion of females who reported having had a mammogram was higher than the average for Victoria.

Figure 2.45 shows the proportion of females aged 50–69 years who reported having had a mammogram in the past two years, by LGA.

Table 2.84: Had a mammogram in the past two years<sup>(a)</sup>, females aged 50–69 years, by LGA, 2008

LGA	Yes			No			LGA	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI		%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	75.1	65.2	83.0	24.9	17.0	34.8	Mansfield (S)	81.9	73.8	88.0	18.1	12.1	26.2
Ararat (RC)	75.1	66.0	82.4	24.9	17.6	34.0	Maribyrnong (C)	69.5	55.8	80.4	30.5	19.6	44.2
Ballarat (C)	73.7	63.9	81.6	25.1	17.4	34.8	Maroondah (C)	69.7	57.5	79.6	29.4	19.6	41.5
Banyule (C)	80.9	71.6	87.7	19.1	12.3	28.4	Melbourne (C)	79.3	62.8	89.6	20.8*	10.4	37.2
Bass Coast (S)	73.9	63.3	82.3	25.6	17.2	36.2	Melton (S)	78.7	69.9	85.5	19.1	12.6	27.9
Baw Baw (S)	75.6	66.3	83.0	24.4	17.0	33.7	Mildura (RC)	74.2	62.9	83.0	25.8	17.0	37.1
Bayside (C)	79.9	70.1	87.1	20.1	12.9	29.9	Mitchell (S)	76.5	66.9	83.9	22.4	15.1	31.8
Benalla (RC)	76.8	67.7	84.0	23.2	16.0	32.3	Moira (S)	82.7	73.7	89.1	16.4	10.2	25.4
Boroondara (C)	81.5	70.7	88.9	17.9*	10.6	28.7	Monash (C)	77.0	66.5	85.0	23.0	15.0	33.5
Brimbank (C)	81.6	72.7	88.0	16.8	10.6	25.6	Moonee Valley (C)	73.9	63.9	81.9	26.1	18.1	36.1
Buloke (S)	73.7	63.6	81.7	26.3	18.3	36.4	Moorabool (S)	66.4	56.7	74.8	30.1	22.2	39.3
Campaspe (S)	75.5	65.5	83.3	24.5	16.7	34.5	Moreland (C)	82.4	71.2	89.8	15.9*	8.9	26.8
Cardinia (S)	76.2	65.7	84.2	20.6	13.1	30.8	Mornington Peninsula (S)	69.8	60.4	77.8	30.2	22.2	39.6
Casey (C)	73.2	61.0	82.6	26.9	17.4	39.1	Mount Alexander (S)	72.8	63.3	80.5	27.2	19.5	36.7
Central Goldfields (S)	66.3	57.3	74.3	33.7	25.7	42.8	Moyne (S)	66.5	56.7	75.0	33.5	25.0	43.3
Colac-Otway (S)	71.7	62.4	79.5	25.3	17.8	34.5	Murrindindi (S)	78.2	69.6	84.9	21.1	14.5	29.6
Corangamite (S)	73.2	63.0	81.4	26.1	17.9	36.3	Nilumbik (S)	73.4	62.4	82.2	26.6	17.8	37.7
Darebin (C)	74.9	62.7	84.1	25.2	15.9	37.3	Northern Grampians (S)	70.6	61.5	78.2	29.4	21.8	38.5
East Gippsland (S)	71.3	62.1	78.9	27.1	19.6	36.1	Port Phillip (C)	75.6	62.9	85.0	24.4	15.0	37.1
Frankston (C)	67.1	56.8	76.0	31.3	22.5	41.8	Pyrenees (S)	65.7	56.6	73.8	31.8	23.9	40.9
Gannawarra (S)	83.8	74.8	90.1	15.4	9.3	24.4	Queenscliffe (B)	77.2	66.9	85.0	22.8	15.0	33.1
Glen Eira (C)	81.4	71.2	88.6	17.8	10.7	28.0	Southern Grampians (S)	75.9	65.0	84.2	24.1	15.8	35.0
Glenelg (S)	73.4	63.6	81.3	26.6	18.7	36.5	South Gippsland (S)	74.1	63.8	82.3	24.3	16.3	34.7
Golden Plains (S)	73.1	63.9	80.7	25.8	18.3	35.0	Stonnington (C)	76.5	65.5	84.8	23.5	15.2	34.5
Greater Bendigo (C)	70.6	61.1	78.6	29.4	21.4	38.9	Strathbogie (S)	67.2	57.1	75.9	32.8	24.1	43.0
Greater Dandenong (C)	72.7	61.8	81.5	26.1	17.5	37.0	Surf Coast (S)	73.8	64.5	81.4	26.2	18.6	35.5
Greater Geelong (C)	74.3	64.8	81.9	25.7	18.1	35.2	Swan Hill (RC)	76.6	66.3	84.5	23.4	15.5	33.7
Greater Shepparton (C)	72.7	62.5	81.0	26.4	18.3	36.6	Towong (S)	79.7	70.7	86.5	20.3	13.5	29.3
Hepburn (S)	69.8	60.2	77.9	29.2	21.1	38.7	Wangaratta (RC)	81.6	72.3	88.2	17.6	11.1	26.9
Hindmarsh (S)	77.4	67.0	85.3	22.6	14.8	33.1	Warrnambool (C)	82.6	74.3	88.6	17.4	11.4	25.7
Hobsons Bay (C)	77.7	65.8	86.3	22.3	13.7	34.2	Wellington (S)	82.4	73.0	89.0	16.4	10.1	25.6
Horsham (RC)	66.9	58.2	74.6	31.6	24.3	39.9	West Wimmera (S)	68.6	58.5	77.1	28.7	20.5	38.6
Hume (C)	71.4	61.2	79.8	28.1	19.8	38.3	Whitehorse (C)	76.0	65.9	83.9	24.0	16.1	34.1
Indigo (S)	78.7	70.5	85.1	20.5	14.2	28.6	Whittlesea (C)	70.2	60.1	78.6	26.9	18.9	36.8
Kingston (C)	81.1	72.4	87.6	17.1	10.9	25.8	Wodonga (RC)	71.9	62.2	79.9	28.1	20.1	37.8
Knox (C)	89.1	80.8	94.1	10.9*	5.9	19.2	Wyndham (C)	69.4	58.6	78.4	30.6	21.6	41.4
Latrobe (C)	72.1	61.1	81.0	27.9	19.0	38.9	Yarra (C)	73.3	59.9	83.4	26.8	16.6	40.1
Loddon (S)	74.6	64.1	82.8	25.4	17.2	35.9	Yarra Ranges (S)	74.5	64.1	82.6	24.8	16.8	35.1
Macedon Ranges (S)	83.5	75.0	89.4	16.6	10.6	25.0	Yarriambiack (S)	82.0	73.1	88.5	18.0	11.5	26.9
Manningham (C)	82.6	73.8	88.9	17.4	11.1	26.2	<b>Total (50-69 years)</b>	<b>75.9</b>	<b>74.5</b>	<b>77.2</b>	<b>23.6</b>	<b>22.2</b>	<b>24.9</b>

(a) Female survey participants were able to select 'not applicable' as a response to this question. They have been excluded from the denominator when calculating estimates.

Metropolitan and rural LGAs 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.

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

Figure 2.45: Had a mammogram in the past two years<sup>(a)</sup>, females aged 50–69 years, by LGA, 2008



(a) Female survey participants were able to select 'not applicable' as a response to this question. They have been excluded from the denominator when calculating estimates.  
 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 line on the graph is the Victorian estimate, it does not show the 95% CI.  
 See relevant table for 95% CI for Victoria (Total).

## References

AIHW (Australian Institute of Health and Welfare) 2004, *Heart, stroke and vascular diseases, Australian facts 2004*, cat. no. CVD 27, AIHW, Canberra.

AIHW (Australian Institute of Health and Welfare) 2008, *Diabetes: Australian facts 2008*, cat. no. CVD 40, AIHW, Canberra.

Cancer Council Victoria 2009, *Canstat: Cancer in Victoria 2006*, no. 46, Cancer Council Victoria, Melbourne.

DoHA (Department of Health and Ageing) 1999, *National physical activity guidelines for adults*, DoHA, Canberra.

DoHA (Department of Health and Ageing) 2004, Get out and get active. *Australia's physical activity recommendations for 12–18 year olds*, DoHA, Canberra.

DoHA (Department of Health and Ageing) 2006, *Recommendations on physical activity for health for older Australians*, DoHA, Canberra, viewed 17 March 2010, [www.health.gov.au/internet/main/publishing.nsf/Content/ECBF57CB49827C0BCA2575820004650C/\\$File/pa-guidelines.pdf](http://www.health.gov.au/internet/main/publishing.nsf/Content/ECBF57CB49827C0BCA2575820004650C/$File/pa-guidelines.pdf).

DoHA (Department of Health and Ageing) 2010a, *National eye health awareness campaign*, viewed 29 March 2010, [www.health.gov.au/internet/eyehealth/publishing.nsf/Content/overview](http://www.health.gov.au/internet/eyehealth/publishing.nsf/Content/overview).

DoHA (Department of Health and Ageing) 2010b, *National bowel cancer screening program*, viewed 29 March 2010, [www.cancerscreening.gov.au/internet/screening/publishing.nsf/Content/bowel-about](http://www.cancerscreening.gov.au/internet/screening/publishing.nsf/Content/bowel-about).

DoHA (Department of Health and Ageing) 2010c, *National cervical screening program*, viewed 29 March 2010, [www.cancerscreening.gov.au/internet/screening/publishing.nsf/Content/cervical-about](http://www.cancerscreening.gov.au/internet/screening/publishing.nsf/Content/cervical-about).

DoHA (Department of Health and Ageing) 2010d, *Breast screen Australia program*, viewed 29 March 2010, [www.cancerscreening.gov.au/internet/screening/publishing.nsf/Content/breastscreen-about](http://www.cancerscreening.gov.au/internet/screening/publishing.nsf/Content/breastscreen-about).

National Heart Foundation of Australia and The Cardiac Society of Australia and New Zealand 2001, 'Lipid management guidelines – 2001', *Medical Journal of Australia*, vol. 175 (supplement), pp. S81.

NHMRC (National Health and Medical Research Council) 2001, *Australian alcohol guidelines: health risks and benefits*, NHMRC, Canberra.

NHMRC (National Health and Medical Research Council) 2003a, *Dietary guidelines for Australian adults*, NHMRC, Canberra.

NHMRC (National Health and Medical Research Council) 2003b, *Dietary guidelines for children and adolescents in Australia*, NHMRC, Canberra.

# 3. Self-Reported Health and Selected Health Conditions



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 South Gippsland Southern Grampians 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 South Gippsland Southern Grampians 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 South Gippsland Southern Grampians 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 South Gippsland Southern Grampians Stonnington Strathbogie Surf Coast Swan Hill Towong Wangaratta Warrnambool Wellington West Wimmera Whitehorse Whittlesea Wodonga Wyndham Yarra Yarra Ranges Yarriambiack

### 3. Self-Reported Health and Selected Health Conditions

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).

Respondents were asked to summarise their perceptions of their health status by indicating whether, in general, they would say their health was excellent, very good, good, fair or poor.

Respondents were also asked whether they had at any time in their life been told by a doctor that they had any of the following conditions: heart disease, stroke, cancer, osteoporosis or arthritis. If they indicated that they had been told they had arthritis, they were asked about the type of arthritis.

#### Survey results

##### Self-reported health

- Approximately four out of five Victorians (81.5 per cent) reported their health status as being excellent, very good or good.
- The proportion of persons reporting excellent, very good, good, fair or poor health remained constant between 2005 and 2008.
- The proportion of males and females reporting excellent, very good, good, fair or poor health was similar between the rural and metropolitan areas of Victoria.
- The proportion of persons reporting fair or poor health in the North and West Metropolitan region was higher than the proportion for all Victorians, while the proportion of persons reporting excellent or very good health in the Southern Metropolitan region was higher than the proportion for all Victorians.

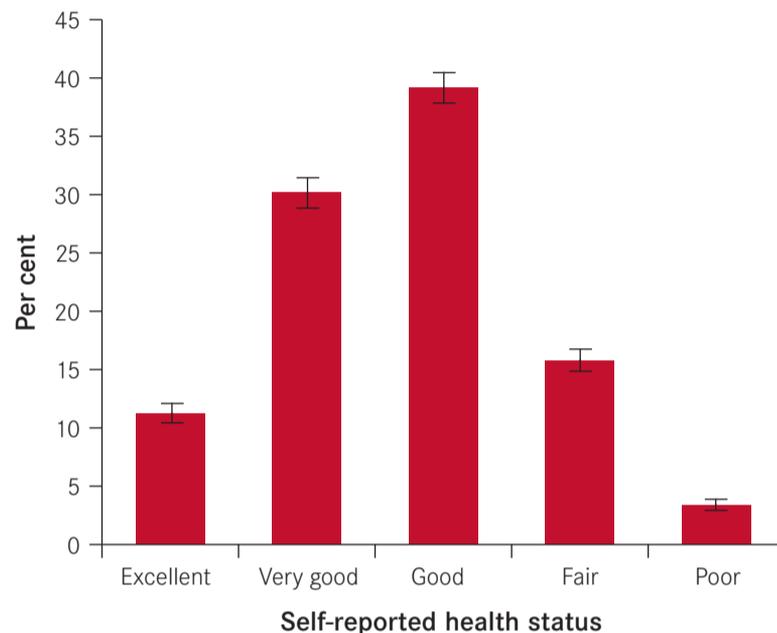
##### Selected health conditions

- The prevalence of having ever been told by a doctor that a person had heart disease was 6.7 per cent, stroke was 2.5 per cent, cancer was 6.6 per cent, osteoporosis was 4.8 per cent, osteoarthritis was 13.7 per cent and rheumatoid arthritis was 3.6 per cent.
- The prevalence of heart disease, stroke, cancer, osteoporosis and rheumatoid arthritis was similar for males and females between the rural and metropolitan areas of Victoria. However, males in rural areas had higher rates of osteoarthritis compared with their metropolitan counterparts.
- Persons in the LGAs of Central Goldfields, Maribyrnong, Pyrenees and Whittlesea had a higher prevalence of heart disease compared with all Victorians.
- Persons in the LGAs of Frankston and Hepburn had a higher prevalence of cancer compared with all Victorians.
- Females in the LGAs of Central Goldfields, Hume, Melbourne, Wellington and Yarra had a higher prevalence of osteoporosis compared with all Victorian females.

#### Self-reported health

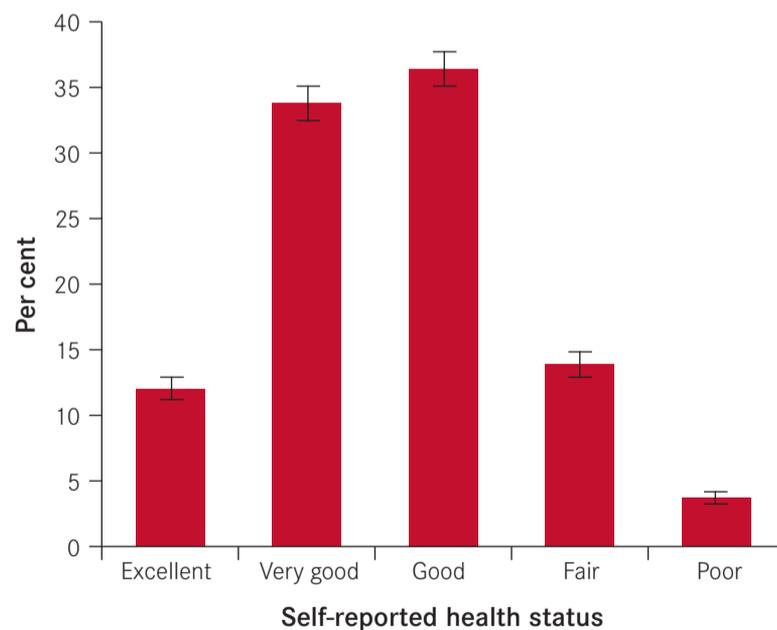
Approximately four out of five persons (81.5 per cent) aged 18 years and over reported their health status as being excellent, very good or good. Figures 3.1 and 3.2 show that similar proportions of males (80.6 per cent) and females (82.2 per cent) reported their health status as being excellent, very good or good.

Figure 3.1: Self-reported health, males, 2008



Data are age standardised to the 2006 Victorian population.

Figure 3.2: Self-reported health, females, 2008



Data are age standardised to the 2006 Victorian population.

More than one in five persons (22.9 per cent) aged 65 years and over, reported their health to be fair or poor (Table 3.1, figure 3.3 and figure 3.4). Among younger persons, a higher proportion of males (12.6 per cent) aged 18–24 years reported being in excellent health compared with females (6.9 per cent) in the same age group.

**Table 3.1: Self-reported health, by age group and sex, 2008**

Age group (years)	Excellent			Very good			Good			Fair			Poor		
	%	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
<b>Males</b>															
18–24 years	12.6	9.7	16.1	37.6	33.0	42.5	37.1	32.7	41.8	11.3	8.7	14.6	1.4*	0.8	2.4
25–34 years	11.0	8.8	13.6	32.3	28.6	36.3	39.3	35.5	43.3	14.5	11.9	17.4	2.9	1.9	4.6
35–44 years	11.3	9.5	13.5	29.8	27.2	32.5	40.1	37.2	43.1	16.3	14.1	18.6	2.4	1.6	3.5
45–54 years	10.4	8.8	12.2	27.1	24.7	29.6	41.2	38.5	44.0	17.5	15.4	19.9	3.7	2.9	4.8
55–64 years	10.8	9.3	12.6	27.8	25.5	30.3	40.5	37.9	43.1	15.8	13.9	17.8	4.8	3.8	6.1
65+	12.2	10.8	13.8	28.6	26.5	30.7	35.9	33.7	38.1	17.9	16.2	19.7	4.8	3.9	5.9
<b>Total</b>	<b>11.2</b>	<b>10.4</b>	<b>12.1</b>	<b>30.2</b>	<b>28.9</b>	<b>31.4</b>	<b>39.2</b>	<b>37.9</b>	<b>40.6</b>	<b>15.8</b>	<b>14.9</b>	<b>16.8</b>	<b>3.4</b>	<b>3.0</b>	<b>3.8</b>
<b>Females</b>															
18–24 years	6.9	4.9	9.6	36.2	32.0	40.6	41.4	37.2	45.9	13.5	10.7	16.9	1.9*	1.1	3.4
25–34 years	10.4	8.8	12.3	34.6	32.0	37.3	40.1	37.2	42.9	12.7	10.8	14.7	2.3	1.5	3.3
35–44 years	13.6	12.2	15.1	35.1	33.2	37.1	36.1	34.0	38.1	11.9	10.5	13.4	3.3	2.5	4.3
45–54 years	14.2	12.6	15.8	34.2	32.1	36.4	34.7	32.6	36.9	13.3	11.9	14.9	3.5	2.7	4.5
55–64 years	13.9	12.4	15.5	32.4	30.4	34.4	33.9	31.9	36.0	14.2	12.8	15.8	5.4	4.5	6.6
65+	12.7	11.5	14.0	31.0	29.3	32.8	32.5	30.7	34.3	17.5	16.1	19.1	5.6	4.7	6.6
<b>Total</b>	<b>12.0</b>	<b>11.4</b>	<b>12.7</b>	<b>33.8</b>	<b>32.8</b>	<b>34.9</b>	<b>36.4</b>	<b>35.4</b>	<b>37.5</b>	<b>13.9</b>	<b>13.1</b>	<b>14.6</b>	<b>3.7</b>	<b>3.3</b>	<b>4.1</b>
<b>Persons</b>															
18–24 years	9.8	8.0	12.0	36.9	33.8	40.2	39.2	36.1	42.5	12.4	10.4	14.7	1.6	1.1	2.5
25–34 years	10.7	9.3	12.3	33.5	31.2	35.8	39.7	37.3	42.1	13.6	12.0	15.3	2.6	1.9	3.5
35–44 years	12.5	11.3	13.7	32.5	30.8	34.2	38.1	36.3	39.9	14.0	12.8	15.4	2.8	2.3	3.6
45–54 years	12.3	11.2	13.5	30.7	29.1	32.3	37.9	36.2	39.7	15.4	14.1	16.8	3.6	3.0	4.3
55–64 years	12.4	11.3	13.5	30.1	28.6	31.7	37.2	35.5	38.8	15.0	13.8	16.3	5.1	4.4	5.9
65+	12.5	11.5	13.5	29.9	28.6	31.3	34.0	32.6	35.4	17.7	16.6	18.9	5.2	4.6	6.0
<b>Total</b>	<b>11.7</b>	<b>11.1</b>	<b>12.2</b>	<b>32.0</b>	<b>31.2</b>	<b>32.9</b>	<b>37.8</b>	<b>36.9</b>	<b>38.6</b>	<b>14.8</b>	<b>14.2</b>	<b>15.4</b>	<b>3.5</b>	<b>3.2</b>	<b>3.8</b>

95% CI = 95 per cent confidence interval.

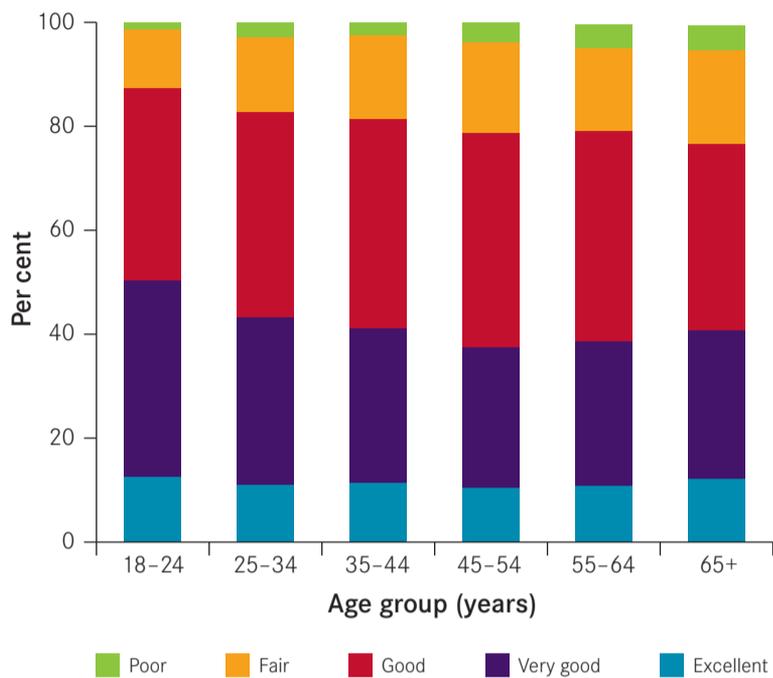
Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

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.

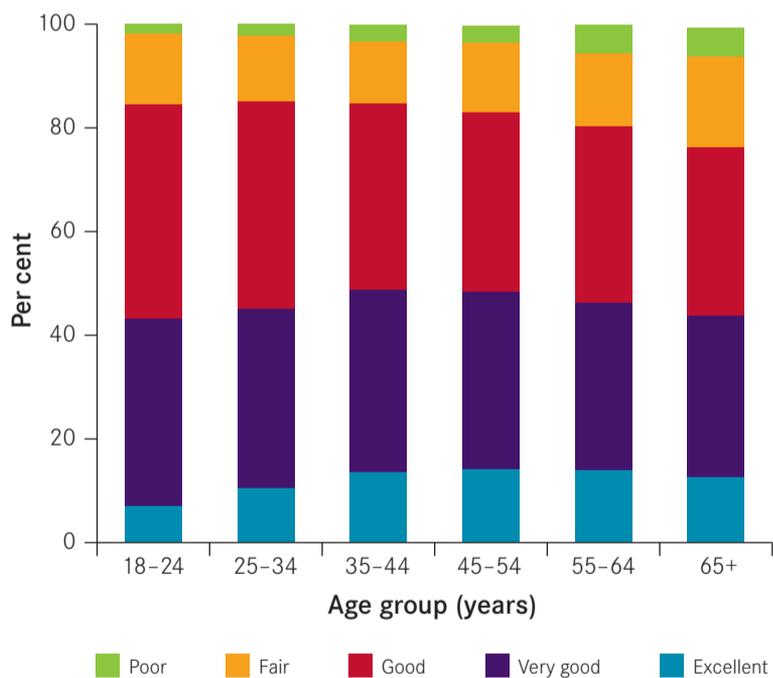
\* Estimate has a relative standard error of between 25 and 50 per cent and should be interpreted with caution.

Figure 3.3: Self-reported health, by age group, males, 2008



Data are crude estimates, they have not been age standardised.

Figure 3.4: Self-reported health, by age group, females, 2008



Data are crude estimates, they have not been age standardised.

Table 3.2 shows self-reported health status by sex for the period 2005–2008. The pattern for self-reported health was similar between males and females and there were no significant changes in the proportion of persons, male or female, reporting excellent, very good, good, fair or poor health between 2005 and 2008.

Table 3.2: Self-reported health, by sex, 2005–2008

	2005	2006	2007	2008
	Per cent			
<b>Males</b>				
Excellent	11.2	12.5	11.1	11.2
Very good	33.1	34.5	32.6	30.2
Good	37.3	36.4	40.2	39.2
Fair	14.8	13.2	12.6	15.8
Poor	3.6	3.1	3.3	3.4
<b>Females</b>				
Excellent	11.5	12.7	13.5	12.0
Very good	34.4	34.6	33.8	33.8
Good	36.9	37.8	36.0	36.4
Fair	13.7	10.9	13.4	13.9
Poor	3.3	3.7	3.1	3.7
<b>Persons</b>				
Excellent	11.4	12.6	12.3	11.7
Very good	33.8	34.6	33.2	32.0
Good	37.0	37.1	38.1	37.8
Fair	14.2	12.1	13.0	14.8
Poor	3.4	3.4	3.2	3.5

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.

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

### Self-reported health by region and LGA

Table 3.3 shows self-reported health status by sex and Department of Health region. The data show that self-reported health was similar between rural and metropolitan Victoria, for both males and females.

Among specific Department of Health regions, persons from the North and West Metropolitan region had a higher rate of fair/poor health (20.4 per cent) and a lower rate of excellent/very good health (39.3 per cent), compared with the rates for Victoria (18.3 per cent and 43.7 per cent, respectively). In contrast, persons from the Southern Metropolitan region had a higher rate of excellent/very good health (46.7 per cent) and a lower rate of good health (34.7 per cent) compared with the rates for Victoria (43.7 per cent and 37.8 per cent, respectively).

Table 3.3: Self-reported health, by sex and Department of Health region, 2008

Region	Excellent / Very Good			Good			Fair / Poor		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>									
Barwon-South Western	45.6	39.3	52.0	40.0	34.0	46.4	14.1	11.0	17.9
Eastern Metropolitan	44.3	40.8	47.8	38.7	35.3	42.2	16.8	14.4	19.5
Gippsland	38.7	34.5	43.0	41.4	37.1	45.9	19.9	16.8	23.4
Grampians	39.4	35.2	43.8	39.4	35.4	43.6	21.1	17.7	24.9
Hume	40.8	37.3	44.4	40.0	36.5	43.6	19.2	16.5	22.2
Loddon Mallee	38.8	34.7	43.0	43.1	38.9	47.4	17.8	15.3	20.6
North and West Metropolitan	36.5	34.2	38.8	43.1	40.7	45.5	20.4	18.6	22.3
Southern Metropolitan	44.8	41.9	47.7	34.0	31.2	36.9	20.8	18.5	23.3
<b>Metropolitan</b>	41.3	39.7	42.9	38.9	37.3	40.5	19.5	18.3	20.8
<b>Rural</b>	41.0	38.7	43.4	40.8	38.5	43.1	18.1	16.6	19.6
<b>Total</b>	41.4	40.0	42.7	39.2	37.9	40.6	19.2	18.2	20.2
<b>Females</b>									
Barwon-South Western	46.9	42.5	51.4	34.9	30.6	39.6	18.1	14.4	22.5
Eastern Metropolitan	47.4	44.6	50.2	36.6	33.9	39.4	15.8	14.0	17.9
Gippsland	44.7	41.6	47.8	37.4	34.2	40.7	17.8	15.2	20.7
Grampians	47.1	43.3	50.9	35.7	32.2	39.5	16.9	14.6	19.4
Hume	47.3	44.6	50.1	36.2	33.6	38.9	16.4	14.6	18.4
Loddon Mallee	42.9	39.8	46.0	37.7	34.6	40.9	19.3	17.1	21.8
North and West Metropolitan	42.2	40.4	44.1	37.2	35.4	39.0	20.3	18.8	21.8
Southern Metropolitan	48.4	46.0	50.7	35.5	33.3	37.8	15.9	14.2	17.7
<b>Metropolitan</b>	45.8	44.5	47.1	36.5	35.3	37.8	17.5	16.5	18.5
<b>Rural</b>	45.6	43.9	47.3	36.4	34.7	38.2	17.9	16.5	19.3
<b>Total</b>	45.9	44.8	46.9	36.4	35.4	37.5	17.5	16.7	18.3
<b>Persons</b>									
Barwon-South Western	46.2	42.2	50.2	37.4	33.6	41.4	16.2	13.6	19.2
Eastern Metropolitan	46.0	43.7	48.2	37.6	35.5	39.9	16.2	14.7	17.9
Gippsland	41.7	39.0	44.4	39.5	36.8	42.3	18.7	16.7	21.0
Grampians	43.4	40.6	46.3	37.5	34.8	40.3	18.8	16.7	21.2
Hume	44.1	41.8	46.4	38.1	35.9	40.4	17.8	16.1	19.6
Loddon Mallee	40.9	38.3	43.6	40.3	37.7	43.0	18.6	16.9	20.4
North and West Metropolitan	39.3	37.9	40.8	40.0	38.6	41.5	20.4	19.3	21.6
Southern Metropolitan	46.7	44.8	48.6	34.7	32.9	36.6	18.2	16.8	19.8
<b>Metropolitan</b>	43.6	42.6	44.7	37.6	36.6	38.7	18.5	17.7	19.3
<b>Rural</b>	43.3	41.5	44.8	38.6	37.1	40.0	17.9	16.9	19.0
<b>Total</b>	43.7	42.8	44.5	37.8	36.9	38.6	18.3	17.7	19.0

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 3.4: Self-reported health, by LGA, males, 2008

LGA	Excellent / Very good			Good			Fair / Poor		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	38.8	30.6	47.7	47.8	38.9	56.8	13.4	8.7	20.1
Ararat (RC)	31.0	25.1	37.6	44.9	35.4	54.8	24.2	16.6	33.8
Ballarat (C)	41.5	33.6	49.8	35.8	28.4	43.9	22.8	16.5	30.6
Banyule (C)	40.7	32.1	49.9	44.0	35.3	53.1	15.3	10.0	22.7
Bass Coast (S)	34.6	25.4	45.0	46.8	37.7	56.1	18.7	13.2	25.8
Baw Baw (S)	46.0	36.5	55.8	36.8	27.5	47.2	17.3	11.7	24.7
Bayside (C)	61.9	52.4	70.5	25.1	18.1	33.7	13.1	8.4	19.9
Benalla (RC)	37.4	28.2	47.7	40.2	31.1	50.2	22.4	14.9	32.1
Boroondara (C)	53.4	44.8	61.9	31.4	23.8	40.1	15.2	9.9	22.7
Brimbank (C)	29.3	22.7	37.0	48.0	40.3	55.7	22.4	16.3	30.0
Buloke (S)	32.6	26.3	39.6	52.6	45.6	59.5	14.8	9.7	21.8
Campaspe (S)	43.1	34.0	52.7	38.1	29.3	47.7	17.8	11.8	26.0
Cardinia (S)	42.2	33.2	51.6	39.8	31.9	48.4	17.2	11.7	24.6
Casey (C)	35.9	28.7	43.9	38.4	30.9	46.5	25.7	19.2	33.5
Central Goldfields (S)	30.2	21.4	40.6	41.6	30.8	53.2	28.2	20.2	37.8
Colac-Otway (S)	31.7	23.2	41.5	54.5	44.8	63.9	13.8	9.0	20.7
Corangamite (S)	43.7	36.2	51.4	35.7	29.0	43.0	20.6	14.8	28.0
Darebin (C)	37.6	30.6	45.1	35.3	28.0	43.4	27.1	20.7	34.7
East Gippsland (S)	41.4	32.4	51.0	38.0	29.9	46.9	20.4	14.8	27.4
Frankston (C)	39.0	30.4	48.3	32.4	25.4	40.4	27.9	20.5	36.7
Gannawarra (S)	46.3	36.8	56.0	36.6	28.0	46.1	17.2	11.9	24.1
Glen Eira (C)	43.9	36.1	52.1	36.6	28.6	45.4	18.3	12.6	25.9
Glenelg (S)	32.2	24.4	41.2	48.4	40.1	56.8	19.2	13.2	27.2
Golden Plains (S)	39.8	32.0	48.1	43.0	34.9	51.5	17.2	11.9	24.2
Greater Bendigo (C)	36.2	27.7	45.6	45.6	36.5	55.0	18.2	13.1	24.8
Greater Dandenong (C)	32.2	25.0	40.2	39.9	32.1	48.3	28.0	21.2	35.9
Greater Geelong (C)	48.2	38.2	58.3	39.8	30.4	50.1	11.8	7.3	18.5
Greater Shepparton (C)	41.4	32.3	51.0	39.1	30.2	48.8	19.5	14.0	26.6
Hepburn (S)	49.4	40.0	58.8	33.5	26.2	41.7	17.1	11.3	25.1
Hindmarsh (S)	37.9	29.1	47.6	47.3	38.2	56.7	14.6	10.1	20.6
Hobsons Bay (C)	39.5	31.5	48.1	39.3	31.2	48.0	21.2	15.1	28.9
Horsham (RC)	39.9	32.4	47.9	44.1	36.6	51.9	15.8	10.4	23.5
Hume (C)	32.5	25.5	40.5	49.1	41.0	57.2	18.4	13.0	25.3
Indigo (S)	50.0	40.6	59.3	36.7	28.5	45.7	13.3	8.4	20.6
Kingston (C)	55.8	47.8	63.5	26.8	20.3	34.5	17.1	12.0	23.8
Knox (C)	41.8	33.3	50.7	33.3	26.1	41.3	24.2	17.5	32.5
Latrobe (C)	35.6	27.8	44.1	44.0	35.4	52.9	20.4	15.0	27.2
Loddon (S)	33.5	24.8	43.5	41.4	32.9	50.4	25.1	17.3	35.0
Macedon Ranges (S)	35.7	28.3	44.0	47.8	38.6	57.2	16.5	10.4	25.1
Manningham (C)	45.4	36.5	54.5	44.9	35.9	54.2	9.8	6.0	15.5

Metropolitan and rural LGAs 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 3.4: Self-reported health, by LGA, males, 2008 (continued)

LGA	Excellent / Very good			Good			Fair / Poor		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	48.6	39.6	57.8	32.2	24.1	41.5	17.7	12.7	24.1
Maribyrnong (C)	35.5	28.2	43.5	44.9	37.3	52.8	19.6	14.9	25.3
Maroondah (C)	48.1	40.3	56.1	30.5	23.1	39.0	20.2	14.2	27.9
Melbourne (C)	39.8	33.5	46.5	39.1	32.6	46.0	21.1	16.0	27.4
Melton (S)	28.6	21.0	37.8	45.5	36.9	54.4	25.8	19.2	33.8
Mildura (RC)	37.4	28.8	46.9	42.9	33.9	52.3	18.9	13.0	26.6
Mitchell (S)	41.9	34.3	50.0	42.5	34.5	51.0	15.6	11.0	21.5
Moira (S)	40.1	31.9	49.0	39.3	28.9	50.8	20.6	12.8	31.3
Monash (C)	41.2	31.9	51.3	39.5	30.5	49.2	19.3	12.4	28.7
Moonee Valley (C)	46.3	37.9	54.9	34.4	26.5	43.3	19.3	12.8	28.2
Moorabool (S)	31.4	24.1	39.8	46.4	37.9	55.1	22.2	15.6	30.6
Moreland (C)	40.3	33.3	47.8	39.6	32.7	47.1	20.0	14.7	26.6
Mornington Peninsula (S)	43.7	35.9	51.9	33.9	26.0	42.8	22.4	16.2	30.1
Mount Alexander (S)	44.6	36.6	53.0	27.5	20.5	35.7	27.7	22.4	33.7
Moyne (S)	37.2	28.5	46.8	52.2	42.6	61.6	10.6	7.0	15.8
Murrindindi (S)	41.6	32.0	52.0	40.3	30.6	50.9	18.1	10.2	30.0
Nillumbik (S)	44.1	36.7	51.8	37.4	29.6	45.8	17.4	11.6	25.2
Northern Grampians (S)	44.3	34.5	54.6	37.1	28.0	47.1	18.4	12.7	26.0
Port Phillip (C)	53.4	46.0	60.6	31.5	24.8	38.9	13.8	9.3	20.1
Pyrenees (S)	30.9	24.0	38.7	42.1	31.6	53.4	27.1	18.5	37.8
Queenscliffe (B)	67.0	57.9	74.9	28.1	20.5	37.1	5.0	2.6	9.3
Southern Grampians (S)	39.4	31.1	48.4	42.8	34.7	51.2	17.8	12.5	24.7
South Gippsland (S)	44.0	35.1	53.4	34.0	26.2	42.7	22.0	16.6	28.7
Stonnington (C)	60.1	51.1	68.4	26.2	18.9	35.0	13.8	9.1	20.2
Strathbogie (S)	39.0	30.2	48.6	47.9	39.6	56.3	13.0	8.4	19.5
Surf Coast (S)	59.0	49.3	68.0	20.3	15.2	26.6	19.9	12.6	29.9
Swan Hill (RC)	38.7	30.1	48.0	45.1	35.9	54.6	16.3	11.2	23.1
Towong (S)	46.9	39.3	54.6	43.1	35.3	51.3	10.0	6.6	15.0
Wangaratta (RC)	41.8	32.8	51.5	29.9	21.7	39.6	28.3	20.0	38.5
Warrnambool (C)	41.2	33.8	49.0	38.4	32.0	45.1	19.0	13.5	26.0
Wellington (S)	32.4	25.3	40.4	44.6	36.1	53.4	23.1	16.0	32.1
West Wimmera (S)	37.3	29.5	45.9	45.8	37.3	54.5	16.9	12.0	23.2
Whitehorse (C)	45.4	37.1	53.8	42.9	34.8	51.5	11.3	7.5	16.8
Whittlesea (C)	27.9	21.2	35.8	46.4	38.1	55.0	25.5	19.2	33.0
Wodonga (RC)	31.5	25.3	38.4	47.9	40.8	55.0	20.7	14.9	27.9
Wyndham (C)	34.7	27.9	42.2	46.2	38.6	53.9	19.1	13.9	25.7
Yarra (C)	39.8	32.9	47.1	39.5	32.4	47.1	20.5	15.3	26.9
Yarra Ranges (S)	39.2	31.8	47.1	44.0	36.2	52.1	16.9	12.1	23.0
Yarriambiack (S)	36.1	28.3	44.7	41.3	33.3	49.8	21.4	14.9	29.8
<b>Total</b>	<b>41.4</b>	<b>40.0</b>	<b>42.7</b>	<b>39.2</b>	<b>37.9</b>	<b>40.6</b>	<b>19.2</b>	<b>18.2</b>	<b>20.2</b>

Table 3.5: Self-reported health, by LGA, females, 2008

LGA	Excellent / Very good			Good			Fair / Poor		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	48.1	41.1	55.2	26.5	20.3	33.8	25.4	21.7	29.5
Ararat (RC)	43.2	35.4	51.3	37.7	31.1	44.8	17.6	12.0	25.2
Ballarat (C)	46.7	39.9	53.6	35.6	29.2	42.6	17.4	13.4	22.3
Banyule (C)	50.1	42.5	57.7	32.3	25.8	39.6	17.5	12.6	23.9
Bass Coast (S)	50.2	42.2	58.1	36.1	28.7	44.3	13.4	9.7	18.4
Baw Baw (S)	52.2	44.9	59.4	35.5	28.9	42.8	12.3	8.5	17.3
Bayside (C)	60.9	53.0	68.2	26.8	21.3	33.2	12.3	7.6	19.3
Benalla (RC)	42.5	35.8	49.5	37.5	30.4	45.2	20.0	15.0	26.0
Boroondara (C)	60.3	53.1	67.0	29.5	23.4	36.6	10.2	6.7	15.3
Brimbank (C)	26.3	21.5	31.7	45.5	40.1	51.1	27.8	23.0	33.1
Buloke (S)	47.6	38.6	56.8	37.5	28.9	47.0	14.9	10.5	20.7
Campaspe (S)	48.0	40.8	55.2	31.5	25.4	38.2	20.3	14.5	27.6
Cardinia (S)	44.6	37.6	51.9	40.1	33.2	47.4	14.7	10.4	20.3
Casey (C)	42.9	36.7	49.3	37.6	31.7	44.0	19.1	14.6	24.6
Central Goldfields (S)	34.8	28.4	41.8	42.0	33.4	51.1	22.9	16.2	31.4
Colac-Otway (S)	50.2	43.0	57.3	32.9	26.5	40.0	16.6	11.6	23.2
Corangamite (S)	49.6	41.5	57.6	33.0	25.8	41.1	17.0	12.7	22.5
Darebin (C)	42.1	35.9	48.4	40.3	34.1	46.8	17.1	13.0	22.0
East Gippsland (S)	48.5	41.7	55.3	29.4	21.8	38.4	22.1	15.1	31.2
Frankston (C)	45.1	38.4	52.0	37.2	30.7	44.3	17.6	12.9	23.7
Gannawarra (S)	42.5	36.1	49.3	36.9	29.6	44.9	20.0	14.8	26.6
Glen Eira (C)	53.5	46.4	60.4	30.2	24.2	37.0	16.1	11.6	22.0
Glenelg (S)	45.6	38.6	52.7	38.2	31.6	45.2	16.3	11.8	22.1
Golden Plains (S)	53.3	45.9	60.6	34.4	28.8	40.5	11.8	7.3	18.5
Greater Bendigo (C)	43.6	37.2	50.3	37.2	30.9	43.9	19.2	14.8	24.7
Greater Dandenong (C)	40.7	34.1	47.5	36.0	29.7	42.8	22.3	17.3	28.2
Greater Geelong (C)	45.4	38.7	52.4	34.1	27.3	41.5	20.5	14.6	28.0
Greater Shepparton (C)	41.6	35.1	48.5	43.8	36.7	51.2	14.6	10.1	20.7
Hepburn (S)	50.1	42.4	57.8	31.4	24.4	39.3	18.3	13.6	24.1
Hindmarsh (S)	36.7	30.9	42.8	45.1	39.1	51.2	18.1	13.8	23.3
Hobsons Bay (C)	38.5	32.8	44.6	40.5	33.1	48.3	20.6	14.6	28.3
Horsham (RC)	41.6	35.5	48.0	37.9	31.5	44.8	20.4	15.2	26.7
Hume (C)	39.1	32.9	45.8	35.3	29.5	41.6	25.1	19.9	31.2
Indigo (S)	53.1	46.3	59.8	29.2	22.7	36.6	17.8	11.3	26.8
Kingston (C)	48.3	40.4	56.4	36.6	29.3	44.6	15.1	10.5	21.3
Knox (C)	43.6	37.3	50.2	35.2	28.7	42.3	20.2	14.9	26.7
Latrobe (C)	37.5	31.9	43.4	38.5	32.2	45.2	23.9	18.6	30.1
Loddon (S)	47.3	39.3	55.4	34.6	27.1	43.0	18.1	13.2	24.3
Macedon Ranges (S)	44.7	36.1	53.7	37.7	29.3	46.9	17.7	12.6	24.1
Manningham (C)	38.7	32.2	45.6	42.9	35.8	50.3	18.4	13.2	25.1

Metropolitan and rural LGAs 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.

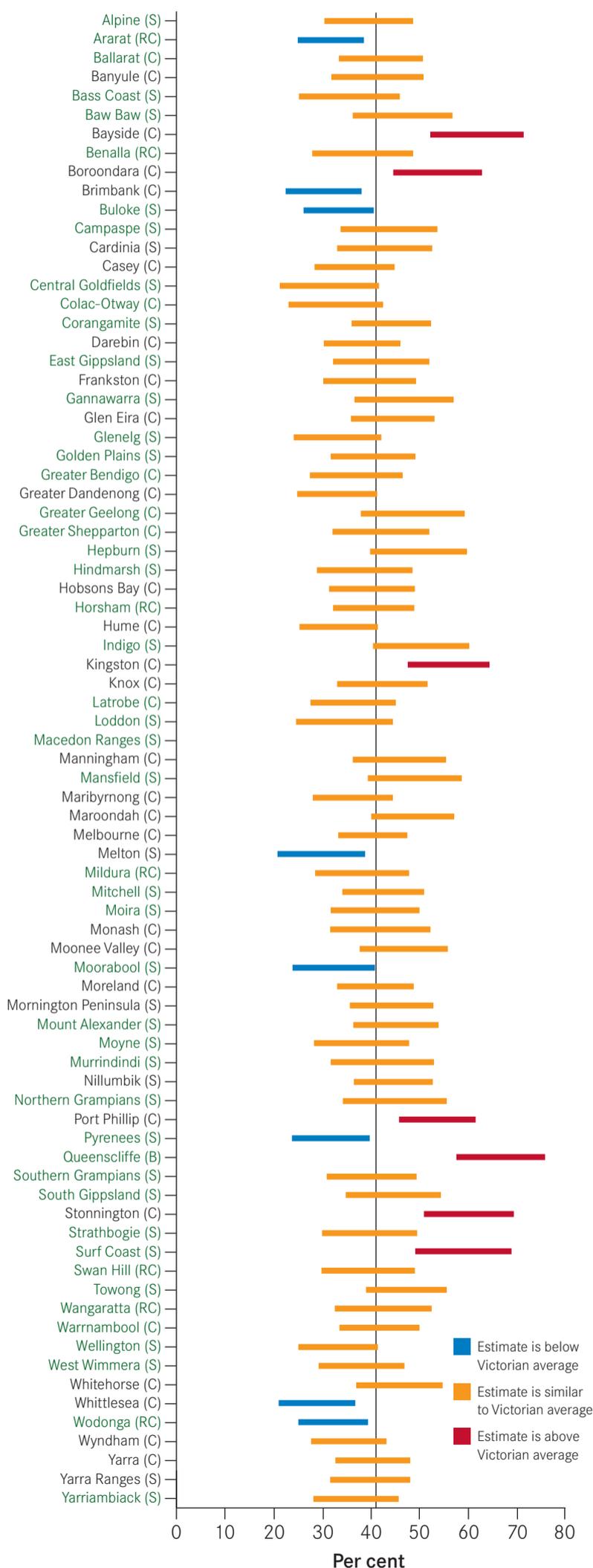
Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Table 3.5: Self-reported health, by LGA, females, 2008 (continued)

LGA	Excellent / Very good			Good			Fair / Poor		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	50.0	42.8	57.2	37.2	30.3	44.6	12.0	7.5	18.6
Maribyrnong (C)	44.9	39.0	51.0	37.9	31.8	44.5	17.2	12.9	22.5
Maroondah (C)	59.8	52.4	66.7	28.7	22.5	35.8	11.6	8.4	15.8
Melbourne (C)	55.8	49.1	62.3	31.0	25.0	37.6	13.2	9.7	17.8
Melton (S)	38.2	32.5	44.2	41.7	36.2	47.3	20.1	15.9	25.2
Mildura (RC)	37.6	31.2	44.5	39.2	32.8	46.0	23.1	17.7	29.6
Mitchell (S)	40.6	33.4	48.3	38.5	31.5	45.9	20.9	15.5	27.6
Moira (S)	51.6	45.8	57.4	33.2	27.6	39.3	15.2	11.6	19.7
Monash (C)	43.9	37.5	50.5	38.3	31.8	45.1	17.9	13.5	23.3
Moonee Valley (C)	46.7	40.4	53.2	33.6	27.5	40.2	19.6	15.0	25.1
Moorabool (S)	48.9	41.7	56.1	36.8	30.3	43.9	13.8	10.4	18.3
Moreland (C)	46.1	40.1	52.3	29.8	24.3	35.9	23.9	19.0	29.5
Mornington Peninsula (S)	47.2	40.2	54.3	41.4	34.5	48.6	11.1	7.3	16.5
Mount Alexander (S)	47.8	39.6	56.1	39.9	31.9	48.5	11.7	7.8	17.1
Moyne (S)	48.9	40.5	57.3	38.4	30.3	47.1	12.6	9.3	16.9
Murrindindi (S)	51.2	46.0	56.2	31.7	26.1	37.9	16.7	12.2	22.4
Nillumbik (S)	52.4	44.1	60.6	32.4	24.9	40.8	14.6	10.1	20.6
Northern Grampians (S)	45.4	38.8	52.3	31.6	25.4	38.5	23.0	18.1	28.7
Port Phillip (C)	55.1	48.4	61.6	30.6	24.9	36.9	14.3	10.4	19.4
Pyrenees (S)	38.9	31.8	46.6	37.3	30.3	45.0	23.7	17.1	31.9
Queenscliffe (B)	62.3	55.0	69.1	27.5	21.4	34.5	10.1	6.2	15.8
Southern Grampians (S)	50.3	42.7	57.8	35.4	28.1	43.4	14.4	10.1	20.1
South Gippsland (S)	55.0	48.5	61.5	32.0	26.3	38.2	13.0	9.0	18.4
Stonnington (C)	54.2	48.0	60.2	33.6	27.8	39.9	12.2	8.8	16.7
Strathbogie (S)	54.8	45.8	63.5	30.7	23.0	39.7	14.3	9.8	20.5
Surf Coast (S)	58.4	51.1	65.4	29.3	23.2	36.2	12.0	8.0	17.6
Swan Hill (RC)	36.3	30.5	42.4	37.4	31.6	43.5	26.0	22.0	30.4
Towong (S)	45.4	38.3	52.7	40.2	33.6	47.3	13.9	10.0	18.9
Wangaratta (RC)	53.3	45.4	61.0	33.3	26.3	41.2	13.4	9.6	18.4
Warrnambool (C)	49.5	42.1	57.0	38.3	31.3	45.9	12.1	8.8	16.5
Wellington (S)	44.1	37.3	51.1	43.9	37.1	50.9	11.6	8.3	16.0
West Wimmera (S)	43.4	37.0	49.9	38.7	31.6	46.3	17.5	12.3	24.3
Whitehorse (C)	37.2	31.6	43.3	48.7	42.6	54.9	13.9	10.3	18.6
Whittlesea (C)	42.1	36.2	48.2	40.7	35.0	46.6	17.2	13.4	21.9
Wodonga (RC)	46.0	39.6	52.6	36.5	30.6	42.8	17.5	13.0	23.2
Wyndham (C)	44.8	38.9	50.9	33.1	27.7	39.0	21.0	16.3	26.5
Yarra (C)	41.1	34.7	47.8	43.0	36.8	49.4	15.7	11.7	20.9
Yarra Ranges (S)	44.5	38.0	51.1	34.5	28.8	40.6	21.1	15.9	27.5
Yarriambiack (S)	48.5	40.8	56.3	34.2	27.3	41.8	16.9	12.1	23.1
<b>Total</b>	<b>45.9</b>	<b>44.8</b>	<b>46.9</b>	<b>36.4</b>	<b>35.4</b>	<b>37.5</b>	<b>17.5</b>	<b>16.7</b>	<b>18.3</b>

Table 3.4 and figure 3.5 show the proportion of males who reported being in excellent or very good health, by LGA. The highest proportion of males who reported being in excellent or very good health was in Queenscliffe (67.0 per cent) and the lowest proportion was in Whittlesea (27.9 per cent). A higher proportion of males reported being in excellent or very good health in seven LGAs: Queenscliffe (67.0 per cent), Bayside (61.9 per cent), Stonnington (60.1 per cent), Surf Coast (59.0 per cent), Kingston (55.8 per cent), Boroondara (53.4 per cent) and Port Phillip (53.4 per cent), compared with all Victorian males (41.4 per cent).

Figure 3.5: Excellent or very good self-reported health, by LGA, males, 2008



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

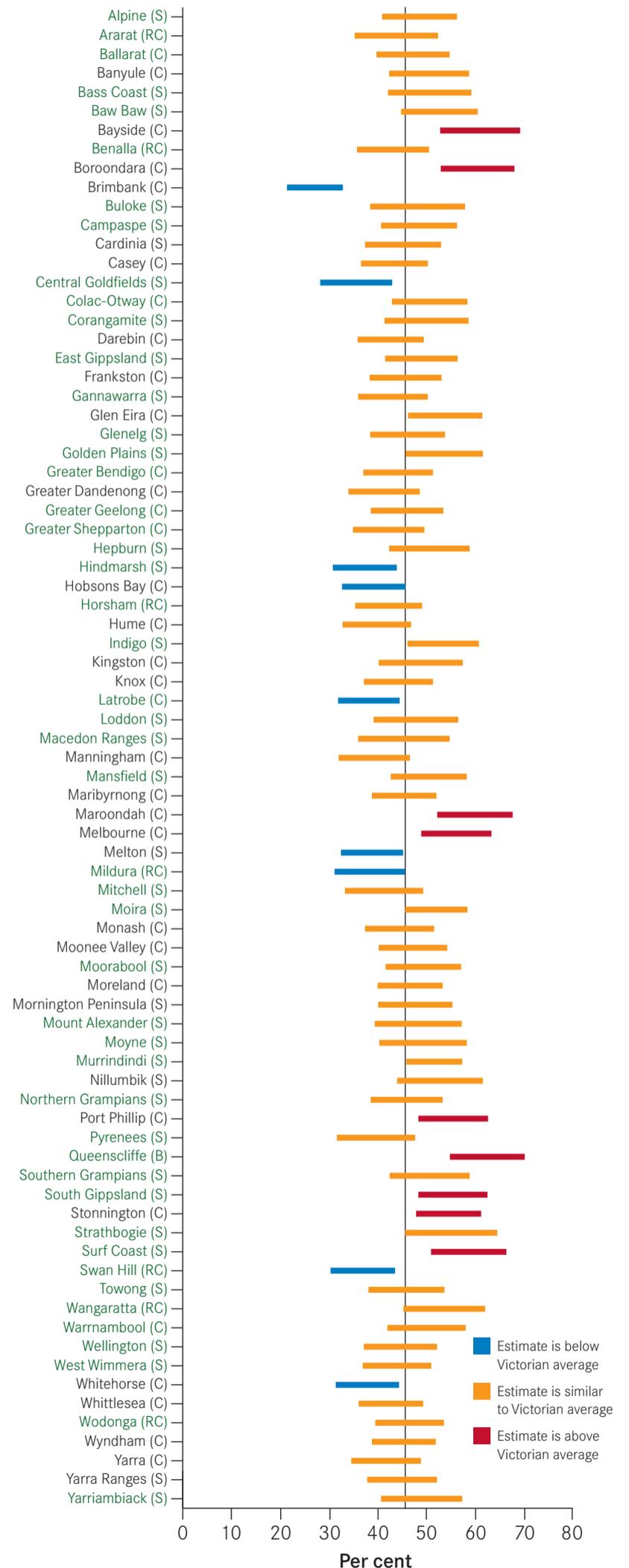
LGA = local government area.

Data are age standardised to the 2006 Victorian population.

The line on the graph is the Victorian estimate, it does not show the 95% CI. See the relevant table for the 95% CI for Victoria (Total).

Table 3.5 and figure 3.6 show the proportion of females who reported being in excellent or very good health, by LGA. The highest proportion of females who reported being in excellent or very good health was in Queenscliffe (62.3 per cent) and the lowest proportion was in Brimbank (26.3 per cent). A higher proportion of females reported being in excellent or very good health in nine LGAs: Queenscliffe (62.3 per cent), Bayside (60.9 per cent), Boroondara (60.3 per cent), Maroondah (59.8 per cent), Surf Coast (58.4 per cent), Melbourne (55.8 per cent), Port Phillip (55.1 per cent), South Gippsland (55.0 per cent) and Stonnington (54.2 per cent), compared with all Victorian females (45.9 per cent).

Figure 3.6: Excellent or very good self-reported health, by LGA, females, 2008



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

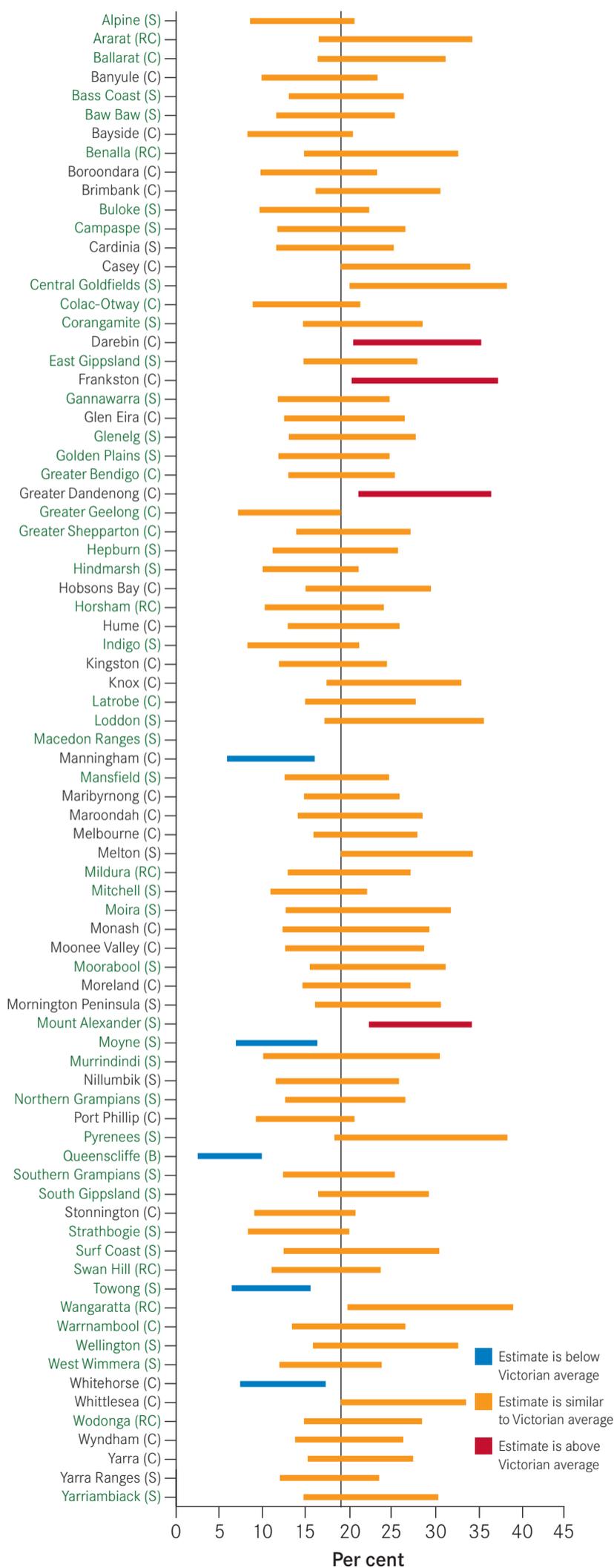
LGA = local government area.

Data are age standardised to the 2006 Victorian population.

The line on the graph is the Victorian estimate, it does not show the 95% CI. See the relevant table for the 95% CI for Victoria (Total).

Table 3.4 and figure 3.7 show the proportion of males who reported being in fair or poor health, by LGA. The highest proportion of males who reported being in fair or poor health was in Greater Dandenong (28.0 per cent) and the lowest proportion was in Queenscliffe (5.0 per cent). There was a higher proportion of males who reported being in fair or poor health in four LGAs: Greater Dandenong (28.0 per cent), Frankston (27.9 per cent), Mount Alexander (27.7 per cent) and Darebin (27.1 per cent), compared with all Victorian males (19.2 per cent).

Figure 3.7: Fair or poor self-reported health, by LGA, males, 2008



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

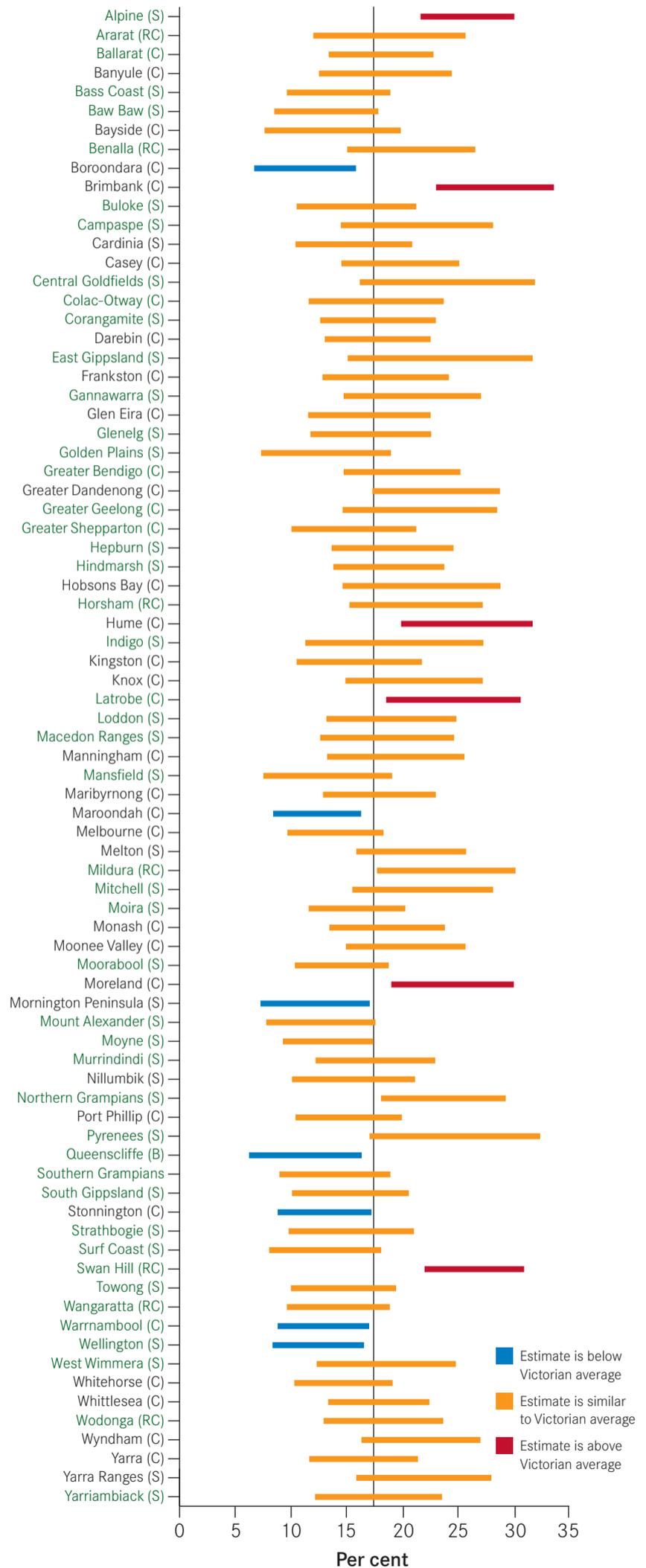
LGA = local government area.

Data are age standardised to the 2006 Victorian population.

The line on the graph is the Victorian estimate, it does not show the 95% CI. See the relevant table for the 95% CI for Victoria (Total).

Table 3.5 and figure 3.8 show the proportion of females who reported being in fair or poor health, by LGA. The highest proportion of females who reported being in fair or poor health was in Brimbank (27.8 per cent) and the lowest proportion was in Queenscliffe (10.1 per cent). There was a higher proportion of females who reported being in fair or poor health in six LGAs: Brimbank (27.8 per cent), Swan Hill (26.0 per cent), Alpine (25.4 per cent), Hume (25.1 per cent), Latrobe (23.9 per cent) and Moreland (23.9 per cent) compared with all Victorian females (17.5 per cent).

Figure 3.8: Fair or poor self-reported health, by LGA, females, 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 line on the graph is the Victorian estimate, it does not show the 95% CI. See the relevant table for the 95% CI for Victoria (Total).

## Self-reported health by selected health indicators

Tables 3.6 and 3.7 show self-reported health status for males and females, by selected health indicators. The rates for fair or poor self-reported health were higher than the rates for Victoria among males and females who reported higher levels of psychological distress, current smoking, underweight and obese body weight and lower levels of physical activity.

The rates for fair or poor health status were also higher for males who reported consuming alcohol at levels which put them at risk for long-term harm, while the rates for fair or poor health status were higher for females who also reported being abstainers (non-drinkers) and meeting neither the fruit or vegetable consumption guidelines.

**Table 3.6: Self-reported health status, by selected health indicators, males, 2008**

Region	Excellent / Very Good			Good			Fair / Poor		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Level of psychological distress<sup>(a)</sup></b>									
Low (10–15)	47.2	45.6	48.9	39.2	37.6	40.9	13.5	12.3	14.6
Moderate (16–21)	34.2	31.4	37.0	40.2	37.4	43.1	25.4	23.1	27.8
High (22–29)	20.8	17.2	25.0	38.2	33.7	42.9	40.4	36.2	44.8
Very high (30–50)	10.9	7.5	15.7	26.2	19.6	34.0	62.6	54.5	70.0
<b>Physical activity<sup>(b)</sup></b>									
Sedentary	25.1	19.8	31.3	40.2	34.0	46.8	34.5	28.9	40.7
Insufficient time and/or sessions	33.2	30.6	35.9	42.4	39.7	45.1	24.2	21.9	26.6
Sufficient time and sessions	46.7	45.0	48.5	38.1	36.4	39.8	15.0	13.8	16.2
<b>Alcohol consumption<sup>(c)</sup></b>									
At risk or high risk of long-term harm	26.7	22.2	31.8	44.6	38.9	50.5	28.5	23.2	34.5
At risk or high risk of short-term harm	41.2	39.4	43.0	40.8	39.0	42.7	17.7	16.4	19.2
Abstainer from alcohol	39.6	35.7	43.6	37.1	33.3	41.0	23.0	19.9	26.5
<b>Nutrition<sup>(d)</sup></b>									
Met guidelines for fruit and vegetable consumption	48.3	41.4	55.2	39.0	32.6	45.9	12.6	9.2	17.1
Met guidelines for vegetable consumption	47.5	41.6	53.6	37.4	31.9	43.2	14.9	11.4	19.2
Met guidelines for fruit consumption	48.1	46.0	50.2	36.1	34.1	38.2	15.6	14.2	17.1
Did not meet guidelines for either fruit or vegetables	36.7	35.0	38.5	41.8	40.0	43.6	21.3	19.9	22.8
<b>Smoking status</b>									
Non-smoker	47.6	45.7	49.4	37.2	35.4	39.0	15.2	13.9	16.6
Ex-smoker	38.6	35.2	42.1	38.4	35.2	41.6	22.8	19.9	26.0
Current	30.8	28.0	33.7	43.7	40.6	46.8	25.2	22.8	27.8
<b>Body weight status<sup>(e)</sup></b>									
Underweight	32.6	22.5	44.6	32.9	24.8	42.2	31.6	22.0	43.1
Normal weight	50.6	48.4	52.7	34.8	32.8	36.9	14.4	13.0	16.0
Overweight	41.6	39.4	43.8	40.8	38.6	43.0	17.4	15.8	19.1
Obese	21.8	19.1	24.7	44.9	41.3	48.6	33.2	29.8	36.7
<b>Total</b>	<b>41.4</b>	<b>40.0</b>	<b>42.7</b>	<b>39.2</b>	<b>37.9</b>	<b>40.6</b>	<b>19.2</b>	<b>18.2</b>	<b>20.2</b>

(a) Based on Kessler 10 Psychological Distress Scale 10 (K10).

(b) Based on national guidelines (DoHA 1999) and excludes adults aged less than 19 years.

(c) Based on national guidelines (NHMRC 2001).

(d) Based on national guidelines (NHMRC 2003).

(e) Based on Body Mass Index (BMI) score.

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 3.7: Self-reported health status, by selected health indicators, females, 2008

Region	Excellent / Very Good			Good			Fair / Poor		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Level of psychological distress<sup>(a)</sup></b>									
Low (10–15)	55.6	54.1	57.0	34.7	33.3	36.1	9.6	8.8	10.5
Moderate (16–21)	36.8	34.8	38.9	40.7	38.6	42.8	22.4	20.7	24.1
High (22–29)	22.0	19.4	24.8	38.2	35.0	41.5	39.4	36.3	42.7
Very high (30–50)	15.0	11.5	19.3	28.8	24.1	34.0	55.9	50.7	61.0
<b>Physical activity<sup>(b)</sup></b>									
Sedentary	37.2	32.5	42.1	31.2	26.3	36.6	31.0	26.5	35.9
Insufficient time and/or sessions	38.8	36.7	40.9	41.0	38.9	43.2	20.1	18.4	21.8
Sufficient time and sessions	51.0	49.5	52.4	35.3	33.9	36.7	13.7	12.7	14.8
<b>Alcohol consumption<sup>(c)</sup></b>									
At risk or high risk of long-term harm	37.6	32.7	42.6	41.3	35.5	47.4	21.1	16.4	26.7
At risk or high risk of short-term harm	49.6	47.7	51.4	36.6	34.8	38.3	13.7	12.5	15.0
Abstainer from alcohol	37.0	34.6	39.5	37.9	35.4	40.4	24.8	22.8	26.9
<b>Nutrition<sup>(d)</sup></b>									
Met guidelines for fruit and vegetable consumption	60.3	55.9	64.5	26.4	23.0	30.2	13.0	10.0	16.7
Met guidelines for vegetable consumption	57.9	54.2	61.5	28.7	25.6	31.9	13.2	10.6	16.2
Met guidelines for fruit consumption	51.0	49.5	52.5	34.3	32.9	35.8	14.5	13.5	15.6
Did not meet guidelines for either fruit or vegetables	40.2	38.6	41.7	39.1	37.5	40.7	20.6	19.4	22.0
<b>Smoking status</b>									
Non-smoker	49.0	47.6	50.3	35.4	34.1	36.8	15.4	14.5	16.5
Ex-smoker	45.5	42.8	48.1	36.5	33.9	39.3	17.8	15.6	20.1
Current	34.7	32.2	37.3	38.6	36.2	41.0	26.4	24.1	28.7
<b>Body weight status<sup>(e)</sup></b>									
Underweight	50.4	44.6	56.2	26.3	21.7	31.5	23.1	18.4	28.7
Normal weight	56.0	54.5	57.5	32.8	31.3	34.2	11.1	10.2	12.0
Overweight	43.6	41.4	45.9	38.8	36.5	41.0	17.4	15.6	19.2
Obese	26.1	23.6	28.6	42.7	39.8	45.7	31.1	28.3	34.0
<b>Total</b>	<b>45.9</b>	<b>44.8</b>	<b>46.9</b>	<b>36.4</b>	<b>35.4</b>	<b>37.5</b>	<b>17.5</b>	<b>16.7</b>	<b>18.3</b>

(a) Based on Kessler 10 Psychological Distress Scale 10 (K10).

(b) Based on national guidelines (DoHA 1999) and excludes adults aged less than 19 years.

(c) Based on national guidelines (NHMRC 2001).

(d) Based on national guidelines (NHMRC 2003).

(e) Based on Body Mass Index (BMI) score.

95% CI = 95 per cent confidence interval.

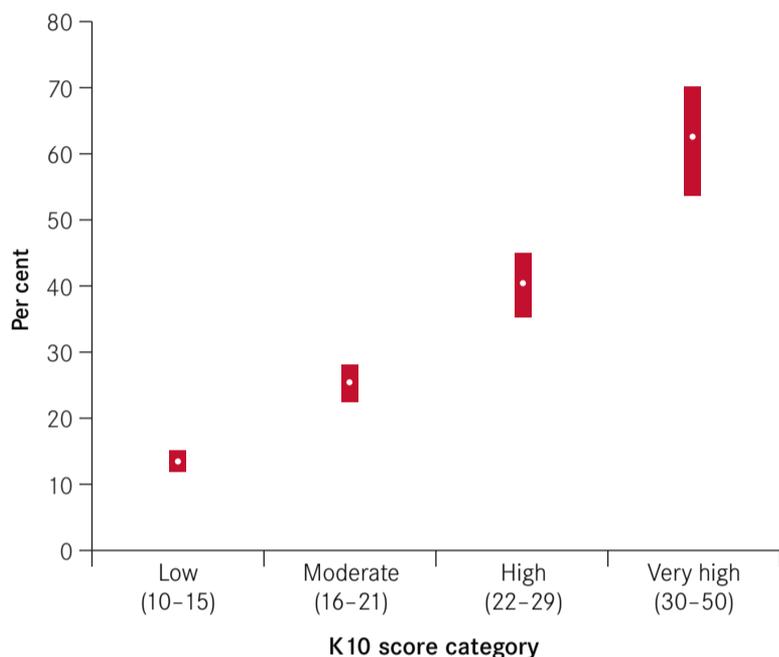
Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

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.

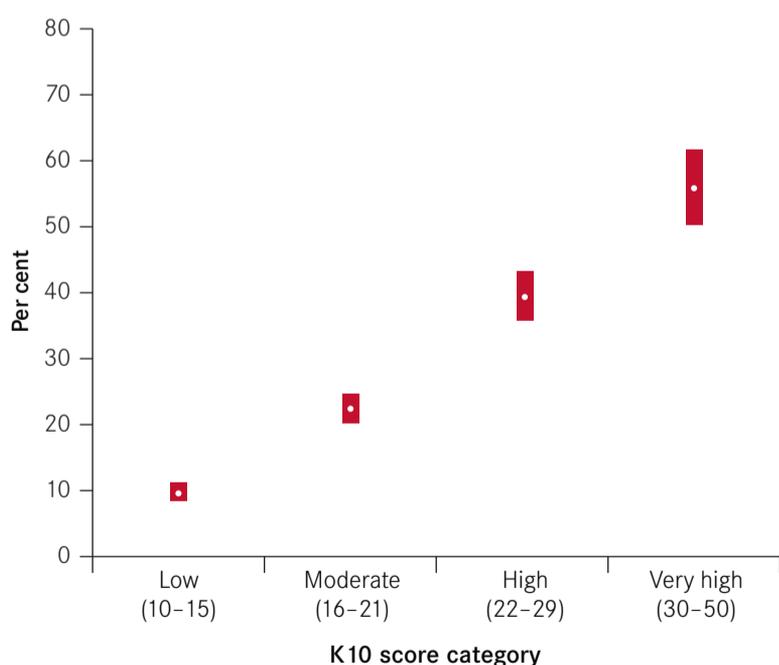
Figures 3.9 and 3.10 show the relationship between fair or poor self-reported health and levels of psychological distress for males and females. The figures show that levels of psychological distress increased as the proportion of males and females with fair or poor health increased.

**Figure 3.9: Fair or poor health status, by level of psychological distress, males, 2008**



Data are age standardised to the 2006 Victorian population.

**Figure 3.10: Fair or poor health status, by level of psychological distress, females, 2008**



Data are age standardised to the 2006 Victorian population.

## Selected health conditions

Table 3.8 shows the prevalence of selected doctor diagnosed health conditions by sex, between 2001 and 2008. The prevalence of heart disease, stroke and cancer remained constant between 2001 and 2008, for males and females. However, although the prevalence of osteoporosis remained constant for males between 2003 and 2008, prevalence increased for females from 6.2 per cent in 2001 to 7.0 per cent in 2008. In addition, the prevalence of arthritis decreased for males and females between 2001 and 2008.

**Table 3.8: Selected health conditions, by sex, 2001–2008**

	2001	2002	2003	2004	2005	2006	2007	2008
	Per cent							
<b>Males</b>								
Heart disease	8.2	7.7	8.4	7.9	8.4	8.6	8.7	8.3
Stroke	2.7	2.4	1.7	3.1	2.5	2.3	2.3	2.8
Cancer	7.2	6.5	6.8	5.5	6.7	5.8	6.6	6.1
Osteoporosis	..	..	1.4	1.9	1.8	1.7	1.9	2.2
Arthritis	19.8	21.4	16.8	17.2	15.7	15.3	16.2	16.6
<b>Females</b>								
Heart disease	5.5	5.2	4.8	4.1	6.0	5.7	5.2	5.2
Stroke	1.9	1.7	1.7	2.2	1.7	1.9	1.5	2.3
Cancer	7.5	6.6	6.6	6.4	6.7	7.0	6.7	7.1
Osteoporosis	6.2	6.0	6.6	6.7	6.8	6.9	6.8	7.0
Arthritis	26.4	26.0	23.5	23.3	23.7	23.8	24.5	23.5
<b>Persons</b>								
Heart disease	6.8	6.3	6.4	5.7	7.2	7.1	6.8	6.7
Stroke	2.3	2.0	1.7	2.6	2.1	2.1	1.9	2.5
Cancer	7.2	6.5	6.6	5.9	6.6	6.3	6.6	6.6
Osteoporosis	..	..	4.3	4.6	4.5	4.5	4.5	4.8
Arthritis	23.3	23.9	20.4	20.5	19.9	19.9	20.6	20.2

Data are age standardised to the 2006 Victorian population.

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

### Heart Disease

In 2008, 6.7 per cent of persons reported having ever been told by a doctor that they had heart disease. The prevalence of heart disease increased with increasing age for both males and females, with the highest estimates occurring in those aged 65 years and over. After the age of 45 years, the prevalence of heart disease was higher for males, compared with females (table 3.9).

### Stroke

The prevalence of doctor diagnosed stroke was 2.5 per cent in Victoria in 2008, with no difference in prevalence between males and females. However, the prevalence of stroke increased with increasing age and the highest rates were observed for males (9.3 per cent) and females (7.2 per cent) aged 65 years and over (table 3.9).

## Cancer

The prevalence of having ever been diagnosed with cancer was 6.6 per cent in 2008, with no difference in prevalence between males and females. However, the prevalence of cancer increased with increasing age. The highest rates were observed for persons aged 65 years and over (17.6 per cent) (table 3.9).

## Osteoporosis

The prevalence of having ever been diagnosed with osteoporosis was 4.8 per cent in 2008. Females (7.0 per cent) had higher rates than males (2.2 per cent) and prevalence increased with age. The highest rates were observed for males (6.8 per cent) and females (23.2 per cent) aged 65 years and over (table 3.9).

**Table 3.9: Selected health conditions, by age group and sex, 2008**

Age group (years)	Heart disease			Stroke			Cancer			Osteoporosis			Arthritis		
	%	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
<b>Males</b>															
18–44 years	0.6	0.4	0.9	0.5*	0.3	0.8	1.0	0.6	1.5	0.3*	0.2	0.7	4.3	3.6	5.2
45–54 years	6.9	5.5	8.6	1.9	1.3	2.9	3.9	3.0	5.1	1.5*	0.9	2.5	16.7	14.7	18.9
55–64 years	12.5	10.9	14.4	4.0	3.1	5.1	10.0	8.4	11.7	3.8	2.9	5.0	30.0	27.6	32.5
65+	27.9	25.9	30.0	9.3	8.1	10.7	19.5	17.7	21.4	6.8	5.8	8.0	41.3	39.1	43.6
<b>Total</b>	<b>8.3</b>	<b>7.8</b>	<b>8.9</b>	<b>2.8</b>	<b>2.5</b>	<b>3.2</b>	<b>6.1</b>	<b>5.6</b>	<b>6.6</b>	<b>2.2</b>	<b>1.9</b>	<b>2.5</b>	<b>16.6</b>	<b>15.9</b>	<b>17.4</b>
<b>Females</b>															
18–44 years	1.3	0.9	1.7	0.4	0.2	0.6	2.4	2.0	3.0	0.6	0.5	0.9	5.4	4.8	6.2
45–54 years	2.9	2.3	3.7	1.9	1.3	2.6	7.9	6.8	9.2	4.8	3.9	5.8	22.8	20.9	24.8
55–64 years	6.8	5.8	7.9	2.4	1.9	3.1	11.3	10.0	12.9	12.3	10.9	13.8	44.3	42.2	46.5
65+	16.8	15.4	18.3	7.2	6.3	8.3	16.1	14.8	17.5	23.2	21.6	24.8	60.6	58.7	62.4
<b>Total</b>	<b>5.2</b>	<b>4.9</b>	<b>5.6</b>	<b>2.3</b>	<b>2.0</b>	<b>2.5</b>	<b>7.1</b>	<b>6.6</b>	<b>7.5</b>	<b>7.0</b>	<b>6.7</b>	<b>7.5</b>	<b>23.5</b>	<b>22.8</b>	<b>24.1</b>
<b>Persons</b>															
18–44 years	0.9	0.7	1.2	0.4	0.3	0.6	1.7	1.4	2.1	0.5	0.4	0.7	4.9	4.4	5.4
45–54 years	4.9	4.1	5.8	1.9	1.4	2.5	5.9	5.2	6.8	3.1	2.6	3.8	19.8	18.4	21.2
55–64 years	9.6	8.6	10.7	3.2	2.7	3.8	10.7	9.6	11.8	8.1	7.2	9.1	37.3	35.6	38.9
65+	21.8	20.6	23.0	8.2	7.4	9.0	17.6	16.6	18.8	15.8	14.8	16.9	51.9	50.5	53.4
<b>Total</b>	<b>6.7</b>	<b>6.3</b>	<b>7.0</b>	<b>2.5</b>	<b>2.3</b>	<b>2.8</b>	<b>6.6</b>	<b>6.2</b>	<b>6.9</b>	<b>4.8</b>	<b>4.5</b>	<b>5.1</b>	<b>20.2</b>	<b>19.7</b>	<b>20.7</b>

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**.

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

## Arthritis

Approximately one in five persons (20.2 per cent) aged 18 years and over had ever been diagnosed with arthritis in 2008 (table 3.9). The prevalence of arthritis was higher for females (23.5 per cent), compared with males (16.6 per cent) and increased with age. The highest rates were observed for males (41.3 per cent) and females (60.6 per cent) aged 65 years and over.

Table 3.10 and figure 3.11 show the prevalence of arthritis by sex and type of arthritis. Osteoarthritis was the most common type of arthritis reported by both males (10.6 per cent) and females (16.4 per cent). Females had a higher prevalence of osteoarthritis (16.4 per cent) and rheumatoid arthritis (4.2 per cent) compared with their male counterparts (10.6 per cent and 3.2 per cent respectively).

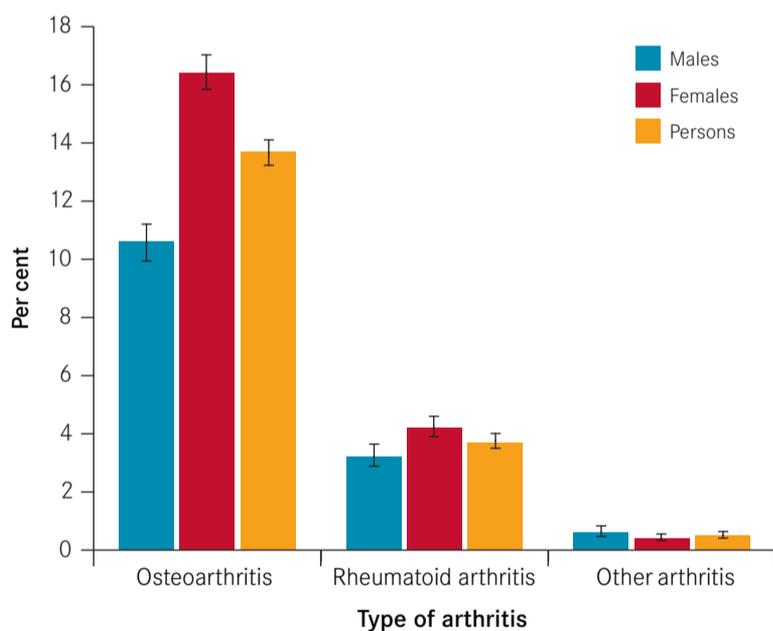
**Table 3.10: Prevalence of arthritis, by sex and arthritis type, 2008**

	Osteoarthritis			Rheumatoid arthritis			Other arthritis		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Males	10.6	10.0	11.2	3.2	2.9	3.6	0.6	0.4	0.8
Females	16.4	15.9	17.0	4.2	3.9	4.6	0.4	0.3	0.5
Persons	13.7	13.2	14.1	3.6	3.5	4.0	0.5	0.4	0.6

95% CI = 95 per cent confidence interval.

Data are age standardised to the 2006 Victorian population.

**Figure 3.11: Prevalence of arthritis, by type and sex, 2008**



Data are age standardised to the 2006 Victorian population.

Excess body weight or obesity, is a risk factor for both osteoarthritis (ARC 2009) and rheumatoid arthritis (Symmons & Harrison 2000). Table 3.11 shows the association between obesity and arthritis (osteoarthritis and rheumatoid arthritis). Persons with osteoarthritis (24.9 per cent) and rheumatoid arthritis (23.7 per cent) had higher rates of obese body weight (body mass index greater than or equal to 30 kg/m<sup>2</sup>) compared with all persons in Victoria (16.7 per cent).

**Table 3.11: Prevalence of arthritis, by type of arthritis, sex and body weight status<sup>(a)</sup>, 2008**

	Underweight (<18.5)			Normal (18.5–24.9)			Overweight (25.0–29.9)			Obese (≥30.0)		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
Osteoarthritis	**	**	**	<b>42.8</b>	36.5	49.2	<b>29.7</b>	25.5	34.2	<b>24.2</b>	18.6	30.7
Rheumatoid arthritis	**	**	**	<b>31.3</b>	25.0	38.3	<b>40.0</b>	31.5	49.0	<b>26.5</b>	19.5	34.8
Other arthritis	<b>0.9</b>	0.7	1.2	<b>38.9</b>	37.6	40.3	<b>40.4</b>	39.1	41.8	<b>16.5</b>	15.5	17.5
<b>Total</b>	<b>0.9</b>	<b>0.7</b>	<b>1.2</b>	<b>38.6</b>	<b>37.3</b>	<b>40.0</b>	<b>39.9</b>	<b>38.7</b>	<b>41.2</b>	<b>17.3</b>	<b>16.4</b>	<b>18.2</b>
<b>Females</b>												
Osteoarthritis	**	**	**	<b>37.3</b>	33.8	41.0	<b>27.3</b>	23.8	31.0	<b>26.8</b>	23.2	30.7
Rheumatoid arthritis	<b>1.2*</b>	0.6	2.3	<b>38.7</b>	32.9	44.9	<b>31.2</b>	25.4	37.6	<b>22.5</b>	18.5	27.0
Other arthritis	<b>3.8</b>	3.3	4.4	<b>49.5</b>	48.4	50.7	<b>23.7</b>	22.8	24.6	<b>14.9</b>	14.2	15.7
<b>Total</b>	<b>3.6</b>	<b>3.1</b>	<b>4.1</b>	<b>48.1</b>	<b>47.1</b>	<b>49.2</b>	<b>24.2</b>	<b>23.4</b>	<b>25.1</b>	<b>16.1</b>	<b>15.4</b>	<b>16.8</b>
<b>Persons</b>												
Osteoarthritis	<b>1.1*</b>	0.5	2.5	<b>41.7</b>	37.8	45.7	<b>27.4</b>	24.6	30.3	<b>24.9</b>	21.4	28.7
Rheumatoid arthritis	<b>1.3*</b>	0.6	2.6	<b>36.1</b>	31.5	41.0	<b>35.1</b>	29.6	41.1	<b>23.7</b>	18.8	29.3
Other arthritis	<b>2.3</b>	2.1	2.7	<b>44.1</b>	43.3	45.0	<b>32.3</b>	31.4	33.0	<b>15.7</b>	15.1	16.3
<b>Total</b>	<b>2.2</b>	<b>2.0</b>	<b>2.5</b>	<b>43.5</b>	<b>42.6</b>	<b>44.3</b>	<b>31.9</b>	<b>31.1</b>	<b>32.7</b>	<b>16.7</b>	<b>16.1</b>	<b>17.3</b>

(a) Based on Body Mass Index (BMI) score.

95% CI = 95 per cent confidence interval.

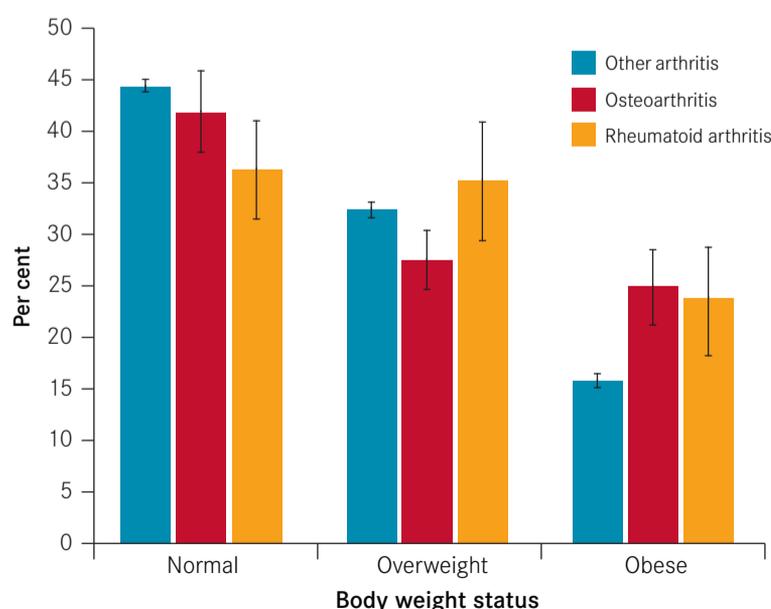
Data are age standardised to the 2006 Victorian population.

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

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

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

Figure 3.12 shows the prevalence of arthritis by body weight and type of arthritis. It is important to note that the causal pathway between obesity and arthritis cannot be determined from survey data because surveys are cross-sectional in design. While obesity has been shown to be a risk factor for both osteoarthritis and rheumatoid arthritis, people with these conditions are also at higher risk of developing obesity or exacerbating pre-existing obesity.

**Figure 3.12: Prevalence of doctor diagnosed arthritis, by type of arthritis and body weight status<sup>(a)</sup>, 2008**

(a) Based on Body Mass Index (BMI) score.

Data are age standardised to the 2006 Victorian population.

## Selected health conditions by region and LGA

The tables and figures which follow show the prevalence of heart disease, stroke, cancer, osteoporosis and arthritis by sex and Department of Health region. The prevalence of heart disease, stroke, cancer, osteoporosis and rheumatoid arthritis for males and females was similar between rural and metropolitan Victoria. However, males in rural Victoria (12.2 per cent) had a higher prevalence of osteoarthritis compared with their metropolitan counterparts (9.9 per cent).

### Heart Disease

Females who were resident in the Grampians region had a higher prevalence of doctor diagnosed heart disease (7.3 per cent) compared with all Victorian females (5.2 per cent) (table 3.12). There were no other differences between the Department of Health regions and state estimates for heart disease.

**Table 3.12: Prevalence of heart disease, by sex and Department of Health region, 2008**

Regions	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Barwon-South Western	7.5	5.8	9.7	5.1	3.8	6.7	6.2	5.1	7.6
Eastern Metropolitan	7.6	6.4	8.9	4.2	3.4	5.1	5.7	5.0	6.5
Gippsland	9.2	7.7	10.9	6.3	5.2	7.6	7.7	6.8	8.8
Grampians	9.4	7.9	11.0	7.3	5.7	9.3	8.3	7.1	9.6
Hume	8.6	7.3	10.1	6.1	5.3	7.0	7.3	6.5	8.2
Loddon Mallee	8.5	7.3	9.9	5.5	4.5	6.6	6.9	6.1	7.8
North and West Metropolitan	8.2	7.1	9.3	5.8	5.1	6.7	6.9	6.2	7.6
Southern Metropolitan	8.7	7.5	10.0	4.7	3.9	5.6	6.5	5.8	7.3
<b>Metropolitan</b>	8.2	7.5	8.9	5.0	4.5	5.5	6.5	6.1	6.9
<b>Rural</b>	8.6	7.9	9.4	6.0	5.4	6.6	7.2	6.7	7.7
<b>Total</b>	8.3	7.8	8.9	5.2	4.9	5.6	6.7	6.3	7.0

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 3.13 and figure 3.13 show the prevalence of heart disease for persons by LGA. Persons in four LGAs: Central Goldfields (12.9 per cent); Whittlesea (10.1 per cent); Maribyrnong (9.6 per cent) and Pyrenees (9.6 per cent) had a higher prevalence of doctor diagnosed heart disease compared with all Victorians (6.7 per cent), while Victorians in two LGAs: Towong (4.6 per cent) and Queenscliffe (4.3 per cent) had a lower prevalence of the disease.

# Self-Reported Health and Selected Health Conditions

Table 3.13: Prevalence of heart disease, by sex and LGA, 2008

LGA	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	7.9	5.5	11.4	5.5	3.9	7.9	6.9	5.3	9.0
Ararat (RC)	12.6	9.1	17.0	5.7	3.9	8.1	8.6	6.6	11.3
Ballarat (C)	10.2	7.6	13.6	8.4	5.6	12.4	9.1	6.8	12.0
Banyule (C)	6.2*	3.7	10.4	6.3*	3.5	11.1	6.2	4.3	8.9
Bass Coast (S)	9.3	6.7	12.8	5.4	3.9	7.5	7.0	5.4	9.0
Baw Baw (S)	9.0	6.2	12.8	4.3*	2.6	6.9	6.6	4.9	8.8
Bayside (C)	5.8	3.7	8.9	4.9	3.2	7.5	5.2	3.8	7.1
Benalla (RC)	7.2	4.8	10.7	7.4	5.3	10.1	7.2	5.6	9.3
Boroondara (C)	6.4	4.2	9.7	3.1*	1.9	5.0	4.7	3.4	6.6
Brimbank (C)	8.9	6.6	11.7	6.0*	3.5	10.2	7.9	5.7	10.8
Buloke (S)	8.0	5.9	10.9	6.0	3.7	9.5	7.1	5.1	9.6
Campaspe (S)	9.2	5.9	13.9	7.7*	4.5	13.1	8.4	5.8	12.1
Cardinia (S)	9.6	6.7	13.5	4.4	2.8	6.9	6.8	5.0	9.1
Casey (C)	10.7	7.5	15.1	3.0*	1.6	5.6	6.1	4.3	8.6
Central Goldfields (S)	15.5	10.1	23.0	9.2	6.9	12.1	12.9	9.2	17.8
Colac-Otway (S)	7.9	5.4	11.4	6.6	4.6	9.4	7.2	5.3	9.6
Corangamite (S)	6.4	4.0	10.2	6.8	4.5	10.0	6.6	4.8	8.9
Darebin (C)	5.9*	3.4	9.9	5.4	3.7	7.9	5.5	3.9	7.7
East Gippsland (S)	9.8	7.3	13.1	7.3	4.8	10.8	8.5	6.6	11.0
Frankston (C)	9.7	6.8	13.7	6.5*	3.8	10.8	8.0	5.8	11.0
Gannawarra (S)	8.6	5.9	12.5	5.3*	2.9	9.7	6.7	4.8	9.3
Glen Eira (C)	7.0	4.6	10.7	5.0*	3.1	8.1	5.7	4.1	7.9
Glenelg (S)	8.8	6.1	12.5	3.9*	2.2	6.7	6.2	4.5	8.5
Golden Plains (S)	7.6	4.7	11.9	10.3*	5.9	17.2	8.9	5.9	13.1
Greater Bendigo (C)	8.6	5.9	12.2	5.8	3.7	9.0	7.1	5.3	9.6
Greater Dandenong (C)	9.1	5.8	14.1	4.2*	2.4	7.2	6.5	4.4	9.5
Greater Geelong (C)	6.5*	3.9	10.7	4.4*	2.6	7.3	5.6	3.8	8.1
Greater Shepparton (C)	7.2	4.6	11.2	6.4	4.3	9.2	6.8	4.9	9.3
Hepburn (S)	13.1	8.8	19.0	6.2	4.1	9.2	9.1	6.6	12.5
Hindmarsh (S)	7.8	5.9	10.3	6.3	4.2	9.3	7.2	5.4	9.5
Hobsons Bay (C)	6.1	3.9	9.4	3.4*	1.9	5.9	5.2	3.6	7.5
Horsham (RC)	8.7	5.8	12.7	6.8*	3.6	12.3	7.4	5.3	10.2
Hume (C)	10.9	7.4	15.9	6.7	4.2	10.6	8.9	6.5	12.1
Indigo (S)	7.8	5.2	11.5	5.2	3.4	8.0	6.7	4.9	9.0
Kingston (C)	10.1	7.0	14.2	6.7	4.4	10.1	7.8	5.9	10.4
Knox (C)	8.6	5.5	13.0	4.8	3.0	7.6	6.5	4.8	8.9
Latrobe (C)	10.7	7.6	14.9	5.6*	3.5	9.0	8.1	5.7	11.3
Loddon (S)	8.3	5.5	12.4	7.2	5.2	10.0	8.0	6.1	10.4
Macedon Ranges (S)	6.9	4.7	9.9	4.6	2.9	7.3	6.3	4.6	8.4
Manningham (C)	6.5	4.2	9.9	4.9*	3.0	7.9	5.5	4.0	7.6

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

95% CI = 95 per cent confidence interval.

Data are age standardised to the 2006 Victorian population.

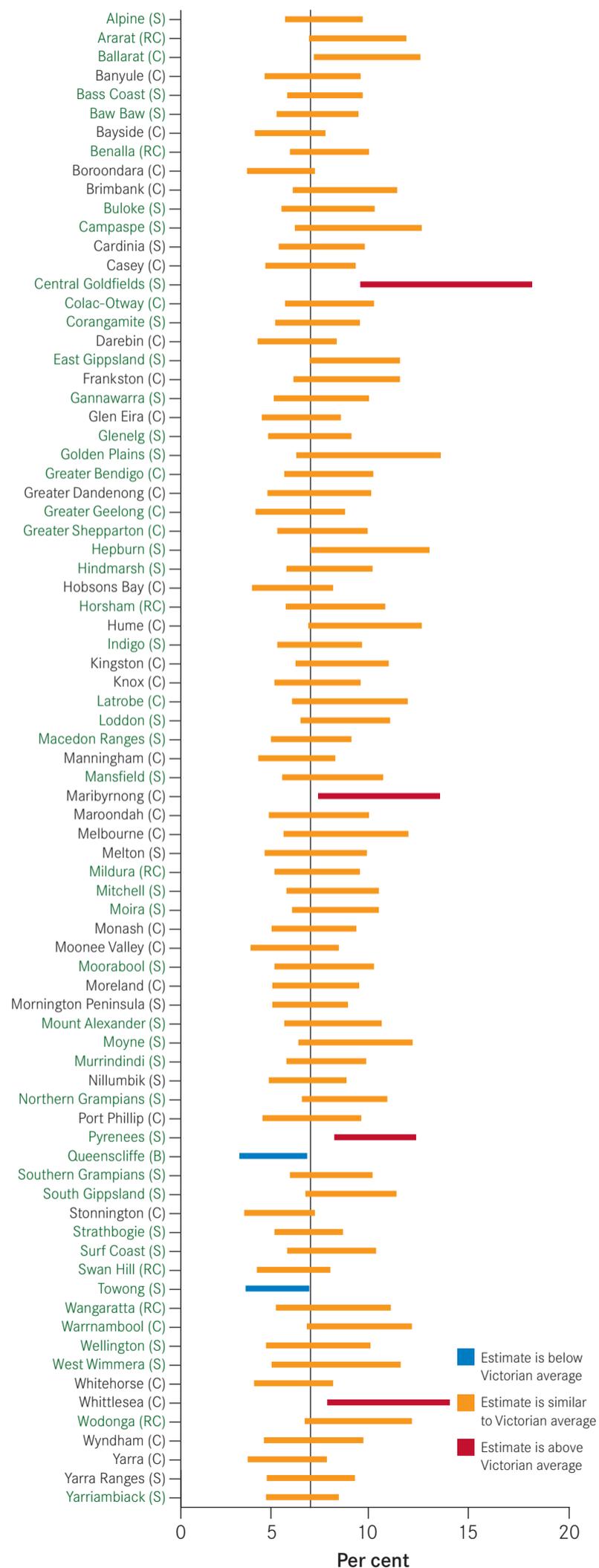
Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

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

Table 3.13: Prevalence of heart disease, by sex and LGA, 2008 (continued)

LGA	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	8.8	5.8	13.0	7.1	4.5	11.0	7.3	5.2	10.1
Maribyrnong (C)	9.6	6.2	14.6	9.4	6.0	14.3	9.6	7.0	13.0
Maroondah (C)	9.0	5.8	13.8	3.9*	2.3	6.6	6.5	4.5	9.3
Melbourne (C)	7.3*	4.1	12.7	8.6	5.8	12.4	7.8	5.3	11.4
Melton (S)	10.4	7.5	14.4	3.4*	1.9	6.1	6.3	4.3	9.2
Mildura (RC)	9.7	7.3	12.9	3.5*	1.9	6.3	6.5	4.8	8.9
Mitchell (S)	6.3	4.1	9.7	8.2	5.8	11.5	7.3	5.4	9.8
Moira (S)	9.6	7.0	13.0	5.5	3.5	8.6	7.5	5.7	9.8
Monash (C)	7.3	4.7	11.1	5.7	3.7	8.7	6.4	4.6	8.7
Moonee Valley (C)	5.4*	3.0	9.5	5.2*	3.1	8.6	5.3	3.5	7.8
Moorabool (S)	9.8	6.5	14.4	3.2*	1.8	5.6	6.8	4.8	9.6
Moreland (C)	6.1	3.9	9.3	5.3	3.3	8.2	6.5	4.7	8.8
Mornington Peninsula (S)	8.2	6.0	11.3	3.6*	2.2	5.8	6.2	4.7	8.3
Mount Alexander (S)	9.2	6.0	13.9	5.7	3.6	8.9	7.3	5.3	10.0
Moyne (S)	10.8	7.1	16.0	5.5	3.6	8.2	8.4	6.0	11.6
Murrindindi (S)	8.2	5.8	11.5	5.3	3.6	7.7	7.1	5.4	9.2
Nilumbik (S)	6.3	4.2	9.3	4.3	2.8	6.5	6.1	4.5	8.2
Northern Grampians (S)	7.3	5.1	10.2	7.4	5.0	10.9	8.0	6.2	10.3
Port Phillip (C)	5.7*	3.2	10.2	5.6	3.8	8.3	6.1	4.2	8.9
Pyrenees (S)	9.0	6.8	11.7	7.9	5.3	11.6	9.6	7.9	11.8
Queenscliffe (B)	5.1*	3.1	8.2	3.9*	2.3	6.4	4.3	3.0	6.1
Southern Grampians (S)	7.4	5.4	10.1	7.5	4.9	11.3	7.3	5.6	9.5
South Gippsland (S)	8.8	6.1	12.4	8.0	6.0	10.6	8.3	6.4	10.8
Stonnington (C)	7.6	5.1	11.2	2.3*	1.3	4.0	4.6	3.2	6.6
Strathbogie (S)	7.7	5.6	10.7	4.7	3.2	7.0	6.2	4.8	8.0
Surf Coast (S)	10.1	7.2	13.9	4.2	2.7	6.6	7.3	5.4	9.7
Swan Hill (RC)	6.6	4.3	9.8	3.9	2.5	6.2	5.3	3.9	7.3
Towong (S)	5.7	3.8	8.5	4.3	2.7	6.6	4.6	3.3	6.3
Wangaratta (RC)	9.1*	5.2	15.4	5.4	3.7	7.7	7.2	4.9	10.5
Warrnambool (C)	8.3	5.6	12.1	7.5	4.9	11.4	8.7	6.4	11.5
Wellington (S)	5.8*	3.0	11.0	6.1	4.0	9.2	6.4	4.4	9.4
West Wimmera (S)	10.4	6.5	16.2	4.4	2.8	6.9	7.2	4.7	11.0
Whitehorse (C)	7.7	5.0	11.6	3.1*	1.8	5.3	5.3	3.7	7.5
Whittlesea (C)	12.2	8.2	17.8	7.3	4.8	11.0	10.1	7.5	13.5
Wodonga (RC)	12.4	8.8	17.4	5.8	3.7	9.1	8.6	6.3	11.6
Wyndham (C)	7.8	5.2	11.7	4.0*	2.1	7.3	6.2	4.2	9.1
Yarra (C)	6.9*	4.2	11.3	5.0	3.6	6.8	5.0	3.4	7.2
Yarra Ranges (S)	8.9	5.9	13.0	3.9*	2.2	7.1	6.2	4.4	8.6
Yarriambiack (S)	4.3*	2.4	7.3	8.0	5.9	10.9	5.9	4.4	7.8
<b>Total</b>	<b>8.3</b>	<b>7.8</b>	<b>8.9</b>	<b>5.2</b>	<b>4.9</b>	<b>5.6</b>	<b>6.7</b>	<b>6.3</b>	<b>7.0</b>

Figure 3.13: Prevalence of heart disease, 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 line on the graph is the Victorian estimate, it does not show the 95% CI. See the relevant table for the 95% CI for Victoria (Total).

## Stroke

There were no differences between Department of Health regions and the state in the prevalence of stroke for either sex (table 3.14). The prevalence of stroke was too low to allow for reliable analysis at the LGA level.

**Table 3.14: Prevalence of stroke, by sex, and Department of Health region, 2008**

Regions	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Barwon-South Western	2.4	1.6	3.6	2.3	1.4	3.6	2.3	1.7	3.1
Eastern Metropolitan	2.6	1.9	3.6	1.7	1.3	2.3	2.2	1.7	2.7
Gippsland	2.9	1.9	4.3	2.4	1.7	3.4	2.7	2.1	3.5
Grampians	3.7	2.5	5.5	2.6	1.9	3.6	3.2	2.4	4.1
Hume	3.4	2.6	4.2	2.5	2.0	3.2	2.9	2.4	3.4
Loddon Mallee	2.7	1.8	4.0	2.7	2.1	3.5	2.7	2.1	3.4
North and West Metropolitan	2.9	2.3	3.7	2.5	2.0	3.1	2.7	2.3	3.2
Southern Metropolitan	2.9	2.2	3.8	2.3	1.8	3.1	2.6	2.1	3.1
<b>Metropolitan</b>	<b>2.8</b>	<b>2.4</b>	<b>3.3</b>	<b>2.2</b>	<b>1.9</b>	<b>2.5</b>	<b>2.5</b>	<b>2.2</b>	<b>2.8</b>
<b>Rural</b>	<b>2.9</b>	<b>2.4</b>	<b>3.4</b>	<b>2.5</b>	<b>2.1</b>	<b>2.9</b>	<b>2.7</b>	<b>2.4</b>	<b>3.0</b>
<b>Total</b>	<b>2.8</b>	<b>2.5</b>	<b>3.2</b>	<b>2.3</b>	<b>2.0</b>	<b>2.5</b>	<b>2.5</b>	<b>2.3</b>	<b>2.8</b>

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.

## Cancer

The prevalence of ever having been diagnosed with cancer was similar between most of the metropolitan and rural regions of Victoria (table 3.15). However, the lifetime prevalence of cancer was lower for persons in the North and West Metropolitan region (5.6 per cent), compared with Victoria (6.6 per cent).

**Table 3.15: Prevalence of cancer, by sex, and Department of Health region, 2008**

Regions	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Barwon-South Western	5.4	4.1	6.9	9.4	7.4	11.8	7.3	6.1	8.8
Eastern Metropolitan	5.4	4.4	6.6	6.7	5.7	7.8	6.0	5.3	6.8
Gippsland	6.2	5.0	7.6	6.2	5.0	7.6	6.1	5.2	7.0
Grampians	6.2	5.0	7.7	7.7	6.5	9.1	6.9	6.0	7.9
Hume	7.3	6.2	8.7	7.6	6.5	8.9	7.4	6.6	8.3
Loddon Mallee	6.9	5.7	8.3	8.0	6.5	9.8	7.4	6.5	8.6
North and West Metropolitan	5.1	4.2	6.1	6.1	5.4	6.9	5.6	5.0	6.2
Southern Metropolitan	7.2	6.0	8.5	7.7	6.7	8.9	7.4	6.6	8.3
<b>Metropolitan</b>	<b>6.0</b>	<b>5.4</b>	<b>6.6</b>	<b>6.8</b>	<b>6.3</b>	<b>7.4</b>	<b>6.4</b>	<b>6.0</b>	<b>6.8</b>
<b>Rural</b>	<b>6.3</b>	<b>5.7</b>	<b>7.0</b>	<b>7.9</b>	<b>7.1</b>	<b>8.7</b>	<b>7.1</b>	<b>6.6</b>	<b>7.6</b>
<b>Total</b>	<b>6.1</b>	<b>5.6</b>	<b>6.6</b>	<b>7.1</b>	<b>6.6</b>	<b>7.5</b>	<b>6.6</b>	<b>6.2</b>	<b>6.9</b>

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 3.16 and figure 3.14 show the prevalence of cancer for persons by LGA (the rates for males and females were too low to allow reliable analysis at the LGA level). Persons in the LGAs of Frankston (10.5 per cent) and Hepburn (9.6 per cent) had a higher prevalence of doctor diagnosed cancer compared with all Victorians (6.6 per cent), while Victorians in the LGAs of Southern Grampians (4.3 per cent), Yarra Ranges (3.7 per cent) and Wyndham (3.5 per cent) had a lower prevalence of the disease.

Table 3.16: Prevalence of cancer, by sex and LGA, 2008

LGA	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	4.6	2.9	7.1	6.8	4.6	10.0	5.8	4.2	7.8
Ararat (RC)	7.6	4.9	11.7	8.1	5.0	13.0	7.4	5.2	10.4
Ballarat (C)	4.4*	2.3	8.3	7.9	5.6	11.2	6.4	4.6	8.9
Banyule (C)	6.1*	3.3	11.2	4.7	3.0	7.5	5.5	3.5	8.3
Bass Coast (S)	6.2*	3.8	9.9	7.1	4.9	10.0	6.4	4.7	8.7
Baw Baw (S)	4.4*	2.5	7.6	4.6*	2.8	7.4	4.4	3.0	6.4
Bayside (C)	5.8	3.7	9.1	7.5	5.1	10.8	6.7	5.0	8.9
Benalla (RC)	8.0	5.2	12.0	9.2	5.9	14.2	8.6	6.2	11.9
Boroondara (C)	7.6	5.0	11.3	7.1	4.9	10.2	7.2	5.4	9.4
Brimbank (C)	2.1*	1.0	4.4	7.4	5.0	10.9	4.4	3.0	6.3
Buloke (S)	5.7	3.7	8.8	5.2	3.2	8.3	5.5	3.9	7.7
Campaspe (S)	5.5	3.5	8.6	5.5	3.6	8.5	5.5	4.0	7.5
Cardinia (S)	4.6*	2.6	7.8	6.7	4.4	9.9	5.7	4.1	8.0
Casey (C)	4.9*	2.9	8.0	7.7	5.2	11.4	7.2	5.3	9.8
Central Goldfields (S)	6.2	3.9	9.6	10.1	7.1	14.3	8.4	6.3	11.2
Colac-Otway (S)	3.0*	1.6	5.4	10.6	7.8	14.3	6.7	4.7	9.4
Corangamite (S)	3.1*	1.6	5.9	8.4	6.1	11.6	5.9	4.3	7.9
Darebin (C)	9.7	6.0	15.1	7.0	4.7	10.1	8.3	5.9	11.5
East Gippsland (S)	7.8	5.6	10.7	5.3	3.6	7.7	6.4	4.8	8.4
Frankston (C)	10.5	6.5	16.6	10.4	7.3	14.6	10.5	7.6	14.2
Gannawarra (S)	7.4	5.0	10.8	9.6*	5.6	16.1	7.5	5.4	10.2
Glen Eira (C)	6.8*	4.2	10.9	9.9	6.9	14.2	8.4	6.2	11.3
Glenelg (S)	6.6*	4.0	10.5	6.6*	3.9	11.1	6.7	4.4	10.1
Golden Plains (S)	8.4	5.6	12.4	6.0	3.9	9.0	7.4	5.3	10.3
Greater Bendigo (C)	9.9	6.8	14.2	9.1	5.9	13.6	9.3	6.9	12.3
Greater Dandenong (C)	5.0*	2.5	9.8	6.0	3.8	9.2	5.8	3.8	8.7
Greater Geelong (C)	5.4	3.5	8.1	11.4	8.2	15.5	8.2	6.2	10.9
Greater Shepparton (C)	6.6	4.2	10.3	8.9	5.6	14.0	7.3	5.2	9.9
Hepburn (S)	6.3*	3.8	10.2	13.2	10.1	17.1	9.6	7.5	12.3
Hindmarsh (S)	4.9*	2.7	8.8	5.1	3.2	8.0	5.2	3.5	7.7
Hobsons Bay (C)	5.8*	3.4	9.8	8.1	5.5	11.8	7.4	5.3	10.1
Horsham (RC)	5.9*	3.5	9.7	4.5	2.9	7.0	5.4	3.9	7.6
Hume (C)	4.8*	2.5	9.0	4.4*	2.5	7.5	4.3	2.8	6.6
Indigo (S)	6.3	4.0	10.0	10.0	7.3	13.4	8.7	6.6	11.5
Kingston (C)	6.4	4.1	10.1	8.2*	4.7	14.0	6.9	4.8	9.9
Knox (C)	6.7*	3.9	11.2	7.2	4.9	10.4	6.8	4.9	9.3
Latrobe (C)	6.1	4.3	8.5	6.9	4.5	10.6	6.1	4.1	8.8
Loddon (S)	5.7	3.6	8.7	6.1	4.2	8.9	6.0	4.4	8.0
Macedon Ranges (S)	8.3	5.3	12.7	7.9	5.5	11.3	7.5	5.5	10.0
Manningham (C)	3.7*	2.0	6.7	8.1	5.7	11.3	6.0	4.4	8.1

Metropolitan and rural LGAs 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.

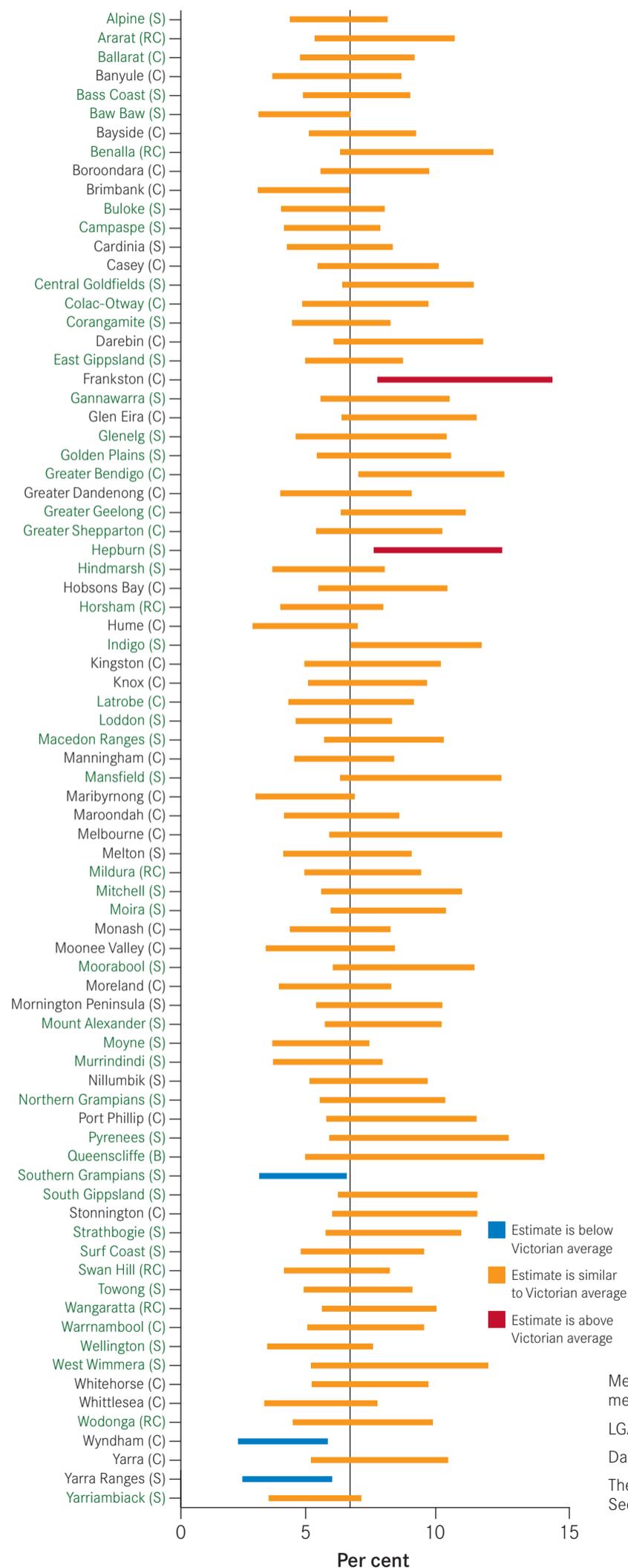
\* Estimate has a relative standard error of between 25 and 50 per cent and should be interpreted with caution.

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

Table 3.16: Prevalence of cancer, by sex and LGA, 2008 (continued)

LGA	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	9.6	6.5	13.8	8.8	5.5	13.9	8.7	6.2	12.3
Maribyrnong (C)	**			7.3	4.7	11.0	4.3	2.9	6.5
Maroondah (C)	6.0*	3.7	9.7	6.0*	3.5	9.8	5.8	4.0	8.2
Melbourne (C)	11.0	7.4	15.9	6.2*	3.4	11.1	8.5	5.8	12.3
Melton (S)	6.6	4.3	9.9	7.1	4.5	10.9	5.9	4.0	8.8
Mildura (RC)	5.1*	2.9	8.7	7.3	4.8	11.0	6.6	4.8	9.1
Mitchell (S)	5.7	3.5	9.0	9.0*	5.5	14.4	7.7	5.4	10.7
Moira (S)	7.5	4.9	11.2	7.9	5.6	11.2	7.7	5.8	10.1
Monash (C)	3.3	2.1	5.2	7.1	4.7	10.4	5.8	4.2	7.9
Moonee Valley (C)	5.1*	2.5	10.1	4.9*	3.0	7.9	5.2	3.3	8.1
Moorabool (S)	8.5	5.8	12.2	8.0*	4.8	12.9	8.2	5.9	11.2
Moreland (C)	3.2*	1.8	5.6	7.9	5.0	12.3	5.5	3.8	7.9
Mornington Peninsula (S)	7.2	4.6	11.2	6.6	4.2	10.0	7.2	5.2	9.9
Mount Alexander (S)	6.0	3.8	9.3	8.7	5.9	12.5	7.5	5.6	9.9
Moyne (S)	3.7*	2.0	6.6	6.3	4.1	9.5	5.0	3.5	7.1
Murrindindi (S)	6.9*	4.1	11.3	3.9*	2.4	6.4	5.2	3.6	7.6
Nilumbik (S)	8.7	5.7	13.0	5.0*	3.0	8.2	6.9	5.0	9.4
Northern Grampians (S)	5.7	3.5	9.1	8.2	5.5	12.0	7.4	5.4	10.1
Port Phillip (C)	7.5	4.8	11.6	10.0	6.8	14.5	8.0	5.6	11.3
Pyrenees (S)	10.3*	6.1	16.9	7.0	4.4	10.9	8.6	5.8	12.5
Queenscliffe (B)	3.2*	1.5	6.8	17.3	14.7	20.3	8.3	4.8	13.9
Southern Grampians (S)	4.6*	2.7	7.7	4.5*	2.8	7.2	4.3	3.0	6.2
South Gippsland (S)	9.3	6.0	14.1	7.4	4.8	11.2	8.3	6.1	11.3
Stonnington (C)	11.2	7.3	17.0	5.4	3.5	8.2	8.2	5.9	11.3
Strathbogie (S)	8.3	5.8	11.8	6.9	4.4	10.8	7.8	5.6	10.7
Surf Coast (S)	7.4*	4.2	12.7	6.4	4.4	9.2	6.6	4.6	9.2
Swan Hill (RC)	3.7*	2.1	6.6	7.3	4.9	10.8	5.6	4.0	7.9
Towong (S)	8.5	5.8	12.4	5.0	3.3	7.5	6.5	4.8	8.8
Wangaratta (RC)	7.5	5.1	11.1	7.1	4.9	10.3	7.3	5.5	9.7
Warrnambool (C)	7.4	4.8	11.4	6.0	3.9	9.0	6.7	4.9	9.2
Wellington (S)	5.2*	2.9	9.1	4.5*	2.7	7.5	4.9	3.3	7.2
West Wimmera (S)	11.7	7.3	18.3	3.9	2.4	6.2	7.7	5.0	11.7
Whitehorse (C)	8.0	5.2	12.1	6.1	4.0	9.3	6.9	5.1	9.4
Whittlesea (C)	4.2*	2.1	8.2	5.9*	3.6	9.6	4.9	3.2	7.4
Wodonga (RC)	7.7*	4.4	13.1	4.2	2.6	6.7	6.5	4.3	9.6
Wyndham (C)	3.0*	1.4	6.2	4.2*	2.5	7.2	3.5	2.2	5.5
Yarra (C)	8.0	5.3	11.9	7.2	4.5	11.2	7.2	5.0	10.2
Yarra Ranges (S)	2.3*	1.0	5.1	5.0*	3.0	8.3	3.7	2.4	5.6
Yarriambiack (S)	3.6*	2.1	6.0	6.1	4.0	9.2	4.8	3.4	6.8
<b>Total</b>	<b>6.1</b>	<b>5.6</b>	<b>6.6</b>	<b>7.1</b>	<b>6.6</b>	<b>7.5</b>	<b>6.6</b>	<b>6.2</b>	<b>6.9</b>

Figure 3.14: Prevalence of cancer, 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 line on the graph is the Victorian estimate, it does not show the 95% CI.  
See the relevant table for the 95% CI for Victoria (Total).

## Osteoporosis

The prevalence of osteoporosis was similar between Department of Health regions and the state, for both sexes (table 3.17).

**Table 3.17: Prevalence of osteoporosis, by sex, and Department of Health region, 2008**

Regions	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Barwon-South Western	1.7	1.1	2.5	6.4	5.1	8.0	4.2	3.4	5.1
Eastern Metropolitan	2.2	1.5	3.1	7.1	6.2	8.2	4.8	4.2	5.5
Gippsland	1.8	1.2	2.7	7.6	6.5	8.9	4.7	4.1	5.5
Grampians	2.3	1.6	3.3	6.0	5.1	7.2	4.3	3.6	5.0
Hume	2.4	1.8	3.3	7.0	6.2	7.9	4.8	4.2	5.4
Loddon Mallee	3.0	2.2	4.2	7.6	6.7	8.8	5.5	4.8	6.3
North and West Metropolitan	2.0	1.5	2.7	8.0	7.2	8.9	5.2	4.6	5.8
Southern Metropolitan	2.3	1.7	3.1	6.2	5.4	7.2	4.4	3.8	5.0
<b>Metropolitan</b>	2.1	1.8	2.6	7.1	6.6	7.6	4.8	4.5	5.2
<b>Rural</b>	2.2	1.9	2.6	6.9	6.4	7.5	4.7	4.4	5.0
<b>Total</b>	2.2	1.9	2.5	7.0	6.7	7.5	4.8	4.5	5.1

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.

Table 3.18 and figure 3.15 show the prevalence of osteoporosis for females by LGA. Females in the LGAs of Hume (13.2 per cent), Central Goldfields (11.4 per cent), Yarra (11.4 per cent), Wellington (11.1 per cent) and Melbourne (10.1 per cent) had a higher prevalence of doctor diagnosed osteoporosis compared with all Victorian females (7.0 per cent), while females in the LGAs of Queenscliffe (4.3 per cent), Hindmarsh (4.0 per cent) and Mornington Peninsula (3.5 per cent) had a lower prevalence of the disease.

The prevalence of osteoporosis for males was too low to allow reliable analysis at the LGA level.

Table 3.18: Prevalence of osteoporosis, by LGA, females, 2008

LGA	%	Lower 95% CI	Upper 95% CI	LGA	%	Lower 95% CI	Upper 95% CI
Alpine (S)	7.2	5.3	9.7	Mansfield (S)	6.5	4.5	9.3
Ararat (RC)	5.1	3.3	7.7	Maribyrnong (C)	8.3	5.1	13.0
Ballarat (C)	5.9	3.9	8.7	Maroondah (C)	5.7	3.9	8.3
Banyule (C)	5.4	3.5	8.1	Melbourne (C)	10.1	7.5	13.4
Bass Coast (S)	4.9	3.5	6.7	Melton (S)	9.6	6.9	13.1
Baw Baw (S)	7.4	5.1	10.7	Mildura (RC)	6.4	4.3	9.4
Bayside (C)	6.5	4.5	9.4	Mitchell (S)	7.1	4.8	10.3
Benalla (RC)	8.5	6.2	11.6	Moira (S)	7.0	5.1	9.6
Boroondara (C)	6.9	4.8	9.7	Monash (C)	8.5	6.0	11.8
Brimbank (C)	9.3	7.0	12.2	Moonee Valley (C)	8.8	6.5	11.8
Buloke (S)	7.8	5.5	10.7	Moorabool (S)	6.2	4.4	8.6
Campaspe (S)	6.4	4.5	9.1	Moreland (C)	9.3	6.2	13.8
Cardinia (S)	5.5	3.6	8.3	Mornington Peninsula (S)	3.5*	2.2	5.6
Casey (C)	5.1	3.2	7.9	Mount Alexander (S)	6.7	4.5	9.7
Central Goldfields (S)	11.4	8.6	15.0	Moyne (S)	7.4	5.3	10.1
Colac-Otway (S)	7.9	5.4	11.3	Murrindindi (S)	7.5	5.3	10.6
Corangamite (S)	7.1	5.1	9.7	Nilumbik (S)	7.3	5.0	10.7
Darebin (C)	6.6	4.3	10.0	Northern Grampians (S)	5.7	4.1	8.0
East Gippsland (S)	6.4	4.5	8.9	Port Phillip (C)	7.0	4.8	10.0
Frankston (C)	9.9	7.4	13.2	Pyrenees (S)	10.9*	6.2	18.2
Gannawarra (S)	7.0	5.1	9.5	Queenscliffe (B)	4.3	2.9	6.3
Glen Eira (C)	4.9	3.2	7.4	Southern Grampians (S)	5.9	4.0	8.6
Glenelg (S)	8.8	5.6	13.4	South Gippsland (S)	5.6	3.7	8.3
Golden Plains (S)	5.6	3.6	8.4	Stonnington (C)	6.3	4.1	9.4
Greater Bendigo (C)	7.6	5.6	10.1	Strathbogie (S)	6.8	4.9	9.5
Greater Dandenong (C)	7.8	5.1	11.6	Surf Coast (S)	4.7	3.2	6.9
Greater Geelong (C)	5.7	3.7	8.5	Swan Hill (RC)	9.4	6.8	12.9
Greater Shepparton (C)	5.9	4.0	8.6	Towong (S)	6.0	4.0	8.9
Hepburn (S)	5.8	3.9	8.4	Wangaratta (RC)	7.2	5.2	10.0
Hindmarsh (S)	4.0	2.6	6.0	Warrnambool (C)	8.2	5.5	12.1
Hobsons Bay (C)	4.8	3.0	7.5	Wellington (S)	11.1	8.1	14.9
Horsham (RC)	7.7	5.3	11.0	West Wimmera (S)	5.7	3.9	8.3
Hume (C)	13.2	10.5	16.4	Whitehorse (C)	7.0	4.9	10.0
Indigo (S)	5.3	3.5	7.9	Whittlesea (C)	9.1	6.7	12.3
Kingston (C)	5.1	3.3	8.0	Wodonga (RC)	8.8	6.2	12.3
Knox (C)	8.0	5.7	11.2	Wyndham (C)	8.5	6.0	11.8
Latrobe (C)	9.2	7.1	11.9	Yarra (C)	11.4	8.2	15.5
Loddon (S)	5.0	3.5	7.2	Yarra Ranges (S)	5.0	3.5	7.1
Macedon Ranges (S)	7.0	4.6	10.5	Yarriambiack (S)	8.6*	5.3	13.7
Manningham (C)	7.4	5.0	10.9	<b>Total</b>	<b>7.0</b>	<b>6.7</b>	<b>7.5</b>

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

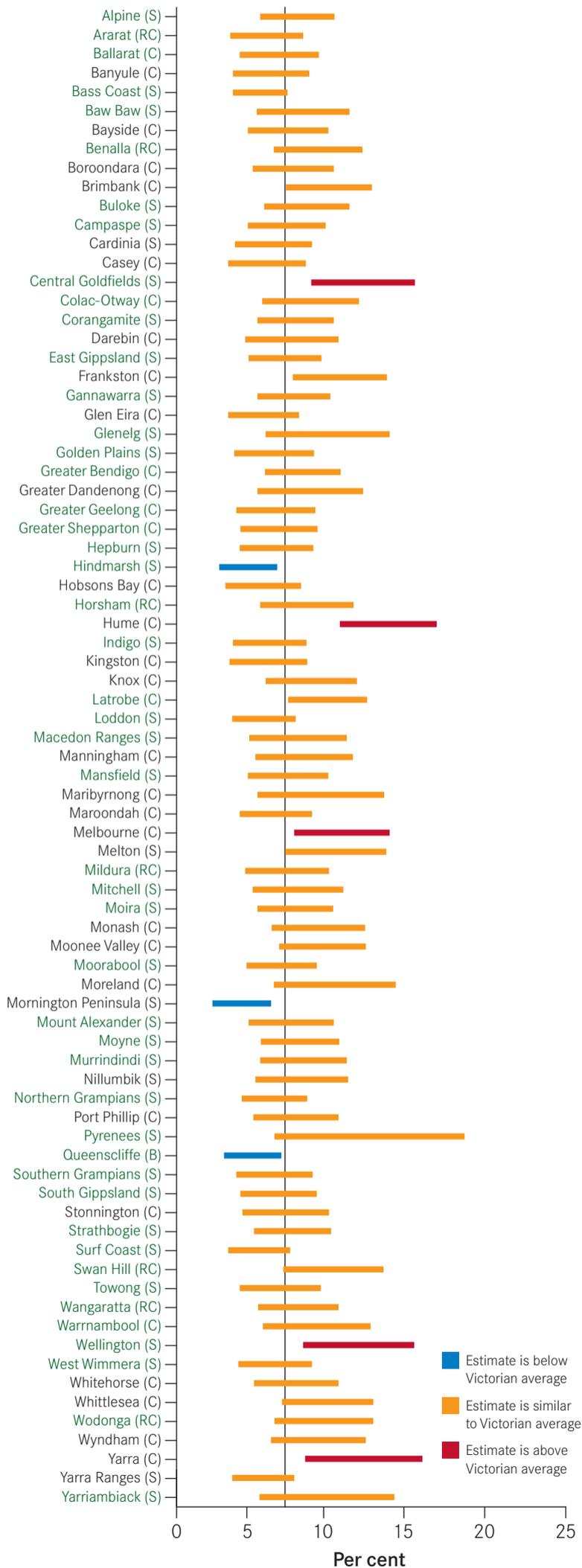
95% CI = 95 per cent confidence interval.

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.

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

Figure 3.15: Prevalence of osteoporosis, by LGA, females, 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 line on the graph is the Victorian estimate, it does not show the 95% CI. See the relevant table for the 95% CI for Victoria (Total).

## Osteoarthritis

The prevalence of osteoarthritis was similar between most of the metropolitan and rural regions of Victoria (table 3.19). However, males in the Loddon Mallee region (14.0 per cent) had a higher prevalence of osteoarthritis, compared with all Victorian males (10.6 per cent).

**Table 3.19: Prevalence of arthritis, by type of arthritis, sex and Department of Health region, 2008**

Region	%	Osteoarthritis		%	Rheumatoid arthritis	
		Lower 95% CI	Upper 95% CI		Lower 95% CI	Upper 95% CI
<b>Males</b>						
Barwon-South Western	11.8	9.8	14.2	2.4	1.6	3.6
Eastern Metropolitan	8.8	7.6	10.3	2.9	2.2	3.9
Gippsland	10.5	8.6	12.6	3.7	2.4	5.5
Grampians	12.1	10.4	14.2	3.5	2.6	4.7
Hume	12.6	11.0	14.4	4.1	3.2	5.3
Loddon Mallee	14.0	12.0	16.3	4.7	3.5	6.3
North and West Metropolitan	10.1	8.9	11.4	4.0	3.3	5.0
Southern Metropolitan	10.3	9.0	11.8	2.3	1.7	3.3
<b>Metropolitan</b>	<b>9.9</b>	<b>9.1</b>	<b>10.7</b>	<b>3.1</b>	<b>2.7</b>	<b>3.6</b>
<b>Rural</b>	<b>12.2</b>	<b>11.3</b>	<b>13.2</b>	<b>3.6</b>	<b>3.1</b>	<b>4.2</b>
<b>Total</b>	<b>10.6</b>	<b>10.0</b>	<b>11.2</b>	<b>3.2</b>	<b>2.9</b>	<b>3.6</b>
<b>Females</b>						
Barwon-South Western	14.9	13.0	17.0	3.9	2.6	5.9
Eastern Metropolitan	16.8	15.3	18.3	3.1	2.5	4.0
Gippsland	17.1	15.4	18.8	5.1	4.1	6.2
Grampians	18.2	16.6	19.9	4.5	3.6	5.7
Hume	16.7	15.5	18.0	4.9	4.0	6.0
Loddon Mallee	17.7	16.0	19.4	5.0	4.0	6.4
North and West Metropolitan	16.0	14.9	17.1	5.3	4.6	6.2
Southern Metropolitan	16.6	15.3	18.0	3.6	2.9	4.5
<b>Metropolitan</b>	<b>16.4</b>	<b>15.6</b>	<b>17.1</b>	<b>4.1</b>	<b>3.7</b>	<b>4.6</b>
<b>Rural</b>	<b>16.8</b>	<b>16.0</b>	<b>17.6</b>	<b>4.6</b>	<b>4.1</b>	<b>5.3</b>
<b>Total</b>	<b>16.4</b>	<b>15.9</b>	<b>17.0</b>	<b>4.2</b>	<b>3.9</b>	<b>4.6</b>
<b>Persons</b>						
Barwon-South Western	13.5	12.1	15.1	3.0	2.2	4.1
Eastern Metropolitan	13.0	12.0	14.1	2.9	2.4	3.6
Gippsland	13.8	12.5	15.2	4.0	3.2	5.0
Grampians	15.3	14.0	16.6	3.7	3.1	4.5
Hume	14.7	13.7	15.8	4.3	3.7	5.1
Loddon Mallee	15.9	14.6	17.3	4.7	3.8	5.7
North and West Metropolitan	13.2	12.4	14.1	4.5	3.9	5.1
Southern Metropolitan	13.7	12.7	14.7	2.8	2.3	3.4
<b>Metropolitan</b>	<b>13.3</b>	<b>12.8</b>	<b>13.9</b>	<b>3.4</b>	<b>3.1</b>	<b>3.8</b>
<b>Rural</b>	<b>14.6</b>	<b>14.0</b>	<b>15.2</b>	<b>3.9</b>	<b>3.5</b>	<b>4.3</b>
<b>Total</b>	<b>13.7</b>	<b>13.2</b>	<b>14.1</b>	<b>3.6</b>	<b>3.3</b>	<b>3.8</b>

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.

Males in the LGAs of Glenelg (20.7 per cent), Central Goldfields (19.3 per cent), Macedon Ranges (19.2 per cent), Moira (16.3 per cent), Murrindindi (16.3 per cent), Buloke (16.2 per cent), Greater Bendigo (15.8 per cent), Yarriambiack (15.5 per cent), Gannawarra (15.4 per cent), Casey (15.4 per cent) and Strathbogie (15.2 per cent), had a higher prevalence of doctor diagnosed osteoarthritis compared with all Victorian males (10.6 per cent), while males in the LGAs of Manningham (5.7 per cent) and Port Phillip (4.5 per cent) had a lower prevalence of the disease (table 3.20 and figure 3.16).

Females in the LGAs of Murrindindi (24.1 per cent), Pyrenees (23.2 per cent), Greater Bendigo (22.5 per cent), Strathbogie (21.9 per cent), Central Goldfields (21.7 per cent) and Mitchell (20.6 per cent), had a higher prevalence of doctor diagnosed osteoarthritis compared with all Victorian females (16.4 per cent). There were no LGAs where females had a lower prevalence of osteoarthritis compared with all Victorian females (table 3.20 and figure 3.17).

Table 3.20: Prevalence of osteoarthritis, by sex and LGA, 2008

LGA	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	8.6	5.9	12.4	15.3	12.3	18.8	12.2	10.0	14.8
Ararat (RC)	14.4	10.2	19.9	20.8	15.1	27.8	15.9	12.5	20.0
Ballarat (C)	11.9	8.3	16.8	20.0	16.8	23.7	16.0	13.5	18.8
Banyule (C)	8.6*	5.2	13.9	18.4	14.9	22.5	13.7	11.0	17.0
Bass Coast (S)	10.0	7.0	14.0	17.4	14.0	21.4	13.5	11.1	16.4
Baw Baw (S)	8.7	5.7	12.8	13.3	10.4	17.0	11.0	8.8	13.6
Bayside (C)	8.5	5.9	12.2	15.2	12.7	18.1	12.0	10.0	14.3
Benalla (RC)	11.7	8.1	16.5	14.3	11.5	17.6	13.0	10.6	15.8
Boroondara (C)	8.0	5.4	11.8	15.0	12.0	18.6	11.7	9.6	14.3
Brimbank (C)	10.5	6.9	15.7	16.1	12.6	20.3	14.0	11.1	17.4
Buloke (S)	16.2	12.0	21.5	16.5	12.9	20.8	17.1	13.8	20.9
Campaspe (S)	11.9	8.3	16.8	14.6	11.3	18.7	13.2	10.6	16.2
Cardinia (S)	8.4	5.6	12.4	17.7	14.1	22.1	13.5	10.9	16.5
Casey (C)	15.4	11.2	20.7	20.0	16.1	24.7	18.4	15.3	21.9
Central Goldfields (S)	19.3	13.3	27.2	21.7	17.8	26.1	19.8	16.0	24.2
Colac-Otway (S)	14.4	9.7	20.8	14.1	11.0	17.8	14.0	11.1	17.6
Corangamite (S)	12.5	8.4	18.1	16.2	13.2	19.7	14.3	11.7	17.5
Darebin (C)	15.3	10.8	21.3	13.4	10.5	16.8	14.3	11.4	17.8
East Gippsland (S)	7.8	5.0	11.9	16.4	13.3	20.0	12.0	9.7	14.7
Frankston (C)	9.5	6.4	13.9	19.2	15.5	23.6	15.2	12.4	18.4
Gannawarra (S)	15.4	11.6	20.1	17.4	13.7	21.8	16.0	13.2	19.2
Glen Eira (C)	8.2	5.3	12.4	12.8	9.7	16.7	10.8	8.5	13.7
Glenelg (S)	20.7	15.3	27.3	20.7	16.7	25.4	20.8	17.2	25.0
Golden Plains (S)	12.0	8.2	17.2	14.1	11.1	17.7	12.6	10.1	15.7
Greater Bendigo (C)	15.8	11.8	20.9	22.5	18.6	26.9	18.9	15.9	22.2
Greater Dandenong (C)	12.9	9.0	18.0	16.6	12.5	21.7	15.2	12.4	18.4
Greater Geelong (C)	11.0	7.8	15.2	14.4	11.4	18.1	12.9	10.6	15.6
Greater Shepparton (C)	9.7	6.4	14.5	14.5	11.5	18.1	12.2	9.8	15.1
Hepburn (S)	9.8	6.8	13.9	17.7	14.4	21.7	14.3	11.8	17.2
Hindmarsh (S)	10.4	6.9	15.5	14.1	10.9	18.1	12.1	9.5	15.2
Hobsons Bay (C)	9.0	6.7	12.0	14.7	11.2	19.0	12.0	9.6	14.9
Horsham (RC)	13.1	9.2	18.2	17.9	14.3	22.2	15.5	12.7	18.8
Hume (C)	14.2	10.9	18.3	12.9	9.6	17.1	13.4	10.5	16.9
Indigo (S)	10.9	7.7	15.2	16.2	13.1	19.9	13.3	10.8	16.1
Kingston (C)	8.2	5.3	12.4	17.6	12.9	23.5	13.2	10.4	16.6
Knox (C)	9.0	5.9	13.3	15.6	12.4	19.4	12.5	10.1	15.3
Latrobe (C)	14.1	9.5	20.6	18.5	14.9	22.8	16.1	13.1	19.8
Loddon (S)	15.1	10.7	20.8	15.4	12.2	19.3	14.7	12.0	17.9
Macedon Ranges (S)	19.2	12.9	27.5	18.5	15.0	22.6	18.6	14.2	24.1
Manningham (C)	5.7	3.6	9.0	17.7	14.2	21.8	12.3	9.9	15.0

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 to the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

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

Table 3.20: Prevalence of osteoarthritis, by sex and LGA, 2008 (continued)

LGA	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	13.4	9.6	18.4	15.6	11.7	20.6	13.8	10.8	17.4
Maribyrnong (C)	6.1*	3.6	10.0	13.5	10.0	18.0	10.0	7.6	13.0
Maroondah (C)	9.8	6.4	14.8	18.4	14.4	23.2	14.2	11.5	17.4
Melbourne (C)	9.7	6.2	14.9	12.2	9.0	16.2	10.7	8.0	14.0
Melton (S)	13.0	9.3	17.8	19.1	14.9	24.0	16.0	12.9	19.6
Mildura (RC)	11.4	7.8	16.4	13.2	10.1	16.9	12.8	10.3	15.9
Mitchell (S)	12.7	9.0	17.7	20.6	17.1	24.6	16.1	13.2	19.6
Moira (S)	16.3	11.5	22.7	15.9	13.2	19.1	16.2	13.4	19.5
Monash (C)	7.7	5.7	10.3	17.1	13.4	21.6	12.7	10.2	15.8
Moonee Valley (C)	8.6	5.4	13.6	15.2	12.4	18.5	12.4	9.9	15.4
Moorabool (S)	10.1	6.8	14.8	18.7	15.0	23.1	14.9	12.1	18.3
Moreland (C)	7.3	4.6	11.2	17.6	13.5	22.7	12.7	10.1	15.9
Mornington Peninsula (S)	10.6	7.4	15.1	16.2	13.3	19.5	13.9	11.6	16.7
Mount Alexander (S)	10.2	7.6	13.6	17.2	13.3	21.9	13.9	11.4	16.7
Moyne (S)	13.3	10.2	17.2	16.2	12.9	20.1	14.6	12.3	17.3
Murrindindi (S)	16.3	11.9	21.9	24.1	17.7	32.0	20.0	15.4	25.5
Nilumbik (S)	10.8	7.8	15.0	14.9	11.5	19.2	13.3	10.8	16.3
Northern Grampians (S)	13.7	9.3	19.7	15.7	12.8	19.1	15.3	12.4	18.8
Port Phillip (C)	4.5*	2.5	8.1	14.0	10.7	18.1	9.3	7.1	12.1
Pyrenees (S)	14.7	10.5	20.2	23.2	17.3	30.6	18.4	13.5	24.7
Queenscliffe (B)	9.3	6.4	13.2	13.4	11.0	16.2	11.7	9.6	14.0
Southern Grampians (S)	11.9	8.1	17.0	16.8	13.3	20.9	14.4	11.7	17.6
South Gippsland (S)	10.8	7.2	16.0	13.1	10.2	16.7	12.3	9.8	15.4
Stonnington (C)	12.2	8.6	17.0	12.7	9.8	16.2	12.7	10.2	15.8
Strathbogie (S)	15.2	11.2	20.2	21.9	17.4	27.1	18.1	14.9	21.9
Surf Coast (S)	10.8	7.3	15.6	14.1	11.1	17.8	12.7	10.3	15.7
Swan Hill (RC)	9.3	6.3	13.5	14.5	11.4	18.3	12.1	9.8	14.9
Towong (S)	11.4	8.2	15.6	18.9	14.8	23.8	14.6	11.9	17.7
Wangaratta (RC)	10.7	6.7	16.7	15.4	12.2	19.3	13.4	10.4	17.1
Warrnambool (C)	8.2	5.3	12.3	12.8	10.0	16.2	10.6	8.5	13.1
Wellington (S)	11.6	8.2	16.1	18.2	14.5	22.5	14.5	11.9	17.7
West Wimmera (S)	13.1	9.0	18.7	15.3	12.1	19.1	14.2	11.4	17.5
Whitehorse (C)	7.6	4.9	11.5	15.7	12.2	19.9	12.1	9.8	14.9
Whittlesea (C)	11.0	7.4	16.1	18.9	15.4	22.9	14.9	12.3	18.0
Wodonga (RC)	12.4	8.8	17.2	18.4	14.9	22.6	15.7	12.8	19.1
Wyndham (C)	10.0	6.6	14.9	16.3	12.7	20.7	13.2	10.5	16.4
Yarra (C)	11.3	7.5	16.7	15.6	11.6	20.6	13.4	10.4	17.0
Yarra Ranges (S)	12.4	8.7	17.5	16.0	12.9	19.7	14.3	11.7	17.2
Yarriambiack (S)	15.5	11.5	20.5	15.4	12.1	19.4	14.7	12.1	17.8
<b>Total</b>	<b>10.6</b>	<b>10.0</b>	<b>11.2</b>	<b>16.4</b>	<b>15.9</b>	<b>17.0</b>	<b>13.7</b>	<b>13.2</b>	<b>14.1</b>

Figure 3.16: Prevalence of osteoarthritis, by LGA, males, 2008

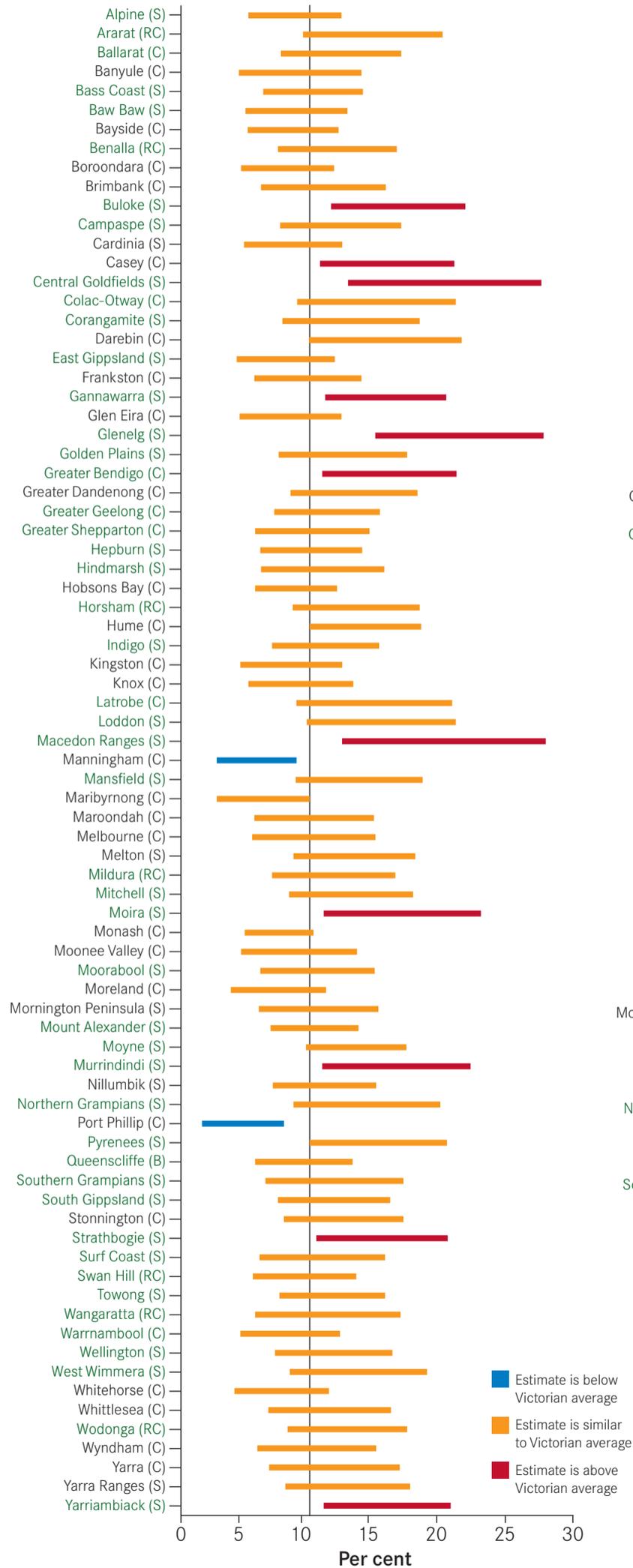
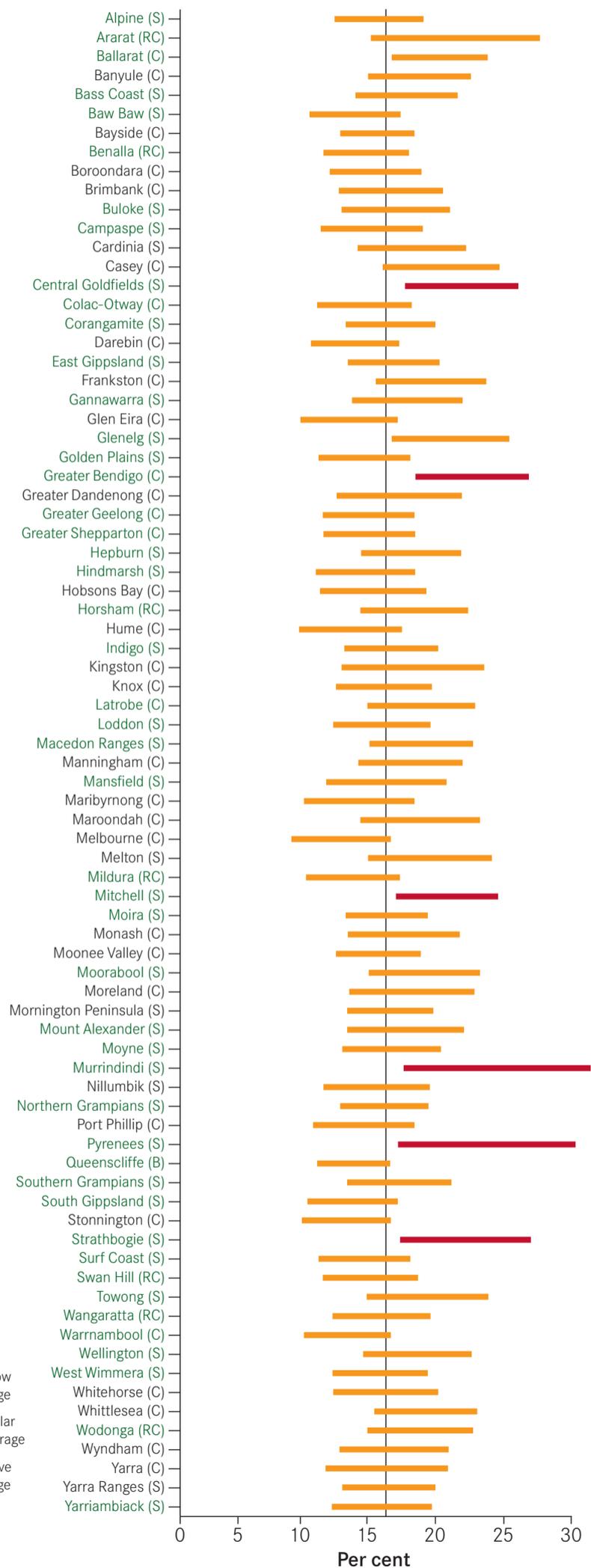


Figure 3.17: Prevalence of osteoarthritis, by LGA, females, 2008



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 line on the graph is the Victorian estimate, it does not show the 95% CI. See the relevant table for the 95% CI for Victoria (Total).

## Rheumatoid arthritis

Persons in the Loddon Mallee (4.7 per cent) and North and West Metropolitan (4.5 per cent) regions had a higher prevalence of rheumatoid arthritis compared with the state average (3.6 per cent) (table 3.19). The prevalence of rheumatoid arthritis was too low to allow for reliable analysis at the LGA level.

## References

ARC (Arthritis Research Campaign) 2009, *Osteoarthritis and Obesity: A report by the Arthritis Research Campaign*, ARC, Chesterfield, United Kingdom.

Burstrom, B & Fredlund, P 2001, 'Self-rated health: Is it as good a predictor of subsequent mortality among adults in lower as well as in higher social classes?', *Journal of Epidemiology and Community Health*, vol. 55, pp. 836-40.

DoHA (Department of Health and Ageing) 1999, *National physical activity guidelines for adults*, DoHA, Canberra.

Idler, E & Benyamini, Y 1997, 'Self-rated health and mortality: a review of twenty-seven community studies', *Journal of Health and Social Behaviour*, vol. 38, pp. 21-37.

Miilunpalo, S, Vuori, I & Oja, P 1997, 'Self-rated health as a health measure: the predictive value of self-reported health status on the use of physician services and on mortality in the working age population', *Journal of Clinical Epidemiology*, vol. 50, no. 5, pp. 517-28.

NHMRC (National Health and Medical Research Council) 2001, *Alcohol guidelines for Australian adults*, NHMRC, Canberra.

NHMRC (National Health and Medical Research Council) 2003, *Dietary guidelines for Australian adults*, NHMRC, Canberra.

Symmons, D & Harrison, B 2000, 'Early inflammatory polyarthritis: results from the Norfolk Arthritis Register with a review of the literature. I. Risk factors from the development of inflammatory polyarthritis and rheumatoid arthritis', *Rheumatology*, vol. 39, pp. 385-843.



# 4. Body weight status



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 South Gippsland Southern Grampians 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 South Gippsland Southern Grampians 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 South Gippsland Southern Grampians 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

## 4. Body Weight Status

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

$$\text{BMI} = \text{weight (kg)} / \text{height squared (m}_2\text{)}$$

The World Health Organisation classifies adult body weight status based on the following BMI scores:

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

(WHO 2000)

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

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

Self-reported data still have a place in health monitoring because such data are relatively inexpensive and easy to collect, and have been shown to be useful in monitoring trends over time.

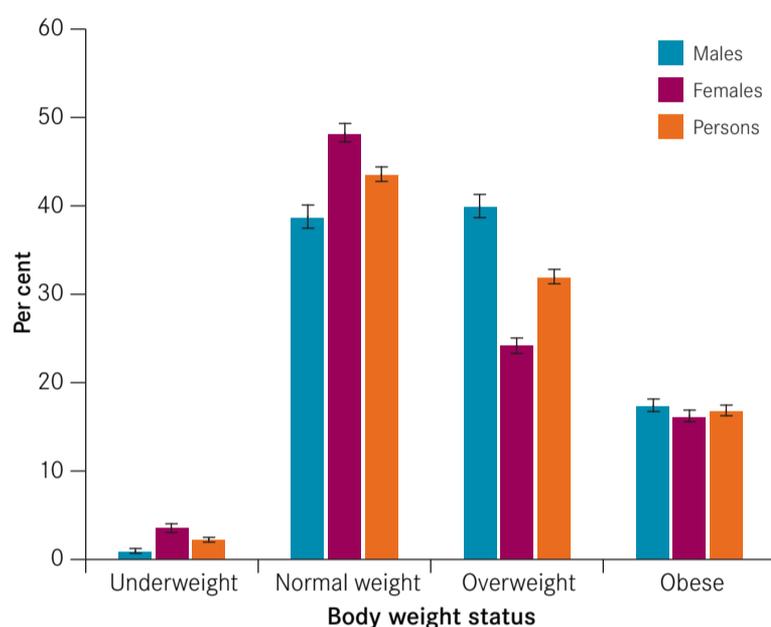
### Survey results

- Almost half (48.6 per cent) of all persons aged 18 years and over were overweight or obese (31.9 per cent were overweight and 16.7 per cent were obese) in 2008.
- The proportion of persons who were underweight, or of normal weight, declined between 2002 and 2008, while the proportion of persons who were overweight or obese increased over this period.
- Between the sexes, the proportion of males (39.9 per cent) who were overweight was higher than the corresponding proportion of females (24.2 per cent), however, the proportion of females (3.6 per cent) who were underweight, was higher than the proportion of underweight males (0.9 per cent).
- Overweight and obesity were more prevalent among persons aged 45 years and over. Persons in the youngest age groups (18–24 years and 25–34 years) had the lowest rates of overweight and obesity, but had the highest rates of underweight body weight.
- More than one in ten (11.7 per cent) persons were classified as Class I obese (BMI 30–34.9), 3.4 per cent were classified as Class II obese (BMI 35–39.9) and 1.7 per cent were classified as Class III obese (BMI ≥40.0).
- A higher proportion of persons from rural areas were overweight (34.4 per cent) or obese (19.8 per cent), compared with persons from the metropolitan area (31.1 and 15.7 per cent, respectively).
- Among specific Department of Health regions, persons from the Hume (21.1 per cent), Loddon Mallee (21.0 per cent) and Grampians (20.3 per cent) regions had higher rates of obesity, compared with the rate for Victoria (16.7 per cent).
- There was a higher proportion of overweight males in the LGAs of Ararat, East Gippsland, Hobsons Bay, Moira, Murrindindi and Yarriambiack, compared with all Victorian males.
- There was a higher proportion of overweight females in the LGAs of Alpine, Baw Baw, Campaspe, Greater Geelong, Hindmarsh, Murrindindi and Strathbogie, compared with all Victorian females.
- There was a higher proportion of obesity for males in the LGAs of Buloke, Glenelg, Greater Shepparton, Hume, Mildura, Moorabool, Pyrenees, Towong, Wangaratta, Warrnambool and Wyndham, compared with all Victorian males.
- There was a higher proportion of obesity for females in the LGAs of Ararat, Cardinia, Casey, Corangamite, Frankston, Glenelg, Hindmarsh, Latrobe, Melton, Mitchell, Moira, Northern Grampians, Towong and Wodonga, compared with all Victorian females.

Figure 4.1 shows body weight status by sex in 2008, as determined by self-reported height and weight and subsequent calculation of corresponding body mass index (BMI).

Almost half (48.6 per cent) of all persons aged 18 years and over were overweight or obese (31.9 per cent were overweight and 16.7 per cent were obese). More than half (57.2 per cent) of all males in Victoria were overweight or obese, compared with 40.3 per cent of females.

**Figure 4.1: Self-reported body weight status<sup>(a)</sup>, by sex, 2008**



(a) Determined by calculation of body mass index (BMI).  
Data are age standardised to the 2006 Victorian population.

Table 4.1 shows BMI status for the period 2002–2008. The proportion of persons who were underweight, or of normal weight, declined between 2002 and 2008, while the proportion of persons who were overweight or obese increased over this period.

**Table 4.1: Body weight status<sup>(a)</sup>, 2002–2008**

Body weight status	2002	2003	2004	2005	2006	2007	2008
	Per cent						
Underweight (<18.5)	3.4	3.4	3.4	2.6	1.9	2.0	2.2
Normal (18.5–24.9)	48.4	47.3	44.8	45.0	45.1	43.7	43.5
Overweight (25.0–29.9)	30.7	31.2	32.0	32.2	32.1	32.8	31.9
Obese (≥30.0)	14.4	14.0	14.4	15.6	15.3	15.4	16.7

(a) Determined by calculation of body mass index (BMI).

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.

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

Table 4.2 shows that a higher proportion of males were overweight (39.9 per cent), compared with females (24.2 per cent), while there was a similar proportion of obese males and females (17.3 per cent and 16.1 per cent, respectively).

Overweight and obesity were more prevalent for persons aged 45 years and over. Persons in the youngest age groups (18–24 years and 25–34 years) had the lowest rates of overweight and obesity, but had the highest rates of underweight body weight (figure 4.2 and figure 4.3).

Table 4.2: Body weight status<sup>(a)</sup>, by age group and sex, 2008

Age group (years)	Underweight (<18.5)			Normal (18.5–24.9)			Overweight (25.0–29.9)			Obese (≥30.0)		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
18–24 years	2.4*	1.4	4.2	59.7	54.9	64.3	23.7	19.9	28.0	7.3	5.3	9.9
25–34 years	1.3*	0.7	2.5	46.7	42.7	50.7	37.0	33.3	40.9	11.6	9.5	14.2
35–44 years	0.2*	0.1	0.5	35.8	33.0	38.8	42.8	39.8	45.8	19.3	16.9	21.8
45–54 years	0.4*	0.2	1.0	27.5	25.1	30.1	44.4	41.6	47.2	25.0	22.6	27.6
55–64 years	0.6*	0.3	1.2	28.6	26.3	31.0	46.7	44.0	49.3	22.4	20.3	24.6
65+	0.9	0.6	1.4	35.7	33.5	37.9	42.8	40.6	45.1	17.5	15.9	19.4
<b>Total</b>	<b>0.9</b>	<b>0.7</b>	<b>1.2</b>	<b>38.6</b>	<b>37.3</b>	<b>40.0</b>	<b>39.9</b>	<b>38.7</b>	<b>41.2</b>	<b>17.3</b>	<b>16.4</b>	<b>18.2</b>
<b>Females</b>												
18–24 years	8.9	6.4	12.1	63.2	58.8	67.3	14.7	12.0	18.0	6.1	4.5	8.3
25–34 years	4.3	3.3	5.7	54.7	51.8	57.5	20.7	18.5	23.1	13.1	11.3	15.0
35–44 years	2.8	2.2	3.5	49.8	47.7	51.9	23.8	22.0	25.6	16.7	15.1	18.3
45–54 years	1.6	1.1	2.3	44.3	42.1	46.6	27.0	25.0	29.0	19.5	17.8	21.3
55–64 years	1.8	1.3	2.7	38.7	36.6	40.9	29.6	27.7	31.7	23.1	21.3	25.0
65+	2.5	2.0	3.2	38.6	36.7	40.4	29.7	28.0	31.5	18.7	17.2	20.3
<b>Total</b>	<b>3.6</b>	<b>3.1</b>	<b>4.1</b>	<b>48.1</b>	<b>47.1</b>	<b>49.2</b>	<b>24.2</b>	<b>23.4</b>	<b>25.1</b>	<b>16.1</b>	<b>15.4</b>	<b>16.8</b>
<b>Persons</b>												
18–24 years	5.6	4.2	7.4	61.4	58.2	64.5	19.3	16.9	22.0	6.7	5.4	8.4
25–34 years	2.8	2.2	3.6	50.7	48.2	53.1	28.9	26.7	31.2	12.4	10.9	13.9
35–44 years	1.5	1.2	1.9	42.9	41.1	44.7	33.2	31.4	34.9	17.9	16.5	19.4
45–54 years	1.0	0.8	1.4	36.0	34.3	37.8	35.6	33.9	37.3	22.2	20.7	23.8
55–64 years	1.2	0.9	1.7	33.7	32.1	35.3	38.0	36.4	39.7	22.7	21.4	24.2
65+	1.8	1.4	2.2	37.3	35.9	38.7	35.6	34.2	37.0	18.2	17.1	19.4
<b>Total</b>	<b>2.2</b>	<b>2.0</b>	<b>2.5</b>	<b>43.5</b>	<b>42.6</b>	<b>44.3</b>	<b>31.9</b>	<b>31.1</b>	<b>32.7</b>	<b>16.7</b>	<b>16.1</b>	<b>17.3</b>

(a) Determined by calculation of body mass index (BMI).

95% CI = 95 per cent confidence interval.

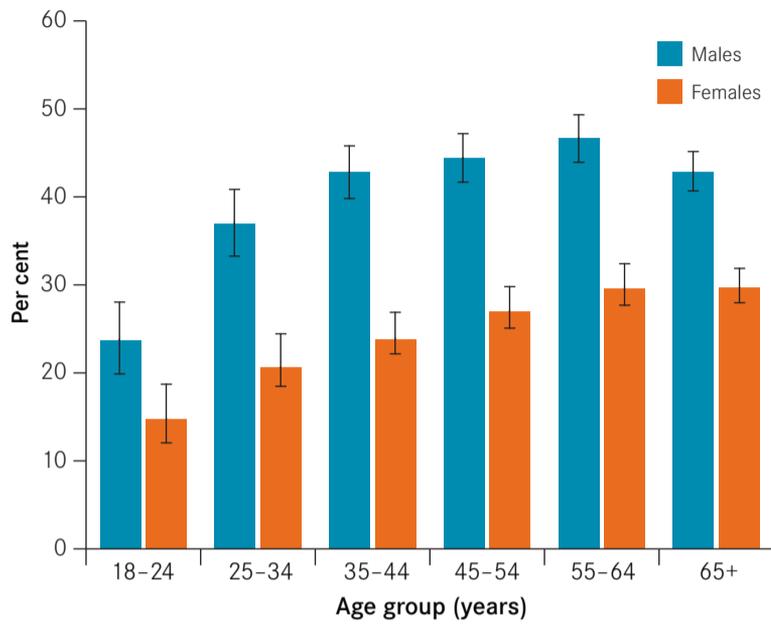
Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

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**.

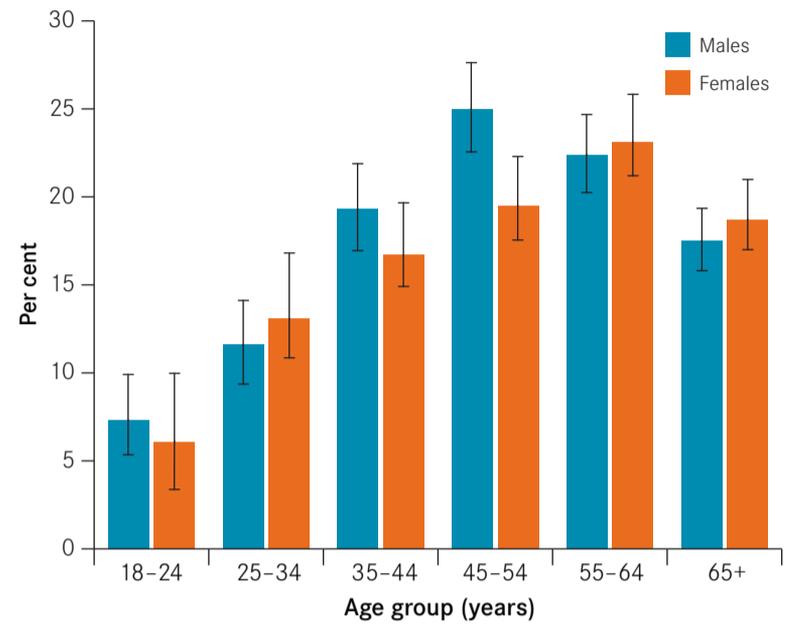
\* Estimate has a relative standard error of between 25 and 50 per cent and should be interpreted with caution.

Figure 4.2: Proportion of males and females who were overweight (BMI 25.0–29.9), by age group, 2008



Data are crude estimates, they have not been age standardised.

Figure 4.3: Proportion of males and females who were obese (BMI ≥30.0), by age group, 2008



Data are crude estimates, they have not been age standardised.

The World Health Organisation has categorised obesity into three groups, ranging from moderate (Class I: BMI 30–34.9), to severe (Class II: BMI 35–39.9), through to very severe (Class III: BMI  $\geq$ 40.0). Table 4.3 shows the proportion of persons who were obese in 2008, by class of obesity, sex and age group.

**Table 4.3: Prevalence of obesity, by obesity class, age group and sex, 2008**

Age group (years)	Obese class I (30.0–34.9)			Obese class II (35.0–39.9)			Obese class III ( $\geq$ 40.0)		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>									
18–24 years	4.6	3.1	6.8	2.2*	1.2	4.1	**	0.2	1.4
25–34 years	8.4	6.6	10.5	1.6*	0.9	2.6	1.7*	0.8	3.6
35–44 years	13.8	11.8	16.1	3.9	2.9	5.3	1.5*	0.9	2.7
45–54 years	18.3	16.1	20.6	3.7	2.8	4.8	3.0	2.1	4.4
55–64 years	16.0	14.2	18.0	4.4	3.4	5.6	2.0	1.4	2.9
65+	14.2	12.7	15.9	2.2	1.6	3.0	1.2	0.8	1.7
<b>Total</b>	<b>12.6</b>	<b>11.8</b>	<b>13.5</b>	<b>2.9</b>	<b>2.6</b>	<b>3.4</b>	<b>1.7</b>	<b>1.4</b>	<b>2.1</b>
<b>Females</b>									
18–24 years	5.0	3.5	7.1	0.9	0.4	1.8	**	0.1	0.7
25–34 years	8.6	7.2	10.3	3.0	2.2	4.1	1.4	0.9	2.2
35–44 years	9.6	8.5	10.8	5.0	4.1	6.0	2.1	1.5	2.9
45–54 years	13.1	11.7	14.7	4.0	3.2	5.0	2.4	1.8	3.1
55–64 years	15.4	13.9	17.0	5.7	4.7	6.8	2.0	1.5	2.7
65+	13.4	12.1	14.8	3.7	3.1	4.6	1.5	1.1	2.1
<b>Total</b>	<b>10.8</b>	<b>10.2</b>	<b>11.4</b>	<b>3.7</b>	<b>3.4</b>	<b>4.1</b>	<b>1.6</b>	<b>1.4</b>	<b>1.9</b>
<b>Persons</b>									
18–24 years	4.8	3.7	6.2	1.5*	0.9	2.5	0.4*	0.2	0.8
25–34 years	8.5	7.3	9.8	2.3	1.8	3.0	1.6	1.0	2.4
35–44 years	11.7	10.5	12.9	4.5	3.8	5.3	1.8	1.3	2.5
45–54 years	15.7	14.4	17.1	3.9	3.2	4.6	2.7	2.1	3.4
55–64 years	15.7	14.5	17.0	5.0	4.3	5.8	2.0	1.6	2.5
65+	13.8	12.8	14.8	3.0	2.6	3.6	1.4	1.1	1.7
<b>Total</b>	<b>11.7</b>	<b>11.2</b>	<b>12.2</b>	<b>3.4</b>	<b>3.1</b>	<b>3.6</b>	<b>1.7</b>	<b>1.5</b>	<b>1.9</b>

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.

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

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

The table shows that Class I obesity was the most common class of obesity, where 11.7 per cent of all persons surveyed had a BMI of 30.0–34.9. Only 3.4 per cent of persons were classified as being Class II obese (BMI of 35.0–39.9) and 1.7 per cent were classified as being Class III obese (BMI of  $\geq$ 40.0).

A higher proportion of males (12.6 per cent) were classified as Class I obese than females (10.8 per cent), while the proportion of females who were classified as Class II obese (3.7 per cent) was higher than the proportion of males (2.9 per cent). There was no difference in the proportion of males and females who were classified as Class III obese.

Persons aged 45 years and over had higher rates of Class I obesity, compared with all age groups. The pattern for Class II and Class III obesity by age group was less clear, however, persons aged 55–64 years (5.0 per cent) had higher rates of Class II obesity compared with all age groups (3.4 per cent) and persons aged 45–54 years (2.7 per cent) had higher rates of Class III obesity compared with all age groups (1.7 per cent).

## Body mass index by region, rurality and LGA

Table 4.4 shows BMI status by sex, Department of Health region and rurality. The table shows that although there was no difference in the proportion of persons who were underweight in metropolitan and rural areas of the state, a higher proportion of persons from rural areas were overweight (34.4 per cent) or obese (19.8 per cent), compared with persons from the metropolitan area (31.1 and 15.7 per cent, respectively).

Between the sexes, a higher proportion of females from rural areas were overweight (27.5 per cent), compared with their metropolitan counterparts (23.2 per cent), while the rates for obesity among males (20.1 per cent) and females (19.5 per cent) from rural areas were higher than the rates for males (16.4 per cent) and females (15.1 per cent) from the metropolitan area.

Among specific Department of Health regions, persons from the Hume (21.1 per cent), Loddon Mallee (21.0 per cent) and Grampians (20.3 per cent) regions had higher rates of obesity, compared with the rate for Victoria (16.7 per cent). In contrast, persons from the Eastern Metropolitan region (14.1 per cent) had a lower rate of obese body weight compared with the rate for Victoria.

There was no difference in the proportion of males who were overweight between any of the Department of Health regions, but there was a higher proportion of overweight females in the Barwon–South Western (29.3 per cent), Gippsland (28.1 per cent) and Loddon Mallee (27.8 per cent) regions, compared with the rate for all Victorian females (24.2 per cent).

There was a higher proportion of males (21.6 per cent) in the Hume region who were obese, compared with all Victorian males (17.3 per cent). There was a higher proportion of obese females in the Loddon Mallee (21.0 per cent), Hume (20.7 per cent) and Grampians (19.9 per cent) regions, compared with all Victorian females (16.1 per cent).

Table 4.4: Body weight status<sup>(a)</sup>, by rurality and Department of Health region, 2008

Region	Underweight (<18.5)			Normal (18.5–24.9)			Overweight (25.0–29.9)			Obese (≥30.0)		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
Barwon-South Western	**			34.7	29.2	40.8	41.3	35.2	47.7	19.2	15.8	23.2
Eastern Metropolitan	1.6*	0.8	2.9	42.0	38.6	45.3	40.0	36.8	43.4	14.2	12.1	16.6
Gippsland	**			35.3	31.2	39.7	42.2	37.9	46.6	18.5	15.6	21.8
Grampians	1.3*	0.5	3.0	36.4	32.6	40.4	38.4	34.4	42.5	20.8	17.6	24.4
Hume	0.7*	0.3	1.5	33.6	30.3	37.1	42.4	39.1	45.8	21.6	18.6	24.8
Loddon Mallee	0.6*	0.3	1.1	33.2	29.2	37.4	42.7	38.7	46.8	21.0	17.9	24.6
North and West Metropolitan	0.7*	0.4	1.3	38.4	36.1	40.7	38.9	36.7	41.2	18.9	17.1	20.7
Southern Metropolitan	0.8*	0.5	1.5	40.3	37.5	43.2	39.5	36.7	42.4	15.1	13.1	17.2
<b>Metropolitan</b>	<b>1.0</b>	<b>0.7</b>	<b>1.3</b>	<b>40.0</b>	<b>38.4</b>	<b>41.6</b>	<b>39.4</b>	<b>37.9</b>	<b>41.0</b>	<b>16.4</b>	<b>15.2</b>	<b>17.5</b>
<b>Rural</b>	<b>0.8</b>	<b>0.5</b>	<b>1.1</b>	<b>34.5</b>	<b>32.3</b>	<b>36.6</b>	<b>41.6</b>	<b>39.4</b>	<b>43.9</b>	<b>20.1</b>	<b>18.5</b>	<b>21.8</b>
<b>Total</b>	<b>0.9</b>	<b>0.7</b>	<b>1.2</b>	<b>38.6</b>	<b>37.3</b>	<b>40.0</b>	<b>39.9</b>	<b>38.7</b>	<b>41.2</b>	<b>17.3</b>	<b>16.4</b>	<b>18.2</b>
<b>Females</b>												
Barwon-South Western	3.0*	1.4	6.7	43.4	38.7	48.3	29.3	25.3	33.8	17.8	15.0	20.9
Eastern Metropolitan	4.3	3.1	5.9	52.5	49.8	55.3	22.5	20.4	24.8	14.0	12.4	15.8
Gippsland	2.4	1.6	3.5	42.6	39.3	46.0	28.1	25.3	31.0	18.3	15.8	21.0
Grampians	1.9	1.2	3.0	44.0	40.2	47.9	25.2	21.9	28.7	19.9	17.5	22.6
Hume	3.0	2.1	4.1	42.2	39.5	45.0	26.6	24.3	29.0	20.7	18.7	22.8
Loddon Mallee	2.3	1.6	3.1	39.4	36.3	42.6	27.8	25.4	30.4	21.0	18.4	23.7
North and West Metropolitan	3.6	2.9	4.6	46.8	45.0	48.6	24.8	23.3	26.3	16.2	14.9	17.5
Southern Metropolitan	3.8	2.9	4.9	51.3	48.9	53.6	22.0	20.2	23.9	14.9	13.4	16.6
<b>Metropolitan</b>	<b>3.8</b>	<b>3.3</b>	<b>4.5</b>	<b>49.9</b>	<b>48.7</b>	<b>51.2</b>	<b>23.2</b>	<b>22.2</b>	<b>24.3</b>	<b>15.1</b>	<b>14.3</b>	<b>16.0</b>
<b>Rural</b>	<b>2.6</b>	<b>1.9</b>	<b>3.5</b>	<b>42.2</b>	<b>40.5</b>	<b>44.0</b>	<b>27.5</b>	<b>25.9</b>	<b>29.1</b>	<b>19.5</b>	<b>18.3</b>	<b>20.8</b>
<b>Total</b>	<b>3.6</b>	<b>3.1</b>	<b>4.1</b>	<b>48.1</b>	<b>47.1</b>	<b>49.2</b>	<b>24.2</b>	<b>23.4</b>	<b>25.1</b>	<b>16.1</b>	<b>15.4</b>	<b>16.8</b>
<b>Persons</b>												
Barwon-South Western	1.8*	0.8	3.7	39.2	35.4	43.1	35.2	31.4	39.1	18.4	16.1	21.1
Eastern Metropolitan	2.9	2.2	3.9	47.5	45.3	49.6	31.0	29.0	33.0	14.1	12.8	15.6
Gippsland	1.8	1.2	2.7	39.1	36.5	41.9	35.0	32.4	37.7	18.2	16.3	20.3
Grampians	1.6	1.0	2.5	40.2	37.4	43.1	31.8	29.1	34.6	20.3	18.2	22.5
Hume	1.8	1.3	2.5	38.1	35.9	40.3	34.3	32.2	36.4	21.1	19.3	23.1
Loddon Mallee	1.5	1.1	1.9	36.4	33.8	39.0	35.0	32.6	37.5	21.0	18.9	23.3
North and West Metropolitan	2.2	1.8	2.7	42.6	41.1	44.0	31.7	30.4	33.1	17.5	16.4	18.6
Southern Metropolitan	2.3	1.8	2.9	45.9	44.0	47.7	30.5	28.8	32.3	15.0	13.8	16.4
<b>Metropolitan</b>	<b>2.4</b>	<b>2.1</b>	<b>2.8</b>	<b>45.0</b>	<b>44.0</b>	<b>46.1</b>	<b>31.1</b>	<b>30.2</b>	<b>32.1</b>	<b>15.7</b>	<b>15.0</b>	<b>16.5</b>
<b>Rural</b>	<b>1.7</b>	<b>1.3</b>	<b>2.2</b>	<b>38.5</b>	<b>37.1</b>	<b>39.9</b>	<b>34.4</b>	<b>33.0</b>	<b>35.7</b>	<b>19.8</b>	<b>18.8</b>	<b>20.8</b>
<b>Total</b>	<b>2.2</b>	<b>2.0</b>	<b>2.5</b>	<b>43.5</b>	<b>42.6</b>	<b>44.3</b>	<b>31.9</b>	<b>31.1</b>	<b>32.7</b>	<b>16.7</b>	<b>16.1</b>	<b>17.3</b>

(a) Determined by calculation of body mass index (BMI).

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.

Estimates 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.

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

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

# Body weight status

Table 4.5: Body weight status<sup>(a)</sup>, by sex and LGA, 2008

LGA	Males						Females					
	Overweight (25.0–29.9)			Obese (≥30.0)			Overweight (25.0–29.9)			Obese (≥30.0)		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	46.3	36.4	56.5	15.8	10.2	23.8	36.6	30.5	43.1	15.4	11.5	20.3
Ararat (RC)	54.3	46.5	61.9	14.7	9.6	21.7	24.5	19.3	30.6	25.7	19.0	33.8
Ballarat (C)	36.8	29.1	45.2	19.0	13.3	26.6	22.9	17.8	29.1	20.2	15.5	25.9
Banyule (C)	41.3	33.3	49.7	17.8	12.3	24.9	26.1	21.1	31.7	16.2	11.7	21.9
Bass Coast (S)	31.6	24.9	39.3	22.9	15.6	32.4	26.8	20.6	34.1	13.9	10.0	18.8
Baw Baw (S)	38.4	29.6	48.0	18.1	12.3	25.9	31.7	25.8	38.3	16.3	11.9	22.1
Bayside (C)	45.1	36.5	54.0	12.1	7.5	19.1	17.3	12.6	23.2	10.0	6.7	14.6
Benalla (RC)	46.5	36.7	56.5	17.3	11.6	25.0	25.2	19.6	31.7	21.3	15.8	28.0
Boroondara (C)	31.1	24.4	38.7	9.5*	5.0	17.3	19.1	14.6	24.6	6.0	3.7	9.7
Brimbank (C)	40.0	33.3	47.1	23.3	17.1	30.9	22.9	18.1	28.4	18.4	14.3	23.2
Buloke (S)	36.9	31.3	42.9	39.9	33.5	46.6	30.5	22.8	39.5	17.4	12.7	23.3
Campaspe (S)	40.0	31.1	49.7	21.5	14.9	30.0	37.9	31.2	45.1	16.7	13.0	21.1
Cardinia (S)	42.5	34.3	51.2	18.8	13.4	25.7	25.8	20.3	32.3	23.3	18.1	29.6
Casey (C)	47.6	39.7	55.6	17.9	12.8	24.5	19.0	15.0	23.8	22.8	17.9	28.5
Central Goldfields (S)	32.0	24.5	40.6	21.7	14.4	31.5	24.5	19.0	31.0	20.7	16.0	26.2
Colac-Otway (S)	38.5	30.0	47.6	19.0	13.3	26.5	29.5	23.9	35.9	16.6	12.2	22.2
Corangamite (S)	42.3	33.2	52.0	19.4	13.2	27.6	22.9	17.8	29.0	23.9	18.4	30.3
Darebin (C)	39.3	31.8	47.2	17.4	12.3	24.0	20.1	15.8	25.2	16.2	12.3	21.0
East Gippsland (S)	57.9	48.1	67.2	13.5	9.0	19.9	28.4	22.3	35.5	17.9	11.2	27.5
Frankston (C)	37.7	29.9	46.2	18.0	12.4	25.5	22.8	18.1	28.3	21.6	17.0	26.9
Gannawarra (S)	46.6	36.9	56.6	13.3	8.9	19.5	20.0	15.4	25.7	21.4	16.8	26.8
Glen Eira (C)	38.4	30.5	46.9	16.3	11.0	23.5	24.3	18.5	31.2	9.1	6.2	13.1
Glenelg (S)	45.6	35.5	56.1	25.4	18.5	33.8	26.0	20.9	31.8	22.9	17.4	29.6
Golden Plains (S)	35.9	28.6	43.9	18.0	12.4	25.2	26.4	21.0	32.6	17.2	13.2	22.1
Greater Bendigo (C)	46.6	37.7	55.6	19.6	13.6	27.4	27.1	22.3	32.6	21.8	16.5	28.1
Greater Dandenong (C)	31.7	25.1	39.1	17.1	12.0	23.8	23.1	17.7	29.5	17.4	12.9	23.0
Greater Geelong (C)	42.2	32.6	52.4	17.9	12.8	24.4	31.4	25.3	38.3	16.7	12.6	21.7
Greater Shepparton (C)	38.6	30.4	47.4	24.6	18.4	32.1	20.1	15.8	25.1	22.3	16.8	29.0
Hepburn (S)	32.9	26.0	40.7	21.5	13.9	31.7	26.5	20.6	33.4	13.7	10.2	18.2
Hindmarsh (S)	41.8	33.5	50.5	22.1	15.7	30.2	32.3	27.2	37.9	22.6	17.7	28.2
Hobsons Bay (C)	52.5	44.0	60.8	18.0	12.8	24.6	28.2	22.8	34.2	13.7	10.0	18.3
Horsham (RC)	46.2	38.1	54.6	20.6	14.6	28.1	26.2	21.2	31.8	17.2	13.0	22.5
Hume (C)	31.5	24.9	39.0	26.8	20.9	33.7	28.6	23.6	34.1	20.1	15.4	25.8
Indigo (S)	36.9	29.9	44.5	16.2	10.9	23.4	26.2	19.9	33.7	21.6	16.0	28.6
Kingston (C)	39.7	31.2	48.8	12.5	8.2	18.5	24.6	19.2	31.0	13.6	9.6	18.8
Knox (C)	40.9	32.7	49.5	19.1	13.6	26.3	23.6	18.1	30.0	15.4	11.6	20.2
Latrobe (C)	42.8	34.2	51.9	17.5	12.0	24.9	25.8	20.4	32.0	21.9	16.9	27.9
Loddon (S)	47.4	37.7	57.3	15.6	11.1	21.4	24.4	17.9	32.3	21.6	15.3	29.6
Macedon Ranges (S)	40.3	32.0	49.2	20.3	13.7	29.0	31.6	23.6	40.8	18.6	13.5	25.1
Manningham (C)	40.5	32.5	49.1	12.9	8.7	18.8	22.3	17.2	28.3	15.2	11.0	20.6

(a) Determined by calculation of body mass index (BMI).

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

95% CI = 95 per cent confidence interval.

LGA = local government area.

Estimates 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.

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

Table 4.5: Body weight status<sup>(a)</sup>, by sex and LGA, 2008 (continued)

LGA	Males						Females					
	Overweight (25.0–29.9)			Obese (≥30.0)			Overweight (25.0–29.9)			Obese (≥30.0)		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	42.3	34.1	50.9	17.7	12.8	24.0	22.1	16.8	28.6	16.6	11.8	22.8
Maribyrnong (C)	42.9	35.4	50.7	13.0	8.9	18.4	22.1	17.4	27.6	10.2	7.1	14.5
Maroondah (C)	43.2	34.6	52.3	20.4	14.2	28.3	25.1	19.7	31.2	11.6	8.2	16.1
Melbourne (C)	34.1	27.3	41.6	10.0	6.5	15.0	14.2	9.2	21.2	11.1	7.3	16.6
Melton (S)	43.9	34.8	53.4	22.5	16.8	29.6	24.9	19.9	30.6	24.5	20.0	29.6
Mildura (RC)	39.8	31.4	48.9	29.1	21.5	38.0	26.2	20.9	32.2	20.8	16.0	26.6
Mitchell (S)	42.5	34.8	50.7	19.1	13.7	25.9	27.7	22.3	33.8	23.5	17.4	31.0
Moira (S)	57.1	44.9	68.4	13.3	9.1	19.0	26.4	20.8	32.9	22.3	17.2	28.4
Monash (C)	35.7	27.9	44.4	13.4	8.6	20.2	20.1	15.8	25.2	18.8	14.7	23.8
Moonee Valley (C)	34.0	26.3	42.6	23.2	16.8	31.1	23.6	18.7	29.4	12.3	9.1	16.2
Moorabool (S)	32.1	25.4	39.6	26.9	19.5	35.8	26.9	21.4	33.2	22.5	16.5	29.9
Moreland (C)	30.9	24.8	37.8	20.0	14.9	26.2	29.2	23.4	35.8	17.5	13.2	22.8
Mornington Peninsula (S)	25.8	19.1	33.9	20.2	13.6	29.1	28.0	22.0	34.9	16.7	12.0	22.8
Mount Alexander (S)	42.4	34.8	50.4	16.4	11.2	23.4	22.4	17.2	28.7	21.9	16.3	28.8
Moyne (S)	37.6	30.7	45.2	21.0	15.1	28.4	24.5	19.4	30.6	20.1	15.6	25.5
Murrindindi (S)	52.5	42.7	62.2	12.2	8.4	17.2	36.4	28.2	45.6	13.6	9.4	19.2
Nillumbik (S)	41.6	33.6	50.1	14.5	9.7	21.1	20.3	15.5	26.1	8.5	5.5	12.9
Northern Grampians (S)	38.0	28.3	48.8	22.1	15.2	31.0	23.8	18.3	30.3	23.8	18.4	30.2
Port Phillip (C)	39.3	32.7	46.3	10.2	6.9	15.0	18.3	14.0	23.4	8.7	5.8	12.9
Pyrenees (S)	36.9	29.7	44.8	32.5	23.7	42.7	28.5	22.7	35.1	17.5	13.2	22.7
Queenscliffe (B)	35.0	27.5	43.3	6.4*	3.3	11.9	19.2	14.3	25.2	7.5	4.8	11.3
Southern Grampians (S)	35.1	28.3	42.7	19.1	13.8	25.9	25.5	20.0	31.8	16.2	12.0	21.6
South Gippsland (S)	42.5	33.5	52.0	24.3	17.5	32.6	30.1	23.3	37.8	22.2	16.1	29.7
Stonnington (C)	47.0	39.3	54.9	7.0*	3.3	14.5	16.7	12.3	22.2	9.2	6.2	13.3
Strathbogie (S)	40.8	32.0	50.3	24.1	17.3	32.5	33.5	25.6	42.4	18.1	12.9	24.7
Surf Coast (S)	36.3	30.0	43.1	15.1*	8.6	25.0	20.4	15.5	26.4	12.9	9.0	18.1
Swan Hill (RC)	46.3	38.3	54.5	18.5	11.3	28.7	30.0	23.6	37.3	22.5	16.7	29.7
Towong (S)	42.2	35.0	49.9	25.8	20.6	31.8	24.7	19.5	30.8	25.6	20.0	32.1
Wangaratta (RC)	38.2	30.6	46.4	29.6	20.9	40.2	29.3	22.4	37.2	20.9	16.5	26.3
Warrnambool (C)	35.9	27.4	45.3	25.5	18.7	33.7	27.0	21.2	33.7	17.9	13.5	23.3
Wellington (S)	41.6	34.4	49.3	20.3	14.1	28.3	30.4	25.1	36.3	18.3	13.5	24.3
West Wimmera (S)	47.2	39.2	55.2	23.3	17.3	30.6	30.9	24.1	38.7	22.0	15.5	30.1
Whitehorse (C)	40.7	32.7	49.2	14.6	10.2	20.3	25.0	19.9	30.8	10.1	7.3	13.7
Whittlesea (C)	47.6	39.3	56.1	17.0	11.9	23.8	28.8	23.8	34.4	19.1	15.1	24.0
Wodonga (RC)	43.6	35.1	52.5	19.2	14.1	25.7	25.3	20.3	31.0	21.9	17.1	27.7
Wyndham (C)	34.4	27.6	41.9	23.9	18.3	30.7	28.9	24.2	34.2	18.9	15.1	23.4
Yarra (C)	42.1	35.3	49.1	9.7*	5.9	15.5	22.7	17.6	28.6	10.4	7.2	14.8
Yarra Ranges (S)	43.5	36.7	50.5	14.0	9.4	20.4	23.8	18.5	30.1	20.2	15.5	25.9
Yarriambiack (S)	49.9	41.5	58.4	18.5	12.9	25.7	28.0	22.0	34.9	21.3	15.6	28.4
<b>Total</b>	<b>39.9</b>	<b>38.7</b>	<b>41.2</b>	<b>17.3</b>	<b>16.4</b>	<b>18.2</b>	<b>24.2</b>	<b>23.4</b>	<b>25.1</b>	<b>16.1</b>	<b>15.4</b>	<b>16.8</b>

Table 4.5 and figure 4.4 show the proportion of overweight males by LGA. The highest proportion of overweight males was in East Gippsland (57.9 per cent) and the lowest in Mornington Peninsula (25.8 per cent). There was a higher proportion of overweight males in East Gippsland (57.9 per cent), Moira (57.1 per cent), Ararat (54.3 per cent), Hobsons Bay (52.5 per cent), Murrindindi (52.5 per cent) and Yarriambiack (49.9 per cent), compared with all Victorian males (39.9 per cent).

Figure 4.4: Proportion of males who were overweight (BMI 25.0–29.9), by LGA, 2008



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

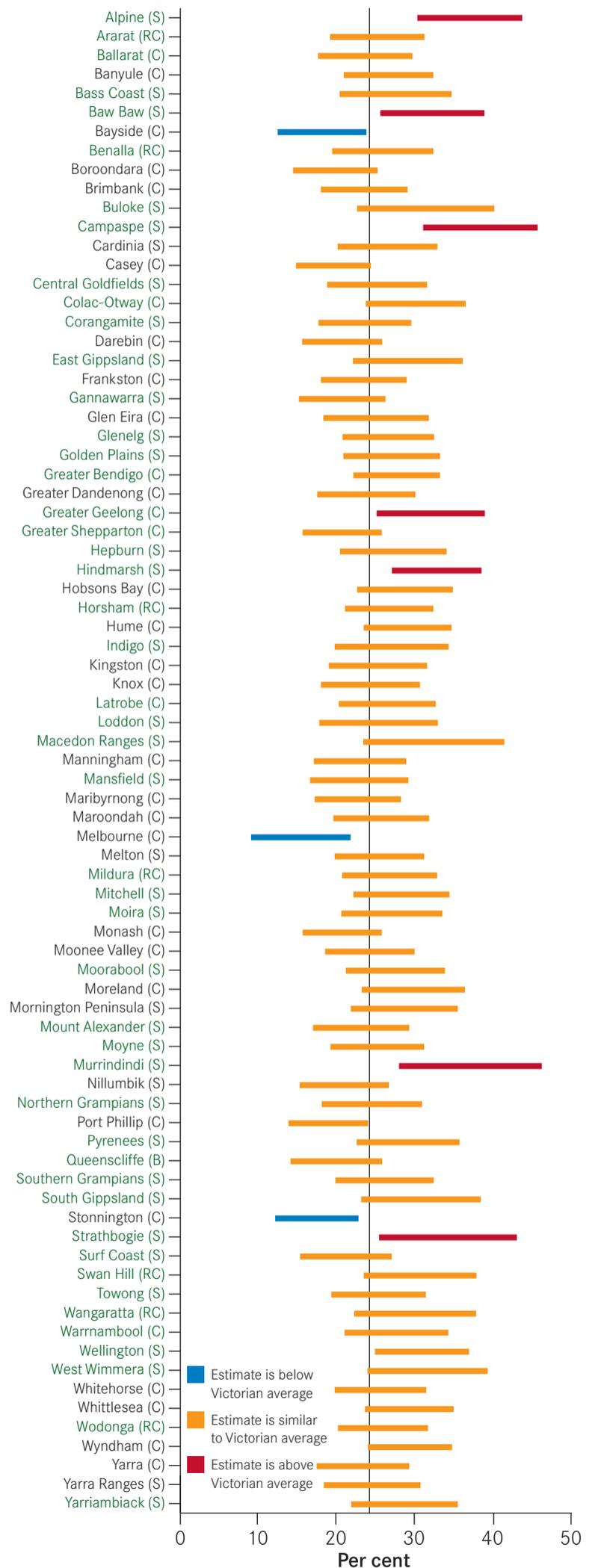
LGA = local government area.

Data are age standardised to the 2006 Victorian population.

The line on the graph is the Victorian estimate, it does not show the 95% CI. See the relevant table for the 95% CI for Victoria (Total).

Table 4.5 and figure 4.5 show the proportion of overweight females by LGA. The highest proportion of overweight females was in Campaspe (37.9 per cent) and the lowest in Melbourne (14.2 per cent). There was a higher prevalence of overweight females in Campaspe (37.9 per cent), Alpine (36.6 per cent), Murrindindi (36.4 per cent), Strathbogie (33.5 per cent), Hindmarsh (32.3 per cent), Baw Baw (31.7 per cent) and Greater Geelong (31.4 per cent), compared with all Victorian females (24.2 per cent).

Figure 4.5: Proportion of females who were overweight (BMI 25.0–29.9), by LGA, 2008



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

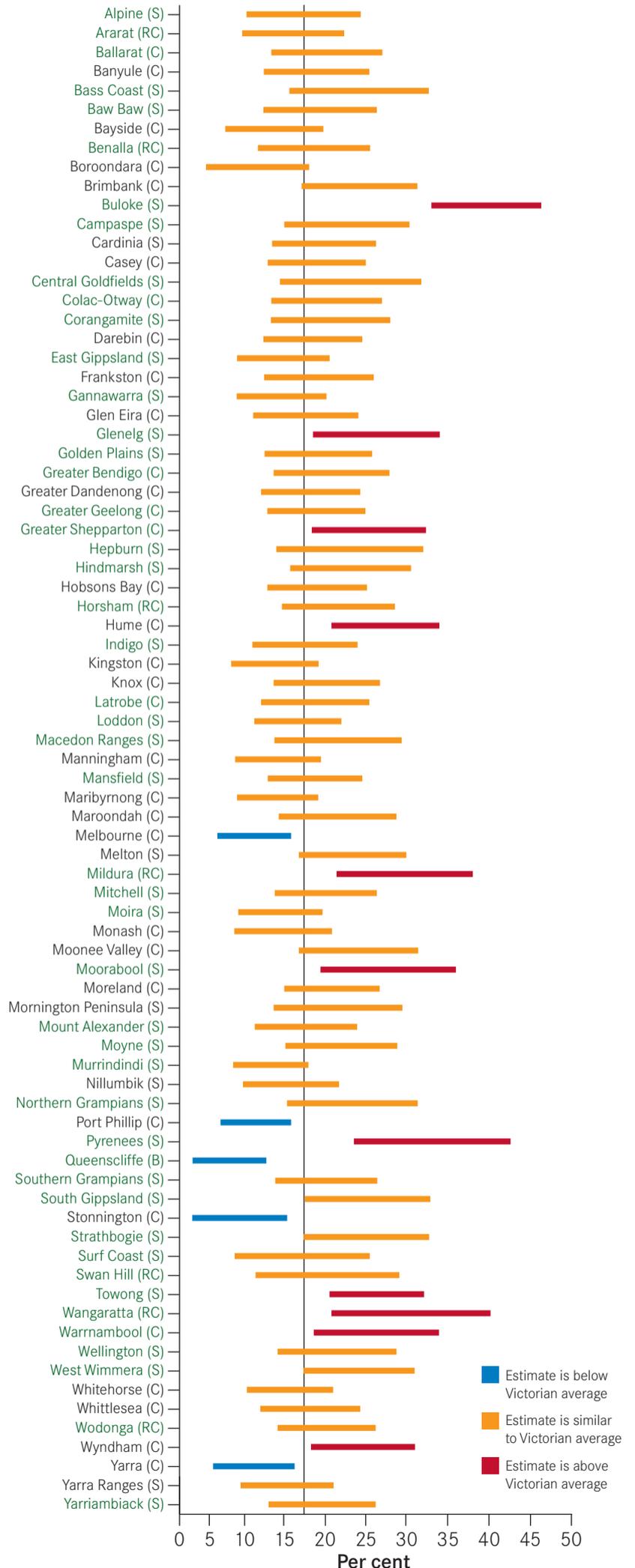
LGA = local government area.

Data are age standardised to the 2006 Victorian population.

The line on the graph is the Victorian estimate, it does not show the 95% CI. See the relevant table for the 95% CI for Victoria (Total).

Table 4.5 and figure 4.6 show the proportion of obese males by LGA. There was a higher proportion of obese males in Buloke (39.9 per cent), Pyrenees (32.5 per cent), Wangaratta (29.6 per cent), Mildura (29.1 per cent), Moorabool (26.9 per cent), Hume (26.8 per cent), Towong (25.8 per cent), Warrnambool (25.5 per cent), Glenelg (25.4 per cent), Greater Shepparton (24.6 per cent) and Wyndham (23.9 per cent), compared with all Victorian males (17.3 per cent).

Figure 4.6: Proportion of males who were obese (BMI ≥30.0), 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 line on the graph is the Victorian estimate, it does not show the 95% CI. See the relevant table for the 95% CI for Victoria (Total).

Table 4.5 and figure 4.7 show the proportion of obese females by LGA. There was a higher proportion of obese females in Ararat (25.7 per cent), Towong (25.6 per cent), Melton (24.5 per cent), Corangamite (23.9 per cent), Northern Grampians (23.8 per cent), Mitchell (23.5 per cent), Cardinia (23.3 per cent), Glenelg (22.9 per cent), Casey (22.8 per cent), Hindmarsh (22.6 per cent), Moira (22.3 per cent), Latrobe (21.9 per cent), Wodonga (21.9 per cent) and Frankston (21.6 per cent), compared with all Victorian females (16.1 per cent).

Figure 4.7: Proportion of females who were obese (BMI ≥30.0), 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 line on the graph is the Victorian estimate, it does not show the 95% CI. See the relevant table for the 95% CI for Victoria (Total).

## Body mass index by selected health indicators

Table 4.6 shows BMI status by selected health indicators for males. The table shows that males who were non-drinkers, current smokers, or had very high levels of psychological stress, had lower rates of overweight body weight, compared with all Victorian males. Males who had lower levels of self-reported health, and very high levels of psychological distress, had higher rates of obesity.

**Table 4.6: Body weight status<sup>(a)</sup>, by selected health indicators, males, 2008**

	Underweight (<18.5)			Normal (18.5–24.9)			Overweight (25.0–29.9)			Obese (≥30.0)		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Physical activity<sup>(b)</sup></b>												
Sedentary	**			35.8	30.0	41.9	38.6	32.6	45.1	18.2	14.9	22.1
Insufficient time and/or sessions	1.4*	0.8	2.4	35.4	32.8	38.1	40.5	38.0	43.1	18.7	16.8	20.8
Sufficient time and sessions	0.7	0.5	1.0	40.3	38.6	42.0	40.4	38.7	42.0	16.1	15.0	17.3
<b>Alcohol consumption<sup>(c)</sup></b>												
At risk or high risk of long-term harm	3.5*	1.7	7.1	31.5	26.1	37.5	41.2	35.7	47.0	21.6	17.3	26.7
At risk or high risk of short-term harm	0.9	0.6	1.3	35.8	34.0	37.5	42.0	40.3	43.8	18.1	16.8	19.6
Abstainer from alcohol	1.7*	0.9	3.2	41.9	38.1	45.8	33.6	30.0	37.4	17.7	15.2	20.6
<b>Nutrition<sup>(d)</sup></b>												
Met guidelines for fruit and vegetable consumption	**			44.1	36.6	52.0	41.1	34.0	48.7	10.7	7.6	14.7
Met guidelines for vegetable consumption	**			45.0	38.5	51.7	38.5	32.2	45.3	13.5	10.3	17.5
Met guidelines for fruit consumption	0.7*	0.4	1.2	39.4	37.4	41.5	41.6	39.6	43.7	15.6	14.3	17.0
Did not meet guidelines for either fruit or vegetables	1.1	0.8	1.5	37.8	36.1	39.6	39.5	37.8	41.2	18.3	17.0	19.6
<b>Smoking status</b>												
Non-smoker	0.6	0.4	0.9	41.0	39.2	42.8	39.6	37.9	41.4	16.0	14.8	17.4
Ex-smoker	1.5*	0.6	3.9	35.4	32.2	38.8	41.8	38.8	44.8	18.2	16.2	20.4
Current	1.8	1.2	2.7	41.6	38.6	44.6	35.3	32.6	38.2	17.0	14.8	19.4
<b>Self-rated health</b>												
Excellent or very good	0.6	0.4	0.9	46.7	44.7	48.8	40.5	38.5	42.5	9.5	8.5	10.7
Good	1.0	0.6	1.6	34.8	32.8	36.9	41.4	39.3	43.5	19.7	18.1	21.3
Fair or poor	1.5*	0.8	2.6	27.9	25.1	30.9	36.3	33.4	39.3	29.3	26.6	32.2
<b>Level of psychological distress<sup>(e)</sup></b>												
Low to moderate (< 22)	0.9	0.6	1.2	38.6	37.2	40.0	40.7	39.3	42.1	16.6	15.7	17.7
High (22–29)	**			39.1	34.7	43.7	36.3	32.1	40.7	20.5	17.2	24.2
Very high (30–50)	2.2*	0.9	5.4	39.2	32.9	45.9	30.7	24.0	38.2	24.8	19.5	31.0
<b>Total</b>	<b>0.9</b>	<b>0.7</b>	<b>1.2</b>	<b>38.6</b>	<b>37.3</b>	<b>40.0</b>	<b>39.9</b>	<b>38.7</b>	<b>41.2</b>	<b>17.3</b>	<b>16.4</b>	<b>18.2</b>

(a) Based on Body Mass Index (BMI) score.

(b) Based on national guidelines (DoHA 1999) and excludes adults aged less than 19 years.

(c) Based on national guidelines (NHMRC 2001).

(d) Based on national guidelines (NHMRC 2003).

(e) Based on Kessler 10 Psychological Distress Scale (K10).

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**.

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

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

Table 4.7 shows BMI status by selected health indicators for females. The table shows that females who were ex-smokers had higher rates of overweight body weight, compared with all Victorian females. Females who engaged in insufficient physical activity to meet the levels recommended in the national guidelines, were non-drinkers, those who rated their health status as fair, poor or good and those with high to very high levels of psychological distress, had higher rates of obese body weight compared with all Victorian females.

**Table 4.7: Body weight status<sup>(a)</sup>, by selected health indicators, females, 2008**

	Underweight (<18.5)			Normal (18.5–24.9)			Overweight (25.0–29.9)			Obese (≥30.0)		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Physical activity<sup>(b)</sup></b>												
Sedentary	6.7*	3.4	12.7	43.1	37.5	48.9	20.6	17.1	24.6	19.8	16.8	23.2
Insufficient time and/or sessions	3.1	2.4	4.2	46.2	44.1	48.4	23.6	21.9	25.4	19.0	17.6	20.6
Sufficient time and sessions	4.0	3.3	4.8	49.8	48.4	51.2	25.3	24.2	26.5	14.3	13.4	15.2
<b>Alcohol consumption<sup>(c)</sup></b>												
At risk or high risk of long-term harm	2.9*	1.5	5.6	52.8	46.8	58.7	23.5	19.1	28.6	10.5	7.6	14.5
At risk or high risk of short-term harm	3.2	2.5	4.0	49.5	47.7	51.3	25.9	24.4	27.6	14.4	13.3	15.6
Abstainer from alcohol	3.8	2.8	5.2	45.2	42.8	47.7	22.0	20.1	23.9	19.5	17.9	21.1
<b>Nutrition<sup>(d)</sup></b>												
Met guidelines for fruit and vegetable consumption	2.8	1.9	4.3	49.8	45.5	54.2	26.9	23.2	31.0	14.3	12.1	16.9
Met guidelines for vegetable consumption	3.1	2.1	4.4	49.0	45.4	52.6	26.8	23.7	30.1	14.9	12.8	17.1
Met guidelines for fruit consumption	3.3	2.7	4.0	49.5	48.0	51.0	24.9	23.7	26.2	15.7	14.8	16.7
Did not meet guidelines for either fruit or vegetables	3.8	3.1	4.6	46.8	45.2	48.4	23.4	22.1	24.7	16.7	15.7	17.8
<b>Smoking status</b>												
Non-smoker	3.5	2.9	4.2	50.0	48.6	51.3	22.8	21.8	23.9	15.6	14.8	16.6
Ex-smoker	2.1	1.5	2.8	45.4	42.5	48.3	28.7	26.1	31.5	17.0	15.4	18.7
Current	5.6	4.2	7.4	46.1	43.5	48.8	23.9	21.9	26.0	16.0	14.4	17.8
<b>Self-rated health</b>												
Excellent or very good	3.9	3.2	4.7	58.3	56.8	59.9	23.2	22.0	24.4	9.4	8.7	10.3
Good	2.5	2.0	3.1	43.4	41.7	45.2	25.9	24.5	27.4	18.8	17.6	20.1
Fair or poor	5.3	3.9	7.2	29.8	27.4	32.4	24.3	22.2	26.6	29.0	26.8	31.3
<b>Level of psychological distress<sup>(e)</sup></b>												
Low to moderate (< 22)	3.2	2.7	3.8	49.8	48.6	51.0	24.4	23.5	25.4	15.1	14.4	15.9
High (22–29)	4.8	3.5	6.5	41.1	38.0	44.4	24.3	21.6	27.2	22.4	19.8	25.2
Very high (30–50)	6.6*	3.9	11.1	32.1	27.5	37.0	22.2	18.3	27.5	26.7	22.4	31.6
<b>Total</b>	<b>3.6</b>	<b>3.1</b>	<b>4.1</b>	<b>48.1</b>	<b>47.1</b>	<b>49.2</b>	<b>24.2</b>	<b>23.4</b>	<b>25.1</b>	<b>16.1</b>	<b>15.4</b>	<b>16.8</b>

(a) Based on Body Mass Index (BMI) score.

(b) Based on national guidelines (DoHA 1999) and excludes adults aged less than 19 years.

(c) Based on national guidelines (NHMRC 2001).

(d) Based on national guidelines (NHMRC 2003).

(e) Based on Kessler 10 Psychological Distress Scale (K10).

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**.

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

## References

DoHA (Department of Health and Ageing) 1999, *National physical activity guidelines for adults*, DoHA, Canberra.

NHMRC (National Health and Medical Research Council) 2001, *Alcohol guidelines for Australian adults*, NHMRC, Canberra.

NHMRC (National Health and Medical Research Council) 2003, *Dietary guidelines for Australian adults*, NHMRC, Canberra.

WHO (World Health Organisation) 2000, *Obesity: preventing and managing the global epidemic*, WHO technical report series 894, WHO, Geneva.

# 5. Asthma



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 South Gippsland Southern Grampians 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 South Gippsland Southern Grampians 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 South Gippsland Southern Grampians 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

## 5. Asthma

Asthma is a common, chronic disorder affecting the airways of the lungs. Narrowing of these air passages (caused by the inflammation and swelling of the airway lining, and the overproduction of mucus) results in airway obstruction and difficulty with breathing, which may be reversed either spontaneously or with medical treatment. The disease affects all age groups, but particularly young persons, and ranges in severity from intermittent, mild symptoms to a severe, incapacitating and life threatening disorder.

The self-reported prevalence of asthma has been shown to be higher than prevalence levels based on objective measures of lung function (Woolcock et al. 2001), which typically observe the prevalence of current or persistent asthma (wheezing episodes with abnormal airway function between episodes).

Respondents were asked whether a doctor had ever told them that they had asthma and, if so, whether they had had asthma symptoms (wheezing, coughing, shortness of breath, chest tightness) in the 12 months before the survey. Those persons who responded 'yes' to the first question are referred to as the population with 'asthma ever' in the analysis that follows. Those persons who responded 'yes' to the question about having had symptoms in the 12 months before the survey are referred to as the population with 'current asthma'.

More than one in five persons (21.2 per cent) reported having ever been diagnosed by a doctor with asthma in 2008 (table 5.1 and figure 5.1). The prevalence of asthma ever decreased with age and was higher for females (22.7 per cent), compared with males (19.5 per cent).

### Survey results

#### Asthma

- More than one in five persons (21.2 per cent) reported having ever been diagnosed by a doctor with asthma (asthma ever) and 10.7 per cent reported having experienced asthma symptoms in the last 12 months (current asthma).
- The prevalence of asthma ever remained constant between 2001 and 2008, however, the prevalence of current asthma decreased between 2001 and 2008.
- The prevalence of asthma ever and current asthma decreased with age.
- The prevalence of asthma ever and current asthma was higher for females, compared with males.
- The prevalence of current asthma was similar between the metropolitan and rural areas of Victoria. However, the Grampians region (13.4 per cent) had a higher prevalence rate for current asthma compared with the prevalence rate for Victoria (10.7 per cent).
- The LGAs of Benalla (17.2 per cent), Corangamite (16.1 per cent) and Ballarat (15.4 per cent) had higher prevalence rates of current asthma, compared with Victoria (10.7 per cent).
- Males and females who reported high or very high levels of psychological distress and rated their health as fair or poor had higher prevalence rates of current asthma, compared with the averages for Victorian males and females.
- Females who reported a body weight in the obese range had a higher prevalence rate of current asthma, compared with the average for Victorian females.

Table 5.1: Prevalence of asthma ever<sup>(a)</sup>, by age group and sex, 2008

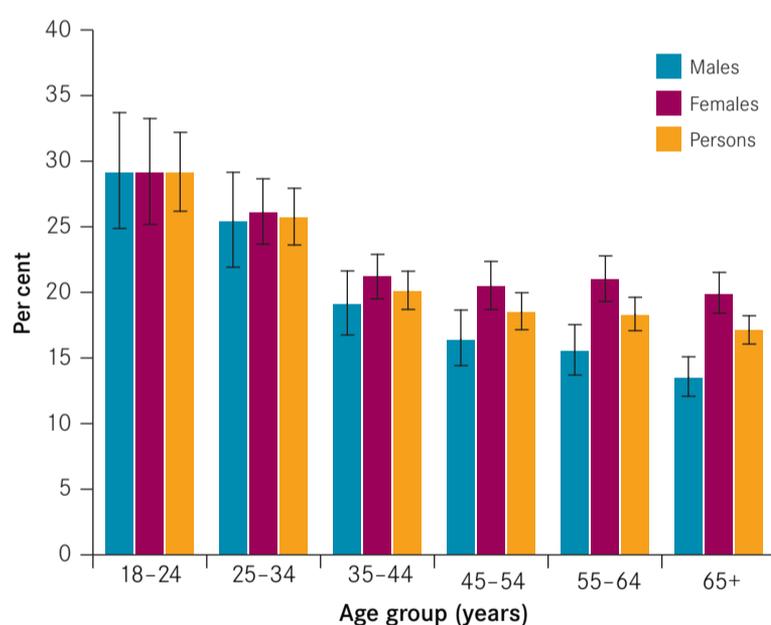
Age group (years)	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
18-24	<b>29.1</b>	24.8	33.7	<b>29.1</b>	25.3	33.3	<b>29.1</b>	26.2	32.2
25-34	<b>25.4</b>	22.0	29.2	<b>26.1</b>	23.7	28.6	<b>25.7</b>	23.6	28.0
35-44	<b>19.1</b>	16.8	21.6	<b>21.2</b>	19.5	22.9	<b>20.1</b>	18.7	21.6
45-54	<b>16.4</b>	14.4	18.7	<b>20.5</b>	18.7	22.4	<b>18.5</b>	17.1	19.9
55-64	<b>15.5</b>	13.7	17.5	<b>21.0</b>	19.3	22.7	<b>18.3</b>	17.0	19.6
65+	<b>13.5</b>	12.1	15.1	<b>19.9</b>	18.5	21.5	<b>17.1</b>	16.0	18.2
<b>Total</b>	<b>19.5</b>	<b>18.4</b>	<b>20.7</b>	<b>22.7</b>	<b>21.8</b>	<b>23.6</b>	<b>21.2</b>	<b>20.5</b>	<b>21.9</b>

(a) Reported ever having been diagnosed with asthma by a doctor.

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**.

Figure 5.2: Prevalence of asthma ever<sup>(a)</sup>, by age group and sex, 2008

(a) Reported ever having been diagnosed with asthma by a doctor.

Data are crude estimates, they have not been age standardised.

Table 5.2 and figure 5.2 show the prevalence of current asthma by sex and age group. Almost eleven per cent (10.7 per cent) of persons had experienced asthma symptoms in the previous 12 months. The prevalence of current asthma decreased with age and was higher for females (12.3 per cent), compared with males (8.9 per cent).

**Table 5.2: Prevalence of current asthma<sup>(a)</sup>, by age group and sex, 2008**

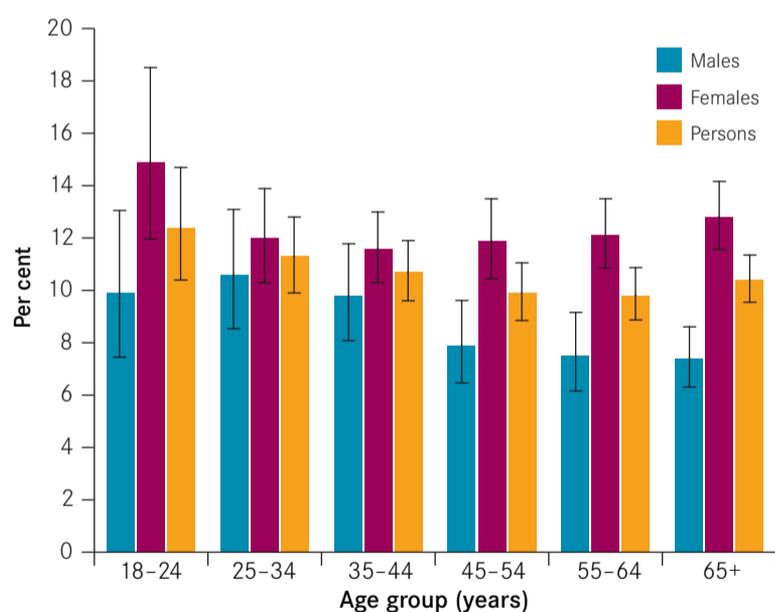
Age group (years)	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
18–24	9.9	7.4	13.0	14.9	11.9	18.5	12.4	10.4	14.7
25–34	10.6	8.5	13.1	12.0	10.3	13.9	11.3	9.9	12.8
35–44	9.8	8.1	11.8	11.6	10.3	13.1	10.7	9.6	11.9
45–54	7.9	6.5	9.7	11.9	10.4	13.5	9.9	8.9	11.1
55–64	7.5	6.2	9.1	12.1	10.8	13.5	9.8	8.9	10.9
65+	7.4	6.3	8.6	12.8	11.6	14.2	10.4	9.5	11.3
<b>Total</b>	<b>8.9</b>	<b>8.2</b>	<b>9.7</b>	<b>12.3</b>	<b>11.6</b>	<b>13.1</b>	<b>10.7</b>	<b>10.1</b>	<b>11.2</b>

(a) Reported ever having been diagnosed with asthma by a doctor and reported experiencing symptoms in previous 12 months.

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.

**Figure 5.2: Prevalence of current asthma<sup>(a)</sup>, by age group and sex, 2008**



(a) Reported ever having been diagnosed with asthma by a doctor and reported experiencing symptoms in previous 12 months.

Data are crude estimates, they have not been age standardised.

Table 5.3 shows the prevalence of asthma for the period 2001–2008. The prevalence of asthma ever (having ever been diagnosed by a doctor with asthma) remained constant between 2001 and 2008. However, the prevalence of current asthma (experiencing asthma symptoms in the previous 12 months) decreased over this period for Victoria. Among males and females, the prevalence of current asthma decreased for females, but not for males.

**Table 5.3: Prevalence of asthma, by sex, 2001–2008**

	2001	2002	2003	2004	2005	2006	2007	2008
	Per cent							
<b>Asthma ever<sup>(a)</sup></b>								
Males	19.9	19.4	18.3	18.2	19.7	19.6	18.5	19.5
Females	23.5	23.6	22.0	21.9	22.2	22.4	22.6	22.7
Persons	21.8	21.7	20.2	20.1	21.0	21.1	20.6	21.2
<b>Current asthma<sup>(b)</sup></b>								
Males	9.6	9.5	9.5	8.6	9.5	9.2	8.7	8.9
Females	14.2	15.4	13.7	12.1	13.0	11.9	12.1	12.3
Persons	12.1	12.6	11.6	10.4	11.3	10.6	10.4	10.7

(a) Reported ever having been diagnosed with asthma by a doctor.

(b) Reported ever having been diagnosed with asthma by a doctor and reported experiencing symptoms in previous 12 months.

Data are age standardised to the 2006 Victorian population.

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

## Asthma by region and LGA

The prevalence of current asthma was similar between the metropolitan (10.6 per cent) and rural (11.0 per cent) areas of Victoria (table 5.4). However, the prevalence of asthma was higher in the Grampians region (13.4 per cent) compared with Victoria (10.7 per cent). The prevalence of current asthma ranged from 9.9 per cent in the Gippsland region to 13.4 per cent in the Grampians region.

**Table 5.4: Prevalence of current asthma<sup>(a)</sup>, by rurality and Department of Health region, 2008**

Region	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Barwon–South Western	8.9	6.3	12.3	11.7	9.3	14.7	10.2	8.4	12.5
Eastern Metropolitan	9.2	7.3	11.4	12.4	10.6	14.6	10.8	9.5	12.4
Gippsland	7.6	5.7	10.0	12.5	10.4	15.0	9.9	8.5	11.6
Grampians	10.3	7.8	13.5	16.4	13.3	20.0	13.4	11.2	15.8
Hume	7.9	6.3	9.9	13.6	11.9	15.5	10.8	9.6	12.2
Loddon Mallee	8.5	6.1	11.5	14.3	12.2	16.6	11.4	9.8	13.3
North and West Metropolitan	9.0	7.7	10.5	12.0	10.8	13.3	10.5	9.6	11.5
Southern Metropolitan	8.8	7.3	10.7	11.8	10.3	13.4	10.3	9.2	11.5
<b>Metropolitan</b>	9.0	8.1	10.0	12.0	11.1	12.9	10.6	9.9	11.2
<b>Rural</b>	8.6	7.4	9.9	13.5	12.3	14.7	11.0	10.2	11.9
<b>Total</b>	8.9	8.2	9.7	12.3	11.6	13.1	10.7	10.1	11.2

(a) Reported ever having been diagnosed with asthma by a doctor and reported experiencing symptoms in previous 12 months.

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.



Figure 5.3, figure 5.4 and table 5.5 show the prevalence of current asthma by LGA, for males and females, respectively. Current asthma prevalence ranged from 6.4 per cent in the LGA of Wellington to 17.2 per cent in Benalla. The LGAs of Benalla (17.2 per cent), Corangamite (16.1 per cent) and Ballarat (15.4 per cent) had prevalence rates for current asthma that were higher than the rate for Victoria (10.7 per cent).

Among males, the prevalence rate for current asthma was higher in Indigo (21.9 per cent) and Glenelg (16.6 per cent) compared with the rate for males in Victoria (8.9 per cent).

Prevalence rates were higher for females in Corangamite (23.3 per cent), Central Goldfields (22.8 per cent), Golden Plains (19.5 per cent), Ballarat (19.4 per cent), Queenscliffe (18.9 per cent) and Benalla (18.4 per cent), compared with the rate for females in Victoria (12.3 per cent).

Table 5.5: Prevalence of current asthma<sup>(a)</sup>, by LGA, 2008

LGA	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	4.4	2.0	9.3	9.4	6.2	14.1	7.3	5.0	10.7
Ararat (RC)	5.1	2.6	9.8	16.7	11.7	23.2	9.7	7.0	13.5
Ballarat (C)	10.7	6.4	17.4	19.4	14.1	26.0	15.4	11.6	20.3
Banyule (C)	11.9	6.7	20.5	12.1	8.1	17.8	12.2	8.6	17.2
Bass Coast (S)	4.7	2.5	8.7	16.9	11.3	24.6	12.2	8.0	18.2
Baw Baw (S)	11.9	7.4	18.4	12.5	9.1	17.0	12.6	9.3	16.8
Bayside (C)	4.7	2.1	10.1	10.7	7.1	15.8	8.1	5.5	11.8
Benalla (RC)	14.1	8.0	23.7	18.4	14.1	23.6	17.2	12.7	22.8
Boroondara (C)	5.3	2.9	9.8	12.8	8.5	18.9	9.3	6.5	13.2
Brimbank (C)	7.9	4.8	12.7	14.9	11.0	20.0	11.9	9.1	15.5
Buloke (S)	8.4	5.5	12.8	16.1	11.3	22.4	13.5	9.7	18.5
Campaspe (S)	9.1	5.3	15.3	13.4	9.7	18.1	11.8	8.7	15.9
Cardinia (S)	10.9	6.3	18.0	12.1	7.6	18.8	10.5	7.2	15.2
Casey (C)	11.8	7.6	17.8	13.9	9.9	19.2	12.8	9.7	16.8
Central Goldfields (S)	9.4	4.7	17.9	22.8	15.9	31.5	14.9	10.4	20.9
Colac-Otway (S)	8.9	5.4	14.1	10.5	6.9	15.5	10.5	7.2	15.1
Corangamite (S)	9.0	5.6	14.4	23.3	17.1	30.9	16.1	11.9	21.3
Darebin (C)	10.7	7.0	16.2	9.3	6.4	13.4	10.0	7.0	14.2
East Gippsland (S)	9.0	5.0	15.5	10.4	6.9	15.6	9.9	6.8	14.3
Frankston (C)	10.5	6.9	15.8	11.6	8.2	16.1	11.3	8.6	14.8
Gannawarra (S)	12.0	7.3	19.0	13.6	8.7	20.6	11.4	8.4	15.4
Glen Eira (C)	5.7	3.0	10.7	10.4	6.8	15.5	8.5	5.8	12.2
Glenelg (S)	16.6	10.0	26.3	12.6	8.4	18.5	14.3	10.0	20.0
Golden Plains (S)	9.6	6.0	15.0	19.5	13.6	27.2	14.1	10.2	19.2
Greater Bendigo (C)	10.3	5.4	18.9	15.3	11.4	20.4	12.2	8.8	16.7
Greater Dandenong (C)	10.6	6.4	17.0	9.9	6.7	14.4	10.5	7.5	14.4
Greater Geelong (C)	7.8	4.5	13.3	10.0	6.6	14.9	9.1	6.4	12.7
Greater Shepparton (C)	6.4	3.8	10.6	13.3	9.5	18.4	10.0	7.4	13.3
Hepburn (S)	8.5	3.9	17.3	15.7	10.3	23.2	11.2	7.4	16.6
Hindmarsh (S)	4.5	2.3	8.9	12.7	8.9	17.7	9.0	6.5	12.2
Hobsons Bay (C)	9.6	5.7	15.6	13.4	9.4	18.8	11.5	8.4	15.6
Horsham (RC)	12.8	7.7	20.7	11.3	7.9	16.1	13.2	9.1	18.7
Hume (C)	12.5	7.9	19.3	13.8	9.8	19.2	12.8	9.6	16.8
Indigo (S)	21.9	15.7	29.6	13.4	8.5	20.4	16.1	11.0	22.8
Kingston (C)	6.6	3.4	12.6	12.0	7.8	18.0	9.4	6.6	13.3
Knox (C)	12.9	8.6	19.0	13.1	8.5	19.6	12.4	9.2	16.6
Latrobe (C)	6.5	3.5	11.8	12.0	8.1	17.6	9.1	6.4	12.8
Loddon (S)	4.6	2.5	8.3	14.8	9.4	22.5	10.2	6.8	15.0
Macedon Ranges (S)	4.0	1.6	9.5	15.2	9.5	23.5	9.7	6.4	14.4
Manningham (C)	9.0	4.6	17.0	11.3	7.5	16.5	9.7	6.8	13.8

(a) Reported ever having been diagnosed with asthma by a doctor and reported experiencing symptoms in previous 12 months.

Metropolitan and rural LGAs 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 5.5: Prevalence of current asthma<sup>(a)</sup>, by LGA, 2008 (continued)

LGA	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	6.9	3.7	12.5	9.9	6.5	14.9	8.0	5.4	11.6
Maribyrnong (C)	3.3	1.4	7.5	9.3	6.2	13.8	6.4	4.4	9.4
Maroondah (C)	6.2	3.4	11.3	12.4	7.8	19.2	9.8	6.5	14.4
Melbourne (C)	8.5	4.8	14.5	13.8	9.2	20.2	9.4	6.5	13.4
Melton (S)	6.7	3.8	11.7	15.7	11.7	20.8	11.3	8.5	15.0
Mildura (RC)	7.4	3.8	13.7	13.8	9.1	20.4	10.7	7.5	15.1
Mitchell (S)	9.5	5.5	16.0	10.5	6.6	16.3	9.9	6.8	14.1
Moira (S)	5.3	2.1	12.9	17.0	12.1	23.3	11.4	7.8	16.4
Monash (C)	8.9	5.2	15.0	13.2	9.5	18.0	11.4	8.5	15.1
Moonee Valley (C)	8.6	4.9	14.7	12.2	8.2	17.7	10.3	7.4	14.2
Moorabool (S)	9.6	5.6	15.9	13.3	9.0	19.1	11.7	8.4	16.1
Moreland (C)	9.5	5.9	15.2	11.7	8.1	16.6	10.4	7.6	14.1
Mornington Peninsula (S)	10.9	6.1	18.6	15.5	10.5	22.2	13.5	9.5	18.8
Mount Alexander (S)	6.6	3.9	10.9	12.5	8.1	18.8	9.0	6.4	12.4
Moyne (S)	6.6	3.9	10.9	12.8	8.8	18.2	10.4	7.4	14.4
Murrindindi (S)	11.6	5.7	22.1	18.9	12.5	27.6	15.1	10.2	21.8
Nillumbik (S)	8.2	4.4	14.9	9.2	5.7	14.6	9.1	6.2	13.3
Northern Grampians (S)	6.3	4.0	9.8	9.8	6.7	14.2	8.3	6.1	11.1
Port Phillip (C)	6.4	3.4	11.8	8.2	5.5	12.2	7.8	5.1	11.7
Pyrenees (S)	15.2	8.5	25.8	13.2	9.6	17.9	13.4	9.1	19.2
Queenscliffe (B)	7.9	3.5	16.9	18.9	15.0	23.5	12.2	7.5	19.3
Southern Grampians (S)	6.7	3.4	12.9	11.3	7.3	17.0	9.1	6.1	13.5
South Gippsland (S)	5.0	2.6	9.4	13.8	9.2	20.2	9.3	6.5	13.1
Stonnington (C)	7.3	4.3	12.0	12.1	8.5	16.8	9.5	7.0	12.8
Strathbogie (S)	6.9	3.7	12.3	8.5	5.3	13.3	7.9	5.4	11.5
Surf Coast (S)	6.3	3.2	12.1	12.3	8.6	17.3	9.1	6.6	12.5
Swan Hill (RC)	11.1	5.8	20.0	9.8	6.1	15.3	10.0	6.6	15.0
Towong (S)	3.9	1.7	8.6	11.3	7.5	16.7	7.7	5.2	11.5
Wangaratta (RC)	9.6	5.5	16.3	12.0	8.5	16.7	12.5	9.6	16.1
Warrnambool (C)	8.4	4.9	13.8	15.8	11.2	21.8	12.8	9.5	17.1
Wellington (S)	4.2	1.7	9.9	8.9	5.8	13.3	6.4	4.2	9.6
West Wimmera (S)	7.5	3.7	14.6	18.0	12.8	24.7	12.3	8.5	17.5
Whitehorse (C)	11.0	6.5	17.9	17.7	12.3	24.9	13.3	9.4	18.4
Whittlesea (C)	7.3	4.0	13.1	8.0	5.5	11.5	7.8	5.5	11.0
Wodonga (RC)	7.4	4.8	11.3	13.6	9.9	18.2	10.7	8.2	13.8
Wyndham (C)	10.8	6.8	16.9	13.1	9.6	17.6	12.2	9.2	16.0
Yarra (C)	9.6	6.4	14.2	11.6	8.1	16.2	10.8	8.1	14.2
Yarra Ranges (S)	8.0	4.4	14.1	10.7	7.2	15.4	9.4	6.7	13.2
Yarriambiack (S)	7.6	4.9	11.7	17.8	12.3	25.2	14.3	9.9	20.3
<b>Total</b>	<b>8.9</b>	<b>8.2</b>	<b>9.7</b>	<b>12.3</b>	<b>11.6</b>	<b>13.1</b>	<b>10.7</b>	<b>10.1</b>	<b>11.2</b>

Figure 5.3: Prevalence of current asthma<sup>(a)</sup>, by LGA, males, 2008

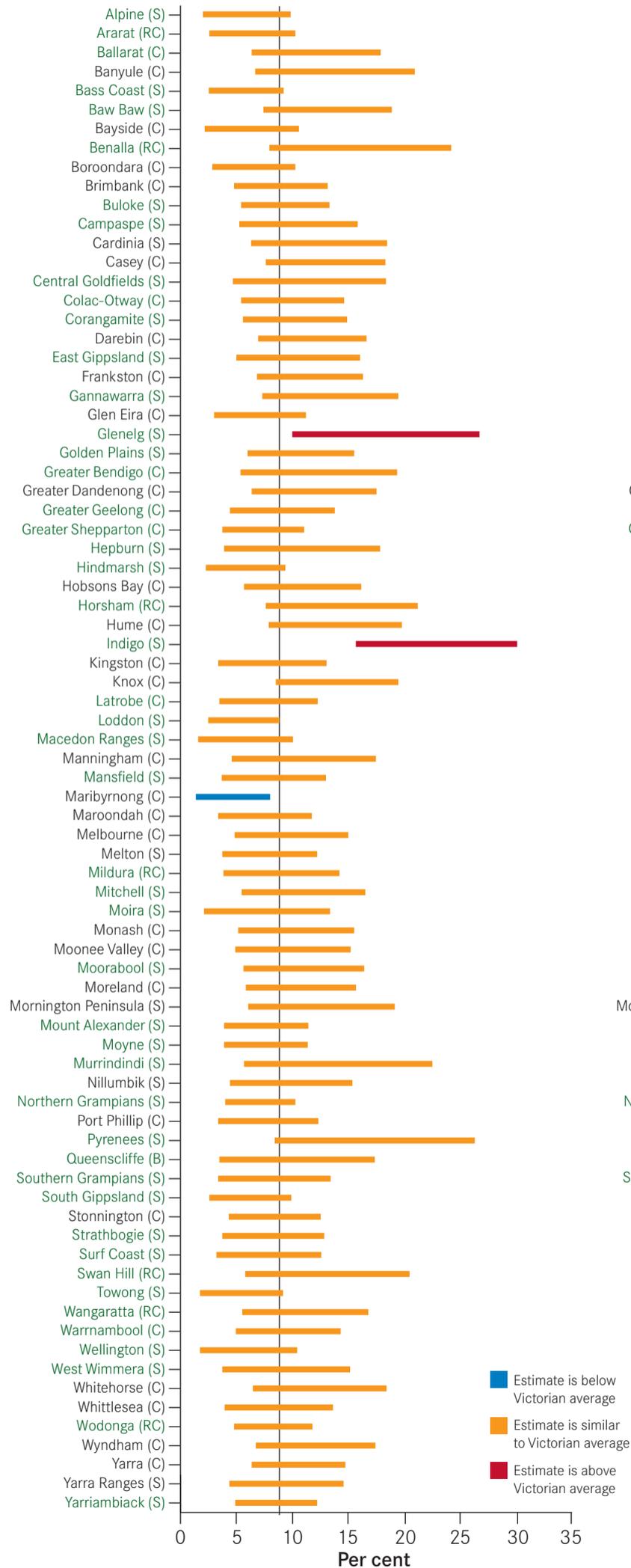
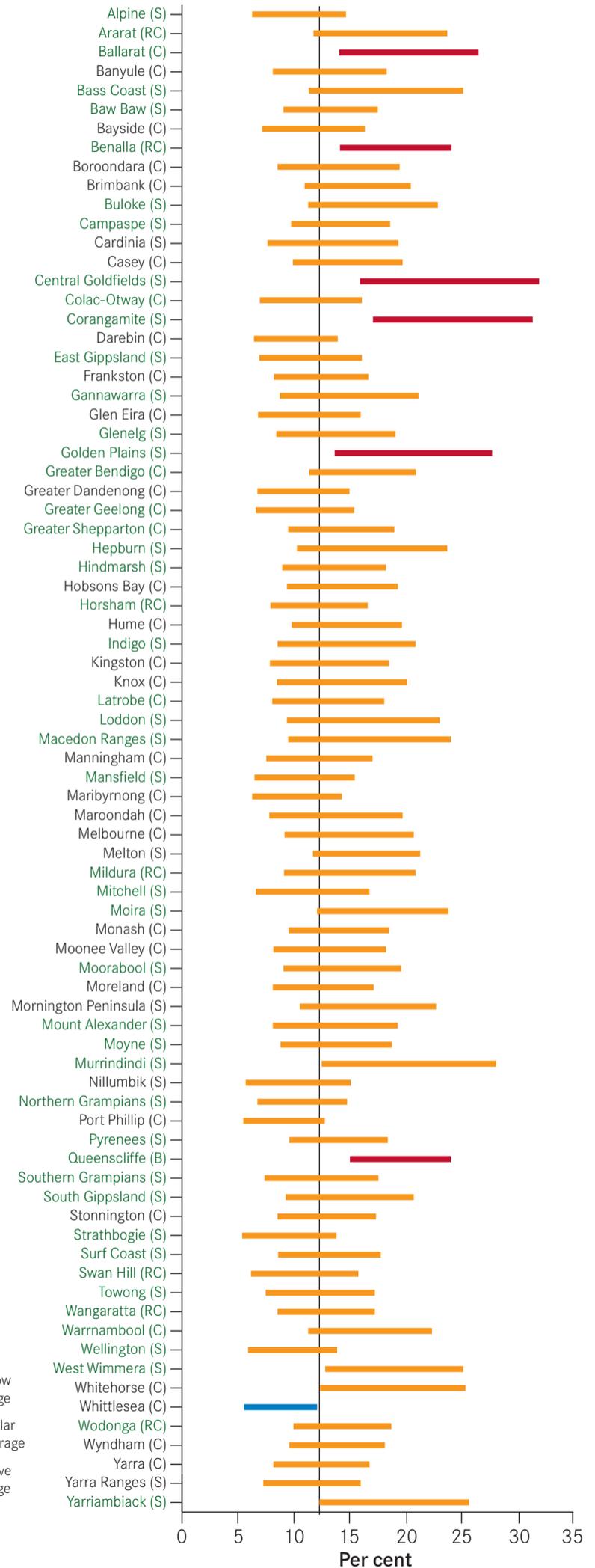


Figure 5.4: Prevalence of current asthma<sup>(a)</sup>, by LGA, females, 2008



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 line on the graph is the Victorian estimate, it does not show the 95% CI. See the relevant table for the 95% CI for Victoria (Total).

## Asthma by selected health indicators

Table 5.6 shows the prevalence of current asthma by selected health indicators, for males and females, respectively. The table shows that males and females who reported high or very high levels of psychological distress and rated their health as fair or poor had higher prevalence rates of current asthma, than the average rates for all Victorian males and females. The table also shows that females who reported a body weight in the obese range had a higher prevalence rate of current asthma, than the average for all Victorian females.

**Table 5.6: Prevalence of current asthma<sup>(a)</sup>, by sex and selected health indicators, 2008**

	Males			Females		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Level of psychological distress<sup>(b)</sup></b>						
Low (10–15)	7.6	6.7	8.6	10.3	9.5	11.3
Moderate (16–21)	11.1	9.5	13.0	13.9	12.4	15.4
High (22–29)	12.7	9.8	16.3	16.8	14.6	19.3
Very high (30–50)	18.5	13.0	25.7	27.3	22.8	32.4
<b>Physical activity<sup>(c)</sup></b>						
Sedentary	6.3	4.1	9.4	9.4	6.7	13.2
Insufficient time and/or sessions	8.6	7.2	10.3	11.9	10.5	13.4
Sufficient time and sessions	8.8	7.8	9.8	12.3	11.3	13.2
<b>Alcohol consumption<sup>(d)</sup></b>						
At risk or high risk of long-term harm	10.7	7.5	15.1	16.2	11.9	21.7
At risk or high risk of short-term harm	9.3	8.3	10.4	13.4	12.2	14.6
Abstainer from alcohol	8.1	6.2	10.4	11.3	9.7	13.1
<b>Nutrition<sup>(e)</sup></b>						
Met guidelines for fruit and vegetable consumption	6.0*	3.5	10.0	13.1	10.6	16.0
Met guidelines for vegetable consumption	5.7	3.7	8.6	13.9	11.5	16.7
Met guidelines for fruit consumption	8.8	7.6	10.1	11.2	10.3	12.2
Did not meet guidelines for either fruit or vegetables	9.2	8.2	10.3	13.2	12.2	14.4
<b>Smoking status</b>						
Non-smoker	9.2	8.1	10.4	11.8	11.0	12.8
Ex-smoker	8.8	7.1	11.0	14.2	12.0	16.8
Current	7.7	6.3	9.4	13.7	12.0	15.7
<b>Self-rated health</b>						
Excellent or very good	6.3	5.3	7.4	9.1	8.2	10.1
Good	9.3	8.1	10.7	12.8	11.6	14.0
Fair or poor	12.9	11.0	15.0	19.8	17.8	21.9
<b>Body weight status<sup>(f)</sup></b>						
Underweight	4.6*	2.4	8.7	13.3	9.9	17.8
Normal weight	7.5	6.4	8.7	9.7	8.9	10.7
Overweight	9.5	8.2	10.9	13.9	12.3	15.7
Obese	11.7	9.4	14.3	17.3	15.0	19.8
<b>Total</b>	<b>8.9</b>	<b>8.2</b>	<b>9.7</b>	<b>12.3</b>	<b>11.6</b>	<b>13.1</b>

(a) Reported ever having been diagnosed with asthma by a doctor and reported experiencing symptoms in previous 12 months.

(b) Based on Kessler 10 Psychological Distress Scale (K10).

(c) Based on national guidelines (DoHA 1999) and excludes adults aged less than 19 years.

(d) Based on national guidelines (NHMRC 2001).

(e) Based on national guidelines (NHMRC 2003).

(f) Based on Body Mass Index (BMI) score.

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**.

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

## References

DoHA (Department of Health and Ageing) 1999, *National physical activity guidelines for adults*, DoHA, Canberra.

NHMRC (National Health and Medical Research Council) 2001, *Australian alcohol guidelines: health risks and benefits*, NHMRC, Canberra.

NHMRC (National Health and Medical Research Council) 2003, *Dietary guidelines for Australian adults*, NHMRC, Canberra.

Woolcock, B, Marks, GB & Keena, VA 2001, 'The burden of asthma in Australia', *Medical Journal of Australia*, vol. 175, pp. 141–45.

# 6. Diabetes



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 South Gippsland Southern Grampians 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 South Gippsland Southern Grampians 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 South Gippsland Southern Grampians 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

## 6. Diabetes

Diabetes mellitus is a common chronic condition characterised by high blood glucose (sugar) levels. The two main types of diabetes mellitus are type 1 (insulin dependent) diabetes and type 2 diabetes. Gestational diabetes is another form of the condition that affects women during pregnancy, with no prior diagnosis of diabetes. This condition usually abates after birth, but may be a risk factor for the development of type 2 diabetes later in life.

Type 1 diabetes is an autoimmune disease in which the body's immune system destroys the insulin-producing cells of the pancreas rendering the individual unable to produce enough of the hormone insulin, which is essential for the control of glucose levels in the blood. It most commonly occurs in persons under the age of 30 years and may be referred to as juvenile-onset diabetes. People with type 1 diabetes require replacement insulin injections (usually several times a day) for life. Unlike type 2 diabetes, it is not caused by lifestyle factors. Type 1 diabetes accounts for approximately 10 to 15 per cent of diabetes mellitus and while a great deal of research is being carried out, at this stage nothing can be done to prevent or cure type 1 diabetes.

Type 2 diabetes is the most common form of diabetes, which occurs mostly in people aged 50 years and over who are overweight, or have a family history of the condition. Accounting for around 85 per cent of all cases of diabetes mellitus, it is caused by insufficient production of insulin and/or the body becoming resistant to high glucose levels in the blood. In many cases, appropriate diet and exercise can control type 2 diabetes. More severe cases require treatment with oral glucose-lowering drugs, insulin injections, or a combination of these. Left untreated, diabetes mellitus can cause kidney, eye and nerve damage, heart disease, stroke and impotence.

### Survey results

- The prevalence of doctor diagnosed diabetes for persons aged 18 years and over was 5.8 per cent in 2008.
- Type 2 diabetes was the most commonly reported form of diabetes (4.8 per cent), followed by type 1 diabetes (0.7 per cent).
- The prevalence of type 2 diabetes increased with age and was higher for males (5.8 per cent), compared with females (3.8 per cent).
- The prevalence of type 1 diabetes remained constant between 2005 and 2008, however, the prevalence of type 2 diabetes increased for males from 3.9 per cent to 5.8 per cent over the same period.
- The prevalence of type 2 diabetes was similar between metropolitan and rural areas of Victoria.
- The LGAs of Melton (9.3 per cent), Hume (8.5 per cent), Whittlesea (7.1 per cent) and Frankston (7.0 per cent) had higher prevalence rates of type 2 diabetes, compared with Victoria (4.8 per cent).
- Males and females who reported very high levels of psychological distress, abstinence from alcohol consumption, fair or poor self-reported health and obesity, had higher prevalence rates of type 2 diabetes compared with the average for all Victorian males and females.
- Females who reported sedentary behaviour had a higher prevalence rate of type 2 diabetes compared with the average for all Victorian females.

Respondents were asked if they had ever been told by a doctor that they had diabetes and, if so, what type of diabetes they were told they had. Female respondents were asked if they had ever had diabetes, apart from when they were pregnant. Females who reported only ever having diabetes when they were pregnant are referred to as having had gestational diabetes in the analysis that follows. They are excluded from the overall total for diabetes prevalence.

Table 6.1 shows that the prevalence of doctor diagnosed diabetes for persons aged 18 years and over was 5.8 per cent in 2008. Type 2 diabetes was the most commonly reported form of diabetes (4.8 per cent), followed by type 1 diabetes (0.7 per cent). Gestational diabetes (1.5 per cent) was the second most commonly reported form of diabetes for females.

Although the prevalence of type 1 diabetes was similar between males (0.8 per cent) and females (0.7 per cent), the prevalence of type 2 diabetes was higher for males (5.8 per cent), compared with females (3.8 per cent).

**Table 6.1: Prevalence of diabetes, by diabetes type & sex, 2008**

Region	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Type 1 diabetes	<b>0.8</b>	0.6	1.0	<b>0.7</b>	0.6	0.9	<b>0.7</b>	0.6	0.9
Type 2 diabetes	<b>5.8</b>	5.3	6.4	<b>3.8</b>	3.5	4.1	<b>4.8</b>	4.5	5.1
Other	<b>0.3</b>	0.2	0.4	<b>0.4</b>	0.3	0.5	<b>0.3</b>	0.3	0.4
Gestational diabetes	..	..	..	<b>1.5</b>	1.2	1.7	<b>0.7</b>	0.6	0.9
<b>Total</b> (excluding gestational diabetes)	<b>6.9</b>	6.4	7.5	<b>4.9</b>	4.5	5.3	<b>5.8</b>	5.5	6.2

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.

Although the prevalence of type 2 diabetes did not change for females between 2005 and 2008, the prevalence of type 2 diabetes increased for males from 3.9 per cent in 2005 to 5.8 per cent in 2008 (table 6.2).

The prevalence of type 1 diabetes remained relatively steady over the period 2005–2008 for both males and females.

**Table 6.2: Prevalence of diabetes, by diabetes type, 2005–2008**

	2005	2006	2007	2008
	Per cent			
<b>Males</b>				
Type 1 diabetes	0.9	1.3	0.8*	0.8
Type 2 diabetes	3.9	4.2	4.6	5.8
<b>Females</b>				
Type 1 diabetes	0.5	0.4*	0.8*	0.7
Type 2 diabetes	3.8	3.7	3.8	3.8
<b>Persons</b>				
Type 1 diabetes	0.7	0.9	0.8	0.7
Type 2 diabetes	3.8	4.0	4.1	4.8

Estimates have been age standardised to the 2006 Victorian population.

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

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

Table 6.3 and figure 6.1 show the prevalence of type 1 and type 2 diabetes by sex and age group. The prevalence of type 2 diabetes increased with age and was higher for males across age groups, compared with females. The prevalence of type 1 diabetes did not vary by age group or sex.

**Table 6.3: Prevalence of diabetes, by type of diabetes, age group, and sex, 2008**

Age group (years)	Type of diabetes					
	Type 1 diabetes			Type 2 diabetes		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
18–24 years	**			**		
25–34 years	0.6*	0.3	1.4	**		
35–44 years	0.5*	0.2	1.0	3.0	2.0	4.5
45–54 years	0.6*	0.3	1.2	5.4	4.3	6.8
55–64 years	1.3	0.8	2.1	12.0	10.2	14.0
65+	1.1	0.7	1.7	15.0	13.5	16.7
<b>Total</b>	<b>0.8</b>	<b>0.6</b>	<b>1.0</b>	<b>5.8</b>	<b>5.3</b>	<b>6.4</b>
<b>Females</b>						
18–24 years	0.8*	0.3	1.7	**		
25–34 years	**			0.3*	0.1	0.6
35–44 years	0.4*	0.2	0.8	1.3	0.9	2.1
45–54 years	0.7*	0.4	1.2	3.3	2.6	4.3
55–64 years	1.3	0.8	1.9	6.2	5.3	7.3
65+	0.9	0.6	1.3	11.7	10.5	13.0
<b>Total</b>	<b>0.7</b>	<b>0.6</b>	<b>0.9</b>	<b>3.8</b>	<b>3.5</b>	<b>4.1</b>
<b>Persons</b>						
18–24 years	0.7*	0.4	1.2	**		
25–34 years	0.6*	0.3	1.1	0.3*	0.2	0.7
35–44 years	0.4*	0.3	0.7	2.2	1.6	2.9
45–54 years	0.6	0.4	1.0	4.4	3.7	5.2
55–64 years	1.3	0.9	1.8	9.1	8.0	10.2
65+	1.0	0.8	1.3	13.2	12.2	14.2
<b>Total</b>	<b>0.7</b>	<b>0.6</b>	<b>0.9</b>	<b>4.9</b>	<b>4.5</b>	<b>5.2</b>

95% CI = 95 per cent confidence interval.

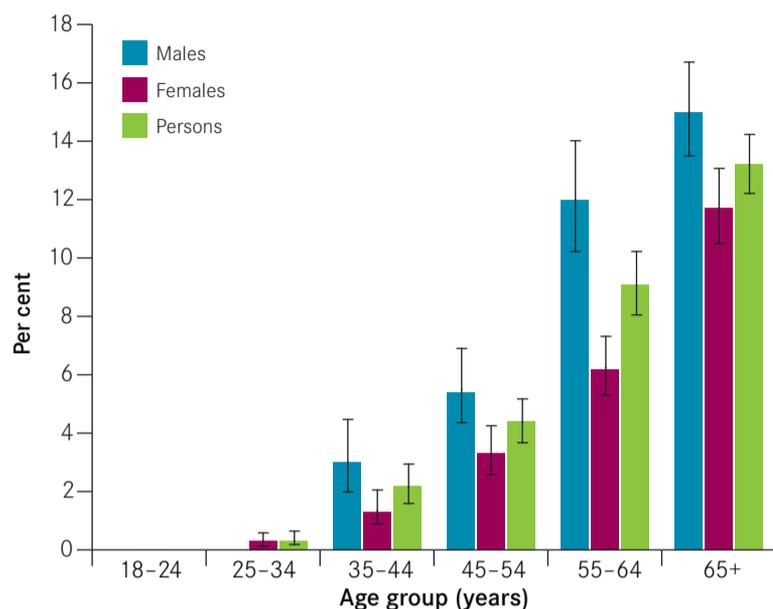
Data are crude estimates, except for the totals, which represent the estimates for Victoria and have been age standardised to the 2006 Victorian population.

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

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

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

Figure 6.1: Prevalence of type 2 diabetes, by age group and sex, 2008



Data are crude estimates, they have not been age standardised.

### Type 2 diabetes by region and LGA

The prevalence of type 2 diabetes was similar between metropolitan (4.8 per cent) and rural (4.8 per cent) areas of Victoria (table 6.4). Type 2 diabetes prevalence ranged from 3.9 per cent in the Eastern Metropolitan region to 5.5 per cent in the North and West Metropolitan region.

Table 6.4: Prevalence of type 2 diabetes, by sex and Department of Health region, 2008

Region	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Barwon–South Western	5.4	3.7	7.8	3.9	2.7	5.5	4.6	3.5	6.1
Eastern Metropolitan	5.1	4.0	6.5	2.8	2.2	3.7	3.9	3.3	4.7
Gippsland	6.1	4.9	7.5	4.0	3.1	5.0	4.9	4.2	5.8
Grampians	5.8	4.4	7.6	3.9	3.1	4.8	4.7	3.9	5.7
Hume	4.7	3.8	5.8	4.4	3.6	5.3	4.5	3.9	5.2
Loddon Mallee	5.5	4.2	7.1	4.7	3.7	5.8	5.1	4.2	6.0
North and West Metropolitan	6.6	5.6	7.8	4.4	3.8	5.2	5.5	4.9	6.2
Southern Metropolitan	6.0	5.0	7.2	3.4	2.8	4.2	4.6	4.0	5.3
<b>Metropolitan</b>	<b>6.0</b>	<b>5.4</b>	<b>6.7</b>	<b>3.6</b>	<b>3.2</b>	<b>4.1</b>	<b>4.8</b>	<b>4.4</b>	<b>5.2</b>
<b>Rural</b>	<b>5.4</b>	<b>4.7</b>	<b>6.2</b>	<b>4.2</b>	<b>3.7</b>	<b>4.7</b>	<b>4.8</b>	<b>4.3</b>	<b>5.2</b>
<b>Total</b>	<b>5.8</b>	<b>5.3</b>	<b>6.4</b>	<b>3.8</b>	<b>3.5</b>	<b>4.1</b>	<b>4.8</b>	<b>4.5</b>	<b>5.1</b>

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.

Table 6.5 and figure 6.2 show the prevalence of type 2 diabetes by LGA. The prevalence of the disease ranged from 1.6 per cent in the LGA of Melbourne to 9.3 per cent in Melton. The LGAs of Melton (9.3 per cent), Hume (8.5 per cent), Whittlesea (7.1 per cent) and Frankston (7.0 per cent) had prevalence rates for type 2 diabetes that were higher than the rate for Victoria (4.8 per cent).

Table 6.5: Prevalence of type 2 diabetes, by LGA, 2008

LGA	%	Lower 95% CI	Upper 95% CI	LGA	%	Lower 95% CI	Upper 95% CI
Alpine (S)	3.7	2.4	5.7	Mansfield (S)	4.0	2.7	5.8
Ararat (RC)	4.8	3.2	7.3	Maribyrnong (C)	5.5	3.5	8.5
Ballarat (C)	5.0	3.3	7.6	Maroondah (C)	5.0	3.2	7.7
Banyule (C)	3.5	2.3	5.3	Melbourne (C)	1.6*	0.7	3.3
Bass Coast (S)	5.6	3.9	7.9	Melton (S)	9.3	6.6	13.0
Baw Baw (S)	3.5	2.2	5.5	Mildura (RC)	4.9	3.3	7.2
Bayside (C)	2.4	1.5	3.8	Mitchell (S)	5.0	3.2	7.7
Benalla (RC)	5.5	4.0	7.5	Moira (S)	3.7	2.5	5.6
Boroondara (C)	2.9*	1.5	5.6	Monash (C)	4.0	2.5	6.2
Brimbank (C)	6.7	4.8	9.2	Moonee Valley (C)	3.1	2.0	4.9
Buloke (S)	4.4	3.1	6.2	Moorabool (S)	5.0	3.3	7.4
Campaspe (S)	5.8*	3.6	9.1	Moreland (C)	7.0	5.0	9.6
Cardinia (S)	4.6	3.1	7.0	Mornington Peninsula (S)	3.3	2.2	4.8
Casey (C)	6.6	4.6	9.4	Mount Alexander (S)	3.2	2.1	4.8
Central Goldfields (S)	7.5	5.1	10.9	Moyne (S)	2.7*	1.6	4.5
Colac-Otway (S)	2.8	1.9	4.2	Murrindindi (S)	3.3	2.2	4.9
Corangamite (S)	5.3	3.7	7.4	Nilumbik (S)	1.8*	0.9	3.3
Darebin (C)	6.4	4.2	9.6	Northern Grampians (S)	4.3	3.0	6.1
East Gippsland (S)	4.8	3.3	7.0	Port Phillip (C)	3.1*	1.8	5.1
Frankston (C)	7.0	5.1	9.6	Pyrenees (S)	6.3	4.3	9.0
Gannawarra (S)	4.7	3.3	6.6	Queenscliffe (B)	2.6*	1.6	4.2
Glen Eira (C)	4.0	2.7	5.9	Southern Grampians (S)	3.7	2.5	5.4
Glenelg (S)	6.4	4.6	8.8	South Gippsland (S)	6.1	4.4	8.3
Golden Plains (S)	5.6	3.6	8.5	Stonnington (C)	3.5*	2.0	5.9
Greater Bendigo (C)	5.7	3.8	8.5	Strathbogie (S)	4.5	3.2	6.3
Greater Dandenong (C)	6.6	4.6	9.4	Surf Coast (S)	2.4*	1.4	4.0
Greater Geelong (C)	4.8	3.1	7.4	Swan Hill (RC)	3.4	2.2	5.1
Greater Shepparton (C)	4.2	2.9	6.0	Towong (S)	4.6	3.2	6.6
Hepburn (S)	4.8	3.4	6.8	Wangaratta (RC)	5.2*	3.1	8.7
Hindmarsh (S)	4.0	2.7	5.9	Warrnambool (C)	5.3*	3.2	8.7
Hobsons Bay (C)	3.2	2.1	4.9	Wellington (S)	5.3	3.5	7.9
Horsham (RC)	3.7	2.5	5.5	West Wimmera (S)	3.5	2.3	5.3
Hume (C)	8.5	6.0	11.8	Whitehorse (C)	5.3	3.6	7.7
Indigo (S)	3.3	2.2	5.0	Whittlesea (C)	7.1	5.1	9.8
Kingston (C)	3.6	2.3	5.6	Wodonga (RC)	6.5	4.6	9.0
Knox (C)	4.4	2.9	6.7	Wyndham (C)	4.3	2.8	6.5
Latrobe (C)	5.1	3.6	7.2	Yarra (C)	3.7*	2.2	6.2
Loddon (S)	4.6	3.2	6.4	Yarra Ranges (S)	3.2	2.1	4.9
Macedon Ranges (S)	4.3	2.9	6.2	Yarriambiack (S)	3.5	2.3	5.2
Manningham (C)	3.5	2.2	5.5	<b>Total</b>	<b>4.8</b>	<b>4.5</b>	<b>5.1</b>

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

95% CI = 95 per cent confidence interval.

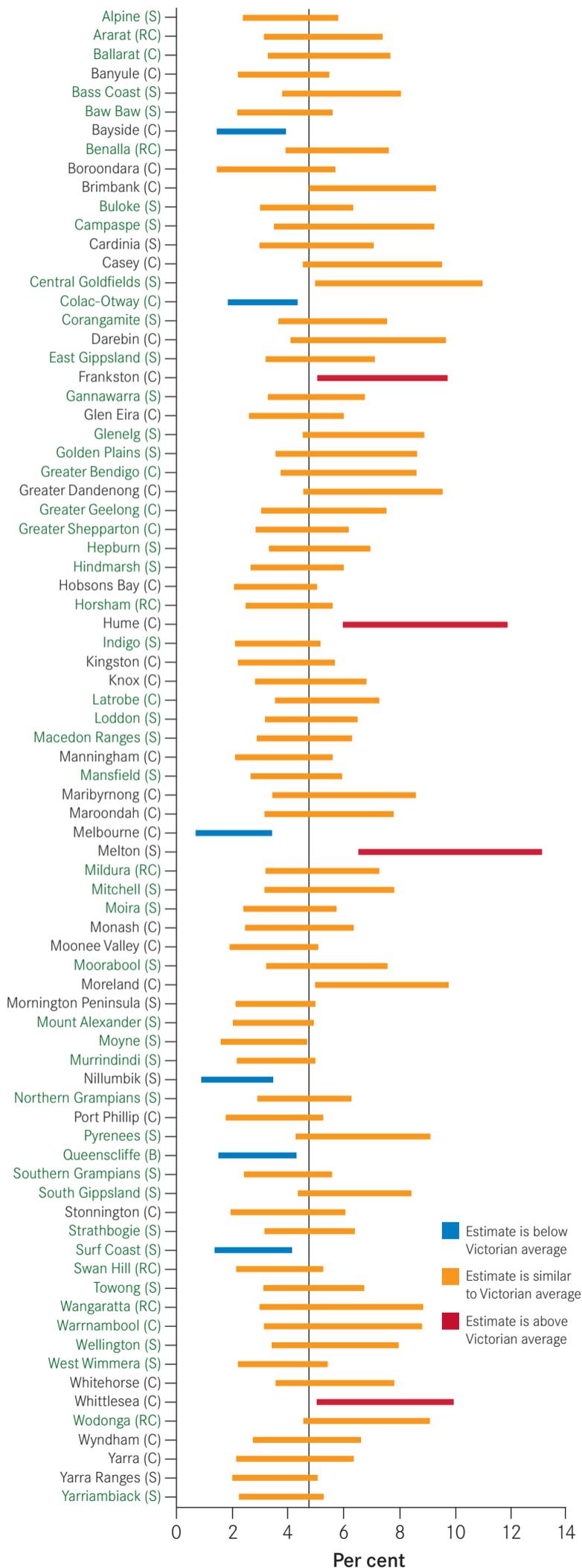
LGA = local government area.

Data are age standardised to the 2006 Victorian population.

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

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

Figure 6.2: Prevalence of type 2 diabetes, 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 line on the graph is the Victorian estimate, it does not show the 95% CI.  
See the relevant table for the 95% CI for Victoria (Total).

## Type 2 diabetes by selected health indicators

Table 6.6 shows the prevalence of type 2 diabetes for males and females by selected health indicators. The table shows that males and females who reported very high levels of psychological distress, abstinence from alcohol consumption, fair or poor self-reported health and obesity had higher prevalence rates of type 2 diabetes compared with the averages for all Victorian males and females. The table also shows that females who reported sedentary behaviour had higher prevalence rates of type 2 diabetes compared with the average for all Victorian females.

**Table 6.6: Prevalence of type 2 diabetes, by sex and selected health indicators, 2008**

	Males			Females		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Level of psychological distress<sup>(a)</sup></b>						
Low (10–15)	4.8	4.3	5.4	3.2	2.8	3.6
Moderate (16–21)	7.1	6.0	8.5	4.7	4.0	5.6
High (22–29)	9.3	7.1	12.0	5.1	4.0	6.5
Very high (30–50)	11.7	7.7	17.3	7.0	5.0	9.7
<b>Physical activity<sup>(b)</sup></b>						
Sedentary	6.3	4.6	8.5	5.3	4.1	6.7
Insufficient time and/or sessions	6.3	5.4	7.4	4.1	3.5	4.8
Sufficient time and sessions	5.5	4.9	6.2	3.2	2.8	3.7
<b>Alcohol consumption<sup>(c)</sup></b>						
At risk or high risk of long-term harm	4.0*	2.4	6.4	1.1*	0.5	2.2
At risk or high risk of short-term harm	4.4	3.7	5.1	1.6	1.2	2.1
Abstainer from alcohol	10.3	8.4	12.7	6.6	5.7	7.6
<b>Nutrition<sup>(d)</sup></b>						
Met guidelines for fruit and vegetable consumption	5.9	4.1	8.5	4.0	3.1	5.1
Met guidelines for vegetable consumption	6.3	4.5	8.8	3.8	3.0	4.8
Met guidelines for fruit consumption	6.5	5.7	7.3	3.7	3.3	4.1
Did not meet guidelines for either fruit or vegetables	5.3	4.7	6.0	3.9	3.3	4.5
<b>Smoking status</b>						
Non-smoker	5.2	4.5	6.0	3.8	3.4	4.2
Ex-smoker	6.4	5.6	7.2	3.8	3.2	4.5
Current	5.2	4.1	6.5	3.3	2.6	4.2
<b>Self-rated health</b>						
Excellent or very good	2.6	2.1	3.2	1.6	1.3	2.0
Good	6.9	6.0	7.9	4.3	3.8	4.9
Fair or poor	10.0	8.7	11.4	7.8	6.8	9.1
<b>Body weight status<sup>(e)</sup></b>						
Underweight	4.0*	2.0	7.9	2.6*	1.2	5.6
Normal weight	3.1	2.5	3.9	1.6	1.3	2.0
Overweight	4.9	4.3	5.7	3.6	3.0	4.3
Obese	12.0	10.5	13.8	8.4	7.3	9.7
<b>Total</b>	<b>5.8</b>	<b>5.3</b>	<b>6.4</b>	<b>3.8</b>	<b>3.5</b>	<b>4.1</b>

(a) Based on Kessler 10 Psychological Distress Scale (K10).

(b) Based on national guidelines (DoHA 1999) and excludes adults aged less than 19 years.

(c) Based on national guidelines (NHMRC 2001).

(d) Based on national guidelines (NHMRC 2003).

(e) Based on Body Mass Index (BMI) score.

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.

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

## References

DoHA (Department of Health and Ageing) 1999, *National physical activity guidelines for adults*, DoHA, Canberra.

NHMRC (National Health and Medical Research Council) 2001, *Australian alcohol guidelines: health risks and benefits*, NHMRC, Canberra.

NHMRC (National Health and Medical Research Council) 2003, *Dietary guidelines for Australian adults*, NHMRC, Canberra.



# 7. Mental 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 Queenscliffe South Gippsland Southern Grampians 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 South Gippsland Southern Grampians 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 South Gippsland Southern Grampians 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

## 7. Mental Health

There is strong and consistent evidence of an association between depression and anxiety and physical illness in each of the National Health Priority Area disease groups (Clark & Currie 2009). Depression is also associated with poorer health outcomes in those with physical diseases. Given the significance of mental health and its relationship to poor physical health, a measure of psychological distress, the Kessler 10 Psychological Distress Scale (K10) has been included in the survey. The K10 is a set of ten questions designed to categorise the level of psychological distress over a four week period. It cannot be used to determine the presence of major illnesses but has been validated as a simple measure of anxiety, depression and worry (psychological distress).

The K10 covers the dimensions of depression and anxiety, such as nervousness, hopelessness, restlessness, sadness and worthlessness. It consists of 10 questions that have the same response categories: all of the time, most of the time, some of the time, a little of the time and none of the time (that are scored 5 through to 1). The ten items are summed to yield scores ranging from 10 to 50. Individuals are categorised to four levels of psychological distress, based on their score: low (10–15), moderate (16–21), high (22–29) and very high (30–50) (Andrews & Slade 2001).

The survey also collected information regarding the life-time prevalence of depression and anxiety (ever diagnosed by a doctor) and the use of mental health services.

### Survey results

#### Psychological distress

- The majority (62.4 per cent) of persons aged 18 years and over experienced low levels (10–15) of psychological distress, based on their K10 scores, and a further 22.8 per cent experienced moderate levels (16–21) of distress in the four weeks before the survey. High levels (22–29) of distress were reported by 8.3 per cent of persons and 3.1 per cent reported very high levels (30–50) of distress.
- The prevalence of very high levels of distress was higher for females (3.8 per cent), compared with males (2.4 per cent).
- The proportion of Victorians who experienced very high levels of psychological distress remained constant between 2001 and 2008, as did the proportion who experienced low levels of distress.
- There were no differences between metropolitan and rural areas of the state in levels of psychological distress.
- Victorians in the LGAs of Brimbank, Greater Dandenong, Hume, Melton and Pyrenees were more likely to have high or very high levels of psychological distress, compared with all Victorians.

#### Use of mental health services

- More than one in ten (10.9 per cent) persons reported seeking professional help for a mental health problem in the last 12 months.
- Females were more likely to have sought professional help than males and older persons (aged 65 years and over) were less likely to have sought help than persons from other age groups.
- The higher the level of psychological distress, the more likely a person was to have sought professional help.
- There were no differences between metropolitan and rural areas of Victoria in the proportion of persons, who sought professional help for a mental health problem.
- Persons in the LGAs of Colac-Otway and East Gippsland were more likely to have sought professional help for a mental health problem, compared with all Victorians. Conversely, persons in the LGAs of Brimbank and Greater Dandenong were less likely to have sought professional help, compared with all Victorians.
- Approximately one-third (33.4 per cent) of persons saw a private counsellor or psychologist, almost one-third (31.6 per cent) saw a general practitioner, and 17.3 per cent sought help from a private psychiatrist.

## Psychological distress

Table 7.1 shows the proportion of persons by level of psychological distress, age group and sex. Overall, 3.1 per cent of persons had experienced very high levels and 8.3 per cent had experienced high levels of psychological distress in the previous four weeks. More than one in five (22.8 per cent) had experienced moderate levels, and the majority (62.4 per cent) had experienced low levels of psychological distress.

Females had higher rates of moderate, high and very high (24.0 per cent, 9.3 per cent, and 3.8 per cent respectively) levels of psychological distress compared with their male counterparts (21.5 per cent, 7.3 per cent, and 2.4 per cent respectively).

Persons aged 18–24 years had higher rates of moderate (32.7 per cent) and high (10.9 per cent) levels of psychological distress, compared with the average for Victoria (22.8 per cent and 8.3 per cent respectively). Persons aged 25–34 years also had higher rates of moderate (25.8 per cent) psychological distress, compared with the state average (22.8 per cent). Persons from older age groups (aged 55–64 years and 65 years and over) had higher rates (67.5 per cent and 66.3 per cent respectively) of low psychological distress, compared with the rate for Victoria (62.4 per cent).

**Table 7.1: Psychological distress<sup>(a)</sup>, by age group and sex, 2008**

Age group (years)	Level of psychological distress											
	Low (10–15)			Moderate (16–21)			High (22–29)			Very high (30–50)		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
18–24 years	55.1	50.3	59.8	32.5	28.1	37.2	9.2	6.7	12.5	1.7*	0.9	3.3
25–34 years	60.1	56.1	64.1	24.5	21.1	28.3	8.2	6.3	10.6	3.5	2.3	5.1
35–44 years	67.0	64.2	69.8	20.7	18.4	23.2	6.8	5.5	8.4	2.2	1.5	3.3
45–54 years	68.7	66.0	71.2	19.0	17.0	21.3	7.1	5.8	8.6	2.3	1.6	3.4
55–64 years	70.2	67.6	72.6	16.5	14.6	18.7	6.7	5.6	8.1	3.1	2.2	4.2
65+	69.8	67.7	71.9	17.3	15.6	19.1	5.9	4.9	7.2	1.7	1.2	2.4
<b>Total</b>	<b>65.3</b>	<b>64.0</b>	<b>66.6</b>	<b>21.5</b>	<b>20.4</b>	<b>22.7</b>	<b>7.3</b>	<b>6.6</b>	<b>8.0</b>	<b>2.4</b>	<b>2.0</b>	<b>2.8</b>
<b>Females</b>												
18–24 years	48.6	44.1	53.0	32.9	28.9	37.3	12.7	10.2	15.7	5.1	3.4	7.4
25–34 years	56.8	53.9	59.6	27.1	24.6	29.8	10.1	8.5	12.0	3.1	2.3	4.2
35–44 years	62.2	60.2	64.2	24.0	22.2	25.8	8.7	7.6	10.0	3.1	2.5	3.9
45–54 years	60.9	58.6	63.1	21.6	19.8	23.6	10.0	8.7	11.5	5.1	4.2	6.3
55–64 years	64.8	62.7	66.9	20.1	18.3	21.9	7.5	6.4	8.7	4.1	3.3	5.0
65+	63.5	61.6	65.4	19.8	18.3	21.4	7.1	6.2	8.3	2.9	2.3	3.7
<b>Total</b>	<b>59.7</b>	<b>58.6</b>	<b>60.7</b>	<b>24.0</b>	<b>23.1</b>	<b>25.0</b>	<b>9.3</b>	<b>8.7</b>	<b>9.9</b>	<b>3.8</b>	<b>3.4</b>	<b>4.3</b>
<b>Persons</b>												
18–24 years	51.9	48.6	55.2	32.7	29.7	35.9	10.9	9.1	13.1	3.4	2.4	4.7
25–34 years	58.5	56.0	60.9	25.8	23.7	28.1	9.2	7.9	10.6	3.3	2.6	4.2
35–44 years	64.6	62.8	66.3	22.3	20.9	23.9	7.8	6.9	8.7	2.7	2.2	3.3
45–54 years	64.7	63.0	66.4	20.3	18.9	21.8	8.6	7.6	9.6	3.7	3.1	4.5
55–64 years	67.5	65.8	69.1	18.3	17.0	19.7	7.1	6.3	8.0	3.6	3.0	4.3
65+	66.3	64.9	67.7	18.7	17.5	19.9	6.6	5.9	7.4	2.4	1.9	2.9
<b>Total</b>	<b>62.4</b>	<b>61.6</b>	<b>63.3</b>	<b>22.8</b>	<b>22.1</b>	<b>23.6</b>	<b>8.3</b>	<b>7.8</b>	<b>8.8</b>	<b>3.1</b>	<b>2.8</b>	<b>3.4</b>

(a) Based on Kessler 10 Psychological Distress Scale (K10).

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**.

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

Table 7.2 shows K10 score categories for the period 2001–2008. The proportion of persons aged 18 years and over who had experienced very high levels of psychological distress remained constant between 2001 and 2008. The proportion of persons who experienced low levels of distress also remained constant over this period.

**Table 7.2: Psychological distress<sup>(a)</sup>, 2001–2008**

Level of psychological distress	2001	2002	2003	2004	2005	2006	2007	2008
	Per cent							
Low (10–15)	56.1	67.6	66.7	64.9	60.9	63.5	63.8	62.4
Moderate (16–21)	28.3	21.1	20.7	20.6	24.5	22.2	22.2	22.8
High (22–29)	11.6	8.6	8.3	8.7	8.7	7.8	8.2	8.3
Very high (30–50)	4.0	2.7	2.6	3.4	3.2	2.8	2.4	3.1

(a) Based on Kessler 10 Psychological Distress Scale (K10).

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

Data are age standardised to the 2006 Victorian population.

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

### Levels of psychological distress by region and LGA

Table 7.3 shows the prevalence of psychological distress by sex and Department of Health region. When compared with each other, there were no differences in the levels of psychological distress between metropolitan and rural areas of the state.

However, females in the metropolitan area had higher rates of moderate (24.2 per cent), high (9.3 per cent) and very high (3.9 per cent) levels of psychological distress, compared with their metropolitan male counterparts (21.3 per cent, 7.1 per cent and 2.4 per cent respectively). There were no differences between males and females in rural Victoria.

Persons in the North and West Metropolitan region had lower rates (59.5 per cent) of low psychological distress, compared with all Victorians (62.4 per cent). There were no other differences between the Department of Health regions for all persons.

Females in the North and West Metropolitan region had higher rates of moderate (25.8 per cent) and high (10.7 per cent) psychological distress, compared with their male counterparts (21.5 per cent and 7.9 per cent, respectively). Moreover, the female rate for very high (4.7 per cent) psychological distress was almost twice as high as the rate for males (2.6 per cent) in the North and West Metropolitan region.

Table 7.3: Psychological distress<sup>(a)</sup>, by sex and Department of Health region, 2008

Region	Level of psychological distress											
	Low (10–15)			Moderate (16–21)			High (22–29)			Very high (30–50)		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
Barwon-South Western	64.0	57.6	69.8	22.4	17.3	28.5	7.0	4.6	10.6	1.3*	0.7	2.6
Eastern Metropolitan	65.5	62.1	68.7	23.3	20.3	26.4	5.4	4.0	7.1	2.4	1.6	3.7
Gippsland	61.6	57.3	65.7	25.6	21.8	29.7	8.6	6.3	11.6	2.8	1.8	4.4
Grampians	65.5	61.2	69.5	21.6	18.2	25.5	7.5	5.6	9.8	2.2*	1.1	4.3
Hume	65.0	61.4	68.4	22.5	19.4	25.9	6.1	4.6	8.1	4.0*	2.4	6.7
Loddon Mallee	65.7	61.5	69.7	20.6	17.2	24.4	9.1	6.8	12.2	1.9*	1.1	3.2
North and West Metropolitan	64.2	61.9	66.5	21.5	19.7	23.6	7.9	6.7	9.3	2.6	1.9	3.5
Southern Metropolitan	66.8	63.9	69.6	20.2	17.8	22.8	7.1	5.7	8.8	2.2	1.5	3.2
<b>Metropolitan</b>	65.6	64.0	67.1	21.3	19.9	22.7	7.1	6.3	8.0	2.4	2.0	3.0
<b>Rural</b>	64.6	62.2	66.9	22.3	20.3	24.5	7.7	6.5	9.0	2.3	1.8	3.0
<b>Total</b>	65.3	64.0	66.6	21.5	20.4	22.7	7.3	6.6	8.0	2.4	2.0	2.8
<b>Females</b>												
Barwon-South Western	61.7	56.8	66.3	25.3	21.3	29.7	6.5	4.3	9.6	4.1*	2.4	6.9
Eastern Metropolitan	61.6	58.8	64.3	23.7	21.3	26.3	8.4	6.9	10.3	3.4	2.5	4.6
Gippsland	59.3	56.0	62.4	23.0	20.2	26.1	10.6	8.4	13.3	4.2	3.1	5.8
Grampians	62.6	58.8	66.3	19.0	16.1	22.3	11.1	8.6	14.2	4.1	2.7	6.2
Hume	62.3	59.5	65.0	22.6	20.3	25.1	9.5	7.9	11.5	2.7	2.0	3.7
Loddon Mallee	58.4	55.3	61.6	25.2	22.4	28.3	10.8	8.8	13.2	3.0	2.1	4.3
North and West Metropolitan	54.9	53.0	56.8	25.8	24.1	27.5	10.7	9.6	11.9	4.7	4.0	5.5
Southern Metropolitan	62.1	59.8	64.4	22.5	20.6	24.6	8.7	7.4	10.3	3.6	2.7	4.7
<b>Metropolitan</b>	59.2	57.9	60.5	24.2	23.1	25.4	9.3	8.6	10.1	3.9	3.5	4.5
<b>Rural</b>	60.8	59.0	62.5	23.5	21.9	25.1	9.4	8.4	10.6	3.6	2.9	4.5
<b>Total</b>	59.7	58.6	60.7	24.0	23.1	25.0	9.3	8.7	9.9	3.8	3.4	4.3
<b>Persons</b>												
Barwon-South Western	62.8	58.8	66.7	23.8	20.4	27.5	6.7	5.0	9.0	2.7	1.7	4.2
Eastern Metropolitan	63.4	61.2	65.5	23.6	21.7	25.7	6.9	5.8	8.1	2.9	2.3	3.8
Gippsland	60.6	57.9	63.2	24.1	21.7	26.7	9.6	7.9	11.5	3.5	2.7	4.6
Grampians	63.9	61.0	66.7	20.4	18.1	22.9	9.4	7.7	11.4	3.1	2.1	4.5
Hume	63.6	61.3	65.8	22.6	20.6	24.7	7.8	6.6	9.2	3.4	2.4	4.7
Loddon Mallee	62.1	59.5	64.7	22.9	20.6	25.3	10.0	8.4	11.8	2.5	1.8	3.3
North and West Metropolitan	59.5	58.0	60.9	23.6	22.4	24.9	9.3	8.5	10.2	3.7	3.2	4.2
Southern Metropolitan	64.4	62.5	66.2	21.4	19.8	23.0	7.9	7.0	9.1	2.9	2.3	3.6
<b>Metropolitan</b>	62.3	61.3	63.3	22.8	21.9	23.7	8.2	7.7	8.8	3.2	2.9	3.6
<b>Rural</b>	62.7	61.2	64.1	22.9	21.6	24.2	8.5	7.7	9.4	3.0	2.5	3.5
<b>Total</b>	62.4	61.6	63.3	22.8	22.1	23.6	8.3	7.8	8.8	3.1	2.8	3.4

(a) Based on Kessler 10 Psychological Distress Scale (K10).

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 '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.

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

Table 7.4: Low (10–15) levels of psychological distress<sup>(a)</sup>, by sex and LGA, 2008

LGA	Males			Females		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	70.7	62.7	77.5	71.2	64.6	77.0
Ararat (RC)	54.9	45.6	63.9	61.4	53.3	68.9
Ballarat (C)	65.0	56.9	72.4	63.6	56.2	70.3
Banyule (C)	63.9	54.0	72.7	51.4	43.8	58.9
Bass Coast (S)	62.1	52.8	70.6	61.7	54.3	68.5
Baw Baw (S)	61.4	50.6	71.2	66.7	60.0	72.9
Bayside (C)	71.8	62.5	79.5	64.8	57.1	71.9
Benalla (RC)	70.0	60.3	78.2	61.4	53.6	68.7
Boroondara (C)	69.5	61.4	76.6	68.2	61.2	74.5
Brimbank (C)	57.0	49.0	64.7	50.1	44.1	56.0
Buloke (S)	78.0	71.8	83.2	68.2	58.9	76.2
Campaspe (S)	67.3	58.1	75.2	57.0	49.6	64.1
Cardinia (S)	65.5	55.9	74.0	60.3	53.1	67.1
Casey (C)	63.6	56.0	70.6	59.6	53.2	65.7
Central Goldfields (S)	54.9	45.3	64.1	53.5	46.9	60.0
Colac-Otway (S)	76.4	69.0	82.5	61.8	54.1	69.0
Corangamite (S)	69.0	59.9	76.8	69.5	61.0	76.9
Darebin (C)	66.2	58.5	73.0	54.2	47.8	60.4
East Gippsland (S)	54.6	45.3	63.7	53.5	46.7	60.2
Frankston (C)	64.8	56.4	72.3	60.6	53.6	67.2
Gannawarra (S)	70.4	63.1	76.8	56.9	50.6	63.0
Glen Eira (C)	72.2	64.1	79.0	59.2	52.2	65.9
Glenelg (S)	66.9	56.3	76.1	62.6	55.7	69.1
Golden Plains (S)	61.9	53.8	69.4	60.7	52.7	68.2
Greater Bendigo (C)	66.1	56.1	74.8	56.3	49.5	62.9
Greater Dandenong (C)	60.1	51.9	67.9	63.2	56.3	69.5
Greater Geelong (C)	59.2	49.4	68.3	59.3	51.5	66.6
Greater Shepparton (C)	52.4	44.6	60.0	56.0	49.0	62.8
Hepburn (S)	68.5	58.2	77.2	56.4	48.4	64.1
Hindmarsh (S)	65.8	57.0	73.7	66.2	57.6	73.8
Hobsons Bay (C)	69.4	62.0	75.9	60.2	52.4	67.6
Horsham (RC)	64.6	57.2	71.3	64.2	56.8	71.0
Hume (C)	58.8	50.7	66.4	50.2	43.5	56.8
Indigo (S)	58.5	49.0	67.4	67.1	60.5	73.0
Kingston (C)	70.8	61.8	78.4	58.0	50.5	65.1
Knox (C)	63.0	54.6	70.6	62.0	55.1	68.4
Latrobe (C)	60.8	52.3	68.8	54.3	47.7	60.7
Loddon (S)	63.8	55.7	71.1	62.7	54.9	69.8
Macedon Ranges (S)	70.6	61.2	78.6	60.4	51.5	68.7
Manningham (C)	67.4	59.0	74.8	58.8	51.6	65.7
Mansfield (S)	72.5	63.7	79.8	68.8	61.9	74.9
Maribyrnong (C)	68.4	61.1	74.9	56.9	50.2	63.4
Maroondah (C)	63.2	54.6	71.1	68.3	61.1	74.8
Melbourne (C)	58.1	50.9	65.0	65.7	58.8	71.9
Melton (S)	58.7	49.9	66.9	54.0	47.9	59.9
Mildura (RC)	65.2	56.8	72.8	59.6	53.0	65.8
Mitchell (S)	69.5	61.8	76.2	54.6	47.5	61.6
Moira (S)	62.3	53.8	70.1	62.6	55.8	68.9
Monash (C)	65.9	56.9	73.8	58.0	51.5	64.3
Moonee Valley (C)	69.7	60.7	77.4	52.7	46.9	58.4
Moorabool (S)	66.4	58.0	74.0	66.7	59.6	73.1
Moreland (C)	62.3	54.7	69.4	52.7	46.6	58.7
Mornington Peninsula (S)	69.1	60.8	76.3	67.6	60.5	73.9
Mount Alexander (S)	59.6	51.7	66.9	57.5	49.1	65.4
Moyne (S)	64.5	56.3	72.0	61.9	55.0	68.4
Murrindindi (S)	74.3	64.5	82.1	51.0	44.6	57.4
Nilumbik (S)	67.7	59.7	74.7	63.3	55.6	70.3
Northern Grampians (S)	63.1	53.5	71.8	60.2	52.9	67.1
Port Phillip (C)	69.3	62.1	75.6	65.3	58.8	71.2
Pyrenees (S)	62.3	51.2	72.3	48.5	42.1	55.0
Queenscliffe (B)	67.2	60.1	73.7	69.2	60.7	76.6
Southern Grampians (S)	69.9	62.1	76.7	64.1	56.2	71.4
South Gippsland (S)	67.2	57.3	75.8	70.7	63.5	77.0
Stonnington (C)	66.5	59.0	73.2	69.2	63.1	74.7
Strathbogie (S)	66.4	54.5	76.5	58.8	52.1	65.2
Surf Coast (S)	72.2	60.6	81.4	68.9	62.4	74.8
Swan Hill (RC)	61.1	50.7	70.5	59.3	52.0	66.3
Towong (S)	70.0	63.3	76.0	69.5	61.8	76.2
Wangaratta (RC)	62.9	52.7	72.0	70.1	62.5	76.8
Warrnambool (C)	71.7	63.8	78.4	67.9	60.6	74.3
Wellington (S)	62.5	53.5	70.7	62.6	55.7	69.1
West Wimmera (S)	65.7	56.9	73.5	63.3	56.3	69.7
Whitehorse (C)	61.3	53.0	69.1	55.2	48.8	61.5
Whittlesea (C)	64.2	55.7	72.0	53.5	47.6	59.3
Wodonga (RC)	75.5	67.7	82.0	66.4	60.0	72.3
Wyndham (C)	75.3	68.8	80.8	55.1	48.8	61.3
Yarra (C)	63.2	55.8	70.1	60.7	54.1	66.9
Yarra Ranges (S)	69.9	62.2	76.6	59.0	52.2	65.5
Yarriambiack (S)	74.5	68.1	80.0	64.6	57.3	71.3
<b>Total</b>	<b>65.3</b>	<b>64.0</b>	<b>66.6</b>	<b>59.7</b>	<b>58.6</b>	<b>60.7</b>

(a) Based on Kessler 10 Psychological Distress Scale (K10).

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 to the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Figure 7.1: Low (10–15) levels of psychological distress<sup>(a)</sup>, by LGA, males, 2008

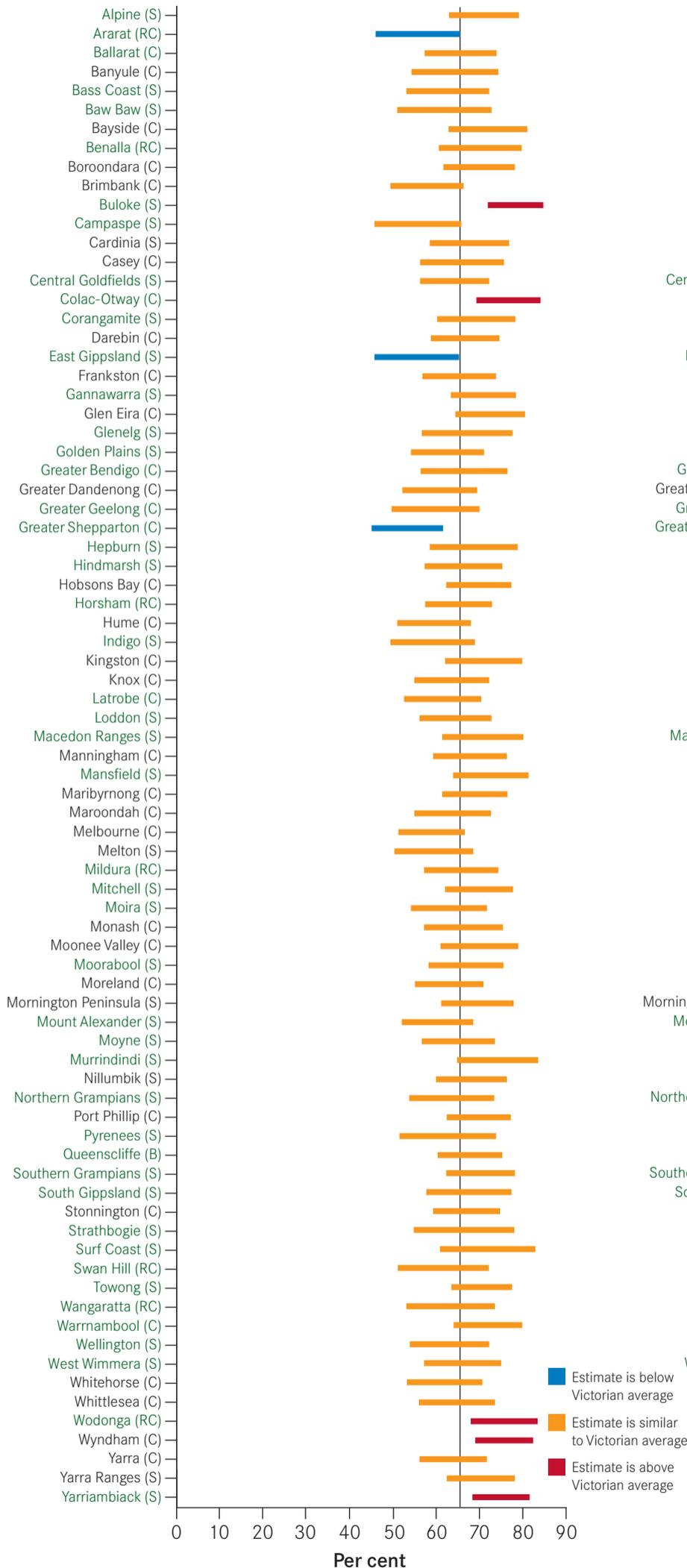
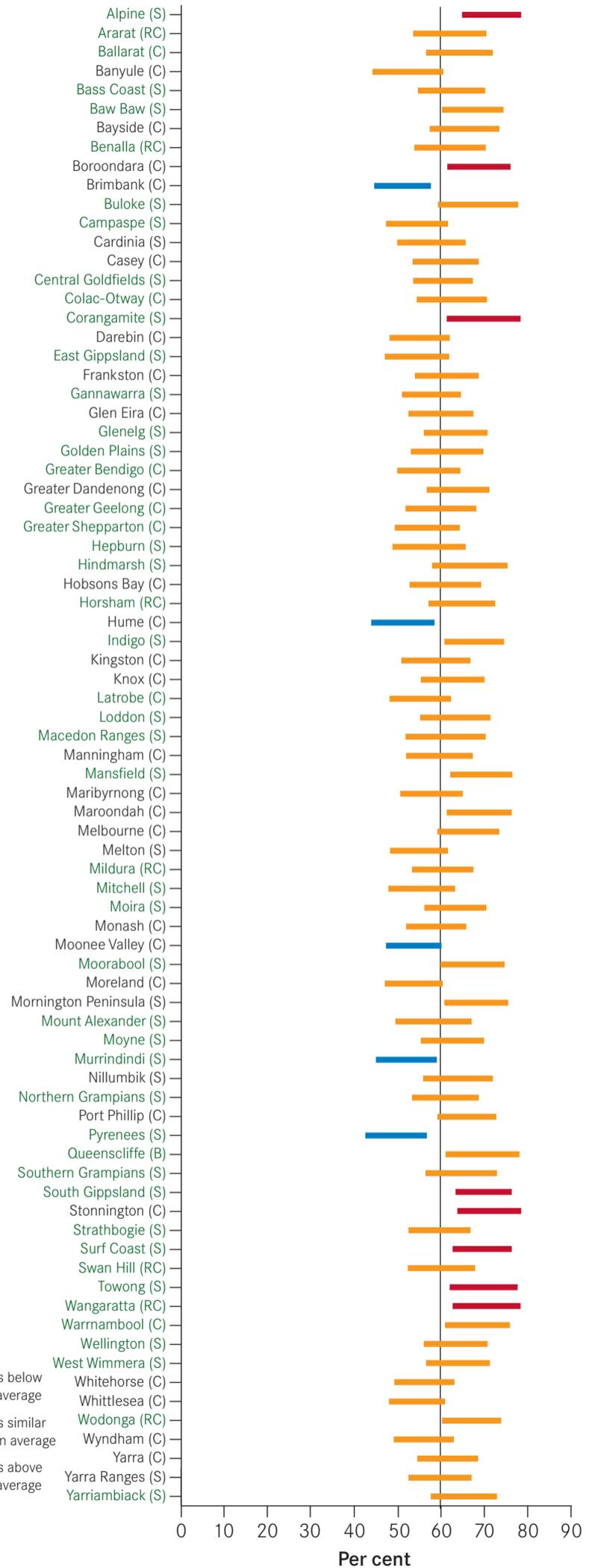


Figure 7.2: Low (10–15) levels of psychological distress<sup>(a)</sup>, by LGA, females, 2008



(a) Based on Kessler 10 Psychological Distress Scale (K10).  
 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 line on the graph is the Victorian estimate, it does not show the 95% CI. See the relevant table for the 95% CI for Victoria (Total).

Table 7.4, figure 7.1 and figure 7.2 show the proportion of males and females who had experienced the lowest levels of psychological distress, based on a K10 score of less than 16, by LGA. The highest proportion of males who had experienced low levels of psychological distress resided in the LGA of Buloke (78.0 per cent), while the lowest was in the LGA of Greater Shepparton (52.4 per cent). There was a higher proportion of males who had experienced low levels of psychological distress in the LGAs of Buloke (78.0 per cent), Colac-Otway (76.4 per cent), Wodonga (75.5 per cent), Wyndham (75.3 per cent) and Yarriambiack (74.5 per cent), compared with all Victorian males (65.3 per cent).

The highest proportion of females who had experienced low levels of psychological distress resided in the LGA of Alpine (71.2 per cent), while the lowest was in the Pyrenees (48.5 per cent). There was a higher proportion of females who had experienced low levels of psychological distress in the LGAs of Alpine (71.2 per cent), South Gippsland (70.7 per cent), Wangaratta (70.1 per cent), Towong (69.5 per cent), Corangamite (69.5 per cent), Stonnington (69.2 per cent), Surf Coast (68.9 per cent), Mansfield (68.8 per cent), Maroondah (68.3 per cent) and Boroondara (68.2 per cent), compared with all Victorian females (59.7 per cent).

Table 7.5 and figure 7.3 show the proportion of persons who had experienced high or very high levels of psychological distress, by LGA. It was not possible to present the data by sex, or singly for high and very high levels of psychological distress respectively as the rates were too low to allow for reliable analysis at the LGA level.

The highest proportion of persons who had experienced high or very high levels of psychological distress resided in the Hume LGA (19.2 per cent), while the lowest resided in the Boroondara LGA (5.1 per cent). Higher proportions of persons who resided in the LGAs of Hume (19.2 per cent), Pyrenees (19.1 per cent), Brimbank (16.7 per cent), Greater Dandenong (15.5 per cent) and Melton (15.5 per cent) had experienced high or very high levels of psychological distress, compared with all Victorians (11.4 per cent).

**Table 7.5: High (22–29) and very high (30–50) levels of psychological distress<sup>(a)</sup>, by LGA, 2008**

LGA	%	Lower 95% CI	Upper 95% CI
Alpine (S)	9.2	6.0	13.9
Ararat (RC)	9.9	6.7	14.6
Ballarat (C)	13.5	10.0	18.0
Banyule (C)	12.4	8.7	17.4
Bass Coast (S)	16.4	11.3	23.2
Baw Baw (S)	10.4	7.2	14.6
Bayside (C)	6.0	3.9	9.1
Benalla (RC)	10.1	7.2	13.9
Boroondara (C)	5.1	3.3	8.0
Brimbank (C)	16.7	13.2	20.9
Buloke (S)	6.7	4.4	10.0
Campaspe (S)	13.0	9.2	17.9
Cardinia (S)	11.3	8.0	15.8
Casey (C)	12.4	9.3	16.2
Central Goldfields (S)	16.4	11.3	23.2
Colac-Otway (S)	8.7*	5.3	13.9
Corangamite (S)	7.8	5.3	11.3
Darebin (C)	12.2	9.3	15.7
East Gippsland (S)	16.2	11.0	23.2
Frankston (C)	14.0	10.3	18.7
Gannawarra (S)	11.4	8.1	15.6
Glen Eira (C)	9.3	6.6	13.1
Glenelg (S)	12.0	7.9	17.8
Golden Plains (S)	10.4	7.4	14.4
Greater Bendigo (C)	12.2	9.0	16.4
Greater Dandenong (C)	15.5	12.1	19.8
Greater Geelong (C)	9.3	6.3	13.7
Greater Shepparton (C)	14.8	10.2	21.0
Hepburn (S)	12.7	9.0	17.6
Hindmarsh (S)	13.6	9.5	19.0
Hobsons Bay (C)	10.9	7.8	14.9
Horsham (RC)	10.0	6.7	14.6
Hume (C)	19.2	15.3	23.8
Indigo (S)	10.4	7.2	14.8
Kingston (C)	8.8	6.0	12.7
Knox (C)	10.6	7.7	14.5
Latrobe (C)	14.3	10.7	18.8
Loddon (S)	15.6	11.5	20.8
Macedon Ranges (S)	11.4	7.2	17.7
Manningham (C)	10.6	7.7	14.4

(a) Based on Kessler 10 Psychological Distress Scale (K10).

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.

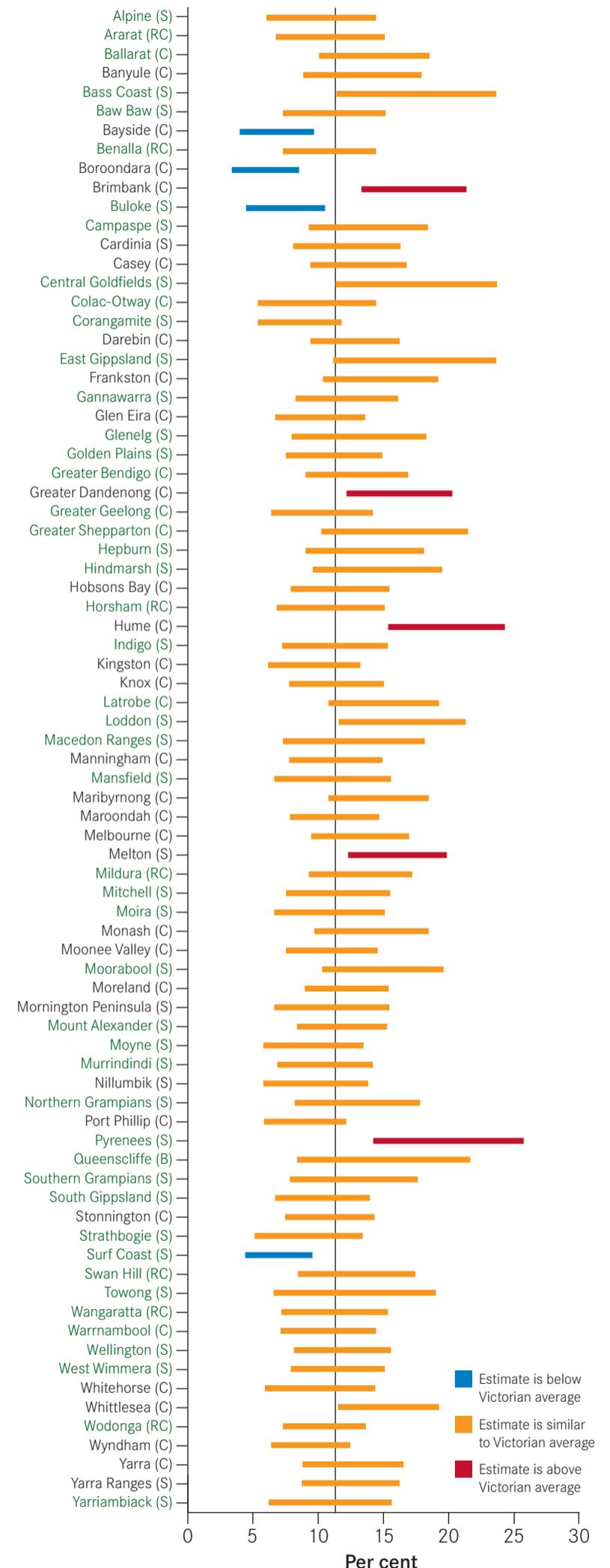
Estimates that are (statistically) significantly different to the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

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

**Table 7.5: High (22–29) and very high (30–50) levels of psychological distress<sup>(a)</sup>, by LGA, 2008 (continued)**

LGA	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	10.0	6.5	15.1
Maribyrnong (C)	13.9	10.7	17.9
Maroondah (C)	10.5	7.7	14.1
Melbourne (C)	12.5	9.4	16.5
Melton (S)	15.5	12.2	19.4
Mildura (RC)	12.5	9.2	16.7
Mitchell (S)	10.6	7.4	15.0
Moira (S)	9.8	6.5	14.6
Monash (C)	13.3	9.6	18.0
Moonee Valley (C)	10.3	7.5	14.0
Moorabool (S)	14.1	10.2	19.1
Moreland (C)	11.5	8.9	14.9
Mornington Peninsula (S)	10.0	6.5	15.0
Mount Alexander (S)	11.1	8.3	14.8
Moyne (S)	8.7	5.7	12.9
Murrindindi (S)	9.7	6.8	13.7
Nillumbik (S)	8.8	5.7	13.3
Northern Grampians (S)	12.0	8.1	17.3
Port Phillip (C)	8.2	5.8	11.6
Pyrenees (S)	19.1	14.1	25.3
Queenscliffe (B)	13.5	8.3	21.2
Southern Grampians (S)	11.6	7.7	17.1
South Gippsland (S)	9.5	6.6	13.4
Stonnington (C)	10.2	7.4	13.8
Strathbogie (S)	8.1	5.0	12.9
Surf Coast (S)	6.2	4.3	9.0
Swan Hill (RC)	12.0	8.3	16.9
Towong (S)	11.2*	6.5	18.5
Wangaratta (RC)	10.3	7.1	14.8
Warrnambool (C)	9.9	7.0	13.9
Wellington (S)	11.1	8.0	15.1
West Wimmera (S)	10.7	7.8	14.6
Whitehorse (C)	9.0	5.8	13.8
Whittlesea (C)	14.7	11.4	18.8
Wodonga (RC)	9.8	7.2	13.1
Wyndham (C)	8.7	6.3	11.9
Yarra (C)	11.9	8.7	16.0
Yarra Ranges (S)	11.7	8.7	15.7
Yarriambiack (S)	9.7	6.1	15.1
<b>Total</b>	<b>11.4</b>	<b>10.9</b>	<b>12.0</b>

**Figure 7.3: High (22–29) and very high (30–50) levels of psychological distress<sup>(a)</sup>, by LGA, 2008**



(a) Based on Kessler 10 Psychological Distress Scale (K10).  
 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 line on the graph is the Victorian estimate, it does not show the 95% CI.  
 See the relevant table for the 95% CI for Victoria (Total).

## Levels of psychological distress by selected health indicators

Table 7.6 shows levels of psychological distress for males, by selected health indicators. The proportion of males with high levels of psychological distress was higher than the average for the state among those at risk of long-term harm from their level of alcohol consumption, current smokers and those who reported fair or poor health status.

The proportion of males with very high levels of psychological distress was higher than the average for the state among those who reported being non-drinkers (abstainers), current smokers, those who reported fair or poor health status and those who reported being underweight.

**Table 7.6: Levels of psychological distress<sup>(a)</sup> by selected health indicators, males, 2008**

Age group (years)	Level of psychological distress								
	Low to moderate (10–21)			High (22–29)			Very high (30–50)		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Physical activity<sup>(b)</sup></b>									
Sedentary	78.9	73.5	83.4	10.9	7.7	15.2	3.7*	1.8	7.4
Insufficient time and/or sessions	86.6	84.5	88.4	7.2	5.9	8.8	2.7	1.9	3.8
Sufficient time and sessions	89.2	88.0	90.2	6.5	5.7	7.4	2.2	1.7	2.8
<b>Alcohol consumption<sup>(c)</sup></b>									
At risk or high risk of long-term harm	82.2	76.6	86.8	12.2	8.2	17.9	3.2*	1.8	5.5
At risk or high risk of short-term harm	88.6	87.3	89.7	7.1	6.1	8.1	1.9	1.5	2.4
Abstainer from alcohol	79.9	76.6	82.9	8.6	6.8	10.7	4.5	3.1	6.5
<b>Nutrition<sup>(d)</sup></b>									
Met guidelines for fruit and vegetable consumption	87.6	81.0	92.1	8.2*	4.4	14.7	**		
Met guidelines for vegetable consumption	87.2	81.3	91.4	8.5*	4.9	14.4	0.7*	0.4	1.4
Met guidelines for fruit consumption	88.2	86.7	89.6	6.6	5.5	7.8	2.1	1.5	2.7
Did not meet guidelines for either fruit or vegetables	86.5	85.2	87.7	7.9	7.0	8.9	2.5	2.0	3.1
<b>Smoking status</b>									
Non-smoker	88.9	87.6	90.0	6.0	5.2	6.9	1.9	1.4	2.5
Ex-smoker	87.6	84.9	89.9	6.2	4.8	8.1	1.9	1.3	2.9
Current	81.3	78.8	83.6	10.7	9.0	12.7	4.7	3.5	6.2
<b>Self-rated health</b>									
Excellent or very good	93.0	91.7	94.1	3.7	3.0	4.6	0.7*	0.4	1.2
Good	87.4	85.8	88.8	7.3	6.2	8.6	1.5	1.1	2.1
Fair or poor	73.1	70.2	75.8	14.9	12.8	17.3	7.7	6.2	9.5
<b>Body weight status<sup>(e)</sup></b>									
Underweight	78.9	68.1	86.7	7.4*	3.3	15.8	10.4*	5.0	20.3
Normal weight	87.1	85.5	88.5	7.4	6.3	8.6	2.2	1.7	2.9
Overweight	88.3	86.8	89.7	6.6	5.5	7.8	1.6	1.2	2.2
Obese	83.8	80.9	86.3	9.0	6.9	11.6	3.2	2.4	4.4
<b>Total</b>	<b>86.8</b>	<b>85.9</b>	<b>87.7</b>	<b>7.3</b>	<b>6.6</b>	<b>8.0</b>	<b>2.4</b>	<b>2.0</b>	<b>2.8</b>

(a) Based on Kessler 10 Psychological Distress Scale (K10).

(b) Based on national guidelines (DoHA 1999) and excludes adults aged less than 19 years.

(c) Based on national guidelines (NHMRC 2001).

(d) Based on national guidelines (NHMRC 2003).

(e) Based on Body Mass Index (BMI) score.

95% CI = 95 per cent confidence interval.

Note that figures may not add to 100 per cent due to a proportion of '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**.

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

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

Table 7.7 shows levels of psychological distress for females, by selected health indicators. The proportion of females with high levels of psychological distress was higher than the average for the state among those who reported being sedentary, non-drinkers (abstainers), current smokers, those who reported fair or poor health status and those with obese body weight status.

The proportion of females with very high levels of psychological distress was higher than the average for the state among those who reported being inactive (sedentary), non-drinkers (abstainers), not meeting either the fruit or vegetable guidelines, current smokers and those who reported fair or poor health status.

**Table 7.7: Levels of psychological distress<sup>(a)</sup> by selected health indicators, females, 2008**

Age group (years)	Level of psychological distress								
	Low to moderate (10–21)			High (22–29)			Very high (30–50)		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Physical activity<sup>(b)</sup></b>									
Sedentary	68.2	62.1	73.7	13.6	9.9	18.4	11.0	6.8	17.4
Insufficient time and/or sessions	84.0	82.3	85.4	9.5	8.3	10.9	4.0	3.2	4.9
Sufficient time and sessions	86.2	85.2	87.2	8.3	7.6	9.2	3.0	2.5	3.5
<b>Alcohol consumption<sup>(c)</sup></b>									
At risk or high risk of long-term harm	79.2	73.3	84.1	13.0	8.8	18.7	6.4	4.1	9.7
At risk or high risk of short-term harm	85.9	84.6	87.1	8.8	7.9	9.9	3.3	2.7	3.9
Abstainer from alcohol	76.9	74.8	78.9	11.7	10.1	13.4	6.2	5.2	7.5
<b>Nutrition<sup>(d)</sup></b>									
Met guidelines for fruit and vegetable consumption	86.0	81.7	89.4	9.0	6.7	12.0	3.9*	1.7	9.0
Met guidelines for vegetable consumption	86.7	83.4	89.5	8.8	6.9	11.2	3.2*	1.5	6.8
Met guidelines for fruit consumption	86.3	85.2	87.3	8.2	7.4	9.1	2.7	2.2	3.2
Did not meet guidelines for either fruit or vegetables	81.1	79.8	82.4	10.6	9.6	11.6	5.0	4.4	5.8
<b>Smoking status</b>									
Non-smoker	85.5	84.5	86.5	7.8	7.1	8.6	3.2	2.7	3.8
Ex-smoker	84.4	82.0	86.6	10.2	8.4	12.3	2.4	1.8	3.1
Current	75.3	72.9	77.6	13.6	11.9	15.5	7.6	6.4	9.1
<b>Self-rated health</b>									
Excellent or very good	92.1	91.1	92.9	4.6	4.0	5.4	1.3	0.9	1.9
Good	83.9	82.5	85.1	9.8	8.8	10.9	3.0	2.4	3.6
Fair or poor	62.2	59.6	64.7	20.2	18.1	22.5	11.9	10.4	13.7
<b>Body weight status<sup>(e)</sup></b>									
Underweight	76.8	71.6	81.3	13.1	9.6	17.6	6.2	3.8	9.8
Normal weight	86.7	85.6	87.7	7.9	7.1	8.7	2.6	2.1	3.1
Overweight	84.5	82.8	86.1	9.3	8.0	10.8	3.2	2.6	3.9
Obese	77.7	74.9	80.3	12.8	10.7	15.3	7.2	5.5	9.5
<b>Total</b>	<b>83.7</b>	<b>82.9</b>	<b>84.5</b>	<b>9.3</b>	<b>8.7</b>	<b>9.9</b>	<b>3.8</b>	<b>3.4</b>	<b>4.3</b>

(a) Based on Kessler 10 Psychological Distress Scale (K10).

(b) Based on national guidelines (DoHA 1999) and excludes adults aged less than 19 years.

(c) Based on national guidelines (NHMRC 2001).

(d) Based on national guidelines (NHMRC 2003).

(e) Based on Body Mass Index (BMI) score.

95% CI = 95 per cent confidence interval.

Note that figures may not add to 100 per cent due to a proportion of '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.

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

## Use of mental health services

Survey respondents were asked if they had sought help from a medical professional for a mental health problem in the previous 12 months. Table 7.8 shows the proportion of males and females who sought help for a mental health problem in the year prior to the survey, by age group and sex.

More than one in 10 persons (11.4 per cent) sought professional help for a mental health problem in the last 12 months. The proportion of females (13.9 per cent) who sought professional help for a mental health problem was higher than the proportion of males (8.7 per cent) who sought professional help.

The proportion of persons aged 65 years and over (4.4 per cent) who sought professional help for a mental health problem was lower than the Victorian average (11.4 per cent) and persons aged 25–34 years (13.5 per cent), 35–44 years (13.5 per cent) and 45–54 years (13.0 per cent) had higher rates, compared with the rate for Victoria.

**Table 7.8: Proportion of persons who sought professional help for a mental health problem in the last 12 months, by age group and sex, 2008**

Age group (years)	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
18–24	8.6	6.2	11.7	17.9	14.8	21.6	13.2	11.1	15.5
25–34	9.9	7.9	12.5	17.1	15.1	19.3	13.5	12.0	15.1
35–44	9.8	8.2	11.5	17.2	15.7	18.7	13.5	12.4	14.7
45–54	10.4	8.8	12.2	15.6	14.1	17.3	13.0	11.9	14.2
55–64	9.9	8.4	11.5	11.3	10.0	12.8	10.6	9.6	11.7
65+	3.4	2.7	4.2	5.3	4.5	6.2	4.4	3.9	5.0
<b>Total</b>	<b>8.7</b>	<b>8.0</b>	<b>9.5</b>	<b>13.9</b>	<b>13.2</b>	<b>14.7</b>	<b>11.4</b>	<b>10.9</b>	<b>11.9</b>

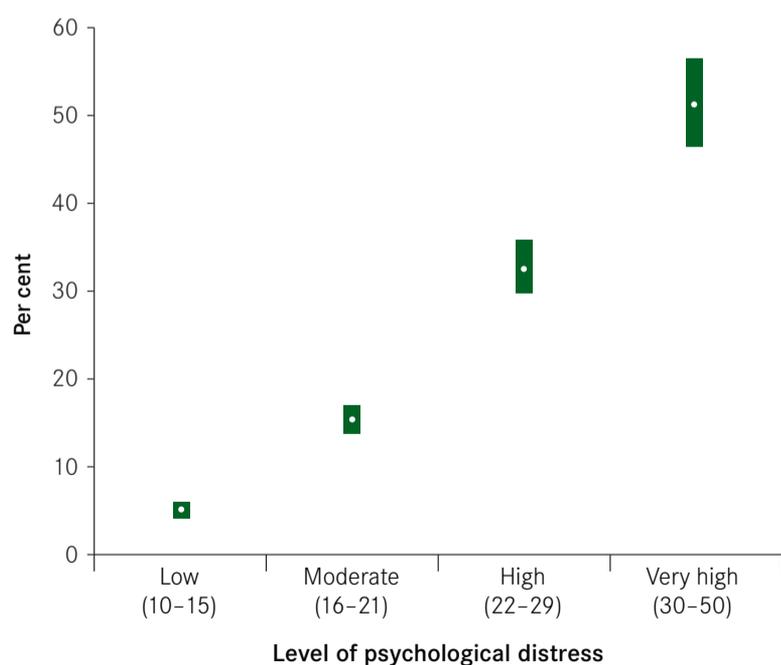
95% CI = 95 per cent confidence interval.

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**.

Figure 7.4 shows that the proportion of persons who sought professional help for a mental health problem increased with increasing levels of psychological distress.

**Figure 7.4: Proportion of persons who sought professional help for a mental health problem in the last 12 months, by level of psychological distress, 2008**



Data are crude estimates, they have not been age standardised.

## Use of mental health services by region and LGA

Table 7.9 shows the proportion of persons who sought professional help for a mental health problem in the last 12 months, by sex and Department of Health region.

There were no differences in the proportion of persons who sought help for a mental health problem between the Department of Health regions. However, a higher proportion of females sought help than males, for all regions of the state, with the exception of the Barwon-South Western and Grampians regions, where there was no difference between the sexes.

**Table 7.9: Proportion of persons who sought professional help for a mental health problem in the last 12 months, by sex and Department of Health region, 2008**

Region	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Barwon-South Western	9.1	6.4	12.8	12.1	9.5	15.4	10.7	8.6	13.1
Eastern Metropolitan	8.7	6.9	11.0	13.7	11.7	15.8	11.2	9.8	12.7
Gippsland	9.3	7.2	12.1	17.3	14.7	20.2	13.3	11.6	15.3
Grampians	11.2	8.4	14.7	15.0	12.1	18.3	13.3	11.2	15.7
Hume	8.8	6.8	11.3	14.7	12.7	16.9	11.7	10.2	13.3
Loddon Mallee	7.9	6.1	10.0	15.2	12.8	18.0	11.6	10.0	13.4
North and West Metropolitan	8.5	7.3	9.8	13.8	12.6	15.2	11.2	10.3	12.1
Southern Metropolitan	8.0	6.5	9.8	14.4	12.8	16.1	11.3	10.1	12.5
<b>Metropolitan</b>	<b>8.4</b>	<b>7.5</b>	<b>9.3</b>	<b>13.9</b>	<b>13.0</b>	<b>14.8</b>	<b>11.2</b>	<b>10.5</b>	<b>11.8</b>
<b>Rural</b>	<b>9.2</b>	<b>8.0</b>	<b>10.5</b>	<b>14.7</b>	<b>13.5</b>	<b>16.1</b>	<b>12.0</b>	<b>11.1</b>	<b>12.9</b>
<b>Total</b>	<b>8.6</b>	<b>7.9</b>	<b>9.4</b>	<b>14.1</b>	<b>13.3</b>	<b>14.8</b>	<b>11.4</b>	<b>10.8</b>	<b>11.9</b>

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.

Table 7.10 and Figure 7.5 show the proportion of persons who sought professional help for a mental health problem by LGA. There was a higher proportion of persons who had sought professional help for a mental health problem in the LGAs of East Gippsland (18.1 per cent) and Colac-Otway (16.7 per cent), compared with all Victorians (11.4 per cent).

Conversely, there was a lower proportion of persons who had sought professional help in the LGAs of Brimbank (7.8 per cent) and Greater Dandenong (7.0 per cent). The lowest rate reported was in the Greater Dandenong LGA (7.0 per cent).

Table 7.10: Proportion of persons who sought professional help for a mental health problem in the last 12 months, by LGA, 2008

LGA	%	Lower 95% CI	Upper 95% CI	LGA	%	Lower 95% CI	Upper 95% CI
Alpine (S)	10.5	6.7	16.0	Mansfield (S)	11.9	8.1	17.2
Ararat (RC)	14.2	9.6	20.6	Maribyrnong (C)	11.1	8.4	14.5
Ballarat (C)	15.7	11.9	20.5	Maroondah (C)	13.9	10.4	18.3
Banyule (C)	13.2	9.5	18.1	Melbourne (C)	13.0	9.8	17.1
Bass Coast (S)	17.0	11.7	24.1	Melton (S)	12.1	9.2	15.7
Baw Baw (S)	10.3	7.4	14.1	Mildura (RC)	11.7	8.6	15.7
Bayside (C)	10.7	7.5	15.0	Mitchell (S)	9.9	7.0	13.9
Benalla (RC)	15.0	10.8	20.4	Moira (S)	10.6	7.3	15.3
Boroondara (C)	9.6	6.5	13.9	Monash (C)	11.3	8.1	15.5
Brimbank (C)	7.8	5.8	10.4	Moonee Valley (C)	12.0	8.8	16.1
Buloke (S)	8.7	5.9	12.8	Moorabool (S)	10.1	7.3	14.0
Campaspe (S)	10.9	7.4	15.6	Moreland (C)	10.2	7.4	13.8
Cardinia (S)	9.0	6.3	12.6	Mornington Peninsula (S)	15.6	11.2	21.3
Casey (C)	10.0	7.5	13.3	Mount Alexander (S)	15.5	11.5	20.5
Central Goldfields (S)	10.8	7.4	15.4	Moyne (S)	10.1	7.6	13.3
Colac-Otway (S)	16.7	12.0	22.8	Murrindindi (S)	10.8	7.9	14.5
Corangamite (S)	8.2	5.7	11.6	Nillumbik (S)	11.7	8.3	16.2
Darebin (C)	11.3	8.5	14.9	Northern Grampians (S)	10.0	6.8	14.4
East Gippsland (S)	18.1	12.5	25.6	Port Phillip (C)	11.2	8.6	14.6
Frankston (C)	13.5	9.9	18.1	Pyrenees (S)	16.9	11.6	23.8
Gannawarra (S)	10.8	7.5	15.4	Queenscliffe (B)	12.5	7.9	19.3
Glen Eira (C)	12.5	9.2	16.7	Southern Grampians (S)	9.8	6.6	14.4
Glenelg (S)	10.6	7.9	14.2	South Gippsland (S)	7.7	4.9	12.0
Golden Plains (S)	11.6	8.5	15.5	Stonnington (C)	13.0	9.8	17.0
Greater Bendigo (C)	11.7	8.6	15.7	Strathbogie (S)	11.1	7.2	16.6
Greater Dandenong (C)	7.0	4.9	9.9	Surf Coast (S)	12.1	8.4	17.1
Greater Geelong (C)	9.4	6.5	13.4	Swan Hill (RC)	9.7	6.4	14.5
Greater Shepparton (C)	13.8	9.7	19.4	Towong (S)	12.9	8.7	18.7
Hepburn (S)	12.3	9.1	16.6	Wangaratta (RC)	10.4	7.3	14.5
Hindmarsh (S)	12.0	8.3	17.1	Warrnambool (C)	15.4	11.7	20.0
Hobsons Bay (C)	13.0	9.5	17.6	Wellington (S)	12.9	9.4	17.4
Horsham (RC)	10.2	7.3	13.9	West Wimmera (S)	9.3	6.6	13.1
Hume (C)	11.6	8.7	15.4	Whitehorse (C)	12.0	8.3	17.1
Indigo (S)	9.1	5.7	14.4	Whittlesea (C)	10.3	7.6	13.8
Kingston (C)	12.2	8.7	16.9	Wodonga (RC)	14.1	10.8	18.2
Knox (C)	9.2	6.2	13.5	Wyndham (C)	10.3	7.8	13.5
Latrobe (C)	13.3	10.1	17.4	Yarra (C)	15.2	11.7	19.5
Loddon (S)	12.0	8.4	16.9	Yarra Ranges (S)	14.3	10.9	18.5
Macedon Ranges (S)	9.7	6.5	14.1	Yarriambiack (S)	13.1	8.6	19.5
Manningham (C)	8.5	6.0	11.8	<b>Total</b>	<b>11.4</b>	<b>10.8</b>	<b>11.9</b>

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

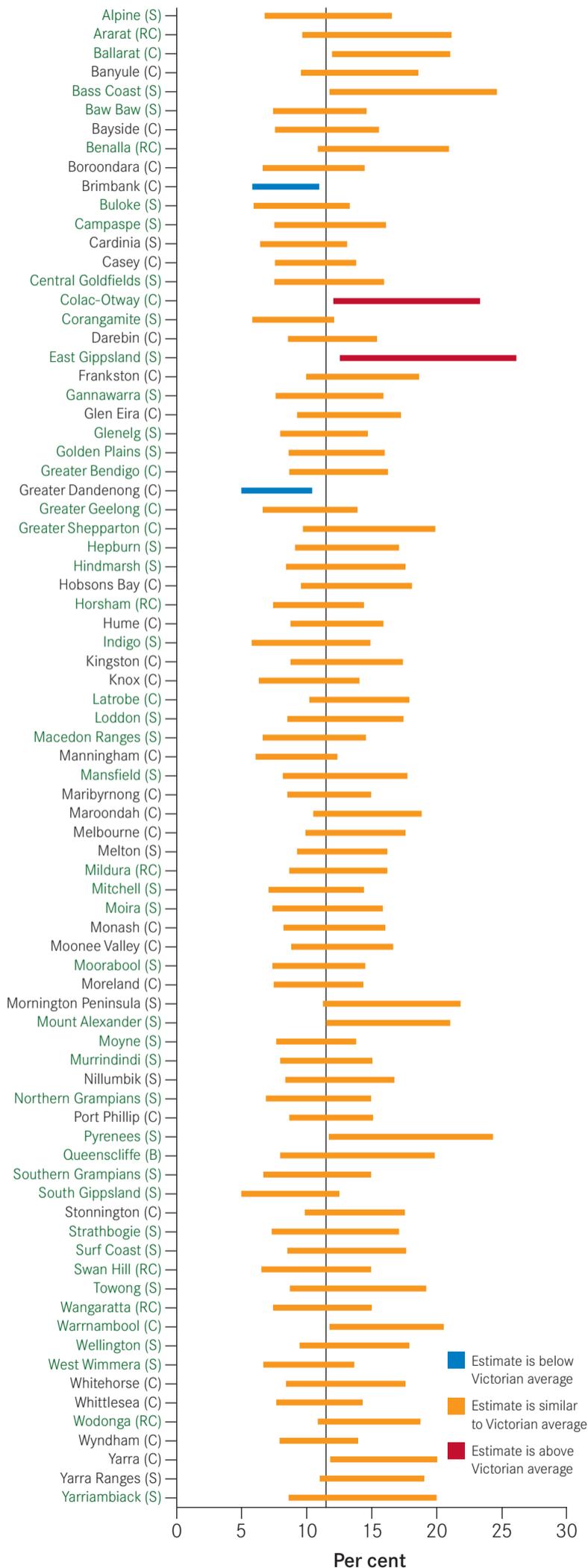
95% CI = 95 per cent confidence interval.

LGA = local government area.

Data are age standardised to the 2006 Victorian population.

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

Figure 7.5: Proportion of persons who sought professional help for a mental health problem in the last 12 months, 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 line on the graph is the Victorian estimate, it does not show the 95% CI.  
 See the relevant table for the 95% CI for Victoria (Total).

## Sources of professional help

Respondents who reported seeking professional help for a mental health problem were also asked who they sought help from. Table 7.11 shows the various sources of professional help sought for a mental health problem, by sex.

Approximately one third (33.4 per cent) of persons who sought professional help, consulted a private counsellor or psychologist, while almost one third (31.6 per cent) consulted a general practitioner and 17.3 per cent sought help from a private psychiatrist.

**Table 7.11: Sources of professional help for persons who sought professional help for a mental health problem in the last 12 months, 2008**

	Males			Females			Persons		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Private counselling/psychologist	<b>31.7</b>	27.6	36.2	<b>34.4</b>	31.7	37.2	<b>33.4</b>	31.1	35.8
GP	<b>29.4</b>	25.6	33.5	<b>32.9</b>	30.3	35.6	<b>31.6</b>	29.4	33.8
Private psychiatrist	<b>20.6</b>	17.1	24.6	<b>15.4</b>	13.3	17.6	<b>17.3</b>	15.5	19.4
Public mental health service community service	<b>6.6</b>	4.5	9.6	<b>4.9</b>	3.9	6.2	<b>5.5</b>	4.4	6.9
Other	<b>4.2</b>	2.9	6.0	<b>4.8</b>	3.6	6.2	<b>4.5</b>	3.6	5.6
Public hospital inpatient services	<b>2.0*</b>	1.0	4.1	<b>1.0*</b>	0.6	1.7	<b>1.4</b>	0.9	2.2
Unknown or refused to say	<b>1.5*</b>	0.7	3.2	<b>0.8*</b>	0.4	1.6	<b>1.1*</b>	0.6	1.8
Community Health Service	<b>1.1*</b>	0.6	2.0	<b>3.8</b>	2.8	5.1	<b>2.8</b>	2.2	3.6
Public mental health service inpatient service	**			**			<b>0.8*</b>	0.4	1.4
Public hospital emergency department	**			<b>0.3*</b>	0.1	0.6	**		
Private hospital inpatient services	**			<b>0.5*</b>	0.2	1.1	<b>0.6*</b>	0.3	1.0
Public mental health service crisis service	**			<b>0.7*</b>	0.4	1.3	<b>0.6*</b>	0.3	1.0
Private hospital emergency department	**			**			**		

95% CI = 95 per cent confidence interval.

Data are crude estimates, they have not been age standardised.

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

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

## References

Andrews, G & Slade, T 2001, 'Interpreting scores on the Kessler psychological distress scale (K10)', *Australian and New Zealand Journal of Public Health*, vol. 26, no. 6, pp. 494-7.

Clarke, DM & Currie, KC 2009, 'Depression, anxiety and their relationship with chronic diseases: a review of the epidemiology, risk and treatment evidence', *Medical Journal of Australia*, vol. 190, pp. S54-S60.

DoHA (Department of Health and Ageing) 1999, *National physical activity guidelines for adults*, DoHA, Canberra.

NHMRC (National Health and Medical Research Council) 2001, *Alcohol guidelines for Australian adults*, NHMRC, Canberra.

NHMRC (National Health and Medical Research Council) 2003, *Dietary guidelines for Australian adults*, NHMRC, Canberra.

# 8. Connections With Others



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 South Gippsland Southern Grampians 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 South Gippsland Southern Grampians 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 South Gippsland Southern Grampians 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

## 8. Connections with others

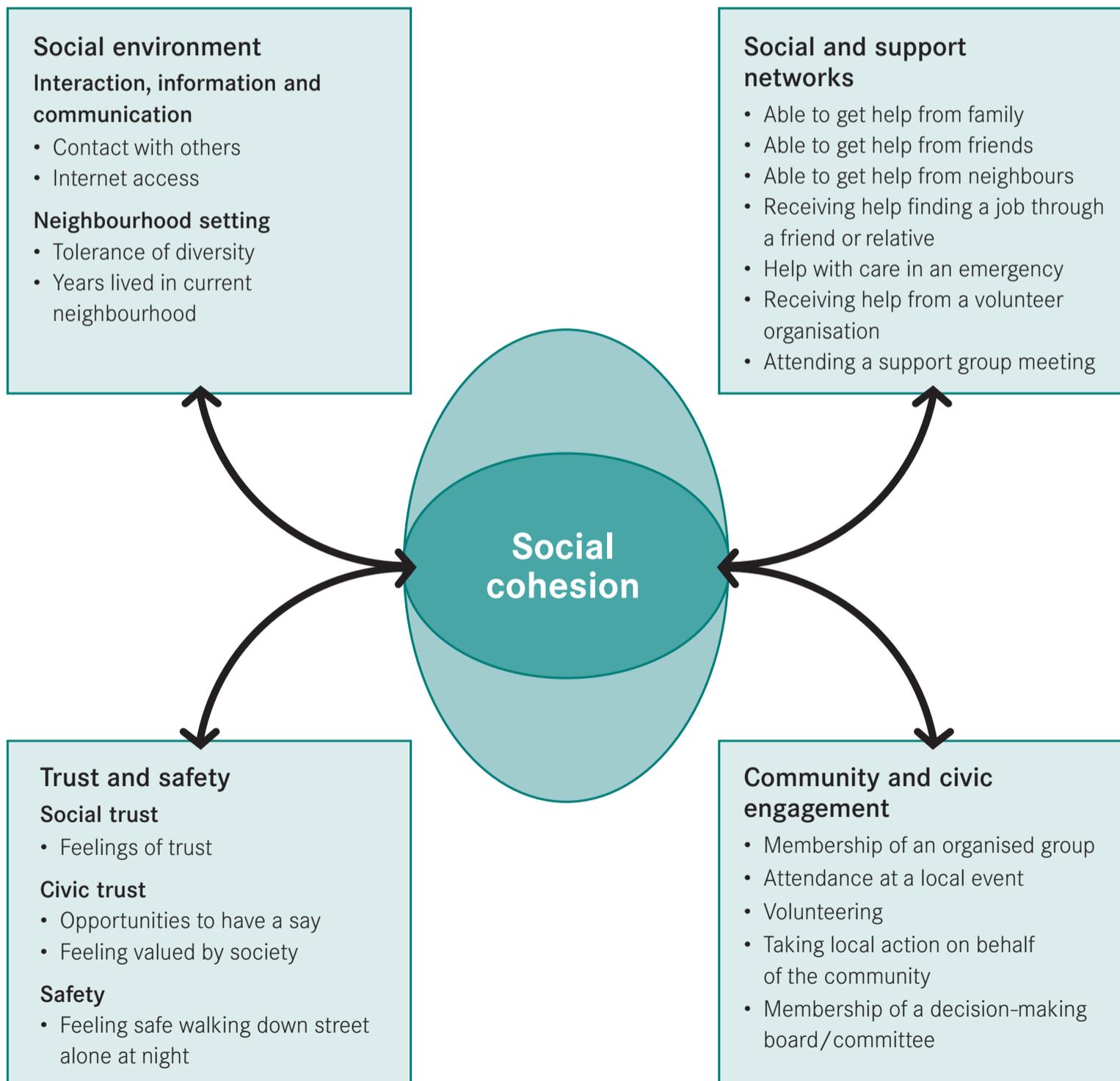
The Victorian Population Health Survey includes questions on social support and community connections and participation. The makeup of questions has evolved since the first survey in 2001, but a core set of questions on social and community characteristics has been retained and is reported annually.

The 2008 survey continued to collect information on informal social contacts (family, friends and neighbours) and membership or involvement with broader organisations such as sporting clubs, professional associations and community groups. It also collected data on other indicators of social cohesion. This section describes survey findings under headings that describe some key enabling and reinforcing factors for social cohesion.

### Social cohesion

Social health—defined as the ability to develop, maintain and nurture major social relationships—is an important dimension of health. It is defined at the level of the individual; at a societal level, the corresponding concept is social cohesion, which focuses on interrelatedness and unity among individuals, groups and associations within society. Unity is established and maintained through social relationships based on trust, shared values, feelings of inclusion and belonging, and expectations of reciprocity. The 2008 survey data on social and community characteristics are organised under the umbrella of social cohesion.

Figure 8.1: Selected indicators of social cohesion



## Survey results

### Interaction, information and communication

#### • Contact with others

- In 2008, a small percentage of Victorians (2.4 per cent) aged 18 years and over reported they had not spoken to anyone the previous day.
- Persons in older age groups, particularly older females, spoke with fewer persons on the previous day than did those in younger age groups. More than a third of persons (34.0 per cent) aged 65 years and over had spoken with 10 or more people the previous day, compared with six in 10 (60.1 per cent) persons aged 18–24 years.
- A higher proportion of persons living in the metropolitan area than in rural areas had not spoken to anyone the previous day (2.6 per cent and 1.7 per cent respectively).

#### • Internet access

- In 2008, more than eight in 10 persons (81.3 per cent) aged 18 years and over reported their household had internet access.
- Lack of household access to the internet was concentrated disproportionately among those aged 65 years and over.
- A higher proportion of females in older age groups reported their household did not have access to the internet, compared with males in older age groups.
- A higher proportion of persons in rural areas did not have access to the internet, compared with those in the metropolitan area (20.5 per cent and 16.7 per cent respectively).
- There were 31 local government areas (LGAs) (seven metropolitan and 24 rural) in which the proportion of persons who had no household internet access was above the average for Victoria (17.7 per cent).

### Neighbourhood setting

#### • Years lived in current neighbourhood

- In 2008, more than half (50.9 per cent) of the Victorian population aged 18 years and over had been resident in their neighbourhood or local area for 10 years or more.
- The proportion of persons who had lived in their current neighbourhood for 10 years or more increased with increasing age (except for persons aged 18–24 years), rising from one in five (20.1 per cent) of those aged 25–34 years to almost four in five (78.5 per cent) of those aged 65 years and over.
- A higher proportion of persons from the metropolitan area (51.6 per cent) had lived in their neighbourhood for 10 years or more, compared with those from rural areas (49.1 per cent).
- The proportion of persons who had lived in their neighbourhood for 10 years or more ranged from slightly more than a third (34.3 per cent) of those from the LGA of Melbourne to almost two thirds (64.6 per cent) of those from Moonee Valley.

#### • Tolerance of diversity

- In 2008, more than half (52.2 per cent) of persons thought multiculturalism definitely made life in their area better, and a further 24.0 per cent thought it sometimes made life in their area better.
- In most age groups (except those aged 65 years and over), males and females were equally likely to think multiculturalism definitely made life in their area better.
- Persons living in the metropolitan area (55.1 per cent) were more likely than those in rural areas (43.6 per cent) to think multiculturalism made life better in their area. This difference may be explained, however, by a higher proportion of persons from rural areas thinking multiculturalism was not applicable in their area (18.2 per cent), compared with those living in the metropolitan area (4.1 per cent).

## Social and support networks

### • Social support

- In 2008, most persons felt they could get help from family, friends or neighbours when needed. More than eight in 10 persons (80.3 per cent) reported that they could definitely get help from family if needed. Similar proportions of males, females and persons in the rural and metropolitan areas of the state were able to get help from family when needed.
- The proportion of persons who could get help from family (either definitely or sometimes) ranged from 87.2 per cent for the Yarra LGA to 96.3 per cent for Ballarat. The proportion was below the average for Victoria (92.2 per cent) in four metropolitan LGAs: Melbourne (88.9 per cent), Greater Dandenong (88.8 per cent), Port Phillip (88.3 per cent) and Yarra (87.2 per cent).
- In 2008, more than eight in 10 persons (80.6 per cent) aged 18 years and over felt they could definitely get help from friends, and a further 13.7 per cent felt they could sometimes get help if needed.
- The proportion of persons who reported they could get help from friends when needed was highest (97.9 per cent) in the rural LGA of South Gippsland and lowest in the metropolitan LGA of Brimbank (86.3 per cent).
- Slightly more than half (50.2 per cent) of persons felt they could definitely get help from neighbours if required, and a further 21.4 per cent of persons anticipated getting help from neighbours sometimes. Compared with the situation of getting help from family and friends when needed, stronger metropolitan-rural differences were evident in the proportion of persons who reported they were able to get help from neighbours when needed: almost six in 10 persons living in rural areas (57.8 per cent) reported they could definitely get help from neighbours when needed, compared with 47.6 per cent of those living in the metropolitan area.
- The proportion of persons who could get help from neighbours (either definitely or sometimes) ranged from 55.7 per cent for the Melbourne LGA to 90.8 per cent for Buloke. In 25 LGAs (all in rural areas), the proportion of persons who could get help from neighbours when needed was above the average for Victoria.

### • Help with care in an emergency

- In 2008, most people (88.5 per cent) reported there was someone outside their household who could provide care in the event of an emergency.
- Persons living in rural areas (90.5 per cent) were more likely than those from the metropolitan area (87.8 per cent) to have a relative or friend who could care for them (or their children) in an emergency.
- Younger persons were more likely to report they could get emergency care, compared with older persons. Older females (84.4 per cent) were more likely to have a friend or relative who could care for them in an emergency, compared with older males (81.1 per cent).
- Across LGAs, the proportion of persons who could get emergency care from friend or relative ranged from 80.7 per cent in Greater Dandenong to 93.7 per cent in Buloke.

### • Receiving help finding a job through a relative or friend

- In 2008, over half (54.3 per cent) of people aged 18–64 years reported they could find a job through a relative or a friend. A higher proportion of males (58.3 per cent) than females (50.4 per cent) said they could find a job in this way.
- Reporting that a relative or a friend may be able to help with finding a job decreased with age. For all age groups (except 35–44 years), a higher proportion of males than females reported they could find a job in this way.
- A higher proportion of persons aged 18–64 years living in rural areas (57.1 per cent) indicated they could find a job in this way, compared with those living in the metropolitan area (53.4 per cent). This metropolitan-rural difference was evident in the proportions of males of working age who could find a job through a relative or a friend, but not in the proportions of females.
- Across LGAs, the proportion of persons of working age who could get a job, if needed, with the help of a relative or a friend ranged from 42.3 per cent in Greater Dandenong to 68.6 per cent in Moyne.

### • Receiving help from a volunteer organisation

- In 2008, more than one in 20 persons (5.8 per cent) had received help from volunteer organisations.
- Similar proportions of males, females and persons living in the metropolitan and rural areas had received help from volunteer organisations.
- Similar proportions of people in the age groups from 18–24 years to 55–64 years had received help from volunteer organisations. The proportion of persons who received such help was higher among those aged 65 years and over.
- Across LGAs, the proportion of persons who received help from volunteer organisations ranged from 2.4 per cent in Golden Plains to 13.9 per cent in Loddon.

### • Attending a support group meeting

- In 2008, one in 10 persons (10.0 per cent) reported they had attended a support group meeting in the past two years. Females were more likely (10.8 per cent) than males (9.2 per cent) to have attended a support group meeting in the past two years.
- The proportion of persons who had attended a support group meeting within the past two years did not differ by age group.
- A higher proportion of persons living in the metropolitan area (12.8 per cent) reported they had attended a support group meeting in the past two years, compared with those living in rural areas (9.3 per cent).
- Across LGAs, the proportion of persons who had attended a support group meeting ranged from 4.0 per cent in Bayside to 17.8 per cent in Pyrenees.

## Trust and safety

### • Feelings of trust

- In 2008, more than a third (37.5 per cent) of persons aged 18 years and over agreed most people definitely can be trusted, and a further four in 10 persons (40.4 per cent) agreed others can be trusted sometimes. On average, more than three quarters of persons (77.9 per cent) agreed others can be trusted sometimes or definitely.
- A higher proportion of males (41.4 per cent) than females (33.8 per cent) agreed most people definitely can be trusted.
- A higher proportion of males in older age groups than in younger age groups agreed most people can be trusted. Females in all age groups (except those aged 18–24 years) were less likely than males to agree most people definitely can be trusted.
- A higher proportion of persons living in rural areas (41.6 per cent) agreed most people can be trusted, compared with those living in the metropolitan area (36.0 per cent).
- Across Department of Health regions, the proportion of persons who agreed most people can be trusted was higher than the average for Victoria (37.5 per cent) in the Barwon–South Western (43.4 per cent), Loddon Mallee (42.6 per cent), Grampians (41.7 per cent), and Hume (40.6 per cent) regions.
- Across LGAs, the proportion of persons who were more positive than negative about the extent to which most people can be trusted ranged from 62.0 per cent in Greater Dandenong to 91.2 per cent in Buloke.

### • Opportunities to have a say

- In 2008, almost three quarters of the Victorian population (74.0 per cent) felt there was an opportunity to have a say on matters of importance to them.
- More than one in 10 persons (12.3 per cent) felt they did not have an opportunity to have a say on issues that they considered to be important.
- Compared with persons aged 18–24 years, persons aged 65 years and over were more likely to indicate they had this opportunity (35.9 per cent and 45.0 per cent respectively).
- A higher proportion of persons living in rural areas (46.9 per cent) felt they had an opportunity to have a say on matters of importance, compared with those living in the metropolitan area (40.6 per cent).
- Across LGAs, the proportion of persons who were more positive than negative in their response ranged from 66.0 per cent in Maribyrnong to 88.7 per cent in Buloke.

### • Feeling valued by society

- In 2008, more than half of all persons (52.4 per cent) felt they were definitely valued by society. A further 29.1 per cent felt they were valued by society only sometimes.
- A higher proportion of males (56.2 per cent) living in rural areas definitely felt valued by society, compared with those living in the metropolitan area (52.0 per cent). There were no rural–metropolitan differences for females.
- Across LGAs, the proportion of persons who felt valued by society (either definitely or sometimes) ranged from almost three–quarters (73.7 per cent) in Greater Dandenong to 91.7 per cent in Buloke.

### • Feeling safe walking down street at night

- In 2008, almost six in 10 persons (58.9 per cent) said they definitely felt safe walking down their street alone after dark. A further 15.4 per cent of persons reported they sometimes felt safe in these circumstances.
- A higher proportion of males (74.4 per cent) than females (43.9 per cent) definitely felt safe walking alone down their street after dark.
- Definitely not feeling safe walking alone down their street at night was concentrated disproportionately among those aged 65 years and over for both males and females.
- A higher proportion of males and females living in rural areas (79.3 per cent and 51.5 per cent respectively) felt safe walking down their street alone after dark, compared with males and females living in the metropolitan area (72.8 per cent and 41.2 per cent respectively).
- Across LGAs, the proportion of persons who felt safe in these circumstances ranged from 54.5 per cent in Greater Dandenong to 90.3 per cent in Queenscliffe.

## Community and civic engagement

### • Membership of an organised group

- In 2008, more than one in four persons (26.0 per cent) was a member of a sports group, over one in five (22.5 per cent) was a member of a professional group or academic society, almost one in six (16.4 per cent) belonged to a church group and more than one in 10 (11.2 per cent) was a member of a school group. Almost one in five persons (19.0 per cent) was a member of a community or other action group.
- More than six in 10 (60.7 per cent) persons (62.6 per cent of males and 59.1 per cent of females) were members of one or more of the following: a sports group, a church group, a school group, a professional group or academic society, or some other community or action group.
- Group membership varied by age and sex. Membership of one or more sports groups was popular among males and females of all ages. Among those aged 65 years and over, almost one-third of females (30.0 per cent) and more than one-fifth of males (23.7 per cent) were members of a church group.
- Belonging to sports groups and other community or action groups was more popular in rural areas than in the metropolitan area, for both males and females.

### • Attendance at a local event

- In 2008, more than half of males and females (50.9 per cent and 54.8 per cent respectively) had attended a community event in the preceding six months.
- Persons in the age groups 35–44 and 45–54 years were more likely than those in younger or older groups to have attended an event such as a church fête, school concert or craft exhibition within the previous six months.
- A higher proportion of males and females living in rural areas (64.1 per cent and 66.4 per cent) had attended a local community event in the preceding six months, compared with those who lived in the metropolitan area (46.3 per cent and 50.7 per cent respectively).
- Across LGAs, the proportion of persons who had attended a local event ranged from 35.0 per cent in Brimbank to 85.5 per cent in Buloke.

### • Volunteering

- In 2008, more than one-fifth (22.2 per cent) of persons reported they had definitely helped out a local group as a volunteer, and a further 10.2 per cent sometimes did so.
- The propensity to help out a local group as a volunteer increased with age for males and females. Within each age group, males and females were similarly disposed to help out by volunteering.
- Volunteering was more prevalent among persons living in rural areas than among those in the metropolitan area.
- Across LGAs, the proportion of persons who had volunteered ranged from 19.9 per cent in Brimbank to 68.0 per cent in West Wimmera.

### • Taking local action on behalf of the community

- In 2008, more than four in 10 (40.7 per cent) persons who belonged to one or more sporting, church, school, professional or other community or action groups reported that the group had taken local action on behalf of the community within the past two years.
- Similar proportions of males and females who were members of one or more of these organised groups reported that the group had taken local action on behalf of the community within the past two years.
- There were no differences by age group in the prevalence of community action among persons who were group members.
- The proportion of persons who reported involvement in local action in the community within the past two years through an organised group was above the average for Victoria (40.7 per cent) in all five rural Department of Health regions.
- Across LGAs, the proportion of persons who reported belonging to an organised group that took local action ranged from almost three in 10 (28.2 per cent) in Brimbank to almost two-thirds (65.5 per cent) in Buloke.

### • Membership of a decision-making board/committee

- In 2008, less than one-fifth (18.7 per cent) of persons reported being on a decision-making board or committee. A higher proportion of males (20.6 per cent) than females (16.9 per cent) had such responsibilities.
- Among females, those in the age groups 35–44 years and 45–54 years were more likely to be on a decision-making body than those in younger or older age groups. The proportion of males who had a decision-making role on a committee or board was highest among those aged 45–54 years and lowest among those aged 18–24 years.
- A higher proportion of persons in rural areas (23.0 per cent) were on a decision-making board or committee, compared with those living in the metropolitan area (17.2 per cent). This metropolitan–rural difference applied to both males and females.
- Across LGAs, the proportion of persons reporting decision-making involvement on a board or committee ranged from 9.1 per cent in Brimbank to 41.5 per cent in West Wimmera.

## Social Environment

### Interaction, information and communication

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

#### Contact with others

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

Table 8.1 provides data on the number of persons with whom an individual spoke the previous day, by age group and sex. Persons in older age groups, particularly older females, spoke with fewer persons on the previous day than did those in younger age groups. More than a third of persons (34.0 per cent) aged 65 years and over had spoken with 10 or more people the previous day, compared with six in 10 (60.1 per cent) persons aged 18–24 years. Among persons aged 65 years and over, a higher proportion of females than males (32.1 per cent and 28.0 per cent respectively) had spoken to fewer than five persons the previous day.

**Table 8.1: Number of persons spoke with the previous day, by age group and sex, 2008**

Age group (years)	Number of persons spoke with the previous day											
	None at all			Less than 5			5 to 9			10 or more		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
18–24 years	1.5*	0.8	2.8	12.8	10.1	16.1	22.8	19.1	27.0	62.9	58.2	67.3
25–34 years	3.3*	2.0	5.6	17.5	14.7	20.7	23.1	20.0	26.5	56.1	52.1	60.0
35–44 years	3.3	2.4	4.6	16.4	14.3	18.8	23.2	20.8	25.8	56.7	53.7	59.7
45–54 years	2.6	1.8	3.7	17.4	15.4	19.6	26.0	23.6	28.6	53.7	50.8	56.4
55–64 years	2.3	1.5	3.3	19.9	17.9	22.1	28.1	25.8	30.6	49.7	47.0	52.3
65+	2.2	1.6	2.9	28.0	25.9	30.1	32.0	29.9	34.2	37.0	34.8	39.2
<b>Total</b>	<b>2.6</b>	<b>2.2</b>	<b>3.1</b>	<b>19.0</b>	<b>18.0</b>	<b>20.0</b>	<b>25.8</b>	<b>24.7</b>	<b>27.0</b>	<b>52.7</b>	<b>50.9</b>	<b>53.6</b>
<b>Females</b>												
18–24 years	1.3	0.7	2.5	14.5	11.7	17.9	26.9	23.2	31.0	57.2	52.8	61.5
25–34 years	3.0	2.1	4.4	18.0	16.0	20.2	33.8	31.1	36.6	45.1	42.3	48.0
35–44 years	1.8	1.3	2.5	15.9	14.4	17.5	28.5	26.7	30.5	53.4	51.3	55.5
45–54 years	2.1	1.5	2.8	16.5	15.0	18.2	26.0	24.1	28.0	55.3	53.0	57.5
55–64 years	1.7	1.3	2.3	21.0	19.3	22.7	32.0	30.0	34.0	45.2	43.0	47.4
65+	2.5	2.0	3.2	32.1	30.3	34.0	33.0	31.2	34.9	31.6	29.9	33.4
<b>Total</b>	<b>2.2</b>	<b>1.9</b>	<b>2.5</b>	<b>19.8</b>	<b>19.0</b>	<b>20.7</b>	<b>30.1</b>	<b>29.1</b>	<b>31.1</b>	<b>47.6</b>	<b>46.6</b>	<b>48.7</b>
<b>Persons</b>												
18–24 years	1.4	0.9	2.2	13.7	11.6	16.0	24.9	22.2	27.7	60.1	56.9	63.2
25–34 years	3.2	2.3	4.4	17.7	16.0	19.6	28.4	26.3	30.7	50.6	48.2	53.1
35–44 years	2.5	2.0	3.2	16.1	14.8	17.6	25.9	24.4	27.5	55.1	53.2	56.9
45–54 years	2.3	1.9	3.0	17.0	15.7	18.3	26.0	24.5	27.6	54.5	52.7	56.3
55–64 years	2.0	1.5	2.5	20.4	19.1	21.8	30.1	28.5	31.7	47.4	45.7	49.1
65+	2.4	2.0	2.8	30.2	28.9	31.6	32.6	31.2	34.0	34.0	32.6	35.4
<b>Total</b>	<b>2.4</b>	<b>2.1</b>	<b>2.7</b>	<b>19.5</b>	<b>18.8</b>	<b>20.1</b>	<b>28.0</b>	<b>27.2</b>	<b>28.8</b>	<b>49.9</b>	<b>49.0</b>	<b>50.7</b>

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 Victorian estimates which 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**.

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

Table 8.2 shows the proportion of persons with whom an individual spoke on the previous day, over time. The proportion of persons who spoke to fewer than five persons on the day before the survey decreased, from 21.8 per cent in 2001 to 19.5 per cent in 2008.

**Table 8.2: Number of persons spoke with the previous day, 2001–2008**

Number of persons spoke with the previous day	2001	2002	2003	2004	2005	2006	2007	2008
	Per cent							
None at all	0.9	1.0	1.1	0.5	2.1	2.4	1.5	2.4
Less than 5	21.8	17.4	17.5	17.8	18.3	18.5	17.8	19.5
5 to 9	29.6	26.8	27.3	22.9	28.2	27.3	28.0	28.0
10 or more	47.7	54.9	54.0	58.6	51.2	51.6	52.3	49.9

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.

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

Table 8.3 shows the number of persons with whom an individual spoke the previous day, by sex and region. Almost half of all persons (49.9 per cent) had spoken to 10 or more persons the previous day. A small percentage of persons (2.4 per cent) reported they had not spoken to anyone the previous day. A higher proportion of persons living in the metropolitan area than in rural areas reported they had not spoken to anyone the previous day (2.6 per cent and 1.7 per cent respectively).

The proportion of females who had spoken to fewer than five people the previous day was above the average for Victoria (19.8 per cent) for the North and West Metropolitan region (22.7 per cent).

Table 8.3: Number of persons spoke with the previous day, by sex and Department of Health region, 2008

Region	Number of persons spoke with the previous day											
	None at all			Less than 5			5 to 9			10 or more		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
Barwon-South Western	1.7*	0.8	3.4	20.9	16.4	26.3	24.5	20.5	28.9	52.7	47.1	58.4
Eastern Metropolitan	2.3	1.5	3.4	19.4	17.0	22.2	23.9	21.1	26.9	54.0	50.6	57.4
Gippsland	1.4*	0.7	2.5	17.7	14.5	21.3	25.7	22.1	29.7	55.2	50.8	59.6
Grampians	2.7*	1.5	4.7	19.0	16.3	22.1	24.9	21.5	28.7	53.2	49.0	57.4
Hume	1.6	1.1	2.3	18.5	15.8	21.4	24.6	21.6	28.0	55.1	51.5	58.7
Loddon Mallee	1.3	0.8	2.2	16.3	13.6	19.4	25.0	21.5	28.7	57.1	52.8	61.2
North and West Metropolitan	2.9	2.1	4.0	19.5	17.8	21.4	27.3	25.3	29.5	49.8	47.5	52.1
Southern Metropolitan	3.1	2.2	4.4	18.4	16.4	20.7	26.5	24.0	29.1	51.7	48.8	54.5
<b>Metropolitan</b>	2.9	2.3	3.5	19.2	18.0	20.5	26.2	24.8	27.6	51.4	49.7	53.0
<b>Rural</b>	1.7	1.3	2.2	18.6	17.0	20.4	24.9	23.1	26.7	54.6	52.4	56.8
<b>Total</b>	2.6	2.2	3.1	19.0	18.0	20.0	25.8	24.7	27.0	52.2	50.9	53.6
<b>Females</b>												
Barwon-South Western	1.9*	1.0	3.8	17.9	15.0	21.2	28.7	24.5	33.2	50.9	46.5	55.3
Eastern Metropolitan	1.8	1.2	2.7	19.2	17.3	21.4	30.1	27.6	32.7	48.7	45.9	51.5
Gippsland	1.8	1.1	2.9	16.9	14.9	19.2	32.4	29.3	35.6	48.2	44.9	51.5
Grampians	1.7*	0.9	3.4	19.3	16.6	22.4	30.0	26.8	33.4	48.7	44.9	52.5
Hume	1.2*	0.8	1.8	20.4	18.3	22.7	28.5	26.1	31.0	49.8	47.0	52.5
Loddon Mallee	1.4*	0.8	2.4	15.2	13.6	17.1	32.3	29.3	35.5	50.9	47.8	54.1
North and West Metropolitan	2.7	2.2	3.3	22.7	21.3	24.3	30.0	28.2	31.7	44.3	42.5	46.2
Southern Metropolitan	2.4	1.7	3.4	19.2	17.5	21.1	30.3	28.2	32.5	47.8	45.5	50.2
<b>Metropolitan</b>	2.4	2.0	2.8	20.6	19.6	21.6	30.1	28.9	31.3	46.8	45.5	48.1
<b>Rural</b>	1.6	1.2	2.2	17.8	16.7	19.0	30.2	28.6	31.9	49.9	48.2	51.6
<b>Total</b>	2.2	1.9	2.5	19.8	19.0	20.7	30.1	29.1	31.1	47.6	46.6	48.7
<b>Persons</b>												
Barwon-South Western	1.8*	1.1	3.0	19.5	16.7	22.8	26.4	23.1	29.9	51.8	47.8	55.7
Eastern Metropolitan	2.1	1.5	2.7	19.3	17.7	21.0	27.1	25.2	29.1	51.3	49.1	53.5
Gippsland	1.5	1.1	2.3	17.5	15.5	19.6	29.0	26.6	31.5	51.6	48.9	54.4
Grampians	2.2	1.4	3.4	19.4	17.3	21.6	27.5	25.0	30.2	50.7	47.8	53.6
Hume	1.4	1.1	1.8	19.3	17.6	21.2	26.6	24.6	28.7	52.4	50.2	54.7
Loddon Mallee	1.3	0.9	2.0	15.8	14.2	17.6	28.6	26.3	31.1	53.9	51.3	56.6
North and West Metropolitan	2.8	2.4	3.4	21.2	20.1	22.4	28.6	27.3	30.0	47.0	45.5	48.5
Southern Metropolitan	2.8	2.2	3.5	18.9	17.5	20.3	28.3	26.7	30.0	49.7	47.9	51.6
<b>Metropolitan</b>	2.6	2.3	3.0	20.0	19.2	20.8	28.1	27.2	29.0	49.0	48.0	50.1
<b>Rural</b>	1.7	1.4	2.0	18.2	17.2	19.3	27.6	26.3	28.9	52.2	50.8	53.7
<b>Total</b>	2.4	2.1	2.7	19.5	18.8	20.1	28.0	27.2	28.8	49.9	49.0	50.7

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

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

### Internet access

Use of the internet for social and commercial purposes has become increasingly common. Individuals who do not have ready access to the internet may be disadvantaged to the extent they cannot retrieve up-to-date information conveniently or routinely engage in different types of electronic social interaction. The 2008 survey collected information on whether the internet was accessible from a respondent's household.

Table 8.4 shows the proportion of persons who reported their household had internet access, by age group and sex. More than half (51.1 per cent) of persons aged 65 years and over reported that they did not have internet access. A higher proportion of females in older age groups reported their household did not have access to the internet, compared with males.

**Table 8.4: Household internet access, by age group and sex, 2008**

Age group (years)	No			Yes		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
18–24 years	4.6	3.0	6.9	95.3	92.9	96.8
25–34 years	7.9	6.1	10.2	91.0	88.5	93.1
35–44 years	7.7	6.4	9.3	92.0	90.4	93.4
45–54 years	9.6	8.2	11.2	90.0	88.4	91.5
55–64 years	16.5	14.8	18.4	82.8	80.8	84.5
65+	43.5	41.2	45.7	54.8	52.5	57.0
<b>Total</b>	<b>15.5</b>	<b>14.8</b>	<b>16.3</b>	<b>83.7</b>	<b>83.0</b>	<b>84.5</b>
<b>Females</b>						
18–24 years	6.0	4.4	8.2	93.4	91.1	95.1
25–34 years	8.5	7.1	10.1	91.1	89.5	92.5
35–44 years	9.2	8.0	10.5	90.4	89.1	91.6
45–54 years	9.5	8.4	10.7	89.5	88.2	90.7
55–64 years	25.7	23.9	27.5	73.1	71.2	74.9
65+	57.3	55.3	59.2	39.9	38.0	41.9
<b>Total</b>	<b>19.7</b>	<b>19.1</b>	<b>20.3</b>	<b>79.1</b>	<b>78.5</b>	<b>79.8</b>
<b>Persons</b>						
18–24 years	5.3	4.1	6.8	94.3	92.8	95.6
25–34 years	8.2	7.0	9.5	91.1	89.6	92.4
35–44 years	8.4	7.5	9.4	91.2	90.2	92.1
45–54 years	9.5	8.6	10.5	89.8	88.7	90.7
55–64 years	21.2	19.9	22.5	77.8	76.5	79.1
65+	51.1	49.6	52.6	46.6	45.1	48.1
<b>Total</b>	<b>17.7</b>	<b>17.3</b>	<b>18.2</b>	<b>81.3</b>	<b>80.8</b>	<b>81.8</b>

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 Victorian estimates which 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**.

Figure 8.2 depicts the ‘disproportionality’ in household access to the internet, by age group. Lack of household access to the internet is concentrated disproportionately among those aged 65 years and over. Persons in this age group accounted for more than one-sixth (17.5 per cent) of the population, but for more than half (51.3 per cent) of persons who reported not having access to the internet at home. By contrast, persons aged 18–24 years represented 12.9 per cent of the population and 3.9 per cent of those who did not have internet access at home.

**Figure 8.2: ‘Disproportionality’ of lack of household internet access and population, by age group, 2008**

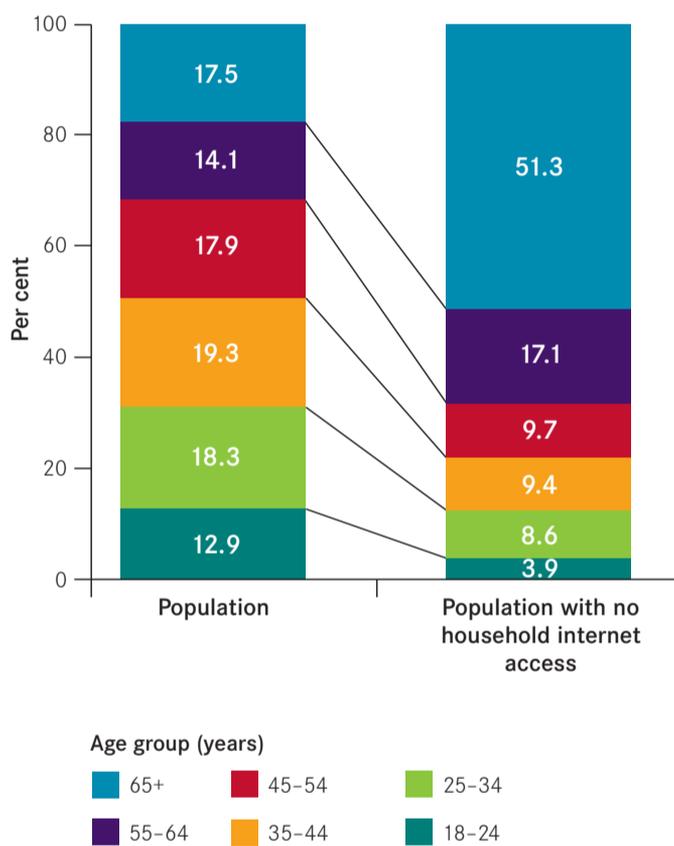


Table 8.5 shows the proportion of persons who reported their household had access to the internet, by region and sex. More than one-sixth (17.7 per cent) of persons reported their household did not have internet access. A higher proportion of persons from households in rural areas, compared with the metropolitan area, did not have access to the internet (20.5 per cent and 16.7 per cent respectively). The proportion of persons without household access to the internet was above the average for Victoria (17.7 per cent) in five Department of Health regions: the Grampians (22.9 per cent), Loddon Mallee (21.8 per cent), Gippsland (21.5 per cent), Hume (21.2 per cent) and North and West Metropolitan (20.9 per cent) regions. Except in the Gippsland and Grampians regions, a higher proportion of females than males reported their households did not have internet access.

Table 8.5: Household internet access, by sex and Department of Health region, 2008

Region	No			Yes		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
Barwon-South Western	13.8	11.8	16.0	85.9	83.6	87.9
Eastern Metropolitan	10.6	9.2	12.2	88.9	87.2	90.3
Gippsland	20.8	18.0	24.0	78.8	75.6	81.7
Grampians	22.0	19.1	25.2	77.4	74.2	80.4
Hume	18.9	16.8	21.3	80.1	77.6	82.3
Loddon Mallee	18.7	16.7	20.9	80.9	78.7	83.0
North and West Metropolitan	18.3	16.9	19.9	80.6	79.0	82.1
Southern Metropolitan	13.4	11.8	15.1	85.8	83.9	87.4
<b>Metropolitan</b>	14.5	13.6	15.4	84.7	83.7	85.6
<b>Rural</b>	18.3	17.2	19.5	81.2	80.0	82.3
<b>Total</b>	15.5	14.8	16.3	83.7	83.0	84.5
<b>Females</b>						
Barwon-South Western	20.1	18.0	22.4	79.3	77.0	81.4
Eastern Metropolitan	14.2	12.9	15.7	84.6	83.0	86.0
Gippsland	22.3	20.4	24.3	77.1	75.0	79.0
Grampians	23.5	21.2	25.9	75.6	73.2	77.9
Hume	23.4	21.7	25.2	75.8	74.0	77.5
Loddon Mallee	24.6	22.6	26.7	74.8	72.6	76.8
North and West Metropolitan	23.3	22.0	24.5	75.2	73.9	76.5
Southern Metropolitan	17.2	15.9	18.6	81.4	80.0	82.8
<b>Metropolitan</b>	18.7	17.9	19.5	80.0	79.2	80.8
<b>Rural</b>	22.5	21.6	23.5	76.8	75.8	77.7
<b>Total</b>	19.7	19.1	20.3	79.1	78.5	79.8
<b>Persons</b>						
Barwon-South Western	17.2	15.7	18.8	82.3	80.7	83.9
Eastern Metropolitan	12.5	11.5	13.6	86.6	85.5	87.6
Gippsland	21.5	19.8	23.4	77.9	76.0	79.7
Grampians	22.9	21.0	24.9	76.4	74.4	78.3
Hume	21.2	19.8	22.7	77.9	76.4	79.3
Loddon Mallee	21.8	20.3	23.3	77.7	76.2	79.2
North and West Metropolitan	20.9	20.0	21.9	77.8	76.8	78.7
Southern Metropolitan	15.5	14.4	16.6	83.4	82.2	84.5
<b>Metropolitan</b>	16.7	16.1	17.3	82.2	81.5	82.8
<b>Rural</b>	20.5	19.8	21.3	78.8	78.1	79.6
<b>Total</b>	17.7	17.3	18.2	81.3	80.8	81.8

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Table 8.6 shows the proportion of persons who did and did not have household access to the internet, by LGA. The proportion of persons reporting their household lacked internet access was significantly higher than the Victorian average (17.7 per cent) for 31 LGAs. Among the LGAs in which the proportion of persons who lacked household internet access was higher than the average for Victoria there were seven LGAs in the metropolitan area: Brimbank (26.7 per cent), Greater Dandenong (23.8 per cent), Hume (23.2 per cent), Whittlesea (22.8 per cent), Maribyrnong (22.2 per cent), Darebin (22.1 per cent) and Moreland (21.7 per cent). Except for Greater Dandenong, these LGAs are all in the North and West Metropolitan region.

The proportion of persons who did not have household access to the internet was below the average for Victoria (17.7 per cent) in 11 LGAs. Except for Greater Geelong and the Macedon Ranges, these LGAs are all located in the metropolitan area.

Figure 8.3 shows household internet access, by LGA.

Table 8.6: Household internet access, by LGA, 2008

LGA	No			Yes		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	16.8	14.0	20.0	81.6	78.1	84.7
Ararat (RC)	29.4	23.6	35.9	70.1	63.7	75.9
Ballarat (C)	21.5	17.9	25.7	77.5	73.3	81.2
Banyule (C)	15.1	12.7	17.9	83.7	80.7	86.3
Bass Coast (S)	18.4	15.1	22.2	80.8	77.0	84.1
Baw Baw (S)	22.2	17.8	27.3	77.5	72.4	81.9
Bayside (C)	10.3	8.4	12.5	89.3	86.9	91.3
Benalla (RC)	25.4	20.5	30.9	73.7	68.2	78.5
Boroondara (C)	8.3	6.4	10.6	90.5	88.0	92.5
Brimbank (C)	26.7	23.2	30.6	71.4	67.5	75.0
Buloke (S)	24.7	20.8	29.1	73.1	68.3	77.5
Campaspe (S)	24.4	20.6	28.7	75.5	71.2	79.3
Cardinia (S)	15.1	12.7	17.9	84.5	81.7	87.0
Casey (C)	14.5	11.7	17.8	84.2	80.4	87.3
Central Goldfields (S)	24.8	20.5	29.6	74.6	69.8	78.9
Colac-Otway (S)	22.1	18.1	26.7	77.0	72.2	81.1
Corangamite (S)	26.9	22.3	32.0	72.2	67.1	76.8
Darebin (C)	22.1	19.1	25.3	75.3	71.7	78.7
East Gippsland (S)	25.1	20.4	30.6	74.4	69.0	79.1
Frankston (C)	16.3	13.4	19.6	83.0	79.6	85.9
Gannawarra (S)	26.7	22.3	31.6	73.2	68.3	77.6
Glen Eira (C)	13.8	10.8	17.4	85.6	82.1	88.6
Glenelg (S)	21.3	17.9	25.1	76.3	71.9	80.2
Golden Plains (S)	15.4	12.6	18.7	84.0	80.7	86.9
Greater Bendigo (C)	20.1	17.4	23.2	79.5	76.4	82.2
Greater Dandenong (C)	23.8	19.8	28.2	75.3	70.9	79.3
Greater Geelong (C)	13.7	11.6	16.2	86.1	83.6	88.2
Greater Shepparton (C)	21.3	17.7	25.4	77.9	73.7	81.6
Hepburn (S)	23.9	19.6	28.8	75.9	71.0	80.2
Hindmarsh (S)	23.0	19.6	26.9	76.5	72.6	80.1
Hobsons Bay (C)	18.7	15.9	21.8	80.7	77.5	83.4
Horsham (RC)	26.7	21.7	32.4	72.3	66.6	77.4
Hume (C)	23.2	19.2	27.9	75.5	70.9	79.6
Indigo (S)	17.1	13.3	21.7	81.7	77.0	85.6
Kingston (C)	16.1	13.3	19.3	83.5	80.2	86.3
Knox (C)	12.2	9.8	15.1	86.3	83.2	89.0
Latrobe (C)	21.6	17.9	25.8	77.3	73.1	81.1
Loddon (S)	27.8	23.0	33.1	71.4	66.0	76.2
Macedon Ranges (S)	13.4	10.7	16.7	85.5	82.1	88.4
Manningham (C)	13.7	11.4	16.5	85.6	82.8	88.0
Mansfield (S)	25.7	20.1	32.3	73.6	67.0	79.2
Maribyrnong (C)	22.2	18.9	25.8	75.9	72.1	79.3
Maroondah (C)	14.0	11.3	17.2	85.8	82.6	88.4
Melbourne (C)	14.2	11.4	17.6	85.1	81.7	88.0
Melton (S)	20.7	17.3	24.5	79.0	75.1	82.4
Mildura (RC)	24.2	20.4	28.4	75.2	70.9	79.0
Mitchell (S)	20.9	17.3	25.0	78.3	74.3	81.9
Moira (S)	24.4	19.7	29.9	72.2	66.3	77.5
Monash (C)	11.9	9.4	15.0	87.3	84.2	89.8
Moonee Valley (C)	19.7	16.8	23.0	79.5	76.2	82.6
Moorabool (S)	20.0	16.6	23.9	79.7	75.8	83.1
Moreland (C)	21.7	18.7	25.0	76.9	73.6	80.0
Mornington Peninsula (S)	14.6	11.6	18.2	83.5	79.9	86.6
Mount Alexander (S)	18.5	15.2	22.3	81.1	77.3	84.5
Moyne (S)	19.9	17.1	23.0	78.8	74.9	82.2
Murrindindi (S)	19.3	16.5	22.4	80.7	77.6	83.5
Nullumbik (S)	11.9	9.1	15.4	87.8	84.3	90.6
Northern Grampians (S)	27.4	22.5	32.9	72.3	66.8	77.2
Port Phillip (C)	14.6	11.9	17.8	84.5	81.1	87.4
Pyrenees (S)	25.9	21.5	30.7	72.7	67.8	77.1
Queenscliffe (B)	17.1	12.6	22.9	82.5	76.8	87.0
Southern Grampians (S)	25.3	21.7	29.3	74.5	70.5	78.1
South Gippsland (S)	20.8	17.2	24.9	78.8	74.7	82.5
Stonnington (C)	11.8	9.2	15.1	87.2	84.0	89.9
Strathbogie (S)	26.1	20.8	32.1	73.5	67.5	78.8
Surf Coast (S)	17.9	13.4	23.4	81.7	76.2	86.2
Swan Hill (RC)	29.0	23.7	35.0	70.8	64.8	76.1
Towong (S)	27.0	21.4	33.6	72.6	66.1	78.3
Wangaratta (RC)	20.9	17.8	24.4	78.6	75.2	81.7
Warrnambool (C)	23.2	19.7	27.1	76.2	72.2	79.7
Wellington (S)	21.0	17.6	24.8	79.0	75.2	82.4
West Wimmera (S)	26.4	22.7	30.4	73.5	69.5	77.2
Whitehorse (C)	12.9	10.3	15.9	86.0	82.8	88.7
Whittlesea (C)	22.8	19.4	26.6	76.2	72.5	79.6
Wodonga (RC)	18.5	15.6	21.8	81.1	77.8	84.0
Wyndham (C)	19.6	16.6	23.0	78.7	75.5	81.6
Yarra (C)	18.3	15.3	21.7	81.1	77.7	84.0
Yarra Ranges (S)	17.1	14.6	19.8	82.3	79.4	84.8
Yarriambiack (S)	25.6	21.0	30.8	73.6	68.4	78.2
<b>Total</b>	<b>17.7</b>	<b>17.3</b>	<b>18.2</b>	<b>81.3</b>	<b>80.8</b>	<b>81.8</b>

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

95% CI = 95 per cent confidence interval.

LGA = local government area.

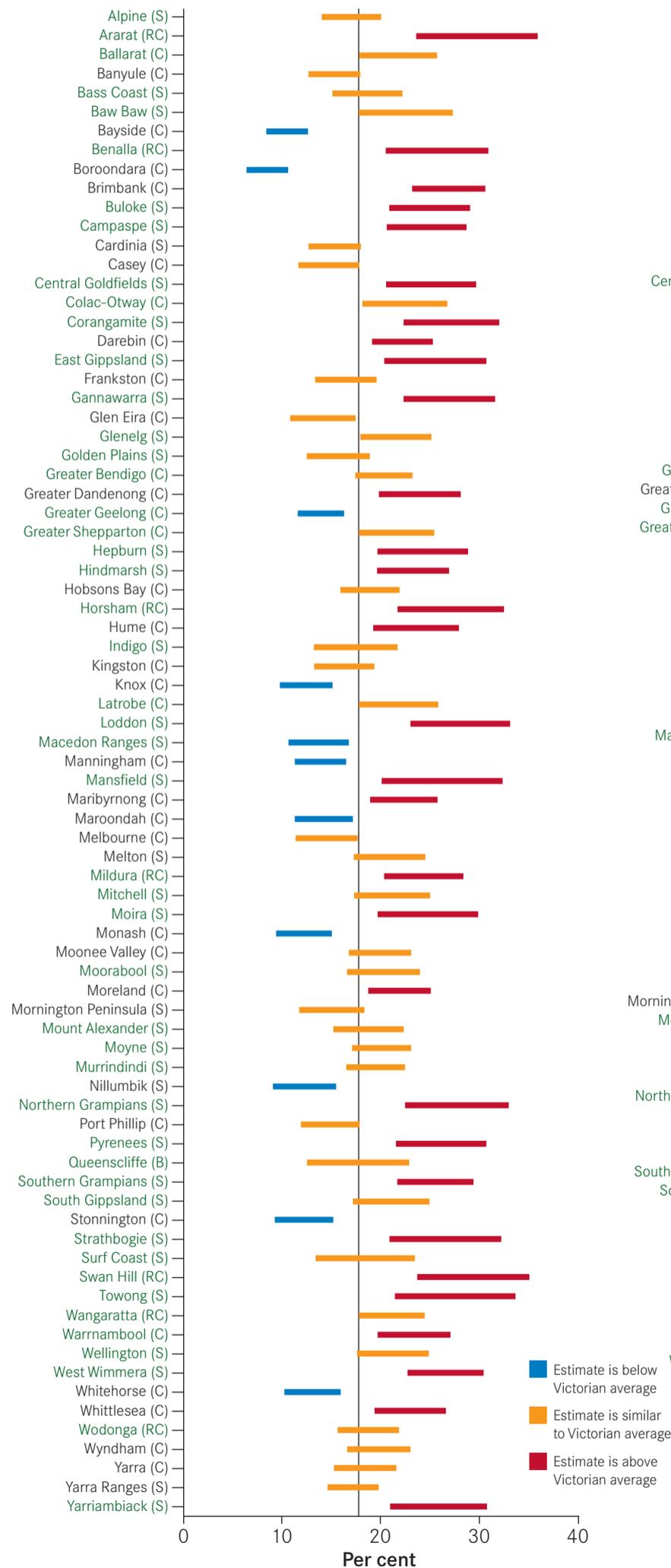
Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are age standardised to the 2006 Victorian population.

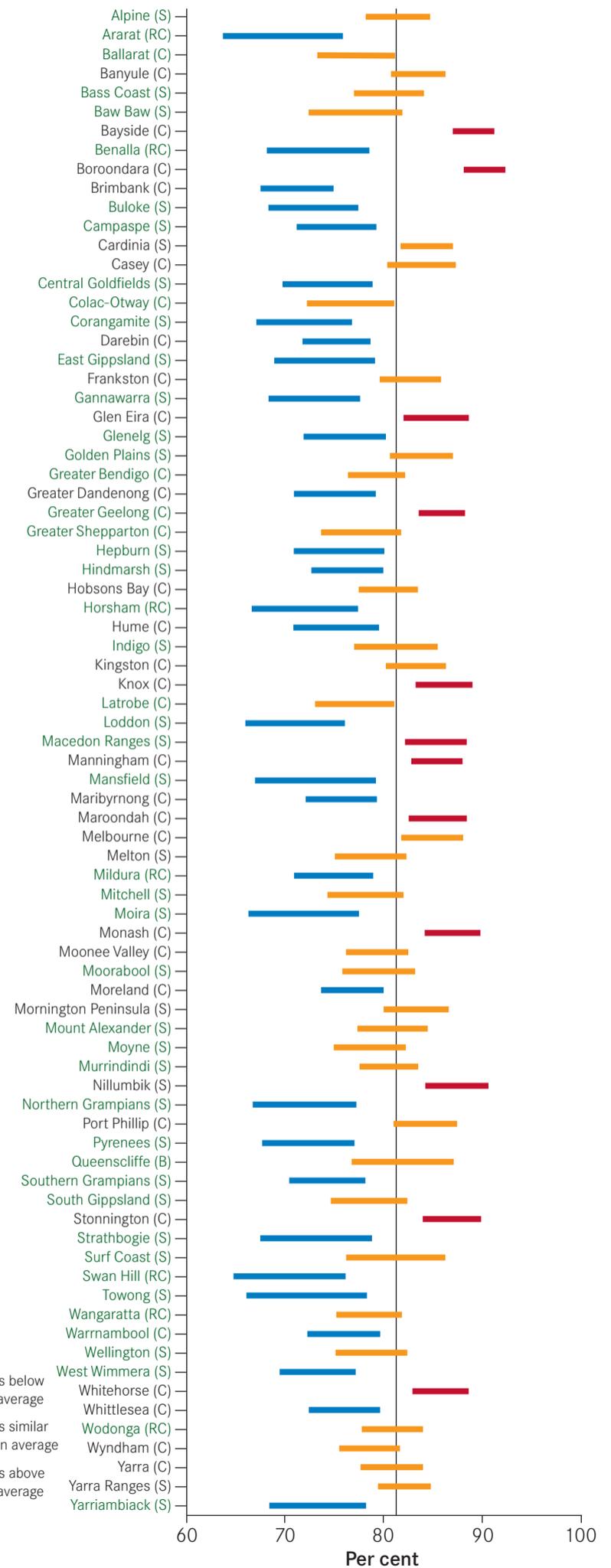
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Figure 8.3: Household internet access, by LGA, 2008

No internet access



Internet access



Note that the scale differs for different parts of the graph.

LGA = local government area.

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

Data are age standardised to the 2006 Victorian population.

The line on the graph is the Victorian estimate, it does not show the 95% CI. See relevant table for 95% CI for Victoria (Total).

### Tenure in neighbourhood

Neighbourhoods/local areas are an important unit in society. One indicator of the stability of neighbourhoods is the number of years that a person has lived in their current neighbourhood. Table 8.7 shows the proportion of persons who reported having lived in their neighbourhood (local area/suburb/town) for intervals ranging from less than a year, to more than 10 years, by age group and sex. The proportion of persons who had lived in their current neighbourhood for 10 years or more increased with age (except for persons aged 18–24 years), rising from one in five (20.1 per cent) of those aged 25–34 years to almost four in five (78.5 per cent) of those aged 65 years and over.

**Table 8.7: Tenure in neighbourhood, by age group and sex, 2008**

Age group (years)	Less than a year			More than one year and fewer than five years			More than five years and fewer than 10 years			10 years or more		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
18–24 years	12.6	9.7	16.0	22.0	18.4	26.1	11.7	9.1	15.0	53.6	48.9	58.4
25–34 years	20.4	17.5	23.7	44.8	40.9	48.8	12.8	10.5	15.5	21.7	18.2	25.6
35–44 years	9.0	7.4	11.0	30.1	27.4	32.9	27.9	25.3	30.7	32.8	30.0	35.8
45–54 years	3.9	2.9	5.2	15.8	13.9	17.8	20.1	17.9	22.4	60.2	57.4	62.9
55–64 years	2.8	2.1	3.8	11.8	10.3	13.6	15.5	13.6	17.6	69.6	67.1	72.0
65+	1.8	1.3	2.5	8.1	7.0	9.4	10.2	9.0	11.6	79.7	77.9	81.4
<b>Total</b>	<b>8.7</b>	<b>7.9</b>	<b>9.6</b>	<b>23.0</b>	<b>21.9</b>	<b>24.2</b>	<b>16.8</b>	<b>15.9</b>	<b>17.8</b>	<b>51.3</b>	<b>50.0</b>	<b>52.5</b>
<b>Females</b>												
18–24 years	17.6	14.4	21.2	22.9	19.6	26.7	13.1	10.3	16.4	46.2	41.8	50.7
25–34 years	15.9	13.9	18.1	45.7	42.8	48.6	19.6	17.5	22.0	18.6	16.3	21.2
35–44 years	6.9	6.0	8.0	28.3	26.4	30.2	30.4	28.5	32.4	34.4	32.4	36.4
45–54 years	3.8	3.0	4.7	13.5	12.1	15.1	19.3	17.6	21.1	63.4	61.2	65.5
55–64 years	2.9	2.3	3.7	12.1	10.8	13.5	14.1	12.7	15.7	70.5	68.6	72.4
65+	2.1	1.6	2.7	9.0	8.0	10.1	11.2	10.0	12.4	77.5	75.9	79.0
<b>Total</b>	<b>8.2</b>	<b>7.5</b>	<b>8.8</b>	<b>22.7</b>	<b>21.8</b>	<b>23.6</b>	<b>18.4</b>	<b>17.6</b>	<b>19.2</b>	<b>50.6</b>	<b>49.6</b>	<b>51.5</b>
<b>Persons</b>												
18–24 years	15.0	12.8	17.5	22.5	19.9	25.2	12.4	10.4	14.7	50.0	46.7	53.3
25–34 years	18.2	16.4	20.1	45.3	42.8	47.7	16.2	14.6	18.0	20.1	18.0	22.5
35–44 years	8.0	7.0	9.0	29.2	27.5	30.9	29.2	27.6	30.9	33.6	31.9	35.4
45–54 years	3.9	3.2	4.6	14.6	13.4	15.9	19.7	18.3	21.2	61.8	60.0	63.5
55–64 years	2.9	2.4	3.5	12.0	10.9	13.1	14.8	13.6	16.1	70.1	68.5	71.6
65+	2.0	1.6	2.4	8.6	7.9	9.4	10.8	9.9	11.7	78.5	77.3	79.6
<b>Total</b>	<b>8.4</b>	<b>7.9</b>	<b>9.0</b>	<b>22.9</b>	<b>22.2</b>	<b>23.6</b>	<b>17.6</b>	<b>17.0</b>	<b>18.3</b>	<b>50.9</b>	<b>50.1</b>	<b>51.7</b>

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 8.8 shows more than half (50.9 per cent) of persons had been resident in their neighbourhood or local area for 10 years or more. Of the remainder, 8.4 per cent of persons had lived in their current neighbourhood for less than a year, 22.9 per cent had been in their neighbourhood for between one and five years, and 17.6 per cent had resided in their neighbourhood for between five and 10 years.

There were few regional differences in neighbourhood tenure, although a higher proportion of persons from the metropolitan area (51.6 per cent) had lived in their neighbourhood for 10 years or more, compared with those from rural areas (49.1 per cent).

Table 8.8: Tenure in neighbourhood, by sex and Department of Health region, 2008

Region	Less than a year			More than one year and fewer than five years			More than five years and fewer than 10 years			10 years or more		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
Barwon-South Western	5.3	3.4	8.1	29.0	24.1	34.4	18.9	15.6	22.8	46.7	41.5	51.9
Eastern Metropolitan	8.2	6.2	10.7	20.0	17.4	22.9	15.9	13.5	18.5	55.8	52.5	59.0
Gippsland	6.6	4.7	9.3	22.1	18.6	26.0	15.8	13.1	18.9	55.5	51.4	59.5
Grampians	6.3	4.4	8.8	21.9	18.4	25.9	17.0	13.8	20.7	54.9	50.6	59.1
Hume	9.4	7.1	12.3	21.9	18.7	25.4	20.8	18.1	23.8	47.8	44.5	51.2
Loddon Mallee	10.1	7.3	13.8	24.0	20.3	28.0	16.9	13.8	20.5	49.0	45.3	52.6
North and West Metropolitan	9.0	7.7	10.5	23.0	21.1	24.9	15.3	13.8	17.0	52.5	50.4	54.7
Southern Metropolitan	9.6	8.0	11.6	23.8	21.4	26.4	18.6	16.5	21.0	47.8	45.1	50.4
<b>Metropolitan</b>	9.1	8.1	10.2	22.6	21.3	24.0	16.4	15.3	17.6	51.7	50.2	53.2
<b>Rural</b>	7.5	6.3	8.8	24.1	22.0	26.3	18.0	16.5	19.7	50.3	48.1	52.5
<b>Total</b>	8.7	7.9	9.6	23.0	21.9	24.2	16.8	15.9	17.8	51.3	50.0	52.5
<b>Females</b>												
Barwon-South Western	7.4	5.0	10.8	23.8	19.8	28.4	21.1	17.9	24.7	47.7	43.2	52.3
Eastern Metropolitan	6.8	5.4	8.5	18.8	16.7	21.1	18.8	16.8	21.0	55.4	52.7	58.1
Gippsland	9.1	7.1	11.6	23.4	20.6	26.4	18.5	16.2	21.1	48.9	46.0	51.9
Grampians	11.7	8.8	15.3	21.4	18.3	25.0	18.7	16.4	21.2	48.2	44.9	51.5
Hume	9.2	7.6	11.1	22.6	20.3	25.1	19.3	17.4	21.4	48.9	46.3	51.4
Loddon Mallee	11.1	8.9	13.8	25.2	22.5	28.2	17.4	15.3	19.8	46.2	43.4	49.0
North and West Metropolitan	7.7	6.6	8.8	23.1	21.6	24.6	16.9	15.6	18.2	52.2	50.5	53.9
Southern Metropolitan	8.3	6.9	9.8	24.3	22.5	26.2	19.1	17.3	20.9	48.2	46.0	50.4
<b>Metropolitan</b>	7.7	6.9	8.5	22.4	21.4	23.5	18.1	17.2	19.1	51.6	50.4	52.8
<b>Rural</b>	9.5	8.4	10.8	23.4	21.9	25.1	19.2	17.9	20.5	47.8	46.2	49.4
<b>Total</b>	8.2	7.5	8.8	22.7	21.8	23.6	18.4	17.6	19.2	50.6	49.6	51.5
<b>Persons</b>												
Barwon-South Western	6.3	4.7	8.5	26.5	23.1	30.2	20.0	17.5	22.7	47.1	43.4	50.9
Eastern Metropolitan	7.5	6.2	9.0	19.4	17.7	21.2	17.4	15.8	19.1	55.6	53.5	57.7
Gippsland	7.7	6.2	9.5	22.7	20.5	25.2	17.4	15.5	19.4	52.1	49.5	54.7
Grampians	9.1	7.2	11.4	21.5	19.0	24.1	17.9	15.9	20.1	51.5	48.7	54.3
Hume	9.3	7.8	11.0	22.2	20.2	24.3	20.0	18.3	21.8	48.5	46.4	50.6
Loddon Mallee	10.6	8.7	12.8	24.6	22.3	27.0	17.2	15.3	19.3	47.6	45.3	49.9
North and West Metropolitan	8.3	7.4	9.3	23.0	21.8	24.2	16.1	15.1	17.1	52.4	51.1	53.8
Southern Metropolitan	8.9	7.8	10.1	24.1	22.6	25.7	18.8	17.4	20.3	48.0	46.3	49.7
<b>Metropolitan</b>	8.4	7.7	9.0	22.5	21.7	23.4	17.3	16.5	18.1	51.6	50.7	52.6
<b>Rural</b>	8.5	7.7	9.4	23.8	22.5	25.1	18.6	17.6	19.7	49.1	47.7	50.5
<b>Total</b>	8.4	7.9	9.0	22.9	22.2	23.6	17.6	17.0	18.3	50.9	50.1	51.7

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.



Table 8.9 shows the proportion of persons who reported having lived in their neighbourhood for less than a year, between one and five years, between five and 10 years, and 10 years or more, by LGA. The proportion of persons who had lived in their neighbourhood for 10 years or more ranged from more than a third (34.3 per cent) in the LGA of Melbourne, to almost two thirds (64.6 per cent) in Moonee Valley. The rural LGA of Benalla had the highest proportion of people (14.6 per cent) who had lived in their neighbourhood for less than a year. The proportion of persons who had lived in their neighbourhood between five and 10 years was highest in Casey (25.1 per cent) and lowest in Buloke (11.8 per cent).

Table 8.9: Tenure in neighbourhood, by LGA, 2008

LGA	Less than a year			More than one year and fewer than five years			More than five years and fewer than 10 years			10 years or more		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	8.3	5.5	12.5	21.5	16.1	27.9	20.6	15.8	26.3	49.6	43.4	55.9
Ararat (RC)	7.1*	3.9	12.4	23.8	17.5	31.4	14.7	10.6	20.1	54.4	47.7	61.0
Ballarat (C)	10.4	7.2	14.9	20.9	16.5	26.1	19.5	15.6	24.1	49.2	43.9	54.5
Banyule (C)	9.3*	5.6	15.1	16.9	13.0	21.7	16.3	12.8	20.5	57.1	51.4	62.6
Bass Coast (S)	10.7*	6.1	18.2	22.4	16.4	30.0	22.8	17.5	29.2	43.8	36.0	51.9
Baw Baw (S)	5.0*	2.9	8.5	27.3	22.7	32.5	14.2	10.5	18.8	53.2	48.0	58.5
Bayside (C)	9.2	5.6	14.6	20.1	15.5	25.7	20.9	16.9	25.5	49.7	44.7	54.7
Benalla (RC)	14.6	10.0	20.8	21.6	16.7	27.4	16.5	12.8	21.0	47.4	41.2	53.6
Boroondara (C)	6.2*	3.8	10.1	26.1	21.3	31.5	18.2	14.2	23.1	49.3	44.2	54.5
Brimbank (C)	6.1	3.9	9.3	17.1	13.6	21.3	19.2	15.7	23.3	57.6	52.8	62.3
Buloke (S)	3.3*	1.8	5.9	20.4	15.5	26.3	11.8	8.2	16.7	64.5	59.4	69.4
Campaspe (S)	9.1	5.9	14.0	26.0	21.6	31.0	15.3	11.8	19.7	49.5	44.0	55.0
Cardinia (S)	7.1	4.5	11.0	23.0	18.6	28.2	21.3	17.4	25.8	48.5	43.0	54.0
Casey (C)	7.8	5.2	11.4	17.5	14.1	21.6	25.1	21.0	29.6	49.6	45.0	54.3
Central Goldfields (S)	8.9*	4.9	15.7	18.7	13.9	24.7	13.0	9.6	17.6	59.3	52.5	65.7
Colac-Otway (S)	7.4*	4.4	12.2	22.7	17.4	29.0	18.4	14.0	23.8	51.4	45.4	57.3
Corangamite (S)	6.9*	3.7	12.6	20.4	15.6	26.2	14.4	10.2	19.9	58.2	51.8	64.4
Darebin (C)	10.2	6.9	14.7	25.6	21.3	30.4	12.4	9.4	16.1	51.7	46.7	56.8
East Gippsland (S)	10.7*	6.1	18.0	18.7	13.6	25.2	18.3	13.9	23.6	52.3	44.9	59.7
Frankston (C)	8.7	5.8	12.9	24.9	20.3	30.2	20.7	16.4	25.8	45.4	40.6	50.3
Gannawarra (S)	7.1*	4.0	12.5	15.7	11.8	20.5	16.0	12.0	21.0	61.1	55.3	66.7
Glen Eira (C)	9.3	6.4	13.2	26.0	21.3	31.3	16.6	13.0	20.9	48.1	43.0	53.2
Glenelg (S)	13.1	8.7	19.3	17.8	13.7	22.8	17.0	12.8	22.2	52.1	46.1	58.1
Golden Plains (S)	5.3*	2.8	9.5	19.5	15.7	24.0	19.8	15.5	24.9	55.4	49.8	60.9
Greater Bendigo (C)	13.4	9.4	18.8	29.3	24.4	34.8	18.0	13.9	23.0	39.2	34.9	43.7
Greater Dandenong (C)	9.3	6.5	13.2	26.7	22.4	31.5	12.1	8.9	16.2	51.1	46.1	56.1
Greater Geelong (C)	5.1*	2.9	8.8	27.9	22.7	33.9	22.1	18.2	26.6	44.8	39.0	50.8
Greater Shepparton (C)	10.9	7.0	16.6	24.0	18.9	30.0	16.9	12.9	21.8	48.2	43.6	52.8
Hepburn (S)	6.9*	3.8	12.4	19.8	15.4	25.0	18.8	14.5	24.1	54.4	48.2	60.6
Hindmarsh (S)	10.1	6.3	16.0	12.3	9.0	16.6	17.3	12.5	23.6	60.1	54.6	65.3
Hobsons Bay (C)	6.7	4.4	10.1	17.4	13.5	22.2	14.0	11.0	17.8	61.8	56.6	66.8
Horsham (RC)	11.9	8.1	17.1	28.3	23.0	34.3	15.9	11.9	20.8	43.8	38.1	49.7
Hume (C)	6.9	4.7	10.1	20.5	16.5	25.2	15.2	12.1	19.1	56.7	51.3	61.9
Indigo (S)	10.0	6.6	15.0	13.5	10.2	17.6	19.0	14.6	24.2	57.5	52.3	62.6
Kingston (C)	6.3*	3.7	10.5	23.8	19.0	29.5	13.9	10.5	18.2	56.0	50.4	61.3
Knox (C)	4.8*	2.9	7.7	17.7	13.9	22.3	20.3	16.3	25.0	57.0	51.4	62.5
Latrobe (C)	6.7	4.5	9.9	21.5	17.3	26.5	15.0	11.6	19.1	56.8	51.6	61.9
Loddon (S)	8.2	5.0	13.1	16.4	12.3	21.6	13.8	10.3	18.2	61.2	55.1	67.1
Macedon Ranges (S)	8.0	5.0	12.7	15.5	11.5	20.6	22.1	17.5	27.6	53.8	47.4	60.1
Manningham (C)	9.3	6.0	14.2	16.1	12.2	21.0	18.4	14.3	23.3	56.2	50.5	61.7

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

95% CI = 95 per cent confidence interval.

LGA = local government area.

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

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

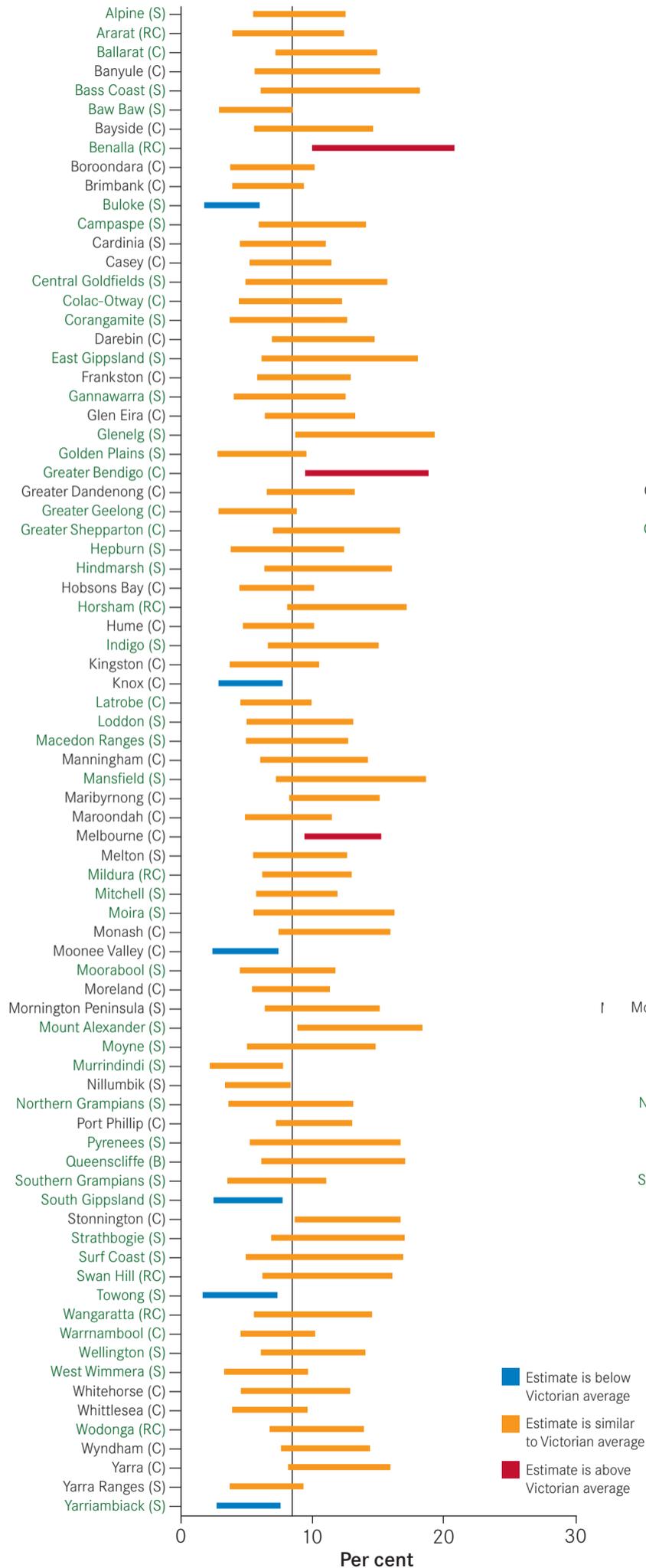
Table 8.9: Tenure in neighbourhood, by LGA, 2008 (continued)

LGA	Less than a year			More than one year and fewer than five years			More than five years and fewer than 10 years			10 years or more		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	11.8	7.2	18.6	24.4	18.8	31.1	20.2	15.2	26.2	43.7	36.6	51.0
Maribyrnong (C)	11.2	8.2	15.1	27.0	22.6	32.0	15.9	12.5	19.9	45.8	41.1	50.5
Maroondah (C)	7.6	4.9	11.5	20.6	16.4	25.4	14.6	11.1	18.9	56.8	51.3	62.2
Melbourne (C)	12.0	9.4	15.2	37.6	32.9	42.6	16.0	12.6	20.2	34.3	29.9	39.0
Melton (S)	8.4	5.5	12.6	26.8	22.1	32.2	22.2	18.4	26.6	41.9	36.8	47.2
Mildura (RC)	9.0	6.2	13.0	28.8	23.8	34.5	14.4	10.9	18.8	47.7	42.4	53.1
Mitchell (S)	8.3	5.7	11.9	23.3	18.8	28.4	20.8	16.9	25.3	47.7	42.3	53.2
Moira (S)	9.6*	5.5	16.2	20.6	15.6	26.7	18.8	14.1	24.7	50.6	43.8	57.4
Monash (C)	11.0	7.4	15.9	15.6	12.0	20.2	15.2	11.6	19.7	58.2	52.9	63.4
Moonee Valley (C)	4.2	2.4	7.4	18.5	14.8	22.8	12.7	9.5	16.8	64.6	59.5	69.4
Moorabool (S)	7.3	4.5	11.7	23.2	18.8	28.3	17.9	14.0	22.6	51.5	46.0	57.1
Moreland (C)	7.9	5.4	11.3	25.5	21.5	29.9	13.7	10.8	17.2	52.7	48.6	56.7
Mornington Peninsula (S)	9.9	6.4	15.1	25.7	20.7	31.4	21.4	16.8	27.0	42.6	36.7	48.7
Mount Alexander (S)	12.9	8.8	18.4	21.7	16.6	27.9	18.8	14.2	24.4	46.7	41.1	52.4
Moyne (S)	8.7*	5.0	14.8	28.9	23.3	35.3	14.4	11.1	18.4	48.0	42.9	53.1
Murrindindi (S)	4.2*	2.2	7.8	20.2	15.2	26.4	22.1	16.8	28.5	53.5	48.9	58.0
Nillumbik (S)	5.2	3.3	8.3	18.7	14.8	23.3	16.4	12.8	20.8	59.6	54.8	64.1
Northern Grampians (S)	7.0*	3.6	13.1	20.3	15.2	26.6	13.1	9.8	17.2	59.6	52.7	66.1
Port Phillip (C)	9.7	7.2	13.0	29.4	25.3	33.9	16.5	13.4	20.2	44.4	40.2	48.8
Pyrenees (S)	9.5	5.2	16.7	27.1	21.0	34.2	15.0	11.1	19.9	48.3	42.2	54.4
Queenscliffe (B)	10.4*	6.1	17.1	17.9	12.5	24.9	15.3	11.4	20.2	56.3	48.8	63.5
Southern Grampians (S)	6.3	3.5	11.0	25.4	19.8	31.9	15.7	11.3	21.3	52.6	46.6	58.6
South Gippsland (S)	4.4	2.5	7.7	19.3	15.2	24.3	21.8	17.0	27.4	54.4	48.6	60.2
Stonnington (C)	12.1	8.6	16.7	26.6	22.3	31.4	17.1	13.5	21.5	44.0	39.4	48.8
Strathbogie (S)	11.0	6.9	17.0	20.2	15.0	26.6	17.4	12.6	23.6	51.4	44.4	58.5
Surf Coast (S)	9.3*	4.9	16.9	21.2	15.8	27.7	20.6	16.5	25.5	48.9	42.4	55.4
Swan Hill (RC)	10.1	6.2	16.0	20.5	15.1	27.2	20.4	14.8	27.3	49.1	43.8	54.3
Towong (S)	3.5*	1.6	7.3	14.8	10.9	19.9	22.1	17.0	28.3	59.1	52.4	65.5
Wangaratta (RC)	9.0	5.5	14.5	19.8	15.0	25.6	20.9	16.1	26.7	50.1	43.7	56.6
Warrnambool (C)	6.8	4.5	10.2	29.0	23.7	34.9	20.4	16.5	24.9	43.7	38.4	49.2
Wellington (S)	9.2	6.0	14.0	25.3	20.2	31.2	16.4	12.6	21.0	49.0	43.0	55.1
West Wimmera (S)	5.7*	3.3	9.6	16.1	11.7	21.9	17.1	13.0	22.0	61.1	54.9	66.9
Whitehorse (C)	7.7*	4.5	12.8	21.8	17.8	26.4	16.9	13.1	21.6	53.4	47.7	58.9
Whittlesea (C)	6.2	3.9	9.6	21.3	17.8	25.3	17.7	14.3	21.8	54.5	50.0	59.0
Wodonga (RC)	9.7	6.7	13.9	22.0	17.8	26.9	25.0	20.5	30.2	43.2	38.5	47.9
Wyndham (C)	10.6	7.6	14.4	24.1	20.2	28.5	19.0	15.6	23.0	46.2	41.5	51.0
Yarra (C)	11.5	8.1	15.9	27.1	22.9	31.7	17.8	14.5	21.7	43.4	38.6	48.3
Yarra Ranges (S)	5.9	3.7	9.3	17.4	13.7	21.8	17.9	14.4	22.0	58.6	53.8	63.4
Yarriambiack (S)	4.6*	2.7	7.6	19.0	13.9	25.5	15.3	11.3	20.4	60.2	53.7	66.4
<b>Total</b>	<b>8.4</b>	<b>7.9</b>	<b>9.0</b>	<b>22.9</b>	<b>22.2</b>	<b>23.6</b>	<b>17.6</b>	<b>17.0</b>	<b>18.3</b>	<b>50.9</b>	<b>50.1</b>	<b>51.7</b>

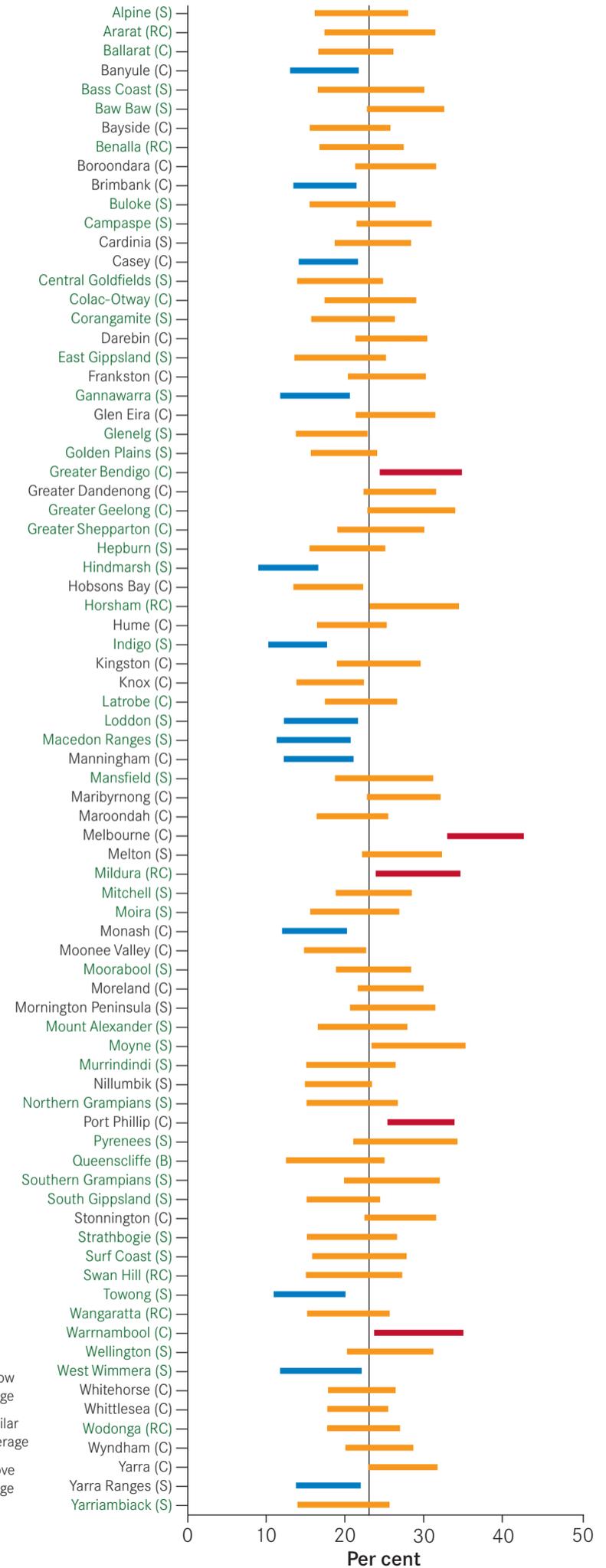
Figure 8.4 shows the variability in neighbourhood tenure, by LGA.

Figure 8.4: Tenure in neighbourhood, by LGA, 2008

Less than one year



More than one year and less than five years



Note that the scale differs for different parts of the graph.

LGA = local government area.

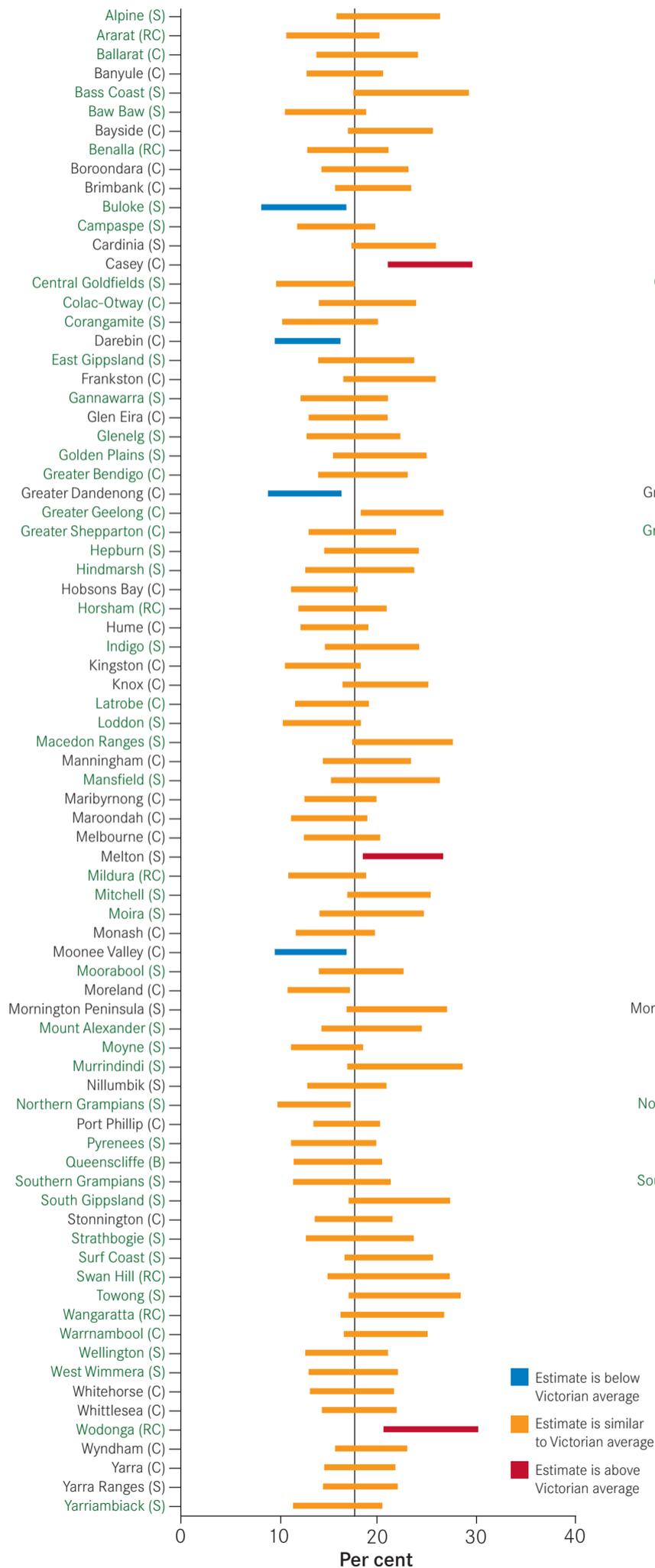
Metropolitan and rural LGAs are identified by colour as follows: metropolitan / rural.

Data are age standardised to the 2006 Victorian population.

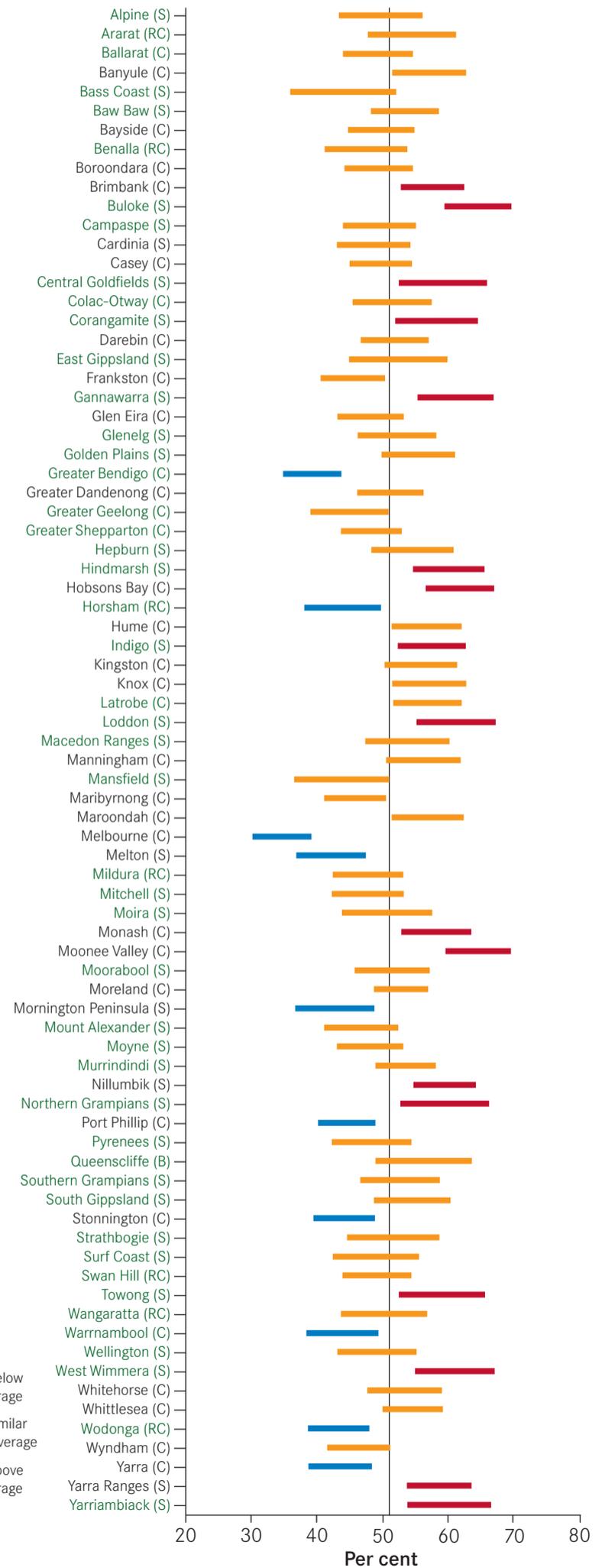
The line on the graph is the Victorian estimate, it does not show the 95% CI. See relevant table for 95% CI for Victoria (Total).

Figure 8.4: Tenure in neighbourhood, by LGA, 2008 (continued)

More than five years and less than 10 years



10 years or more



Note that the scale differs for different parts of the graph.

LGA = local government area.

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

Data are age standardised to the 2006 Victorian population.

The line on the graph is the Victorian estimate, it does not show the 95% CI.

See relevant table for 95% CI for Victoria (Total).

### Tolerance of diversity

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

More than half (52.2 per cent) of persons thought multiculturalism definitely made life in their area better, and a further 24.0 per cent thought it made life in their area better sometimes. On average, 7.8 per cent of the population thought multiculturalism was not applicable to their area, and 7.1 per cent thought multiculturalism did not make life better in their area (table 8.10).

In most age groups, males and females were equally likely to think multiculturalism definitely made life in their area better. An exception was among those aged 65 years and over, with a higher proportion of males (44.5 per cent) than females (39.8 per cent) reporting multiculturalism definitely made life better in their area.

**Table 8.10: Tolerance of diversity, by age group and sex, 2008**

Age group (years)	No, not at all			Not often			Sometimes			Yes, definitely			Not applicable		
	%	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
<b>Males</b>															
18–24 years	6.2	4.3	9.0	4.2	2.7	6.5	34.2	29.7	39.0	51.2	46.4	56.0	2.3*	1.4	3.7
25–34 years	5.0	3.7	6.8	2.2	1.4	3.5	25.9	22.6	29.5	59.2	55.3	63.0	5.0	3.8	6.7
35–44 years	5.4	4.3	6.8	4.7	3.6	6.2	23.0	20.6	25.6	56.2	53.2	59.2	6.4	5.3	7.8
45–54 years	8.2	6.8	9.8	4.3	3.2	5.6	22.5	20.2	25.0	52.4	49.6	55.2	8.4	7.2	9.9
55–64 years	10.4	9.0	12.2	4.1	3.2	5.2	22.3	20.1	24.7	48.3	45.6	51.0	9.6	8.3	11.1
65+	11.7	10.3	13.2	4.2	3.3	5.2	20.0	18.2	21.9	44.5	42.2	46.8	11.2	10.0	12.5
<b>Total</b>	<b>7.7</b>	<b>7.1</b>	<b>8.4</b>	<b>3.9</b>	<b>3.5</b>	<b>4.5</b>	<b>24.2</b>	<b>23.1</b>	<b>25.4</b>	<b>52.3</b>	<b>51.0</b>	<b>53.6</b>	<b>7.3</b>	<b>6.7</b>	<b>7.8</b>
<b>Females</b>															
18–24 years	4.2	2.8	6.3	3.5	2.3	5.4	27.2	23.6	31.2	57.0	52.6	61.3	5.3	3.7	7.4
25–34 years	3.6	2.8	4.7	2.6	1.9	3.6	24.3	22.0	26.9	61.3	58.5	64.0	4.4	3.5	5.5
35–44 years	5.7	4.7	6.7	3.3	2.7	4.2	23.5	21.7	25.3	55.7	53.6	57.8	8.2	7.2	9.3
45–54 years	6.7	5.7	8.0	3.5	2.8	4.5	23.0	21.2	25.0	52.7	50.4	54.9	9.0	7.9	10.1
55–64 years	8.1	7.0	9.4	4.0	3.2	5.0	24.5	22.7	26.5	46.8	44.6	49.0	10.6	9.5	11.8
65+	10.2	9.0	11.4	4.0	3.3	4.8	22.0	20.5	23.7	39.8	38.0	41.7	12.6	11.5	13.8
<b>Total</b>	<b>6.4</b>	<b>6.0</b>	<b>6.9</b>	<b>3.4</b>	<b>3.1</b>	<b>3.8</b>	<b>23.8</b>	<b>22.9</b>	<b>24.7</b>	<b>52.3</b>	<b>51.3</b>	<b>53.3</b>	<b>8.3</b>	<b>7.9</b>	<b>8.8</b>
<b>Persons</b>															
18–24 years	5.2	4.0	6.9	3.9	2.8	5.3	30.8	27.8	33.9	54.1	50.8	57.3	3.8	2.8	5.0
25–34 years	4.3	3.5	5.3	2.4	1.8	3.1	25.1	23.1	27.3	60.2	57.8	62.6	4.7	3.9	5.7
35–44 years	5.5	4.8	6.4	4.0	3.3	4.8	23.2	21.7	24.8	56.0	54.2	57.8	7.3	6.5	8.2
45–54 years	7.4	6.6	8.4	3.9	3.2	4.7	22.8	21.3	24.4	52.5	50.7	54.3	8.7	7.9	9.6
55–64 years	9.3	8.3	10.3	4.1	3.4	4.8	23.5	22.0	24.9	47.5	45.8	49.3	10.1	9.2	11.1
65+	10.8	9.9	11.8	4.1	3.5	4.7	21.1	19.9	22.4	41.9	40.5	43.4	12.0	11.1	12.8
<b>Total</b>	<b>7.1</b>	<b>6.7</b>	<b>7.5</b>	<b>3.7</b>	<b>3.4</b>	<b>4.0</b>	<b>24.0</b>	<b>23.3</b>	<b>24.8</b>	<b>52.2</b>	<b>51.4</b>	<b>53.1</b>	<b>7.8</b>	<b>7.5</b>	<b>8.2</b>

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

The proportion of persons who thought multiculturalism made life in their area better remained constant between 2005 and 2008 (table 8.11). In 2005, respondents were given the option of providing a 'not applicable' answer for the first time, if they considered their area was not multicultural. The addition of 'not applicable' had an impact on the rates between 2004 and 2005.

Table 8.11: Tolerance of diversity, 2001–2008

	2001	2002	2003	2004	2005	2006	2007	2008
<b>Tolerance of diversity</b>	<b>Per cent</b>							
Not at all	8.9	7.9	5.5	5.2	5.5	6.5	6.3	7.1
Not often	5.6	4.5	2.7	3.0	3.3	3.6	3.5	3.7
Sometimes	28.6	27.5	21.9	19.5	22.8	22.5	25.2	24.0
Yes, definitely	56.9	59.1	63.7	66.0	56.9	52.4	50.9	52.2
<b>Not applicable</b>	..	..	..	..	8.4	10.1	8.9	7.8

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.

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

Persons who were living in the metropolitan area (55.1 per cent) were more likely than those in rural areas (43.6 per cent) to think multiculturalism made life better in their area. This difference may be largely explained, by a higher proportion of persons from rural areas (18.2 per cent) thinking multiculturalism was not applicable to their area, compared with those living in the metropolitan area (4.1 per cent).

Among Department of Health rural regions, the proportion of persons who thought multiculturalism made life better in their area ranged from more than a third (38.9 per cent) in the Loddon Mallee region to 51.2 per cent in the Barwon–South Western region. Similar proportions of persons in the three metropolitan regions thought multiculturalism made life better in their area. Rural males were more likely (10.5 per cent) to report multiculturalism did not make life in their area better, compared with rural females (6.3 per cent) and metropolitan males (6.8 per cent).

Table 8.12: Tolerance of diversity, by sex and Department of Health region, 2008

Region	No, not at all			Not often			Sometimes			Yes, definitely			Not applicable		
	%	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
<b>Males</b>															
Barwon-South Western	9.2	6.4	12.9	3.1*	1.9	5.1	17.1	12.8	22.4	51.6	45.5	57.7	14.5	11.8	17.7
Eastern Metropolitan	6.6	5.2	8.4	4.7	3.4	6.4	23.4	20.6	26.6	56.0	52.6	59.4	4.8	3.7	6.2
Gippsland	13.7	10.9	17.0	4.8	3.2	7.4	20.8	17.3	24.9	40.6	36.5	44.8	14.1	11.6	17.0
Grampians	9.6	7.4	12.3	3.6*	2.2	6.0	18.6	15.6	22.1	40.0	35.8	44.3	24.8	21.0	28.9
Hume	9.5	7.6	11.9	4.6	3.2	6.5	26.5	23.4	29.9	41.2	37.7	44.7	14.8	12.8	17.1
Loddon Mallee	11.3	9.0	14.1	3.7	2.4	5.7	20.6	17.2	24.4	37.6	33.8	41.6	22.0	18.6	25.9
North and West Metropolitan	7.3	6.2	8.5	4.0	3.2	5.1	26.8	24.8	29.0	55.4	53.1	57.7	1.8	1.3	2.4
Southern Metropolitan	6.7	5.4	8.3	3.4	2.5	4.5	25.8	23.2	28.6	54.6	51.6	57.5	4.7	3.7	5.9
<b>Metropolitan</b>	6.8	6.1	7.6	4.0	3.4	4.7	25.5	24.1	27.0	55.4	53.8	57.0	3.5	3.0	4.1
<b>Rural</b>	10.5	9.3	11.8	3.9	3.2	4.8	20.4	18.6	22.3	42.9	40.5	45.2	17.8	16.3	19.4
<b>Total</b>	7.7	7.1	8.4	3.9	3.5	4.5	24.2	23.1	25.4	52.3	51.0	53.6	7.3	6.7	7.8
<b>Females</b>															
Barwon-South Western	4.1	2.9	5.7	2.1*	1.2	3.8	18.8	16.0	22.0	50.9	46.3	55.5	19.2	15.9	23.1
Eastern Metropolitan	6.0	4.9	7.4	3.4	2.5	4.6	23.6	21.3	26.1	56.5	53.7	59.2	4.9	4.0	5.9
Gippsland	8.3	6.4	10.6	3.5	2.5	4.8	24.4	21.5	27.5	42.7	39.5	46.0	15.7	13.7	18.0
Grampians	5.6	4.1	7.5	2.2	1.6	3.0	22.8	19.4	26.6	45.7	41.9	49.5	18.4	16.2	20.8
Hume	7.3	6.0	8.8	4.3	3.3	5.5	26.7	24.2	29.3	40.8	38.2	43.5	16.4	14.9	18.1
Loddon Mallee	6.9	5.6	8.4	3.6	2.8	4.6	22.6	20.0	25.6	40.1	37.1	43.2	22.2	19.8	24.7
North and West Metropolitan	6.9	6.1	7.8	3.5	2.9	4.2	24.6	23.1	26.3	54.2	52.4	56.0	3.5	2.9	4.2
Southern Metropolitan	6.8	5.7	8.1	4.1	3.2	5.1	24.2	22.2	26.2	53.5	51.2	55.8	5.8	4.9	6.8
<b>Metropolitan</b>	6.5	6.0	7.2	3.6	3.2	4.1	24.2	23.1	25.3	54.9	53.6	56.1	4.6	4.2	5.1
<b>Rural</b>	6.3	5.6	7.1	3.1	2.6	3.6	22.6	21.2	24.1	44.5	42.7	46.2	18.7	17.4	20.0
<b>Total</b>	6.4	6.0	6.9	3.4	3.1	3.8	23.8	22.9	24.7	52.3	51.3	53.3	8.3	7.9	8.8
<b>Persons</b>															
Barwon-South Western	6.6	5.1	8.7	2.6	1.7	3.8	18.0	15.2	21.1	51.2	47.4	55.0	17.0	14.7	19.6
Eastern Metropolitan	6.3	5.4	7.4	4.1	3.2	5.1	23.6	21.8	25.6	56.1	53.9	58.3	4.9	4.1	5.7
Gippsland	10.9	9.2	12.9	4.2	3.1	5.6	22.5	20.2	25.0	41.5	38.9	44.2	15.1	13.4	16.9
Grampians	7.6	6.2	9.3	2.9	2.0	4.0	20.7	18.3	23.4	42.9	40.1	45.9	21.4	19.2	23.9
Hume	8.4	7.2	9.8	4.4	3.5	5.5	26.6	24.5	28.7	41.0	38.8	43.3	15.6	14.3	17.0
Loddon Mallee	9.0	7.7	10.6	3.6	2.8	4.7	21.7	19.5	24.0	38.9	36.4	41.5	22.0	19.9	24.3
North and West Metropolitan	7.1	6.4	7.9	3.8	3.2	4.4	25.7	24.4	27.0	54.7	53.2	56.2	2.6	2.3	3.1
Southern Metropolitan	6.7	5.9	7.7	3.8	3.1	4.5	25.0	23.4	26.7	54.0	52.1	55.8	5.2	4.6	6.0
<b>Metropolitan</b>	6.7	6.2	7.2	3.8	3.4	4.2	24.9	24.0	25.8	55.1	54.0	56.1	4.1	3.7	4.5
<b>Rural</b>	8.4	7.7	9.1	3.5	3.0	4.0	21.6	20.4	22.8	43.6	42.2	45.1	18.2	17.2	19.2
<b>Total</b>	7.1	6.7	7.5	3.7	3.4	4.0	24.0	23.3	24.8	52.2	51.4	53.1	7.8	7.5	8.2

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

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

Table 8.13 shows tolerance to diversity by LGA. The proportion of persons who thought multiculturalism made life better in their area ranged from 44.7 per cent in the rural LGA of Pyrenees (where 37.3 per cent thought the concept of multiculturalism was not applicable in their area) to 90.8 per cent in Melbourne. Among metropolitan LGAs, the proportion of persons who thought multiculturalism made life better in their area was lowest in Cardinia (63.6 per cent), where 18.8 per cent of the population regarded multiculturalism as not applicable in their area. Among rural LGAs, the proportion of persons who thought multiculturalism made life in their area better was lowest in the Pyrenees.

Figure 8.5 summarises the data in table 8.13 for the proportion of persons who thought multiculturalism made life in their area better, and the proportion who thought multiculturalism did not apply in their area.

Table 8.13: Tolerance of diversity, by LGA, 2008

LGA	Does multiculturalism make life in your area better?								
	No, not at all / Not often			Sometimes / Yes, definitely			Not applicable		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	7.1	5.0	10.0	77.6	72.3	82.2	12.8	9.0	17.9
Ararat (RC)	11.3	7.2	17.3	60.0	53.3	66.3	22.9	17.7	29.2
Ballarat (C)	10.0	7.0	14.0	68.2	62.6	73.4	17.0	13.0	21.9
Banyule (C)	8.5	6.0	11.8	80.2	75.4	84.3	6.1	3.8	9.7
Bass Coast (S)	15.7	10.5	22.9	63.3	54.6	71.2	13.9	9.1	20.7
Baw Baw (S)	12.5	8.5	18.1	57.4	51.2	63.3	22.7	18.4	27.8
Bayside (C)	7.1	4.8	10.4	79.7	74.3	84.1	8.4	5.4	12.7
Benalla (RC)	8.5	5.9	11.9	64.0	57.9	69.7	22.4	17.5	28.3
Boroondara (C)	8.1	5.8	11.2	84.7	80.9	87.8	2.1	1.1	3.9
Brimbank (C)	11.0	8.4	14.1	81.4	77.5	84.8	**		
Buloke (S)	6.6	4.2	10.1	60.0	54.1	65.5	30.0	25.3	35.1
Campaspe (S)	14.0	10.6	18.3	55.5	49.7	61.1	26.8	22.0	32.1
Cardinia (S)	13.1	9.5	17.6	63.6	57.7	69.1	18.8	14.8	23.7
Casey (C)	13.6	10.4	17.5	76.6	72.0	80.6	2.9	1.7	4.7
Central Goldfields (S)	11.3	7.0	17.6	55.2	48.6	61.7	29.6	24.7	35.1
Colac-Otway (S)	9.4	6.6	13.2	74.0	68.5	78.8	9.5	7.2	12.5
Corangamite (S)	9.0	5.7	13.9	56.3	49.7	62.6	31.8	26.5	37.7
Darebin (C)	8.9	6.2	12.5	82.8	78.9	86.1	**		
East Gippsland (S)	15.8	10.7	22.8	56.5	49.7	63.0	18.3	13.7	23.9
Frankston (C)	10.9	8.1	14.4	74.8	70.1	79.0	7.2	4.8	10.7
Gannawarra (S)	18.2	13.7	23.9	49.3	43.4	55.1	28.3	22.9	34.5
Glen Eira (C)	4.0	2.7	6.0	90.1	87.4	92.3	0.7	0.3	1.7
Glenelg (S)	8.1	5.8	11.3	66.6	60.9	71.9	20.8	16.5	26.0
Golden Plains (S)	7.2	5.1	10.2	58.7	54.0	63.2	29.3	25.2	33.7
Greater Bendigo (C)	8.7	5.9	12.5	57.0	51.1	62.7	30.0	25.0	35.5
Greater Dandenong (C)	18.1	14.3	22.6	78.1	73.5	82.1	**		
Greater Geelong (C)	9.1	6.3	12.9	71.4	65.7	76.4	14.9	11.3	19.4
Greater Shepparton (C)	18.2	13.8	23.7	70.4	64.6	75.7	6.9	4.9	9.8
Hepburn (S)	6.0	4.1	8.8	70.4	65.1	75.2	21.1	16.9	26.1
Hindmarsh (S)	14.9	10.8	20.3	55.0	48.6	61.3	24.4	19.3	30.4
Hobsons Bay (C)	13.1	9.8	17.2	78.3	73.5	82.5	2.5	1.3	4.8
Horsham (RC)	10.1	6.9	14.7	69.3	63.6	74.5	14.9	11.0	19.8
Hume (C)	18.4	14.8	22.6	72.1	67.4	76.4	3.7	2.4	5.8
Indigo (S)	7.3	5.0	10.5	68.5	63.4	73.2	22.4	18.1	27.4
Kingston (C)	9.5	7.0	12.8	80.4	75.9	84.2	3.4	2.2	5.2
Knox (C)	13.8	10.3	18.3	76.2	71.3	80.4	4.1	2.6	6.5
Latrobe (C)	19.3	15.1	24.2	69.6	64.1	74.6	6.4	4.3	9.5
Loddon (S)	10.9	7.4	15.9	47.7	41.3	54.1	38.2	32.1	44.7
Macedon Ranges (S)	10.4	6.8	15.6	62.7	56.2	68.8	23.7	18.9	29.3
Manningham (C)	9.1	6.2	13.2	82.3	77.6	86.2	4.9	3.2	7.4

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

LGA = local government area.

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

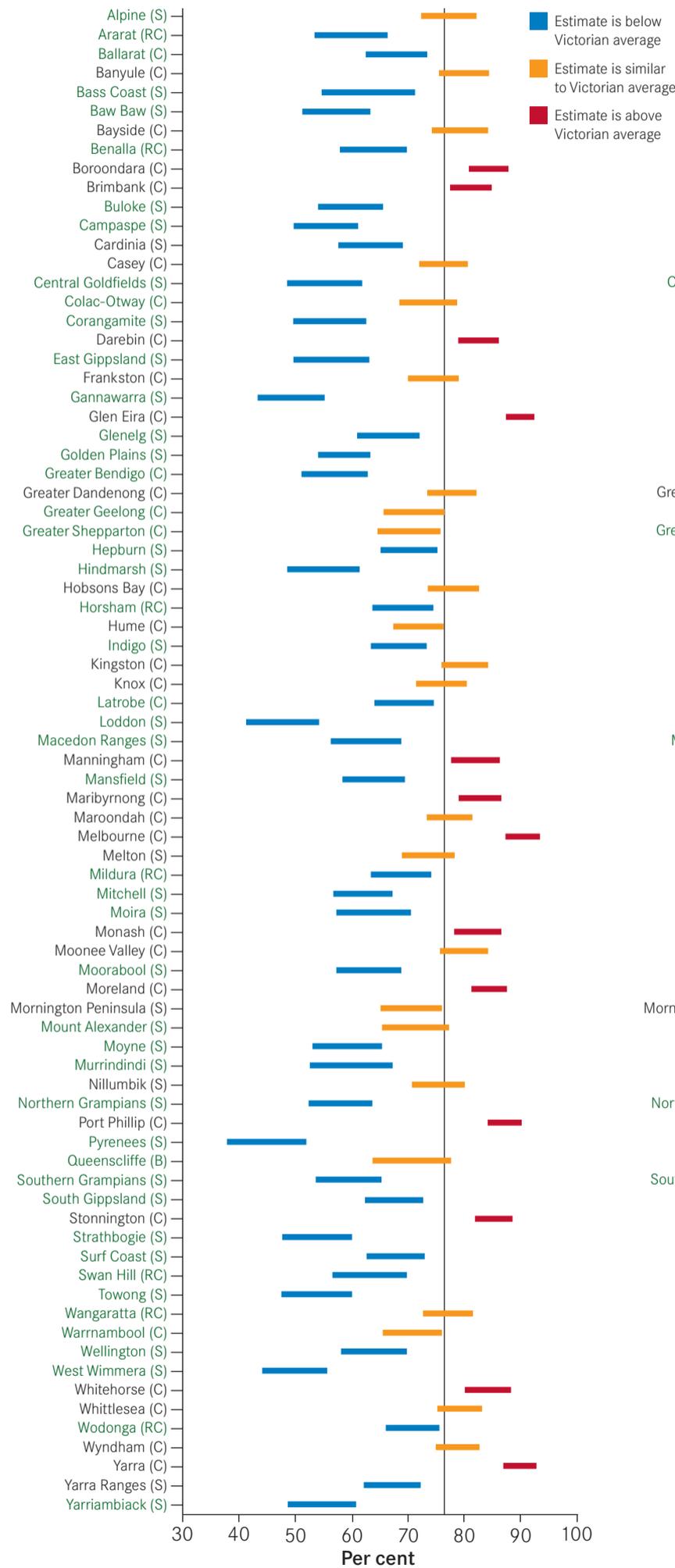
\* Estimate has a relative standard error between 25 and 50 per cent and should be interpreted with caution.

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

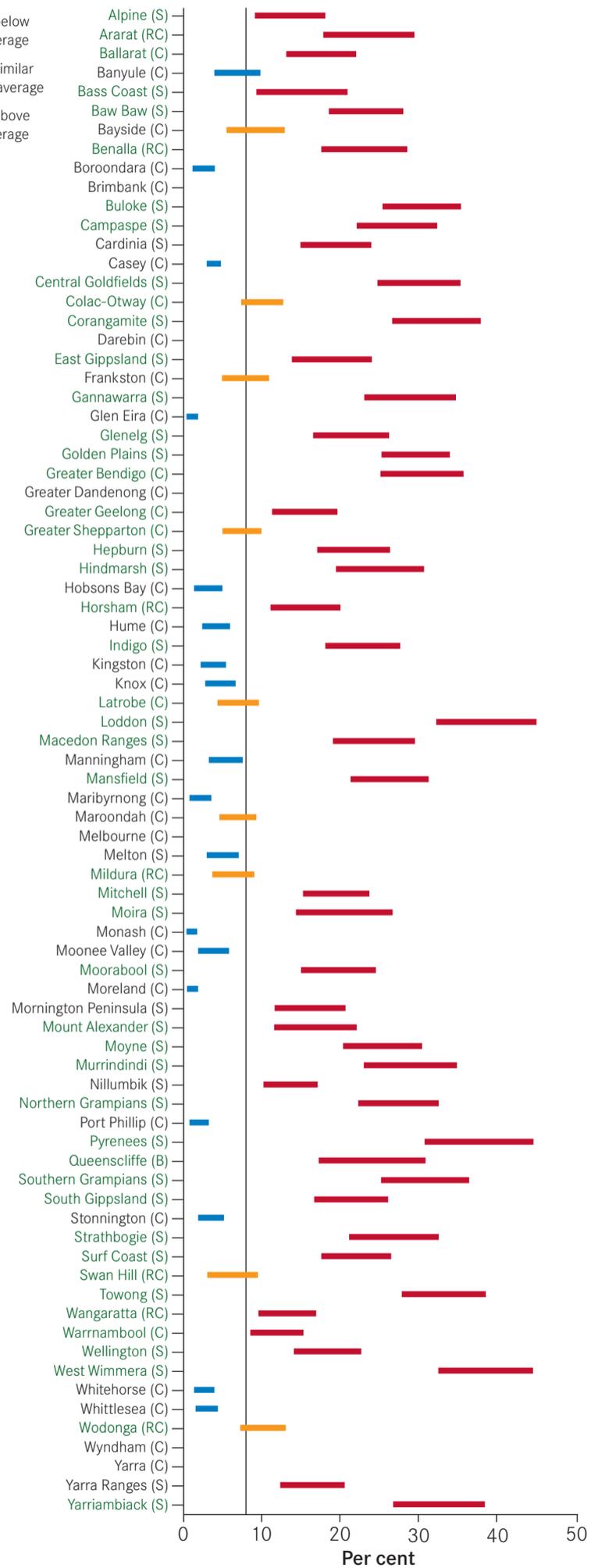
Table 8.13: Tolerance of diversity, by LGA, 2008 (continued)

LGA	Does multiculturalism make life in your area better?								
	No, not at all / Not often			Sometimes / Yes, definitely			Not applicable		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	7.6	5.0	11.5	64.0	58.3	69.3	25.8	21.1	31.1
Maribyrnong (C)	11.4	8.6	15.0	83.2	79.1	86.6	1.4	2.5	6.3
Maroondah (C)	9.8	7.3	13.2	77.6	73.3	81.5	6.4	4.5	9.1
Melbourne (C)	7.2	4.8	10.5	90.8	87.4	93.4	**		
Melton (S)	14.7	11.1	19.3	73.8	68.9	78.2	4.5	2.9	6.9
Mildura (RC)	18.5	14.4	23.5	69.1	63.5	74.2	5.8	3.7	8.9
Mitchell (S)	15.0	11.5	19.4	62.1	56.7	67.1	19.0	15.1	23.6
Moira (S)	13.0	9.5	17.5	64.2	57.3	70.5	19.6	14.2	26.4
Monash (C)	10.2	7.3	14.0	82.8	78.3	86.5	0.7	0.3	1.6
Moonee Valley (C)	9.8	7.2	13.3	80.2	75.7	84.0	3.3	1.9	5.6
Moorabool (S)	13.7	9.9	18.7	63.2	57.3	68.8	19.1	14.8	24.4
Moreland (C)	8.1	5.9	10.9	84.6	81.2	87.5	0.7	0.3	1.7
Mornington Peninsula (S)	11.5	8.2	16.0	71.0	65.2	76.1	15.5	11.5	20.4
Mount Alexander (S)	7.0	5.0	9.7	71.7	65.4	77.2	15.9	11.4	21.8
Moyne (S)	9.6	6.3	14.4	59.3	53.1	65.3	24.9	20.3	30.1
Murrindindi (S)	9.2	5.3	15.7	60.0	52.4	67.1	28.3	22.9	34.6
Nillumbik (S)	9.0	6.0	13.2	75.6	70.5	80.1	13.2	10.1	16.9
Northern Grampians (S)	11.5	8.4	15.5	58.1	52.3	63.6	26.9	22.2	32.2
Port Phillip (C)	6.2	4.2	9.0	87.5	84.2	90.1	1.5	0.7	3.1
Pyrenees (S)	13.9	11.1	17.2	44.7	37.7	51.9	37.3	30.6	44.4
Queenscliffe (B)	3.7	1.8	7.1	71.1	63.6	77.5	23.2	17.2	30.6
Southern Grampians (S)	8.2	5.7	11.7	59.6	53.6	65.2	30.4	25.1	36.2
South Gippsland (S)	7.2	5.0	10.4	67.6	62.2	72.6	20.8	16.6	25.8
Stonnington (C)	7.6	5.4	10.6	85.5	81.8	88.5	3.0	1.8	5.0
Strathbogie (S)	15.9	11.2	22.1	53.8	47.6	59.9	26.2	21.0	32.2
Surf Coast (S)	7.4	4.9	11.0	67.9	62.5	72.9	21.5	17.5	26.3
Swan Hill (RC)	26.4	20.9	32.8	63.5	56.7	69.7	5.3	2.9	9.3
Towong (S)	10.8	6.9	16.5	53.7	47.4	59.9	32.8	27.8	38.2
Wangaratta (RC)	6.7	4.5	9.8	77.4	72.6	81.5	12.7	9.5	16.8
Warmambool (C)	11.8	8.3	16.6	71.0	65.4	76.1	11.4	8.5	15.2
Wellington (S)	13.5	10.0	18.0	64.0	58.1	69.6	17.9	14.0	22.5
West Wimmera (S)	8.9	5.8	13.4	49.8	44.2	55.5	38.2	32.4	44.3
Whitehorse (C)	11.0	7.6	15.5	84.6	80.0	88.3	2.2	1.3	3.8
Whittlesea (C)	11.1	8.4	14.6	79.3	75.1	83.0	2.5	1.5	4.3
Wodonga (RC)	13.2	10.1	17.2	71.0	65.9	75.5	9.7	7.2	12.9
Wyndham (C)	14.8	11.6	18.8	79.0	74.9	82.6	**		
Yarra (C)	5.4	3.5	8.3	90.1	86.8	92.7	**		
Yarra Ranges (S)	11.3	8.2	15.3	67.3	62.1	72.2	15.8	12.2	20.2
Yarriambiack (S)	10.8	7.5	15.3	54.7	48.5	60.7	32.1	26.6	38.2
<b>Total</b>	<b>10.8</b>	<b>10.3</b>	<b>11.3</b>	<b>76.3</b>	<b>75.6</b>	<b>76.9</b>	<b>7.8</b>	<b>7.5</b>	<b>8.2</b>

Figure 8.5: Tolerance of diversity, by LGA, 2008  
Yes, definitely/sometimes



Not applicable



Note that the scale differs for different parts of the graph.  
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 line on the graph is the Victorian estimate, it does not show the 95% CI.  
See relevant table for the 95% CI for Victoria (Total).  
No data are provided for LGAs where the RSE for the estimate is greater than 50 per cent.

## Social and support networks

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

Another layer of support within the community is provided by volunteer organisations and support groups. Many individuals receive their help. Volunteer organisations provide a vehicle for individuals or groups to address human, environmental and social needs. Support groups provide an opportunity for people to share experiences with others with similar backgrounds or experiences, and often benefit from the work of volunteers.

### Ability to get help from family, friends and neighbours

An individual's informal relationships with family, friends, and neighbours provide valuable support in times of need. The 2008 survey asked respondents whether they were able to get help from family, friends and neighbours if they needed it. Tables 8.14–8.16 show the proportions of persons who reported they could get help from each of these sources, by sex and age group.

More than eight in 10 persons aged 18–24 years, 25–34 years, 55–64 years and 65 years and over reported they were definitely able to get help from family if needed (table 8.14). Similar proportions of males and females in each age group reported they could definitely get help from family if needed.

Table 8.15 shows the proportion of persons who reported they could get help from friends if they needed it. A higher proportion of females (79.7 per cent) than males (74.9 per cent) aged 35–44 years reported they could definitely get help from friends; in other age groups, the proportions were similar for males and females. A higher proportion of persons aged 65 years and over (4.7 per cent) reported they could not get help from friends if needed, compared with those in other age groups.

Being able to get help from neighbours when needed was related to age, with a higher proportion of those in older age groups reporting they definitely were able to get help when needed (table 8.16). Similar proportions of males and females in each age group reported they were definitely able to get help from neighbours.

Table 8.14: Able to get help from family when needed, by age group and sex, 2008

Age group (years)	No, not at all			Not often			Sometimes			Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
18–24 years	1.6*	0.8	3.1	1.3*	0.5	3.4	8.2	6.0	11.1	88.6	85.3	91.3
25–34 years	2.9*	1.9	4.5	2.6	1.6	4.4	13.8	11.2	16.8	80.4	77.0	83.3
35–44 years	4.4	3.4	5.8	3.6	2.7	4.8	15.6	13.5	17.9	75.8	73.2	78.3
45–54 years	4.8	3.8	6.1	2.9	2.1	4.0	14.1	12.2	16.1	77.6	75.2	79.8
55–64 years	4.3	3.4	5.4	2.4	1.7	3.2	11.0	9.4	12.7	81.2	79.1	83.2
65+	4.4	3.7	5.2	2.2	1.7	3.0	8.1	6.9	9.4	84.4	82.7	85.9
<b>Total</b>	<b>3.9</b>	<b>3.5</b>	<b>4.4</b>	<b>2.5</b>	<b>2.2</b>	<b>3.0</b>	<b>12.1</b>	<b>11.2</b>	<b>13.0</b>	<b>80.8</b>	<b>79.7</b>	<b>81.8</b>
<b>Females</b>												
18–24 years	1.2*	0.6	2.3	2.9	1.8	4.8	9.8	7.6	12.6	85.7	82.5	88.5
25–34 years	4.5	3.5	5.7	3.6	2.7	4.8	11.7	10.0	13.6	80.0	77.7	82.2
35–44 years	6.2	5.3	7.3	5.6	4.6	6.7	14.8	13.3	16.3	72.9	71.0	74.8
45–54 years	5.3	4.4	6.4	4.9	4.0	6.0	14.1	12.6	15.8	75.4	73.4	77.3
55–64 years	3.5	2.8	4.2	2.9	2.2	3.7	9.0	7.9	10.3	84.4	82.8	85.8
65+	3.9	3.3	4.7	2.5	2.1	3.1	9.0	7.9	10.1	83.9	82.4	85.2
<b>Total</b>	<b>4.3</b>	<b>3.9</b>	<b>4.7</b>	<b>3.8</b>	<b>3.4</b>	<b>4.2</b>	<b>11.6</b>	<b>11.0</b>	<b>12.3</b>	<b>79.9</b>	<b>79.1</b>	<b>80.7</b>
<b>Persons</b>												
18–24 years	1.4	0.8	2.2	2.1	1.3	3.3	9.0	7.4	10.9	87.2	85.0	89.2
25–34 years	3.7	3.0	4.6	3.1	2.4	4.1	12.7	11.2	14.5	80.2	78.2	82.1
35–44 years	5.4	4.6	6.2	4.6	3.9	5.4	15.2	13.9	16.5	74.4	72.8	75.9
45–54 years	5.1	4.4	5.9	3.9	3.3	4.7	14.1	12.9	15.4	76.5	75.0	78.0
55–64 years	3.9	3.3	4.5	2.6	2.1	3.2	10.0	9.0	11.1	82.8	81.5	84.1
65+	4.1	3.6	4.7	2.4	2.0	2.8	8.6	7.8	9.4	84.1	83.0	85.1
<b>Total</b>	<b>4.1</b>	<b>3.8</b>	<b>4.4</b>	<b>3.2</b>	<b>2.9</b>	<b>3.5</b>	<b>11.9</b>	<b>11.3</b>	<b>12.4</b>	<b>80.3</b>	<b>79.7</b>	<b>81.0</b>

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

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

Table 8.15: Able to get help from friends when needed, by age group and sex, 2008

Age group (years)	No, not at all			Not often			Sometimes			Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
18–24 years	0.3*	0.1	0.8	2.8*	1.5	5.1	11.7	8.9	15.3	85.2	81.3	88.3
25–34 years	1.8*	1.1	2.9	1.7	1.0	3.1	15.8	13.1	19.0	80.4	77.1	83.4
35–44 years	2.4	1.6	3.6	3.6	2.5	5.0	18.7	16.4	21.1	74.9	72.1	77.4
45–54 years	2.6	1.8	3.7	2.2	1.5	3.2	17.1	15.0	19.3	77.7	75.3	80.0
55–64 years	2.4	1.7	3.4	2.9	2.0	4.1	12.8	11.1	14.8	80.9	78.7	83.0
65+	4.0	3.2	5.0	2.8	2.2	3.7	9.9	8.6	11.4	81.1	79.3	82.8
<b>Total</b>	<b>2.4</b>	<b>2.0</b>	<b>2.7</b>	<b>2.7</b>	<b>2.3</b>	<b>3.2</b>	<b>14.7</b>	<b>13.8</b>	<b>15.7</b>	<b>79.5</b>	<b>78.4</b>	<b>80.6</b>
<b>Females</b>												
18–24 years	1.5*	0.7	3.3	1.9*	1.0	3.7	10.4	8.0	13.4	86.2	82.8	89.0
25–34 years	1.4	0.9	2.2	1.7	1.2	2.6	14.7	12.8	16.8	82.0	79.7	84.1
35–44 years	2.4	1.8	3.1	2.5	1.9	3.3	15.2	13.8	16.8	79.7	77.9	81.3
45–54 years	2.4	1.8	3.1	2.7	2.1	3.6	13.1	11.6	14.8	81.5	79.6	83.2
55–64 years	3.1	2.4	4.0	2.1	1.5	2.8	10.9	9.6	12.4	83.4	81.7	85.0
65+	5.2	4.4	6.1	2.7	2.1	3.4	10.5	9.4	11.8	79.9	78.3	81.4
<b>Total</b>	<b>2.8</b>	<b>2.5</b>	<b>3.1</b>	<b>2.3</b>	<b>2.0</b>	<b>2.6</b>	<b>12.7</b>	<b>12.0</b>	<b>13.5</b>	<b>81.7</b>	<b>80.9</b>	<b>82.5</b>
<b>Persons</b>												
18–24 years	0.9*	0.4	1.7	2.4	1.5	3.7	11.1	9.2	13.3	85.7	83.2	87.8
25–34 years	1.6	1.2	2.2	1.7	1.2	2.5	15.3	13.5	17.1	81.2	79.2	83.1
35–44 years	2.4	1.9	3.1	3.0	2.4	3.8	16.9	15.6	18.4	77.3	75.7	78.8
45–54 years	2.5	2.0	3.1	2.5	2.0	3.1	15.1	13.8	16.5	79.6	78.1	81.1
55–64 years	2.7	2.2	3.4	2.5	1.9	3.1	11.9	10.8	13.0	82.2	80.8	83.5
65+	4.7	4.1	5.3	2.8	2.3	3.3	10.2	9.4	11.2	80.4	79.2	81.6
<b>Total</b>	<b>2.6</b>	<b>2.3</b>	<b>2.8</b>	<b>2.5</b>	<b>2.2</b>	<b>2.8</b>	<b>13.7</b>	<b>13.1</b>	<b>14.3</b>	<b>80.6</b>	<b>79.9</b>	<b>81.3</b>

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

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

Table 8.16: Able to get help from neighbours when needed, by age group and sex, 2008

Age group (years)	No, not at all			Not often			Sometimes			Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
18–24 years	21.0	17.4	25.1	12.1	9.2	15.6	27.2	23.1	31.8	36.6	32.1	41.3
25–34 years	25.1	21.7	28.8	9.2	7.3	11.6	24.0	20.8	27.6	35.8	32.0	39.7
35–44 years	15.7	13.7	18.0	8.1	6.6	9.8	25.2	22.7	28.0	47.1	44.1	50.2
45–54 years	14.2	12.3	16.4	6.5	5.3	8.0	22.4	20.2	24.8	53.2	50.4	56.1
55–64 years	12.5	10.8	14.4	5.7	4.6	7.1	17.1	15.2	19.3	61.6	58.9	64.2
65+	10.6	9.2	12.1	4.7	3.8	5.8	12.9	11.4	14.5	67.4	65.2	69.5
<b>Total</b>	<b>16.6</b>	<b>15.6</b>	<b>17.7</b>	<b>7.7</b>	<b>7.0</b>	<b>8.5</b>	<b>21.3</b>	<b>20.2</b>	<b>22.5</b>	<b>50.2</b>	<b>48.9</b>	<b>51.5</b>
<b>Females</b>												
18–24 years	21.8	18.4	25.7	12.1	9.5	15.2	30.2	26.2	34.6	32.9	28.9	37.1
25–34 years	22.9	20.5	25.4	8.9	7.4	10.7	24.6	22.1	27.2	39.6	36.8	42.4
35–44 years	17.7	16.2	19.4	7.0	6.0	8.1	24.6	22.8	26.4	47.9	45.8	50.1
45–54 years	14.4	12.9	16.1	7.0	5.9	8.3	21.3	19.5	23.3	53.8	51.5	56.1
55–64 years	12.9	11.5	14.6	5.9	5.0	7.1	18.2	16.6	20.0	59.6	57.4	61.7
65+	12.6	11.3	14.0	4.8	4.0	5.7	12.4	11.2	13.7	66.2	64.3	68.0
<b>Total</b>	<b>17.1</b>	<b>16.3</b>	<b>18.0</b>	<b>7.5</b>	<b>6.9</b>	<b>8.1</b>	<b>21.6</b>	<b>20.7</b>	<b>22.5</b>	<b>50.3</b>	<b>49.2</b>	<b>51.3</b>
<b>Persons</b>												
18–24 years	21.4	18.9	24.2	12.1	10.1	14.4	28.7	25.7	31.8	34.8	31.8	37.9
25–34 years	24.0	21.9	26.2	9.1	7.8	10.5	24.3	22.2	26.5	37.7	35.3	40.1
35–44 years	16.8	15.4	18.1	7.5	6.6	8.5	24.9	23.3	26.5	47.5	45.7	49.4
45–54 years	14.3	13.1	15.7	6.8	5.9	7.7	21.9	20.4	23.4	53.5	51.7	55.3
55–64 years	12.7	11.6	14.0	5.8	5.1	6.7	17.7	16.4	19.0	60.6	58.9	62.2
65+	11.7	10.7	12.7	4.7	4.1	5.4	12.6	11.7	13.7	66.7	65.3	68.1
<b>Total</b>	<b>16.9</b>	<b>16.3</b>	<b>17.6</b>	<b>7.6</b>	<b>7.1</b>	<b>8.1</b>	<b>21.4</b>	<b>20.7</b>	<b>22.2</b>	<b>50.2</b>	<b>49.4</b>	<b>51.1</b>

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 from the corresponding estimate for Victoria are identified by colour as follows: **above Victoria** / **below Victoria**.

Table 8.17 shows the proportion of persons who reported being able to get help from family, friends or neighbours when needed, over time. The proportion of persons who reported being able to get help from family, friends or neighbours remained constant between 2001 and 2008.

**Table 8.17: Ability to get help when needed, 2001–2008**

	2001	2002	2003	2004	2005	2006	2007	2008
	Per cent							
<b>Can you get help from friends when you need it?</b>								
Not at all	3.1	2.9	3.2	3.8	2.9	2.7	2.9	2.6
Not often	2.7	3.1	2.6	2.6	3.1	2.1	2.1	2.5
Sometimes	14.7	14.1	13.8	12.6	14.2	12.3	14.5	13.7
Yes, definitely	79.5	79.9	80.4	80.6	78.9	82.1	79.6	80.6
<b>Can you get help from family members when you need it?</b>								
Not at all	4.4	4.3	3.7	4.4	3.9	3.9	4.1	4.1
Not often	3.0	3.0	2.2	2.5	2.6	3.3	3.2	3.2
Sometimes	10.6	9.8	10.4	8.9	11.3	11.8	11.2	11.9
Yes, definitely	82.0	83.0	83.7	84.0	82.0	80.6	81.0	80.3
<b>Can you get help from neighbours when you need it?</b>								
Not at all	13.1	18.8	21.0	22.1	15.8	16.6	16.9	16.9
Not often	9.1	9.4	7.8	8.6	8.8	7.5	8.5	7.6
Sometimes	26.9	20.0	19.6	18.2	21.3	20.1	22.6	21.4
Yes, definitely	50.9	51.7	51.6	49.5	50.0	51.2	47.8	50.2

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.

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

Tables 8.18–8.20 show whether persons could get help from family, friends or neighbours, by sex and Department of Health region. More than eight in 10 persons (80.3 per cent) reported they could definitely get help from family if needed (table 8.18). A further 11.9 per cent of persons could get help sometimes. Less than five per cent of persons reported they could get help either not often or not at all (3.2 per cent and 4.1 per cent respectively).

Similar proportions of males, females and persons in rural and metropolitan areas of the state were able to get help from family. The proportions differed little across regions, relative to the average for Victoria (80.3 per cent). However, the proportion of persons from the Grampians region (84.3 per cent) who reported they could definitely get help from family was higher than the average for Victoria.

Table 8.18: Able to get help from family when needed, by sex and Department of Health region, 2008

Region	No, not at all			Not often			Sometimes			Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
Barwon-South Western	3.1*	1.9	5.1	1.9*	1.2	3.0	11.0	8.2	14.5	83.2	79.4	86.4
Eastern Metropolitan	3.6	2.5	5.0	2.3	1.5	3.5	13.1	10.9	15.7	80.1	77.2	82.8
Gippsland	3.8	2.7	5.5	3.6	2.2	5.7	10.8	8.5	13.7	81.5	78.1	84.5
Grampians	2.6	2.0	3.3	2.1	1.3	3.5	10.8	8.6	13.4	84.3	81.4	86.7
Hume	5.8	4.0	8.4	3.1	2.2	4.2	12.6	10.2	15.5	78.0	74.6	81.0
Loddon Mallee	3.4	2.5	4.6	1.3	0.9	1.9	9.0	7.2	11.3	86.2	83.7	88.3
North and West Metropolitan	4.3	3.5	5.3	2.4	1.8	3.2	12.0	10.6	13.5	80.5	78.7	82.3
Southern Metropolitan	3.8	2.9	5.0	3.0	2.1	4.2	12.7	10.8	14.9	80.0	77.5	82.2
<b>Metropolitan</b>	4.0	3.4	4.6	2.6	2.1	3.2	12.5	11.5	13.6	80.2	78.9	81.5
<b>Rural</b>	3.7	3.1	4.5	2.3	1.9	2.8	10.7	9.5	12.0	82.8	81.3	84.2
<b>Total</b>	3.9	3.5	4.4	2.5	2.2	3.0	12.1	11.2	13.0	80.8	79.7	81.8
<b>Females</b>												
Barwon-South Western	4.1	2.8	5.8	5.3	3.3	8.2	12.5	9.5	16.3	77.7	73.2	81.6
Eastern Metropolitan	4.4	3.4	5.6	3.7	2.8	4.8	10.1	8.7	11.7	81.5	79.5	83.4
Gippsland	3.5	2.7	4.6	3.2	2.4	4.2	10.3	8.5	12.5	82.7	80.3	84.8
Grampians	3.8	2.9	4.9	2.6	2.0	3.4	9.2	7.8	10.9	84.2	82.2	86.0
Hume	3.7	3.0	4.6	3.1	2.5	3.8	12.2	10.4	14.3	80.7	78.4	82.8
Loddon Mallee	4.4	3.4	5.7	4.2	3.3	5.4	12.6	10.4	15.1	78.6	75.9	81.1
North and West Metropolitan	4.3	3.7	5.0	3.7	3.1	4.4	12.5	11.3	13.7	79.1	77.6	80.6
Southern Metropolitan	4.6	3.8	5.5	3.8	3.0	4.7	12.2	10.7	13.9	78.9	76.9	80.7
<b>Metropolitan</b>	4.4	3.9	4.9	3.8	3.3	4.3	11.7	10.9	12.5	79.7	78.7	80.7
<b>Rural</b>	3.9	3.4	4.5	3.9	3.2	4.7	11.5	10.3	12.7	80.4	78.9	81.8
<b>Total</b>	4.3	3.9	4.7	3.8	3.4	4.2	11.6	11.0	12.3	79.9	79.1	80.7
<b>Persons</b>												
Barwon-South Western	3.6	2.7	4.9	3.6	2.5	5.2	11.7	9.5	14.3	80.5	77.5	83.2
Eastern Metropolitan	4.0	3.2	4.9	3.0	2.4	3.8	11.6	10.2	13.1	80.9	79.1	82.6
Gippsland	3.7	2.9	4.6	3.4	2.6	4.6	10.6	9.1	12.4	82.1	80.0	84.0
Grampians	3.2	2.6	3.9	2.4	1.8	3.1	9.9	8.6	11.4	84.3	82.6	85.8
Hume	4.8	3.7	6.2	3.1	2.5	3.7	12.4	10.9	14.2	79.2	77.2	81.1
Loddon Mallee	3.9	3.2	4.7	2.8	2.3	3.5	10.8	9.3	12.5	82.4	80.5	84.1
North and West Metropolitan	4.3	3.8	4.9	3.1	2.6	3.6	12.2	11.3	13.2	79.8	78.6	80.9
Southern Metropolitan	4.2	3.6	5.0	3.4	2.8	4.2	12.4	11.2	13.8	79.4	77.8	80.9
<b>Metropolitan</b>	4.2	3.8	4.6	3.2	2.9	3.6	12.1	11.4	12.8	80.0	79.1	80.8
<b>Rural</b>	3.8	3.4	4.3	3.1	2.7	3.6	11.1	10.3	12.0	81.6	80.6	82.6
<b>Total</b>	4.1	3.8	4.4	3.2	2.9	3.5	11.9	11.3	12.4	80.3	79.7	81.0

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

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

Table 8.19 shows more than eight in 10 persons (80.6 per cent) felt they could definitely get help from friends if needed, and a further 13.7 per cent felt they could sometimes get help. The proportion of males living in rural regions who felt they could definitely get help from friends (83.4 per cent) was higher than the average for Victoria (79.5 per cent). Although the proportion of females who felt they could get help from friends was similar for metropolitan and rural areas, there were some regional differences. The proportion of females from the Hume region (85.0 per cent) who felt they could get help from friends was higher than the average for Victoria (81.7 per cent), and the proportion of females from the North and West Metropolitan region (78.6 per cent) who could get help from friends was lower than the average for Victoria.

Table 8.19: Able to get help from friends when needed, by sex and Department of Health region, 2008

Region	No, not at all			Not often			Sometimes			Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
Barwon-South Western	1.3	0.8	2.2	1.8*	1.0	3.4	9.5	7.1	12.7	86.8	83.5	89.6
Eastern Metropolitan	2.0	1.4	3.0	2.9	1.9	4.4	15.6	13.0	18.5	78.3	75.1	81.1
Gippsland	2.9*	1.6	5.2	2.0*	0.8	4.9	14.3	11.6	17.4	80.4	76.4	83.9
Grampians	2.9	2.0	4.2	2.2*	1.3	4.0	11.9	9.7	14.3	82.7	79.7	85.3
Hume	2.2	1.5	3.3	1.6	0.9	2.8	16.7	13.9	20.0	78.8	75.5	81.8
Loddon Mallee	1.7	1.1	2.7	2.3*	1.2	4.4	10.3	8.4	12.6	85.5	82.6	87.9
North and West Metropolitan	2.9	2.3	3.8	2.9	2.2	3.9	16.4	14.7	18.2	77.2	75.2	79.1
Southern Metropolitan	2.4	1.6	3.5	2.9	2.1	4.0	14.8	12.7	17.0	79.0	76.5	81.3
<b>Metropolitan</b>	2.5	2.0	3.0	2.9	2.4	3.6	15.5	14.3	16.8	78.2	76.8	79.5
<b>Rural</b>	2.1	1.7	2.7	2.0	1.4	2.7	12.1	10.9	13.4	83.4	81.9	84.8
<b>Total</b>	2.4	2.0	2.7	2.7	2.3	3.2	14.7	13.8	15.7	79.5	78.4	80.6
<b>Females</b>												
Barwon-South Western	2.8*	1.4	5.6	1.2*	0.7	2.1	11.3	8.5	15.0	84.3	80.2	87.7
Eastern Metropolitan	2.4	1.8	3.2	2.6	1.7	3.7	12.6	10.9	14.6	82.0	79.8	84.0
Gippsland	3.0	2.1	4.2	1.0*	0.6	1.7	12.3	10.1	14.8	83.4	80.6	85.8
Grampians	1.8	1.3	2.4	1.4	0.9	2.1	12.2	9.8	15.1	83.7	80.7	86.3
Hume	2.4	1.8	3.2	1.5*	0.9	2.6	10.7	9.2	12.4	85.0	83.0	86.7
Loddon Mallee	2.7	2.0	3.6	1.5	1.0	2.2	12.5	10.2	15.1	83.0	80.3	85.4
North and West Metropolitan	3.8	3.2	4.6	3.1	2.5	3.8	13.7	12.5	15.0	78.6	77.0	80.1
Southern Metropolitan	2.1	1.5	2.8	2.5	1.9	3.3	13.1	11.5	14.8	82.0	80.2	83.8
<b>Metropolitan</b>	2.8	2.5	3.3	2.7	2.3	3.1	13.1	12.3	14.0	80.8	79.8	81.8
<b>Rural</b>	2.6	2.0	3.3	1.3	1.1	1.6	11.7	10.5	13.0	83.9	82.5	85.2
<b>Total</b>	2.8	2.5	3.1	2.3	2.0	2.6	12.7	12.0	13.5	81.7	80.9	82.5
<b>Persons</b>												
Barwon-South Western	2.1*	1.3	3.5	1.5*	1.0	2.4	10.4	8.4	12.9	85.5	82.7	87.8
Eastern Metropolitan	2.3	1.8	2.9	2.7	2.1	3.6	14.1	12.5	15.8	80.1	78.2	81.9
Gippsland	3.1	2.2	4.4	1.5*	0.8	2.9	13.1	11.3	15.1	82.0	79.6	84.1
Grampians	2.3	1.8	3.0	1.8	1.2	2.7	11.9	10.3	13.8	83.2	81.1	85.1
Hume	2.3	1.8	3.0	1.6	1.1	2.3	13.7	12.0	15.7	81.8	79.8	83.7
Loddon Mallee	2.2	1.7	2.9	1.9	1.2	2.9	11.4	9.9	13.1	84.2	82.2	85.9
North and West Metropolitan	3.4	2.9	4.0	3.0	2.5	3.6	15.0	14.0	16.2	77.9	76.6	79.1
Southern Metropolitan	2.2	1.7	2.8	2.7	2.1	3.3	13.9	12.6	15.3	80.6	79.0	82.0
<b>Metropolitan</b>	2.7	2.4	3.0	2.8	2.5	3.2	14.3	13.6	15.1	79.5	78.6	80.3
<b>Rural</b>	2.4	2.0	2.8	1.6	1.3	2.0	11.9	11.0	12.8	83.6	82.6	84.6
<b>Total</b>	2.6	2.3	2.8	2.5	2.2	2.8	13.7	13.1	14.3	80.6	79.9	81.3

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

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

Table 8.20 shows slightly more than half (50.2 per cent) of persons surveyed felt they could definitely get help from neighbours if needed, and a further 21.4 per cent of persons could get help from neighbours sometimes. Compared with the situation of getting help from family and friends when needed, stronger metropolitan–rural differences were evident in the proportion of persons who reported they were able to get help from neighbours. Almost six in 10 persons living in rural areas (57.8 per cent) reported they could definitely get help from neighbours, compared with 47.6 per cent of those living in the metropolitan area.

The proportion of males who could definitely get help when needed was highest in the Barwon–South Western region (62.5 per cent) and lowest in the North and West Metropolitan region (45.8 per cent). Across the three metropolitan regions, the proportion of males who could definitely get help from neighbours was similar (50.0 per cent, 45.8 per cent and 47.2 per cent respectively).

Among females, the proportion of individuals who could get help from neighbours if needed ranged from 45.8 per cent in the North and West Metropolitan region to 61.0 per cent in the Hume region. The proportion of females who could get help from neighbours was above the Victorian average (50.3 per cent) for those living in each of the rural regions.

The proportion of males (19.7 per cent) and females (20.5 per cent) in the North and West Metropolitan region who could not get help from neighbours was higher than the average for Victoria (16.6 per cent and 17.1 per cent respectively), but similar to the average for the metropolitan area (17.9 per cent and 18.3 per cent respectively).

Table 8.20: Able to get help from neighbours when needed, by sex and Department of Health region, 2008

Region	No, not at all			Not often			Sometimes			Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
Barwon-South Western	11.5	7.8	16.5	4.3	2.8	6.6	18.1	14.2	22.9	62.5	56.1	68.4
Eastern Metropolitan	16.1	13.6	19.0	6.5	5.0	8.5	23.1	20.2	26.3	50.0	46.5	53.4
Gippsland	13.0	10.2	16.5	8.6	6.0	12.1	18.1	14.9	21.7	56.0	51.6	60.3
Grampians	12.3	9.6	15.5	7.8	5.5	10.9	19.8	16.3	23.9	55.6	51.5	59.5
Hume	12.5	10.2	15.2	6.7	4.9	9.0	21.0	17.9	24.4	57.2	53.8	60.6
Loddon Mallee	14.0	11.2	17.4	7.5	5.1	10.9	17.5	14.4	21.1	56.6	52.5	60.7
North and West Metropolitan	19.7	17.9	21.7	8.1	6.9	9.5	22.1	20.2	24.2	45.8	43.5	48.1
Southern Metropolitan	16.7	14.6	19.1	9.5	7.8	11.5	22.2	19.7	24.8	47.2	44.4	50.0
<b>Metropolitan</b>	17.9	16.7	19.3	8.1	7.2	9.1	22.2	20.8	23.6	47.4	45.8	49.0
<b>Rural</b>	12.5	11.0	14.2	6.7	5.7	8.0	18.9	17.1	20.7	58.0	55.7	60.3
<b>Total</b>	16.6	15.6	17.7	7.7	7.0	8.5	21.3	20.2	22.5	50.2	48.9	51.5
<b>Females</b>												
Barwon-South Western	12.3	9.7	15.5	5.9	3.9	8.8	22.9	18.7	27.7	56.3	51.5	61.0
Eastern Metropolitan	16.0	13.9	18.3	7.6	6.3	9.2	24.2	21.8	26.9	49.5	46.8	52.2
Gippsland	14.2	11.9	16.8	6.4	4.9	8.4	19.2	16.6	22.2	57.7	54.4	61.0
Grampians	13.4	11.2	16.0	6.4	5.0	8.1	18.0	15.0	21.4	59.2	55.4	62.9
Hume	13.1	11.3	15.0	5.9	4.6	7.6	17.7	15.6	20.0	61.0	58.2	63.7
Loddon Mallee	14.5	12.2	17.1	7.7	5.9	10.1	19.2	16.5	22.2	56.1	53.0	59.2
North and West Metropolitan	20.5	19.0	22.2	7.7	6.7	8.8	22.2	20.6	23.8	45.8	44.0	47.7
Southern Metropolitan	17.4	15.7	19.4	8.3	7.0	9.8	20.9	19.0	22.9	48.7	46.4	51.0
<b>Metropolitan</b>	18.3	17.3	19.4	7.9	7.1	8.6	22.3	21.2	23.4	47.7	46.5	49.0
<b>Rural</b>	13.5	12.4	14.7	6.4	5.6	7.4	19.7	18.2	21.4	57.8	56.0	59.5
<b>Total</b>	17.1	16.3	18.0	7.5	6.9	8.1	21.6	20.7	22.5	50.3	49.2	51.3
<b>Persons</b>												
Barwon-South Western	12.0	9.4	15.1	5.1	3.7	7.0	20.5	17.5	23.9	59.2	55.2	63.1
Eastern Metropolitan	16.1	14.4	17.9	7.1	6.0	8.3	23.7	21.7	25.7	49.7	47.5	52.0
Gippsland	13.8	11.9	16.0	7.5	5.9	9.4	18.6	16.5	20.9	56.7	53.9	59.4
Grampians	12.8	11.0	14.8	7.1	5.6	8.8	18.9	16.5	21.5	57.4	54.4	60.3
Hume	12.8	11.3	14.5	6.2	5.1	7.6	19.3	17.4	21.4	59.1	56.8	61.3
Loddon Mallee	14.2	12.3	16.4	7.6	6.0	9.6	18.3	16.2	20.6	56.4	53.8	59.0
North and West Metropolitan	20.2	19.0	21.5	7.8	7.1	8.7	22.2	20.9	23.5	45.8	44.3	47.3
Southern Metropolitan	17.2	15.8	18.7	8.8	7.7	10.1	21.5	19.9	23.1	48.0	46.1	49.8
<b>Metropolitan</b>	18.2	17.4	19.0	8.0	7.4	8.6	22.2	21.4	23.2	47.6	46.6	48.6
<b>Rural</b>	13.1	12.1	14.1	6.6	5.9	7.3	19.3	18.1	20.5	57.8	56.4	59.3
<b>Total</b>	16.9	16.3	17.6	7.6	7.1	8.1	21.4	20.7	22.2	50.2	49.4	51.1

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Table 8.21 shows the proportion of persons who reported they could get help from family when needed, by LGA. The proportion of persons who could get help from family (either definitely or sometimes) ranged from 87.2 per cent for the LGA of Yarra to 96.3 per cent for the LGA of Ballarat.

There were five LGAs (one metropolitan and four rural) in which the proportion of persons who could get help from family was above the average for Victoria (92.2 per cent): Ballarat (96.3 per cent), Banyule (95.9 per cent), Colac–Otway (95.4 per cent), Towong (95.3 per cent) and Swan Hill (95.0 per cent). The four LGAs in which the proportion of persons who could get help from family (definitely/sometimes) was below the average for Victoria were located in the metropolitan area: Melbourne (88.9 per cent), Greater Dandenong (88.8 per cent), Port Phillip (88.3 per cent) and Yarra (87.2 per cent). Figure 8.6 summarises these data.

Table 8.22 and figure 8.7 shows the proportion of persons who could get support from friends, by LGA. The proportion of persons who reported they could get help from friends was highest (97.9 per cent) in the rural LGA of South Gippsland and lowest in the metropolitan LGA of Brimbank (86.3 per cent). Brimbank was one of three metropolitan LGAs in which the proportion of persons who could definitely or sometimes get help from friends was below the average for Victoria (94.3 per cent). The other two LGAs were Hume (90.2 per cent) and Greater Dandenong (89.4 per cent).

In eight LGAs, the proportion of persons who reported they could get help from friends, was above the average for Victoria. One was a metropolitan LGA (Nillumbik, at 97.2 per cent) and seven were rural LGAs: South Gippsland (97.9 per cent), Buloke (97.8 per cent), Warrnambool (97.8 per cent), Colac–Otway (97.7 per cent), Southern Grampians (97.5 per cent), Mansfield (97.3 per cent) and Indigo (97.1 per cent).

There were three metropolitan LGAs—Brimbank (12.7 per cent), Greater Dandenong (10.3 per cent) and Hume (9.0 per cent)—in which the proportion of persons who could get help either not at all or not often was above the average for Victoria (5.1 per cent).

Table 8.23 and figure 8.8 shows the proportion of the Victorian population who could get support from neighbours either definitely or sometimes, by LGA. The proportion of persons who reported they could get help from neighbours (71.7 per cent for Victoria) was lower than the proportion who could get help from family (92.2 per cent) or friends (94.3 per cent).

The proportion of persons who could get help from neighbours (either definitely or sometimes) ranged from 55.7 per cent in Melbourne to 90.8 per cent in Buloke. In 25 LGAs (all rural), the proportion of persons who could get help from neighbours was above the average for Victoria. Of the five LGAs in which the proportion of persons who could sometimes or definitely get help from neighbours was below the average for Victoria, all were located in the metropolitan area: Brimbank (65.9 per cent), Darebin (65.6 per cent), Yarra (65.0 per cent), Greater Dandenong (61.8 per cent) and Melbourne (55.7 per cent).

Almost a quarter (24.5 per cent) of persons surveyed could get help from their neighbours either not at all or not often.

Table 8.21: Able to get help from family when needed, by LGA, 2008

LGA	No, not at all / Not often			Sometimes / Yes, definitely			LGA	No, not at all / Not often			Sometimes / Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI		%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	8.4	6.0	11.8	91.4	88.1	93.9	Mansfield (S)	9.0	6.3	12.7	90.5	86.7	93.2
Ararat (RC)	5.9	3.8	8.9	93.9	90.9	96.0	Maribyrnong (C)	7.9	5.7	10.8	91.7	88.7	93.9
Ballarat (C)	3.6*	2.3	5.7	96.3	94.2	97.6	Maroondah (C)	9.2	6.4	13.1	90.6	86.7	93.4
Banyule (C)	3.7	2.3	5.8	95.9	93.7	97.4	Melbourne (C)	10.9	8.3	14.2	88.9	85.6	91.6
Bass Coast (S)	8.7	6.1	12.4	91.2	87.5	93.8	Melton (S)	6.9	4.8	9.9	93.1	90.1	95.2
Baw Baw (S)	8.0*	4.8	13.1	91.8	86.7	95.0	Mildura (RC)	8.9	6.6	11.9	91.1	88.1	93.4
Bayside (C)	6.3	4.1	9.7	93.5	90.1	95.7	Mitchell (S)	6.2	4.2	9.2	93.3	90.3	95.4
Benalla (RC)	9.4	6.8	12.8	90.4	86.9	93.0	Moira (S)	8.1	5.4	12.0	91.4	87.4	94.1
Boroondara (C)	6.9	4.4	10.6	93.1	89.4	95.6	Monash (C)	7.0	4.8	10.1	92.6	89.5	94.9
Brimbank (C)	7.9	5.8	10.8	91.9	89.0	94.0	Moonee Valley (C)	7.4	5.0	10.8	92.2	88.8	94.6
Buloke (S)	5.3	3.6	7.8	94.7	92.2	96.4	Moorabool (S)	5.7	3.9	8.3	94.1	91.5	95.9
Campaspe (S)	7.9	5.4	11.4	92.1	88.6	94.6	Moreland (C)	7.2	5.3	9.8	91.6	88.8	93.8
Cardinia (S)	5.1	3.6	7.3	94.8	92.6	96.4	Mornington Peninsula (S)	7.3	5.0	10.7	92.5	89.1	94.9
Casey (C)	7.9	5.5	11.2	91.3	87.9	93.8	Mount Alexander (S)	8.2	5.4	12.2	91.3	87.3	94.2
Central Goldfields (S)	12.0	7.8	17.9	88.0	82.1	92.2	Moyne (S)	5.2	3.6	7.4	94.8	92.6	96.4
Colac-Otway (S)	4.5	2.8	7.0	95.4	92.8	97.1	Murrindindi (S)	9.5	7.2	12.5	89.9	86.9	92.3
Corangamite (S)	8.4	5.4	12.9	91.5	87.0	94.6	Nillumbik (S)	6.8	4.6	9.9	93.2	90.1	95.4
Darebin (C)	8.2	5.8	11.5	89.9	86.2	92.7	Northern Grampians (S)	6.5	4.3	9.8	92.7	89.3	95.1
East Gippsland (S)	8.6	6.2	11.8	91.1	87.9	93.6	Port Phillip (C)	11.5	8.7	15.1	88.3	84.7	91.1
Frankston (C)	6.9	4.6	10.1	93.0	89.7	95.2	Pyrenees (S)	8.2	5.4	12.4	91.7	87.5	94.5
Gannawarra (S)	6.2	4.2	9.1	93.8	90.9	95.8	Queenscliffe (B)	4.8	2.4	9.4	94.7	90.2	97.2
Glen Eira (C)	8.6	6.0	12.2	90.2	86.6	92.9	Southern Grampians (S)	6.7	4.6	9.6	92.9	90.0	95.0
Glenelg (S)	9.7	7.2	12.9	90.1	86.9	92.6	South Gippsland (S)	7.0	4.6	10.4	92.6	89.2	95.0
Golden Plains (S)	6.8	4.8	9.6	92.8	90.0	94.9	Stonnington (C)	7.3	5.0	10.3	92.3	89.2	94.6
Greater Bendigo (C)	5.2	3.5	7.5	94.7	92.4	96.4	Strathbogie (S)	7.1	4.9	10.1	92.8	89.8	94.9
Greater Dandenong (C)	10.4	7.5	14.1	88.8	85.0	91.7	Surf Coast (S)	9.3	6.3	13.6	89.9	85.6	93.1
Greater Geelong (C)	7.2	4.9	10.5	92.0	88.6	94.4	Swan Hill (RC)	4.3	3.0	6.3	95.0	92.7	96.6
Greater Shepparton (C)	10.1	6.1	16.2	89.3	83.2	93.3	Towong (S)	4.5	3.0	6.6	95.3	93.2	96.8
Hepburn (S)	6.6	4.5	9.5	92.7	89.7	94.9	Wangaratta (RC)	5.1	3.4	7.6	94.7	92.2	96.4
Hindmarsh (S)	7.3	5.2	10.1	92.5	89.7	94.6	Warrnambool (C)	6.2	4.3	9.1	93.6	90.8	95.6
Hobsons Bay (C)	6.6	4.3	10.0	93.2	89.8	95.6	Wellington (S)	6.3	3.9	10.0	93.1	89.4	95.6
Horsham (RC)	7.2	4.7	11.0	92.7	89.0	95.2	West Wimmera (S)	9.2	6.5	12.7	90.5	87.0	93.2
Hume (C)	6.1	4.4	8.4	93.7	91.4	95.4	Whitehorse (C)	6.1	4.1	9.0	93.0	89.9	95.2
Indigo (S)	5.3	3.5	7.9	94.7	92.1	96.5	Whittlesea (C)	6.4	4.3	9.2	93.2	90.2	95.3
Kingston (C)	5.0	3.3	7.6	94.4	91.6	96.3	Wodonga (RC)	7.8	5.6	10.7	91.8	88.8	94.0
Knox (C)	6.0	4.0	9.1	92.7	89.4	95.1	Wyndham (C)	6.8	4.8	9.5	92.9	90.2	94.9
Latrobe (C)	5.6	3.8	8.3	94.4	91.7	96.2	Yarra (C)	10.7	7.8	14.5	87.2	82.8	90.7
Loddon (S)	8.9	6.5	12.2	90.5	87.2	93.0	Yarra Ranges (S)	8.1	5.8	11.2	91.6	88.4	93.9
Macedon Ranges (S)	5.9	3.8	9.0	93.9	90.8	96.0	Yarriambiack (S)	11.1	7.1	17.1	88.6	82.7	92.7
Manningham (C)	6.1	4.1	8.8	93.2	90.3	95.3	<b>Total</b>	<b>7.3</b>	<b>6.9</b>	<b>7.7</b>	<b>92.2</b>	<b>91.8</b>	<b>92.6</b>

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

LGA = local government area.

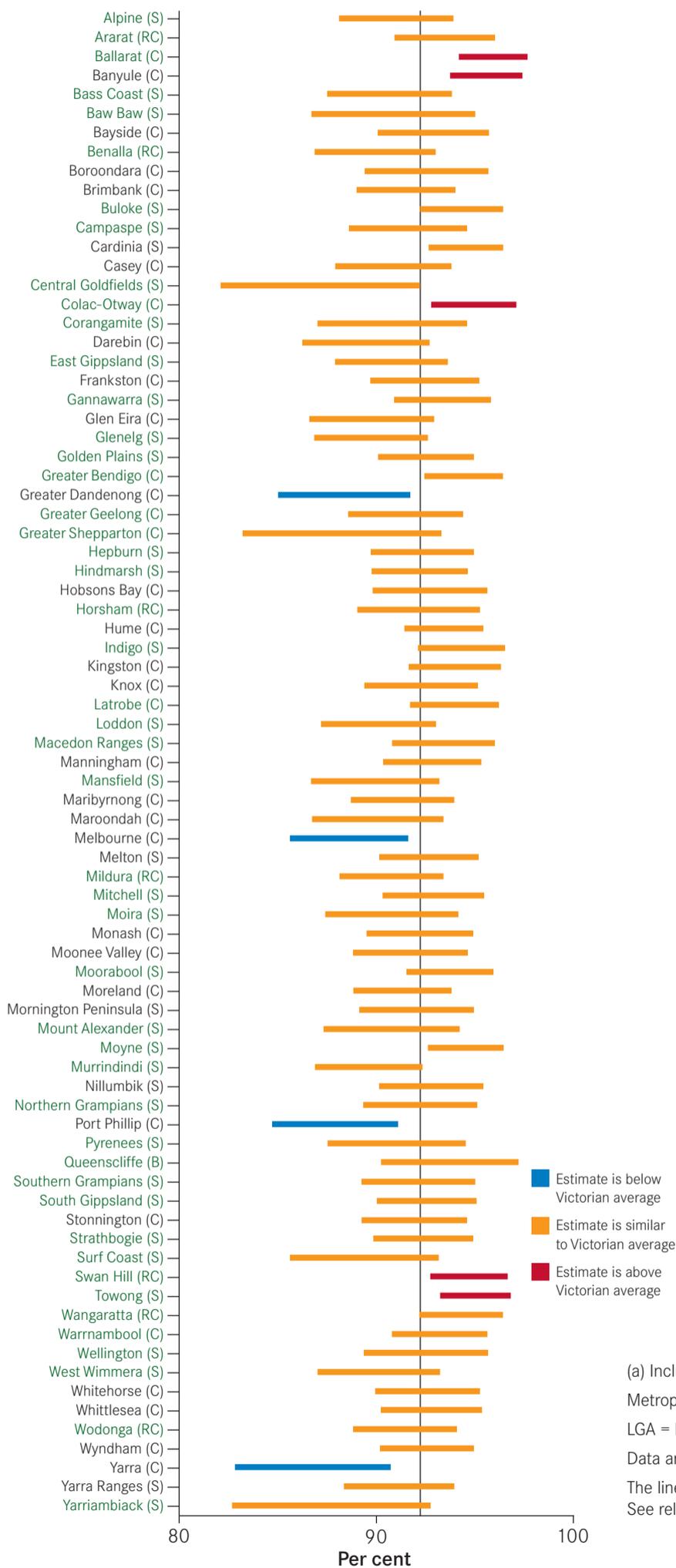
Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are age standardised to the 2006 Victorian population.

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

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

Figure 8.6: Able to get help from family when needed<sup>(a)</sup>, by LGA, 2008



(a) Includes those who responded 'sometimes' and 'yes, definitely'.  
 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 line on the graph is the Victorian estimate, it does not show the 95% CI.  
 See relevant table for the 95% CI for Victoria (Total).

Table 8.22: Able to get help from friends when needed, by LGA, 2008

LGA	No, not at all / Not often			Sometimes / Yes, definitely			LGA	No, not at all / Not often			Sometimes / Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI		%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	3.4*	1.8	6.4	95.9	93.0	97.6	Mansfield (S)	1.6*	0.8	3.0	97.3	95.2	98.5
Ararat (RC)	4.4*	2.3	8.0	95.4	91.8	97.5	Maribyrnong (C)	6.2	4.3	8.9	92.8	90.0	94.8
Ballarat (C)	3.2*	1.8	5.7	96.2	93.7	97.7	Maroondah (C)	3.0	1.9	4.6	96.5	94.7	97.7
Banyule (C)	3.5	2.2	5.4	96.2	94.2	97.5	Melbourne (C)	6.2	4.0	9.4	93.4	90.1	95.7
Bass Coast (S)	5.6	3.6	8.7	93.9	90.8	96.0	Melton (S)	4.7	3.0	7.3	95.2	92.6	96.9
Baw Baw (S)	3.8*	1.4	9.9	95.9	90.0	98.4	Mildura (RC)	3.9*	2.4	6.3	95.5	93.1	97.1
Bayside (C)	3.9	2.4	6.2	95.6	93.2	97.1	Mitchell (S)	2.7*	1.5	5.1	96.2	93.0	98.0
Benalla (RC)	4.0	2.6	6.0	95.7	93.7	97.1	Moira (S)	7.7*	4.1	14.0	92.1	85.9	95.8
Boroondara (C)	3.3*	1.9	5.7	95.8	93.2	97.4	Monash (C)	5.9	3.7	9.2	92.9	89.5	95.2
Brimbank (C)	12.7	9.6	16.6	86.3	82.4	89.5	Moonee Valley (C)	4.7*	2.8	7.9	94.7	91.5	96.8
Buloke (S)	2.2*	1.2	3.9	97.8	96.1	98.8	Moorabool (S)	6.1	3.9	9.4	93.3	90.1	95.6
Campaspe (S)	4.5	2.8	7.3	95.3	92.5	97.0	Moreland (C)	6.1	4.2	8.7	93.2	90.5	95.2
Cardinia (S)	3.9	2.4	6.2	95.8	93.5	97.3	Mornington Peninsula (S)	5.2*	3.1	8.6	94.2	90.8	96.4
Casey (C)	3.9*	2.4	6.3	95.2	92.5	96.9	Mount Alexander (S)	3.9*	2.4	6.3	96.0	93.6	97.6
Central Goldfields (S)	4.9*	2.5	9.4	94.7	90.2	97.2	Moyne (S)	4.2*	2.1	8.3	94.6	90.7	96.9
Colac-Otway (S)	2.1*	1.2	3.6	97.7	96.2	98.6	Murrindindi (S)	4.0	2.7	6.0	95.5	93.5	96.9
Corangamite (S)	4.2*	2.4	7.4	94.6	91.3	96.7	Nillumbik (S)	2.6*	1.5	4.3	97.2	95.4	98.3
Darebin (C)	6.3	4.2	9.4	92.7	89.6	95.0	Northern Grampians (S)	4.8	2.8	7.9	94.8	91.7	96.8
East Gippsland (S)	4.4*	2.6	7.4	95.3	92.3	97.2	Port Phillip (C)	4.9	3.2	7.6	94.9	92.2	96.7
Frankston (C)	3.1*	1.9	5.1	96.7	94.7	97.9	Pyrenees (S)	6.0*	3.2	11.1	93.3	88.3	96.3
Gannawarra (S)	5.2	3.3	8.2	94.7	91.7	96.7	Queenscliffe (B)	3.1*	1.2	8.2	96.7	91.7	98.7
Glen Eira (C)	5.8	3.7	8.9	92.9	89.7	95.1	Southern Grampians (S)	2.4*	1.3	4.4	97.5	95.5	98.6
Glenelg (S)	4.3*	2.2	8.4	95.7	91.6	97.8	South Gippsland (S)	1.5*	0.8	2.7	97.9	96.5	98.7
Golden Plains (S)	5.8	3.6	9.2	93.8	90.4	96.1	Stonnington (C)	3.1*	1.8	5.3	96.4	94.2	97.8
Greater Bendigo (C)	3.9*	2.3	6.6	96.0	93.4	97.6	Strathbogie (S)	4.0*	2.3	6.9	95.8	93.0	97.6
Greater Dandenong (C)	10.3	7.4	14.2	89.4	85.5	92.4	Surf Coast (S)	3.7	2.2	6.0	95.8	93.3	97.4
Greater Geelong (C)	4.0*	2.4	6.7	95.6	92.9	97.2	Swan Hill (RC)	4.8*	2.7	8.5	94.1	90.5	96.5
Greater Shepparton (C)	4.0*	2.1	7.2	95.7	92.4	97.6	Towong (S)	2.7*	1.5	4.8	96.4	94.1	97.8
Hepburn (S)	6.6*	3.9	11.1	92.7	88.3	95.5	Wangaratta (RC)	5.9*	3.3	10.3	93.9	89.5	96.5
Hindmarsh (S)	3.8	2.4	6.1	95.8	93.5	97.3	Warrnambool (C)	2.0*	0.9	4.3	97.8	95.6	98.9
Hobsons Bay (C)	5.0	3.4	7.4	94.5	92.0	96.2	Wellington (S)	6.0*	3.1	11.5	93.6	88.2	96.6
Horsham (RC)	3.0*	1.7	5.2	95.2	92.0	97.2	West Wimmera (S)	3.8*	2.2	6.7	95.9	93.0	97.6
Hume (C)	9.0	6.6	12.1	90.2	87.0	92.8	Whitehorse (C)	5.2*	3.1	8.6	94.2	90.7	96.4
Indigo (S)	2.6*	1.5	4.4	97.1	95.2	98.3	Whittlesea (C)	7.2	5.1	10.1	92.2	89.2	94.4
Kingston (C)	3.3*	1.8	5.7	96.2	93.8	97.8	Wodonga (RC)	3.2	2.0	5.2	96.0	93.8	97.4
Knox (C)	6.6	4.4	9.8	93.1	89.9	95.3	Wyndham (C)	5.7	3.9	8.4	93.5	90.7	95.4
Latrobe (C)	4.4	2.8	7.1	95.4	92.7	97.1	Yarra (C)	4.6	3.0	7.1	94.4	91.8	96.2
Loddon (S)	5.0	3.2	7.8	93.5	90.6	95.6	Yarra Ranges (S)	5.2	3.3	8.2	94.5	91.5	96.4
Macedon Ranges (S)	3.8*	2.0	7.0	95.9	92.7	97.7	Yarriambiack (S)	6.4*	3.2	12.5	93.2	87.2	96.5
Manningham (C)	5.5	3.7	8.0	93.1	90.4	95.1	<b>Total</b>	<b>5.1</b>	<b>4.7</b>	<b>5.4</b>	<b>94.3</b>	<b>93.9</b>	<b>94.7</b>

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

LGA = local government area.

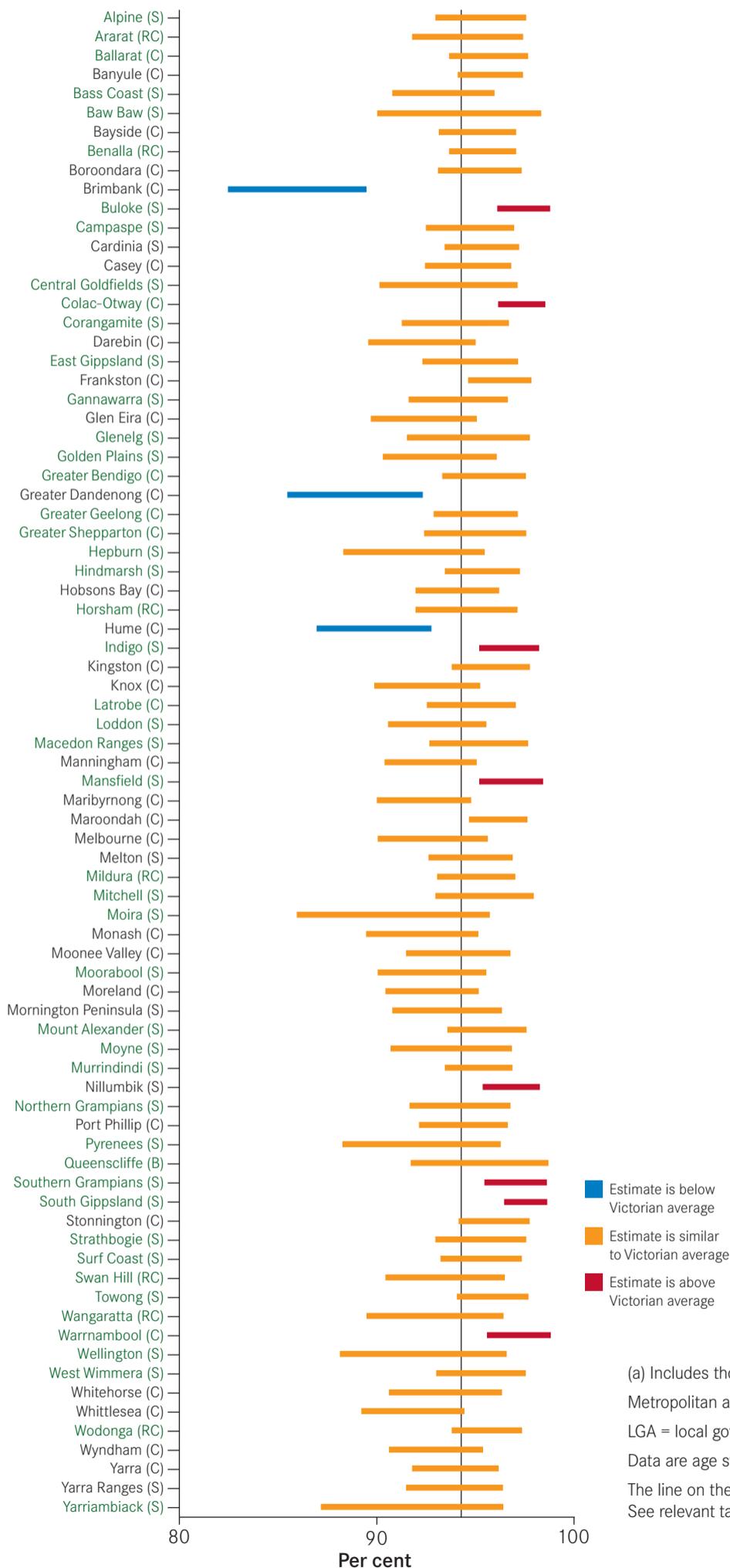
Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are age standardised to the 2006 Victorian population.

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

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

Figure 8.7: Able to get help from friends when needed <sup>(a)</sup>, by LGA, 2008



(a) Includes those who responded 'sometimes' and 'yes, definitely'.  
 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 line on the graph is the Victorian estimate, it does not show the 95% CI.  
 See relevant table for the 95% CI for Victorial (Total).

Table 8.23: Able to get help from neighbours when needed, by LGA, 2008

LGA	No, not at all / Not often			Sometimes / Yes, definitely			LGA	No, not at all / Not often			Sometimes / Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI		%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	15.4	11.3	20.7	83.2	77.9	87.5	Mansfield (S)	15.6	10.9	21.8	82.7	76.5	87.5
Ararat (RC)	17.5	12.9	23.3	81.2	75.2	86.0	Maribyrnong (C)	29.8	25.2	35.0	66.1	60.9	71.0
Ballarat (C)	19.0	15.0	23.8	75.9	70.7	80.5	Maroondah (C)	20.8	16.5	25.8	75.6	70.4	80.1
Banyule (C)	23.1	18.1	29.1	72.5	66.3	77.9	Melbourne (C)	39.8	34.9	44.9	55.7	50.6	60.6
Bass Coast (S)	29.9	22.5	38.6	67.1	58.5	74.7	Melton (S)	26.4	21.8	31.7	71.4	66.1	76.2
Baw Baw (S)	16.4	11.8	22.4	79.3	73.1	84.4	Mildura (RC)	20.9	16.5	26.2	77.5	72.2	82.0
Bayside (C)	24.6	19.6	30.5	72.3	66.4	77.6	Mitchell (S)	19.2	15.2	24.0	78.6	73.7	82.7
Benalla (RC)	17.9	14.4	22.0	80.2	75.1	84.4	Moira (S)	17.7	12.9	23.8	81.4	75.3	86.3
Boroondara (C)	23.3	18.9	28.4	72.6	67.4	77.2	Monash (C)	22.5	18.0	27.8	72.7	67.1	77.7
Brimbank (C)	30.1	25.6	34.9	65.9	61.1	70.5	Moonee Valley (C)	24.6	20.0	29.8	73.6	68.3	78.2
Buloke (S)	8.8	6.3	12.0	90.8	87.6	93.3	Moorabool (S)	23.5	18.8	29.1	71.0	65.1	76.3
Campaspe (S)	17.3	13.3	22.4	79.8	74.5	84.2	Moreland (C)	27.7	23.3	32.5	67.5	62.5	72.1
Cardinia (S)	20.3	15.9	25.7	76.8	71.4	81.4	Mornington Peninsula (S)	26.7	21.1	33.1	71.0	64.5	76.6
Casey (C)	24.0	19.9	28.8	71.2	66.3	75.6	Mount Alexander (S)	21.5	16.4	27.6	75.8	69.6	81.1
Central Goldfields (S)	22.6	16.9	29.5	74.2	67.2	80.2	Moyne (S)	13.2	9.2	18.5	83.7	78.1	88.0
Colac-Otway (S)	20.9	16.0	26.8	75.8	69.2	81.3	Murrindindi (S)	15.7	10.9	22.3	81.5	75.1	86.6
Corangamite (S)	16.8	12.0	22.9	80.7	74.3	85.7	Nillumbik (S)	20.3	15.9	25.5	76.1	70.6	80.8
Darebin (C)	30.2	25.6	35.2	65.6	60.5	70.4	Northern Grampians (S)	22.8	17.6	28.9	75.5	69.4	80.7
East Gippsland (S)	21.6	16.1	28.3	73.7	65.9	80.3	Port Phillip (C)	23.6	19.7	28.0	70.8	66.2	75.1
Frankston (C)	25.4	20.8	30.7	70.0	64.6	75.0	Pyrenees (S)	22.4	16.6	29.6	75.8	68.7	81.8
Gannawarra (S)	18.4	13.7	24.2	79.9	74.1	84.7	Queenscliffe (B)	23.0	16.5	31.0	76.4	68.2	82.9
Glen Eira (C)	24.8	20.2	30.1	69.5	64.2	74.4	Southern Grampians (S)	14.3	10.5	19.1	84.4	79.5	88.3
Glenelg (S)	15.4	11.2	20.9	82.4	76.6	86.9	South Gippsland (S)	12.8	9.4	17.0	83.4	78.6	87.3
Golden Plains (S)	21.1	16.6	26.5	76.5	71.0	81.3	Stonnington (C)	26.6	21.8	32.0	66.7	61.2	71.8
Greater Bendigo (C)	24.6	19.8	30.1	69.8	64.1	74.9	Strathbogie (S)	17.5	12.7	23.6	80.7	74.4	85.7
Greater Dandenong (C)	34.9	29.7	40.4	61.8	56.2	67.1	Surf Coast (S)	21.5	16.4	27.6	77.2	71.1	82.3
Greater Geelong (C)	16.8	12.5	22.4	79.8	73.9	84.7	Swan Hill (RC)	22.8	17.8	28.7	75.0	69.0	80.2
Greater Shepparton (C)	26.5	21.1	32.8	70.3	64.0	75.9	Towong (S)	11.4	7.9	16.3	87.8	82.9	91.5
Hepburn (S)	22.8	17.0	29.9	75.5	68.5	81.3	Wangaratta (RC)	15.3	11.3	20.3	81.9	76.9	86.0
Hindmarsh (S)	16.4	11.8	22.3	80.7	74.5	85.6	Warrnambool (C)	17.8	13.6	23.0	77.6	72.4	82.1
Hobsons Bay (C)	24.6	19.9	30.0	72.4	66.9	77.2	Wellington (S)	21.6	16.9	27.3	75.1	69.7	79.7
Horsham (RC)	19.7	15.5	24.7	75.9	71.5	79.9	West Wimmera (S)	10.0	7.0	14.1	88.6	84.4	91.8
Hume (C)	28.4	23.5	33.8	67.4	62.0	72.3	Whitehorse (C)	21.3	16.7	26.8	76.2	70.7	80.9
Indigo (S)	9.9	7.3	13.2	89.0	85.6	91.6	Whittlesea (C)	27.1	22.8	32.0	69.6	64.6	74.1
Kingston (C)	24.1	19.0	30.1	72.2	66.2	77.4	Wodonga (RC)	19.6	15.5	24.3	76.1	71.1	80.6
Knox (C)	24.1	19.6	29.3	72.4	67.0	77.2	Wyndham (C)	28.2	23.9	33.0	66.3	61.3	70.9
Latrobe (C)	22.3	18.0	27.4	74.8	69.6	79.3	Yarra (C)	31.5	26.8	36.6	65.0	59.9	69.8
Loddon (S)	14.5	10.5	19.6	83.3	78.0	87.5	Yarra Ranges (S)	24.6	20.1	29.6	73.5	68.4	78.1
Macedon Ranges (S)	21.1	16.2	27.0	78.1	72.2	83.1	Yarriambiack (S)	13.7	10.0	18.5	85.6	80.8	89.4
Manningham (C)	23.8	19.0	29.5	72.0	66.2	77.2	<b>Total</b>	<b>24.5</b>	<b>23.7</b>	<b>25.3</b>	<b>71.7</b>	<b>70.9</b>	<b>72.5</b>

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

95% CI = 95 per cent confidence interval.

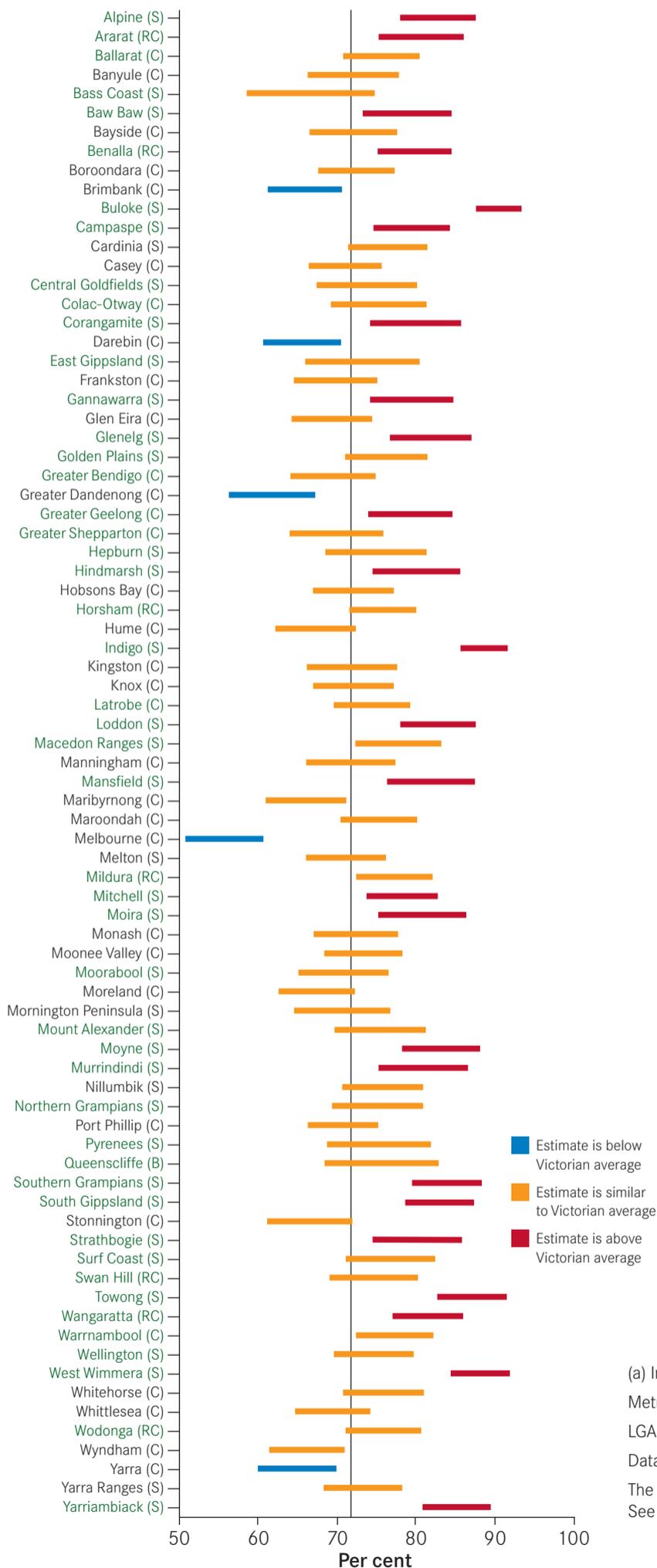
LGA = local government area.

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Figure 8.8: Able to get help from neighbours when needed <sup>(a)</sup>, by LGA, 2008



(a) Includes those who responded 'sometimes' and 'yes, definitely'.  
 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 line on the graph is the Victorian estimate, it does not show the 95% CI.  
 See relevant table for the 95% CI for Victoria (Total).

In addition to asking respondents whether they could get help from family, friends or neighbours when needed, the 2008 survey also considered situations in which an individual might seek help from other social and support networks.

### Help with care in the case of an emergency

Table 8.24 shows the proportion of persons who could rely on a relative or a friend not living with them to care for them (or their children) in an emergency, by age group and sex. More than one in 10 persons in the age groups 45–54 years, 55–64 years and 65 years and over reported they could not rely on a friend or relative to care for them in the event of an emergency (11.1 per cent, 10.6 per cent and 12.2 per cent respectively).

**Table 8.24: Help with emergency care, by age group and sex, 2008**

Age group (years)	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
18–24 years	<b>95.2</b>	92.7	96.9	<b>3.6</b>	2.3	5.5
25–34 years	<b>90.9</b>	88.3	93.0	<b>8.4</b>	6.3	11.0
35–44 years	<b>88.4</b>	86.2	90.2	<b>9.4</b>	7.7	11.4
45–54 years	<b>86.4</b>	84.4	88.3	<b>11.4</b>	9.7	13.3
55–64 years	<b>84.3</b>	82.3	86.2	<b>11.8</b>	10.1	13.6
65+	<b>81.1</b>	79.2	82.8	<b>13.6</b>	12.1	15.2
<b>Total</b>	<b>87.5</b>	<b>86.6</b>	<b>88.3</b>	<b>9.9</b>	<b>9.2</b>	<b>10.7</b>
<b>Females</b>						
18–24 years	<b>94.8</b>	92.5	96.5	<b>4.8</b>	3.2	7.1
25–34 years	<b>93.0</b>	91.4	94.3	<b>5.6</b>	4.5	7.0
35–44 years	<b>91.2</b>	89.9	92.3	<b>6.9</b>	5.9	8.0
45–54 years	<b>87.1</b>	85.5	88.6	<b>10.8</b>	9.4	12.3
55–64 years	<b>87.4</b>	85.9	88.8	<b>9.4</b>	8.2	10.7
65+	<b>84.4</b>	83.0	85.7	<b>11.1</b>	10.0	12.3
<b>Total</b>	<b>89.5</b>	<b>88.9</b>	<b>90.1</b>	<b>8.2</b>	<b>7.7</b>	<b>8.8</b>
<b>Persons</b>						
18–24 years	<b>95.0</b>	93.4	96.3	<b>4.2</b>	3.1	5.6
25–34 years	<b>92.0</b>	90.5	93.2	<b>7.0</b>	5.8	8.4
35–44 years	<b>89.8</b>	88.6	90.9	<b>8.1</b>	7.2	9.2
45–54 years	<b>86.8</b>	85.5	88.0	<b>11.1</b>	10.0	12.3
55–64 years	<b>85.9</b>	84.7	87.1	<b>10.6</b>	9.5	11.7
65+	<b>82.9</b>	81.8	84.0	<b>12.2</b>	11.3	13.2
<b>Total</b>	<b>88.5</b>	<b>88.0</b>	<b>89.0</b>	<b>9.1</b>	<b>8.6</b>	<b>9.5</b>

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 from the corresponding estimate for Victoria are identified by colour as follows: **above Victoria** / **below Victoria**.

The proportion of persons who could rely on a friend or relative to care for them or their children in the event of an emergency remained constant between 2002 and 2008 (table 8.25).

**Table 8.25: Help with emergency care, 2002–2008**

Could one of your relatives or friends care for you (or your children) in an emergency?	2002	2003	2004	2005	2006	2007	2008
	Per cent						
Yes	94.4	92.4	92.7	90.5	92.7	92.1	88.5
No	5.6	4.9	5.5	7.7	5.5	6.1	9.1

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.

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

Table 8.26 shows most people (88.5 per cent) reported having someone who could provide care in the event of an emergency. A higher proportion of persons living in rural areas (90.5 per cent) had a relative or friend who could care for them (or their children) in an emergency, compared with those from the metropolitan area (87.8 per cent). The proportion of persons who could get emergency care via a friend or relative was higher than the average for Victoria (88.5 per cent) for persons living in the Barwon–South Western region (92.2 per cent) and in the Loddon Mallee region (91.1 per cent).

More than nine in 10 rural females (91.4 per cent) could get care in an emergency, compared with 88.8 per cent of those living in the metropolitan area. A higher proportion of rural males (89.6 per cent) reported being able to get care in an emergency, compared with those from the metropolitan area (86.8 per cent).

Table 8.26: Help with emergency care, by sex and Department of Health region, 2008

Region	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
Barwon-South Western	92.5	90.2	94.3	6.4	4.7	8.6
Eastern Metropolitan	88.2	85.8	90.3	9.4	7.5	11.7
Gippsland	86.9	83.9	89.4	9.6	7.4	12.3
Grampians	87.8	84.5	90.4	9.1	7.0	11.8
Hume	88.2	86.1	90.0	9.5	7.9	11.3
Loddon Mallee	91.0	89.1	92.7	7.5	5.9	9.3
North and West Metropolitan	86.3	84.7	87.8	10.4	9.1	11.8
Southern Metropolitan	86.0	83.9	87.9	11.7	9.9	13.7
<b>Metropolitan</b>	<b>86.8</b>	<b>85.7</b>	<b>87.8</b>	<b>10.5</b>	<b>9.6</b>	<b>11.5</b>
<b>Rural</b>	<b>89.6</b>	<b>88.5</b>	<b>90.6</b>	<b>8.2</b>	<b>7.3</b>	<b>9.2</b>
<b>Total</b>	<b>87.5</b>	<b>86.6</b>	<b>88.3</b>	<b>9.9</b>	<b>9.2</b>	<b>10.7</b>
<b>Females</b>						
Barwon-South Western	92.0	89.4	94.0	6.8	4.9	9.4
Eastern Metropolitan	89.9	88.4	91.3	7.7	6.5	9.1
Gippsland	91.5	90.0	92.9	6.5	5.4	7.8
Grampians	91.3	89.7	92.7	7.1	5.9	8.6
Hume	91.0	89.5	92.3	7.4	6.1	8.8
Loddon Mallee	91.1	89.5	92.5	7.6	6.3	9.1
North and West Metropolitan	87.3	86.0	88.5	9.6	8.6	10.8
Southern Metropolitan	89.8	88.4	91.0	8.2	7.1	9.5
<b>Metropolitan</b>	<b>88.8</b>	<b>88.1</b>	<b>89.6</b>	<b>8.6</b>	<b>7.9</b>	<b>9.3</b>
<b>Rural</b>	<b>91.4</b>	<b>90.5</b>	<b>92.2</b>	<b>7.1</b>	<b>6.3</b>	<b>8.0</b>
<b>Total</b>	<b>89.5</b>	<b>88.9</b>	<b>90.1</b>	<b>8.2</b>	<b>7.7</b>	<b>8.8</b>
<b>Persons</b>						
Barwon-South Western	92.2	90.5	93.6	6.7	5.3	8.4
Eastern Metropolitan	89.1	87.7	90.4	8.5	7.3	9.8
Gippsland	89.2	87.6	90.7	8.0	6.7	9.5
Grampians	89.7	87.9	91.3	8.0	6.8	9.5
Hume	89.6	88.4	90.8	8.4	7.4	9.6
Loddon Mallee	91.1	89.9	92.2	7.5	6.4	8.7
North and West Metropolitan	86.9	85.9	87.8	10.0	9.1	10.9
Southern Metropolitan	87.9	86.7	89.1	9.9	8.8	11.1
<b>Metropolitan</b>	<b>87.8</b>	<b>87.2</b>	<b>88.5</b>	<b>9.5</b>	<b>8.9</b>	<b>10.1</b>
<b>Rural</b>	<b>90.5</b>	<b>89.8</b>	<b>91.2</b>	<b>7.6</b>	<b>7.0</b>	<b>8.3</b>
<b>Total</b>	<b>88.5</b>	<b>88.0</b>	<b>89.0</b>	<b>9.1</b>	<b>8.6</b>	<b>9.5</b>

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Table 8.27 and figure 8.9 show the proportion of persons who reported they could get care for themselves or their children in an emergency, by LGA. The proportion of persons who could get emergency care with the aid of a friend or relative ranged from 80.7 per cent in Greater Dandenong to 93.7 per cent in Buloke. The six LGAs in which the proportion of persons who could get emergency care was above the average for Victoria (88.5 per cent) were all located in rural areas: Buloke (93.7 per cent), Colac–Otway (93.4 per cent), Greater Geelong (93.3 per cent), Northern Grampians (92.4 per cent), Greater Bendigo (92.1 per cent) and Warrnambool (92.1 per cent).

There were five LGAs in which the proportion of persons who could get emergency care was below the average for Victoria: Hume (84.6 per cent), Whittlesea (84.4 per cent), Maribryong (83.7 per cent), Brimbank (81.6 per cent) and Greater Dandenong (80.7 per cent). All of these LGAs (except Greater Dandenong) are located in the North and West Metropolitan region.

Table 8.27: Help with emergency care, by LGA, 2008

LGA	Yes			No			LGA	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI		%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	88.9	85.6	91.6	7.4	5.2	10.3	Mansfield (S)	91.2	88.0	93.6	7.4	5.1	10.6
Ararat (RC)	89.5	84.5	93.0	7.2	4.6	11.0	Maribyrnong (C)	83.7	79.3	87.2	12.8	9.7	16.7
Ballarat (C)	90.2	86.5	93.0	7.1	4.9	10.3	Maroondah (C)	90.8	87.7	93.2	6.6	4.7	9.3
Banyule (C)	91.2	87.8	93.7	5.3	3.5	7.7	Melbourne (C)	84.5	80.4	88.0	12.8	9.6	16.7
Bass Coast (S)	88.8	85.2	91.7	7.9	5.7	10.8	Melton (S)	90.1	86.6	92.8	7.1	4.9	10.2
Baw Baw (S)	89.8	84.6	93.4	8.1*	4.8	13.4	Mildura (RC)	89.2	85.8	91.9	8.8	6.4	12.0
Bayside (C)	88.3	84.0	91.6	9.8	6.7	14.1	Mitchell (S)	91.4	88.1	93.8	6.3	4.1	9.4
Benalla (RC)	88.8	85.1	91.7	9.4	6.7	12.8	Moira (S)	87.6	81.8	91.8	7.7	5.1	11.3
Boroondara (C)	90.1	86.3	92.9	8.8	6.1	12.6	Monash (C)	89.2	85.8	91.8	7.5	5.4	10.4
Brimbank (C)	81.6	77.5	85.1	14.3	11.1	18.2	Moonee Valley (C)	88.1	84.8	90.8	6.9	4.9	9.5
Buloke (S)	93.7	91.7	95.3	3.8	2.7	5.4	Moorabool (S)	88.6	84.4	91.7	9.5	6.6	13.6
Campaspe (S)	91.5	88.2	93.9	7.0	4.8	10.0	Moreland (C)	86.7	82.9	89.7	10.7	7.9	14.2
Cardinia (S)	86.7	82.1	90.2	11.3	8.0	15.8	Mornington Peninsula (S)	91.3	87.3	94.2	6.2	3.9	9.6
Casey (C)	87.6	83.8	90.6	10.6	7.8	14.2	Mount Alexander (S)	88.9	84.9	91.8	7.7	5.2	11.4
Central Goldfields (S)	88.2	83.4	91.8	10.6	7.1	15.4	Moynes (S)	91.0	87.9	93.4	7.5	5.4	10.5
Colac-Otway (S)	93.4	90.9	95.2	5.7	4.0	7.9	Murrindindi (S)	89.1	86.0	91.6	9.0	6.7	12.0
Corangamite (S)	90.1	86.6	92.7	9.3	6.7	12.7	Nillumbik (S)	90.0	86.3	92.7	7.5	5.1	10.9
Darebin (C)	86.9	82.8	90.2	10.3	7.4	14.3	Northern Grampians (S)	92.4	89.7	94.4	5.4	3.8	7.6
East Gippsland (S)	87.8	83.1	91.4	8.6	6.1	11.9	Port Phillip (C)	87.2	83.6	90.1	11.5	8.7	15.0
Frankston (C)	90.6	87.5	92.9	7.9	5.6	10.9	Pyrenees (S)	86.3	80.8	90.4	12.0	8.1	17.4
Gannawarra (S)	90.1	86.4	92.9	7.1	4.8	10.4	Queenscliffe (B)	90.6	84.6	94.4	8.4*	4.8	14.4
Glen Eira (C)	86.5	82.7	89.6	9.8	7.2	13.4	Southern Grampians (S)	91.5	88.3	93.8	7.4	5.2	10.5
Glenelg (S)	87.9	83.3	91.4	10.1	6.9	14.6	South Gippsland (S)	90.0	86.7	92.5	7.5	5.4	10.4
Golden Plains (S)	88.6	84.9	91.4	9.6	6.9	13.3	Stonnington (C)	91.5	88.6	93.7	6.2	4.4	8.8
Greater Bendigo (C)	92.1	89.3	94.2	6.9	4.9	9.5	Strathbogie (S)	89.0	85.4	91.9	10.4	7.6	14.1
Greater Dandenong (C)	80.7	75.7	84.8	15.8	12.0	20.6	Surf Coast (S)	88.8	83.1	92.7	9.2*	5.5	14.9
Greater Geelong (C)	93.3	90.4	95.4	5.9	3.9	8.7	Swan Hill (RC)	90.9	86.7	93.8	8.1	5.2	12.3
Greater Shepparton (C)	87.7	83.4	91.1	10.6	7.5	14.8	Towong (S)	89.1	85.0	92.2	7.6	5.0	11.3
Hepburn (S)	90.2	87.0	92.7	8.5	6.1	11.7	Wangaratta (RC)	90.8	86.9	93.6	8.0	5.3	11.8
Hindmarsh (S)	91.0	88.0	93.3	7.0	5.0	9.8	Warrnambool (C)	92.1	89.2	94.3	5.7	3.8	8.5
Hobsons Bay (C)	88.8	85.2	91.6	8.8	6.3	12.2	Wellington (S)	88.8	84.3	92.1	9.2	6.3	13.3
Horsham (RC)	91.8	88.3	94.3	7.6	5.2	11.1	West Wimmera (S)	89.0	85.1	92.0	6.2	4.4	8.7
Hume (C)	84.6	80.7	87.8	10.8	8.2	14.0	Whitehorse (C)	88.8	84.7	91.8	9.0	6.2	13.0
Indigo (S)	90.7	85.5	94.1	8.2*	4.9	13.3	Whittlesea (C)	84.4	80.5	87.6	12.8	9.8	16.5
Kingston (C)	89.7	86.1	92.4	9.2	6.6	12.8	Wodonga (RC)	91.7	88.9	93.9	7.3	5.2	10.0
Knox (C)	87.8	83.5	91.0	9.4	6.4	13.5	Wyndham (C)	91.6	88.4	94.0	6.6	4.5	9.4
Latrobe (C)	89.6	86.2	92.3	7.1	5.0	10.1	Yarra (C)	85.6	81.9	88.7	11.2	8.4	14.7
Loddon (S)	89.9	86.2	92.8	8.7	6.0	12.4	Yarra Ranges (S)	90.5	86.9	93.2	7.7	5.2	11.2
Macedon Ranges (S)	92.1	88.5	94.7	7.2	4.7	10.9	Yarriambiack (S)	85.6	79.7	90.0	13.2	8.9	19.1
Manningham (C)	87.9	83.9	91.1	9.2	6.6	12.6	<b>Total</b>	<b>88.5</b>	<b>88.0</b>	<b>89.0</b>	<b>9.1</b>	<b>8.6</b>	<b>9.5</b>

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

95% CI = 95 per cent confidence interval.

LGA = local government area.

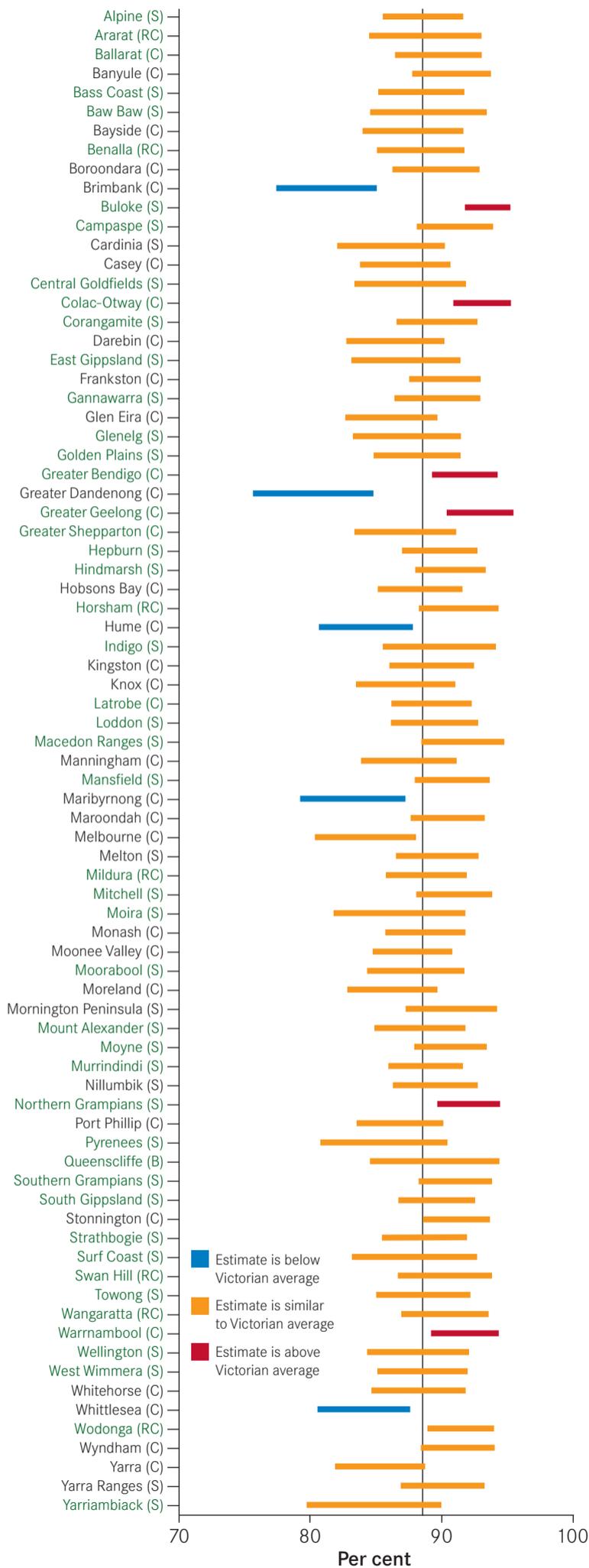
Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are age standardised to the 2006 Victorian population.

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

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

Figure 8.9: Help with emergency care, 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 line on the graph is the Victorian estimate, it does not show the 95% CI.  
 See relevant table for the 95% CI for Victoria (Total).

### Help finding a job

The 2008 survey also asked respondents aged less than 65 years whether they could find a job through family or friends. Table 8.28 shows the proportion of persons who said they could find a job through a family member or a friend, by age group and sex. Reporting that a relative or a friend may be able to help with finding a job was related to age. The table shows 80.3 per cent of persons aged 18–24 years said they could find a job through a family member or a friend, compared with slightly more than a third (34.1 per cent) of those aged 55–64 years. For all age groups (except 25–34 years), a higher proportion of males than females reported they could get help from family or friends to find a job.

**Table 8.28: Able to get help from a relative or friend to find a job, by age group<sup>(a)</sup> and sex, 2008**

Age group (years)	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
18–24 years	<b>86.0</b>	82.6	88.8	<b>10.3</b>	8.0	13.3
25–34 years	<b>65.1</b>	61.2	68.8	<b>26.9</b>	23.5	30.6
35–44 years	<b>57.2</b>	54.2	60.1	<b>33.2</b>	30.4	36.1
45–54 years	<b>47.2</b>	44.4	50.0	<b>39.9</b>	37.2	42.7
55–64 years	<b>38.4</b>	35.9	41.1	<b>49.8</b>	47.2	52.5
65+	..	..	..	..	..	..
<b>Total</b>	<b>58.3</b>	<b>56.9</b>	<b>59.7</b>	<b>32.3</b>	<b>31.0</b>	<b>33.7</b>
<b>Females</b>						
18–24 years	<b>74.4</b>	70.4	78.1	<b>18.7</b>	15.5	22.3
25–34 years	<b>59.1</b>	56.2	61.9	<b>32.1</b>	29.5	34.9
35–44 years	<b>48.9</b>	46.8	51.0	<b>37.4</b>	35.4	39.5
45–54 years	<b>41.3</b>	39.1	43.6	<b>45.8</b>	43.6	48.1
55–64 years	<b>29.8</b>	27.9	31.9	<b>56.8</b>	54.6	59.0
65+	..	..	..	..	..	..
<b>Total</b>	<b>50.4</b>	<b>49.3</b>	<b>51.6</b>	<b>38.4</b>	<b>37.2</b>	<b>39.5</b>
<b>Persons</b>						
18–24 years	<b>80.3</b>	77.7	82.7	<b>14.4</b>	12.4	16.7
25–34 years	<b>62.1</b>	59.7	64.5	<b>29.5</b>	27.3	31.8
35–44 years	<b>53.0</b>	51.2	54.8	<b>35.3</b>	33.6	37.1
45–54 years	<b>44.2</b>	42.4	46.0	<b>42.9</b>	41.1	44.7
55–64 years	<b>34.1</b>	32.5	35.7	<b>53.4</b>	51.6	55.1
65+	..	..	..	..	..	..
<b>Total</b>	<b>54.3</b>	<b>53.4</b>	<b>55.3</b>	<b>35.3</b>	<b>34.5</b>	<b>36.2</b>

(a) The question was asked only of persons aged 18–64 years.

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 from the corresponding estimate for Victoria are identified by colour as follows: **above Victoria** / **below Victoria**.

The proportion of working age persons who reported they could find a job through family or friends remained constant between 2003 and 2008 (table 8.29).

**Table 8.29: Able to get help from a relative or friend to find a job, 2003–2008**

Able to get help from a relative or friend to find a job	2003	2004	2005	2006	2007	2008
	Per cent					
Yes	42.7	51.9	55.5	54.5	54.4	54.3
No	30.9	38.3	35.2	35.8	35.4	35.3

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.

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

Table 8.30 shows the proportion of persons aged 18–64 years who reported they could find a job through a family member or a friend, by sex and region. Over half (54.3 per cent) of all persons aged 18–64 years reported they could find a job through a relative or a friend in 2008. A higher proportion of males (58.3 per cent) than females (50.4 per cent) reported they could find a job through a family member or friend.

A higher proportion of persons aged 18–64 years living in rural areas (57.1 per cent) indicated they could find a job through a relative or a friend, compared with those living in the metropolitan area (53.4 per cent). A higher proportion of males living in rural areas (63.3 per cent) reported being able to find a job through a relative or a friend, compared with males living in the metropolitan area (56.6 per cent). No metropolitan–rural difference was evident in the proportions of females of working age who could find a job through a relative or a friend.

Table 8.30: Able to get help from a relative or friend to find a job, by sex and Department of Health region, 2008

Region	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
Barwon-South Western	68.7	62.8	74.1	23.5	18.8	28.8
Eastern Metropolitan	55.5	51.8	59.2	34.2	30.8	37.9
Gippsland	58.1	53.2	62.8	30.9	26.7	35.5
Grampians	58.3	53.2	63.1	33.4	28.8	38.2
Hume	64.0	60.2	67.5	27.1	24.0	30.3
Loddon Mallee	64.8	60.5	68.8	27.3	23.7	31.2
North and West Metropolitan	57.4	54.9	59.9	33.5	31.1	35.9
Southern Metropolitan	56.8	53.8	59.7	33.4	30.7	36.4
<b>Metropolitan</b>	56.6	54.9	58.4	33.7	32.1	35.3
<b>Rural</b>	63.3	61.0	65.6	28.0	26.0	30.1
<b>Total</b>	58.3	56.9	59.7	32.3	31.0	33.7
<b>Females</b>						
Barwon-South Western	49.9	44.4	55.3	39.3	34.1	44.8
Eastern Metropolitan	52.2	49.3	55.0	37.3	34.5	40.1
Gippsland	51.3	47.6	55.1	38.2	34.7	41.9
Grampians	50.2	45.7	54.6	41.1	36.9	45.5
Hume	54.8	51.9	57.7	36.5	33.9	39.2
Loddon Mallee	49.1	45.4	52.7	41.8	38.3	45.4
North and West Metropolitan	48.6	46.6	50.6	39.1	37.2	41.1
Southern Metropolitan	51.2	48.6	53.7	37.0	34.6	39.5
<b>Metropolitan</b>	50.2	48.8	51.6	38.0	36.7	39.4
<b>Rural</b>	50.9	48.9	53.0	39.5	37.5	41.5
<b>Total</b>	50.4	49.3	51.6	38.4	37.2	39.5
<b>Persons</b>						
Barwon-South Western	59.3	55.0	63.4	31.5	27.7	35.5
Eastern Metropolitan	53.8	51.5	56.2	35.8	33.5	38.1
Gippsland	54.8	51.7	57.8	34.5	31.7	37.5
Grampians	54.1	50.8	57.5	37.2	34.1	40.5
Hume	59.4	57.0	61.7	31.8	29.8	33.9
Loddon Mallee	56.8	53.9	59.7	34.7	32.0	37.4
North and West Metropolitan	53.0	51.4	54.6	36.3	34.8	37.9
Southern Metropolitan	54.0	52.0	55.9	35.2	33.4	37.1
<b>Metropolitan</b>	53.4	52.3	54.5	35.9	34.8	36.9
<b>Rural</b>	57.1	55.5	58.7	33.8	32.3	35.3
<b>Total</b>	54.3	53.4	55.3	35.3	34.5	36.2

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Table 8.31 and figure 8.10 show the proportion of persons aged 18–64 years who reported they could find a job through a relative or friend, by LGA. The proportion ranged from 42.3 per cent in Greater Dandenong to 68.6 per cent in Moyne.

There were 13 LGAs (all located in rural Victoria), where the proportion of persons who could find a job with the aid of a family member or friend was above the average for Victoria (54.3 per cent): Moyne (68.6 per cent), Surf Coast (68.1 per cent), Swan Hill (67.7 per cent), West Wimmera (66.7 per cent), Campaspe (66.6 per cent), Wangaratta (66.6 per cent), Buloke (66.4 per cent), Corangamite, (65.6 per cent), Queenscliffe (64.4 per cent), Mansfield (63.9 per cent), Murrindindi (63.1 per cent), Mitchell (62.5 per cent) and Southern Grampians (62.2 per cent).

There were two LGAs (both in the metropolitan area), where the proportion of persons who could get a job in this way was below the average for Victoria: Melbourne (47.6 per cent) and Greater Dandenong (42.3 per cent).

Table 8.31: Able to get help from a relative or friend to find a job, by LGA, 2008

LGA	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	61.9	54.7	68.7	29.6	23.7	36.2
Ararat (RC)	59.5	52.3	66.4	36.0	29.2	43.3
Ballarat (C)	54.7	48.3	61.0	38.6	32.6	44.9
Banyule (C)	59.8	53.3	66.0	28.3	23.6	33.4
Bass Coast (S)	55.1	46.2	63.7	34.9	27.4	43.3
Baw Baw (S)	58.6	51.8	65.1	28.5	23.4	34.3
Bayside (C)	59.1	52.7	65.3	29.9	24.3	36.1
Benalla (RC)	47.8	40.5	55.2	37.5	31.2	44.2
Boroondara (C)	55.3	48.9	61.5	34.2	28.4	40.6
Brimbank (C)	54.0	48.5	59.4	35.1	30.0	40.4
Buloke (S)	66.4	60.1	72.2	26.2	20.9	32.3
Campaspe (S)	66.6	61.2	71.6	26.2	21.6	31.4
Cardinia (S)	60.9	55.0	66.5	28.3	23.2	33.9
Casey (C)	52.6	47.4	57.8	34.9	30.1	40.1
Central Goldfields (S)	50.0	43.0	57.0	44.0	37.0	51.2
Colac-Otway (S)	59.4	51.8	66.5	33.9	27.0	41.5
Corangamite (S)	65.6	59.0	71.6	24.1	19.7	29.1
Darebin (C)	52.8	47.0	58.6	35.2	30.0	40.7
East Gippsland (S)	53.5	44.8	62.1	35.4	28.0	43.7
Frankston (C)	56.4	50.4	62.3	36.4	31.1	42.0
Gannawarra (S)	57.6	50.4	64.5	34.7	28.2	41.7
Glen Eira (C)	53.5	48.1	58.9	32.4	27.4	37.9
Glenelg (S)	53.2	46.4	60.0	34.8	28.7	41.3
Golden Plains (S)	49.1	42.7	55.5	40.3	34.5	46.4
Greater Bendigo (C)	52.0	45.7	58.3	38.0	32.2	44.1
Greater Dandenong (C)	42.3	36.4	48.5	47.3	41.1	53.6
Greater Geelong (C)	57.3	50.3	64.0	33.6	27.4	40.3
Greater Shepparton (C)	60.6	54.0	66.8	29.4	24.5	34.9
Hepburn (S)	55.4	48.9	61.6	35.8	30.2	41.7
Hindmarsh (S)	58.0	51.9	63.8	28.6	23.8	33.9
Hobsons Bay (C)	59.4	53.7	64.8	31.2	26.2	36.7
Horsham (RC)	56.1	49.4	62.6	34.3	28.2	40.9
Hume (C)	49.1	43.4	54.8	39.5	34.2	45.1
Indigo (S)	53.0	46.2	59.7	38.4	31.9	45.3
Kingston (C)	53.3	47.2	59.4	34.7	29.0	41.0
Knox (C)	52.5	46.4	58.5	36.6	31.1	42.5
Latrobe (C)	51.1	45.0	57.1	37.4	31.8	43.5
Loddon (S)	51.9	45.0	58.7	39.6	33.2	46.3
Macedon Ranges (S)	54.5	47.4	61.4	37.2	30.5	44.4
Manningham (C)	55.3	49.2	61.3	34.3	28.7	40.5

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

95% CI = 95 per cent confidence interval.

LGA = local government area.

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.

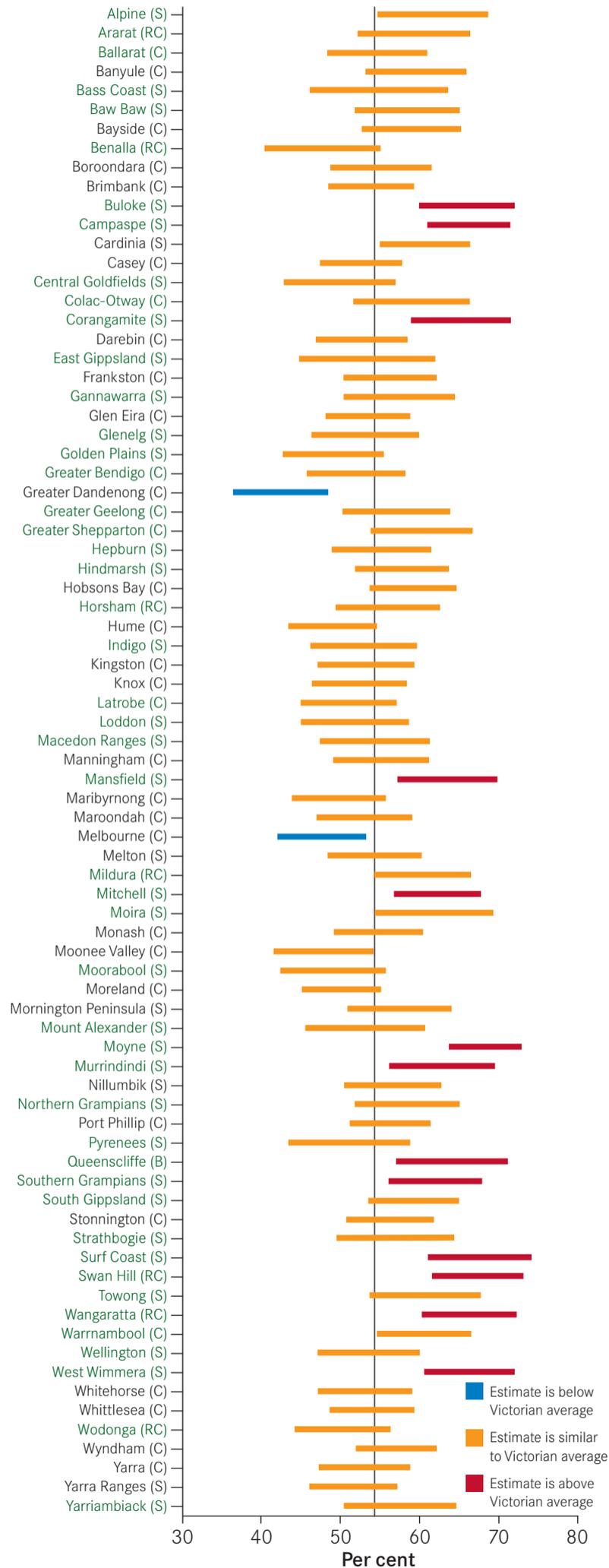
Estimates that are (statistically) significantly different from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

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

Table 8.31: Able to get help from a relative or friend to find a job, by LGA, 2008 (continued)

LGA	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	63.9	57.3	69.9	28.6	22.9	35.1
Maribyrnong (C)	49.9	44.0	55.8	38.5	33.0	44.3
Maroondah (C)	53.0	46.9	59.1	37.2	31.6	43.2
Melbourne (C)	47.6	42.0	53.3	42.3	36.8	48.0
Melton (S)	54.4	48.3	60.3	34.7	29.2	40.6
Mildura (RC)	60.7	54.4	66.5	32.4	26.7	38.6
Mitchell (S)	62.5	56.9	67.8	29.9	25.0	35.4
Moira (S)	62.2	54.5	69.4	25.5	20.4	31.4
Monash (C)	55.0	49.2	60.6	36.6	31.2	42.3
Moonee Valley (C)	47.9	41.6	54.3	36.4	30.5	42.7
Moorabool (S)	49.1	42.3	55.9	39.2	32.9	45.8
Moreland (C)	50.1	45.1	55.2	38.7	33.7	44.0
Mornington Peninsula (S)	57.7	51.0	64.2	33.9	27.7	40.7
Mount Alexander (S)	53.3	45.6	60.8	39.0	32.0	46.5
Moyne (S)	68.6	63.8	73.0	23.7	19.6	28.2
Murrindindi (S)	63.1	56.2	69.6	26.9	21.2	33.4
Nillumbik (S)	56.8	50.5	62.9	31.7	26.6	37.2
Northern Grampians (S)	58.6	51.8	65.2	29.6	24.3	35.4
Port Phillip (C)	56.4	51.2	61.5	32.5	27.7	37.8
Pyrenees (S)	51.3	43.5	58.9	38.8	31.7	46.4
Queenscliffe (B)	64.4	57.1	71.2	26.7	20.9	33.5
Southern Grampians (S)	62.2	56.2	68.0	26.6	21.6	32.3
South Gippsland (S)	59.5	53.6	65.1	30.2	25.1	35.9
Stonnington (C)	56.5	50.8	61.9	32.9	27.8	38.4
Strathbogie (S)	57.2	49.6	64.5	35.5	29.2	42.4
Surf Coast (S)	68.1	61.2	74.3	22.4	18.4	27.0
Swan Hill (RC)	67.7	61.6	73.3	24.5	19.6	30.2
Towong (S)	61.0	53.8	67.8	30.6	24.3	37.7
Wangaratta (RC)	66.6	60.3	72.4	26.6	21.4	32.4
Warrnambool (C)	60.8	54.6	66.7	30.4	25.2	36.2
Wellington (S)	53.8	47.1	60.3	37.3	30.9	44.3
West Wimmera (S)	66.7	60.6	72.2	26.4	21.2	32.3
Whitehorse (C)	53.3	47.2	59.3	34.9	29.6	40.6
Whittlesea (C)	54.2	48.7	59.5	38.4	33.2	43.9
Wodonga (RC)	50.3	44.2	56.4	42.3	36.5	48.4
Wyndham (C)	57.2	52.0	62.2	34.6	29.8	39.8
Yarra (C)	53.1	47.3	58.9	39.6	34.0	45.5
Yarra Ranges (S)	51.7	46.1	57.3	36.9	31.6	42.6
Yarriambiack (S)	57.8	50.5	64.8	33.3	26.7	40.7
<b>Total</b>	<b>54.3</b>	<b>53.4</b>	<b>55.3</b>	<b>35.3</b>	<b>34.5</b>	<b>36.2</b>

Figure 8.10: Able to get help from a relative or a friend to find a job, 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 line on the graph is the Victorian estimate, it does not show the 95% CI.  
 See relevant table for the 95% CI for Victoria (Total).

### Getting help from a volunteer organisation

Many volunteer organisations seek to address human, environmental and social needs within the community. An important principle of volunteering is respecting the rights, dignity and culture of those who are afforded material or other assistance. The 2008 survey asked respondents whether they currently received any help from volunteer organisations.

Table 8.32 shows the proportion of persons who reported they received help from volunteer organisations, by age group and sex. Similar proportions of people received such help in the age groups 18–24 years to 55–64 years. The proportion of persons who received such help was higher among those aged 65 years and over. Among males aged 65 years and over, 9.2 per cent received some help from a volunteer organisation. More than one in 10 (11.1 per cent) females in this age group received such help.

**Table 8.32: Received help from a volunteer organisation, by age group and sex, 2008**

Age group (years)	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
18–24 years	4.7	3.0	7.3	94.9	92.2	96.7
25–34 years	5.2	3.7	7.2	94.2	92.1	95.8
35–44 years	5.2	4.0	6.8	94.5	92.9	95.8
45–54 years	4.9	3.8	6.3	94.9	93.6	96.1
55–64 years	3.1	2.5	4.0	96.5	95.6	97.3
65+	9.2	8.0	10.5	90.5	89.1	91.7
<b>Total</b>	<b>5.7</b>	<b>5.1</b>	<b>6.3</b>	<b>93.9</b>	<b>93.3</b>	<b>94.5</b>
<b>Females</b>						
18–24 years	4.4	3.0	6.5	95.4	93.4	96.9
25–34 years	4.1	3.1	5.4	95.5	94.1	96.5
35–44 years	4.3	3.5	5.2	95.6	94.6	96.4
45–54 years	4.7	3.9	5.8	95.1	94.0	96.0
55–64 years	4.7	3.9	5.8	95.1	94.0	96.0
65+	11.1	10.0	12.3	88.4	87.2	89.6
<b>Total</b>	<b>5.9</b>	<b>5.4</b>	<b>6.3</b>	<b>93.8</b>	<b>93.4</b>	<b>94.3</b>
<b>Persons</b>						
18–24 years	4.5	3.4	6.1	95.2	93.6	96.4
25–34 years	4.6	3.7	5.8	94.8	93.6	95.8
35–44 years	4.7	4.0	5.6	95.0	94.1	95.8
45–54 years	4.8	4.1	5.6	95.0	94.2	95.7
55–64 years	4.0	3.4	4.6	95.8	95.1	96.4
65+	10.2	9.4	11.1	89.4	88.5	90.2
<b>Total</b>	<b>5.8</b>	<b>5.4</b>	<b>6.2</b>	<b>93.9</b>	<b>93.5</b>	<b>94.2</b>

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

The proportion of persons who reported currently receiving help from a volunteer organisation remained constant between 2002 and 2008 (table 8.33).

**Table 8.33: Received help from a volunteer organisation, 2002–2008**

Received help from a volunteer organisation	2002	2003	2004	2005	2006	2007	2008
	Per cent						
Yes	7.8	7.9	7.0	4.6	5.6	5.3	5.8
No	91.6	91.8	92.7	95.1	94.0	94.4	93.9

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.

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

Table 8.34 shows the proportion of persons who received help from volunteer organisations, by sex and region. More than one in 20 persons (5.8 per cent) received help from volunteer organisations. Table 8.34 indicates similar proportions of males, females and persons living in metropolitan and rural areas had received help from volunteer organisations.

**Table 8.34: Received help from a volunteer organisation, by sex and Department of Health region, 2008**

Region	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
Barwon-South Western	6.8	5.5	8.5	95.8	94.0	97.2
Eastern Metropolitan	6.5	4.9	8.7	93.1	90.9	94.8
Gippsland	5.6	4.9	6.4	92.9	90.4	94.8
Grampians	6.0	4.7	7.8	93.8	91.5	95.5
Hume	5.2	4.0	6.7	92.8	91.1	94.3
Loddon Mallee	5.6	4.6	6.7	93.6	91.7	95.0
North and West Metropolitan	4.0	2.7	5.9	94.0	92.8	95.0
Southern Metropolitan	6.9	5.1	9.5	94.5	92.9	95.7
<b>Metropolitan</b>	6.0	4.3	8.3	94.0	93.1	94.7
<b>Rural</b>	5.8	5.1	6.7	93.9	93.0	94.7
<b>Total</b>	5.7	5.1	6.3	93.9	93.3	94.5
<b>Females</b>						
Barwon-South Western	6.8	5.8	8.0	94.0	92.1	95.4
Eastern Metropolitan	4.6	3.6	5.7	95.3	94.1	96.2
Gippsland	5.6	5.0	6.2	92.4	90.7	93.8
Grampians	6.6	5.5	7.9	93.0	91.5	94.3
Hume	6.5	5.4	7.8	92.9	91.8	93.9
Loddon Mallee	5.4	4.7	6.3	93.1	91.8	94.3
North and West Metropolitan	5.8	4.4	7.7	94.1	93.2	94.9
Southern Metropolitan	7.5	6.1	9.2	93.3	91.9	94.4
<b>Metropolitan</b>	6.4	5.2	7.8	94.1	93.5	94.7
<b>Rural</b>	6.5	5.9	7.2	93.2	92.5	93.8
<b>Total</b>	5.9	5.4	6.3	93.8	93.4	94.3
<b>Persons</b>						
Barwon-South Western	6.8	6.0	7.8	94.9	93.6	95.9
Eastern Metropolitan	5.6	4.6	6.8	94.1	92.9	95.2
Gippsland	5.6	5.2	6.1	92.5	91.0	93.8
Grampians	6.3	5.4	7.4	93.4	92.0	94.5
Hume	5.9	5.0	6.8	92.8	91.8	93.8
Loddon Mallee	5.5	4.9	6.2	93.3	92.2	94.2
North and West Metropolitan	4.9	3.9	6.2	94.0	93.3	94.7
Southern Metropolitan	7.3	6.1	8.8	93.9	92.9	94.7
<b>Metropolitan</b>	6.2	5.1	7.5	94.0	93.5	94.5
<b>Rural</b>	6.2	5.7	6.8	93.5	92.9	94.0
<b>Total</b>	5.8	5.4	6.2	93.9	93.5	94.2

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

As shown in table 8.35 and figure 8.11, the proportion of persons who received help from volunteer organisations ranged from 2.4 per cent in the LGA of Golden Plains to 13.9 per cent for the LGA of Loddon. There were seven LGAs (all rural), where the proportion of persons who had received help from a volunteer organisation was above the average for Victoria (5.8 per cent): Loddon (13.9 per cent), Indigo (13.4 per cent), Bass Coast (12.9 per cent), West Wimmera (12.0 per cent), Yarriambiack (11.5 per cent), Buloke (10.8 per cent) and Alpine (10.5 per cent).

Among the four LGAs in which the proportion of persons who reported they had received such help was below the average for Victoria, two were in the metropolitan area (Yarra, at 3.1 per cent, and Stonnington, at 2.5 per cent) and two were rural (Macedon Ranges, at 3.2 per cent, and Golden Plains, at 2.4 per cent).

Table 8.35: Received help from a volunteer organisation, by LGA, 2008

LGA	Yes			No			LGA	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI		%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	10.5	7.5	14.5	89.5	85.5	92.5	Mansfield (S)	5.4	3.5	8.3	94.3	91.5	96.3
Ararat (RC)	7.6	5.1	11.2	92.4	88.8	94.9	Maribyrnong (C)	6.3	4.2	9.5	93.4	90.3	95.6
Ballarat (C)	5.1	3.2	8.1	94.4	91.3	96.4	Maroondah (C)	5.0	3.3	7.6	94.8	92.3	96.6
Banyule (C)	4.9*	2.9	8.2	94.6	91.2	96.7	Melbourne (C)	6.3	4.2	9.4	93.2	90.1	95.4
Bass Coast (S)	12.9	7.7	20.6	86.8	79.0	91.9	Melton (S)	6.0	4.0	8.9	93.3	90.3	95.4
Baw Baw (S)	4.7	3.2	6.8	95.1	92.9	96.6	Mildura (RC)	8.8	6.0	12.7	90.9	87.0	93.7
Bayside (C)	3.8*	2.3	6.3	96.0	93.5	97.6	Mitchell (S)	6.9	4.5	10.4	93.1	89.6	95.5
Benalla (RC)	7.5	4.7	11.7	92.3	88.1	95.1	Moira (S)	6.9	4.5	10.6	92.3	88.2	95.0
Boroondara (C)	3.4*	2.0	5.8	96.4	93.9	97.9	Monash (C)	6.2*	3.7	10.2	93.1	89.0	95.7
Brimbank (C)	7.6	5.1	11.2	92.1	88.5	94.7	Moonee Valley (C)	5.5	3.6	8.4	94.5	91.6	96.4
Buloke (S)	10.8	7.3	15.7	88.9	84.0	92.4	Moorabool (S)	6.2	4.1	9.4	93.1	89.8	95.4
Campaspe (S)	7.5	5.0	11.3	92.5	88.7	95.0	Moreland (C)	4.5*	2.7	7.6	95.1	92.1	97.0
Cardinia (S)	6.0*	3.6	9.7	94.0	90.3	96.4	Mornington Peninsula (S)	7.3*	4.2	12.2	92.7	87.8	95.8
Casey (C)	8.2	5.7	11.6	91.2	87.5	93.8	Mount Alexander (S)	7.4	5.1	10.8	91.9	88.5	94.4
Central Goldfields (S)	9.6*	5.8	15.5	88.7	82.6	92.8	Moynes (S)	6.3	4.0	9.7	93.7	90.2	95.9
Colac-Otway (S)	4.3*	2.6	7.0	95.7	93.0	97.4	Murrindindi (S)	6.7	4.8	9.4	92.9	90.2	94.9
Corangamite (S)	6.2	4.3	8.7	93.1	90.4	95.1	Nilumbik (S)	5.7	3.6	9.0	94.1	90.8	96.3
Darebin (C)	4.8	3.1	7.2	94.9	92.4	96.6	Northern Grampians (S)	8.0*	4.7	13.2	91.6	86.5	94.9
East Gippsland (S)	7.0	4.7	10.3	93.0	89.7	95.3	Port Phillip (C)	3.8*	2.3	6.2	96.2	93.8	97.7
Frankston (C)	6.4	4.3	9.6	92.9	89.5	95.3	Pyrenees (S)	8.8	5.9	12.9	91.1	86.9	94.0
Gannawarra (S)	7.5	5.1	10.9	92.4	89.0	94.9	Queenscliffe (B)	7.7	4.6	12.7	92.0	87.1	95.2
Glen Eira (C)	6.4	4.1	9.8	93.4	90.0	95.7	Southern Grampians (S)	6.9	4.6	10.1	92.4	88.8	94.9
Glenelg (S)	6.8	4.6	10.1	93.2	89.9	95.4	South Gippsland (S)	5.7	3.9	8.3	93.6	90.9	95.6
Golden Plains (S)	2.4*	1.3	4.3	97.3	95.4	98.5	Stonnington (C)	2.5*	1.3	4.7	97.4	95.3	98.6
Greater Bendigo (C)	4.4	3.0	6.6	95.2	92.8	96.8	Strathbogie (S)	6.4	4.3	9.3	93.6	90.7	95.6
Greater Dandenong (C)	7.5	5.0	10.9	92.1	88.5	94.7	Surf Coast (S)	7.2	5.0	10.3	92.8	89.7	95.0
Greater Geelong (C)	3.8	2.4	6.0	96.1	93.9	97.5	Swan Hill (RC)	6.3	4.2	9.2	93.5	90.5	95.6
Greater Shepparton (C)	4.9	3.3	7.3	95.1	92.7	96.7	Towong (S)	8.9	6.2	12.6	89.5	85.5	92.5
Hepburn (S)	6.2	4.3	8.8	93.3	90.7	95.3	Wangaratta (RC)	8.3	5.7	12.1	91.7	87.9	94.3
Hindmarsh (S)	8.2	5.6	11.7	91.5	87.9	94.1	Warrnambool (C)	5.8	3.9	8.6	93.6	90.7	95.7
Hobsons Bay (C)	4.4	2.8	7.0	95.6	93.0	97.2	Wellington (S)	6.9	4.4	10.6	93.1	89.4	95.6
Horsham (RC)	5.5	3.7	8.1	94.2	91.6	96.1	West Wimmera (S)	12.0	8.8	16.1	87.8	83.7	91.0
Hume (C)	6.7	4.6	9.7	92.2	89.1	94.4	Whitehorse (C)	6.3	4.0	9.7	93.2	89.7	95.5
Indigo (S)	13.4	8.6	20.3	86.6	79.7	91.4	Whittlesea (C)	6.1	4.1	9.0	93.8	90.9	95.8
Kingston (C)	5.9	4.0	8.6	94.0	91.3	95.9	Wodonga (RC)	5.9	4.0	8.7	92.8	89.4	95.2
Knox (C)	6.3*	3.8	10.3	93.7	89.7	96.2	Wyndham (C)	6.4	4.3	9.5	92.8	89.5	95.1
Latrobe (C)	8.6	6.2	11.7	91.4	88.3	93.8	Yarra (C)	3.1*	1.8	5.3	96.3	93.9	97.8
Loddon (S)	13.9	10.0	19.0	85.4	80.2	89.4	Yarra Ranges (S)	6.2	4.1	9.4	93.8	90.6	95.9
Macedon Ranges (S)	3.2*	2.0	5.2	96.6	94.5	97.8	Yarriambiack (S)	11.5	8.1	16.1	88.4	83.8	91.9
Manningham (C)	6.1	3.7	9.7	93.9	90.3	96.3	<b>Total</b>	<b>5.8</b>	<b>5.4</b>	<b>6.2</b>	<b>93.9</b>	<b>93.5</b>	<b>94.2</b>

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

LGA = local government area.

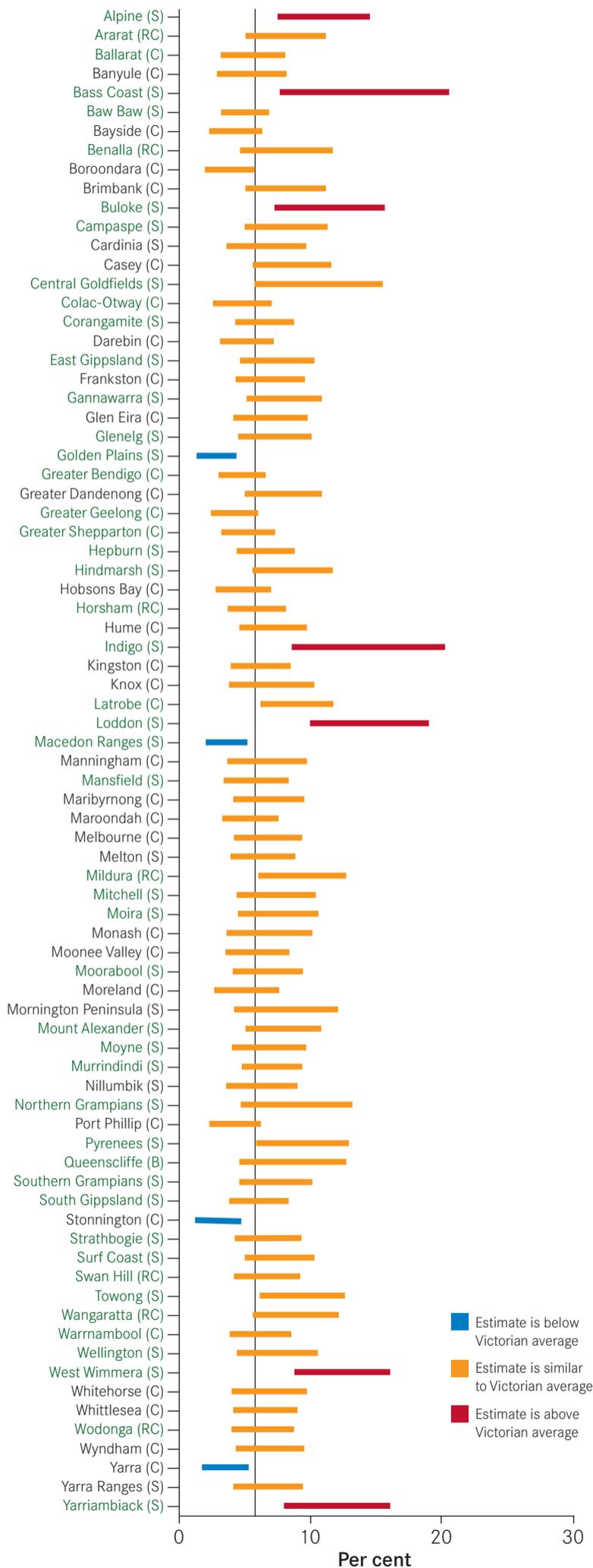
Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are age standardised to the 2006 Victorian population.

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

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

Figure 8.11: Received help from a volunteer organisation, 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 line on the graph is the Victorian estimate, it does not show the 95% CI. See relevant table for the 95% CI for Victoria (Total).

There are a range of support groups in which individuals support one another to deal with an issue they have in common, sometimes with the aid of a facilitator, counsellor or other professional. The 2008 survey asked respondents whether they had been to any support group meetings over the past two years.

Table 8.36 presents information about persons who had attended a support group meeting within the past two years, by age group and sex. The proportion of persons who had attended a support group meeting within the past two years did not differ by age group, however, females (10.8 per cent) were more likely than males (9.2 per cent) to report attending a support group meeting.

**Table 8.36: Attended a support group meeting in the past two years, by age group and sex, 2008**

Age group (years)	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
18–24 years	8.2	6.0	11.2	91.8	88.8	94.0
25–34 years	8.0	6.1	10.4	92.0	89.6	93.9
35–44 years	7.8	6.4	9.4	92.1	90.4	93.5
45–54 years	10.2	8.6	12.0	89.7	87.9	91.3
55–64 years	9.7	8.3	11.3	90.2	88.6	91.6
65+	11.7	10.4	13.3	88.1	86.5	89.5
<b>Total</b>	<b>9.2</b>	<b>8.5</b>	<b>10.0</b>	<b>90.7</b>	<b>89.9</b>	<b>91.4</b>
<b>Females</b>						
18–24 years	8.7	6.6	11.4	90.7	87.8	92.9
25–34 years	9.9	8.4	11.7	89.9	88.1	91.5
35–44 years	11.2	9.9	12.6	88.7	87.3	89.9
45–54 years	11.7	10.4	13.2	88.1	86.6	89.5
55–64 years	13.2	11.7	14.7	86.7	85.2	88.2
65+	10.5	9.5	11.6	89.3	88.1	90.3
<b>Total</b>	<b>10.8</b>	<b>10.2</b>	<b>11.5</b>	<b>88.9</b>	<b>88.3</b>	<b>89.6</b>
<b>Persons</b>						
18–24 years	8.5	6.9	10.4	91.2	89.2	92.9
25–34 years	9.0	7.7	10.4	91.0	89.5	92.2
35–44 years	9.5	8.5	10.6	90.3	89.3	91.3
45–54 years	10.9	9.9	12.1	88.9	87.7	90.0
55–64 years	11.4	10.4	12.5	88.5	87.4	89.5
65+	11.0	10.2	12.0	88.7	87.8	89.6
<b>Total</b>	<b>10.0</b>	<b>9.5</b>	<b>10.5</b>	<b>89.8</b>	<b>89.3</b>	<b>90.3</b>

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 from the corresponding estimate for Victoria are identified by colour as follows: **above Victoria** / **below Victoria**.

The proportion of persons who reported having attended a support group meeting in the past two years remained constant between 2002 and 2008 (table 8.37).

**Table 8.37: Attended a support group meeting in the past two years, 2002–2008**

Attended a support group meeting in the past two years	2002	2003	2004	2005	2006	2007	2008
	Per cent						
Yes	11.8	10.0	9.8	9.5	10.6	10.1	10.0
No	88.1	89.8	90.2	90.4	89.3	89.8	89.8

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.

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

Table 8.38 shows that a higher proportion of persons living in the metropolitan area (12.8 per cent) had attended a support group meeting in the past two years, compared with those living in rural areas (9.3 per cent). The proportion of persons who had attended a support group meeting in the past two years was higher than the average for Victoria (10.0 per cent) in three Department of Health regions: Southern Metropolitan (12.5 per cent), Barwon–South Western (12.3 per cent) and Grampians (11.7 per cent) regions.

The proportion of males from the Gippsland region (6.9 per cent) who had attended a support group meeting within the past two years was lower than the average for Victoria (9.2 per cent), but similar to the rural average (8.6 per cent).

Table 8.38: Attended a support group meeting in the past two years, by sex and Department of Health region, 2008

Region	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
Barwon-South Western	11.8	9.3	14.9	89.4	85.8	92.1
Eastern Metropolitan	7.9	6.4	9.6	89.4	87.0	91.4
Gippsland	6.9	5.7	8.4	88.2	85.1	90.7
Grampians	10.7	9.5	12.1	91.9	90.2	93.4
Hume	10.5	8.5	13.0	88.6	86.3	90.6
Loddon Mallee	8.6	7.4	10.0	88.3	85.3	90.7
North and West Metropolitan	10.5	7.8	14.0	91.2	89.8	92.4
Southern Metropolitan	11.5	9.1	14.5	93.0	91.5	94.3
<b>Metropolitan</b>	11.4	9.4	13.7	91.3	90.3	92.2
<b>Rural</b>	8.6	7.8	9.6	89.2	87.8	90.4
<b>Total</b>	9.2	8.5	10.0	90.7	89.9	91.4
<b>Females</b>						
Barwon-South Western	12.8	10.9	14.8	87.6	84.4	90.2
Eastern Metropolitan	10.9	9.4	12.6	89.3	87.6	90.9
Gippsland	10.9	9.5	12.4	87.0	85.0	88.9
Grampians	12.7	11.7	13.7	89.0	87.3	90.4
Hume	10.6	9.1	12.4	85.8	84.0	87.5
Loddon Mallee	9.0	8.0	10.1	86.4	84.4	88.2
North and West Metropolitan	12.2	9.6	15.3	90.6	89.4	91.6
Southern Metropolitan	13.5	11.7	15.6	89.0	87.5	90.4
<b>Metropolitan</b>	14.1	12.5	15.9	89.7	88.9	90.4
<b>Rural</b>	10.1	9.3	10.9	87.2	86.1	88.2
<b>Total</b>	10.8	10.2	11.5	88.9	88.3	89.6
<b>Persons</b>						
Barwon-South Western	12.3	10.7	14.1	88.5	86.1	90.5
Eastern Metropolitan	9.4	8.4	10.6	89.4	87.9	90.7
Gippsland	8.9	8.0	10.0	87.6	85.8	89.2
Grampians	11.7	10.9	12.5	90.4	89.3	91.5
Hume	10.6	9.3	12.0	87.2	85.7	88.5
Loddon Mallee	8.8	8.0	9.7	87.3	85.6	88.9
North and West Metropolitan	11.3	9.3	13.7	90.9	90.0	91.7
Southern Metropolitan	12.5	11.0	14.3	91.0	89.9	92.0
<b>Metropolitan</b>	12.8	11.5	14.2	90.5	89.9	91.1
<b>Rural</b>	9.3	8.8	10.0	88.2	87.3	89.0
<b>Total</b>	10.0	9.5	10.5	89.8	89.3	90.3

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Table 8.39 shows the proportion of persons who reported they had attended a support group meeting in the past two years, by LGA. The proportion ranged from 4.0 per cent in Bayside to 17.8 per cent in Pyrenees.

There were 14 LGAs (all rural), where the proportion of persons who had attended a support group meeting was above the average for Victoria (10.0 per cent) (figure 8.12). Among the five LGAs in which the proportion was below the average for Victoria, all were located in the metropolitan area: Boroondara (6.5 per cent), Stonnington (6.1 per cent), Darebin (6.0 per cent), Greater Dandenong (5.9 per cent) and Bayside (4.0 per cent).

Table 8.39: Attended a support group meeting in the past two years, by LGA, 2008

LGA	Yes			No			LGA	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI		%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	13.7	10.3	18.0	86.2	81.8	89.6	Mansfield (S)	11.5	8.6	15.2	88.5	84.8	91.4
Ararat (RC)	10.3	7.5	13.9	89.7	86.1	92.5	Maribyrnong (C)	8.9	6.4	12.3	90.9	87.4	93.4
Ballarat (C)	7.4	5.5	10.0	92.5	89.9	94.4	Maroondah (C)	8.5	6.0	11.9	91.4	88.1	93.9
Banyule (C)	8.9	6.2	12.6	89.8	85.6	92.8	Melbourne (C)	13.3	10.0	17.6	86.4	82.2	89.8
Bass Coast (S)	15.8	11.4	21.6	83.7	77.9	88.2	Melton (S)	9.3	6.7	12.7	90.2	86.7	92.9
Baw Baw (S)	11.9	8.0	17.4	88.1	82.6	92.0	Mildura (RC)	13.0	9.6	17.5	87.0	82.5	90.4
Bayside (C)	4.0	2.7	6.0	96.0	94.0	97.3	Mitchell (S)	8.4	6.1	11.5	91.6	88.5	93.9
Benalla (RC)	12.9	9.3	17.6	87.0	82.3	90.6	Moira (S)	16.0	12.0	21.0	84.0	79.0	88.0
Boroondara (C)	6.5	4.4	9.3	93.5	90.7	95.6	Monash (C)	10.0	7.0	14.1	90.0	85.9	93.0
Brimbank (C)	9.2	6.5	12.9	90.8	87.1	93.5	Moonee Valley (C)	7.9	5.4	11.4	92.1	88.6	94.6
Buloke (S)	14.9	11.8	18.7	84.8	81.0	88.0	Moorabool (S)	8.6	6.2	11.9	90.7	87.2	93.3
Campaspe (S)	11.2	8.1	15.3	88.8	84.7	91.9	Moreland (C)	8.1	5.7	11.6	91.6	88.1	94.1
Cardinia (S)	11.9	9.1	15.4	88.1	84.6	90.9	Mornington Peninsula (S)	11.0	7.6	15.6	89.0	84.3	92.4
Casey (C)	11.1	8.3	14.8	88.9	85.2	91.7	Mount Alexander (S)	16.7	12.4	22.2	83.3	77.8	87.6
Central Goldfields (S)	10.7	7.4	15.3	89.3	84.7	92.6	Moyne (S)	11.8	8.6	15.9	88.1	84.0	91.3
Colac-Otway (S)	11.3	7.9	15.9	87.4	82.3	91.2	Murrindindi (S)	11.5	7.1	18.1	88.5	81.9	92.9
Corangamite (S)	14.1	10.6	18.6	85.2	80.6	88.8	Nillumbik (S)	9.0	6.3	12.8	90.7	86.9	93.5
Darebin (C)	6.0	3.9	9.1	93.7	90.6	95.9	Northern Grampians (S)	11.8	8.6	16.0	87.8	83.6	91.1
East Gippsland (S)	12.9	9.8	16.8	87.0	83.1	90.1	Port Phillip (C)	7.1	5.1	9.9	92.7	90.0	94.8
Frankston (C)	10.0	7.3	13.6	90.0	86.4	92.7	Pyrenees (S)	17.8	12.5	24.8	82.1	75.1	87.4
Gannawarra (S)	15.1	11.7	19.3	84.8	80.6	88.2	Queenscliffe (B)	9.5	6.4	13.8	90.5	86.2	93.6
Glen Eira (C)	8.6	6.0	12.1	91.3	87.8	93.9	Southern Grampians (S)	13.2	10.3	16.7	86.8	83.3	89.7
Glenelg (S)	15.8	11.7	21.0	84.2	79.0	88.3	South Gippsland (S)	12.6	9.2	17.0	87.3	82.9	90.7
Golden Plains (S)	8.9	6.3	12.4	91.1	87.6	93.7	Stonnington (C)	6.1	3.9	9.3	93.9	90.7	96.1
Greater Bendigo (C)	12.4	9.2	16.5	87.5	83.4	90.6	Strathbogie (S)	11.5	8.0	16.2	88.4	83.7	91.9
Greater Dandenong (C)	5.9	4.0	8.6	93.7	91.0	95.6	Surf Coast (S)	13.0	8.8	18.7	86.7	80.9	90.9
Greater Geelong (C)	9.8	6.8	14.0	90.1	86.0	93.2	Swan Hill (RC)	9.4	7.0	12.6	90.0	86.6	92.6
Greater Shepparton (C)	12.5	9.3	16.6	87.5	83.4	90.7	Towong (S)	14.9	11.5	19.2	85.0	80.8	88.4
Hepburn (S)	8.8	6.5	11.8	91.1	88.0	93.4	Wangaratta (RC)	13.7	10.6	17.5	86.3	82.5	89.4
Hindmarsh (S)	10.6	8.1	13.8	89.4	86.2	91.9	Warrnambool (C)	14.1	10.5	18.5	85.7	81.2	89.2
Hobsons Bay (C)	9.3	6.2	13.8	90.7	86.2	93.8	Wellington (S)	13.4	9.6	18.3	86.6	81.7	90.4
Horsham (RC)	11.1	8.5	14.4	88.9	85.6	91.5	West Wimmera (S)	17.3	13.2	22.3	82.5	77.5	86.6
Hume (C)	8.4	5.9	11.9	91.2	87.7	93.8	Whitehorse (C)	11.4	7.7	16.7	88.6	83.3	92.3
Indigo (S)	14.3	10.0	20.1	85.7	79.9	90.0	Whittlesea (C)	10.6	8.1	13.7	89.4	86.3	91.9
Kingston (C)	11.9	8.6	16.1	88.1	83.8	91.3	Wodonga (RC)	13.8	10.6	17.8	86.2	82.2	89.4
Knox (C)	13.2	9.7	17.8	86.8	82.2	90.3	Wyndham (C)	10.0	7.5	13.3	90.0	86.7	92.5
Latrobe (C)	9.7	7.2	13.0	90.1	86.8	92.7	Yarra (C)	8.0	5.5	11.5	91.4	87.7	94.1
Loddon (S)	15.8	12.0	20.5	83.7	79.0	87.6	Yarra Ranges (S)	12.0	9.0	15.8	87.8	84.0	90.8
Macedon Ranges (S)	14.0	9.4	20.3	86.0	79.7	90.6	Yarriambiack (S)	14.2	10.6	18.8	85.7	81.1	89.3
Manningham (C)	13.6	9.9	18.4	86.2	81.4	89.9	<b>Total</b>	<b>10.0</b>	<b>9.5</b>	<b>10.5</b>	<b>89.8</b>	<b>89.3</b>	<b>90.3</b>

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

95% CI = 95 per cent confidence interval.

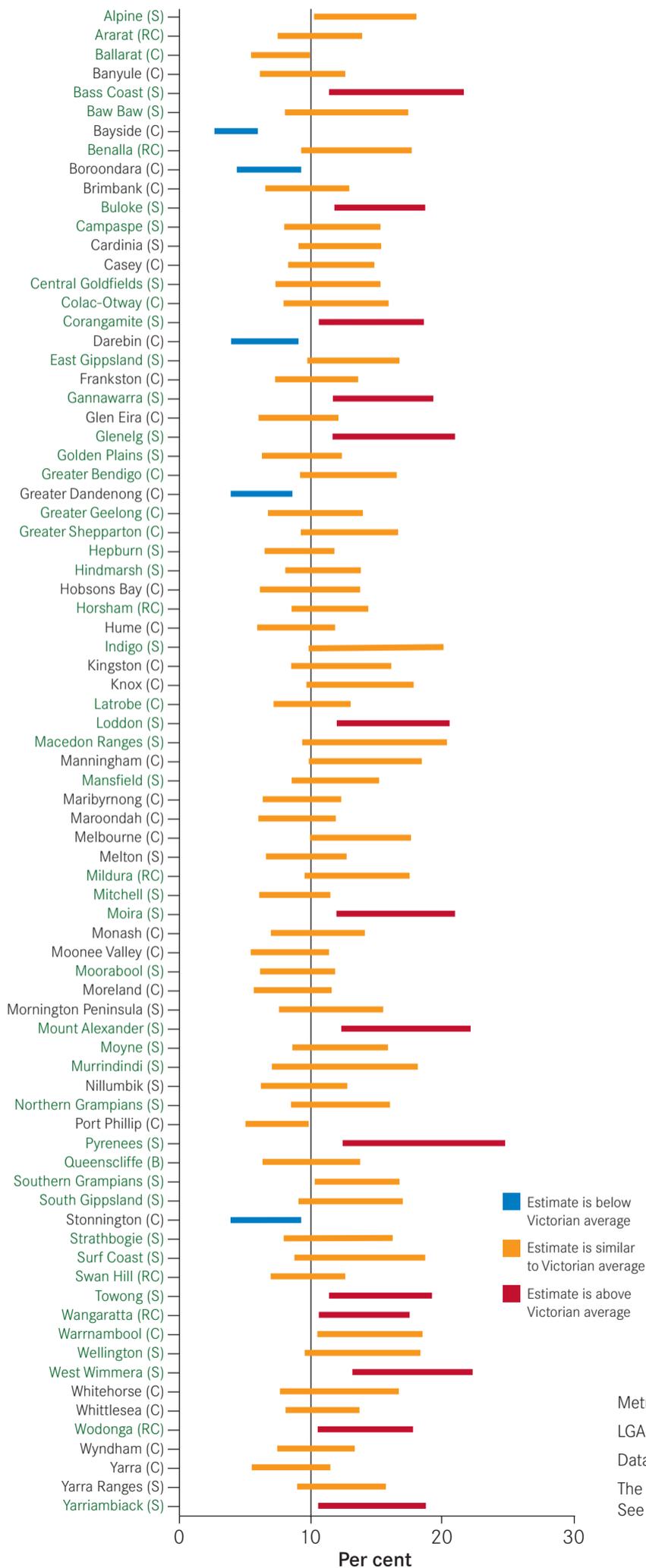
LGA = local government area.

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Figure 8.12: Attended a support group meeting in the past two years, 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 line on the graph is the Victorian estimate, it does not show the 95% CI.  
 See relevant table for the 95% CI for Victoria (Total).

## Trust and safety

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

### Feelings of trust

Table 8.40 shows the proportion of persons who agreed most people can be trusted, by age group and sex. A higher proportion of males in older age groups, compared with those in younger age groups, agreed most people can be trusted. Less than a third (27.5 per cent) of males aged 18–24 years agreed definitely most people can be trusted, compared with more than half (50.2 per cent) of males aged 65 years and over.

A higher proportion of males (41.4 per cent), compared with females (33.8 per cent), agreed definitely most people can be trusted.

This difference between males and females was greatest for persons aged 65 years and over, with 50.2 per cent of males compared with 39.9 per cent of females agreeing definitely that most people can be trusted.

**Table 8.40: Feelings of trust, by age group and sex, 2008**

Age group (years)	Most people can be trusted...											
	No, not at all			Not often			Sometimes			Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
18–24 years	10.3	7.8	13.6	13.6	10.6	17.3	48.4	43.6	53.2	27.5	23.6	31.8
25–34 years	10.2	7.7	13.4	13.0	10.4	16.3	41.8	37.9	45.7	34.5	30.8	38.3
35–44 years	7.5	6.1	9.1	10.1	8.3	12.2	40.3	37.4	43.3	40.3	37.4	43.3
45–54 years	8.3	6.9	10.0	8.6	7.1	10.4	35.8	33.1	38.5	45.7	42.9	48.5
55–64 years	7.5	6.2	9.1	10.0	8.5	11.9	33.4	31.0	36.0	47.8	45.1	50.5
65+	7.6	6.5	8.9	8.4	7.2	9.8	31.3	29.2	33.4	50.2	47.9	52.5
<b>Total</b>	<b>8.4</b>	<b>7.7</b>	<b>9.3</b>	<b>10.6</b>	<b>9.7</b>	<b>11.5</b>	<b>38.2</b>	<b>36.9</b>	<b>39.5</b>	<b>41.4</b>	<b>40.1</b>	<b>42.7</b>
<b>Females</b>												
18–24 years	12.2	9.7	15.3	16.0	13.0	19.7	50.6	46.2	55.1	21.0	17.6	24.9
25–34 years	10.9	9.3	12.8	13.9	11.9	16.0	47.1	44.2	50.0	26.8	24.3	29.4
35–44 years	9.8	8.7	11.2	12.2	10.8	13.8	43.6	41.5	45.7	33.2	31.3	35.2
45–54 years	10.0	8.7	11.5	9.5	8.2	10.9	40.0	37.8	42.3	39.8	37.6	42.0
55–64 years	9.4	8.2	10.7	10.1	8.8	11.5	38.9	36.8	41.1	40.2	38.1	42.3
65+	10.0	8.8	11.2	10.0	8.8	11.2	36.0	34.2	37.9	39.9	38.1	41.8
<b>Total</b>	<b>10.4</b>	<b>9.7</b>	<b>11.1</b>	<b>11.8</b>	<b>11.1</b>	<b>12.6</b>	<b>42.4</b>	<b>41.3</b>	<b>43.4</b>	<b>33.8</b>	<b>32.8</b>	<b>34.8</b>
<b>Persons</b>												
18–24 years	11.3	9.4	13.4	14.8	12.6	17.3	49.5	46.2	52.8	24.3	21.6	27.1
25–34 years	10.6	9.0	12.3	13.4	11.8	15.3	44.4	42.0	46.9	30.6	28.4	33.0
35–44 years	8.7	7.8	9.7	11.2	10.0	12.4	42.0	40.2	43.8	36.7	35.0	38.5
45–54 years	9.2	8.2	10.3	9.0	8.1	10.1	37.9	36.2	39.7	42.7	40.9	44.5
55–64 years	8.5	7.6	9.5	10.1	9.0	11.2	36.2	34.6	37.9	44.0	42.3	45.7
65+	8.9	8.1	9.8	9.3	8.4	10.2	33.9	32.5	35.3	44.5	43.1	46.0
<b>Total</b>	<b>9.4</b>	<b>8.9</b>	<b>10.0</b>	<b>11.2</b>	<b>10.6</b>	<b>11.8</b>	<b>40.4</b>	<b>39.5</b>	<b>41.2</b>	<b>37.5</b>	<b>36.7</b>	<b>38.3</b>

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Table 8.41 shows the proportions of persons who agreed, or did not agree, most people can be trusted, between 2001 and 2008. The proportion of persons who agreed definitely most people can be trusted increased from 28.6 per cent in 2001 to 37.5 per cent in 2008.

**Table 8.41: Feelings of trust, 2001–2008**

	2001	2002	2003	2004	2005	2006	2007	2008
<b>Most people can be trusted</b>	<b>Per cent</b>							
Not at all	16.4	16.4	11.7	12.0	9.3	9.5	7.3	9.4
Not often	11.9	8.6	8.9	11.3	8.7	9.5	9.2	11.2
Sometimes	43.2	43.0	43.3	39.5	44.2	41.3	47.1	40.4
Yes, definitely	28.6	31.9	36.1	36.7	36.5	38.4	34.8	37.5

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.

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

The data in table 8.42 provide a regional perspective on feelings of trust. A higher proportion of persons living in rural areas (41.6 per cent) agreed definitely most people can be trusted, compared with those living in the metropolitan area (36.0 per cent). This metropolitan–rural difference was reflected in the proportions of males and females who agreed definitely most people can be trusted. More than a third of rural females (37.3 per cent) agreed definitely most people can be trusted, compared with 32.5 per cent of females living in the metropolitan area. Similarly, 46.1 per cent of rural males agreed definitely most people can be trusted, compared with 39.7 per cent of males in the metropolitan area.

The proportion of persons who agreed definitely most people can be trusted was higher than the average for Victoria (37.5 per cent) in four Department of Health regions: the Barwon–South Western (43.4 per cent), Loddon Mallee (42.6 per cent), Grampians (41.7 per cent) and Hume (40.6 per cent) regions.

Table 8.42: Feelings of trust, by sex and Department of Health region, 2008

Region	Most people can be trusted...											
	No, not at all			Not often			Sometimes			Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
Barwon-South Western	9.2	5.8	14.4	13.9	9.4	20.0	28.2	24.0	32.8	47.7	41.6	53.8
Eastern Metropolitan	6.7	5.1	8.8	10.0	8.0	12.4	39.9	36.5	43.4	41.9	38.6	45.3
Gippsland	9.4	7.0	12.5	10.9	8.1	14.6	36.3	32.0	40.8	42.4	38.4	46.6
Grampians	8.7	6.2	12.0	7.6	5.6	10.2	37.5	33.3	41.9	45.4	41.3	49.6
Hume	11.0	8.6	14.0	7.0	5.4	8.8	37.3	33.8	40.9	44.0	40.4	47.6
Loddon Mallee	8.5	6.3	11.3	7.1	5.2	9.5	34.1	30.2	38.3	49.8	45.6	54.0
North and West Metropolitan	9.5	8.3	11.0	11.8	10.2	13.6	39.5	37.2	41.8	37.7	35.5	40.0
Southern Metropolitan	7.4	6.0	9.2	11.0	9.3	13.0	39.8	36.9	42.7	40.0	37.3	42.8
<b>Metropolitan</b>	8.1	7.3	9.1	11.1	10.0	12.2	39.6	38.0	41.2	39.7	38.1	41.2
<b>Rural</b>	9.4	7.8	11.3	9.6	8.0	11.6	34.0	32.0	36.1	46.1	43.8	48.4
<b>Total</b>	8.4	7.7	9.3	10.6	9.7	11.5	38.2	36.9	39.5	41.4	40.1	42.7
<b>Females</b>												
Barwon-South Western	5.8	4.2	8.1	13.7	10.4	18.0	40.4	35.9	45.1	39.6	35.4	43.9
Eastern Metropolitan	8.7	7.2	10.6	10.6	9.0	12.5	42.3	39.6	45.1	36.7	34.1	39.3
Gippsland	9.3	7.4	11.5	11.6	9.5	14.0	42.6	39.4	46.0	35.2	32.3	38.2
Grampians	10.4	8.4	12.7	10.0	7.7	12.8	40.3	36.5	44.2	38.2	34.4	42.0
Hume	8.9	7.4	10.7	10.0	8.3	11.9	42.5	39.8	45.3	37.5	35.0	40.1
Loddon Mallee	11.2	9.3	13.4	11.4	9.3	13.8	41.2	38.0	44.4	35.8	33.1	38.6
North and West Metropolitan	13.0	11.8	14.3	13.2	11.9	14.5	43.6	41.7	45.5	27.8	26.2	29.5
Southern Metropolitan	10.4	9.0	12.0	11.9	10.4	13.6	42.0	39.7	44.3	34.0	31.9	36.2
<b>Metropolitan</b>	11.0	10.2	11.8	12.0	11.1	12.9	42.7	41.4	44.0	32.5	31.3	33.7
<b>Rural</b>	8.8	8.0	9.8	11.7	10.4	13.2	41.3	39.6	43.1	37.3	35.7	38.9
<b>Total</b>	10.4	9.7	11.1	11.8	11.1	12.6	42.4	41.3	43.4	33.8	32.8	34.8
<b>Persons</b>												
Barwon-South Western	7.5	5.4	10.4	13.8	10.8	17.5	34.5	31.2	37.9	43.4	39.7	47.3
Eastern Metropolitan	7.8	6.6	9.1	10.4	9.0	11.9	41.0	38.8	43.3	39.3	37.2	41.4
Gippsland	9.4	7.8	11.2	11.3	9.5	13.4	39.6	36.9	42.4	38.6	36.1	41.1
Grampians	9.5	7.8	11.5	8.8	7.2	10.7	39.0	36.1	41.9	41.7	38.9	44.6
Hume	10.0	8.5	11.8	8.5	7.3	9.8	39.9	37.7	42.2	40.6	38.4	42.9
Loddon Mallee	9.9	8.4	11.6	9.3	7.8	11.0	37.7	35.2	40.4	42.6	40.0	45.2
North and West Metropolitan	11.3	10.4	12.3	12.5	11.4	13.6	41.6	40.1	43.1	32.6	31.2	34.0
Southern Metropolitan	9.0	7.9	10.1	11.4	10.3	12.7	40.9	39.1	42.8	37.0	35.2	38.7
<b>Metropolitan</b>	9.6	9.0	10.2	11.5	10.9	12.3	41.1	40.1	42.2	36.0	35.0	36.9
<b>Rural</b>	9.1	8.2	10.1	10.7	9.6	11.9	37.8	36.4	39.2	41.6	40.2	43.0
<b>Total</b>	9.4	8.9	10.0	11.2	10.6	11.8	40.4	39.5	41.2	37.5	36.7	38.3

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Figures 8.13a and 8.13b show the geographic distribution, by Department of Health region, of males and females who agreed definitely that most people can be trusted, compared with the Victorian population. In most regions, the proportion of males and females who agreed definitely that most people can be trusted was consistent with their respective proportions of the population—for example, almost a fifth of the males (19.6 per cent) who agreed most people can be trusted lived in the Eastern Metropolitan region, and almost a fifth (19.3 per cent) of the male population lived in this region. As a proportion of all females who agreed most people can be trusted, females from the North and West Metropolitan region were underrepresented relative to their population share (25.8 per cent and 30.4 per cent respectively).

**Figure 8.13a: Geographic distribution, by Department of Health region, of males who agreed that most people can be trusted and the Victorian population, 2008**

**Figure 8.13b: Geographic distribution, by Department of Health region, of females who agreed that most people can be trusted and the Victorian population, 2008**

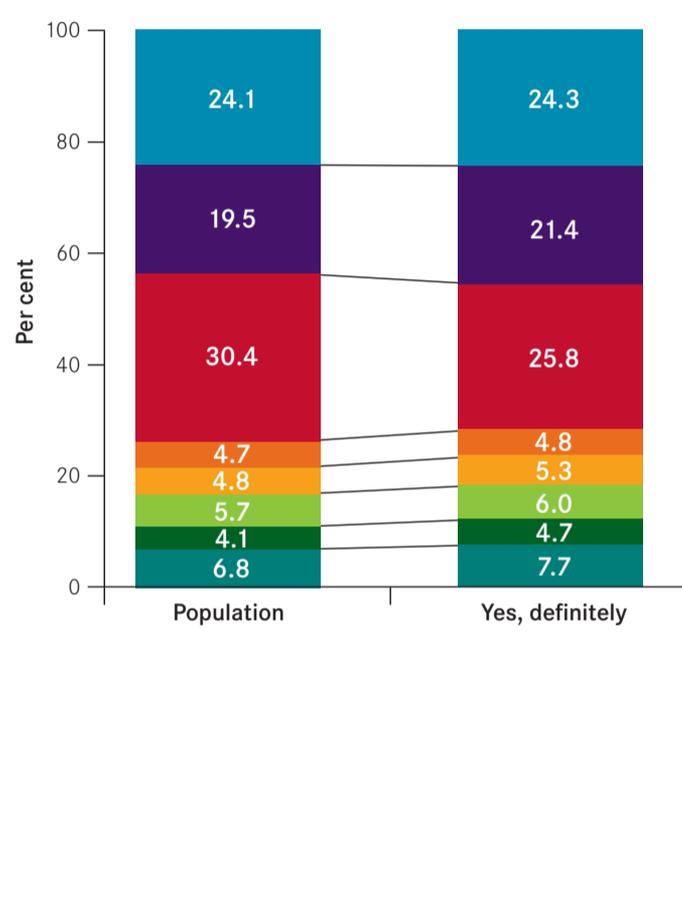
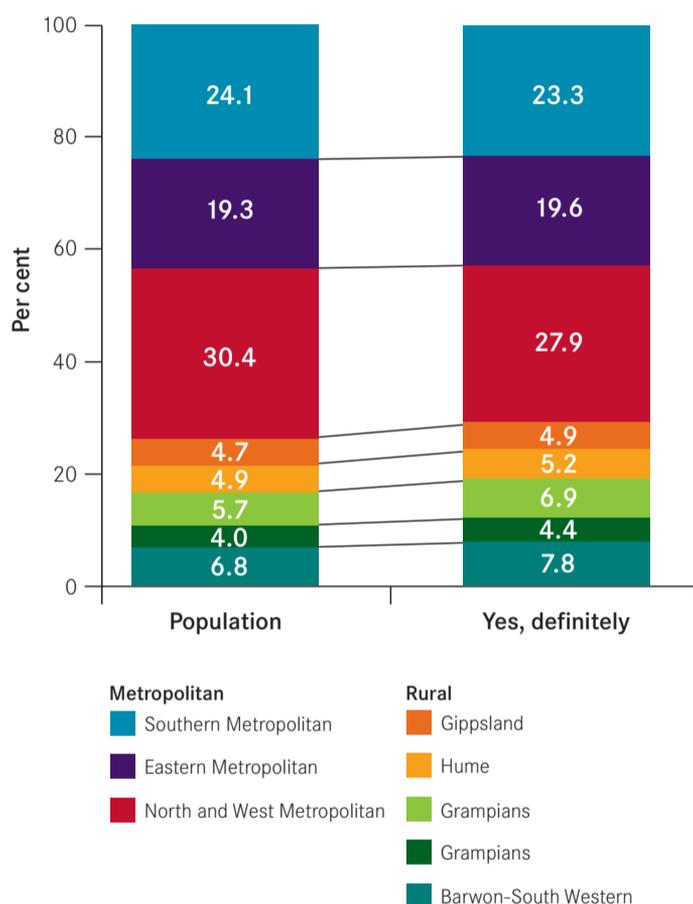


Table 8.43 and figure 8.14 show the proportion of persons who agreed (definitely or sometimes) most people can be trusted, by LGA. The proportion ranged from 62.0 per cent in the LGA of Greater Dandenong to 91.2 per cent in Buloke.

On average, more than three quarters of persons (77.8 per cent) agreed (definitely or sometimes) others can be trusted. The proportion of persons who agreed was above the average for Victoria in 24 (six metropolitan and 18 rural) LGAs. The proportion of persons who agreed was below the average for Victoria in five metropolitan LGAs.

Table 8.43: Feelings of trust, by LGA, 2008

LGA	Most people can be trusted ...						LGA	Most people can be trusted ...					
	No, not at all / Not often			Sometimes / Yes, definitely				No, not at all / Not often			Sometimes / Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI		%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	11.6	8.0	16.5	87.3	82.2	91.1	Mansfield (S)	10.7	7.6	14.9	89.0	84.9	92.2
Ararat (RC)	17.2	12.8	22.7	81.5	76.0	86.0	Maribyrnong (C)	29.3	24.7	34.3	67.8	62.7	72.4
Ballarat (C)	19.4	15.1	24.5	80.3	75.1	84.6	Maroondah (C)	15.1	11.5	19.7	84.2	79.6	87.9
Banyule (C)	16.0	11.9	21.2	83.0	77.8	87.2	Melbourne (C)	18.9	15.2	23.3	80.9	76.6	84.6
Bass Coast (S)	13.9	10.1	18.9	85.0	80.1	88.9	Melton (S)	28.9	23.9	34.5	70.8	65.2	75.8
Baw Baw (S)	21.2	16.0	27.5	77.9	71.6	83.2	Mildura (RC)	24.0	19.1	29.6	75.4	69.8	80.3
Bayside (C)	12.1	8.8	16.4	85.2	80.4	89.0	Mitchell (S)	21.0	16.8	26.0	78.1	73.1	82.4
Benalla (RC)	14.8	11.0	19.7	83.4	78.5	87.3	Moira (S)	17.8	13.1	23.6	81.7	75.8	86.4
Boroondara (C)	14.2	10.6	18.8	84.0	79.2	87.8	Monash (C)	19.2	14.9	24.4	79.2	73.9	83.7
Brimbank (C)	30.8	26.3	35.7	63.6	58.6	68.4	Moonee Valley (C)	22.3	17.7	27.6	75.6	70.4	80.2
Buloke (S)	8.3	5.4	12.5	91.2	87.0	94.2	Moorabool (S)	23.4	18.5	29.0	73.8	67.9	79.0
Campaspe (S)	16.9	12.8	22.1	82.7	77.5	86.8	Moreland (C)	23.0	19.1	27.4	76.0	71.5	80.0
Cardinia (S)	17.2	13.3	21.9	80.6	75.2	85.0	Mornington Peninsula (S)	22.4	17.1	28.8	75.8	69.4	81.3
Casey (C)	23.0	19.0	27.5	76.1	71.6	80.2	Mount Alexander (S)	15.7	11.6	21.0	83.7	78.4	87.9
Central Goldfields (S)	21.8	16.8	27.9	77.5	71.4	82.6	Moyne (S)	16.2	11.4	22.5	83.3	77.0	88.2
Colac-Otway (S)	13.5	9.7	18.3	86.2	81.4	90.0	Murrindindi (S)	19.2	13.4	26.6	79.9	72.5	85.8
Corangamite (S)	11.1	7.7	15.8	87.7	83.0	91.3	Nillumbik (S)	13.7	10.3	18.0	85.6	81.2	89.2
Darebin (C)	24.8	20.3	29.9	72.7	67.6	77.2	Northern Grampians (S)	14.4	10.4	19.7	84.7	79.4	88.9
East Gippsland (S)	24.6	18.4	32.0	74.8	67.4	81.0	Port Phillip (C)	13.2	10.0	17.4	84.9	80.7	88.4
Frankston (C)	23.4	18.8	28.8	75.7	70.4	80.4	Pyrenees (S)	19.1	14.8	24.3	79.6	74.3	84.0
Gannawarra (S)	18.5	13.7	24.4	79.9	73.8	84.8	Queenscliffe (B)	10.3	6.5	15.9	88.3	82.8	92.3
Glen Eira (C)	17.8	13.8	22.8	79.3	74.2	83.6	Southern Grampians (S)	14.0	10.3	18.8	85.1	80.2	88.9
Glenelg (S)	18.0	13.7	23.2	81.6	76.3	85.9	South Gippsland (S)	13.3	9.6	18.2	85.7	80.8	89.5
Golden Plains (S)	17.1	13.1	22.0	80.6	75.4	84.9	Stonnington (C)	14.3	10.6	18.9	84.4	79.7	88.1
Greater Bendigo (C)	17.9	13.9	22.6	82.0	77.2	85.9	Strathbogie (S)	14.1	9.8	19.9	85.5	79.7	89.8
Greater Dandenong (C)	35.5	30.5	40.9	62.0	56.6	67.1	Surf Coast (S)	12.5	9.5	16.2	86.6	82.8	89.7
Greater Geelong (C)	25.6	20.2	32.0	73.6	67.3	79.1	Swan Hill (RC)	21.2	16.0	27.6	77.8	71.4	83.1
Greater Shepparton (C)	25.8	20.3	32.1	73.0	66.6	78.5	Towong (S)	13.7	9.4	19.6	85.6	79.6	90.0
Hepburn (S)	11.8	8.9	15.5	87.6	83.9	90.6	Wangaratta (RC)	18.5	14.2	23.7	80.4	75.2	84.8
Hindmarsh (S)	17.9	13.4	23.6	80.6	74.9	85.3	Warrnambool (C)	17.0	13.0	22.1	82.3	77.3	86.5
Hobsons Bay (C)	24.1	19.4	29.5	74.7	69.3	79.5	Wellington (S)	21.9	16.9	27.7	76.9	71.0	81.9
Horsham (RC)	13.3	10.1	17.4	85.9	81.8	89.2	West Wimmera (S)	10.7	7.8	14.5	88.0	84.1	91.0
Hume (C)	33.4	28.6	38.5	64.9	59.7	69.7	Whitehorse (C)	18.4	13.9	24.0	79.3	73.7	84.0
Indigo (S)	10.7	7.8	14.6	88.4	84.6	91.4	Whittlesea (C)	22.9	19.2	27.1	74.9	70.6	78.7
Kingston (C)	18.5	14.6	23.3	80.2	75.4	84.3	Wodonga (RC)	17.3	13.9	21.3	82.0	77.9	85.4
Knox (C)	19.2	15.1	24.0	79.7	74.9	83.9	Wyndham (C)	22.7	18.8	27.2	75.9	71.4	80.0
Latrobe (C)	23.2	18.9	28.2	74.6	69.4	79.2	Yarra (C)	15.1	11.6	19.4	84.3	79.9	87.8
Loddon (S)	18.9	14.1	24.8	77.6	71.4	82.7	Yarra Ranges (S)	18.9	15.0	23.5	79.4	74.7	83.3
Macedon Ranges (S)	17.7	13.4	23.1	81.9	76.5	86.3	Yarriambiack (S)	19.9	14.8	26.3	78.8	72.4	84.1
Manningham (C)	21.3	16.6	26.8	77.3	71.7	82.1	<b>Total</b>	<b>20.7</b>	<b>20.0</b>	<b>21.4</b>	<b>77.8</b>	<b>77.1</b>	<b>78.6</b>

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

95% CI = 95 per cent confidence interval.

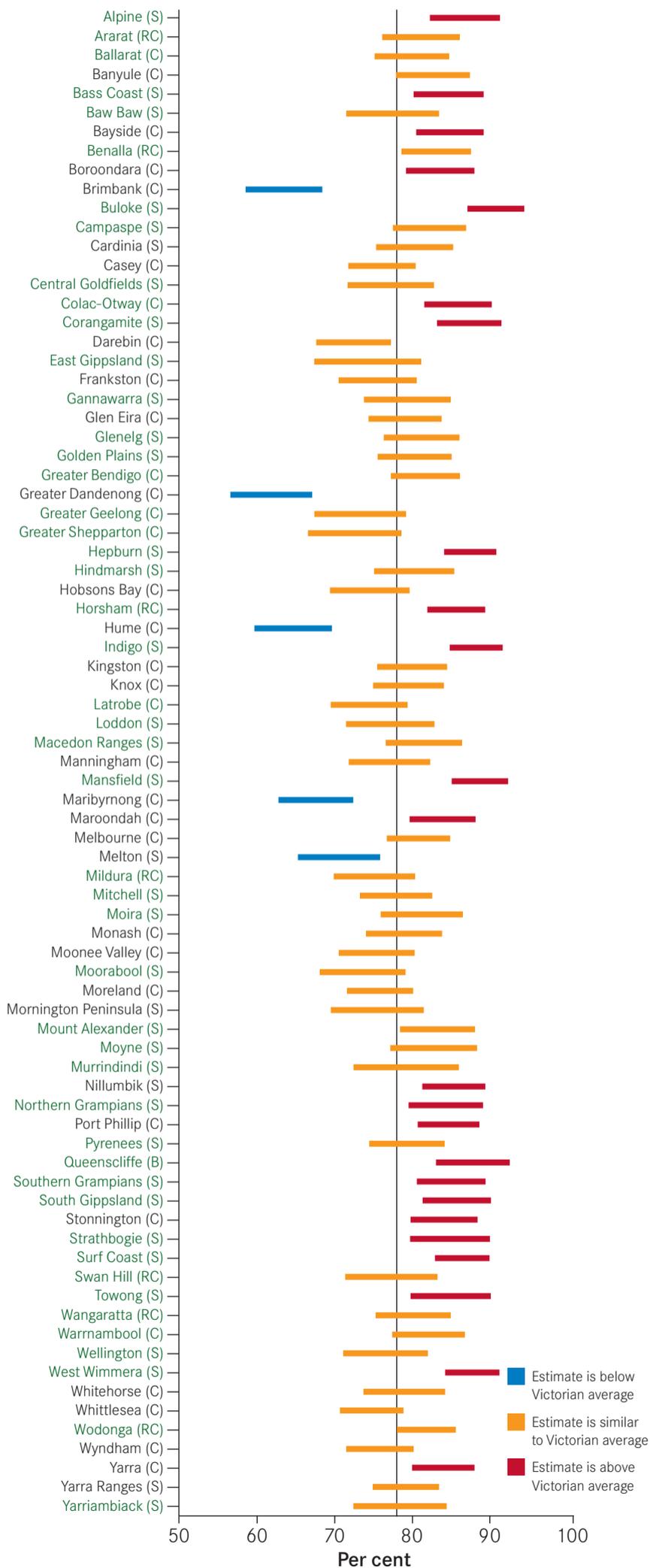
LGA = local government area.

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Figure 8.14: Feelings of trust<sup>(a)</sup>, by LGA, 2008



(a) Includes those who responded 'sometimes' and 'yes, definitely'.

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 line on the graph is the Victorian estimate, it does not show the 95% CI. See the relevant table for the 95% CI for Victoria (Total).

## Opportunities to have a say

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

Table 8.44 shows the proportion of persons who felt there was an opportunity to have a say about issues that mattered to them, by age group and sex. While 42.3 per cent of persons felt they definitely had such an opportunity, more than one in 10 persons (12.3 per cent) felt they definitely did not have an opportunity.

Similar proportions of males and females within each age group definitely felt there was an opportunity to have a say on matters they regarded as important. A higher proportion of persons aged 65 years and over (45.0 per cent) reported a positive response, compared with persons aged 18-24 years (35.9 per cent).

**Table 8.44: Opportunities to have a say, by age group and sex, 2008**

Age group (years)	No, not at all			Not often			Sometimes			Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
18-24 years	11.1	8.4	14.7	11.7	9.1	15.0	39.7	35.1	44.5	36.1	31.7	40.8
25-34 years	13.1	10.7	15.8	11.7	9.4	14.5	33.4	29.7	37.3	39.8	35.9	43.9
35-44 years	12.9	11.0	15.0	10.9	9.2	12.9	30.1	27.4	32.9	44.0	41.1	47.0
45-54 years	13.9	12.0	15.9	11.2	9.5	13.1	28.2	25.7	30.8	44.7	41.9	47.5
55-64 years	4.2	12.5	16.2	10.2	8.7	12.0	24.2	22.0	26.6	49.7	47.1	52.4
65+	16.0	14.4	17.8	9.6	8.3	11.0	23.8	21.9	25.7	45.4	43.2	47.7
<b>Total</b>	<b>13.6</b>	<b>12.7</b>	<b>14.5</b>	<b>10.9</b>	<b>10.1</b>	<b>11.8</b>	<b>29.8</b>	<b>28.5</b>	<b>31.1</b>	<b>43.2</b>	<b>41.8</b>	<b>44.5</b>
<b>Females</b>												
18-24 years	11.1	8.5	14.2	14.3	11.5	17.7	36.9	32.7	41.3	35.7	31.6	40.0
25-34 years	9.7	8.2	11.6	10.2	8.5	12.2	39.4	36.7	42.3	37.2	34.4	40.0
35-44 years	10.9	9.6	12.4	10.2	9.0	11.6	36.2	34.2	38.3	40.1	38.0	42.2
45-54 years	10.8	9.5	12.3	10.4	9.1	11.9	31.7	29.6	33.8	44.6	42.4	46.9
55-64 years	10.2	9.0	11.6	9.6	8.4	10.9	28.7	26.8	30.7	48.0	45.8	50.2
65+	12.8	11.5	14.1	7.6	6.6	8.6	27.4	25.7	29.2	44.7	42.8	46.6
<b>Total</b>	<b>11.0</b>	<b>10.4</b>	<b>11.7</b>	<b>10.3</b>	<b>9.6</b>	<b>11.0</b>	<b>33.4</b>	<b>32.4</b>	<b>34.5</b>	<b>41.6</b>	<b>40.5</b>	<b>42.6</b>
<b>Persons</b>												
18-24 years	11.1	9.2	13.4	13.0	11.0	15.3	38.3	35.2	41.5	35.9	32.8	39.1
25-34 years	11.4	10.0	13.0	11.0	9.5	12.6	36.4	34.1	38.8	38.5	36.1	41.0
35-44 years	11.9	10.7	13.1	10.6	9.5	11.7	33.2	31.5	34.9	42.0	40.2	43.9
45-54 years	12.3	11.2	13.6	10.8	9.7	12.0	30.0	28.3	31.6	44.7	42.9	46.5
55-64 years	12.2	11.1	13.4	9.9	8.9	11.0	26.5	25.0	28.0	48.9	47.1	50.6
65+	14.2	13.2	15.3	8.5	7.7	9.3	25.8	24.5	27.1	45.0	43.6	46.5
<b>Total</b>	<b>12.3</b>	<b>11.7</b>	<b>12.9</b>	<b>10.6</b>	<b>10.0</b>	<b>11.1</b>	<b>31.7</b>	<b>30.8</b>	<b>32.5</b>	<b>42.3</b>	<b>41.5</b>	<b>43.2</b>

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 from the corresponding estimate for Victoria are identified by colour as follows: **above Victoria** / **below Victoria**.

Table 8.45 shows the proportion over time of persons who agreed, or did not agree, there were opportunities to have a say about issues that were important. The proportion of persons who agreed definitely there were opportunities to have a say remained constant between 2001 and 2008.

**Table 8.45: Opportunities to have a say, 2001–2008**

	2001	2002	2003	2004	2005	2006	2007	2008
<b>Opportunities to have a say</b>	<b>Per cent</b>							
Not at all	15.1	13.8	14.5	13.8	12.8	13.4	11.7	12.3
Not often	14.9	12.6	10.6	11.5	12.4	11.7	12.1	10.6
Sometimes	33.8	34.0	32.8	26.4	33.7	29.7	34.6	31.7
Yes, definitely	36.2	39.4	42.0	45.9	38.9	43.0	38.7	42.3

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.

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

Table 8.46 shows the proportion of persons who felt there was an opportunity to have a say about issues that mattered to them, by region and sex. A higher proportion of persons living in rural areas (46.9 per cent) felt they had such an opportunity, compared with those living in the metropolitan area (40.6 per cent).

Among females, the proportion who felt they definitely had an opportunity to have a say on things that matter was above the average for Victoria (41.6 per cent) in two of the five rural regions—Gippsland (46.0 per cent) and Loddon Mallee (45.9 per cent)—and below the average in the North and West Metropolitan region (36.8 per cent). A higher proportion of males from the Grampians (52.0 per cent), Barwon–South Western (51.3 per cent) and Loddon Mallee (49.0 per cent) regions reported they definitely had an opportunity, compared with the average for Victoria (43.2 per cent).

Table 8.46: Opportunities to have a say, by sex and Department of Health region, 2008

Region	No, not at all			Not often			Sometimes			Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
Barwon-South Western	10.5	8.0	13.7	12.2	8.2	17.7	23.6	19.2	28.7	51.3	45.0	57.5
Eastern Metropolitan	13.1	10.9	15.6	11.3	9.2	13.7	31.2	28.0	34.6	42.6	39.3	46.0
Gippsland	15.4	12.4	19.0	11.8	9.4	14.7	29.2	25.3	33.5	41.8	37.8	46.0
Grampians	12.5	9.9	15.6	7.3	5.7	9.4	27.3	23.5	31.4	52.0	47.6	56.4
Hume	13.2	11.0	15.8	11.3	9.0	14.1	28.0	24.7	31.4	46.4	43.0	49.8
Loddon Mallee	13.1	10.7	15.9	11.9	9.2	15.2	23.8	20.2	27.9	49.0	44.8	53.2
North and West Metropolitan	14.9	13.3	16.7	11.0	9.6	12.5	29.9	27.8	32.1	40.4	38.1	42.7
Southern Metropolitan	13.1	11.2	15.1	10.9	9.2	12.8	32.5	29.7	35.4	41.0	38.2	44.0
<b>Metropolitan</b>	13.9	12.8	15.1	11.0	10.0	12.0	31.0	29.5	32.6	41.3	39.7	42.9
<b>Rural</b>	12.8	11.5	14.2	11.0	9.5	12.7	26.1	24.1	28.2	48.4	46.0	50.7
<b>Total</b>	13.6	12.7	14.5	10.9	10.1	11.8	29.8	28.5	31.1	43.2	41.8	44.5
<b>Females</b>												
Barwon-South Western	8.8	6.5	11.8	10.7	7.8	14.6	31.9	27.5	36.7	45.6	41.1	50.2
Eastern Metropolitan	10.4	8.7	12.4	10.9	9.2	12.8	35.2	32.5	38.0	40.2	37.5	42.9
Gippsland	11.5	9.3	14.1	9.8	7.8	12.3	30.1	27.1	33.2	46.0	42.9	49.2
Grampians	8.8	7.1	10.8	9.9	7.9	12.4	33.2	29.7	36.9	46.0	42.3	49.8
Hume	11.0	9.3	13.0	9.2	7.7	11.0	32.8	30.3	35.5	44.9	42.2	47.5
Loddon Mallee	9.7	8.0	11.7	10.2	8.3	12.6	32.8	29.9	35.9	45.9	42.8	49.0
North and West Metropolitan	12.4	11.3	13.7	10.3	9.2	11.5	34.8	33.0	36.6	36.8	35.0	38.7
Southern Metropolitan	11.4	10.0	13.0	10.2	8.8	11.9	31.6	29.5	33.9	43.2	40.9	45.5
<b>Metropolitan</b>	11.4	10.6	12.3	10.4	9.6	11.3	33.9	32.7	35.1	40.0	38.7	41.3
<b>Rural</b>	9.9	8.9	11.0	10.0	8.8	11.2	32.3	30.6	34.1	45.5	43.8	47.2
<b>Total</b>	11.0	10.4	11.7	10.3	9.6	11.0	33.4	32.4	34.5	41.6	40.5	42.6
<b>Persons</b>												
Barwon-South Western	9.7	7.9	11.9	11.4	8.7	14.7	27.7	24.4	31.3	48.5	44.5	52.5
Eastern Metropolitan	11.6	10.2	13.2	11.1	9.7	12.6	33.3	31.2	35.5	41.4	39.3	43.6
Gippsland	13.4	11.5	15.6	10.7	9.0	12.6	29.7	27.2	32.4	43.9	41.4	46.5
Grampians	10.6	9.0	12.4	8.5	7.2	10.1	30.4	27.7	33.3	48.9	46.0	51.9
Hume	12.1	10.7	13.7	10.3	8.8	12.0	30.4	28.2	32.6	45.6	43.4	47.8
Loddon Mallee	11.3	9.8	13.0	11.1	9.4	13.0	28.4	26.0	30.9	47.5	44.8	50.1
North and West Metropolitan	13.7	12.7	14.8	10.6	9.7	11.6	32.4	31.0	33.9	38.4	37.0	39.9
Southern Metropolitan	12.2	11.0	13.4	10.5	9.4	11.8	32.0	30.3	33.9	42.2	40.3	44.0
<b>Metropolitan</b>	12.6	12.0	13.3	10.7	10.0	11.3	32.5	31.5	33.5	40.6	39.6	41.6
<b>Rural</b>	11.3	10.5	12.2	10.5	9.5	11.5	29.3	27.9	30.6	46.9	45.5	48.4
<b>Total</b>	12.3	11.7	12.9	10.6	10.0	11.1	31.7	30.8	32.5	42.3	41.5	43.2

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

# Connections With Others

Table 8.47 and figure 8.15 show the proportion of persons who felt (definitely or sometimes) they had an opportunity to have a say on issues that are important to them, by LGA. On average, almost three-quarters of the Victorian population (74.0 per cent) felt (definitely or sometimes) they had such an opportunity. Across LGAs, the proportion ranged from 66.0 per cent in Maribyrnong to 88.7 per cent in Buloke.

The proportion of persons who felt (definitely or sometimes) there was an opportunity to have a say was above the average for Victoria in 21 LGAs (two metropolitan and 19 rural). The proportion was below the average for Victoria in three metropolitan LGAs (Brimbank, Hume and Maribyrnong), which are all located in the North and West Metropolitan region.

Table 8.47: Opportunities to have a say, by LGA, 2008

LGA	No, not at all / Not often			Sometimes / Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	21.4	16.2	27.7	76.8	70.4	82.2
Ararat (RC)	18.2	12.7	25.4	81.1	73.9	86.7
Ballarat (C)	19.2	15.3	23.8	79.6	75.0	83.5
Banyule (C)	21.3	16.6	27.0	74.9	69.2	79.9
Bass Coast (S)	24.9	18.5	32.7	73.8	66.0	80.3
Baw Baw (S)	28.0	22.4	34.3	70.1	63.7	75.8
Bayside (C)	18.1	13.9	23.2	80.3	75.2	84.7
Benalla (RC)	20.7	15.7	26.7	77.7	71.7	82.8
Boroondara (C)	21.3	16.8	26.5	77.2	71.9	81.7
Brimbank (C)	27.0	22.5	31.9	67.3	62.2	71.9
Buloke (S)	10.4	7.9	13.7	88.7	85.3	91.4
Campaspe (S)	17.8	14.1	22.2	79.8	75.3	83.7
Cardinia (S)	23.8	19.3	29.1	75.0	69.8	79.6
Casey (C)	25.4	21.0	30.3	72.5	67.5	77.0
Central Goldfields (S)	26.6	20.5	33.8	71.0	63.7	77.3
Colac-Otway (S)	18.9	13.7	25.4	78.7	72.1	84.1
Corangamite (S)	22.7	17.3	29.1	76.0	69.6	81.5
Darebin (C)	20.6	16.5	25.4	73.5	68.5	77.9
East Gippsland (S)	26.5	19.8	34.5	72.6	64.6	79.4
Frankston (C)	25.4	20.8	30.7	70.8	65.3	75.8
Gannawarra (S)	18.0	13.9	23.0	81.5	76.4	85.6
Glen Eira (C)	22.0	17.6	27.0	75.2	70.1	79.7
Glenelg (S)	18.1	14.0	23.1	80.0	74.9	84.4
Golden Plains (S)	23.1	18.2	28.8	75.3	69.5	80.3
Greater Bendigo (C)	23.6	18.9	29.0	75.8	70.4	80.5
Greater Dandenong (C)	23.5	19.2	28.4	70.2	65.0	74.9
Greater Geelong (C)	23.1	18.2	28.9	73.1	67.2	78.4
Greater Shepparton (C)	28.6	23.1	34.7	69.6	63.4	75.1
Hepburn (S)	15.4	11.6	20.1	82.7	77.8	86.7
Hindmarsh (S)	18.4	13.6	24.3	80.8	74.9	85.6
Hobsons Bay (C)	23.5	19.0	28.8	71.2	65.7	76.0
Horsham (RC)	14.1	10.7	18.3	83.0	78.3	86.8
Hume (C)	28.6	24.1	33.6	66.9	61.9	71.5
Indigo (S)	15.4	11.1	21.0	82.7	76.4	87.6
Kingston (C)	20.7	16.3	25.9	76.6	71.1	81.3
Knox (C)	26.9	22.1	32.3	70.8	65.4	75.7
Latrobe (C)	24.8	20.1	30.1	71.7	66.6	76.3
Loddon (S)	20.6	15.9	26.3	76.8	71.1	81.7
Macedon Ranges (S)	22.9	17.5	29.5	74.8	68.3	80.4
Manningham (C)	15.7	11.6	20.7	80.9	75.7	85.3

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

95% CI = 95 per cent confidence interval.

LGA = local government area

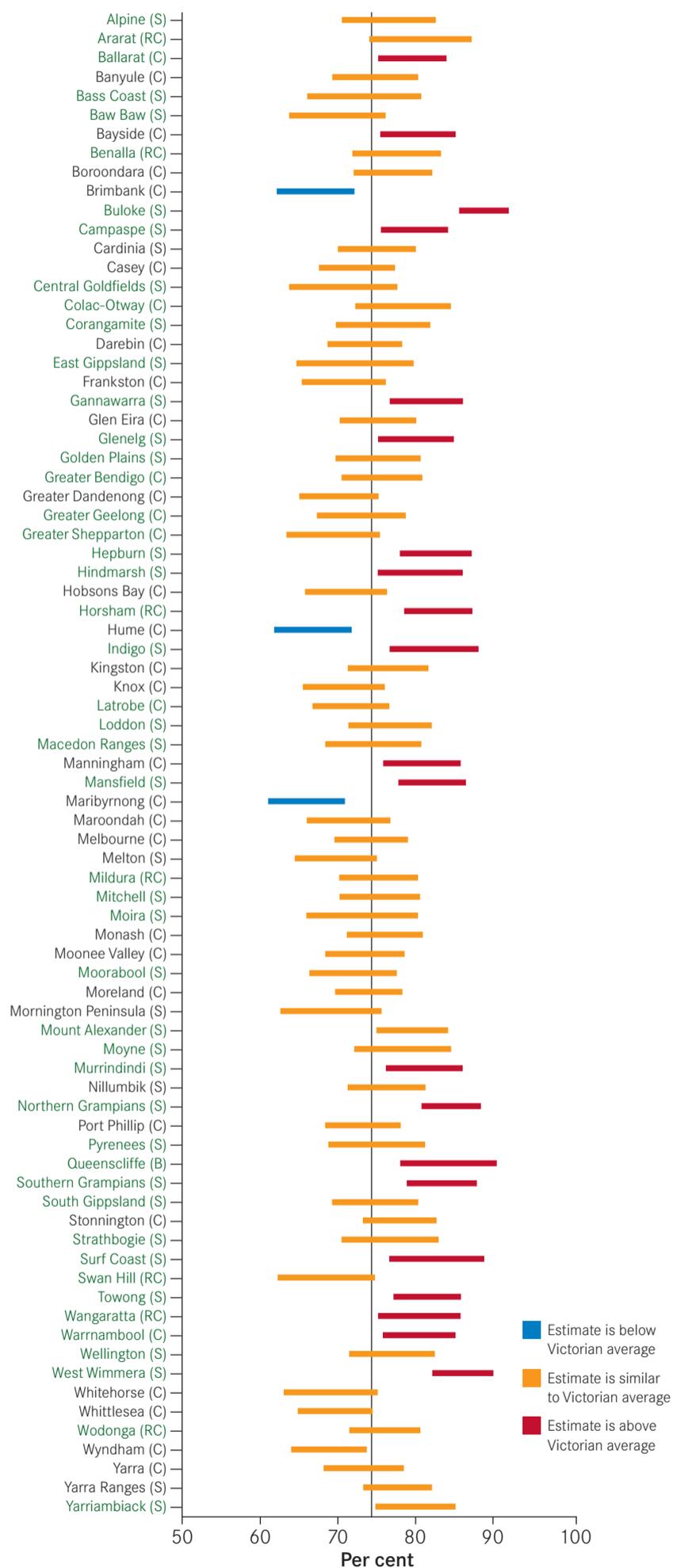
Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are age standardised to the 2006 Victorian population.

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

Table 8.47: Opportunities to have a say, by LGA, 2008 (continued)

LGA	No, not at all / Not often			Sometimes / Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	16.7	12.9	21.4	82.2	77.5	86.1
Maribyrnong (C)	27.1	22.8	31.9	66.0	61.0	70.7
Maroondah (C)	26.6	21.8	32.1	71.4	65.9	76.4
Melbourne (C)	22.6	18.5	27.3	74.3	69.4	78.6
Melton (S)	25.9	21.4	31.1	69.8	64.4	74.7
Mildura (RC)	23.5	19.0	28.8	75.3	70.1	79.9
Mitchell (S)	24.1	19.4	29.5	75.5	70.1	80.2
Moira (S)	24.5	18.2	32.1	73.5	65.9	79.9
Monash (C)	20.3	16.1	25.2	76.1	71.0	80.6
Moonee Valley (C)	21.2	17.0	26.2	73.6	68.3	78.3
Moorabool (S)	27.1	21.9	32.9	72.1	66.3	77.3
Moreland (C)	21.6	17.8	25.9	74.0	69.5	78.0
Mornington Peninsula (S)	29.4	23.4	36.2	69.4	62.5	75.4
Mount Alexander (S)	18.9	14.8	23.7	79.6	74.7	83.8
Moyne (S)	20.7	15.3	27.4	78.6	71.9	84.1
Murrindindi (S)	17.4	13.1	22.7	81.2	75.9	85.6
Nillumbik (S)	22.6	18.2	27.9	76.3	71.1	80.9
Northern Grampians (S)	14.5	11.2	18.6	84.6	80.4	87.9
Port Phillip (C)	22.6	18.3	27.6	73.2	68.2	77.8
Pyrenees (S)	23.1	17.6	29.7	75.3	68.7	80.9
Queenscliffe (B)	14.5	9.4	21.6	84.8	77.7	89.9
Southern Grampians (S)	16.1	12.2	21.0	83.4	78.5	87.4
South Gippsland (S)	21.5	16.6	27.3	75.0	69.1	80.0
Stonnington (C)	17.1	13.6	21.3	78.1	73.0	82.4
Strathbogie (S)	19.7	14.5	26.2	77.1	70.4	82.6
Surf Coast (S)	16.0	10.9	22.9	83.1	76.3	88.3
Swan Hill (RC)	25.9	20.0	33.0	68.7	62.2	74.5
Towong (S)	16.6	12.9	21.1	81.5	76.9	85.4
Wangaratta (RC)	17.6	13.1	23.2	80.7	75.0	85.3
Warrnambool (C)	18.3	14.2	23.2	80.5	75.5	84.6
Wellington (S)	20.6	16.0	26.1	77.1	71.3	82.1
West Wimmera (S)	13.4	10.0	17.6	86.1	81.8	89.5
Whitehorse (C)	28.0	22.5	34.2	69.2	63.0	74.8
Whittlesea (C)	25.6	21.3	30.3	69.6	64.7	74.2
Wodonga (RC)	22.1	18.0	26.8	76.1	71.3	80.3
Wyndham (C)	27.1	22.8	32.0	68.9	63.9	73.5
Yarra (C)	22.4	17.9	27.6	73.4	68.0	78.2
Yarra Ranges (S)	20.5	16.5	25.1	77.7	73.0	81.8
Yarriambiack (S)	17.5	13.0	23.1	80.2	74.5	84.8
<b>Total</b>	<b>22.8</b>	<b>22.1</b>	<b>23.6</b>	<b>74.0</b>	<b>73.2</b>	<b>74.7</b>

Figure 8.15: Opportunities to have a say<sup>(a)</sup>, by LGA, 2008

(a) Includes those who responded 'sometimes' and 'yes, definitely'.

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 line on the graph is the Victorian estimate, it does not show the 95% CI. See relevant table for the 95% CI for Victoria.

## Feeling valued by society

A second indicator of civic trust is the extent to which people feel they are valued by society. More than half of all persons (52.4 per cent) definitely felt they were valued by society. A further 29.1 per cent only sometimes felt they were valued by society (table 8.48).

**Table 8.48: Feeling valued by society, by age group and sex, 2008**

Age group (years)	No, not at all			Not often			Sometimes			Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
18–24 years	6.2	4.4	8.6	4.3	2.7	6.7	36.9	32.4	41.7	49.6	44.8	54.4
25–34 years	9.0	6.8	11.8	4.3	3.1	5.8	31.3	27.7	35.1	51.9	47.8	55.8
35–44 years	6.3	5.0	7.9	4.6	3.5	6.0	28.7	26.0	31.4	54.6	51.6	57.5
45–54 years	7.4	6.1	8.9	4.8	3.7	6.1	27.1	24.7	29.7	54.7	51.9	57.4
55–64 years	9.6	8.1	11.5	5.1	4.0	6.4	24.5	22.3	26.9	54.7	52.1	57.4
65+	10.6	9.3	12.1	4.9	4.0	5.9	21.9	20.1	23.9	53.9	51.6	56.2
<b>Total</b>	<b>8.3</b>	<b>7.6</b>	<b>9.1</b>	<b>4.7</b>	<b>4.1</b>	<b>5.2</b>	<b>28.2</b>	<b>27.0</b>	<b>29.5</b>	<b>53.2</b>	<b>51.8</b>	<b>54.6</b>
<b>Females</b>												
18–24 years	5.2	3.6	7.4	8.4	6.2	11.3	41.3	37.0	45.7	42.1	37.7	46.5
25–34 years	5.3	4.2	6.6	5.5	4.4	7.0	32.1	29.5	34.8	52.9	50.0	55.8
35–44 years	6.3	5.3	7.5	5.7	4.8	6.8	30.4	28.5	32.4	52.6	50.5	54.7
45–54 years	6.6	5.6	7.6	4.6	3.7	5.5	28.7	26.7	30.8	55.3	53.1	57.6
55–64 years	7.7	6.7	9.0	3.9	3.2	4.8	25.3	23.4	27.2	57.0	54.9	59.1
65+	9.4	8.4	10.5	4.8	4.1	5.7	24.5	22.9	26.2	50.1	48.1	52.0
<b>Total</b>	<b>6.9</b>	<b>6.4</b>	<b>7.4</b>	<b>5.4</b>	<b>4.9</b>	<b>5.9</b>	<b>30.1</b>	<b>29.1</b>	<b>31.1</b>	<b>51.7</b>	<b>50.6</b>	<b>52.7</b>
<b>Persons</b>												
18–24 years	5.7	4.4	7.3	6.3	4.9	8.1	39.0	35.9	42.3	45.9	42.6	49.2
25–34 years	7.1	5.9	8.6	4.9	4.0	5.9	31.7	29.4	34.0	52.4	49.9	54.8
35–44 years	6.3	5.4	7.2	5.2	4.4	6.0	29.5	27.9	31.2	53.6	51.7	55.4
45–54 years	7.0	6.1	7.9	4.7	4.0	5.5	27.9	26.4	29.6	55.0	53.2	56.8
55–64 years	8.7	7.7	9.7	4.5	3.8	5.3	24.9	23.5	26.4	55.9	54.2	57.6
65+	10.0	9.1	10.9	4.8	4.3	5.5	23.4	22.1	24.6	51.8	50.3	53.2
<b>Total</b>	<b>7.6</b>	<b>7.2</b>	<b>8.1</b>	<b>5.0</b>	<b>4.7</b>	<b>5.4</b>	<b>29.1</b>	<b>28.3</b>	<b>29.9</b>	<b>52.4</b>	<b>51.5</b>	<b>53.3</b>

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 total, 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 as follows: **above Victoria** / **below Victoria**.

Table 8.49 shows the proportion of persons who agreed, or did not agree, they were valued by society, over time. The proportion of persons who agreed they were definitely valued remained constant between 2001 and 2008.

**Table 8.49: Feeling valued by society, 2001–2008**

Do you feel valued by society?	2001	2002	2003	2004	2005	2006	2007	2008
	Per cent							
Not at all	12.8	8.6	9.3	8.5	7.1	7.6	6.9	7.6
Not often	8.8	6.6	5.6	6.0	5.4	5.5	4.8	5.0
Sometimes	36.1	32.2	29.8	26.8	31.4	27.8	30.8	29.1
Yes, definitely	42.3	51.6	55.3	52.6	51.1	53.3	51.9	52.4

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.

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

Table 8.50 provides data on persons who reported they felt valued by society, by region and sex. A higher proportion of males (56.2 per cent) living in rural areas definitely felt valued by society, compared with those living in the metropolitan area (52.0 per cent). No rural–metropolitan differences were evident among females in the proportion who definitely felt valued by society.

A higher proportion of persons (54.4 per cent) living in rural areas definitely felt valued by society, compared with persons living in the metropolitan area (51.6 per cent). Across the Department of Health regions, there were no differences in the proportion of males, females or persons who definitely felt valued by society, compared with the corresponding averages for Victoria (53.2 per cent, 51.7 per cent and 52.4 per cent respectively).

**Table 8.50: Feeling valued by society, by sex and Department of Health region, 2008**

Region	No, not at all			Not often			Sometimes			Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
Barwon-South Western	6.3	4.6	8.7	4.1*	2.3	7.0	23.9	18.8	29.9	59.0	52.7	65.1
Eastern Metropolitan	9.0	7.1	11.3	4.4	3.2	5.9	27.1	24.1	30.3	53.9	50.4	57.4
Gippsland	9.9	7.2	13.3	6.5	4.6	9.1	28.3	24.3	32.7	50.8	46.4	55.1
Grampians	7.7	5.8	10.1	6.1	4.1	9.1	23.4	20.0	27.2	58.1	53.9	62.2
Hume	9.4	7.3	12.0	4.8	3.5	6.5	26.4	23.2	29.9	54.5	50.9	58.0
Loddon Mallee	8.2	6.1	11.0	4.3	2.9	6.5	23.5	20.2	27.1	57.3	53.1	61.5
North and West Metropolitan	8.2	7.0	9.6	4.5	3.6	5.5	29.8	27.6	32.0	51.7	49.3	54.0
Southern Metropolitan	8.6	7.1	10.4	4.6	3.7	5.8	30.6	27.9	33.4	50.5	47.6	53.4
<b>Metropolitan</b>	<b>8.4</b>	<b>7.5</b>	<b>9.3</b>	<b>4.6</b>	<b>4.0</b>	<b>5.3</b>	<b>29.3</b>	<b>27.8</b>	<b>30.9</b>	<b>52.0</b>	<b>50.4</b>	<b>53.6</b>
<b>Rural</b>	<b>8.1</b>	<b>7.1</b>	<b>9.3</b>	<b>5.1</b>	<b>4.2</b>	<b>6.1</b>	<b>24.9</b>	<b>22.9</b>	<b>27.0</b>	<b>56.2</b>	<b>53.9</b>	<b>58.5</b>
<b>Total</b>	<b>8.3</b>	<b>7.6</b>	<b>9.1</b>	<b>4.7</b>	<b>4.1</b>	<b>5.2</b>	<b>28.2</b>	<b>27.0</b>	<b>29.5</b>	<b>53.2</b>	<b>51.8</b>	<b>54.6</b>
<b>Females</b>												
Barwon-South Western	5.7	3.9	8.2	3.6	2.4	5.3	30.5	26.5	34.8	54.8	50.5	59.1
Eastern Metropolitan	5.7	4.7	6.9	6.0	4.8	7.6	31.1	28.5	33.8	51.6	48.9	54.4
Gippsland	7.7	6.1	9.6	5.4	4.1	7.1	30.4	27.4	33.7	50.8	47.6	54.0
Grampians	7.2	5.6	9.2	6.0	4.1	8.6	29.4	25.9	33.1	52.0	48.0	55.9
Hume	6.2	5.2	7.4	4.2	3.3	5.2	32.2	29.6	34.9	53.3	50.6	56.1
Loddon Mallee	7.3	6.0	8.8	6.7	5.0	8.9	29.9	26.9	33.1	51.0	47.8	54.1
North and West Metropolitan	7.9	6.9	8.9	5.5	4.7	6.5	30.8	29.0	32.5	48.8	47.0	50.7
Southern Metropolitan	7.1	6.0	8.3	5.4	4.4	6.6	28.6	26.5	30.9	52.8	50.4	55.1
<b>Metropolitan</b>	<b>7.0</b>	<b>6.4</b>	<b>7.6</b>	<b>5.5</b>	<b>4.9</b>	<b>6.2</b>	<b>30.0</b>	<b>28.8</b>	<b>31.3</b>	<b>51.1</b>	<b>49.8</b>	<b>52.4</b>
<b>Rural</b>	<b>6.7</b>	<b>5.9</b>	<b>7.6</b>	<b>5.2</b>	<b>4.4</b>	<b>6.0</b>	<b>30.4</b>	<b>28.7</b>	<b>32.1</b>	<b>52.6</b>	<b>50.9</b>	<b>54.3</b>
<b>Total</b>	<b>6.9</b>	<b>6.4</b>	<b>7.4</b>	<b>5.4</b>	<b>4.9</b>	<b>5.9</b>	<b>30.1</b>	<b>29.1</b>	<b>31.1</b>	<b>51.7</b>	<b>50.6</b>	<b>52.7</b>
<b>Persons</b>												
Barwon-South Western	6.0	4.6	7.7	3.9	2.7	5.6	27.3	23.9	31.0	56.8	52.9	60.7
Eastern Metropolitan	7.3	6.1	8.6	5.2	4.3	6.2	29.1	27.1	31.2	52.8	50.6	55.0
Gippsland	8.8	7.1	10.7	6.0	4.8	7.4	29.3	26.7	32.0	50.8	48.1	53.5
Grampians	7.5	6.2	9.1	5.9	4.5	7.8	26.5	24.0	29.1	55.0	52.1	57.9
Hume	7.8	6.6	9.3	4.5	3.7	5.5	29.3	27.2	31.5	53.9	51.6	56.1
Loddon Mallee	7.7	6.4	9.2	5.5	4.4	7.0	26.7	24.4	29.1	54.1	51.4	56.8
North and West Metropolitan	8.0	7.2	8.8	5.0	4.4	5.7	30.3	28.9	31.7	50.2	48.7	51.7
Southern Metropolitan	7.8	6.9	8.9	5.0	4.3	5.8	29.6	27.9	31.4	51.6	49.7	53.5
<b>Metropolitan</b>	<b>7.7</b>	<b>7.1</b>	<b>8.3</b>	<b>5.0</b>	<b>4.6</b>	<b>5.5</b>	<b>29.7</b>	<b>28.7</b>	<b>30.7</b>	<b>51.6</b>	<b>50.5</b>	<b>52.6</b>
<b>Rural</b>	<b>7.4</b>	<b>6.8</b>	<b>8.2</b>	<b>5.1</b>	<b>4.5</b>	<b>5.8</b>	<b>27.6</b>	<b>26.3</b>	<b>29.0</b>	<b>54.4</b>	<b>53.0</b>	<b>55.8</b>
<b>Total</b>	<b>7.6</b>	<b>7.2</b>	<b>8.1</b>	<b>5.0</b>	<b>4.7</b>	<b>5.4</b>	<b>29.1</b>	<b>28.3</b>	<b>29.9</b>	<b>52.4</b>	<b>51.5</b>	<b>53.3</b>

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

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

Table 8.51 and figure 8.16 show the proportion of persons who reported they felt valued by society, by LGA. The proportion ranged from almost three-quarters (73.7 per cent) in Greater Dandenong to 91.7 per cent in Buloke. In 12 LGAs, the proportion of persons who felt valued by society was above the average for Victoria (81.5 per cent). These 12 LGAs included five metropolitan LGAs (Bayside, Glen Eira, Melbourne, Nillumbik and Stonnington) and seven rural LGAs (Buloke, Corangamite, Indigo, Mansfield, Queenscliffe, Towong and West Wimmera). There were also four LGAs (Greater Dandenong, Hume, Moorabool and Wyndham) in which the proportion of persons who felt valued by society was below the average for Victoria.

Table 8.51: Feeling valued by society, by LGA , 2008

LGA	No, not at all / Not often			Sometimes / Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	9.3	6.0	14.2	85.1	79.8	89.2
Ararat (RC)	13.7	9.1	20.0	81.0	74.4	86.2
Ballarat (C)	14.6	11.0	19.0	80.5	75.7	84.5
Banyule (C)	9.9	6.7	14.3	85.8	81.2	89.4
Bass Coast (S)	10.4	7.8	13.7	84.4	78.4	89.0
Baw Baw (S)	18.4	14.1	23.8	78.9	73.4	83.5
Bayside (C)	7.1	4.6	10.7	89.2	85.4	92.2
Benalla (RC)	12.1	8.1	17.8	82.7	76.8	87.4
Boroondara (C)	13.3	9.7	18.0	82.3	77.3	86.3
Brimbank (C)	13.0	10.0	16.9	77.4	72.8	81.5
Buloke (S)	5.6	3.7	8.4	91.7	88.7	94.0
Campaspe (S)	11.5	8.6	15.2	84.5	80.4	87.9
Cardinia (S)	12.0	9.0	15.8	82.9	78.2	86.8
Casey (C)	16.9	13.3	21.2	79.1	74.7	83.0
Central Goldfields (S)	16.1	10.9	23.2	78.7	71.6	84.5
Colac-Otway (S)	11.3	7.9	16.0	84.8	79.9	88.6
Corangamite (S)	8.5	5.8	12.1	88.0	84.0	91.0
Darebin (C)	12.5	9.4	16.5	80.4	75.8	84.3
East Gippsland (S)	13.2	8.7	19.6	82.4	76.0	87.3
Frankston (C)	15.2	11.7	19.5	77.9	73.3	81.8
Gannawarra (S)	10.4	7.5	14.1	85.4	81.4	88.7
Glen Eira (C)	8.6	5.9	12.4	86.3	82.3	89.6
Glenelg (S)	10.1	7.2	14.0	86.3	82.0	89.8
Golden Plains (S)	14.7	10.9	19.6	80.1	75.2	84.3
Greater Bendigo (C)	12.8	9.5	17.2	80.4	75.6	84.5
Greater Dandenong (C)	15.8	12.3	20.1	73.7	68.6	78.2
Greater Geelong (C)	9.6	6.8	13.2	83.6	79.0	87.3
Greater Shepparton (C)	14.8	11.2	19.5	80.8	76.0	84.8
Hepburn (S)	10.6	7.6	14.5	84.1	79.0	88.1
Hindmarsh (S)	14.1	9.9	19.7	82.2	76.5	86.8
Hobsons Bay (C)	13.6	10.2	17.9	81.1	76.4	85.1
Horsham (RC)	9.2	6.7	12.6	85.2	81.4	88.4
Hume (C)	15.0	11.8	19.0	76.0	71.5	80.1
Indigo (S)	8.3	6.0	11.5	88.8	85.4	91.4
Kingston (C)	16.0	12.5	20.2	78.9	74.2	83.0
Knox (C)	16.0	12.1	20.9	78.1	73.0	82.5
Latrobe (C)	15.2	11.8	19.5	78.1	73.2	82.4
Loddon (S)	15.0	11.1	20.0	80.2	75.0	84.6
Macedon Ranges (S)	11.9	8.5	16.4	79.9	74.4	84.4
Manningham (C)	12.4	8.8	17.1	82.5	77.2	86.8

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

95% CI = 95 per cent confidence interval.

LGA = local government area

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

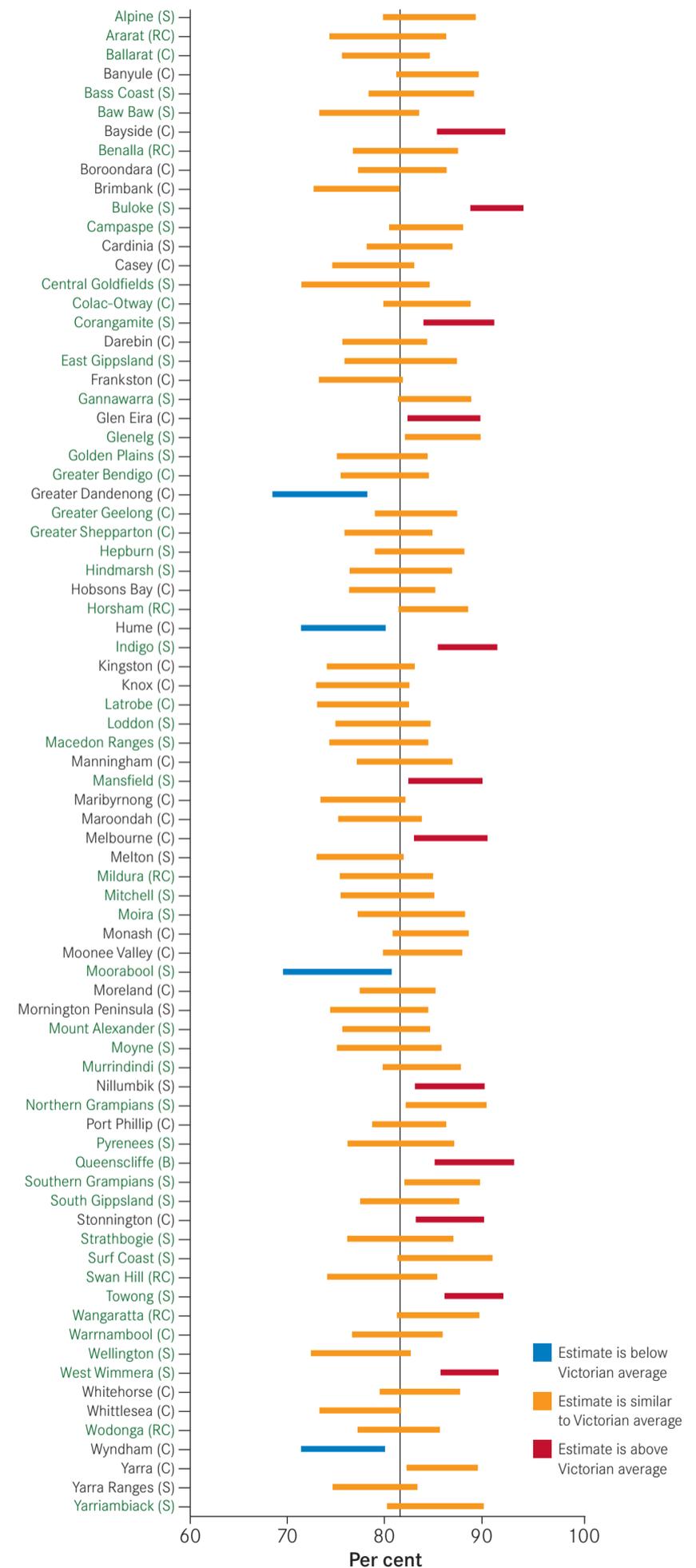
Data are age standardised to the 2006 Victorian population.

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

Table 8.51: Feeling valued by society, by LGA , 2008 (continued)

LGA	No, not at all / Not often			Sometimes / Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	10.1	7.2	14.1	86.6	82.4	89.9
Maribyrnong (C)	16.0	12.5	20.2	78.1	73.5	82.1
Maroondah (C)	13.1	9.9	17.1	79.9	75.4	83.8
Melbourne (C)	10.5	7.5	14.4	87.1	83.0	90.4
Melton (S)	16.8	13.1	21.2	77.8	73.1	81.9
Mildura (RC)	14.8	10.9	19.8	80.6	75.5	84.8
Mitchell (S)	13.6	10.0	18.3	80.7	75.6	85.0
Moira (S)	13.0	8.8	18.9	83.4	77.3	88.1
Monash (C)	9.2	6.5	12.9	85.1	80.9	88.5
Moonee Valley (C)	10.0	7.1	14.0	84.2	79.8	87.8
Moorabool (S)	17.1	12.7	22.5	75.6	69.7	80.7
Moreland (C)	12.5	9.5	16.3	81.6	77.5	85.1
Mornington Peninsula (S)	12.8	9.6	16.9	79.9	74.5	84.4
Mount Alexander (S)	14.3	10.8	18.6	80.5	75.8	84.5
Moyne (S)	11.5	7.8	16.8	81.0	75.2	85.8
Murrindindi (S)	11.2	8.3	15.1	84.1	79.8	87.7
Nillumbik (S)	9.7	7.0	13.3	86.9	83.1	90.0
Northern Grampians (S)	10.8	7.4	15.5	86.7	82.0	90.3
Port Phillip (C)	11.4	8.7	14.8	82.8	78.8	86.2
Pyrenees (S)	14.4	9.9	20.4	82.3	76.3	87.0
Queenscliffe (B)	7.8	4.8	12.5	89.7	85.1	93.0
Southern Grampians (S)	9.4	6.4	13.4	86.3	82.0	89.7
South Gippsland (S)	11.3	7.7	16.3	83.1	77.6	87.5
Stonnington (C)	8.1	5.8	11.1	87.0	83.2	90.0
Strathbogie (S)	12.0	8.2	17.2	82.1	76.2	86.9
Surf Coast (S)	8.0	5.8	11.0	86.8	81.3	90.9
Swan Hill (RC)	11.7	8.4	16.1	80.4	74.2	85.3
Towong (S)	5.9	4.0	8.5	89.5	86.2	92.0
Wangaratta (RC)	8.4	5.6	12.5	86.0	81.4	89.6
Warrnambool (C)	13.1	9.7	17.5	81.7	76.7	85.8
Wellington (S)	17.2	12.6	23.1	77.9	72.5	82.6
West Wimmera (S)	8.8	6.5	11.7	89.0	85.7	91.5
Whitehorse (C)	10.0	7.1	13.9	84.0	79.5	87.6
Whittlesea (C)	14.9	11.7	18.8	77.8	73.4	81.6
Wodonga (RC)	14.3	11.0	18.5	81.8	77.4	85.6
Wyndham (C)	16.8	13.5	20.8	76.0	71.5	80.0
Yarra (C)	9.5	6.7	13.2	86.2	82.2	89.4
Yarra Ranges (S)	15.0	11.5	19.3	79.4	74.7	83.3
Yarriambiack (S)	10.3	6.5	15.9	85.8	80.2	90.0
<b>Total</b>	<b>12.6</b>	<b>12.1</b>	<b>13.2</b>	<b>81.5</b>	<b>80.9</b>	<b>82.2</b>

Figure 8.16: Feeling valued by society<sup>(a)</sup>, by LGA, 2008



(a) Includes those who responded 'sometimes' and 'yes, definitely'.  
 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 line on the graph is the Victorian estimate, it does not show the 95% CI.  
 See relevant table for the 95% CI for Victoria.

## Feeling safe walking down street at night

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

Table 8.52 shows the proportion of persons who felt safe walking alone down their street after dark, by age group and sex. A majority of persons (58.9 per cent) definitely felt safe walking down their street alone after dark, while a further 15.4 per cent reported they sometimes felt safe.

Almost three-quarters of males (74.4 per cent) definitely felt safe walking alone down their street after dark, which was higher than the proportion for females (43.9 per cent). This pattern was observed across all age groups for males, compared with females.

Across age groups, the lowest rates of definitely feeling safe walking alone at night were observed among persons aged 65 years and over.

**Table 8.52: Feelings of safety, by age group and sex, 2008**

Age group (years)	Do you feel safe walking alone down your street after dark?											
	No, not at all			Not often			Sometimes			Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
18–24 years	4.8	3.1	7.3	4.7	3.1	7.1	14.4	11.5	18	75.8	71.6	79.6
25–34 years	5.0	3.5	6.9	2.8	1.8	4.4	14.7	12.0	17.9	77.2	73.7	80.4
35–44 years	4.2	3.1	5.6	2.4	1.6	3.6	11.7	9.9	13.9	80.3	77.7	82.6
45–54 years	5.1	4.1	6.5	2.8	1.9	4.0	10.4	8.8	12.2	79.0	76.7	81.2
55–64 years	8.2	6.9	9.8	3.0	2.1	4.2	10.7	9.2	12.5	74.8	72.4	77.1
65+	17.2	15.5	19.0	5.8	4.8	7.0	9.9	8.6	11.5	60.4	58.2	62.7
<b>Total</b>	<b>7.5</b>	<b>6.9</b>	<b>8.1</b>	<b>3.5</b>	<b>3.1</b>	<b>4.1</b>	<b>12.0</b>	<b>11.1</b>	<b>12.9</b>	<b>74.4</b>	<b>71.8</b>	<b>76.8</b>
<b>Females</b>												
18–24 years	16.1	13.2	19.5	10.2	7.8	13.3	26.1	22.4	30.3	46.7	42.3	51.1
25–34 years	19.0	16.9	21.3	9.2	7.6	11.0	23.6	21.2	26.2	46.5	43.6	49.4
35–44 years	20.1	18.4	21.8	8.4	7.3	9.7	20.9	19.2	22.7	47.6	45.5	49.7
45–54 years	20.6	18.8	22.5	6.9	5.8	8.1	18.4	16.6	20.3	50.8	48.5	53.1
55–64 years	28.6	26.6	30.6	6.6	5.6	7.8	15.7	14.2	17.4	44.5	42.3	46.6
65+	43.3	41.3	45.2	6.1	5.3	7.2	9.7	8.5	10.9	29.7	28.0	31.4
<b>Total</b>	<b>24.9</b>	<b>24.0</b>	<b>25.7</b>	<b>7.9</b>	<b>7.3</b>	<b>8.5</b>	<b>18.9</b>	<b>18.1</b>	<b>19.8</b>	<b>43.9</b>	<b>42.9</b>	<b>45.0</b>
<b>Persons</b>												
18–24 years	10.3	8.6	12.4	7.4	5.9	9.3	20.2	17.7	22.9	61.5	58.3	64.6
25–34 years	12.0	10.6	13.5	6.0	5.0	7.1	19.2	17.3	21.2	61.9	59.5	64.2
35–44 years	12.2	11.2	13.4	5.5	4.7	6.3	16.4	15.1	17.8	63.7	62.0	65.4
45–54 years	12.9	11.8	14.1	4.8	4.1	5.7	14.4	13.2	15.7	64.8	63.0	66.4
55–64 years	18.5	17.3	19.9	4.8	4.2	5.6	13.3	12.1	14.5	59.5	57.8	61.1
65+	31.6	30.2	33.0	6.0	5.3	6.7	9.8	8.9	10.7	43.5	42.0	45.0
<b>Total</b>	<b>16.5</b>	<b>15.9</b>	<b>17.0</b>	<b>5.7</b>	<b>5.3</b>	<b>6.1</b>	<b>15.4</b>	<b>14.8</b>	<b>16.1</b>	<b>58.9</b>	<b>58.0</b>	<b>59.7</b>

95% CI = 95 per cent confidence interval.

Note that figures may not add to 100 per cent due to a proportion of 'not applicable', '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 from the corresponding estimate for Victoria are identified as follows: **above Victoria** / **below Victoria**.

Table 8.53 shows the proportion of persons who agreed, or did not agree, they felt safe walking alone down their street after dark, over time. The proportion of persons who definitely felt safe increased from 54.7 per cent in 2001 to 58.9 per cent in 2008.

**Table 8.53: Feelings of safety, 2001–2008**

Do you feel safe walking alone down your street after dark?	2001	2002	2003	2004	2005	2006	2007	2008
	Per cent							
Not at all	22.0	22.9	17.8	17.7	16.8	15.3	17.0	16.5
Not often	6.0	5.0	5.1	5.1	5.7	5.4	5.3	5.7
Sometimes	17.3	16.0	15.4	13.3	14.5	14.7	16.2	15.4
Yes, definitely	54.7	55.7	57.9	60.3	60.2	61.2	57.6	58.9

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

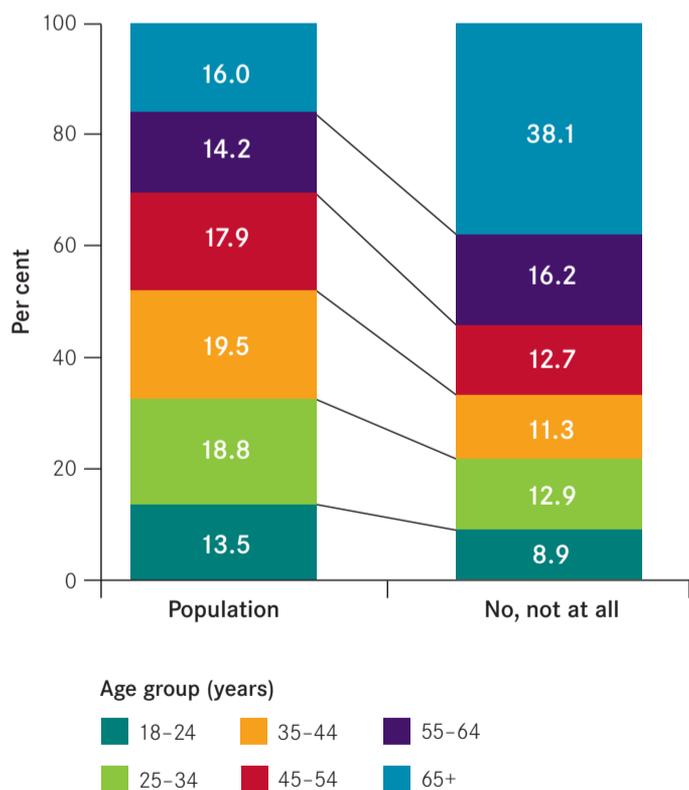
Data are age standardised to the 2006 Victorian population.

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

Figures 8.17a–8.17d show the ‘disproportionality’ in the proportions of males and females who definitely did and did not feel safe walking alone down their street after dark, by age group. Definitely not feeling safe was concentrated disproportionately among those aged 65 years and over for both males and females. Males aged 65 years and over represented 16.0 per cent of the male population in Victoria in 2008, but 38.1 per cent of males who did not feel safe walking down their street alone. In contrast, males aged 18–24 years represented 13.5 per cent of the male population but less than one in ten (8.9 per cent) of those who did not feel safe.

Females aged 65 years and over accounted for almost one third (32.7 per cent) of all females who felt unsafe walking alone down their street after dark and less than one fifth of the female population (18.9 per cent).

**Figure 8.17a: Proportion of males who definitely did not feel safe walking alone down their street after dark, by age group and population proportion, 2008**



**Figure 8.17b: Proportion of females who definitely did not feel safe walking alone down their street after dark, by age group and population proportion, 2008**

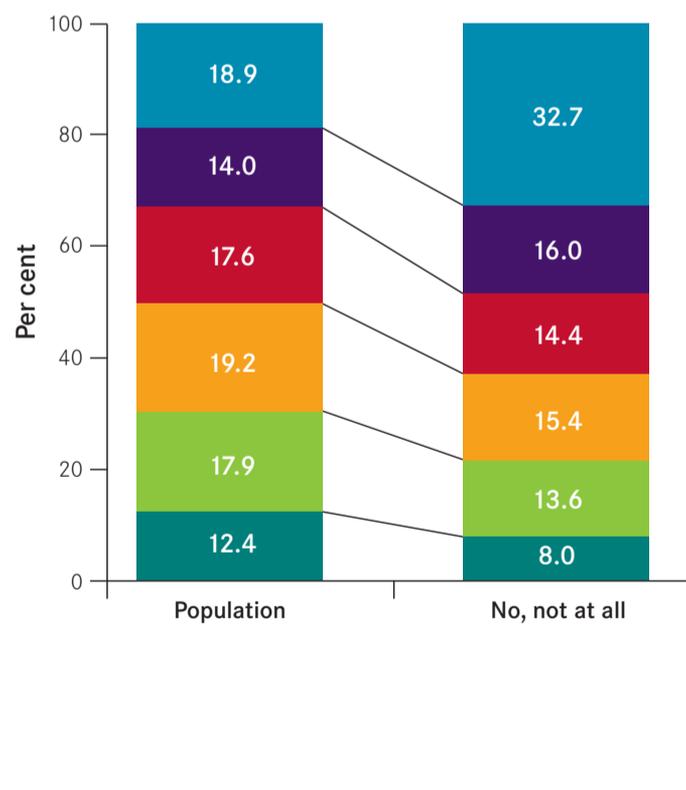


Figure 8.17c: Proportion of males who definitely felt safe walking alone down their street after dark, by age group and population proportion, 2008

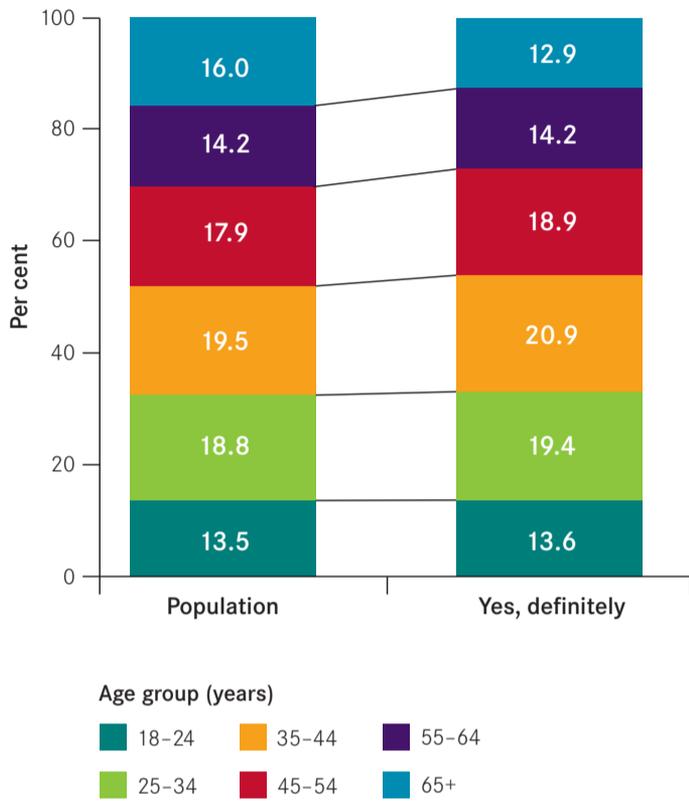
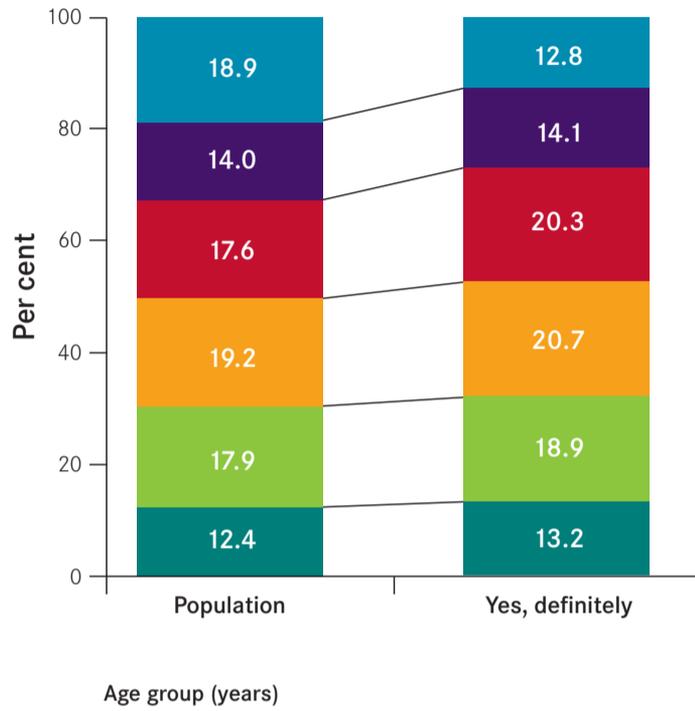


Figure 8.17d: Proportion of females who definitely felt safe walking alone down their street after dark, by age group and population proportion, 2008



There were metropolitan–rural differences in the proportions of males, females and persons who felt safe walking down their street alone after dark (table 8.54). A higher proportion of males living in rural areas (79.3 per cent) felt safe, compared with males living in the metropolitan area (72.8 per cent). Across Department of Health regions, the proportion of males who definitely felt safe ranged from 68.4 per cent in the North and West Metropolitan region to 80.8 per cent in the Barwon–South Western region. The proportion of males who felt safe was above the average for Victoria in the Barwon–South Western, Gippsland and Loddon Mallee regions, and below the state average in the North and West Metropolitan region.

This pattern of results was similar for the female population. A higher proportion of females living in rural areas (51.5 per cent) definitely felt safe walking down their street alone after dark, compared with those living in the metropolitan area (41.2 per cent). The proportion of females who felt safe was above the average for Victoria (43.9 per cent) in all five rural Department of Health regions, and highest in the Loddon Mallee region (53.4 per cent). The proportion of females who definitely felt safe was below the average for Victoria in the North and West Metropolitan region (37.6 per cent). The proportion of females from this region who definitely did not feel safe (29.1 per cent) was also higher than the average for Victoria (24.9 per cent).

The proportion of persons who definitely felt safe walking after dark was above the average for Victoria (58.9 per cent) in all rural Department of Health regions, and below the average for Victoria in the North and West Metropolitan region (52.7 per cent).

Table 8.54: Feelings of safety, by sex and Department of Health region, 2008

Region	Do you feel safe walking alone down your street after dark?											
	No, not at all			Not often			Sometimes			Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
Barwon-South Western	7.0	5.0	9.7	1.5*	0.9	2.4	7.8	4.8	12.5	80.8	76.1	84.8
Eastern Metropolitan	5.4	4.2	6.9	3.6	2.6	5.0	12.1	9.8	14.7	77.1	74.1	79.8
Gippsland	6.9	5.0	9.5	2.5*	1.4	4.2	6.2	4.4	8.7	79.9	76.4	83.0
Grampians	6.2	4.1	9.2	2.0*	1.1	3.6	7.6	5.4	10.7	79.6	75.6	83.0
Hume	7.3	5.6	9.4	2.8*	1.5	5.1	9.3	7.2	11.9	75.4	72.0	78.5
Loddon Mallee	6.2	4.6	8.3	2.2*	1.3	3.9	7.5	5.8	9.8	79.7	76.6	82.5
North and West Metropolitan	9.6	8.4	10.9	5.0	4.0	6.2	15.2	13.5	17.0	68.4	66.3	70.5
Southern Metropolitan	7.9	6.5	9.6	3.0	2.3	4.0	12.7	10.9	14.9	74.4	71.8	76.8
<b>Metropolitan</b>	7.8	7.0	8.6	4.1	3.5	4.7	13.5	12.4	14.7	72.8	71.3	74.2
<b>Rural</b>	6.7	5.7	7.7	2.1	1.6	2.7	7.7	6.5	9.2	79.3	77.5	80.9
<b>Total</b>	7.5	6.9	8.1	3.5	3.1	4.1	12.0	11.1	12.9	74.4	73.3	75.6
<b>Females</b>												
Barwon-South Western	19.3	16.2	22.9	5.7	3.7	8.9	16.8	13.1	21.3	52.1	47.2	56.8
Eastern Metropolitan	23.1	21.0	25.3	8.5	7.1	10.2	20.5	18.2	23.0	44.5	41.8	47.3
Gippsland	22.1	19.6	24.8	5.1	3.8	6.9	14.5	12.2	17.2	50.7	47.5	54.0
Grampians	19.8	17.1	22.8	7.9	5.3	11.6	14.5	11.8	17.7	49.9	46.2	53.5
Hume	21.1	18.7	23.7	5.3	4.2	6.7	15.1	13.2	17.3	50.8	48.1	53.5
Loddon Mallee	22.5	20.0	25.2	4.6	3.4	6.2	12.5	10.4	14.9	53.4	50.2	56.5
North and West Metropolitan	29.1	27.6	30.8	9.7	8.6	10.9	20.1	18.6	21.7	37.6	35.8	39.4
Southern Metropolitan	25.9	24.0	27.9	7.4	6.2	8.9	20.7	18.8	22.8	42.8	40.5	45.1
<b>Metropolitan</b>	26.4	25.4	27.5	8.7	8.0	9.5	20.3	19.3	21.5	41.2	39.9	42.5
<b>Rural</b>	20.9	19.6	22.3	5.6	4.7	6.7	14.9	13.5	16.4	51.5	49.7	53.2
<b>Total</b>	24.9	24.0	25.7	7.9	7.3	8.5	18.9	18.1	19.8	43.9	42.9	45.0
<b>Persons</b>												
Barwon-South Western	13.4	11.4	15.7	3.6	2.4	5.2	12.4	9.8	15.6	66.1	62.4	69.6
Eastern Metropolitan	14.6	13.4	16.0	6.1	5.2	7.2	16.3	14.7	18.1	60.3	58.2	62.4
Gippsland	14.7	13.0	16.6	3.8	2.8	4.9	10.3	8.8	12.1	65.1	62.6	67.6
Grampians	13.2	11.4	15.2	4.9	3.4	7.1	11.1	9.3	13.3	64.4	61.6	67.2
Hume	14.3	12.7	16.0	4.1	3.1	5.3	12.3	10.8	14.0	62.9	60.7	65.1
Loddon Mallee	14.6	13.0	16.3	3.4	2.6	4.5	10.0	8.6	11.7	66.2	63.9	68.5
North and West Metropolitan	19.6	18.6	20.7	7.3	6.6	8.2	17.6	16.5	18.8	52.7	51.3	54.2
Southern Metropolitan	17.2	16.0	18.5	5.2	4.5	6.1	16.7	15.4	18.2	58.3	56.4	60.1
<b>Metropolitan</b>	17.4	16.8	18.1	6.4	5.9	6.9	16.9	16.1	17.7	56.6	55.6	57.6
<b>Rural</b>	14.0	13.2	14.9	3.9	3.3	4.5	11.3	10.4	12.4	65.1	63.8	66.4
<b>Total</b>	16.5	15.9	17.0	5.7	5.3	6.1	15.4	14.8	16.1	58.9	58.0	59.7

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 'not applicable', 'don't know' or 'refused' responses.

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.

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

Table 8.55 and figure 8.18 show the proportion of persons who reported they felt safe (definitely or sometimes) when walking alone down their street at night, by LGA. The proportion ranged from 54.5 per cent in Greater Dandenong to 90.3 per cent in Queenscliffe. In 31 LGAs, the proportion of persons who felt safe walking down their street alone after dark, either definitely or sometimes, was above the average for Victoria (74.3 per cent). Of these 31 LGAs, 22 were in rural areas and nine were in the metropolitan area.

Table 8.55: Feelings of safety, by LGA, 2008

LGA	Do you feel safe walking alone down your street after dark?					
	No, not at all / Not often			Sometimes / Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	9.7	6.8	13.6	85.4	80.9	88.9
Ararat (RC)	14.1	10.4	18.9	75.2	69.5	80.1
Ballarat (C)	26.1	21.3	31.4	68.8	63.4	73.6
Banyule (C)	16.8	13.8	20.4	80.7	76.9	83.9
Bass Coast (S)	14.9	11.3	19.3	81.2	76.4	85.3
Baw Baw (S)	20.1	15.3	26.1	75.3	69.3	80.4
Bayside (C)	14.8	11.3	19.2	84.7	80.3	88.2
Benalla (RC)	14.0	10.8	18.0	80.4	76.0	84.2
Boroondara (C)	15.9	12.5	19.9	82.7	78.6	86.2
Brimbank (C)	35.4	30.7	40.3	59.4	54.7	64.0
Buloke (S)	6.3	4.4	8.9	88.6	85.4	91.2
Campaspe (S)	13.2	10.3	16.8	80.3	76.3	83.8
Cardinia (S)	20.1	16.4	24.3	73.6	68.8	77.8
Casey (C)	28.6	24.4	33.3	69.0	64.3	73.2
Central Goldfields (S)	14.5	10.8	19.1	79.8	74.4	84.3
Colac-Otway (S)	14.5	10.8	19.1	75.4	69.5	80.5
Corangamite (S)	8.4	5.8	12.1	84.4	80.3	87.7
Darebin (C)	30.2	25.4	35.4	67.5	62.3	72.3
East Gippsland (S)	15.2	11.4	20.0	77.2	71.5	82.0
Frankston (C)	27.1	22.7	31.9	70.8	65.9	75.2
Gannawarra (S)	13.4	9.6	18.5	81.2	75.9	85.6
Glen Eira (C)	16.1	12.9	19.9	81.4	77.5	84.8
Glenelg (S)	23.5	18.6	29.3	68.6	62.7	74.0
Golden Plains (S)	10.7	7.7	14.8	79.3	74.0	83.7
Greater Bendigo (C)	23.3	19.2	28.0	72.0	67.1	76.4
Greater Dandenong (C)	42.3	37.0	47.9	54.5	48.9	60.0
Greater Geelong (C)	19.0	15.2	23.5	78.2	73.7	82.2
Greater Shepparton (C)	29.7	24.1	35.9	64.8	58.6	70.6
Hepburn (S)	12.5	9.3	16.6	80.2	75.5	84.2
Hindmarsh (S)	8.7	6.4	11.6	84.2	80.2	87.4
Hobsons Bay (C)	26.8	22.3	31.8	70.3	65.3	74.9
Horsham (RC)	12.6	10.0	15.7	83.2	79.9	86.0
Hume (C)	32.8	28.2	37.8	63.7	58.9	68.2
Indigo (S)	8.5	6.2	11.6	83.5	79.6	86.8
Kingston (C)	24.6	20.5	29.3	72.8	68.2	77.0
Knox (C)	22.0	18.1	26.3	75.2	70.8	79.1
Latrobe (C)	24.7	20.5	29.4	67.7	62.8	72.2
Loddon (S)	6.8	4.7	9.6	78.5	73.7	82.7
Macedon Ranges (S)	11.2	8.1	15.2	82.2	77.9	85.9
Manningham (C)	19.2	15.5	23.6	78.4	74.0	82.1

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

95% CI = 95 per cent confidence interval.

LGA = local government area

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

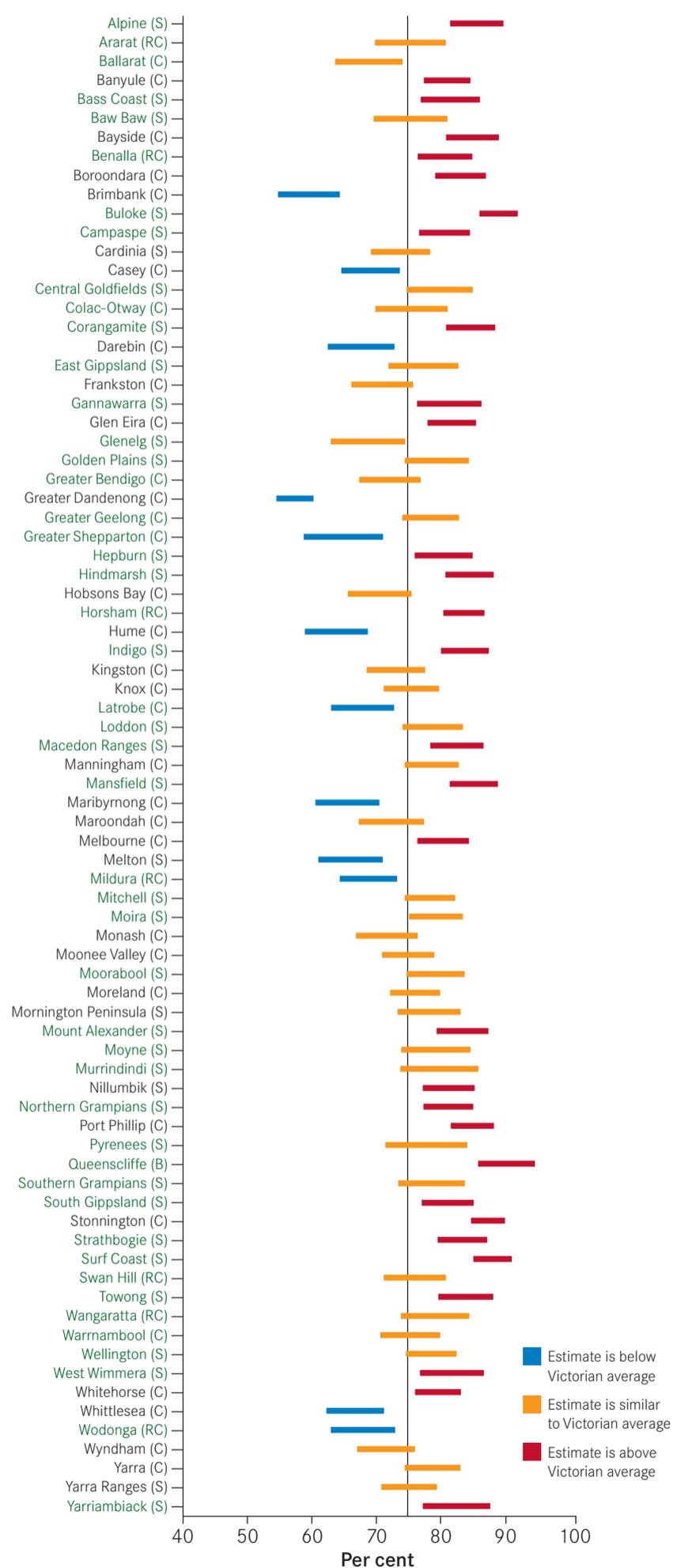
Data are age standardised to the 2006 Victorian population.

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

Table 8.55: Feelings of safety, by LGA, 2008 (continued)

LGA	Do you feel safe walking alone down your street after dark?					
	No, not at all / Not often			Sometimes / Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	6.5	4.5	9.2	84.8	80.8	88.1
Maribyrnong (C)	32.3	27.7	37.2	65.4	60.4	70.0
Maroondah (C)	25.6	21.1	30.8	72.2	67.0	76.8
Melbourne (C)	19.0	15.5	23.1	80.1	75.9	83.8
Melton (S)	31.4	26.8	36.4	65.9	60.9	70.5
Mildura (RC)	27.8	23.8	32.2	68.6	64.1	72.7
Mitchell (S)	13.3	10.3	16.9	78.0	74.0	81.6
Moira (S)	13.5	10.6	17.0	79.0	74.7	82.7
Monash (C)	24.6	20.4	29.4	71.5	66.6	75.9
Moonee Valley (C)	22.8	19.1	27.0	74.6	70.5	78.4
Moorabool (S)	14.8	11.3	19.2	79.0	74.4	83.0
Moreland (C)	22.6	19.1	26.6	75.7	71.8	79.3
Mornington Peninsula (S)	18.4	14.2	23.5	78.0	72.9	82.4
Mount Alexander (S)	9.4	6.9	12.6	83.1	78.9	86.6
Moyne (S)	8.7	6.3	11.8	79.2	73.5	83.9
Murrindindi (S)	11.9	7.5	18.5	79.9	73.3	85.2
Nillumbik (S)	15.2	11.7	19.4	81.0	76.8	84.6
Northern Grampians (S)	12.0	9.2	15.4	80.9	76.9	84.4
Port Phillip (C)	14.6	11.7	18.0	84.6	81.1	87.5
Pyrenees (S)	13.4	8.6	20.4	77.9	71.1	83.4
Queenscliffe (B)	7.9	4.6	13.1	90.3	85.3	93.7
Southern Grampians (S)	12.5	9.3	16.7	78.5	73.1	83.1
South Gippsland (S)	11.3	8.4	15.1	80.9	76.7	84.4
Stonnington (C)	11.8	9.5	14.5	86.8	84.1	89.2
Strathbogie (S)	8.2	5.7	11.6	83.1	79.1	86.5
Surf Coast (S)	7.8	5.8	10.3	87.7	84.5	90.2
Swan Hill (RC)	15.7	11.9	20.4	75.8	70.8	80.2
Towong (S)	7.0	4.5	10.8	83.7	79.2	87.4
Wangaratta (RC)	14.8	10.6	20.4	79.1	73.5	83.8
Warrnambool (C)	21.3	17.2	26.1	75.1	70.3	79.3
Wellington (S)	15.8	12.6	19.6	78.3	74.2	81.8
West Wimmera (S)	5.4	3.6	8.3	81.7	76.3	86.0
Whitehorse (C)	18.3	15.1	22.0	79.3	75.6	82.5
Whittlesea (C)	31.0	26.9	35.4	66.5	62.1	70.7
Wodonga (RC)	28.9	24.4	34.0	67.8	62.7	72.4
Wyndham (C)	26.6	22.6	31.0	71.3	66.8	75.5
Yarra (C)	20.2	16.4	24.8	78.5	74.0	82.4
Yarra Ranges (S)	20.4	16.5	24.9	74.9	70.4	78.9
Yarriambiack (S)	10.1	6.4	15.6	82.4	76.8	86.9
<b>Total</b>	<b>22.2</b>	<b>21.5</b>	<b>22.8</b>	<b>74.3</b>	<b>73.6</b>	<b>75.0</b>

Figure 8.18: Feelings of safety<sup>(a)</sup>, by LGA, 2008



(a) Includes those who responded 'sometimes' and 'yes, definitely'.  
 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 line on the graph is the Victorian estimate, it does not show the 95% CI.  
 See relevant table for the 95% CI for Victoria.

## Community and civic engagement

Participating in recreational and leisure activities allows for social interaction and engagement with a broader cross-section of the community. These activities also contribute to individual wellbeing through benefits to physical and mental health, including social health. In this chapter, recreation and leisure are interpreted broadly to involve activities that individuals may undertake during leisure time. They may include belonging to and participating in organised groups (including church or other religious groups and social or action groups) and attending local events (church fêtes, school concerts etc.).

### Membership of an organised group

The 2008 survey collected information on whether respondents were members of a number of organised groups. Table 8.56 presents information on the proportion of persons who were members of specific groups, by age group and sex. More than one in four persons (26.0 per cent) was a member of a sports group, more than one in five (22.5 per cent) was a member of a professional group or academic society, almost one in six (16.4 per cent) belonged to a church group, and more than one in 10 (11.2 per cent) was a member of a school group. Almost one in five persons (19.0 per cent) was a member of a community or other action group.

Group membership varied by age group and sex. Membership of one or more sports groups was popular among males and females of all ages. The proportions of males and females who were members of sports groups were higher among those aged 18–24 years (39.5 per cent and 25.8 per cent respectively), and the proportions of males and females who belonged to other community or action groups were higher among older males and females (30.8 per cent and 31.8 per cent respectively among those aged 65 years and over). Among those aged 65 years and over, almost one-third of females (30.0 per cent) and more than one-fifth of males (23.7 per cent) were members of a church group. More than one quarter of females (26.4 per cent) and more than one in seven males (14.3 per cent) aged 35–44 years were involved in school groups.

Across all age groups, a higher proportion of males than females indicated they were members of a sports group. A higher proportion of older females than older males belonged to a church group. The proportions of males and females who belonged to a community or action group were similar for all age groups.

Table 8.56: Membership of an organised group, by age group and sex, 2008

Age group (years)	Sports group			Church group			School group			Professional group			Other community or action group		
	%	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
<b>Males</b>															
18–24 years	<b>39.5</b>	34.9	44.3	<b>8.7</b>	6.3	11.9	<b>13.4</b>	10.6	16.9	<b>19.7</b>	16.1	23.9	<b>7.9</b>	5.6	10.8
25–34 years	<b>27.2</b>	23.9	30.7	<b>11.3</b>	9.0	14.2	<b>5.6</b>	4.1	7.7	<b>26.0</b>	22.8	29.5	<b>13.1</b>	10.7	15.9
35–44 years	<b>33.2</b>	30.5	36.1	<b>12.6</b>	10.7	14.6	<b>14.3</b>	12.3	16.6	<b>27.8</b>	25.2	30.6	<b>14.4</b>	12.6	16.5
45–54 years	<b>33.5</b>	30.9	36.2	<b>14.0</b>	12.0	16.2	<b>11.6</b>	10.0	13.5	<b>27.4</b>	25.0	30.0	<b>20.8</b>	18.7	23.1
55–64 years	<b>31.0</b>	28.6	33.5	<b>15.2</b>	13.3	17.3	<b>5.3</b>	4.3	6.7	<b>24.4</b>	22.1	26.7	<b>25.9</b>	23.8	28.3
65+	<b>30.3</b>	28.3	32.5	<b>23.7</b>	21.8	25.7	<b>2.5</b>	1.9	3.3	<b>15.3</b>	13.7	17.1	<b>30.8</b>	28.7	32.9
<b>Total</b>	<b>31.9</b>	<b>30.6</b>	<b>33.1</b>	<b>14.5</b>	<b>13.6</b>	<b>15.4</b>	<b>8.6</b>	<b>7.9</b>	<b>9.4</b>	<b>23.9</b>	<b>22.7</b>	<b>25.1</b>	<b>18.9</b>	<b>17.9</b>	<b>19.8</b>
<b>Females</b>															
18–24 years	<b>25.8</b>	22.2	29.8	<b>11.3</b>	8.7	14.6	<b>17.1</b>	14.0	20.8	<b>22.4</b>	18.9	26.3	<b>6.6</b>	4.8	9.0
25–34 years	<b>17.6</b>	15.6	19.9	<b>12.0</b>	10.3	14.0	<b>11.1</b>	9.5	12.8	<b>25.5</b>	23.0	28.1	<b>13.8</b>	12.0	15.8
35–44 years	<b>22.9</b>	21.2	24.6	<b>16.9</b>	15.3	18.5	<b>26.4</b>	24.6	28.3	<b>22.4</b>	20.7	24.2	<b>16.2</b>	14.8	17.8
45–54 years	<b>22.7</b>	20.9	24.6	<b>17.4</b>	15.7	19.2	<b>17.2</b>	15.6	19.0	<b>25.6</b>	23.7	27.7	<b>20.3</b>	18.6	22.1
55–64 years	<b>16.5</b>	15.1	18.1	<b>20.5</b>	18.8	22.3	<b>6.4</b>	5.4	7.6	<b>19.2</b>	17.5	21.0	<b>25.6</b>	23.8	27.5
65+	<b>18.1</b>	16.7	19.6	<b>30.0</b>	28.3	31.8	<b>3.0</b>	2.4	3.7	<b>10.4</b>	9.3	11.6	<b>31.8</b>	30.1	33.6
<b>Total</b>	<b>20.3</b>	<b>19.5</b>	<b>21.2</b>	<b>18.1</b>	<b>17.4</b>	<b>18.9</b>	<b>13.6</b>	<b>12.9</b>	<b>14.4</b>	<b>21.2</b>	<b>20.3</b>	<b>22.1</b>	<b>19.2</b>	<b>18.5</b>	<b>19.9</b>
<b>Persons</b>															
18–24 years	<b>32.8</b>	29.8	35.9	<b>10.0</b>	8.2	12.2	<b>15.2</b>	13.1	17.7	<b>21.0</b>	18.5	23.8	<b>7.2</b>	5.7	9.1
25–34 years	<b>22.4</b>	20.4	24.5	<b>11.7</b>	10.2	13.4	<b>8.4</b>	7.2	9.7	<b>25.7</b>	23.7	27.9	<b>13.4</b>	11.9	15.1
35–44 years	<b>28.0</b>	26.4	29.7	<b>14.7</b>	13.5	16.1	<b>20.4</b>	19.0	21.9	<b>25.1</b>	23.5	26.7	<b>15.3</b>	14.1	16.6
45–54 years	<b>28.0</b>	26.5	29.7	<b>15.7</b>	14.4	17.1	<b>14.5</b>	13.3	15.7	<b>26.5</b>	25.0	28.2	<b>20.5</b>	19.2	22.0
55–64 years	<b>23.7</b>	22.2	25.1	<b>17.9</b>	16.6	19.2	<b>5.9</b>	5.1	6.7	<b>21.7</b>	20.3	23.2	<b>25.8</b>	24.3	27.3
65+	<b>23.6</b>	22.4	24.8	<b>27.2</b>	25.9	28.5	<b>2.8</b>	2.3	3.3	<b>12.6</b>	11.7	13.6	<b>31.4</b>	30.0	32.7
<b>Total</b>	<b>26.0</b>	<b>25.2</b>	<b>26.7</b>	<b>16.4</b>	<b>15.8</b>	<b>17.0</b>	<b>11.2</b>	<b>10.7</b>	<b>11.7</b>	<b>22.5</b>	<b>21.7</b>	<b>23.2</b>	<b>19.0</b>	<b>18.5</b>	<b>19.7</b>

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 from the corresponding estimate for Victoria are identified by colour as follows: **above Victoria** / **below Victoria**.

Table 8.57 shows the proportion of persons who reported membership of a group, by group type, over time. Sports, church, school and professional/academic group membership decreased between 2002 and 2008, while membership of another community or action group remained constant over this period.

Table 8.57: Membership of an organised group, 2002–2008

Group type	2002	2003	2004	2005	2006	2007	2008
	per cent						
Sports group	28.4	28.2	29.3	27.2	27.0	26.0	26.0
Church group	18.8	18.0	18.9	18.2	16.5	16.6	16.4
School group	14.7	14.3	15.4	15.3	12.7	11.6	11.2
Professional group or academic society	25.1	21.8	20.8	19.6	20.0	18.5	19.0
Other community or action group	21.1	21.6	21.2	23.0	22.0	22.0	22.5
Any of the groups above	64.9	63.4	62.8	62.7	61.6	60.9	60.7

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.

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

Table 8.58 provides a regional perspective on membership of organised groups. Belonging to sports groups and other community or action groups was more popular in rural areas compared with the metropolitan area, for both males and females. More than one-third (37.4 per cent) of rural males belonged to one or more sporting groups, compared with 29.9 per cent of males living in the metropolitan area. Among females, 25.4 per cent of those living in rural areas and 18.6 per cent of those living in the metropolitan area were members of sports groups. Similar proportions of males and females from rural areas (24.1 per cent and 24.0 per cent respectively), and males and females from the metropolitan area (17.0 per cent and 17.4 per cent respectively) were members of other community or action groups.

A higher proportion of females living in rural areas (16.0 per cent) were involved with school groups, compared with those living in the metropolitan area (13.0 per cent). The proportion of females who were members of school groups was above the Victorian average (13.6 per cent) in the Loddon Mallee (18.5 per cent) region.

The proportion of males who were members of a professional group was below the average for Victoria (23.9 per cent) in four of the five rural Department of Health regions: Gippsland (18.3 per cent), Hume (18.1 per cent), Grampians (17.6 per cent) and Loddon Mallee (15.4 per cent). In contrast, the proportion of males from these same four regions who belonged to a community or other action group was above the average for Victoria (18.9 per cent).

Table 8.58: Membership of an organised group, by sex and Department of Health region, 2008

Age group (years)	Sports group			Church group			School group			Professional group			Other community or action group		
	%	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
<b>Males</b>															
Barwon-South Western	37.3	32.2	42.7	16.6	13.2	20.6	9.9	6.9	14.0	25.4	20.1	31.5	23.1	18.6	28.3
Eastern Metropolitan	34.1	30.9	37.5	17.6	15.0	20.5	9.6	7.7	11.9	27.7	24.7	30.9	17.6	15.3	20.2
Gippsland	37.6	33.5	41.9	14.4	11.7	17.7	11.1	8.8	13.9	18.3	15.3	21.8	26.0	22.4	29.8
Grampians	35.5	31.3	40.0	16.2	13.4	19.4	8.3	6.3	10.9	17.6	14.3	21.4	25.4	22.4	28.6
Hume	35.7	32.3	39.2	13.8	11.7	16.1	7.7	6.0	9.9	18.1	15.7	20.8	24.8	22.2	27.7
Loddon Mallee	40.3	36.3	44.5	14.9	12.5	17.7	11.2	8.8	14.2	15.4	13.2	17.8	23.0	20.2	26.1
North and West Metropolitan	27.0	25.0	29.2	13.1	11.6	14.7	7.9	6.8	9.3	24.3	22.3	26.4	16.4	14.9	18.1
Southern Metropolitan	29.6	26.9	32.3	12.8	11.0	14.9	7.8	6.4	9.5	24.8	22.4	27.3	16.6	14.7	18.8
<b>Metropolitan</b>	29.9	28.4	31.4	14.1	13.1	15.3	8.2	7.4	9.2	25.4	24.0	26.8	17.0	15.8	18.1
<b>Rural</b>	37.4	35.2	39.6	15.3	13.8	16.8	9.7	8.5	11.2	19.4	17.6	21.4	24.1	22.4	25.9
<b>Total</b>	31.9	30.6	33.1	14.5	13.6	15.4	8.6	7.9	9.4	23.9	22.7	25.1	18.9	17.9	19.8
<b>Females</b>															
Barwon-South Western	25.0	21.2	29.3	18.8	16.0	21.9	14.8	11.4	19.0	20.9	17.0	25.4	24.1	20.6	28.1
Eastern Metropolitan	21.1	18.9	23.6	21.1	18.9	23.5	14.2	12.6	16.1	24.3	21.9	26.8	17.9	16.2	19.7
Gippsland	26.4	23.6	29.5	17.7	15.5	20.0	15.9	13.8	18.4	16.2	13.9	18.8	23.8	21.4	26.4
Grampians	22.4	19.3	25.7	22.5	19.6	25.7	15.5	13.4	17.9	18.1	15.6	20.9	23.3	21.3	25.5
Hume	26.2	23.9	28.8	18.1	16.4	19.9	15.3	13.5	17.2	20.4	18.2	22.8	25.2	23.2	27.3
Loddon Mallee	26.5	23.8	29.4	20.7	18.3	23.2	18.5	15.9	21.4	19.0	16.5	21.8	23.3	21.2	25.6
North and West Metropolitan	15.6	14.3	16.9	16.4	15.1	17.8	12.0	10.9	13.2	20.2	18.7	21.7	16.5	15.2	17.9
Southern Metropolitan	20.1	18.2	22.0	16.4	14.8	18.1	13.2	11.6	14.8	21.8	19.9	23.8	17.5	16.0	19.2
<b>Metropolitan</b>	18.6	17.6	19.6	17.6	16.7	18.6	13.0	12.1	13.8	21.8	20.8	23.0	17.4	16.5	18.3
<b>Rural</b>	25.4	23.9	27.0	19.4	18.2	20.6	16.0	14.6	17.4	19.1	17.7	20.7	24.0	22.7	25.3
<b>Total</b>	20.3	19.5	21.2	18.1	17.4	18.9	13.6	12.9	14.4	21.2	20.3	22.1	19.2	18.5	19.9
<b>Persons</b>															
Barwon-South Western	31.1	27.8	34.6	17.6	15.4	20.1	12.3	9.9	15.2	23.0	19.6	26.8	23.7	20.7	26.9
Eastern Metropolitan	27.4	25.4	29.4	19.4	17.7	21.2	12.0	10.7	13.4	25.9	24.0	27.9	17.8	16.3	19.4
Gippsland	31.7	29.2	34.4	16.2	14.4	18.2	13.6	12.0	15.4	17.2	15.2	19.3	24.6	22.5	26.9
Grampians	28.9	26.2	31.8	19.5	17.4	21.7	12.1	10.5	13.8	17.9	15.8	20.3	24.2	22.4	26.1
Hume	30.9	28.8	33.1	16.0	14.7	17.5	11.5	10.2	12.9	19.2	17.5	21.0	25.1	23.5	26.9
Loddon Mallee	33.4	30.9	35.9	17.9	16.2	19.8	14.9	13.1	17.0	17.1	15.4	19.0	23.2	21.4	25.1
North and West Metropolitan	21.2	20.0	22.5	14.7	13.7	15.8	10.0	9.2	10.9	22.2	21.0	23.5	16.6	15.5	17.6
Southern Metropolitan	24.7	23.1	26.4	14.6	13.4	15.9	10.5	9.4	11.6	23.2	21.7	24.8	17.1	15.9	18.5
<b>Metropolitan</b>	24.1	23.2	25.0	15.9	15.2	16.7	10.6	10.0	11.3	23.5	22.7	24.4	17.2	16.5	17.9
<b>Rural</b>	31.3	30.0	32.6	17.4	16.5	18.4	12.9	12.0	13.9	19.2	18.0	20.4	24.0	23.0	25.1
<b>Total</b>	26.0	25.2	26.7	16.4	15.8	17.0	11.2	10.7	11.7	22.5	21.7	23.2	19.0	18.5	19.7

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.



Table 8.59 shows the proportion of persons who were members of different organised groups, by LGA.

In 30 LGAs, the proportion of persons who were members of sports groups was above the average for Victoria (26.0 per cent). All of these LGAs, except Nillumbik (32.0 per cent), were located in rural areas. All of the nine LGAs that had a below-average proportion of persons involved in sports organisations (except the Greater Dandenong LGA) were located in the North and West Metropolitan region.

On average, 16.4 per cent of persons reported they were members of a church group. Across LGAs, the proportion of persons who were members of church groups ranged from 6.8 per cent in Yarra to 31.8 per cent in Hindmarsh. In 12 LGAs, an above-average proportion of persons reported being members of a church group. One of these LGAs, Whitehorse (22.5 per cent), was located in the metropolitan area, with the remaining 11 LGAs in rural areas. Ten of the 13 LGAs with a below-average proportion of persons who were members of a church group were located in the metropolitan area.

The proportion of persons who were members of school groups ranged from 6.6 per cent in Maribyrnong to 22.4 per cent in Buloke, with an average of 11.2 per cent for Victoria. In 14 LGAs (of which 12 were located in rural areas), the proportion of persons involved with school groups was above the average for the state.

On average, 22.5 per cent of persons reported they were members of professional or academic groups. The proportion of persons who were members of professional groups ranged from 11.5 per cent in Melton to 40.8 per cent in Melbourne. In 16 LGAs (12 metropolitan and four rural), the proportion of persons who were members of professional groups was above the average for Victoria; in 23 LGAs (eight metropolitan and 15 rural), the proportion was below the state average.

An average of 19.0 per cent of persons reported they were members of some other community or action group. The proportion of persons who belonged to a community or action group ranged from 13.1 per cent in Brimbank to 44.4 per cent in West Wimmera. In 34 LGAs, the proportion of persons involved in some community or action group was higher than the average for Victoria. Except for Melbourne (24.1 per cent) and Yarra (24.1 per cent), these LGAs were located in rural areas of Victoria. All of the seven LGAs with a below-average proportion of persons involved in some other community or action group were located in the metropolitan area, specifically in the North and West Metropolitan and Southern Metropolitan regions.

Figure 8.19 summarises the differences in the proportions of persons who were members of three organised groups: sports groups, school groups and other community or action groups.

Table 8.59: Membership of an organised group, by LGA, 2008

LGA	Sports group			Church group			School group			Professional group			Other community or action group		
	%	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
Alpine (S)	28.1	23.0	33.9	10.9	7.9	15.0	13.0	8.7	19.0	19.9	15.0	25.9	33.6	28.2	39.4
Ararat (RC)	30.4	24.2	37.5	17.6	13.7	22.4	14.6	11.1	18.8	13.0	9.6	17.3	24.4	20.1	29.2
Ballarat (C)	27.5	22.5	33.1	19.0	15.1	23.6	11.1	8.3	14.7	19.1	15.1	23.9	19.5	16.1	23.5
Banyule (C)	26.2	21.3	31.8	12.1	9.2	15.8	12.0	8.7	16.2	31.2	25.6	37.3	19.5	15.0	24.8
Bass Coast (S)	36.6	29.9	43.8	20.8	14.4	29.0	8.8	5.9	13.1	21.3	15.8	28.1	34.4	27.3	42.2
Baw Baw (S)	28.3	23.2	34.1	16.5	13.3	20.4	14.1	10.5	18.8	21.0	16.1	27.0	20.9	17.3	25.0
Bayside (C)	33.2	28.3	38.4	10.3	8.1	13.0	13.9	10.8	17.7	39.4	33.5	45.6	14.7	11.8	18.0
Benalla (RC)	33.5	27.9	39.6	18.5	14.7	23.0	13.4	10.0	17.8	17.2	12.9	22.5	25.8	21.2	31.0
Boroondara (C)	31.0	25.9	36.6	16.6	13.0	21.1	16.3	12.9	20.4	38.8	33.4	44.4	18.7	15.0	23.0
Brimbank (C)	13.7	10.5	17.6	17.6	14.1	21.8	10.6	7.8	14.2	13.1	9.8	17.3	13.1	10.2	16.7
Buloke (S)	56.6	50.4	62.6	21.8	18.3	25.8	22.4	17.5	28.1	21.1	15.6	27.9	39.2	33.3	45.3
Campaspe (S)	36.9	31.2	43.0	22.9	18.2	28.4	15.1	11.2	20.1	19.6	15.1	25.1	28.9	23.7	34.8
Cardinia (S)	30.2	24.8	36.2	18.0	13.8	23.1	12.5	9.3	16.4	16.6	12.8	21.3	20.0	16.0	24.7
Casey (C)	22.4	18.3	27.2	19.2	15.4	23.5	9.6	7.0	12.9	12.0	9.2	15.5	13.3	10.1	17.3
Central Goldfields (S)	33.4	26.7	40.7	19.2	14.1	25.5	12.9	9.1	18.1	15.5	10.9	21.5	19.1	15.6	23.3
Colac-Otway (S)	42.6	36.0	49.4	18.7	14.0	24.5	15.1	10.9	20.5	18.8	13.8	25.0	27.7	23.0	32.9
Corangamite (S)	39.6	33.8	45.7	19.6	15.4	24.6	12.9	9.9	16.6	16.1	11.2	22.6	26.0	21.4	31.3
Darebin (C)	19.0	14.9	23.9	11.2	8.5	14.7	12.6	9.2	17.0	24.7	20.3	29.8	16.9	13.8	20.6
East Gippsland (S)	34.9	29.4	40.9	13.7	10.4	17.9	17.6	13.0	23.4	16.7	12.8	21.6	27.7	21.5	34.8
Frankston (C)	20.9	16.7	25.9	10.7	7.8	14.7	10.5	7.3	14.7	11.9	8.8	15.8	16.4	13.0	20.4
Gannawarra (S)	46.7	41.2	52.3	21.7	17.2	27.0	19.2	15.3	23.7	17.5	13.5	22.5	30.7	26.4	35.5
Glen Eira (C)	21.7	17.8	26.0	17.3	14.0	21.3	9.9	7.4	13.1	29.8	24.9	35.2	17.3	13.9	21.5
Glenelg (S)	37.4	31.2	44.0	17.6	13.7	22.3	13.8	10.6	17.8	15.4	11.2	20.7	24.7	20.7	29.3
Golden Plains (S)	25.9	20.8	31.8	18.3	14.3	23.1	12.6	9.2	16.9	12.4	8.8	17.1	27.5	22.9	32.6
Greater Bendigo (C)	29.0	23.8	34.7	15.6	12.3	19.7	13.8	10.1	18.6	13.3	10.1	17.3	17.9	14.4	22.0
Greater Dandenong (C)	15.8	12.3	20.0	20.8	16.9	25.4	8.4	5.8	12.0	12.5	9.6	16.3	15.7	12.7	19.3
Greater Geelong (C)	27.3	22.2	33.1	16.9	13.4	21.1	11.5	7.9	16.5	26.1	20.8	32.3	21.6	16.9	27.1
Greater Shepparton (C)	27.7	23.0	32.8	16.5	13.4	20.1	9.7	7.0	13.3	18.9	15.0	23.5	19.1	15.5	23.3
Hepburn (S)	26.0	20.0	33.0	10.8	8.0	14.5	12.4	9.2	16.4	21.5	16.4	27.5	34.0	28.5	40.0
Hindmarsh (S)	37.5	31.9	43.4	31.8	27.0	37.0	17.6	14.0	21.9	13.4	10.2	17.4	31.0	25.8	36.7
Hobsons Bay (C)	23.7	19.2	28.9	18.6	14.5	23.6	10.0	7.0	14.1	20.6	16.2	25.9	17.0	13.2	21.6
Horsham (RC)	31.9	26.9	37.4	25.1	20.6	30.1	12.1	9.0	16.1	20.4	15.9	25.7	24.0	19.7	28.8
Hume (C)	18.6	14.8	23.1	15.3	11.9	19.4	7.6	5.4	10.6	18.3	14.4	23.0	14.1	10.8	18.3
Indigo (S)	39.2	32.6	46.3	13.6	10.7	17.1	12.8	8.6	18.7	29.9	24.0	36.5	31.0	25.6	37.0
Kingston (C)	28.9	23.4	35.0	12.0	9.3	15.4	10.1	6.9	14.6	21.5	16.5	27.5	15.6	11.6	20.8
Knox (C)	25.4	20.7	30.7	17.1	13.1	21.9	11.3	8.1	15.5	15.9	12.1	20.7	15.0	11.8	18.9
Latrobe (C)	30.1	25.1	35.7	16.9	13.1	21.4	10.4	7.6	14.1	14.7	11.2	19.0	22.7	18.6	27.5
Loddon (S)	39.3	33.0	46.0	22.1	17.3	27.7	15.9	11.5	21.6	13.4	9.9	17.7	34.3	29.3	39.6
Macedon Ranges (S)	30.9	24.9	37.6	16.4	12.1	21.9	13.5	9.9	18.2	22.9	18.0	28.6	22.7	18.1	28.1
Manningham (C)	27.9	23.2	33.2	19.4	15.3	24.3	14.3	10.9	18.4	30.0	24.7	35.9	19.2	15.3	23.7

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

95% CI = 95 per cent confidence interval.

LGA = local government area

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

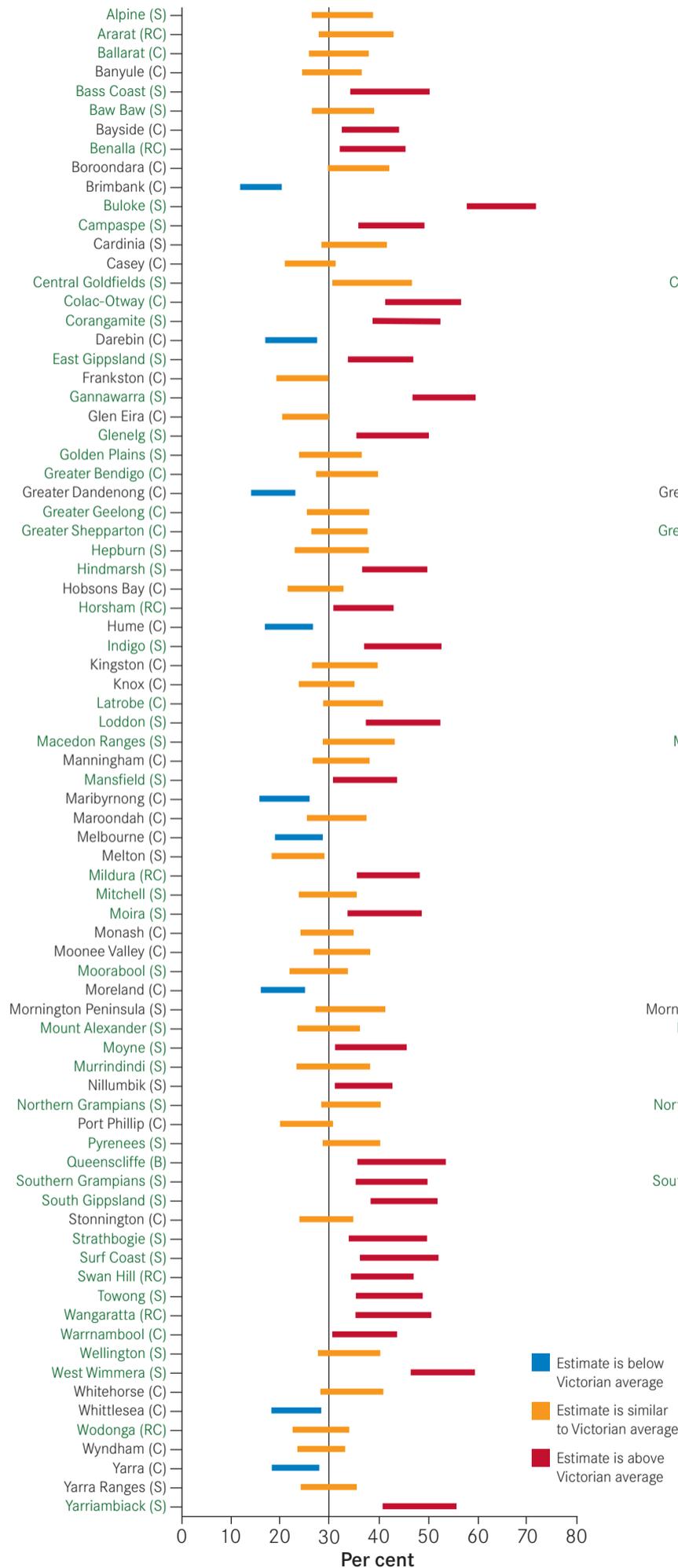
Data are age standardised to the 2006 Victorian population.

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

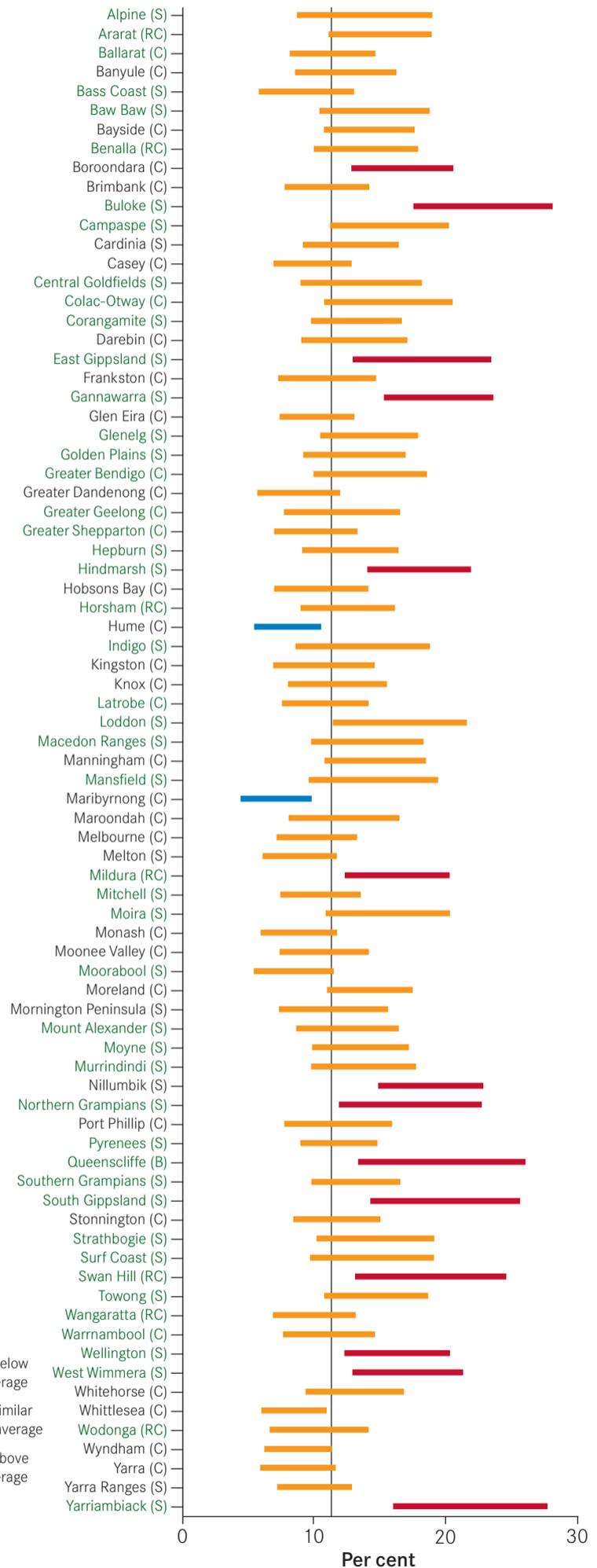
Table 8.59: Membership of an organised group, by LGA, 2008 (continued)

LGA	Sports group			Church group			School group			Professional group			Other community or action group		
	%	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
Mansfield (S)	32.5	27.1	38.4	16.9	11.4	24.3	13.8	9.7	19.3	26.6	20.2	34.1	28.6	24.0	33.6
Maribyrnong (C)	17.8	13.9	22.6	11.3	8.4	15.0	6.6	4.4	9.9	21.8	17.7	26.4	17.9	14.2	22.4
Maroondah (C)	27.1	22.2	32.7	18.7	14.9	23.4	11.6	8.1	16.4	24.1	19.2	29.9	15.2	12.0	19.0
Melbourne (C)	20.4	16.5	24.9	13.1	9.9	17.1	9.8	7.2	13.3	40.8	35.9	46.0	24.1	20.0	28.8
Melton (S)	20.2	16.0	25.2	19.5	15.6	24.1	8.6	6.2	11.8	11.5	8.5	15.3	14.3	11.2	18.0
Mildura (RC)	36.7	31.3	42.4	19.9	15.9	24.7	15.9	12.4	20.3	14.4	11.0	18.5	24.7	20.2	29.8
Mitchell (S)	25.9	21.0	31.4	12.0	8.6	16.5	10.2	7.5	13.6	15.1	11.8	19.3	22.9	19.0	27.3
Moira (S)	36.0	29.7	42.8	18.0	14.2	22.5	15.1	11.0	20.3	20.9	15.2	27.9	28.7	23.3	34.8
Monash (C)	25.5	21.1	30.5	19.9	15.5	25.1	8.4	6.0	11.8	23.3	18.7	28.6	20.9	16.7	26.0
Moonee Valley (C)	28.1	23.4	33.4	14.2	11.1	18.0	10.4	7.6	14.1	28.9	24.1	34.3	14.6	11.6	18.3
Moorabool (S)	24.1	19.3	29.6	16.9	12.8	21.9	8.0	5.5	11.5	17.2	13.0	22.2	23.7	19.1	29.1
Moreland (C)	17.5	13.9	21.8	11.5	8.8	14.8	13.9	11.1	17.4	23.3	19.1	28.0	16.9	13.6	20.9
Mornington Peninsula (S)	29.8	24.0	36.4	10.6	7.5	14.9	10.9	7.5	15.6	28.1	22.6	34.4	20.5	16.7	25.0
Mount Alexander (S)	25.9	20.9	31.8	11.8	9.1	15.1	12.1	8.8	16.4	26.2	20.5	32.8	35.6	29.8	42.0
Moyne (S)	33.2	27.1	39.9	20.8	15.7	27.0	13.1	10.0	17.1	14.0	10.7	18.0	31.0	25.2	37.3
Murrindindi (S)	26.3	20.3	33.3	15.7	10.9	22.1	13.3	9.9	17.7	19.1	15.0	24.0	34.1	28.9	39.7
Nillumbik (S)	32.0	27.1	37.3	17.1	13.4	21.5	18.5	14.9	22.8	23.1	19.1	27.7	19.8	16.0	24.3
Northern Grampians (S)	29.7	24.7	35.2	17.4	13.3	22.5	16.7	12.0	22.8	19.0	14.0	25.4	20.7	17.1	25.0
Port Phillip (C)	22.0	17.7	27.0	12.1	9.2	15.6	11.3	7.9	15.9	33.3	28.9	38.0	20.3	16.8	24.4
Pyrenees (S)	30.2	25.3	35.5	13.7	10.3	18.1	11.7	9.1	14.8	17.0	13.5	21.2	32.1	26.4	38.3
Queenscliffe (B)	38.9	31.3	47.0	12.0	8.3	17.0	19.0	13.4	26.1	30.2	24.1	37.1	29.9	23.5	37.3
Southern Grampians (S)	37.0	30.9	43.6	21.2	17.2	25.8	12.8	9.9	16.5	21.3	16.3	27.3	34.5	29.0	40.6
South Gippsland (S)	39.2	33.4	45.3	18.9	14.3	24.5	19.2	14.3	25.5	17.8	13.4	23.3	28.1	23.3	33.5
Stonnington (C)	25.7	21.2	30.8	12.1	9.4	15.5	11.4	8.6	15.0	37.9	32.7	43.4	22.4	18.1	27.5
Strathbogie (S)	36.5	29.8	43.8	17.8	12.6	24.5	14.2	10.3	19.1	17.6	12.8	23.6	34.9	27.9	42.5
Surf Coast (S)	38.5	31.8	45.6	12.8	8.8	18.1	13.7	9.7	19.0	23.6	19.5	28.2	30.3	24.3	37.0
Swan Hill (RC)	35.4	30.0	41.3	22.1	16.8	28.5	18.2	13.2	24.5	20.5	15.8	26.3	18.5	14.9	22.8
Towong (S)	36.7	30.9	42.9	22.1	17.3	27.8	14.4	10.9	18.7	15.8	11.4	21.4	40.5	33.5	48.0
Wangaratta (RC)	37.4	30.9	44.4	16.9	13.2	21.5	9.6	6.9	13.2	25.2	19.8	31.5	29.6	24.7	35.0
Warrnambool (C)	32.4	27.0	38.4	24.1	20.0	28.6	10.7	7.7	14.6	17.2	13.1	22.2	19.0	15.4	23.3
Wellington (S)	29.2	24.0	35.0	14.8	11.3	19.1	15.9	12.4	20.3	16.0	12.3	20.5	22.2	17.9	27.2
West Wimmera (S)	46.4	40.8	52.2	28.8	23.7	34.5	16.7	13.0	21.3	15.9	11.9	20.9	44.4	38.4	50.5
Whitehorse (C)	30.2	24.9	36.0	22.5	18.3	27.3	12.7	9.5	16.9	30.8	25.5	36.7	17.5	14.2	21.4
Whittlesea (C)	20.3	16.2	25.1	18.1	14.6	22.1	8.3	6.1	11.1	13.2	10.0	17.1	15.2	12.1	18.9
Wodonga (RC)	24.6	20.0	29.9	16.2	12.8	20.3	9.8	6.7	14.1	15.9	12.3	20.4	17.8	14.0	22.4
Wyndham (C)	24.5	20.5	29.0	18.4	14.7	22.7	8.4	6.2	11.4	14.9	11.5	19.0	13.6	10.6	17.1
Yarra (C)	20.2	16.3	24.7	6.8	4.6	10.0	8.3	5.9	11.7	33.8	28.9	39.0	24.1	20.0	28.7
Yarra Ranges (S)	25.6	21.0	30.9	18.6	14.9	23.1	9.6	7.1	12.9	18.4	14.6	23.1	18.1	14.8	22.0
Yarriambiack (S)	42.0	35.6	48.6	30.2	24.6	36.4	21.3	16.0	27.7	18.6	14.2	23.9	40.0	33.9	46.4
<b>Total</b>	<b>26.0</b>	<b>25.2</b>	<b>26.7</b>	<b>16.4</b>	<b>15.8</b>	<b>17.0</b>	<b>11.2</b>	<b>10.7</b>	<b>11.7</b>	<b>22.5</b>	<b>21.7</b>	<b>23.2</b>	<b>19.0</b>	<b>18.5</b>	<b>19.7</b>

**Figure 8.19: Membership of an organised group, by LGA, 2008**  
Sports groups



School groups



Note that the scale differs for different parts of the graph.

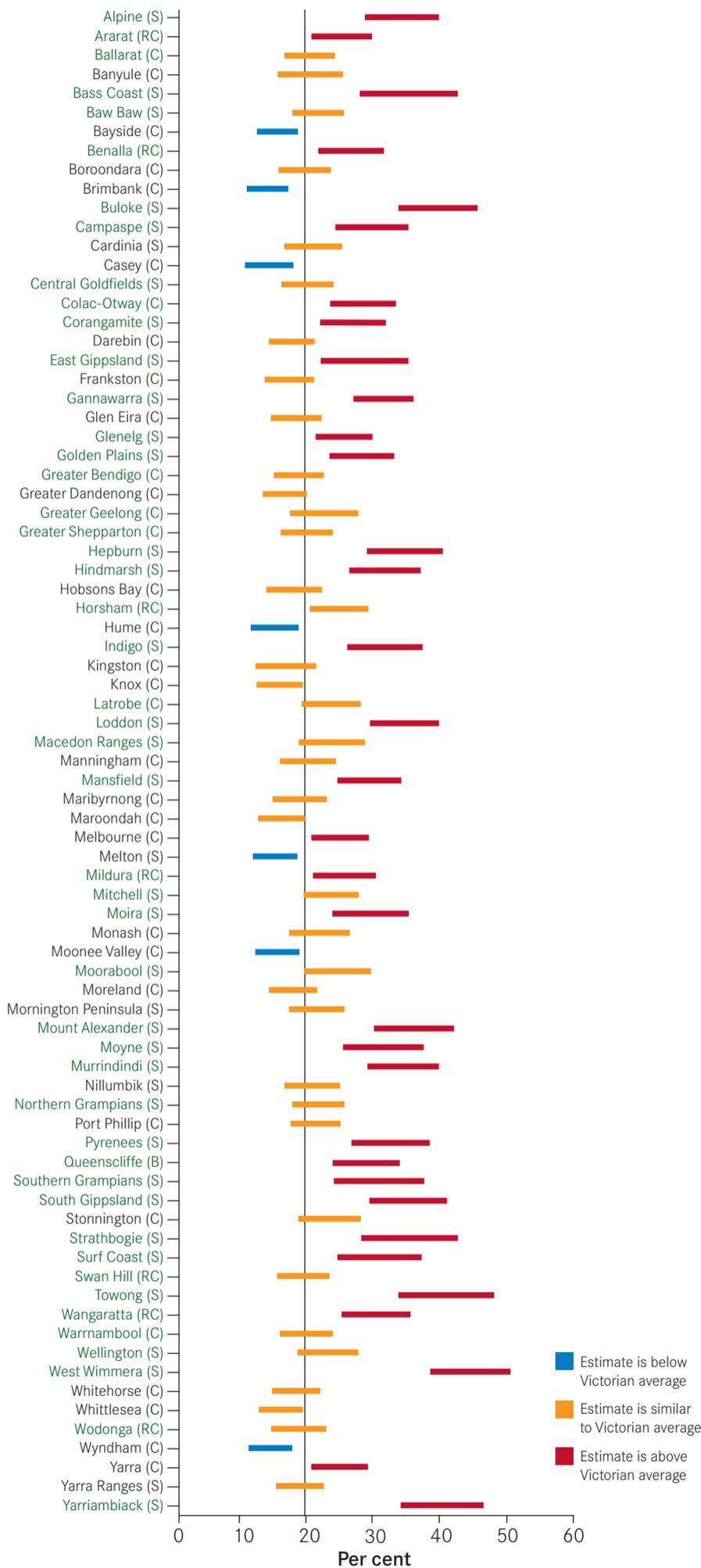
Metropolitan and rural LGAs are identified by colour as follows: metropolitan / rural.

LGA = local government area.

Data are age standardised to the 2006 Victorian population.

The line on the graph is the Victorian estimate, it does not show the 95% CI. See the relevant table for the 95% CI for Victoria (Total).

**Figure 8.19: Membership of an organised group, by LGA, 2008 (continued)**  
**Other community or action group**



Note that the scale differs for different parts of the graph.

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 line on the graph is the Victorian estimate, it does not show the 95% CI. See the relevant table for the 95% CI for Victoria (Total).

## Attendance at a local event

A further indicator of participation in recreational and leisure activities is attendance at a local community event within the past six months. Table 8.60 shows the proportion of persons who reported they had recently attended a local community event, by age group and sex.

More than half of males and females (50.9 per cent and 54.8 per cent respectively) had attended a community event in the previous six months. Persons in the age group 35–44 had the highest attendance rate (64.2 per cent) while persons in the 18–24 years age group had the lowest rate (43.4 per cent).

**Table 8.60: Attended a local community event in the past six months, by age group and sex, 2008**

Age group (years)	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
18–24 years	41.9	37.3	46.6	57.7	53.0	62.3
25–34 years	46.3	42.3	50.3	53.5	49.5	57.4
35–44 years	62.0	59.0	64.9	37.8	34.9	40.8
45–54 years	57.7	54.8	60.4	42.2	39.4	45.0
55–64 years	48.5	45.8	51.1	51.4	48.8	54.1
65+	46.9	44.6	49.1	52.8	50.5	55.1
<b>Total</b>	<b>50.9</b>	49.6	52.2	<b>48.9</b>	47.5	50.2
<b>Females</b>						
18–24 years	45.1	40.7	49.5	54.3	49.8	58.7
25–34 years	48.1	45.2	50.9	51.5	48.6	54.4
35–44 years	66.4	64.3	68.4	33.5	31.5	35.5
45–54 years	59.8	57.5	62.0	39.7	37.5	41.9
55–64 years	54.1	51.9	56.2	45.2	43.1	47.4
65+	53.3	51.4	55.2	46.4	44.5	48.3
<b>Total</b>	<b>54.8</b>	53.7	55.9	<b>44.8</b>	43.7	45.8
<b>Persons</b>						
18–24 years	43.4	40.2	46.7	56.0	52.8	59.2
25–34 years	47.2	44.7	49.6	52.5	50.0	54.9
35–44 years	64.2	62.4	66.0	35.6	33.8	37.4
45–54 years	58.7	56.9	60.5	40.9	39.2	42.7
55–64 years	51.3	49.6	53.0	48.3	46.6	50.0
65+	50.4	48.9	51.9	49.3	47.8	50.8
<b>Total</b>	<b>52.9</b>	52.1	53.8	<b>46.7</b>	45.9	47.6

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 from the corresponding estimate for Victoria are identified by colour as follows: **above Victoria** / **below Victoria**.

Table 8.61 shows the proportion of persons who reported attending an event within the previous six months remained constant between 2003 and 2008.

**Table 8.61: Attended a local community event in the past six months, 2003–2008**

Attended a local community event	2003	2004	2005	2006	2007	2008
	Per cent					
Yes	52.2	49.4	53.9	52.9	51.3	52.9
No	47.4	50.2	45.8	46.8	48.1	46.7

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.

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

Table 8.62 provides a regional perspective on recent attendance at a local community event. A higher proportion of males living in rural areas (64.1 per cent) had attended a local community event in the previous six months, compared with those who lived in the metropolitan area (46.3 per cent). Females living in rural areas (66.4 per cent) also had a higher rate of attending a community event, compared with females living in the metropolitan area (50.7 per cent).

Similar proportions of males and females (64.1 per cent and 66.4 per cent respectively) from rural regions had attended a local community event in the previous six months. In the metropolitan area, the proportion was higher for females (50.7 per cent) than males (46.3 per cent).

Table 8.62: Attended a local community event in the past six months, by sex and Department of Health region, 2008

Region	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
Barwon-South Western	67.2	60.9	72.9	32.6	26.9	38.9
Eastern Metropolitan	51.6	48.1	55.1	48.0	44.5	51.5
Gippsland	59.9	55.4	64.2	40.0	35.7	44.5
Grampians	61.2	56.9	65.4	38.6	34.4	43.0
Hume	62.7	59.1	66.2	37.1	33.6	40.7
Loddon Mallee	67.1	63.4	70.6	32.1	28.6	35.8
North and West Metropolitan	44.1	41.8	46.4	55.6	53.3	57.9
Southern Metropolitan	44.9	42.1	47.8	55.0	52.2	57.8
<b>Metropolitan</b>	<b>46.3</b>	<b>44.7</b>	<b>47.9</b>	<b>53.5</b>	<b>51.9</b>	<b>55.1</b>
<b>Rural</b>	<b>64.1</b>	<b>61.8</b>	<b>66.3</b>	<b>35.6</b>	<b>33.3</b>	<b>37.9</b>
<b>Total</b>	<b>50.9</b>	<b>49.6</b>	<b>52.2</b>	<b>48.9</b>	<b>47.5</b>	<b>50.2</b>
<b>Females</b>						
Barwon-South Western	65.6	60.8	70.1	33.9	29.4	38.7
Eastern Metropolitan	55.4	52.7	58.2	44.1	41.3	46.9
Gippsland	64.0	60.8	67.1	35.5	32.4	38.7
Grampians	67.0	63.0	70.7	32.5	28.8	36.4
Hume	70.4	67.8	73.0	29.4	26.9	32.1
Loddon Mallee	65.0	61.8	68.1	34.5	31.5	37.6
North and West Metropolitan	47.1	45.2	49.0	52.5	50.6	54.4
Southern Metropolitan	50.3	48.0	52.6	49.1	46.8	51.5
<b>Metropolitan</b>	<b>50.7</b>	<b>49.4</b>	<b>52.0</b>	<b>48.9</b>	<b>47.6</b>	<b>50.2</b>
<b>Rural</b>	<b>66.4</b>	<b>64.6</b>	<b>68.1</b>	<b>33.2</b>	<b>31.5</b>	<b>35.0</b>
<b>Total</b>	<b>54.8</b>	<b>53.7</b>	<b>55.9</b>	<b>44.8</b>	<b>43.7</b>	<b>45.8</b>
<b>Persons</b>						
Barwon-South Western	66.4	62.5	70.1	33.2	29.5	37.2
Eastern Metropolitan	53.7	51.5	55.9	45.9	43.7	48.1
Gippsland	62.0	59.2	64.6	37.7	35.1	40.5
Grampians	64.2	61.3	67.1	35.4	32.5	38.4
Hume	66.6	64.3	68.8	33.3	31.1	35.6
Loddon Mallee	66.2	63.7	68.5	33.2	30.8	35.6
North and West Metropolitan	45.7	44.2	47.1	54.0	52.5	55.5
Southern Metropolitan	47.7	45.8	49.5	52.0	50.2	53.9
<b>Metropolitan</b>	<b>48.5</b>	<b>47.5</b>	<b>49.6</b>	<b>51.1</b>	<b>50.1</b>	<b>52.2</b>
<b>Rural</b>	<b>65.3</b>	<b>63.9</b>	<b>66.7</b>	<b>34.3</b>	<b>32.9</b>	<b>35.7</b>
<b>Total</b>	<b>52.9</b>	<b>52.1</b>	<b>53.8</b>	<b>46.7</b>	<b>45.9</b>	<b>47.6</b>

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Table 8.63 and figure 8.20 show the proportion of persons who had attended a local community event in the past six months, by LGA. The proportion ranged from 35.0 per cent in Brimbank to 85.5 per cent in Buloke. Consistent with the metropolitan–rural differences described in table 8.62, 43 rural LGAs were above the average for Victoria (52.9 per cent) and eight metropolitan LGAs were below the state average. There was one metropolitan LGA, Nillumbik (67.8 per cent), that had an above-average proportion of persons who reported attending a local community event. Of the eight LGAs in which the proportion was below the state average, five were in the North and West Metropolitan region (Brimbank, Hume, Maribyrnong, Whittlesea and Wyndham) and three were located in the Southern Metropolitan region (Casey, Glen Eira and Greater Dandenong).

**Table 8.63: Attended a local community event in the past six months, by LGA, 2008**

LGA	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	72.8	66.7	78.1	26.5	21.2	32.5
Ararat (RC)	58.7	52.6	64.7	41.2	35.3	47.4
Ballarat (C)	62.3	56.5	67.7	37.4	31.9	43.2
Banyule (C)	48.5	42.5	54.5	50.1	44.2	56.0
Bass Coast (S)	69.4	62.2	75.8	30.2	23.8	37.4
Baw Baw (S)	55.9	50.0	61.6	44.1	38.4	49.9
Bayside (C)	48.1	42.2	54.0	51.4	45.5	57.3
Benalla (RC)	71.9	66.0	77.1	28.0	22.8	33.8
Boroondara (C)	53.1	47.3	58.9	45.9	40.1	51.8
Brimbank (C)	35.0	30.6	39.6	64.9	60.3	69.3
Buloke (S)	85.5	80.2	89.6	12.9	9.1	18.0
Campaspe (S)	68.3	62.6	73.5	31.6	26.4	37.3
Cardinia (S)	59.7	53.6	65.4	40.1	34.4	46.2
Casey (C)	40.9	36.1	45.8	59.0	54.1	63.8
Central Goldfields (S)	63.8	56.7	70.4	36.0	29.4	43.1
Colac-Otway (S)	69.2	62.6	75.2	30.1	24.2	36.8
Corangamite (S)	69.1	62.4	75.1	30.3	24.4	37.1
Darebin (C)	46.8	41.2	52.4	53.1	47.5	58.7
East Gippsland (S)	63.1	57.2	68.6	36.9	31.4	42.8
Frankston (C)	54.3	48.7	59.8	45.6	40.1	51.2
Gannawarra (S)	72.3	66.6	77.3	27.3	22.2	33.0
Glen Eira (C)	43.8	39.0	48.7	55.6	50.7	60.4
Glenelg (S)	64.5	58.4	70.1	35.5	29.9	41.6
Golden Plains (S)	56.6	50.7	62.4	43.1	37.3	49.0
Greater Bendigo (C)	61.6	56.3	66.7	37.5	32.5	42.8
Greater Dandenong (C)	36.5	31.2	42.1	63.5	57.9	68.8
Greater Geelong (C)	64.0	57.8	69.9	35.7	29.8	41.9
Greater Shepparton (C)	59.6	54.3	64.6	40.4	35.4	45.7
Hepburn (S)	71.7	65.0	77.5	27.9	22.1	34.6
Hindmarsh (S)	74.1	68.0	79.4	25.7	20.5	31.9
Hobsons Bay (C)	49.0	43.3	54.6	50.5	44.8	56.1
Horsham (RC)	69.6	63.6	75.0	30.3	25.0	36.3
Hume (C)	39.5	34.6	44.7	60.4	55.2	65.3
Indigo (S)	73.0	66.3	78.8	26.5	20.8	33.2
Kingston (C)	49.4	44.0	54.8	50.6	45.2	56.0
Knox (C)	53.4	47.9	58.9	45.8	40.3	51.4
Latrobe (C)	58.5	52.8	64.1	41.0	35.4	46.7
Loddon (S)	68.8	62.4	74.5	30.8	25.1	37.2
Macedon Ranges (S)	68.4	62.3	73.8	31.6	26.2	37.7
Manningham (C)	47.8	42.3	53.4	52.2	46.6	57.7

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

95% CI = 95 per cent confidence interval.

LGA = local government area

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

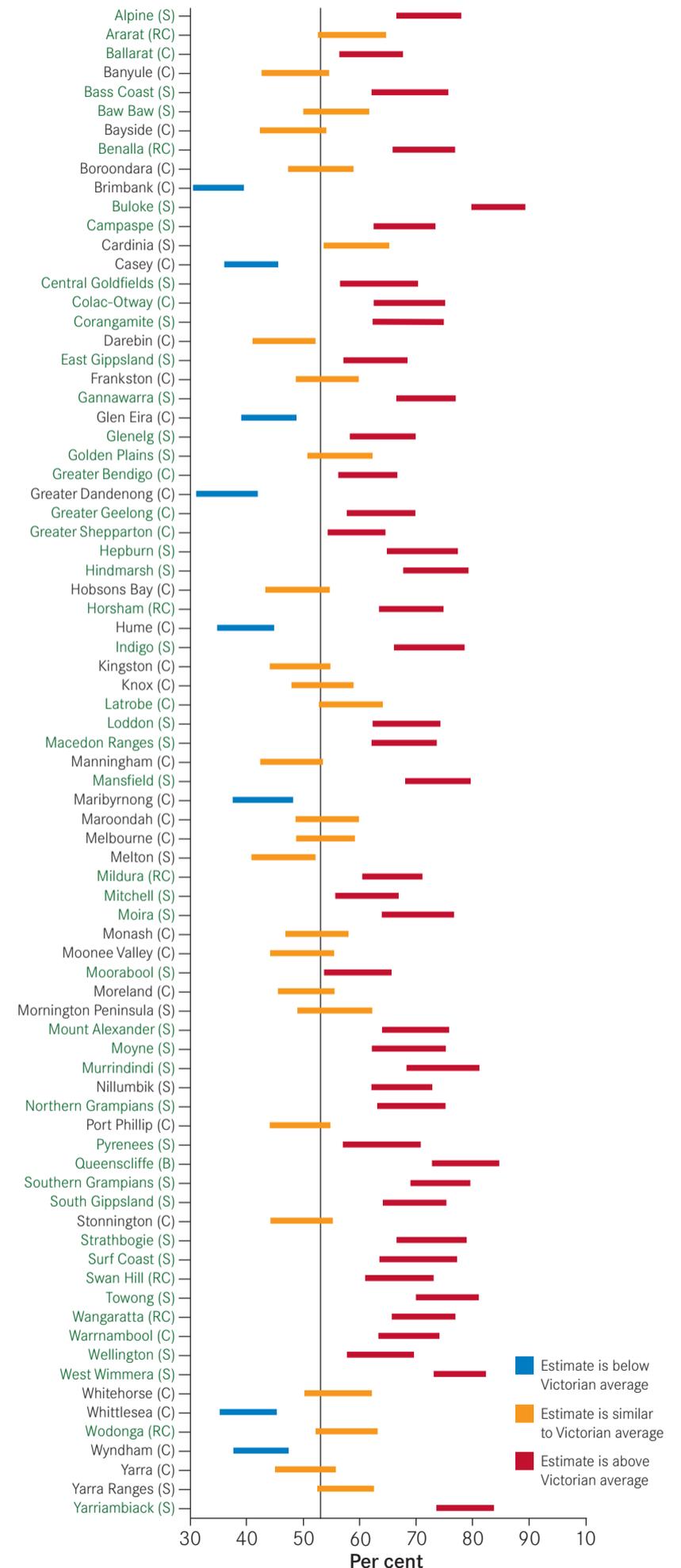
Data are age standardised to the 2006 Victorian population.

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

Table 8.63: Attended a local community event in the past six months, by LGA, 2008 (continued)

LGA	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	74.5	68.3	79.9	24.9	19.6	31.1
Maribyrnong (C)	42.7	37.4	48.1	57.2	51.7	62.5
Maroondah (C)	54.4	48.7	59.9	45.4	39.8	51.1
Melbourne (C)	53.9	48.7	59.1	45.8	40.6	51.0
Melton (S)	46.3	40.7	52.1	53.4	47.6	59.0
Mildura (RC)	66.1	60.5	71.2	33.7	28.6	39.3
Mitchell (S)	61.5	55.7	67.0	38.4	32.9	44.2
Moira (S)	71.0	64.2	76.9	29.0	23.1	35.8
Monash (C)	52.5	46.8	58.0	47.3	41.8	52.9
Moonee Valley (C)	49.8	44.1	55.4	49.5	43.8	55.1
Moorabool (S)	59.9	53.7	65.7	39.7	33.8	45.8
Moreland (C)	50.5	45.5	55.5	49.4	44.4	54.4
Mornington Peninsula (S)	55.6	48.9	62.2	43.4	36.9	50.1
Mount Alexander (S)	70.4	64.1	76.0	29.3	23.7	35.6
Moyne (S)	69.2	62.2	75.4	30.8	24.6	37.8
Murrindindi (S)	75.5	68.5	81.4	24.5	18.6	31.5
Nillumbik (S)	67.8	62.1	73.0	32.2	27.0	37.9
Northern Grampians (S)	69.6	63.1	75.4	30.1	24.3	36.6
Port Phillip (C)	49.4	44.0	54.8	50.1	44.7	55.5
Pyrenees (S)	64.3	57.1	70.9	35.0	28.4	42.2
Queenscliffe (B)	79.7	73.0	85.1	20.2	14.8	26.9
Southern Grampians (S)	74.9	69.2	79.9	24.7	19.8	30.4
South Gippsland (S)	70.2	64.2	75.6	29.5	24.1	35.5
Stonnington (C)	49.7	44.1	55.2	49.9	44.3	55.4
Strathbogie (S)	73.4	66.7	79.1	26.6	20.8	33.3
Surf Coast (S)	70.9	63.6	77.4	28.9	22.5	36.3
Swan Hill (RC)	67.4	61.0	73.2	29.1	24.5	34.2
Towong (S)	76.1	70.2	81.2	23.7	18.7	29.7
Wangaratta (RC)	71.8	65.8	77.1	28.2	22.9	34.2
Warrnambool (C)	69.1	63.4	74.2	30.4	25.3	36.0
Wellington (S)	63.9	57.8	69.7	35.6	29.9	41.8
West Wimmera (S)	78.4	73.3	82.7	21.5	17.2	26.6
Whitehorse (C)	56.3	50.2	62.2	43.7	37.8	49.8
Whittlesea (C)	40.0	35.0	45.1	59.7	54.5	64.6
Wodonga (RC)	57.7	52.2	63.1	41.7	36.3	47.2
Wyndham (C)	42.3	37.5	47.3	57.6	52.7	62.4
Yarra (C)	50.3	44.9	55.7	49.4	44.0	54.9
Yarra Ranges (S)	57.6	52.5	62.6	41.9	36.9	47.1
Yarriambiack (S)	79.4	73.9	84.0	20.5	15.9	26.1
<b>Total</b>	<b>52.9</b>	<b>52.1</b>	<b>53.8</b>	<b>46.7</b>	<b>45.9</b>	<b>47.6</b>

Figure 8.20: Attended a local community event in the past six months, 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 line on the graph is the Victorian estimate, it does not show the 95% CI. See the relevant table for the 95% CI for Victoria (Total).

## Community and civic engagement

Living in a multicultural society among individuals of diverse backgrounds, interests and values presents many opportunities for community and civic engagement. Whether individuals take up opportunities for social interaction and community engagement may depend on the extent to which certain conditions are fulfilled, including whether they trust casual acquaintances and strangers, feel valued as members of society and consider there are opportunities to be involved in different institutions and activities. The previous section of the chapter focused on the extent to which these enabling conditions were fulfilled.

Ways of expressing community and civic engagement include being involved in the community through volunteering, being on a committee or decision-making body, or taking local action on behalf of an organised group (for example, a sporting group, a church group or a school group). Being involved in community or civic activities is a form of socialisation. Networks formed through community and civic engagement tend to bring together individuals from different backgrounds who may not otherwise interact. Community and civic engagement thus facilitates social cohesion by allowing the expression of different perspectives, and it fosters greater appreciation of diversity and understanding throughout the community.

### Volunteering

The 2008 survey asked respondents whether they currently received any help from volunteer-based organisations and whether they helped out a local group as a volunteer. The first of these two indicators was discussed earlier in the chapter; the second indicator is reported in this section.

Table 8.64 shows the proportion of persons who volunteered to help out a local group, by age group and sex. More than one-fifth (22.2 per cent) of persons reported they had definitely helped out a local group as a volunteer, and a further 10.2 per cent sometimes did so. The propensity to report definitely helping out a local group as a volunteer was similar for males and females, but increased with age.

**Table 8.64: Volunteering, by age group and sex, 2008**

Age group (years)	No, not at all			Not often			Sometimes			Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
18–24 years	<b>68.3</b>	63.7	72.6	<b>8.5</b>	6.1	11.7	<b>12.7</b>	9.8	16.4	<b>10.5</b>	8.1	13.5
25–34 years	<b>69.7</b>	65.9	73.2	<b>4.4</b>	3.0	6.6	<b>9.6</b>	7.5	12.2	<b>16.2</b>	13.5	19.2
35–44 years	<b>60.1</b>	57.1	63.0	<b>4.5</b>	3.4	5.9	<b>10.7</b>	9.0	12.5	<b>24.6</b>	22.1	27.2
45–54 years	<b>56.8</b>	54.0	59.5	<b>5.3</b>	4.2	6.8	<b>11.7</b>	10.0	13.7	<b>25.8</b>	23.5	28.3
55–64 years	<b>58.8</b>	56.2	61.4	<b>5.0</b>	4.0	6.3	<b>9.0</b>	7.6	10.6	<b>27.0</b>	24.8	29.3
65+	<b>56.9</b>	54.7	59.2	<b>5.0</b>	4.0	6.2	<b>8.3</b>	7.2	9.6	<b>29.5</b>	27.4	31.5
<b>Total</b>	<b>61.9</b>	<b>60.6</b>	<b>63.2</b>	<b>5.3</b>	<b>4.7</b>	<b>6.0</b>	<b>10.2</b>	<b>9.4</b>	<b>11.1</b>	<b>22.4</b>	<b>21.4</b>	<b>23.4</b>
<b>Females</b>												
18–24 years	<b>64.9</b>	60.5	69.1	<b>9.2</b>	6.9	12.3	<b>11.9</b>	9.3	15.0	<b>13.0</b>	10.3	16.4
25–34 years	<b>71.3</b>	68.7	73.8	<b>5.3</b>	4.1	6.7	<b>10.0</b>	8.4	11.8	<b>13.3</b>	11.5	15.3
35–44 years	<b>57.2</b>	55.2	59.3	<b>4.5</b>	3.7	5.4	<b>13.0</b>	11.7	14.5	<b>25.1</b>	23.3	26.9
45–54 years	<b>60.1</b>	57.9	62.3	<b>4.6</b>	3.8	5.5	<b>11.5</b>	10.2	13.1	<b>23.7</b>	21.9	25.6
55–64 years	<b>58.6</b>	56.5	60.7	<b>3.8</b>	3.1	4.7	<b>9.9</b>	8.7	11.3	<b>27.3</b>	25.5	29.3
65+	<b>61.1</b>	59.3	62.9	<b>3.1</b>	2.5	3.8	<b>5.7</b>	4.9	6.6	<b>30.0</b>	28.3	31.7
<b>Total</b>	<b>62.6</b>	<b>61.6</b>	<b>63.6</b>	<b>4.9</b>	<b>4.7</b>	<b>5.5</b>	<b>10.2</b>	<b>9.7</b>	<b>10.7</b>	<b>22.1</b>	<b>21.6</b>	<b>22.9</b>
<b>Persons</b>												
18–24 years	<b>66.6</b>	63.4	69.7	<b>8.9</b>	7.1	11.0	<b>12.3</b>	10.3	14.6	<b>11.7</b>	9.9	13.9
25–34 years	<b>70.5</b>	68.2	72.7	<b>4.9</b>	3.9	6.1	<b>9.8</b>	8.4	11.3	<b>14.7</b>	13.1	16.5
35–44 years	<b>58.7</b>	56.9	60.4	<b>4.5</b>	3.8	5.3	<b>11.9</b>	10.8	13.0	<b>24.8</b>	23.3	26.4
45–54 years	<b>58.5</b>	56.7	60.2	<b>4.9</b>	4.2	5.8	<b>11.6</b>	10.5	12.9	<b>24.7</b>	23.3	26.3
55–64 years	<b>58.7</b>	57.1	60.4	<b>4.4</b>	3.7	5.2	<b>9.4</b>	8.5	10.5	<b>27.2</b>	25.7	28.7
65+	<b>59.2</b>	57.8	60.7	<b>3.9</b>	3.4	4.6	<b>6.9</b>	6.2	7.6	<b>29.7</b>	28.4	31.1
<b>Total</b>	<b>62.3</b>	<b>61.5</b>	<b>63.1</b>	<b>5.1</b>	<b>4.7</b>	<b>5.5</b>	<b>10.2</b>	<b>9.7</b>	<b>10.7</b>	<b>22.2</b>	<b>21.6</b>	<b>22.9</b>

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 from the corresponding estimate for Victoria are identified by colour as follows: **above Victoria** / **below Victoria**.

Table 8.65 shows the proportion of persons who reported definitely volunteering to help out a local group remained constant between 2001 and 2008.

**Table 8.65: Volunteering, 2001–2008**

Do you help out a local group as a volunteer?	2001	2002	2003	2004	2005	2006	2007	2008
	Per cent							
Not at all	63.8	63.3	59.9	63.2	59.6	61.3	59.4	62.3
Not often	4.3	3.3	6.2	5.9	5.3	5.1	5.2	5.1
Sometimes	10.8	9.5	10.1	8.1	11.4	11.1	12.7	10.2
Yes, definitely	21.1	23.9	23.9	22.9	23.5	22.4	22.4	22.2

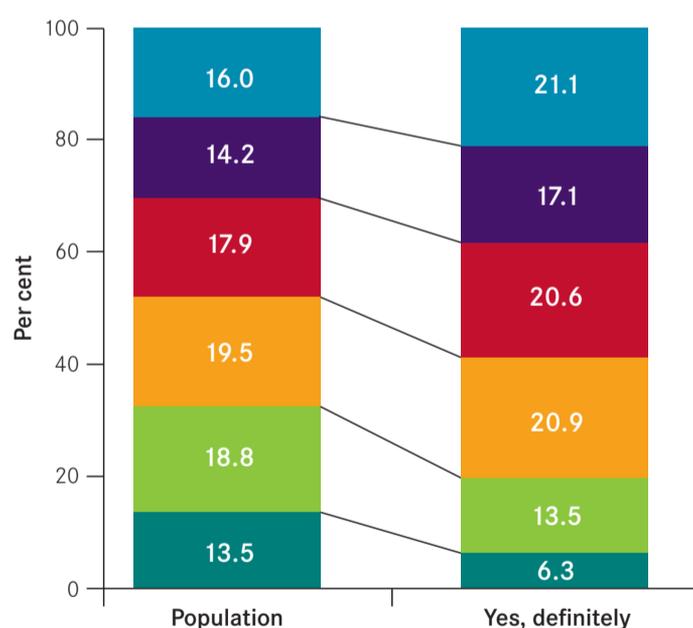
Note that figures may not add to 100 per cent due to a proportion of 'don't know' or 'refused' responses.

Data are age standardised to the 2006 Victorian population.

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

Figures 8.21a and 8.21b show the extent to which persons definitely volunteered to help out a local group, in proportion to their population share. Among the males and females who definitely volunteered to help out a local group, those in the age groups 35–44 years and above were overrepresented, and those in the two younger age groups (18–24 years and 25–34 years) were underrepresented, relative to their respective population shares.

**Figure 8.21a: Proportions of males who definitely helped out a local group as a volunteer, by age group and population proportion, 2008**



**Figure 8.21b: Proportions of females who definitely helped out a local group as a volunteer, by age group and population proportion, 2008**

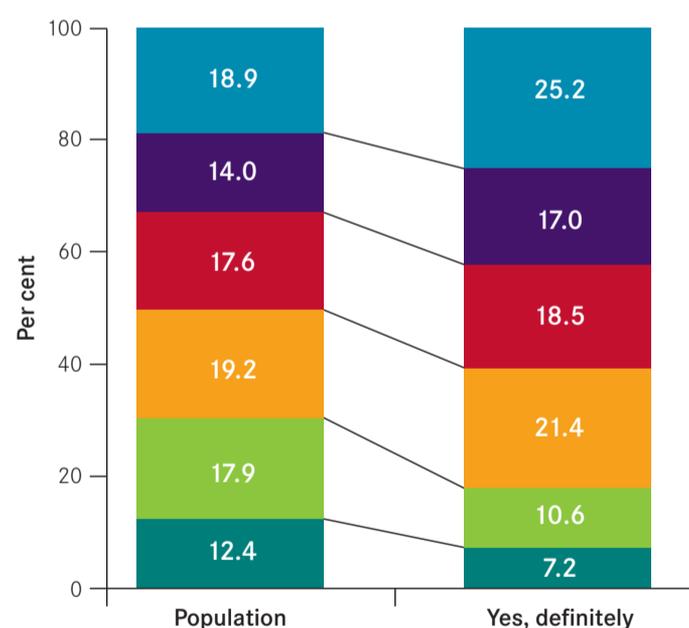


Table 8.66 shows volunteering was more prevalent among persons living in rural areas, compared with the metropolitan area. Almost one-third of persons (31.4 per cent) from rural regions had definitely volunteered to help out a local group, compared with almost one-fifth (18.9 per cent) of those from metropolitan regions.

More than one-third of persons in each of the rural Department of Health regions had definitely volunteered to help out a local group. As a result, the propensity to volunteer was above the average for Victoria (22.2 per cent) in the Barwon–South Western, Gippsland, Grampians, Hume and Loddon Mallee regions. Similar proportions of males and females had definitely volunteered in both rural and metropolitan regions.

Table 8.66: Volunteering, by sex and Department of Health region, 2008

Age group (years)	No, not at all			Not often			Sometimes			Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>												
Barwon-South Western	53.3	47.6	58.8	4.7	3.1	7.0	10.1	7.1	14.1	31.9	27.1	37.1
Eastern Metropolitan	63.2	59.8	66.5	4.9	3.5	6.8	10.3	8.2	12.8	21.3	18.9	24.0
Gippsland	47.5	43.1	51.9	7.5	5.0	11.1	11.3	8.9	14.1	33.3	29.6	37.4
Grampians	48.6	44.4	52.9	4.5	2.9	6.7	12.5	9.8	15.9	34.1	30.4	38.0
Hume	48.3	44.6	51.9	5.3	3.8	7.3	14.2	11.5	17.3	32.1	29.2	35.1
Loddon Mallee	49.0	44.9	53.2	5.0	3.6	7.0	11.9	9.6	14.7	33.8	30.2	37.7
North and West Metropolitan	69.2	67.0	71.4	5.6	4.5	7.0	9.3	8.0	10.7	15.7	14.2	17.5
Southern Metropolitan	65.3	62.5	68.0	5.2	4.0	6.8	9.8	8.1	11.8	19.4	17.3	21.7
<b>Metropolitan</b>	66.2	64.7	67.8	5.3	4.6	6.2	9.7	8.7	10.7	18.5	17.4	19.8
<b>Rural</b>	49.6	47.3	51.8	5.3	4.5	6.4	11.8	10.5	13.3	33.1	31.1	35.1
<b>Total</b>	61.9	60.6	63.2	5.3	4.7	6.0	10.2	9.4	11.1	22.4	21.4	23.4
<b>Females</b>												
Barwon-South Western	51.8	47.5	56.2	6.7	4.4	9.9	11.5	9.0	14.6	29.9	26.3	33.8
Eastern Metropolitan	63.6	60.8	66.2	3.4	2.5	4.6	9.0	7.6	10.7	23.9	21.6	26.3
Gippsland	51.2	47.9	54.4	5.6	4.3	7.4	13.6	11.5	16.1	29.5	26.8	32.4
Grampians	52.1	48.2	55.9	6.0	4.1	8.9	12.4	9.8	15.6	29.3	26.8	32.1
Hume	52.0	49.4	54.6	6.6	5.2	8.5	11.8	10.2	13.5	29.6	27.5	31.7
Loddon Mallee	53.2	50.0	56.3	5.0	3.6	6.9	12.1	10.1	14.4	29.6	27.1	32.2
North and West Metropolitan	68.8	67.0	70.5	5.3	4.4	6.3	9.3	8.3	10.4	16.3	15.1	17.7
Southern Metropolitan	66.0	63.8	68.2	4.4	3.4	5.5	10.2	8.8	11.8	19.0	17.3	20.7
<b>Metropolitan</b>	66.5	65.3	67.7	4.5	4.0	5.1	9.5	8.7	10.3	19.2	18.3	20.2
<b>Rural</b>	52.1	50.4	53.8	6.0	5.1	7.1	12.2	11.1	13.4	29.7	28.3	31.1
<b>Total</b>	62.6	61.6	63.6	4.9	4.4	5.4	10.2	9.5	10.8	22.1	21.3	22.9
<b>Persons</b>												
Barwon-South Western	52.5	48.9	56.1	5.6	4.1	7.6	10.7	8.7	13.1	31.1	28.0	34.4
Eastern Metropolitan	63.5	61.3	65.6	4.1	3.3	5.2	9.6	8.3	11.1	22.5	20.8	24.3
Gippsland	49.5	46.8	52.3	6.5	5.0	8.4	12.5	10.8	14.3	31.2	28.9	33.7
Grampians	50.4	47.5	53.4	5.3	3.9	7.1	12.6	10.6	14.9	31.6	29.3	33.9
Hume	50.1	47.8	52.3	6.0	4.9	7.3	12.9	11.3	14.7	30.9	29.1	32.8
Loddon Mallee	51.2	48.6	53.8	5.0	3.9	6.3	11.9	10.3	13.7	31.8	29.5	34.1
North and West Metropolitan	69.0	67.6	70.4	5.4	4.7	6.2	9.3	8.5	10.2	16.1	15.1	17.2
Southern Metropolitan	65.7	63.9	67.4	4.8	4.0	5.7	10.0	8.9	11.2	19.2	17.8	20.6
<b>Metropolitan</b>	66.4	65.4	67.4	4.9	4.4	5.4	9.6	8.9	10.2	18.9	18.1	19.7
<b>Rural</b>	50.9	49.5	52.3	5.6	5.0	6.4	12.0	11.1	12.9	31.4	30.1	32.6
<b>Total</b>	62.3	61.5	63.1	5.1	4.7	5.5	10.2	9.7	10.7	22.2	21.6	22.9

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Table 8.67 and figure 8.22 reflect these rural–metropolitan differences in the proportions of persons who had volunteered (sometimes or yes, definitely) to help out a local group, by LGA. Almost a third (32.4 per cent) of all persons in Victoria reported they had volunteered definitely or sometimes. Across LGAs, the proportion ranged from 19.9 per cent in Brimbank to 68.0 per cent in West Wimmera.

In 41 of the 48 rural LGAs, the proportion of persons who had volunteered definitely or sometimes was above the average for Victoria (32.4 per cent). In one metropolitan LGA (Nillumbik, at 39.1 per cent), volunteering was above the state average. In 13 LGAs (all metropolitan), the proportion of persons who had volunteered definitely or sometimes was below the average for Victoria.

Apart from the three LGAs located in the Southern Metropolitan region (Greater Dandenong, Port Phillip and Stonnington), the 10 remaining LGAs that had a below–average prevalence of volunteering were in the North and West Metropolitan region (Brimbank, Darebin, Hume, Maribyrnong, Melbourne, Melton, Moreland, Whittlesea, Wyndham and Yarra).

Table 8.67: Volunteering, by LGA, 2008

LGA	No, not at all/Not often			Sometimes/Yes, definitely		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	44.7	38.4	51.2	55.3	48.8	61.6
Ararat (RC)	51.8	45.9	57.7	48.1	42.2	54.0
Ballarat (C)	61.3	55.6	66.7	38.5	33.2	44.2
Banyule (C)	69.4	63.9	74.5	29.5	24.4	35.2
Bass Coast (S)	50.5	42.8	58.1	49.3	41.6	57.0
Baw Baw (S)	59.1	53.2	64.8	40.9	35.2	46.8
Bayside (C)	68.4	63.0	73.3	31.5	26.6	36.8
Benalla (RC)	50.8	44.2	57.4	49.2	42.6	55.8
Boroondara (C)	71.4	66.5	75.8	27.9	23.6	32.7
Brimbank (C)	80.0	75.7	83.7	19.9	16.2	24.2
Buloke (S)	36.1	30.8	41.7	63.9	58.3	69.2
Campaspe (S)	48.3	42.6	54.0	51.4	45.6	57.1
Cardinia (S)	62.1	56.3	67.7	37.9	32.3	43.7
Casey (C)	70.8	66.0	75.2	28.7	24.4	33.5
Central Goldfields (S)	54.9	47.6	62.1	44.8	37.7	52.2
Colac-Otway (S)	54.9	48.6	61.0	44.9	38.8	51.2
Corangamite (S)	49.9	43.8	55.9	49.8	43.8	55.9
Darebin (C)	76.8	72.1	80.9	23.2	19.1	27.9
East Gippsland (S)	50.8	44.9	56.8	48.2	42.3	54.1
Frankston (C)	68.7	63.4	73.5	31.3	26.5	36.6
Gannawarra (S)	36.1	30.4	42.2	63.9	57.8	69.6
Glen Eira (C)	72.1	67.1	76.7	27.4	22.9	32.5
Glenelg (S)	50.1	43.6	56.6	49.8	43.4	56.3
Golden Plains (S)	57.3	51.3	63.1	42.4	36.6	48.4
Greater Bendigo (C)	68.1	62.4	73.4	31.9	26.6	37.6
Greater Dandenong (C)	78.1	73.3	82.2	21.9	17.8	26.7
Greater Geelong (C)	61.7	56.1	67.0	38.3	33.0	43.8
Greater Shepparton (C)	61.8	56.7	66.8	38.0	33.1	43.2
Hepburn (S)	47.3	40.3	54.5	52.2	45.1	59.3
Hindmarsh (S)	44.5	38.7	50.4	55.5	49.6	61.3
Hobsons Bay (C)	73.4	68.0	78.2	26.5	21.7	31.9
Horsham (RC)	50.0	43.7	56.3	50.0	43.7	56.3
Hume (C)	73.7	68.9	78.1	26.2	21.9	31.0
Indigo (S)	49.6	42.7	56.5	50.4	43.5	57.2
Kingston (C)	68.7	62.7	74.1	31.1	25.7	37.2
Knox (C)	66.3	60.7	71.5	33.5	28.4	39.2
Latrobe (C)	63.9	58.5	69.1	36.0	30.9	41.5
Loddon (S)	41.2	34.9	47.8	58.3	51.7	64.6
Macedon Ranges (S)	52.6	46.6	58.6	47.4	41.4	53.4
Manningham (C)	70.5	65.5	75.0	29.0	24.6	34.0
Mansfield (S)	51.5	44.8	58.2	48.5	41.8	55.2
Maribyrnong (C)	75.5	70.6	79.8	24.5	20.2	29.4
Maroondah (C)	67.2	62.1	72.0	32.8	28.0	37.9
Melbourne (C)	74.3	69.7	78.5	25.7	21.5	30.3
Melton (S)	76.5	72.0	80.5	23.2	19.2	27.7
Mildura (RC)	55.3	49.5	60.9	44.7	39.1	50.5
Mitchell (S)	67.7	62.5	72.6	31.8	27.0	37.0
Moira (S)	51.6	44.6	58.4	48.4	41.6	55.4
Monash (C)	67.6	62.0	72.7	32.1	27.0	37.7
Moonee Valley (C)	73.0	67.8	77.6	26.8	22.2	31.9
Moorabool (S)	59.8	53.8	65.6	40.2	34.4	46.2
Moreland (C)	73.6	69.3	77.4	26.2	22.3	30.4
Mornington Peninsula (S)	62.9	56.3	69.0	36.9	30.8	43.4
Mount Alexander (S)	45.4	39.2	51.8	53.9	47.6	60.1
Moyne (S)	50.7	43.8	57.6	49.0	42.2	55.9
Murrindindi (S)	48.8	42.0	55.6	50.9	44.1	57.8
Nilumbik (S)	60.9	55.3	66.2	39.1	33.8	44.7
Northern Grampians (S)	49.0	42.3	55.7	51.0	44.3	57.7
Port Phillip (C)	74.3	69.8	78.3	25.7	21.7	30.2
Pyrenees (S)	50.2	43.4	56.9	49.6	42.9	56.4
Queenscliffe (B)	50.0	43.1	56.9	50.0	43.1	56.9
Southern Grampians (S)	48.5	42.1	55.0	51.3	44.8	57.7
South Gippsland (S)	45.1	39.2	51.2	54.8	48.7	60.7
Stonnington (C)	75.3	70.2	79.7	23.0	19.1	27.3
Strathbogie (S)	44.9	37.8	52.2	55.1	47.7	62.2
Surf Coast (S)	54.0	46.7	61.1	46.0	38.8	53.3
Swan Hill (RC)	51.3	45.1	57.4	47.9	41.8	54.1
Towong (S)	37.6	31.1	44.7	62.3	55.2	68.9
Wangaratta (RC)	48.0	41.0	55.0	52.0	45.0	59.0
Warrnambool (C)	58.8	52.7	64.6	41.1	35.3	47.2
Wellington (S)	54.3	48.6	60.0	45.7	40.0	51.4
West Wimmera (S)	32.0	26.9	37.7	68.0	62.3	73.1
Whitehorse (C)	64.8	58.8	70.3	35.2	29.6	41.2
Whittlesea (C)	76.9	72.3	81.0	23.1	19.0	27.7
Wodonga (RC)	65.9	60.6	70.8	34.1	29.2	39.4
Wyndham (C)	74.1	69.5	78.2	25.9	21.8	30.5
Yarra (C)	75.6	70.6	80.0	24.4	20.0	29.4
Yarra Ranges (S)	67.2	62.1	71.9	32.8	28.1	37.9
Yarriambiack (S)	33.7	27.7	40.3	65.9	59.3	71.9
<b>Total</b>	<b>67.4</b>	<b>66.6</b>	<b>68.2</b>	<b>32.4</b>	<b>31.6</b>	<b>33.2</b>

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

95% CI = 95 per cent confidence interval.

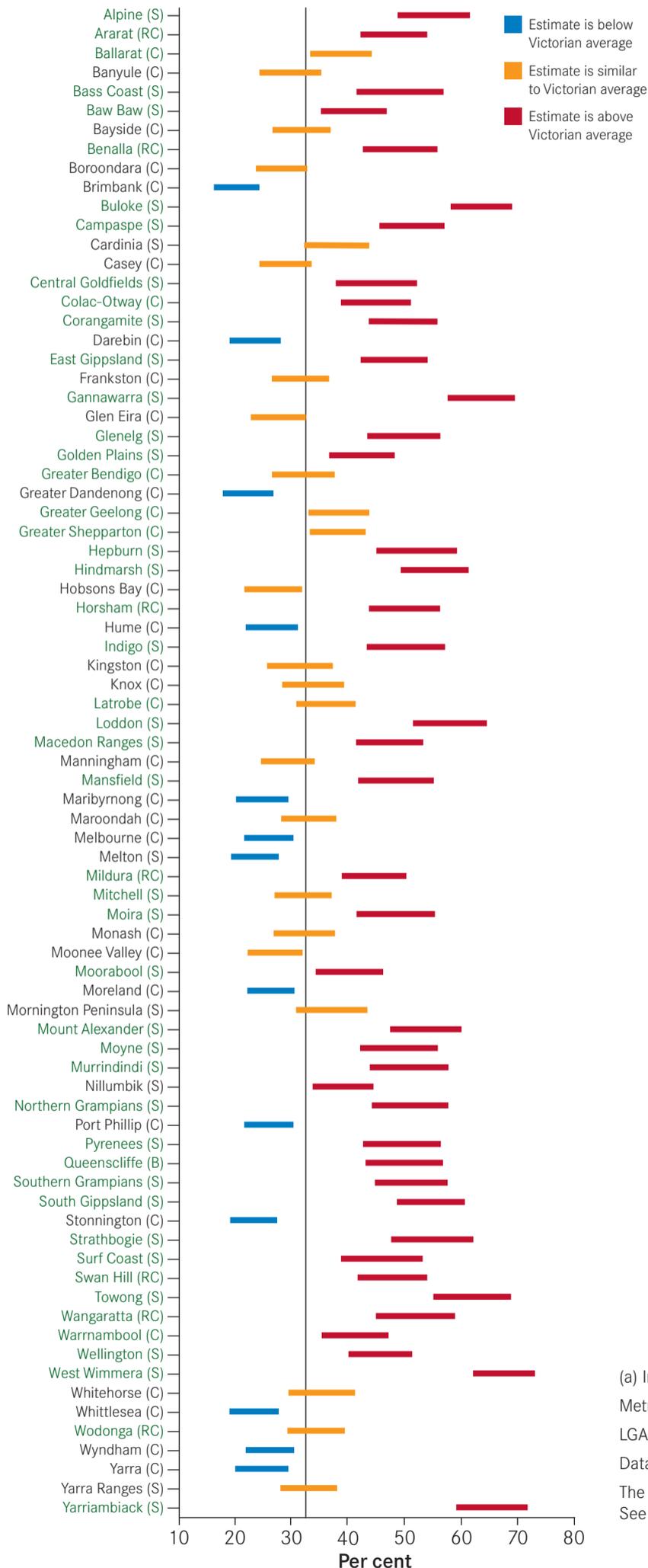
LGA = local government area.

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Figure 8.22: Volunteering<sup>(a)</sup>, by LGA, 2008



(a) Includes those who responded 'sometimes' and 'yes, definitely'.  
 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 line on the graph is the Victorian estimate, it does not show the 95% CI.  
 See the relevant table for the 95% CI for Victoria (Total).

### Taking local action on behalf of the community

The 2008 survey asked respondents whether they were a member of a sports group, church group, school group, professional group or academic society, or a community or other action group (tables 8.56–8.59, figure 8.18), as discussed earlier in this chapter. The survey also asked respondents whether they had taken local action on behalf of the community as a part of being a group member in the previous two years.

More than six in 10 (60.7 per cent) persons reported they were members of one or more of the following: a sports group, a church group, a school group, a professional group or academic society, or some other community or action group (table 8.57). More than four in 10 (40.7 per cent) persons who belonged to a group reported having taken local action on behalf of the community within the previous two years, as a group member (table 8.68).

Similar proportions of males and females who were members of one or more organised groups reported they had taken local action on behalf of the community in the previous two years. There were no differences by age group in the prevalence of group members taking local action on behalf of the community.

**Table 8.68: Taken local action on behalf of community in past two years<sup>(a)</sup>, by age group and sex, 2008**

Age group (years)	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
18–24 years	37.7	31.8	43.9	57.0	50.8	63.0
25–34 years	39.9	34.9	45.1	54.5	49.3	59.6
35–44 years	41.1	37.5	44.8	53.9	50.2	57.6
45–54 years	45.6	42.1	49.1	48.9	45.4	52.5
55–64 years	48.8	45.5	52.1	47.3	44.0	50.6
65+	43.2	40.5	46.0	51.3	48.5	54.1
<b>Total</b>	<b>42.4</b>	<b>40.7</b>	<b>44.1</b>	<b>52.4</b>	<b>50.7</b>	<b>54.1</b>
<b>Females</b>						
18–24 years	39.7	34.1	45.6	53.1	47.2	58.9
25–34 years	33.8	30.3	37.5	57.6	53.8	61.4
35–44 years	38.2	35.7	40.8	55.9	53.3	58.5
45–54 years	42.1	39.3	45.0	52.5	49.6	55.4
55–64 years	45.1	42.3	47.9	48.9	46.0	51.7
65+	38.0	35.8	40.3	53.3	50.9	55.6
<b>Total</b>	<b>39.1</b>	<b>37.8</b>	<b>40.5</b>	<b>53.8</b>	<b>52.4</b>	<b>55.2</b>
<b>Persons</b>						
18–24 years	38.6	34.5	42.9	55.2	50.8	59.4
25–34 years	36.9	33.8	40.1	56.1	52.8	59.3
35–44 years	39.7	37.5	41.9	54.9	52.6	57.2
45–54 years	43.9	41.6	46.2	50.7	48.4	53.0
55–64 years	47.1	44.9	49.2	48.0	45.9	50.2
65+	40.4	38.7	42.2	52.4	50.5	54.2
<b>Total</b>	<b>40.7</b>	<b>39.6</b>	<b>41.8</b>	<b>53.1</b>	<b>52.0</b>	<b>54.2</b>

(a) Percentages are derived from persons who reported being members of a group.

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 from the corresponding estimate for Victoria are identified by colour as follows: **above Victoria** / **below Victoria**.

Across Department of Health regions, the proportion of persons who reported taking local action as part of being a group member ranged from 36.4 per cent in the North and West Metropolitan region to more than half (51.7 per cent) in the Hume region (table 8.69).

The proportion was above the average for Victoria (40.7 per cent) in all five rural regions: Hume (51.7 per cent) Loddon Mallee (50.6 per cent), Gippsland (48.7 per cent), Barwon–South Western (47.7 per cent) and Grampians (46.5 per cent). This is reflected in the summary figures for the metropolitan and rural areas, with 49.0 per cent of those living in rural areas reporting engagement in local community action, compared with 37.6 per cent of persons living in the metropolitan area.

Among females who were members of a local group, the proportion who had been involved in local action was below the average for Victoria (39.1 per cent) in the North and West Metropolitan region (34.9 per cent).

**Table 8.69: Taken local action on behalf of community in past two years<sup>(a)</sup>, by sex and Department of Health region, 2008**

Age group (years)	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
Barwon-South Western	53.8	47.5	59.9	42.8	37.0	48.8
Eastern Metropolitan	40.4	36.3	44.7	54.8	50.5	59.0
Gippsland	53.6	48.1	59.0	41.9	36.5	47.5
Grampians	47.3	42.1	52.6	47.9	42.6	53.3
Hume	52.7	48.0	57.3	43.2	38.6	47.9
Loddon Mallee	54.2	49.0	59.3	41.8	36.9	46.9
North and West Metropolitan	37.8	34.9	40.9	55.8	52.7	58.8
Southern Metropolitan	38.1	34.5	41.9	56.5	52.6	60.3
<b>Metropolitan</b>	<b>38.7</b>	<b>36.6</b>	<b>40.8</b>	<b>55.7</b>	<b>53.6</b>	<b>57.8</b>
<b>Rural</b>	<b>52.3</b>	<b>49.5</b>	<b>55.1</b>	<b>43.6</b>	<b>40.9</b>	<b>46.4</b>
<b>Total</b>	<b>42.4</b>	<b>40.7</b>	<b>44.1</b>	<b>52.4</b>	<b>50.7</b>	<b>54.1</b>
<b>Females</b>						
Barwon-South Western	42.2	36.7	47.8	50.8	45.2	56.5
Eastern Metropolitan	38.3	34.9	41.9	55.5	51.9	59.0
Gippsland	43.8	39.7	47.9	47.9	43.8	52.1
Grampians	46.0	41.9	50.1	49.0	44.9	53.1
Hume	50.8	47.4	54.3	43.4	40.0	46.8
Loddon Mallee	46.9	43.2	50.7	46.3	42.3	50.4
North and West Metropolitan	34.9	32.5	37.3	55.9	53.3	58.5
Southern Metropolitan	36.8	33.9	39.8	56.8	53.8	59.7
<b>Metropolitan</b>	<b>36.6</b>	<b>35.0</b>	<b>38.3</b>	<b>56.1</b>	<b>54.4</b>	<b>57.8</b>
<b>Rural</b>	<b>45.7</b>	<b>43.4</b>	<b>47.9</b>	<b>47.6</b>	<b>45.4</b>	<b>49.9</b>
<b>Total</b>	<b>39.1</b>	<b>37.8</b>	<b>40.5</b>	<b>53.8</b>	<b>52.4</b>	<b>55.2</b>
<b>Persons</b>						
Barwon-South Western	47.7	42.8	52.5	47.2	42.5	51.9
Eastern Metropolitan	39.4	36.6	42.2	55.1	52.3	57.9
Gippsland	48.7	45.2	52.2	45.0	41.5	48.5
Grampians	46.5	43.2	49.9	48.5	45.1	52.0
Hume	51.7	48.8	54.6	43.3	40.5	46.2
Loddon Mallee	50.6	47.2	54.0	44.1	40.8	47.5
North and West Metropolitan	36.4	34.5	38.4	55.8	53.8	57.8
Southern Metropolitan	37.4	35.1	39.8	56.6	54.2	59.0
<b>Metropolitan</b>	<b>37.6</b>	<b>36.3</b>	<b>38.9</b>	<b>55.9</b>	<b>54.5</b>	<b>57.3</b>
<b>Rural</b>	<b>49.0</b>	<b>47.2</b>	<b>50.9</b>	<b>45.6</b>	<b>43.8</b>	<b>47.5</b>
<b>Total</b>	<b>40.7</b>	<b>39.6</b>	<b>41.8</b>	<b>53.1</b>	<b>52.0</b>	<b>54.2</b>

(a) Percentages are derived from persons who reported being members of a group.

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Table 8.70 and figure 8.23 show the proportion of persons who reported membership of a group that had taken local action in the previous two years, by LGA. The proportion ranged from almost three in 10 (28.2 per cent) in Brimbank to almost two-thirds (65.5 per cent) in Buloke.

The proportion of persons reporting that an organised group to which they belonged had taken local action was above the average for Victoria (40.7 per cent) in 27 of the 48 rural LGAs. The proportion was above average in only one of the 31 metropolitan LGAs (Melbourne, at 48.5 per cent).

In four LGAs (all metropolitan), the proportion of persons who reported recent group involvement in local action was below the average for Victoria: Hume (32.3 per cent), Wyndham (31.5 per cent), Greater Dandenong (30.6 per cent) and Brimbank (28.2 per cent).

**Table 8.70: Taken local action on behalf of community in past two years<sup>(a)</sup>, by LGA, 2008**

LGA	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	51.3	43.1	59.4	39.1	31.7	47.1
Ararat (RC)	47.7	41.4	54.1	42.6	36.4	49.1
Ballarat (C)	43.0	36.9	49.3	52.8	46.5	58.9
Banyule (C)	35.3	28.2	43.2	55.0	46.8	62.9
Bass Coast (S)	63.2	54.8	70.9	32.7	25.4	41.0
Baw Baw (S)	52.0	43.9	59.9	43.6	35.8	51.8
Bayside (C)	32.3	24.8	40.9	60.2	51.4	68.4
Benalla (RC)	45.9	37.7	54.3	45.6	37.2	54.2
Boroondara (C)	38.0	32.1	44.3	59.1	52.5	65.5
Brimbank (C)	28.2	22.5	34.6	60.9	54.3	67.1
Buloke (S)	65.5	58.6	71.8	32.9	26.7	39.8
Campaspe (S)	59.3	52.3	65.8	36.5	30.0	43.5
Cardinia (S)	44.0	35.9	52.4	50.8	42.4	59.1
Casey (C)	37.6	31.4	44.3	57.7	51.1	64.1
Central Goldfields (S)	48.2	40.1	56.5	47.9	39.7	56.1
Colac-Otway (S)	36.8	31.4	42.6	55.9	48.2	63.4
Corangamite (S)	45.7	39.6	52.0	52.0	45.8	58.2
Darebin (C)	32.9	26.8	39.7	57.6	50.6	64.3
East Gippsland (S)	47.0	40.0	54.1	49.2	42.2	56.1
Frankston (C)	38.5	31.4	46.2	55.2	47.1	63.1
Gannawarra (S)	59.6	52.7	66.1	35.9	29.6	42.9
Glen Eira (C)	39.5	32.5	46.9	55.1	47.7	62.4
Glenelg (S)	46.6	39.9	53.3	45.0	37.8	52.3
Golden Plains (S)	49.9	42.7	57.2	43.7	37.6	50.0
Greater Bendigo (C)	43.9	36.0	52.2	49.6	41.6	57.7
Greater Dandenong (C)	30.6	24.6	37.4	60.5	53.3	67.2
Greater Geelong (C)	47.1	39.2	55.1	48.2	40.5	56.1
Greater Shepparton (C)	46.0	39.8	52.2	50.7	44.6	56.8
Hepburn (S)	62.6	56.7	68.0	31.7	26.1	37.8
Hindmarsh (S)	59.7	50.5	68.2	35.0	26.9	44.0
Hobsons Bay (C)	38.0	30.7	45.8	56.2	48.4	63.7
Horsham (RC)	42.3	35.7	49.2	50.9	43.1	58.7
Hume (C)	32.3	25.8	39.5	57.0	49.7	64.0
Indigo (S)	59.1	50.5	67.1	36.9	29.0	45.5
Kingston (C)	34.4	27.3	42.3	64.3	56.5	71.5
Knox (C)	38.0	30.9	45.5	52.8	45.8	59.8
Latrobe (C)	36.9	30.4	44.0	52.6	45.7	59.5
Loddon (S)	59.1	50.8	66.9	37.0	29.4	45.4
Macedon Ranges (S)	43.7	36.9	50.8	50.5	43.2	57.8
Manningham (C)	38.7	31.9	46.0	58.0	50.7	65.0

(a) Percentages are derived from persons who reported being members of a group. Metropolitan and rural LGAs are identified by colour as follows: metropolitan / rural. 95% CI = 95 per cent confidence interval.

LGA = local government area

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

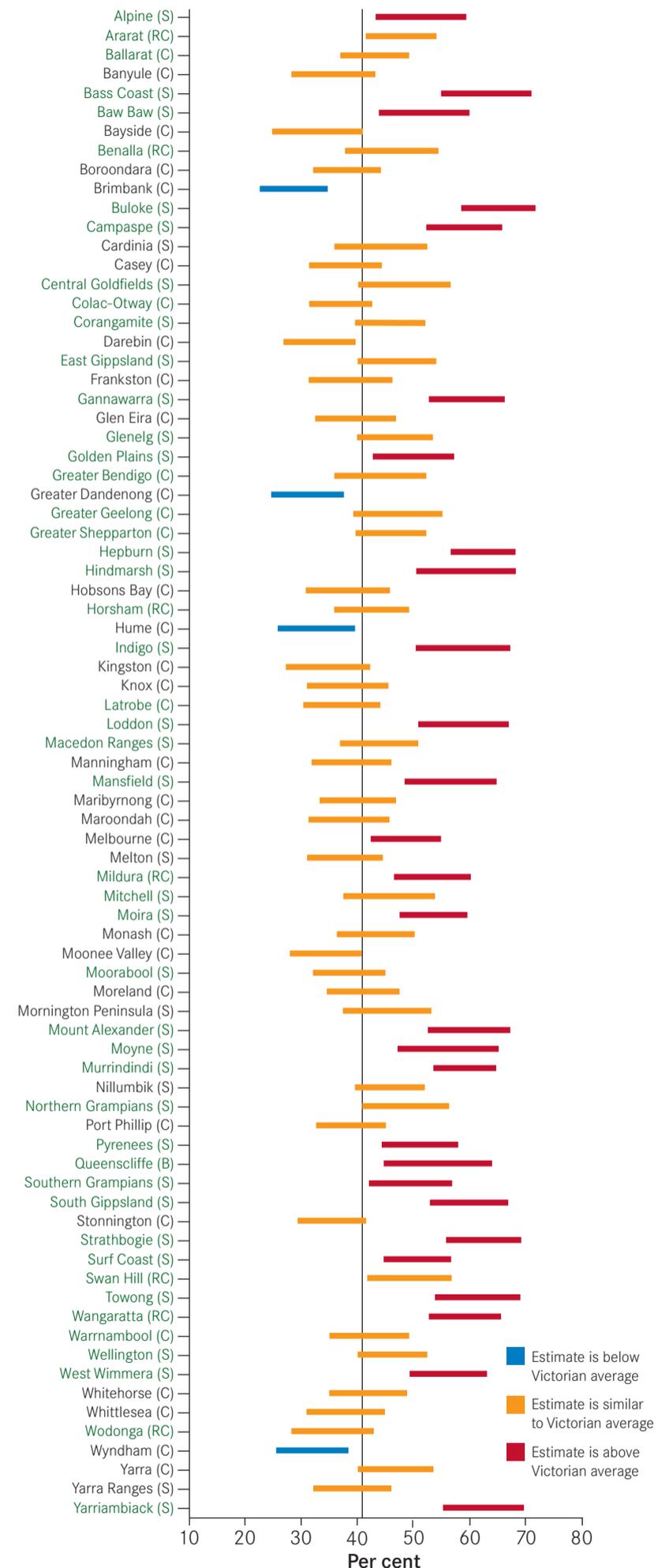
Data are age standardised to the 2006 Victorian population.

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

Table 8.70: Taken local action on behalf of community in past two years<sup>(a)</sup>, by LGA, 2008 (continued)

LGA	%	Yes		%	No	
		Lower 95% CI	Upper 95% CI		Lower 95% CI	Upper 95% CI
Mansfield (S)	56.7	48.4	64.6	38.3	30.5	46.7
Maribyrnong (C)	39.9	33.3	46.9	55.7	48.7	62.5
Maroondah (C)	38.1	31.2	45.6	56.2	48.8	63.4
Melbourne (C)	48.5	42.3	54.7	47.1	40.9	53.4
Melton (S)	37.5	31.1	44.4	54.9	47.8	61.8
Mildura (RC)	53.3	46.5	60.1	42.6	35.8	49.8
Mitchell (S)	45.4	37.4	53.7	49.2	41.1	57.3
Moira (S)	53.6	47.5	59.6	41.3	35.5	47.4
Monash (C)	43.0	36.2	50.1	49.9	43.1	56.7
Moonee Valley (C)	34.1	28.0	40.7	58.3	51.4	64.9
Moorabool (S)	38.3	32.1	44.9	54.5	47.2	61.6
Moreland (C)	40.8	34.5	47.4	53.0	46.4	59.6
Mornington Peninsula (S)	45.1	37.5	53.0	45.7	37.8	53.9
Mount Alexander (S)	60.0	52.5	67.1	33.8	27.4	40.9
Moyne (S)	56.2	47.0	65.0	41.2	32.6	50.4
Murrindindi (S)	59.1	53.5	64.5	38.2	33.0	43.8
Nillumbik (S)	45.6	39.5	51.8	50.1	43.6	56.6
Northern Grampians (S)	48.5	40.9	56.2	47.5	40.0	55.2
Port Phillip (C)	38.5	32.5	45.0	55.0	48.6	61.3
Pyrenees (S)	51.1	44.3	57.8	46.9	40.3	53.6
Queenscliffe (B)	54.4	44.5	63.9	42.7	33.5	52.5
Southern Grampians (S)	49.4	41.9	56.9	48.6	41.1	56.2
South Gippsland (S)	60.0	52.9	66.8	35.5	29.0	42.5
Stonnington (C)	35.1	29.3	41.4	59.9	53.3	66.1
Strathbogie (S)	62.6	55.8	69.0	33.6	27.4	40.3
Surf Coast (S)	50.5	44.7	56.4	39.6	32.3	47.4
Swan Hill (RC)	49.2	41.8	56.7	43.7	37.2	50.5
Towong (S)	61.7	53.9	69.0	31.2	25.0	38.0
Wangaratta (RC)	59.3	52.6	65.6	36.3	30.3	42.8
Warrnambool (C)	42.0	35.1	49.2	51.7	44.8	58.5
Wellington (S)	46.2	40.1	52.3	47.7	40.7	54.8
West Wimmera (S)	56.3	49.3	63.1	39.9	33.4	46.7
Whitehorse (C)	41.7	35.0	48.8	52.7	45.9	59.3
Whittlesea (C)	37.6	30.9	44.8	54.6	47.8	61.3
Wodonga (RC)	35.2	28.2	42.9	59.6	51.7	67.0
Wyndham (C)	31.5	25.5	38.3	60.4	53.8	66.6
Yarra (C)	46.7	40.0	53.5	45.1	38.5	51.9
Yarra Ranges (S)	38.9	32.1	46.0	55.6	48.3	62.7
Yarriambiack (S)	62.7	55.2	69.6	32.7	26.1	40.1
<b>Total</b>	<b>40.7</b>	<b>39.6</b>	<b>41.8</b>	<b>53.1</b>	<b>52.0</b>	<b>54.2</b>

Figure 8.23: Taken local action on behalf of the community<sup>(a)</sup>, in the past two years, by LGA, 2008



(a) Percentages are derived from persons who reported being members of a group. 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 line on the graph is the Victorian estimate, it does not show the 95% CI. See the relevant table for the 95% CI for Victoria (Total).

### Membership of a decision-making board or committee

The 2008 survey collected information on whether respondents were on a decision-making board or committee. Being on a committee or decision-making body is a common form of civic engagement. Examples include being a member of a sports club committee, a church committee, a body corporate or a resident action group. Less than one-fifth (18.7 per cent) of persons reported being on a decision-making board or committee (table 8.71). A higher proportion of males (20.6 per cent) than females (16.9 per cent) indicated they had such responsibilities.

A higher proportion of females aged 35–44 years and 45–54 years reported being on a decision-making body, compared with those in younger or older age groups. The proportion of males who had a decision-making role on a committee or board was highest among those aged 45–54 years (25.9 per cent) and lowest among those aged 18–24 years (11.7 per cent).

**Table 8.71: On a decision-making board or committee, by age group and sex, 2008**

Age group (years)	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
18–24 years	11.7	8.9	15.2	88.3	84.8	91.1
25–34 years	16.1	13.3	19.2	83.9	80.7	86.6
35–44 years	20.9	18.6	23.4	78.7	76.3	81.0
45–54 years	25.9	23.6	28.5	73.7	71.2	76.1
55–64 years	25.7	23.5	28.1	74.2	71.8	76.4
65+	23.1	21.3	25.1	76.8	74.8	78.6
<b>Total</b>	<b>20.6</b>	<b>19.6</b>	<b>21.6</b>	<b>79.2</b>	<b>76.4</b>	<b>83.1</b>
<b>Females</b>						
18–24 years	9.3	7.0	12.1	90.7	87.9	93.0
25–34 years	13.3	11.5	15.2	86.5	84.5	88.3
35–44 years	21.4	19.8	23.2	78.4	76.7	80.1
45–54 years	21.2	19.4	23.0	78.5	76.6	80.3
55–64 years	19.2	17.6	21.0	80.7	78.9	82.3
65+	15.7	14.4	17.1	84.1	82.8	85.4
<b>Total</b>	<b>16.9</b>	<b>16.2</b>	<b>17.7</b>	<b>82.9</b>	<b>82.2</b>	<b>83.7</b>
<b>Persons</b>						
18–24 years	10.5	8.6	12.7	89.5	87.3	91.4
25–34 years	14.7	13.0	16.5	85.2	83.3	86.8
35–44 years	21.2	19.8	22.6	78.6	77.1	80.0
45–54 years	23.5	22.1	25.1	76.2	74.6	77.6
55–64 years	22.4	21.1	23.9	77.4	76.0	78.8
65+	19.1	17.9	20.2	80.8	79.7	81.9
<b>Total</b>	<b>18.7</b>	<b>18.1</b>	<b>19.3</b>	<b>81.1</b>	<b>80.5</b>	<b>81.8</b>

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 from the corresponding estimate for Victoria are identified by colour as follows: **above Victoria** / **below Victoria**.

Table 8.72 shows a higher proportion of persons living in rural areas (23.0 per cent) were on a decision-making board or committee, compared with those living in the metropolitan area (17.2 per cent). This metropolitan–rural difference applied to both males and females, such that 19.0 per cent of metropolitan males compared with 25.3 per cent of rural males, and 15.5 per cent of metropolitan females compared with 20.7 per cent of rural females, reported being involved with a decision-making body.

The proportion of males, females and persons who reported they were part of a decision-making board or committee was above the respective averages for Victoria for two rural Department of Health regions (Gippsland and Loddon Mallee) and above the Victorian average for persons (18.7 per cent) in the three remaining rural regions (Barwon–South Western at 22.8 per cent, Hume at 22.2 per cent and Grampians at 21.9 per cent). The proportions of males and females who were on a decision-making board or committee were below the respective averages for Victoria (20.6 per cent and 16.9 per cent) in the North and West Metropolitan region (15.9 per cent and 13.3 per cent respectively).

Table 8.72: On a decision-making board or committee, by sex and Department of Health region, 2008

Age group (years)	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
<b>Males</b>						
Barwon-South Western	25.8	20.6	31.8	74.2	68.2	79.4
Eastern Metropolitan	21.9	19.2	24.8	77.9	74.9	80.6
Gippsland	27.3	23.5	31.5	72.7	68.5	76.5
Grampians	24.3	21.2	27.7	75.7	72.3	78.8
Hume	22.2	19.7	24.8	77.6	74.9	80.1
Loddon Mallee	26.7	23.4	30.3	73.2	69.7	76.5
North and West Metropolitan	15.9	14.3	17.6	84.0	82.3	85.6
Southern Metropolitan	20.3	18.1	22.7	79.4	77.0	81.6
<b>Metropolitan</b>	<b>19.0</b>	<b>17.7</b>	<b>20.2</b>	<b>80.8</b>	<b>79.5</b>	<b>82.0</b>
<b>Rural</b>	<b>25.3</b>	<b>23.4</b>	<b>27.3</b>	<b>74.6</b>	<b>72.6</b>	<b>76.5</b>
<b>Total</b>	<b>20.6</b>	<b>19.6</b>	<b>21.6</b>	<b>79.2</b>	<b>78.2</b>	<b>80.3</b>
<b>Females</b>						
Barwon-South Western	20.0	16.9	23.6	79.9	76.4	83.1
Eastern Metropolitan	17.9	15.9	20.1	81.9	79.7	83.9
Gippsland	20.0	17.8	22.4	79.8	77.4	82.0
Grampians	19.8	17.5	22.4	80.0	77.4	82.4
Hume	22.1	20.2	24.1	77.9	75.8	79.8
Loddon Mallee	21.5	19.3	23.9	78.5	76.1	80.7
North and West Metropolitan	13.3	12.1	14.5	86.5	85.2	87.6
Southern Metropolitan	16.3	14.8	18.0	83.5	81.9	85.1
<b>Metropolitan</b>	<b>15.5</b>	<b>14.7</b>	<b>16.5</b>	<b>84.3</b>	<b>83.4</b>	<b>85.2</b>
<b>Rural</b>	<b>20.7</b>	<b>19.5</b>	<b>21.9</b>	<b>79.2</b>	<b>78.0</b>	<b>80.4</b>
<b>Total</b>	<b>16.9</b>	<b>16.2</b>	<b>17.7</b>	<b>82.9</b>	<b>82.2</b>	<b>83.7</b>
<b>Persons</b>						
Barwon-South Western	22.8	19.7	26.3	77.1	73.6	80.3
Eastern Metropolitan	19.8	18.1	21.6	80.0	78.2	81.7
Gippsland	23.8	21.5	26.2	76.1	73.6	78.4
Grampians	21.9	19.9	24.0	78.0	75.9	80.0
Hume	22.2	20.6	23.9	77.7	76.0	79.3
Loddon Mallee	24.1	22.1	26.3	75.9	73.7	77.9
North and West Metropolitan	14.6	13.6	15.7	85.2	84.1	86.2
Southern Metropolitan	18.2	16.9	19.7	81.6	80.1	82.9
<b>Metropolitan</b>	<b>17.2</b>	<b>16.4</b>	<b>18.0</b>	<b>82.6</b>	<b>81.8</b>	<b>83.4</b>
<b>Rural</b>	<b>23.0</b>	<b>21.8</b>	<b>24.2</b>	<b>76.9</b>	<b>75.8</b>	<b>78.1</b>
<b>Total</b>	<b>18.7</b>	<b>18.1</b>	<b>19.3</b>	<b>81.1</b>	<b>80.5</b>	<b>81.8</b>

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 from the corresponding estimate for Victoria are identified by colour as follows: above Victoria / below Victoria.

Table 8.73 and figure 8.23 show the proportion of persons who reported being involved with a decision-making body, by LGA. The proportion ranged from 9.1 per cent in Brimbank to 41.5 per cent in West Wimmera. In 31 LGAs, the proportion of persons on a decision-making board or committee was above the average for Victoria (18.7 per cent). Of these LGAs, 29 were located in rural areas and two were metropolitan: Melbourne (24.8 per cent) and Stonnington (24.8 per cent).

In six LGAs, the proportion of persons on a decision-making board or committee was below the average for the state. These LGAs were all located in the metropolitan area, and five of the six were in the North and West Metropolitan region (Brimbank, Hume, Maribyrnong, Melton and Moreland); the remaining LGA (Kingston) was located in the Southern Metropolitan region.

**Table 8.73: On a decision-making board or committee, by LGA, 2008**

LGA	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Alpine (S)	24.7	20.4	29.6	75.3	70.4	79.6
Ararat (RC)	23.6	19.3	28.6	76.4	71.4	80.7
Ballarat (C)	17.4	13.7	21.9	82.4	78.0	86.1
Banyule (C)	19.1	14.8	24.2	80.9	75.7	85.2
Bass Coast (S)	24.0	19.1	29.7	76.0	70.3	80.9
Baw Baw (S)	19.1	15.0	24.2	80.8	75.8	84.9
Bayside (C)	23.7	19.0	29.2	76.3	70.8	81.0
Benalla (RC)	23.7	19.3	28.9	76.3	71.1	80.7
Boroondara (C)	22.6	18.6	27.2	77.4	72.8	81.4
Brimbank (C)	9.1	6.6	12.5	90.5	87.1	93.1
Buloke (S)	39.7	33.6	46.2	60.3	53.8	66.4
Campaspe (S)	30.5	25.1	36.5	69.5	63.5	74.9
Cardinia (S)	22.2	17.9	27.2	77.8	72.8	82.1
Casey (C)	18.5	14.7	23.0	81.5	77.0	85.3
Central Goldfields (S)	25.5	20.0	31.9	74.5	68.1	80.0
Colac-Otway (S)	24.7	20.6	29.3	75.3	70.7	79.4
Corangamite (S)	26.8	22.0	32.3	73.1	67.7	77.9
Darebin (C)	14.9	11.6	19.0	85.1	81.0	88.4
East Gippsland (S)	31.4	24.2	39.7	68.6	60.3	75.8
Frankston (C)	14.6	11.3	18.6	85.4	81.4	88.7
Gannawarra (S)	31.1	26.2	36.5	68.9	63.5	73.8
Glen Eira (C)	18.1	14.4	22.5	81.7	77.2	85.4
Glenelg (S)	24.9	20.2	30.2	74.9	69.6	79.6
Golden Plains (S)	24.5	19.9	29.7	75.5	70.3	80.1
Greater Bendigo (C)	16.8	12.8	21.6	83.2	78.4	87.2
Greater Dandenong (C)	14.0	10.7	18.1	85.2	81.1	88.6
Greater Geelong (C)	21.8	16.9	27.7	78.2	72.3	83.1
Greater Shepparton (C)	17.5	14.1	21.6	82.3	78.1	85.8
Hepburn (S)	24.1	19.7	29.3	75.9	70.7	80.3
Hindmarsh (S)	37.4	31.8	43.3	62.6	56.6	68.2
Hobsons Bay (C)	14.3	10.8	18.5	85.7	81.5	89.2
Horsham (RC)	21.3	17.1	26.3	78.7	73.7	82.9
Hume (C)	13.2	10.0	17.3	86.4	82.4	89.7
Indigo (S)	30.8	24.9	37.4	69.2	62.6	75.1
Kingston (C)	12.4	9.4	16.3	86.8	82.7	90.0
Knox (C)	17.5	13.3	22.6	82.5	77.4	86.7
Latrobe (C)	21.5	17.3	26.3	78.2	73.4	82.3
Loddon (S)	31.7	26.6	37.4	68.0	62.3	73.1
Macedon Ranges (S)	19.4	15.4	24.1	80.6	75.9	84.6
Manningham (C)	16.5	13.0	20.8	83.0	78.8	86.6

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

95% CI = 95 per cent confidence interval.

LGA = local government area

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

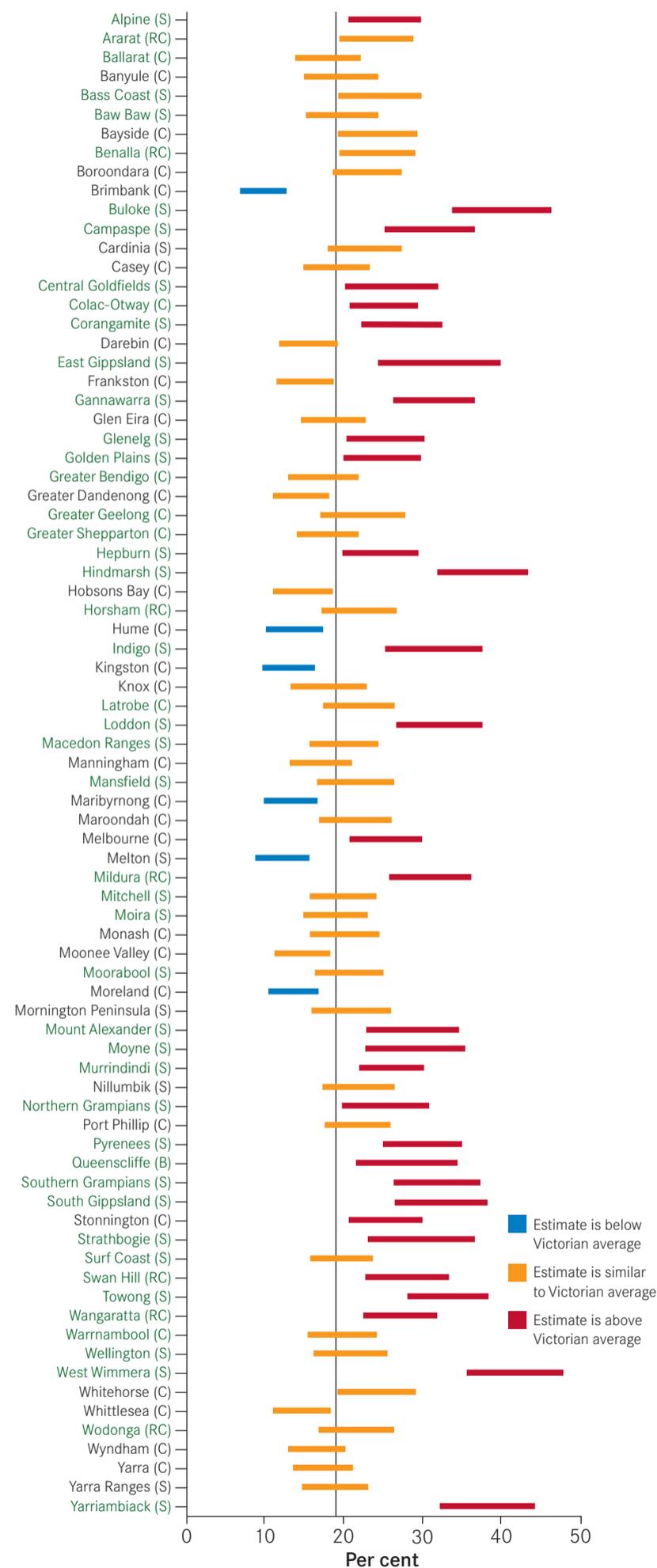
Data are age standardised to the 2006 Victorian population.

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

**Table 8.73: On a decision-making board or committee, by LGA, 2008 (continued)**

LGA	Yes			No		
	%	Lower 95% CI	Upper 95% CI	%	Lower 95% CI	Upper 95% CI
Mansfield (S)	21.1	16.6	26.3	78.9	73.7	83.4
Maribyrnong (C)	12.7	9.7	16.6	86.7	82.8	89.8
Maroondah (C)	20.9	16.8	25.7	79.1	74.3	83.2
Melbourne (C)	24.8	20.5	29.7	74.5	69.6	78.9
Melton (S)	11.7	8.6	15.6	88.3	84.4	91.4
Mildura (RC)	30.6	25.6	36.0	69.4	64.0	74.4
Mitchell (S)	19.4	15.7	23.8	80.6	76.2	84.3
Moira (S)	18.4	14.7	22.9	81.2	76.7	85.0
Monash (C)	19.6	15.5	24.4	80.1	75.2	84.2
Moonee Valley (C)	14.2	11.0	18.2	85.8	81.8	89.0
Moorabool (S)	20.1	16.1	24.9	79.8	75.0	83.8
Moreland (C)	13.2	10.4	16.7	86.8	83.3	89.6
Mornington Peninsula (S)	20.3	15.7	25.8	79.7	74.2	84.3
Mount Alexander (S)	28.2	22.6	34.5	71.3	65.0	76.8
Moyne (S)	28.5	22.5	35.3	71.2	64.4	77.2
Murrindindi (S)	25.7	21.8	30.0	74.3	70.0	78.2
Nillumbik (S)	21.4	17.2	26.3	78.6	73.7	82.8
Northern Grampians (S)	24.8	19.6	30.7	75.2	69.3	80.4
Port Phillip (C)	21.3	17.5	25.7	78.7	74.3	82.5
Pyrenees (S)	29.6	24.8	34.8	70.0	64.7	74.8
Queenscliff (B)	27.3	21.3	34.3	72.7	65.7	78.7
Southern Grampians (S)	31.5	26.2	37.2	68.5	62.8	73.8
South Gippsland (S)	31.9	26.3	38.1	68.0	61.8	73.7
Stonnington (C)	24.8	20.4	29.8	75.0	70.0	79.4
Strathbogie (S)	29.3	23.0	36.5	70.7	63.5	77.0
Surf Coast (S)	19.2	15.5	23.5	80.7	76.4	84.4
Swan Hill (RC)	27.5	22.5	33.2	72.5	66.8	77.5
Towong (S)	32.9	28.0	38.3	66.9	61.6	71.8
Wangaratta (RC)	26.8	22.4	31.7	73.1	68.2	77.5
Warrnambool (C)	19.2	15.2	24.1	80.8	75.9	84.8
Wellington (S)	20.2	16.0	25.3	79.8	74.7	84.0
West Wimmera (S)	41.5	35.5	47.7	58.5	52.3	64.5
Whitehorse (C)	23.6	19.0	29.0	76.0	70.6	80.7
Whittlesea (C)	14.1	10.8	18.2	85.7	81.6	89.0
Wodonga (RC)	21.0	16.8	25.9	79.0	74.1	83.2
Wyndham (C)	16.1	12.8	20.0	83.8	79.9	87.1
Yarra (C)	16.8	13.4	20.9	83.0	78.9	86.4
Yarra Ranges (S)	18.3	14.5	22.8	81.4	77.0	85.2
Yarriambiack (S)	37.9	32.0	44.1	62.1	55.8	67.9
<b>Total</b>	<b>18.7</b>	<b>18.1</b>	<b>19.3</b>	<b>81.1</b>	<b>80.5</b>	<b>81.8</b>

**Figure 8.24: On a decision-making board or committee, by LGA, 2008**



(a) Percentages are derived from persons who reported being members of a group. 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 line on the graph is the Victorian estimate, it does not show the 95% CI. See the relevant table for the 95% CI for Victoria (Total).

## Reference

AIHW (Australian Institute of Health and Welfare) 2007, 'Indicators of social cohesion', *Australia's Welfare 2007*, cat. no. AUS 93, Canberra.

# 9. 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 Queenscliffe South Gippsland Southern Grampians 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 South Gippsland Southern Grampians 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 South Gippsland Southern Grampians 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

## 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

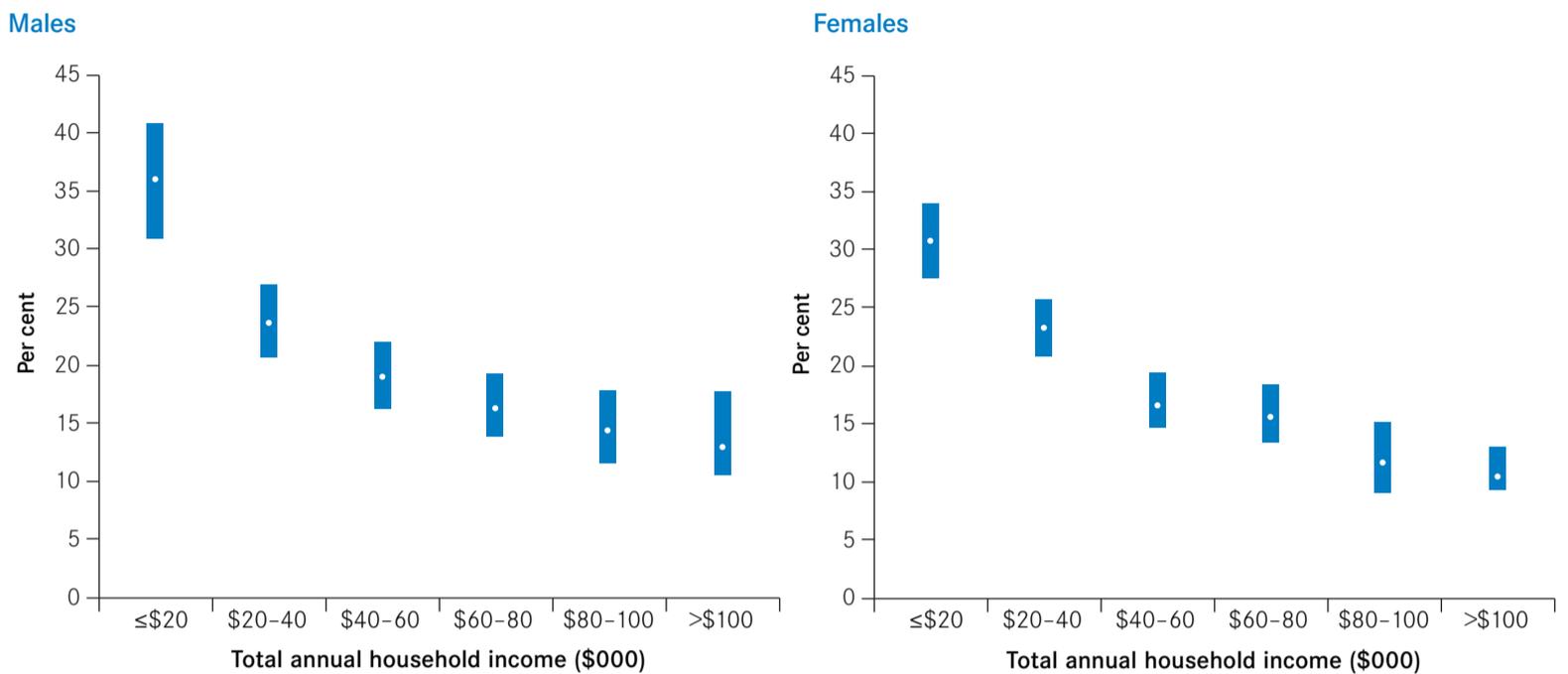
This section presents total household income as a proxy for socioeconomic status, by sex. Respondents were asked to indicate the range into which their total annual household income would fall. Total annual household income includes all sources of income, such as wages, family tax benefits and child 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.

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.

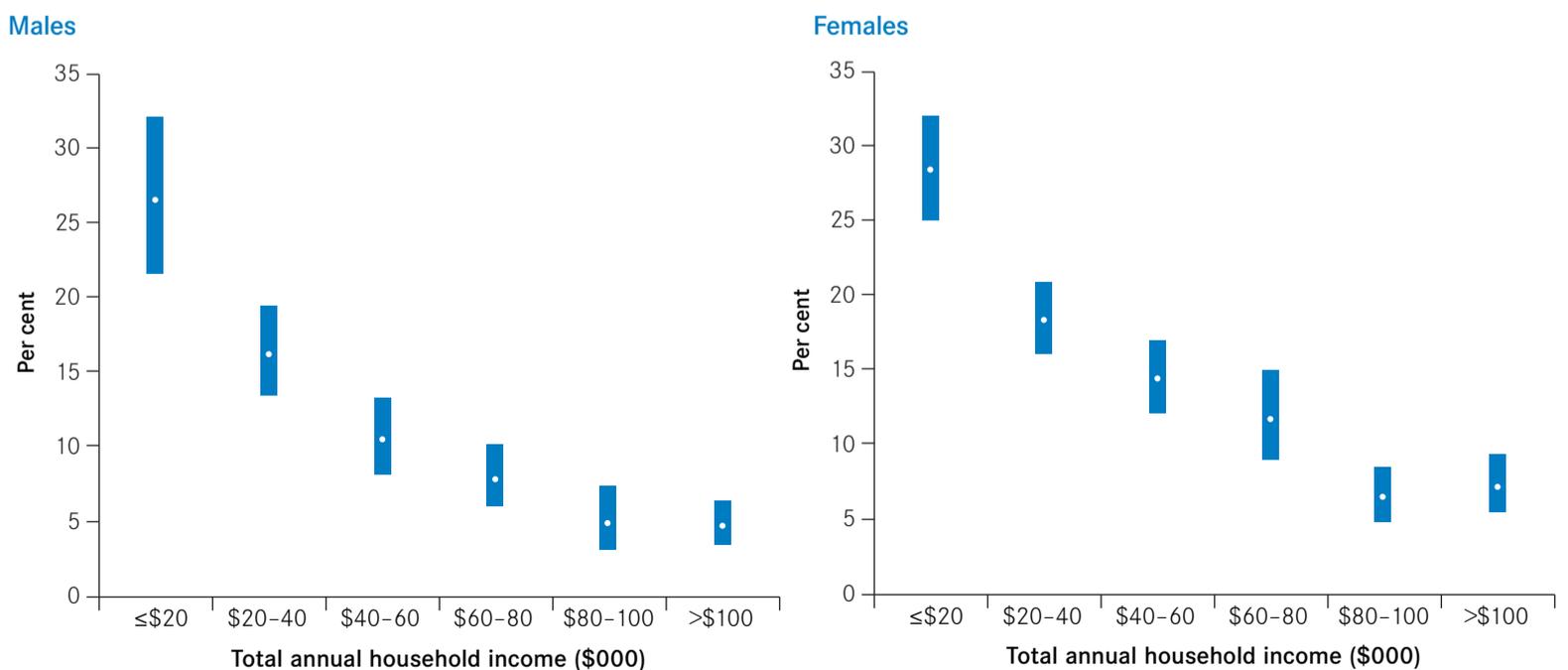
### Psychological distress

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



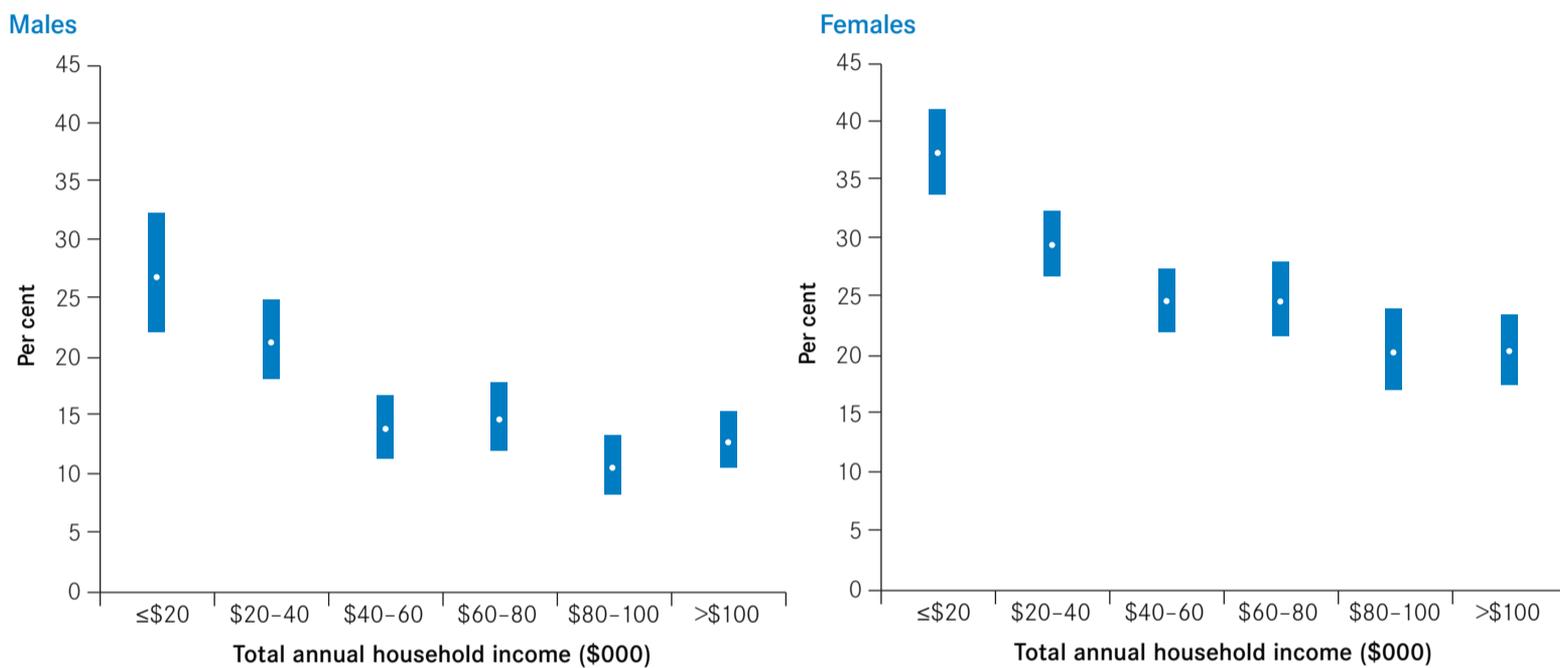
Data are age standardised to the 2006 Victorian population.

## 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**

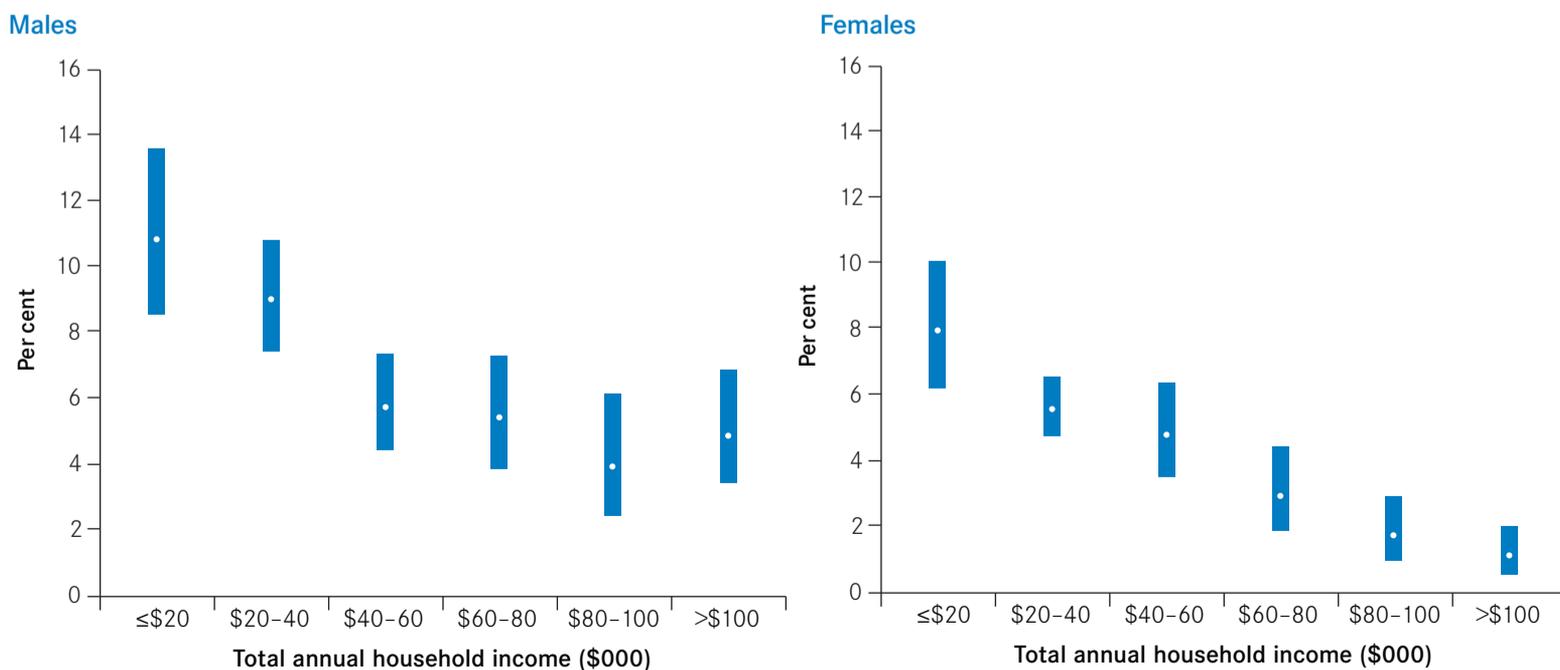


Data are age standardised to the 2006 Victorian population.

## 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**



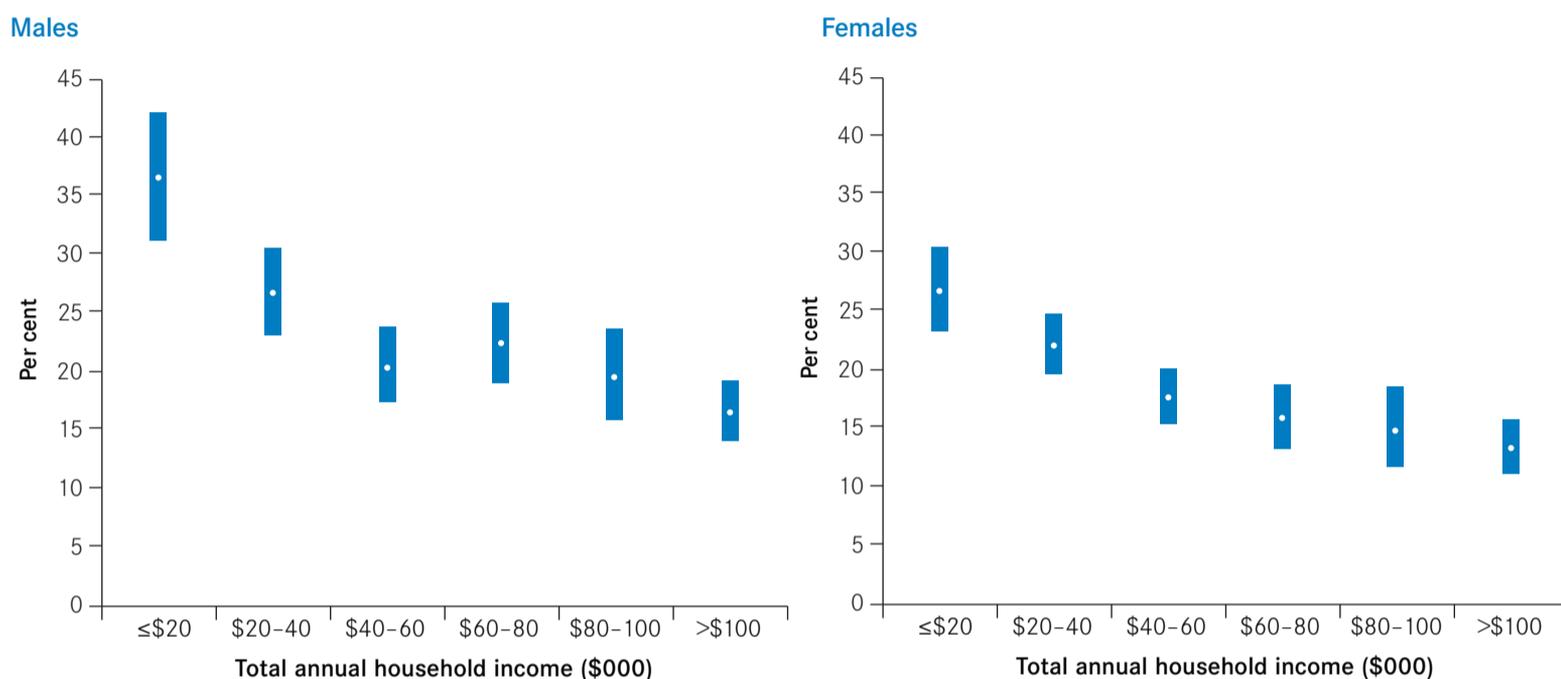
Data are age standardised to the 2006 Victorian population.

## Current smoking

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.

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



Data are age standardised to the 2006 Victorian population.

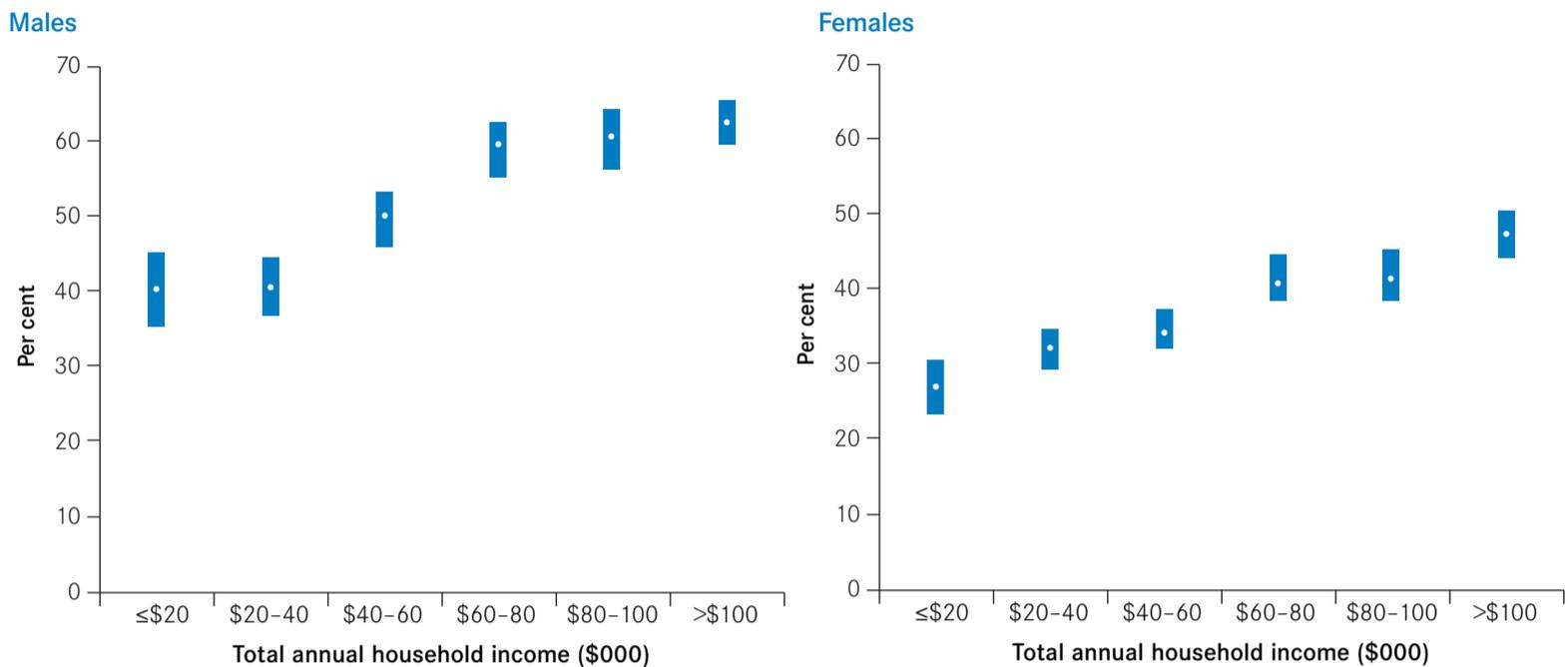
## Consumption of alcohol

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.

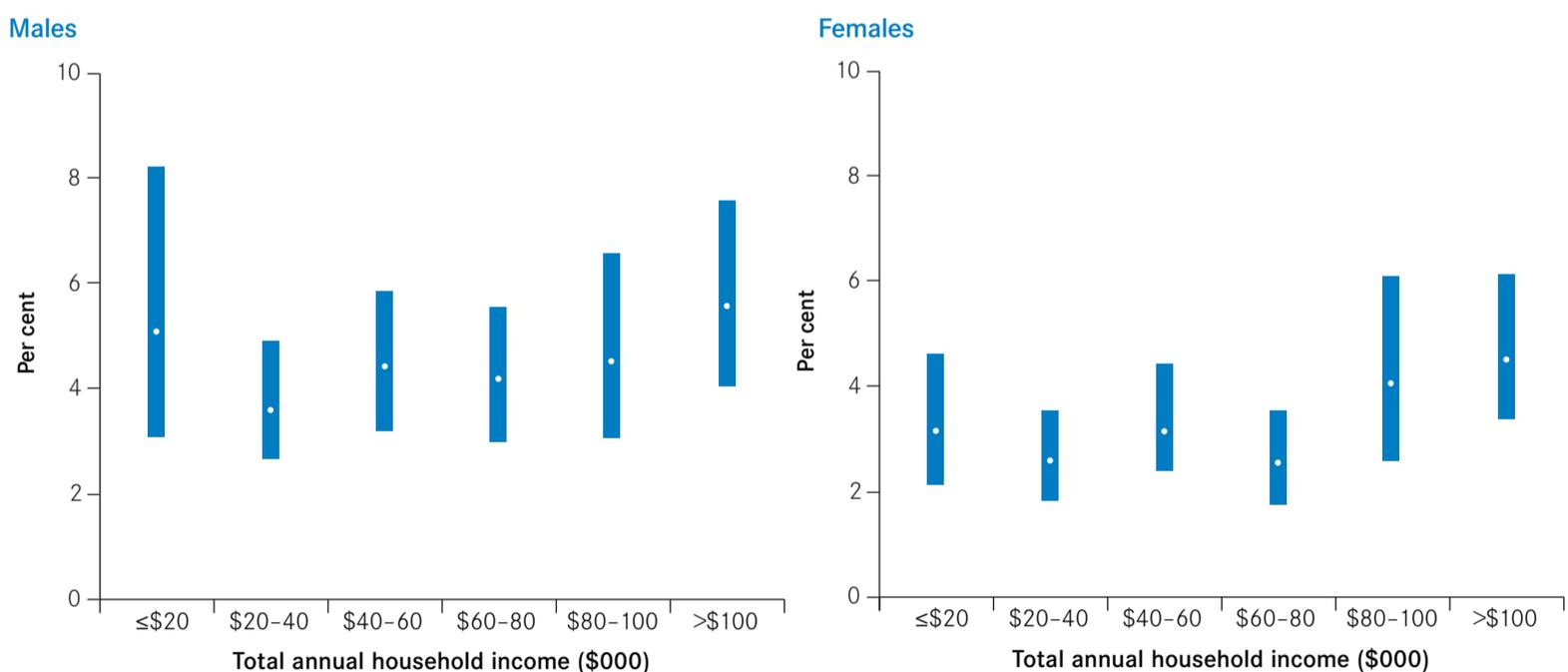
Figure 9.6: Proportion of males and females at short-term risk of harm due to alcohol consumption, by household income, 2008



Data are age standardised to the 2006 Victorian population.

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.

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



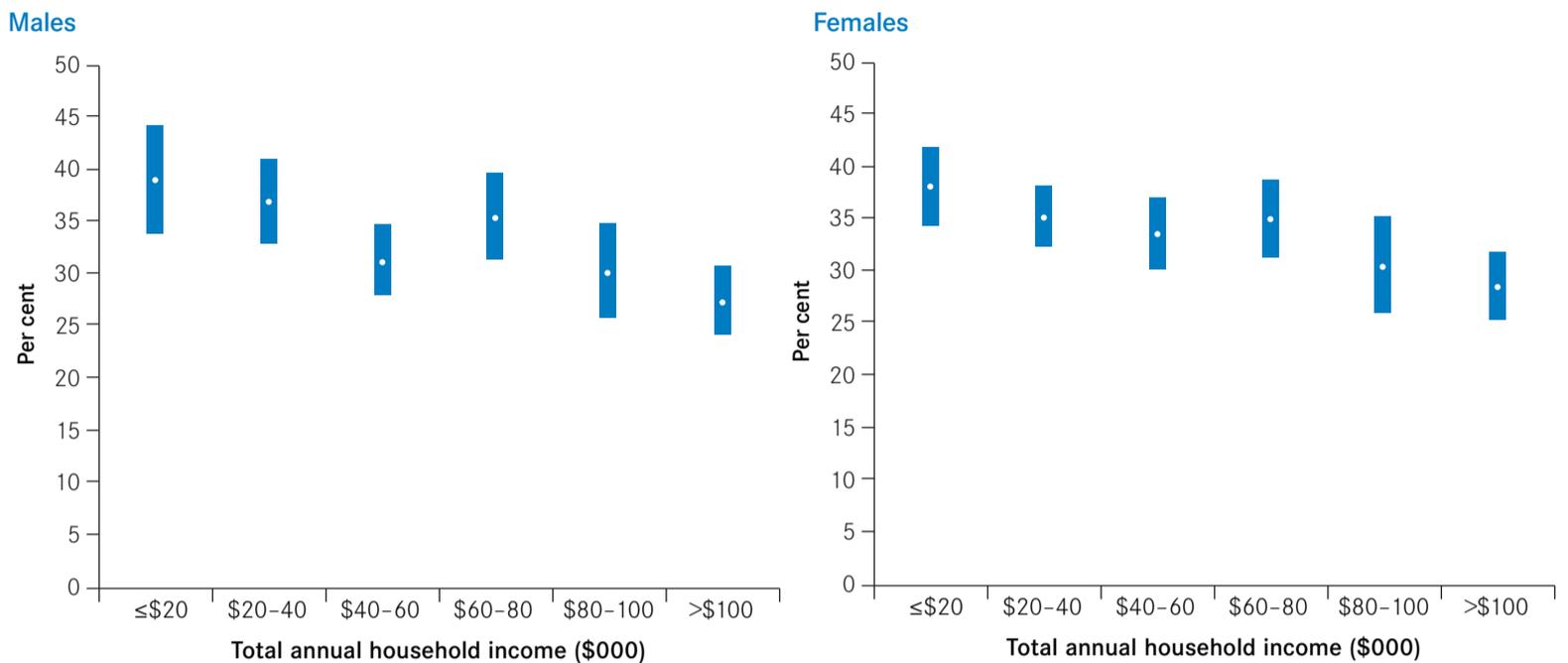
Data are age standardised to the 2006 Victorian population.

### 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.

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



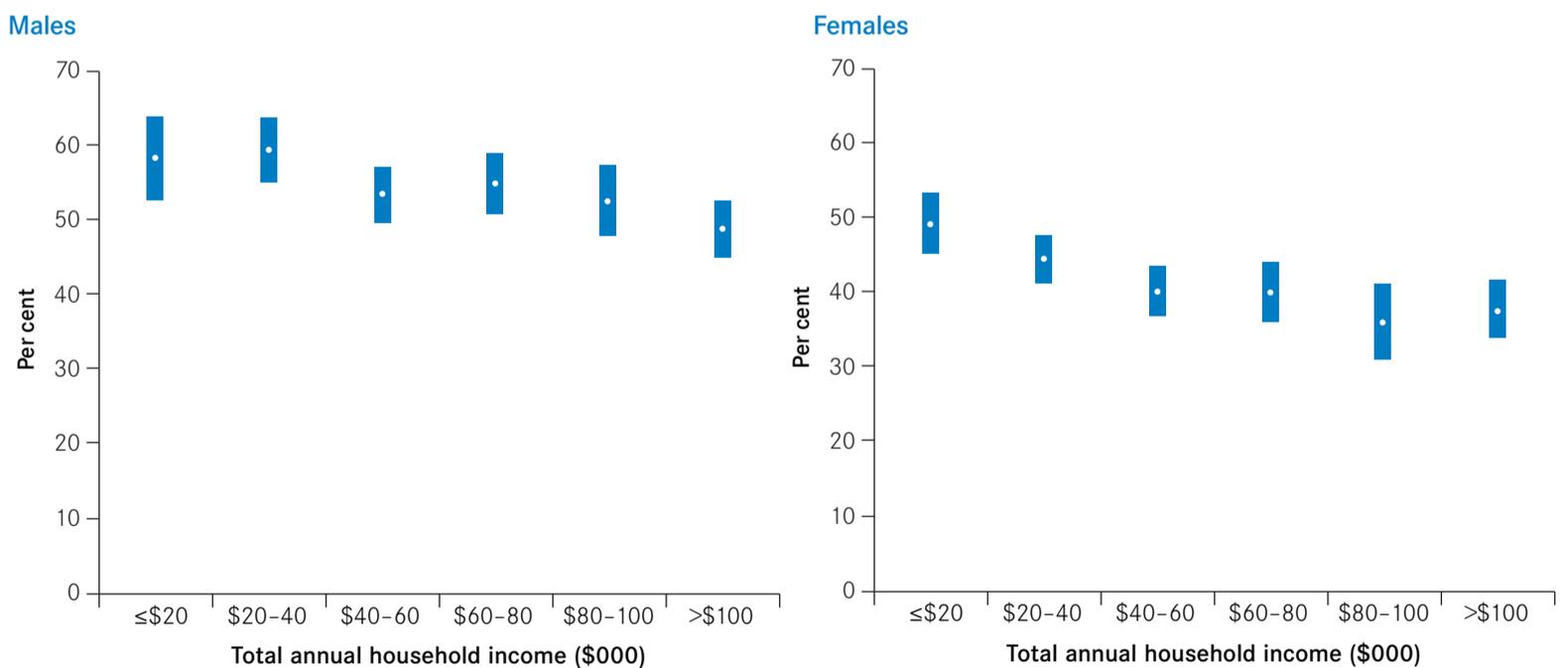
Data are age standardised to the 2006 Victorian population.

### 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



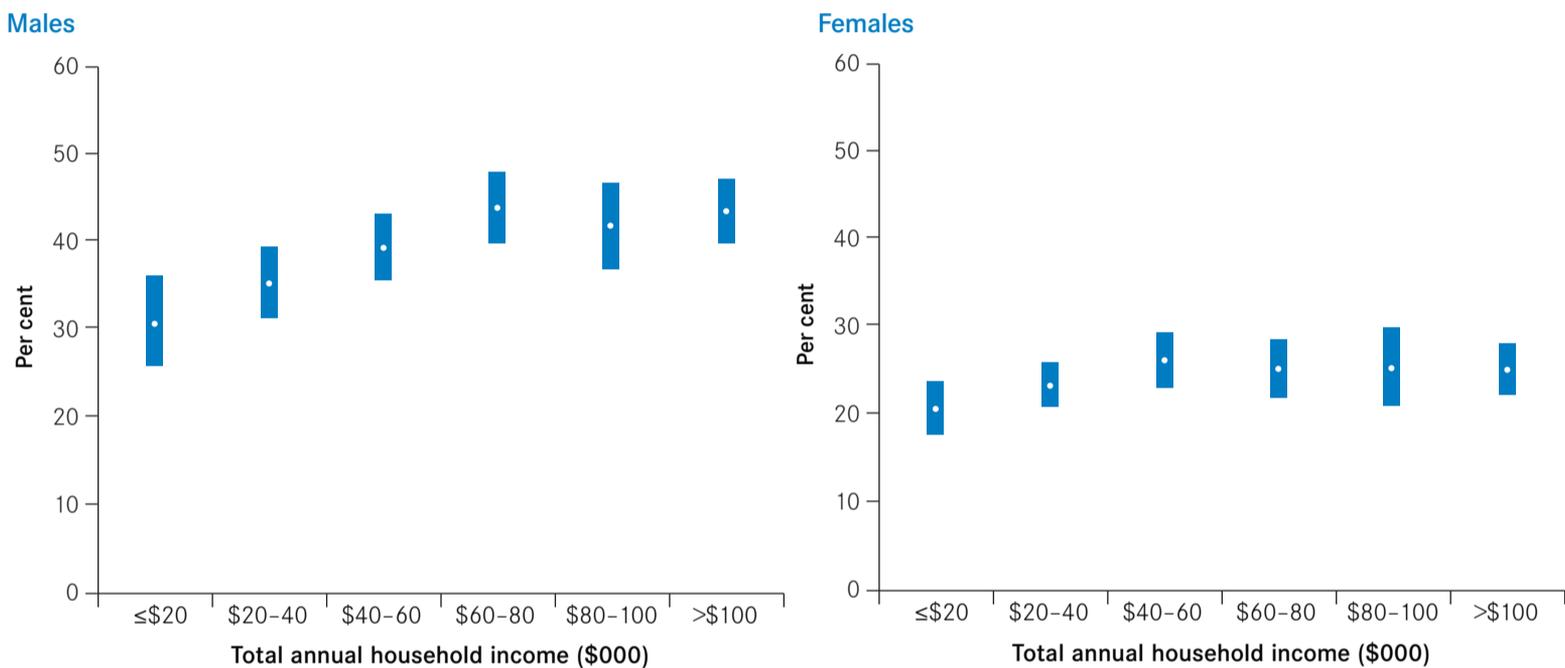
Data are age standardised to the 2006 Victorian population.

### 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.

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

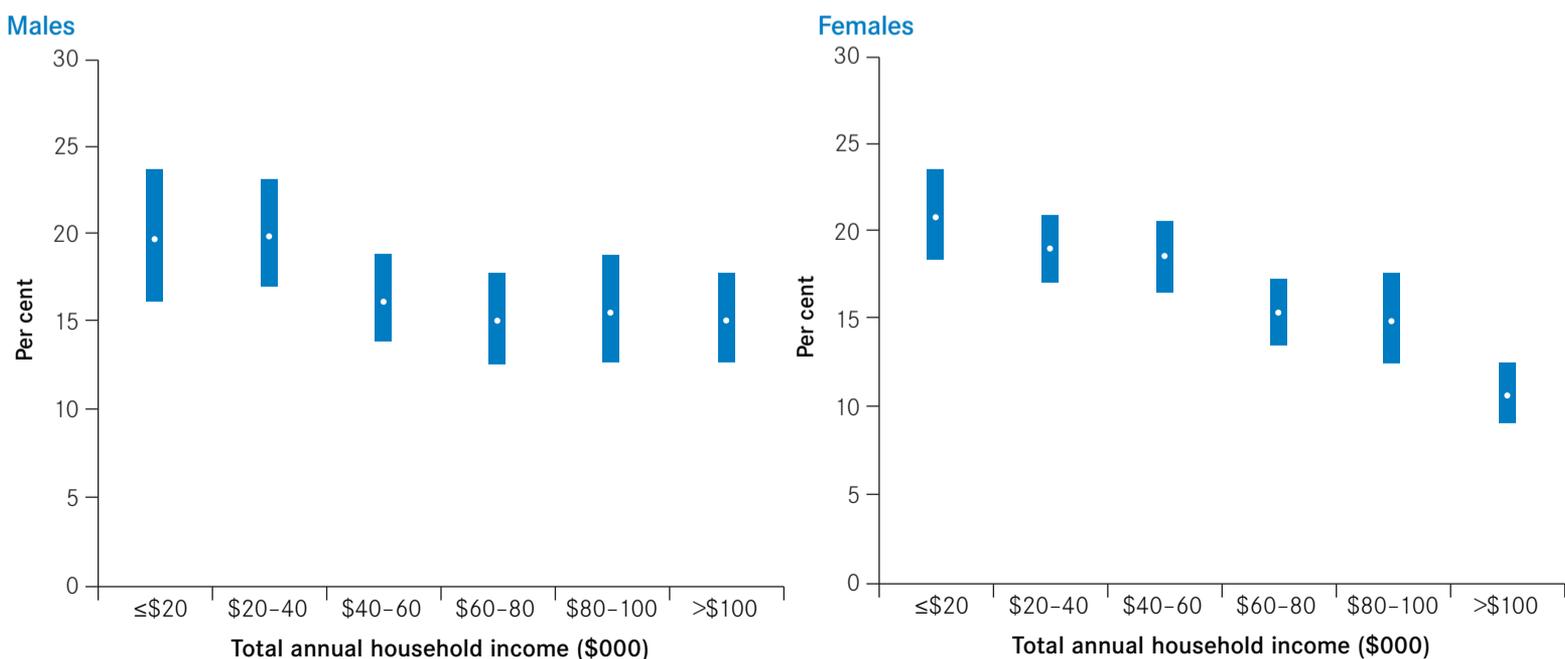


Data are age standardised to the 2006 Victorian population.

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).

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**



Data are age standardised to the 2006 Victorian population.

## Food insecurity and financial stress

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

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**

Region	Males			Females			Persons		
	%	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
<b>Metropolitan</b>	4.6	3.8	5.4	6.2	5.6	6.9	5.4	4.9	6.0
<b>Rural</b>	4.2	3.5	5.1	7.7	6.7	8.9	6.0	5.4	6.7
<b>Total</b>	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.

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

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).



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

LGA	Yes			LGA	Yes		
	%	Lower 95% CI	Upper 95% CI		%	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	Mornington 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	Nullumbik (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	<b>Total</b>	<b>5.6</b>	<b>5.2</b>	<b>6.0</b>

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

95% CI = 95 per cent confidence interval.

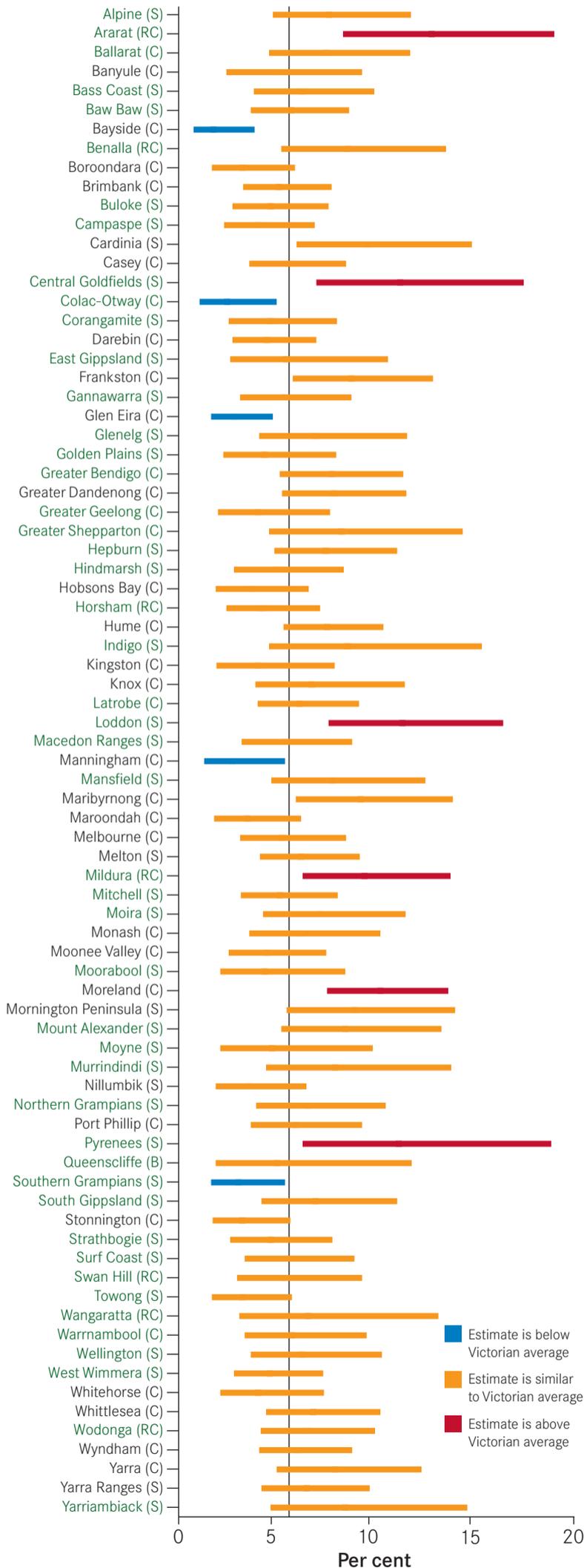
LGA = local government area

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.

\* 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.  
 The line on the graph is the Victorian estimate, it does not show the 95% CI.  
 See the relevant table for the 95% CI for Victoria (Total).

Survey respondents who reported having run out of food at least once in the last 12 months were also asked how often they had run out of food and could not afford to buy more (frequency). Table 9.5 shows that more than one in ten (11.4 per cent) respondents who had run out of food reported running out of food once a week or more, 14.1 per cent ran out of food once every two weeks, almost one in five (18.4 per cent) ran out of food once a month and more than half (54.1 per cent) reported running out of food less than once a month, in the previous 12 months. Similar rates were reported between males and females.

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

Region	Once a week or more			Once every two weeks			Once a month			Less than once a month		
	%	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	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
<b>Persons</b>	<b>11.4</b>	<b>9.0</b>	<b>14.5</b>	<b>14.1</b>	<b>11.8</b>	<b>16.8</b>	<b>18.4</b>	<b>16.0</b>	<b>21.1</b>	<b>54.1</b>	<b>50.4</b>	<b>57.7</b>

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**

Age group (years)	Once a week or more			Once every two weeks			Once a month			Less than once a month		
	%	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
<b>Total</b>	<b>11.4</b>	<b>8.9</b>	<b>14.5</b>	<b>14.1</b>	<b>11.8</b>	<b>16.8</b>	<b>18.4</b>	<b>16.0</b>	<b>21.1</b>	<b>54.1</b>	<b>50.4</b>	<b>57.7</b>

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.

\* 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.

Table 9.7: Proportion of persons who ran out of food in last 12 months, by frequency and Department of Health region, 2008

Region	Once a week or more			Once every two weeks			Once a month			Less than once a month		
	%	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
<b>Metropolitan</b>	<b>13.6</b>	<b>10.8</b>	<b>17.1</b>	<b>14.4</b>	<b>11.6</b>	<b>17.7</b>	<b>18.0</b>	<b>15.0</b>	<b>21.4</b>	<b>52.2</b>	<b>47.8</b>	<b>56.6</b>
<b>Rural</b>	<b>7.0</b>	<b>5.3</b>	<b>9.1</b>	<b>12.9</b>	<b>10.2</b>	<b>16.3</b>	<b>20.3</b>	<b>16.7</b>	<b>24.4</b>	<b>58.1</b>	<b>53.4</b>	<b>62.6</b>
<b>Total</b>	<b>11.4</b>	<b>8.9</b>	<b>14.5</b>	<b>14.1</b>	<b>11.8</b>	<b>16.8</b>	<b>18.4</b>	<b>16.0</b>	<b>21.1</b>	<b>54.1</b>	<b>50.4</b>	<b>57.7</b>

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.

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

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.

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

Age group (years)	I don't always have the type of food I want because....														
	Some foods are too expensive			Can't always get right quality			Can't always get right variety			Can't always get culturally appropriate food			Inadequate and unreliable public transport		
	%	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
<b>Males</b>															
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
<b>Total</b>	<b>25.0</b>	<b>23.8</b>	<b>26.2</b>	<b>23.5</b>	<b>22.4</b>	<b>24.7</b>	<b>11.2</b>	<b>10.3</b>	<b>12.1</b>	<b>7.1</b>	<b>6.3</b>	<b>7.9</b>	<b>7.6</b>	<b>6.8</b>	<b>8.4</b>
<b>Females</b>															
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
<b>Total</b>	<b>31.5</b>	<b>30.5</b>	<b>32.5</b>	<b>27.3</b>	<b>26.4</b>	<b>28.3</b>	<b>10.7</b>	<b>10.0</b>	<b>11.4</b>	<b>6.5</b>	<b>6.0</b>	<b>7.2</b>	<b>8.4</b>	<b>7.8</b>	<b>9.1</b>
<b>Persons</b>															
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
<b>Total</b>	<b>28.3</b>	<b>27.5</b>	<b>29.0</b>	<b>25.5</b>	<b>24.7</b>	<b>26.2</b>	<b>10.9</b>	<b>10.4</b>	<b>11.5</b>	<b>6.8</b>	<b>6.3</b>	<b>7.3</b>	<b>8.0</b>	<b>7.6</b>	<b>8.5</b>

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**

Age group (years)	I don't always have the type of food I want because....														
	Some foods are too expensive			Can't always get right quality			Can't always get right variety			Can't always get culturally appropriate food			Inadequate and unreliable public transport		
	%	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

LGA	I don't always have the type of food I want because....														
	Some foods are too expensive			Can't always get right quality			Can't always get right variety			Can't always get culturally appropriate food			Inadequate and unreliable public transport		
	%	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
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	5.1	13.2	6.8*	4.1	11.0	9.9	6.7	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.

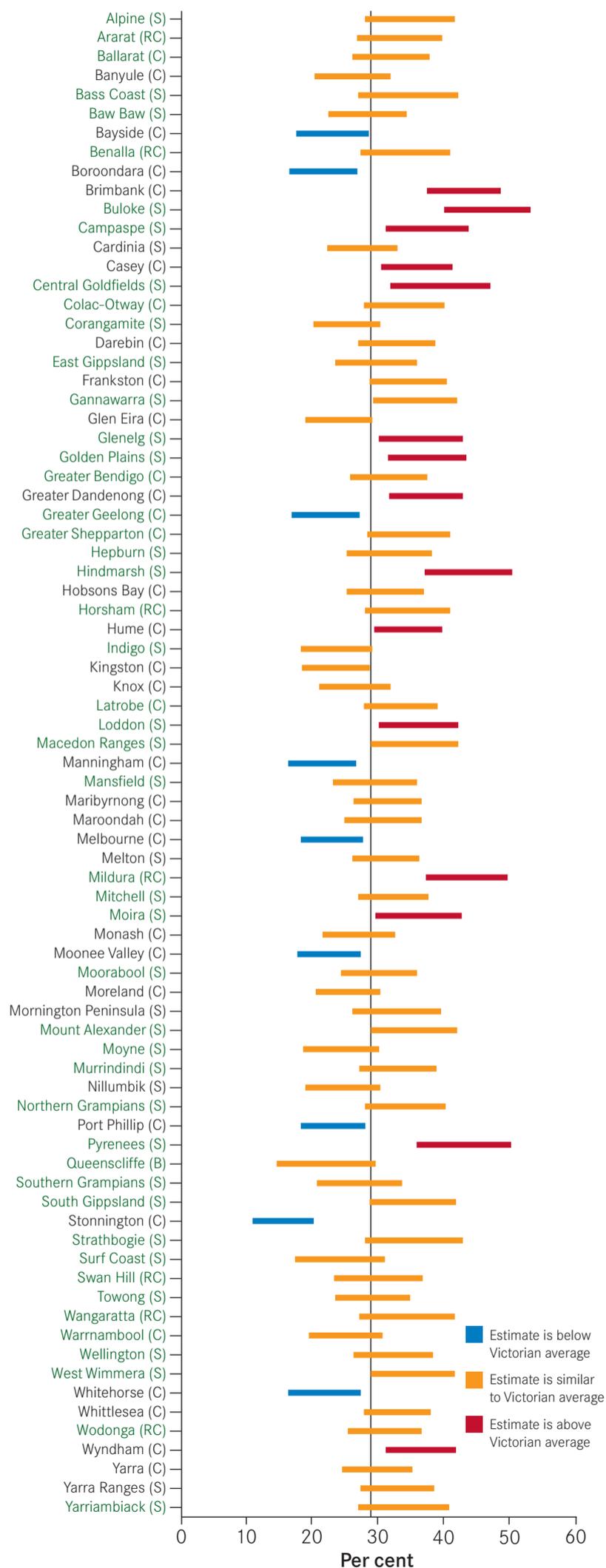
\* Estimate has a relative standard error of between 25 and 50 per cent and should be interpreted with caution.

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

LGA	I don't always have the type of food I want because....														
	Some foods are too expensive			Can't always get right quality			Can't always get right variety			Can't always get culturally appropriate food			Inadequate and unreliable public transport		
	%	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
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
Mornington 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
<b>Total</b>	<b>28.3</b>	<b>27.5</b>	<b>29.0</b>	<b>25.5</b>	<b>24.7</b>	<b>26.2</b>	<b>10.9</b>	<b>10.4</b>	<b>11.5</b>	<b>6.8</b>	<b>6.3</b>	<b>7.3</b>	<b>8.0</b>	<b>7.6</b>	<b>8.5</b>

Table 9.10 shows reasons why people don't always have the quality or variety of foods they want, by LGA. The results for persons reporting some foods were too expensive, ranged from 14.3 per cent for Stonnington to 45.9 per cent for Buloke (figure 9.13). There were 15 LGAs where the proportion of persons reporting some foods were too expensive was higher than the proportion for the state. Ten of these LGAs were in rural areas and five were in metropolitan areas of the state. There were nine LGAs where the proportion of persons reporting some foods were too expensive was lower than the proportion for the state.

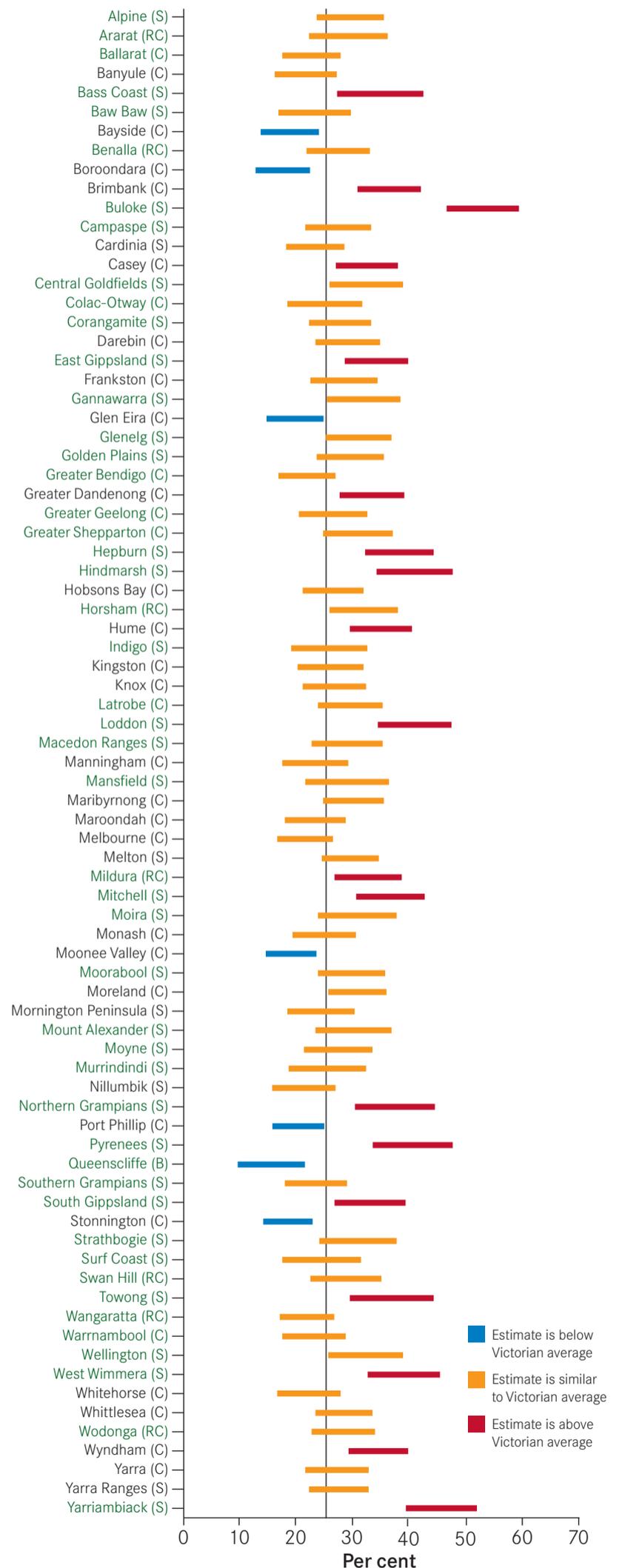
Figure 9.13: Proportion of persons reporting some foods were too expensive, by LGA, 2008



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 line on the graph is the Victorian estimate, it does not show the 95% CI.  
 See the relevant table for the 95% CI for Victoria (Total).

The proportion of persons reporting they could not always get food of the right quality ranged from 14.0 per cent for Queenscliff 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.

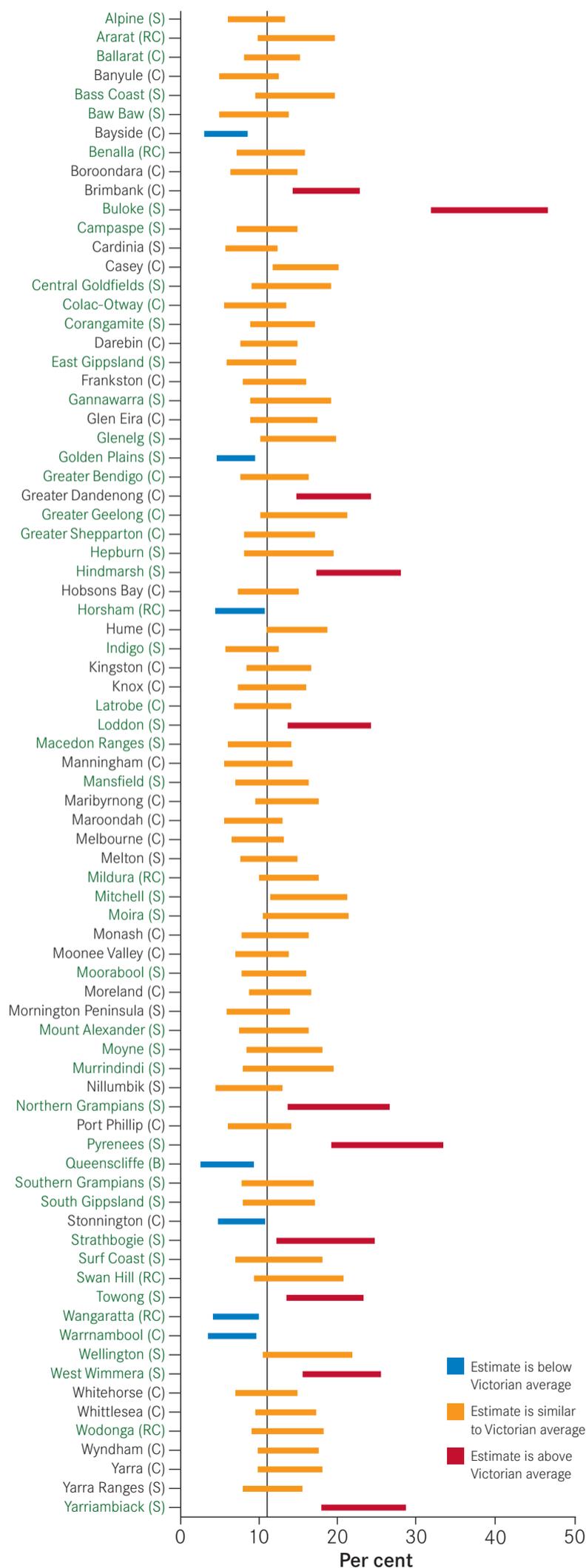
Figure 9.14: Proportion of persons reporting they could not always get food of the right quality, by LGA, 2008



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.  
 The line on the graph is the Victorian estimate, it does not show the 95% CI.  
 See the relevant table for the 95% CI for Victoria (Total).

The proportion of persons reporting they could not always get the right variety of food ranged from 4.2 per cent for Queenscliffe to 38.3 per cent for Buloke (figure 9.15). There were 11 LGAs where the proportion of persons reporting they could not always get the right variety of food was higher than the proportion for the state. Nine of these LGAs were in rural areas of Victoria and two were in metropolitan areas. There were seven LGAs where the proportion of persons reporting they could not always get the right variety of food was lower than the proportion for the state.

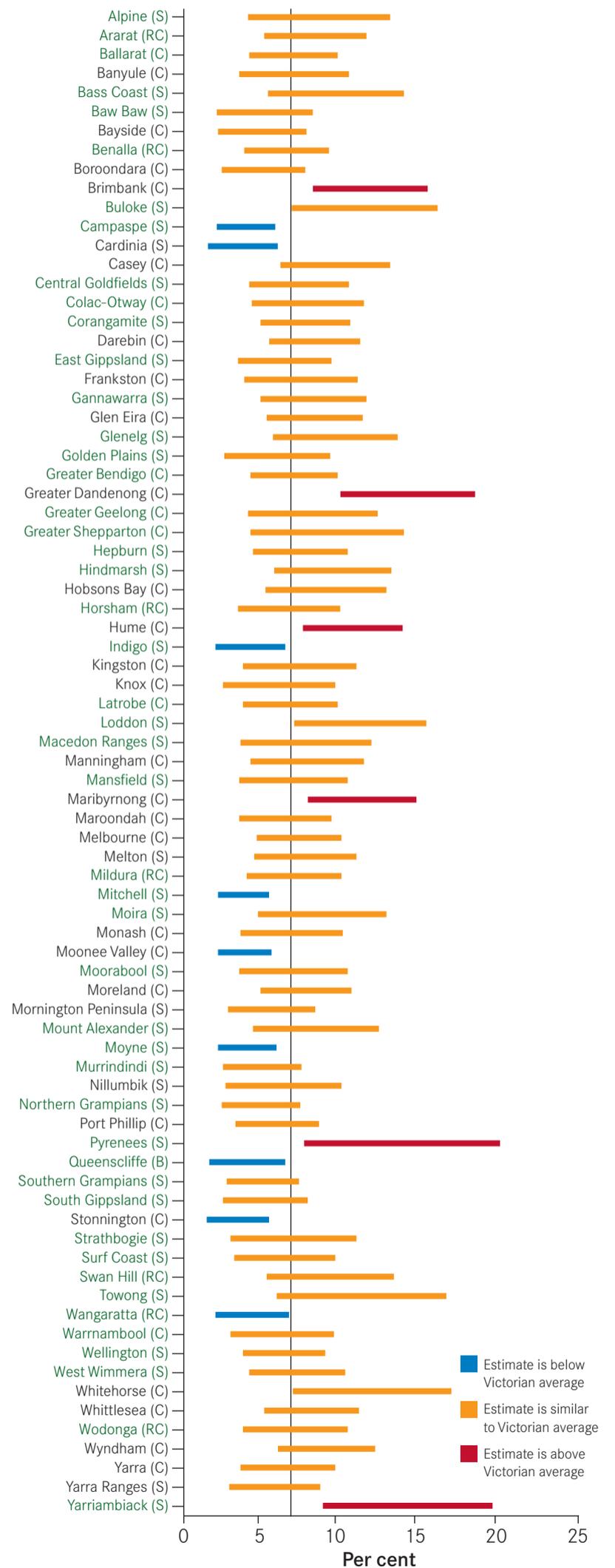
Figure 9.15: Proportion of persons reporting they could not always get food of the right variety, by LGA, 2008



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 line on the graph is the Victorian estimate, it does not show the 95% CI.  
 See the relevant table for the 95% CI for Victoria (Total).

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.

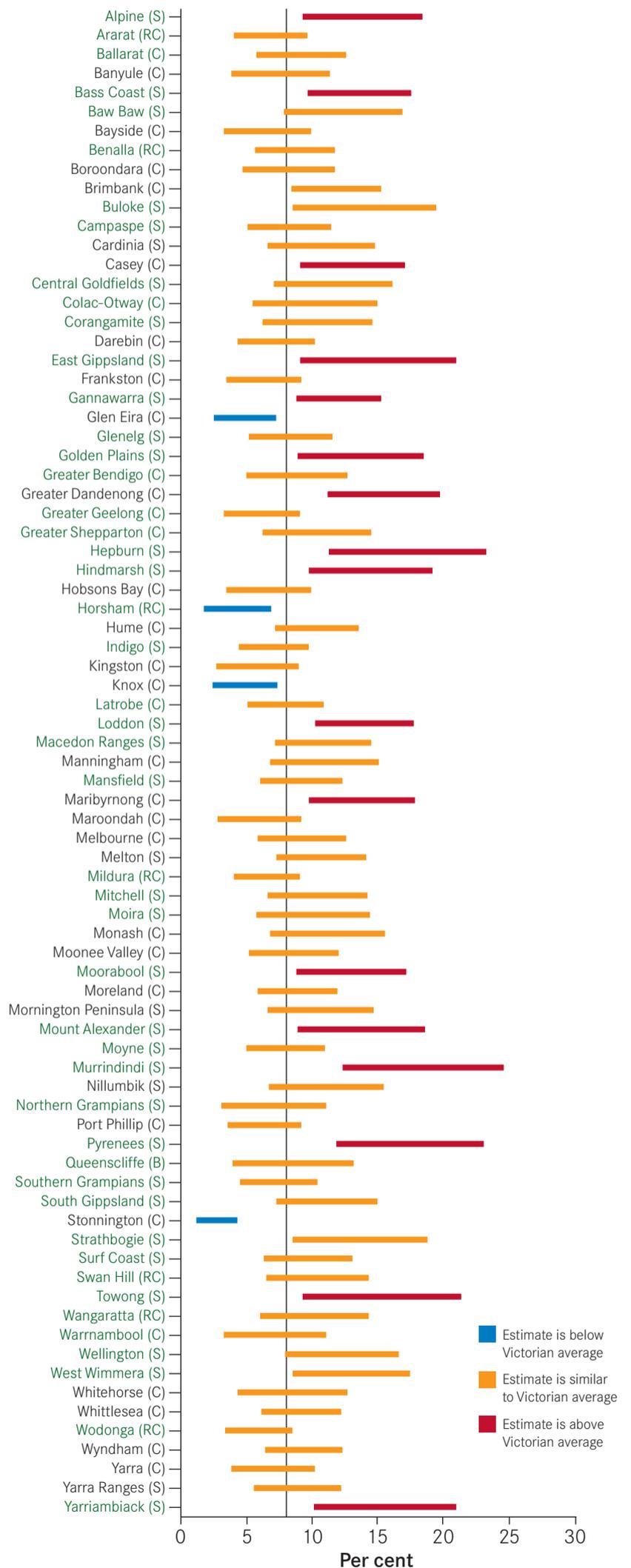
Data are age standardised to the 2006 Victorian population.

The line on the graph is the Victorian estimate, it does not show the 95% CI.

See the relevant table for the 95% CI for Victoria (Total).

The proportion of persons reporting they don't always have the quality or variety of foods they want because of inadequate or unreliable public transport, ranged from 2.0 per cent for Stonnington to 17.3 per cent for Murrindindi (figure 9.17). There were 17 LGAs where the proportion of persons reporting they don't always have the quality or variety of foods they want because of inadequate or unreliable public transport was higher than the proportion for the state. Fourteen of these LGAs were in rural areas of Victoria and three were in metropolitan areas. There were four LGAs where the proportion of persons reporting they don't always have the quality or variety of foods they want because of inadequate or unreliable public transport was lower than the proportion 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.

The line on the graph is the Victorian estimate, it does not show the 95% CI.

See the relevant table for the 95% CI for Victoria (Total).

Among respondents who did not report inadequate or unreliable public transport as a reason for not always having the quality and variety of food they want, three per cent reported that they had difficulty getting to the shops using their normal mode of transport (table 9.11). The results were similar between males and females, however, a higher proportion of persons aged 65 years and over (4.5 per cent) reported difficulty in getting to the shops using their normal mode of transport, compared with the average for the state (3.0 per cent).

**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**

Age group (years)	Males						Females						Persons					
	Easy			Difficult			Easy			Difficult			Easy			Difficult		
	%	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	%	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
<b>Total</b>	<b>97.0</b>	<b>96.5</b>	<b>97.4</b>	<b>2.6</b>	<b>2.2</b>	<b>3.1</b>	<b>96.1</b>	<b>95.7</b>	<b>96.5</b>	<b>3.4</b>	<b>3.0</b>	<b>3.8</b>	<b>96.5</b>	<b>96.2</b>	<b>96.8</b>	<b>3.0</b>	<b>2.8</b>	<b>3.3</b>

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.

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

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**

Region	Easy			Difficult		
	%	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
<b>Metropolitan</b>	<b>96.6</b>	<b>96.2</b>	<b>96.9</b>	<b>3.0</b>	<b>2.6</b>	<b>3.4</b>
<b>Rural</b>	<b>96.3</b>	<b>95.8</b>	<b>96.7</b>	<b>3.3</b>	<b>2.8</b>	<b>3.7</b>
<b>Total</b>	<b>96.5</b>	<b>96.2</b>	<b>96.8</b>	<b>3.0</b>	<b>2.8</b>	<b>3.3</b>

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.

## 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
<b>Persons</b>	<b>16.4</b>	<b>15.7</b>	<b>14.7</b>	<b>12.8</b>	<b>10.6</b>	<b>10.0</b>	<b>11.5</b>

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**

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

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**

Region	Males			Females			Persons		
	%	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
<b>Metropolitan</b>	10.2	9.1	11.3	12.8	12.0	13.7	11.6	10.9	12.3
<b>Rural</b>	9.8	8.6	11.2	13.1	11.9	14.3	11.5	10.6	12.5
<b>Total</b>	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	LGA	%	Lower 95% CI	Upper 95% CI
Alpine (S)	12.7	8.6	18.5	Mansfield (S)	8.5	5.5	13.1
Ararat (RC)	21.3	15.5	28.4	Maribyrnong (C)	18.6	14.4	23.7
Ballarat (C)	11.4	8.6	15.0	Maroondah (C)	7.9	5.4	11.4
Banyule (C)	10.9	7.7	15.1	Melbourne (C)	8.5	6.1	11.8
Bass Coast (S)	17.4	11.6	25.2	Melton (S)	14.0	10.8	18.0
Baw Baw (S)	11.1	7.7	15.6	Mildura (RC)	14.0	10.6	18.2
Bayside (C)	3.6	1.9	6.6	Mitchell (S)	10.3	7.2	14.5
Benalla (RC)	14.2	10.1	19.7	Moira (S)	10.9	7.6	15.4
Boroondara (C)	6.2	3.9	9.6	Monash (C)	9.6	6.5	14.0
Brimbank (C)	18.9	15.4	23.1	Moonee Valley (C)	12.1	9.0	16.1
Buloke (S)	10.4	7.2	14.9	Moorabool (S)	9.3	6.4	13.3
Campaspe (S)	10.1	7.2	14.0	Moreland (C)	10.9	7.9	14.8
Cardinia (S)	11.7	8.5	15.8	Mornington Peninsula (S)	9.0	5.8	13.8
Casey (C)	17.3	13.4	22.0	Mount Alexander (S)	9.1	6.3	13.0
Central Goldfields (S)	14.5*	10.7	19.3	Moyne (S)	13.1	8.5	19.8
Colac-Otway (S)	10.4	7.1	15.1	Murrindindi (S)	12	7.7	18.2
Corangamite (S)	8.2	5.6	11.9	Nillumbik (S)	8.0	5.3	11.8
Darebin (C)	14.8	11.0	19.6	Northern Grampians (S)	14.3	9.9	20.2
East Gippsland (S)	14.5	9.2	22.0	Port Phillip (C)	7.7	5.3	11.1
Frankston (C)	15.2	11.6	19.6	Pyrenees (S)	25.5	21.2	30.4
Gannawarra (S)	10.7	7.7	14.7	Queenscliffe (B)	7.9	4.0	14.9
Glen Eira (C)	6.4	4.3	9.4	Southern Grampians (S)	12.1	8.7	16.5
Glenelg (S)	10.8	7.6	15.3	South Gippsland (S)	7.1*	4.8	10.4
Golden Plains (S)	12.6	9.0	17.4	Stonnington (C)	6.3	4.0	9.8
Greater Bendigo (C)	12.2	8.9	16.5	Strathbogie (S)	8.4	5.7	12.3
Greater Dandenong (C)	24.9	20.5	30.0	Surf Coast (S)	5.1	2.9	8.6
Greater Geelong (C)	8.4	5.4	12.8	Swan Hill (RC)	14.1	10.0	19.4
Greater Shepparton (C)	13.0	8.8	18.7	Towong (S)	7.9	5.1	12.0
Hepburn (S)	14.3	10.0	20.0	Wangaratta (RC)	6.5	4.2	10.0
Hindmarsh (S)	10.9	8.1	14.5	Warrnambool (C)	13.5	9.9	18.1
Hobsons Bay (C)	11.3	8.0	15.7	Wellington (S)	17.4	12.9	23.0
Horsham (RC)	9.4	6.5	13.3	West Wimmera (S)	11.5	8.6	15.3
Hume (C)	15.1*	11.8	19.0	Whitehorse (C)	6.9	4.3	10.9
Indigo (S)	7.5	5.1	11.0	Whittlesea (C)	13.6	10.6	17.3
Kingston (C)	9.1	6.5	12.7	Wodonga (RC)	13.7	10.3	17.9
Knox (C)	7.5	5.1	10.8	Wyndham (C)	14.3	11.2	18.2
Latrobe (C)	15.0	11.5	19.2	Yarra (C)	13.8	10.4	18.2
Loddon (S)	14.8	11.2	19.4	Yarra Ranges (S)	13.0	9.6	17.4
Macedon Ranges (S)	8.2	5.5	12.0	Yarriambiack (S)	15.1	10.5	21.2
Manningham (C)	7.0	4.7	10.3	<b>Total</b>	<b>11.5</b>	<b>11.0</b>	<b>12.1</b>

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

95% CI = 95 per cent confidence interval.

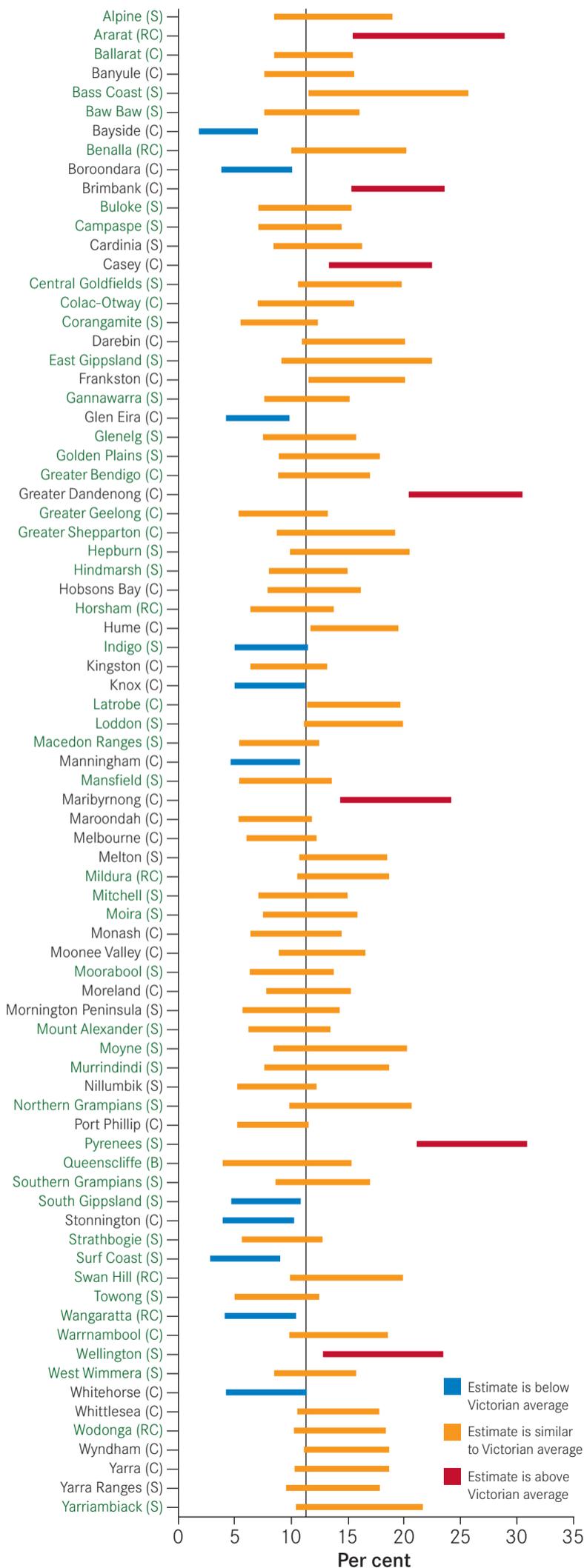
LGA = local government area

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.

\* 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.  
 The line on the graph is the Victorian estimate, it does not show the 95% CI.  
 See the relevant table for the 95% CI for Victoria (Total).

## References

- ABS (Australian Bureau of Statistics) 2001, *Information paper: use of the kessler psychological distress scale in ABS health surveys, Australia, 2001*, cat. no. 4817.0.55.001, ABS, Canberra.
- Burstrom, B & Fredlund, P 2001, 'Self-rated health: is it as good a predictor of subsequent mortality among adults in lower as well as in higher social classes?', *Journal of Epidemiology and Community Health*, vol. 55, pp. 836–40.
- DoHA (Department of Health and Ageing) 1999, *National physical activity guidelines for adults*, DoHA, Canberra.
- FAO (Food and Agriculture Organisation of the United Nations) 1996, *Report of the world food summit 13–17 November 1996*, FAO, Rome.
- Idler, E & Benyamini, Y 1997, 'Self-rated health and mortality: a review of twenty-seven community studies', *Journal of Health and Social Behaviour*, vol. 38, pp. 21–37.
- Kawachi, I, Subramanian, SV, Almeida-Filho, N 2002, 'A glossary for health inequalities', *Journal of Epidemiology and Community Health*, vol. 56, pp. 647–52.
- Lahelma, E, Martikainen, P, Laaksonen, M & Aittomäki, A 2004, 'Pathways between socioeconomic determinants of health', *Journal of Epidemiology and Community Health*, vol. 58, pp. 327–32.
- Miilunpalo, S, Vuori, I & Oja, P 1997, 'Self-rated health as a health measure: the predictive value of self-reported health status on the use of physician services and on mortality in the working age population', *Journal of Clinical Epidemiology*, vol. 50, no. 5, pp. 517–28.
- NHMRC (National Health and Medical Research Council) 2001, *Australian alcohol guidelines: health risks and benefits*, NHMRC, Canberra.
- NHMRC (National Health and Medical Research Council) 2003, *Dietary guidelines for Australian adults*, NHMRC, Canberra.
- Turrell, G, Oldenburg, B, McGuffog, I & Dent, R 1999, *Socioeconomic determinants of health: towards a national research program and a policy and intervention agenda*, AusInfo, Canberra.
- Victorian Government 2005, *A fairer Victoria, creating opportunity and addressing disadvantage*, Department of Premier and Cabinet, Melbourne.
- Victorian Government 2009, *A fairer Victoria, standing together through tough times*, Department of Premier and Cabinet, Melbourne.

# Appendix



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 South Gippsland Southern Grampians 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 South Gippsland Southern Grampians 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 South Gippsland Southern Grampians 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



## Appendix A

Data items for the Victorian Population Health Survey 2008

### Demographics

Age  
Sex  
Marital status  
Country of birth  
Main language spoken at home  
Country of birth of mother  
Country of birth of father  
Highest level of education  
Employment status  
Main field of occupation  
Household income  
Housing tenure  
Whether has private health insurance  
Indigenous status  
Area of state (Local Government Area & Department of Health region)  
Number of adults aged 18 years or over in household

### Screening

Whether had blood pressure check in previous two years  
Whether had cholesterol check in previous two years  
Whether had a test for diabetes or high blood sugar levels in previous two years  
Bowel cancer screening in previous two years  
Recency of pap smear screening  
Recency of breast cancer screening

### Self-reported height and weight

#### Nutrition

Number of serves of vegetables eaten each day  
Number of serves of fruit eaten each day  
Amount of water consumed each day  
Food security

#### Alcohol

Whether had an alcoholic drink of any kind in previous 12 months  
Frequency of having an alcoholic drink of any kind  
Amount of standard drinks consumed when drinking  
Level of frequency of high risk drinking

#### Smoking

Smoking status  
Frequency of smoking  
Smoking during pregnancy

#### Asthma

Asthma status

### Blood pressure

High blood pressure status  
Management of high blood pressure

### Diabetes

Diabetes status  
Age first diagnosed with diabetes  
Type of diabetes

### Social capital measures

Social networks and support structures  
Social and community participation  
Civic involvement and empowerment  
Trust in people and social institutions  
Tolerance of diversity

### Physical activity

Whether walked continuously for at least 10 minutes in previous week  
Amount of time spent walking continuously in previous week  
Whether did any vigorous physical activity in previous week  
Amount of time spent doing vigorous activity  
Whether did any incidental physical activity for 10 or more minutes in previous week  
Usual time of week spent doing incidental physical activity

### Self-reported health status

#### Kessler 10 measure of psychological distress

##### Health conditions

Arthritis  
Heart disease  
Stroke  
Cancer  
Osteoporosis  
Depression or anxiety

##### Mental Health

Whether sought help for mental health related problem  
Who professional help was sought from

### Eye care

Change in vision in previous 12 months  
Visits to eye specialists  
Eye problems  
Eye protection





