10. Health Behaviours

10.1 Chronic Disease Risk Factors

10.1.1 Smoking

Compared to Victoria, Central Goldfields had a higher proportion of population aged 18 years and over who were current smokers. Within the CVHA region, Central Goldfields had the highest proportion and Mount Alexander had the lowest. State-wide findings from the Victorian Population Health Survey also indicate that *across Victoria*:

- Males aged 25-34 years were most likely to be current smokers compared to all males and females
- Females aged 18-24 years were most likely to be current smokers, compared to other females, and
- The proportion of males & females who were current smokers decreased between 2001 and 2008.

Prevalence of Smoking, Population Aged 18 Years and Over[#] (2008)

	Central Goldfields	Macedon Ranges	Mount Alexander	Victoria
Smoking status	%	%	%	%
Current smoker [(a)]	21.6	17.1	15.3	**19.1**
Ex-smoker	24.7	21.4	25.3	**23.8**
Non-smoker	53.5	61.4	59.0	**56.8**

Victorian Population Health Survey 2008, Department of Health 2010 *# Age-standardised* *[(a)] A person who smoked daily or occasionally was categorised as a current smoker*

Statistical Local Area trends

An estimate of the proportion of population that smokes has been undertaken by the Public Health Information Development Unit, using data from the 2007-08 National Health Survey.

Compared to the Victorian average, males of all CVHA region SLAs, excluding Macedon Ranges – Balance, were more likely to be smokers. Within the region, males from Central Goldfields – Maryborough SLA were the most likely to be smokers, followed by those from Central Goldfields – Balance, while males from Macedon Ranges – Balance SLA were least likely to be smokers.

Females from all Central Goldfields and Mount Alexander SLAs, together with Macedon Ranges – Kyneton SLA, were more likely to be smokers than the regional Victoria and Victoria average. Within the region, females from Central Goldfields – Maryborough SLA, followed by Central Goldfields – Balance SLA, had the highest rate of smoking. Females from Macedon Ranges – Balance had the lowest rate of smoking in the CVHA region.

Male and Female Current Smokers (Synthetic Prediction) 18 Years and Over (2007-08)

	Males		Females	
	No.	Rate* per 100	No.	Rate* per 100
C. Goldfields – Maryborough	701	29.0	649	24.0
C. Goldfields – Balance	499	28.1	400	22.7
Macedon Ranges – Kyneton	744	25.3	655	20.1
Macedon Ranges – Romsey	910	22.5	770	17.8
Macedon Ranges – Balance	1,352	19.2	1,239	16.1
Mount Alexander – Castlemaine	712	26.2	561	21.2
Mount Alexander – Balance	907	25.2	792	20.3
Regional Victoria	-	*24.5*	-	*20.9*
Victoria	-	**21.9**	-	**17.8**

Social Health Atlas of Australia, Victoria 2011, Public Health Information Development Unit 2011 **Indirectly age-standardised rate per 100 population*

10.1.2 Nutrition

The current Australian guidelines recommend a minimum daily vegetable intake of five serves and a recommended minimum daily fruit intake of two serves for persons aged 19 years and over. Compared to the Victorian average, a higher proportion of all CVHA LGA populations aged 18 years and over met the vegetable consumption guidelines. Within the CVHA region, Mount Alexander had the highest proportion and Central Goldfields had the lowest.

Macedon Ranges and Mount Alexander had a higher proportion of population aged 18 years and over that met the fruit consumption guidelines, while Central Goldfields had a lower proportion. Within the CVHA region, Mount Alexander had the highest proportion and Central Goldfields had the lowest.

Fruit and Vegetable Intake, Population Aged 18 Years and Over[#] (2008)

	C. Goldfields	M. Ranges	Mt Alexander	Victoria
5 or more serves of vegetables per day	9.3	9.6	10.0	**7.7**
2 or more serves of fruit per day	46.8	54.3	55.6	**48.6**

*Victorian Population Health Survey 2008, Department of Health 2010 # Age-standardised * Estimate has a relative standard error between 25 and 50 per cent and should be interpreted with caution. [(a)] A serve is half a cup of cooked vegetables or a cup of salad vegetables [(b)] A serve is one medium piece or two small pieces of fruit, or one cup of diced pieces.*

State-wide findings from the Victorian Population Health Survey also indicate that *across Victoria*:

- 90% of people aged ≥18 years did not meet the guidelines for vegetable intake in 2008
- More males than females did not meet the vegetable intake guidelines,
- The 18-24 years age group, for males and females, had the lowest intake of 3 or more daily serves of vegetables
- 53% of persons aged ≥18 years did not meet the guidelines for fruit intake
- More males than females did not meet the fruit intake guidelines, and
- The 25-34 years age group, for males and females, had the lowest intake of 2 or more daily serves of fruit.

Statistical Local Area Trends

Compared to Victoria, population aged 5 to 17 years from both Central Goldfields SLAs and Mount Alexander – Castlemaine SLA were less likely to have had a usual daily intake of two or more serves of fruit. Within the CVHA region, Macedon Ranges – Romsey and Balance SLAs shared the highest rate and Central Goldfields – Balance SLA had the lowest.

Compared to Victoria, population aged 18 years and over from all CVHA region LGAs were less likely to have had a usual daily intake of two or more serves of fruit. Within the CVHA region, Macedon Ranges – Balance had the highest rate and Central Goldfields – Balance SLA had the lowest.

Usual Daily Intake Of Two Or More Serves Of Fruit (Synthetic Prediction) by Age Group (2007-08)

	persons aged 5 to 17 years		persons aged 18 years and over	
	No.	Rate per 100*	No.	Rate per 100*
C. Goldfields – Maryborough	686	58.2	2,939	46.8
C. Goldfields – Balance	558	57.5	1,972	46.8
Macedon Ranges – Kyneton	1,018	63.4	3,278	48.5
Macedon Ranges – Romsey	1,606	64.3	4,025	48.9
Macedon Ranges – Balance	2,838	64.3	7,590	50.6
Mount Alexander – Castlemaine	672	58.2	3,046	48.5
Mount Alexander – Balance	1,254	64.9	3,997	48.0
Regional Victoria	*161,026*	*62.1*	*532,109*	*48.9*
Victoria	**552,472**	**63.2**	**2,064,664**	**50.9**

*Social Health Atlas of Australia, Victoria 2011, Public Health Information Development Unit 2011 * Indirectly age-standardised rate per 100 population*

10.1.3 Physical Inactivity

Compared to Victoria, a higher proportion of all LGA populations within the CVHA region aged 18 years and over had sufficient physical activity time and sessions. Central Goldfields had a higher proportion of residents that were sedentary[(b)] in comparison to Victoria. Both Central Goldfields and Macedon Ranges populations aged 18 years and over were more likely to have had zero days of incidental physical activity in the past week.

Physical Inactivity, Population Aged 18 Years and Over[#] (2008)

		Central Goldfields	Macedon Ranges	Mount Alexander	Victoria
		%	%	%	%
Physical activity levels[(a)]	Sedentary [(b)]	6.6*	3.6*	3.9	**5.3**
	Insufficient time and/or sessions	21.7	22.9	19.6	**27.4**
	Sufficient time and sessions	61.8	64.4	68.2	**60.3**
Incidental[(c)] physical activity	Zero days of incidental physical activity in past week	65.6	70.1	55.5	**61.7**
Occupational physical activity	Mostly sitting or standing	52.1	56.7	49.0	**64.2**
	Mostly walking	19.8	29.9	34.3	**20.5**
	Mostly heavy labour or physically demanding work	25.6	12.8	12.0	**13.3**

*Victorian Population Health Survey 2008, Department of Health 2010 # Age-standardised [(a)] Based on national guidelines (DoHA 1999) and excludes adults aged less than 19 years. [(b)] No physical activity time [(c)] walked or cycled for transport for trips taking longer than 10 minutes 2008 * Estimate has a relative standard error between 25 and 50 per cent and should be interpreted with caution.*

State-wide findings from the Victorian Population Health Survey also indicate that *across Victoria*:

- Males aged 19-24 years reported the highest incidence of sufficient physical activity sessions/time – out of all age groups for males and females
- Females aged 19-24 years reported the highest incidence of sufficient physical activity sessions/time – out of all female age groups
- Males and females aged 65 years and over reported the lowest incidence of sufficient physical activity sessions/time, and
- The proportion of males and females reporting sufficient time and sessions of physical activity to meet the guidelines decreased slightly between 2005 and 2008 (63.6% to 60.3%).

Estimates of physical inactivity were undertaken by the Public Health Information Development Unit using the 2007-08 National Health Survey data. Central Goldfields – Maryborough and Balance SLAs and Mount Alexander - Castlemaine SLA had a higher rate of population that was physically inactive, compared to the regional Victoria and Victoria average. Within the region, Central Goldfields – Maryborough SLA had the highest rate of population that was physically inactive.

Physical Inactivity (Synthetic Prediction) Persons Aged 15 Years and Over (2007-08)

	No.	Rate per 100
C. Goldfields – Maryborough	2,569	38.7
C. Goldfields – Balance	1,681	38.1
Macedon Ranges – Kyneton	2,314	32.4
Macedon Ranges – Romsey	2,665	30.5
Macedon Ranges – Balance	4,409	27.7
Mount Alexander – Castlemaine	2,444	36.7
Mount Alexander – Balance	2,752	31.6
Regional Victoria	*389,323*	*33.8*
Victoria	**1,396,639**	**32.6**

*Social Health Atlas of Australia, Victoria 2011, Public Health Information Development Unit 2011 * Indirectly age-standardised rate per 100 population*

10.1.4 Obesity and Body Weight Status

Compared to Victoria, a higher proportion of males from Macedon Ranges and Mount Alexander were overweight, while a higher proportion of males from Central Goldfields and Macedon Ranges were obese. Within the CVHA region, Mount Alexander had the highest proporiton of overweight males while Central Goldfields had the highest proportion of obese males.

Compared to Victoria, a higher proportion of females from Central Goldfields and Macedon Ranges were overweight and a higher proportion of females from every LGA were obese. Within the CVHA region, Macedon Ranges had the highest proportion of overweight females while Mount Alexander had the highest rate of obese females.

Overweight and Obese[(a)] Population, Population Aged 18 Years and Over[#] (2008)

	C.Goldfields		M. Ranges		Mt Alexander		Victoria	
	Males	Females	Males	Females	Males	Females	Males	Females
	%	%	%	%	%	%	%	%
Overweight	32.0	**24.5**	**40.3**	**31.6**	**42.4**	22.4	**39.9**	**24.2**
Obese	**21.7**	**20.7**	**20.3**	**18.6**	16.4	**21.9**	**17.3**	**16.1**

Victorian Population Health Survey 2008, Department of Health 2010 (a) Determined by calculation of body mass index (BMI). #Age-standardised

State-wide findings from the Victorian Population Health Survey also indicate that *across Victoria*:

- Between the sexes, the proportion of males who were overweight was higher than females
- The proportion of persons who were overweight or obese increased between 2002 and 2008
- Overweight and obesity were more prevalent among persons aged 45 years and over, and
- More people from rural areas were overweight or obese, compared with metro areas.

Males

Estimates of obese and overweight population were undertaken by the Public Health Information Development Unit, using the 2007-08 National Health Survey data. All Central Goldfields and Mount Alexander SLA male populations, together with the Macedon Ranges - Kyneton SLA, were more likely to be obese than the Victorian average. Within the CVHA region, Central Goldfields – Maryborough had the highest rate of male population that was obese, followed by Central Goldfields – Balance.

All Macedon Ranges SLAs had a higher rate of overweight (not obese) male population compared to Victoria. Within the CVHA region, Macedon Ranges – Balance SLA had the highest rate of male population that was overweight, followed by Macedon Ranges – Romsey SLA.

Overweight and Obese Males (Synthetic Prediction) 18 Years and Over (2007-08)

	Overweight (not obese)		Obese	
	No.	Rate per 100*	No.	Rate per 100*
C. Goldfields – Maryborough	999	34.5	778	**27.3**
C. Goldfields – Balance	739	34.6	580	25.9
Macedon Ranges – Kyneton	1,179	36.2	710	21.1
Macedon Ranges – Romsey	1,569	37.4	771	17.3
Macedon Ranges – Balance	2,823	38.3	1,291	16.6
Mount Alexander – Castlemaine	1,018	34.2	621	21.0
Mount Alexander – Balance	1,461	35.5	880	20.2
Regional Victoria	*189,696*	*35.8*	*111,020*	*20.7*
Victoria	**709,572**	**35.7**	**355,824**	**18.0**

*Social Health Atlas of Australia, Victoria 2011, Public Health Information Development Unit 2011 * Indirectly age-standardised rate per 100 population*

Females

Estimates of obese and overweight population were undertaken by the Public Health Information Development Unit, using the 2007-08 National Health Survey data. All Central Goldfields and Mount Alexander SLA female populations, together with the Macedon Ranges - Kyneton SLA, were more likely to be obese than the Victorian average. Within the CVHA region, Central Goldfields – Maryborough had the highest rate of female population that was obese, followed by Central Goldfields – Balance.

All CVHA region SLAs had a higher rate of overweight (not obese) female population compared to Victoria. Within the CVHA region, Central Goldfields – Balance SLA had the highest rate of female population that was overweight, followed by Central Goldfields – Maryborough SLA

Overweight and Obese Females[#], 18 Years and Over (2007-08)

	Overweight (not obese)		Obese	
	No.	**Rate per 100***	**No.**	**Rate per 100***
C. Goldfields – Maryborough	755	23.8	626	19.7
C. Goldfields – Balance	491	24.0	413	19.4
Macedon Ranges – Kyneton	818	23.5	659	18.5
Macedon Ranges – Romsey	987	23.5	693	15.9
Macedon Ranges – Balance	1,825	23.5	1,086	13.4
Mount Alexander – Castlemaine	745	23.7	533	16.7
Mount Alexander – Balance	999	23.6	741	16.7
Regional Victoria	*130,217*	*23.6*	*97,116*	*17.4*
Victoria	**467,525**	**22.6**	**330,289**	**16.0**

*Social Health Atlas of Australia, Victoria 2011, Public Health Information Development Unit 2011 # Synthetic prediction * Indirectly age-standardised rate per 100 population*

10.1.5 Type 2 Diabetes and Body Weight Status

In 2007-08, Central Goldfields - Maryborough and Balance SLAs had higher estimated rates of population, aged 18 years and over, that had type 2 diabetes and were overweight or obese, compared to Victoria and regional Victoria averages. Within the CVHA region, Central Goldfields – Balance had the highest rate, followed by Central Goldfields – Maryborough, while Macedon Ranges – Balance had the lowest.

People Who Had Type 2 Diabetes and Were Overweight/Obese (Synthetic Prediction) (2007-08)

	No.	**Rate per 100***
C. Goldfields – Maryborough	274	**3.4**
C. Goldfields – Balance	199	**3.6**
Macedon Ranges – Kyneton	233	3.0
Macedon Ranges – Romsey	233	2.8
Macedon Ranges – Balance	433	2.7
Mount Alexander – Castlemaine	236	3.1
Mount Alexander – Balance	318	3.1
Regional Victoria	*127,536*	*3.2*
Victoria	**37,734**	**3.1**

*Social Health Atlas of Australia, Victoria 2011 , Public Health Information Development Unit 2011 * Indirectly age-standardised rate per 100 population*

10.2 Health Screening and Checks

10.2.1 Breast Cancer

Compared to Victoria and rural Victoria, Central Goldfields and Mount Alexander females aged 50-69 years reported they were less likely to have had a mammogram in the two years preceding 2008. Macedon Ranges females were more likely than Victoria and rural Victoria to have had a mammogram in the two years preceding 2008.

Had Mammogram* in Last Two Years, Women[(a)] Aged 50-69 years (2008)

	% of surveyed women aged 50-69 years
Central Goldfields	66.3
Macedon Ranges	83.5
Mount Alexander	72.8
Rural Victoria	*74.4*
Victoria	**75.9**

*Victorian Population Health Survey 2008, Department of Health 2010. * self reported [(a)] out of surveyed women aged 50 – 69 years.*

State-wide findings from the Victorian Population Health Survey also indicate that *across Victoria*:

- In 2006, there were 3,182 new cases of breast cancer
- Women[(a)] aged 60-64 years were most likely to have had a mammogram in the last 2 years, and
- Women[(a)] aged 50-54 years were least likely to have had a mammogram in the last 2 years.

10.2.2 Cervical Cancer

In 2008, compared to Victoria and rural Victoria, females aged 20-69 years from all LGAs within the CVHA region reported they were less likely to have had a pap smear in the previous two years. Within the CVHA region, Central Goldfields had the lowest rate and Mount Alexander had the highest.

Had a Pap Smear in the Past Two Years*[(a)], Females Aged 20–69 Years[#] (2008)

Area	% of surveyed women aged 20-69 years
Central Goldfields	61.4
Macedon Ranges	66.5
Mt. Alexander	69.9
Rural Victoria	*71.4*
Victoria	**71.1**

*Victorian Population Health Survey 2008, Department of Health 2010 a) Female survey participants were able to select 'not applicable' as a response to the question. They have been excluded from the denominator when calculating estimates. * self reported #Age-standardised*

10.2.3 Bowel Cancer

In 2008, compared to Victoria, Macedon Ranges had a lower proportion of population aged 50 years and over, that had had a test to detect bowel cancer in the two years preceding 2008. Central Goldfields and Mount Alexander populations had a similar proportion to the Victorian average.

Bowel Cancer Screening*, Population Aged 50 Years and Over# (2008)

	Central Goldfields	Macedon Ranges	Mount Alexander	Rural Victoria	Victoria
	%	%	%	%	%
Bowel cancer screening in last 2 years[a] [b]	30.4	28.0	30.3	30.0	**29.4**

*Victorian Population Health Survey 2008, Department of Health 2010. * self reported #Age-standardised [a] Only respondents aged 50 years and over were asked whether they had had a test for bowel cancer in the past 2 years. [b] Based on persons for whom a bowel examination to detect bowel cancer was applicable at the time of the survey.*

State-wide findings from the Victorian Population Health Survey also indicate that *across Victoria*:

- More males than females had a bowel cancer detection test in the past 2 years
- The 65-69 years age group was most likely to have had a detection test in the past 2 years, and
- The 50-54 years age group was least likely to have had had a detection test in the past 2 years.

10.2.4 Other Health Checks

In 2008, compared to Victoria, Macedon Ranges had a higher rate of population aged 18 years and over that had had a blood pressure, cholesterol or blood glucose check in the previous two years.

Blood Pressure

In 2008, compared to Victoria, all CVHA region LGAs had a higher proportion of population aged 18 to 49 years that had had a blood pressure check in the previous two years. However, a lower proportion of Central Goldfields population aged 50 years and had a blood pressure check in the last two years.

Cholesterol

In 2008, compared to Victoria, a lower proportion of Central Goldfields and Mount Alexander populations aged 18 years and over had had a cholesterol check in the previous two years.

Blood Glucose

In 2008, compared to Victoria, a lower proportion of Central Goldfields population aged 18 to 49 years and Mount Alexander population aged 50 years and over had a blood glucose check in the last 2 years.

Self Reported Health Checks# (2008)

	Health check*	C.Goldfields	M.Ranges	Mt Alexander	Victoria
		%	%	%	%
Blood pressure checked in last 2 years	• 18 – 49 years old	78.5	74.9	71.6	**70.6**
	• 50 years and older	89.6	93.7	95.0	**93.1**
Cholesterol checked in last 2 years	• 18 – 49 years old	35.0	41.7	28.4	**39.7**
	• 50 years and older	73.7	84.3	77.4	**81.9**
Blood glucose checked in last 2 years	• 18 – 49 years old	35.6	43.7	40.3	**39.1**
	• 50 years and older	72.5	74.9	66.4	**72.1**

*Victorian Population Health Survey 2008, Department of Health 2010. #Age-standardised * self reported*

State-wide findings from the Victorian Population Health Survey also indicate that:

- Females were more likely than males to have had a blood pressure check in the last 2 years
- Males were more likely than females to have had a blood test for cholesterol in the last 2 years
- Males and females were equally likely to have had a blood glucose check in the last 2 years, and
- The probability of having had a blood pressure, cholesterol or blood glucose check in the last 2 years increased with age.

10.2.5 Sun Protective Behaviour

Compared to Victoria, all CVHA LGAs had a higher proportion of population aged 18 years and over that, when out in the sun, usually wore a hat or usually wore both a hat and sunglasses together. Central Goldfields and Mt Alexander had a lower proportion of population aged 18 years and over that, when out in the sun, usually wore only sunglasses.

Sun Protective Behaviour*, 18 Years and Over# (2008)

Behaviour	C.Goldfields	M.Ranges	Mt Alexander	Victoria
Usually wears a hat**	64.2	63.9	67.8	**52.6**
Usually wears sunglasses**	72.6	74.8	71.6	**74.0**
Usually wears hat & sunglasses	47.7	48.3	49.4	**41.0**
Wears neither hat nor sun-glasses	10.5	9.6	9.6	**14.1**

*Victorian Population Health Survey 2008, Department of Health 2010. * self reported ** when out in the sun #Age-standardised*

State-wide findings from the Victorian Population Health Survey also indicate that *across Victoria*:

- Males were more likely to usually wear a hat when out in the sun, compared to females
- Out of all males and females, males aged 65 yrs and over were most likely to report they usually wear a hat and females aged 18 – 24 were least likely
- Females were more likely to wear sunglasses when out in the sun, compared to males, and
- Out of all males and females, females aged 35-44 were most likely to report they usually wear sunglasses and males aged 65 years and over were least likely.