Greater Geelong Community Health Needs Assessment 2014
The City of Greater Geelong acknowledges Wadawurrung Traditional Owners of this land and all Aboriginal and Torres Strait Islander People who are part of the Greater Geelong community today.

Acknowledgement:
This document was produced by Healthy Together Geelong on behalf of the Healthy Together Governance Group. Acknowledgement is also made to Barwon Health, Bellarine Community Health, G21 and the City of Greater Geelong for the time, commitment, resources and support contributed to the development of this resource.

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EXECUTIVE SUMMARY

This report provides a Health Needs Assessment for Greater Geelong which is based on rates of key lifestyle related health problems – overweight/obesity, inadequate fruit and vegetable consumption, inadequate physical activity, smoking and harmful alcohol consumption. Breastfeeding rates in Greater Geelong are also included, as another important preventive health relevant behaviour. The report includes comparisons with state averages, comparisons between geographic areas, and comparisons between 2008 and 2011/12 rates of prevalence of these key health problems. The key findings presented in this report are:

Alcohol

- The percentage of adults (and both males and females separately) in Greater Geelong at risk of short-term alcohol related harm was higher than the Victorian average in 2008 and 2011/12,
- The percentage of males at risk of short-term alcohol related harm dropped between 2008 and 2011/12, and the percentage of females at risk increased during this period,
- The percentage of adults in Greater Geelong at risk of long-term alcohol related harm was more than double the Victorian average in 2008.

Overweight/Obesity

- The percentage of overweight/obese combined adults in Greater Geelong was higher than the Victorian average in 2008 and in 2011/12,
- The percentage of overweight/obese combined adults in Greater Geelong increased between 2008 and 2011/12, and this increase was greater than the increase in the Victorian average,
- The percentage of overweight males in Greater Geelong was slightly higher than the Victorian average, and the percentage of obese males was slightly lower than the Victorian average in both 2008 and 2011/12,
- The percentages of overweight and obese adult females in Greater Geelong was higher than the Victorian average in both 2008 and 2011/12,
- The geographic pattern of overweight/obesity combined in Greater Geelong shows that obesity is higher in low socioeconomic status suburbs, but not overweight/obesity combined, which is higher in suburbs far out from central Geelong.
Physical Activity

- The percentage of adults in Greater Geelong who were sufficiently physically active were slightly higher in Greater Geelong than the Victorian average in 2008 and in 2011/12, and rose slightly between 2008 and 2011/12,
- The percentage of children in Greater Geelong who were insufficiently physically active was slightly above the Victorian average in 2007,
- The geographic pattern of insufficient physical activity in Greater Geelong can be extrapolated from the pattern of overweight/obesity combined levels, and shows that insufficient physical activity levels are higher in suburbs far out from central Geelong.

Smoking

- The percentage of smokers in Greater Geelong was higher than the Victorian average in 2008 and 2011/12, and increased between 2008 and 2011/12, whereas the Victorian state average percentage decreased during this period,
- The geographic pattern of smoking in Greater Geelong shows that smoking levels are higher in low socioeconomic status suburbs.

Vegetable/ Fruit Consumption

- The percentage of adults eating enough vegetables in Greater Geelong approximately halved between 2008 and 2011/12, and was higher than the Victorian average in 2008, and lower than the Victorian average in 2011/12,
- The percentage of adults eating enough fruit in Greater Geelong dropped between 2008 and 2011/12, and was higher than the Victorian average in 2008 and lower than the Victorian average in 2011/12,
- The percentage of children eating enough vegetables in Greater Geelong was well below the Victorian average in 2007,
- The percentage of children eating enough fruit in Greater Geelong was slightly above the Victorian average in 2007.

Breast Feeding

- The breast feeding rate in Greater Geelong in 2011/12 was lower for all post hospital periods than the Victorian state average,
The information presented in this report indicates that:

Greater Geelong’s worst preventable health problem, as assessed by comparisons with state averages, is the percentage of adults who are current smokers. The next worst preventable health problems are short-term alcohol related harm, and overweight and obesity in adult females. The worst preventable health problem for children as assessed by comparisons with state averages is insufficient physical activity, followed by insufficient vegetable consumption.

Greater Geelong’s worst preventable health problem in terms of geographic location consists of low socio-economic status suburbs, and suburbs that are comparatively distant from central Geelong.

Greater Geelong’s most worsening preventable health problem between 2008 and 2011/12 is insufficient fruit consumption. The next most worsening preventable health problem during this period is the percentage of adults who are smokers, and this rise was against the Victorian wide smoking trend, which improved. Overweight/obesity combined levels have also worsened in Greater Geelong between 2008 and 2011/12.

This Greater Geelong Health Needs Assessment will inform health need recommendations, based on identifications of the worst health problems in the area and the geographic locations and genders with the worst health problems. Recommendations based on this Health Needs Assessment will also need to be based on determinations of the most effective health improving responses.
INTRODUCTION

About this report

This report contains information on the prevalence of major health risk-taking behaviours across the City of Greater Geelong population, including the prevalence of overweight and obesity, insufficient fruit and vegetable intake, consumption, insufficient levels of physical activity, smoking, harmful consumption of alcohol, and breastfeeding rates. This information is vital for optimal targeting of public health interventions and for evaluating outcomes.

The Health Needs Assessment was developed with support from the City of Greater Geelong, Healthy Together Geelong, Barwon Health, Bellarine Community Health and G21.

Survey information is presented in this report, where available, for children and adults in the City of Greater Geelong and in the State of Victoria for the following indicators:

- Alcohol consumption (short and long term risk)
- Healthy Eating (fruit and vegetable consumption and breastfeeding)
- Overweight and obesity
- Physical Activity
- Smoking

BACKGROUND

Healthy Together Geelong

Healthy Together Geelong (HTG) is jointly funded by the State Government of Victoria and the Australian Government through the National Partnership Agreement on Preventive Health (NPAPH). Healthy Together Geelong is a strategic partnership between the City of Greater Geelong, Barwon Health and Bellarine Community Health. Healthy Together Geelong is working collaboratively to achieve sustained reductions in the growth of preventable chronic diseases, and to create lasting improvements in the health and wellbeing of the Greater Geelong community.

Greater Geelong communities, early childhood services, schools and workplaces are being encouraged to take action to improve the health and wellbeing of people where they live, learn, work and play through a range of prevention initiatives, and are grouped into the following intervention types:

• Healthy living programs and strategies (HLPS)
• Health promoting settings (schools and early childhood services and workplaces)
• Social marketing

For more information about Healthy Together Geelong, please visit http://www.geelongaustralia.com.au/healthytogether/

Community Health Needs Assessment
To ensure that delivered Healthy Living Programs and Strategies meet local needs, the Healthy Together Geelong Governance Group formed a Needs Assessment Project Group (NAPG) to undertake a comprehensive needs assessment. The NAPG consists of representatives from Healthy Together Geelong, Barwon Health, Bellarine Community Health and G21.

This Health Needs Assessment provides a comprehensive overview of the current health status of the Greater Geelong population, in relation to levels of, healthy eating, physical activity, tobacco and alcohol use, at varying ages and at common transition points across the life span. Health and wellbeing is influenced by interactions between individuals and their physical, social and economic environments, and these interactions change as a person develops and ages. There are critical periods of development that provide opportunities for significant preventive impact over people’s life course – for example, infancy and early childhood, adolescence, and periods of transition (such as from early childhood education and care to primary school, primary to secondary school, new parenthood and retirement). Investment in positive early childhood development is highly cost-effective as it provides children with valuable cognitive and social skills. This investment supports the development of resilience and the ability to make positive health choices. Furthermore, these skills can help delay the initiation of risk behaviours such as smoking and alcohol use. Given that many chronic conditions stem from these behavioural choices, the investment in positive early childhood development is likely to result in a lower burden of disease caused by preventable health problems and diseases across people’s life courses.
METHODOLOGY

Population Health Survey 2008\(^2\), 2011/12 preliminary findings\(^3\)

The Victorian Population Health Survey (VPHS) has been conducted since 2001. Prior to 2008 the survey was based on a sample of 7500 adults aged 18 years and over, (436 residents were surveyed in the city of Greater Geelong) randomly selected from households from each of the eight Department of Health regions in the state. In 2008, computer-assisted telephone interviewing was undertaken, the sample size was expanded to 34,168 adults, and the survey was taken at the Local Government Area level.

The Victorian 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.

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. In 2008 the VPHS was undertaken at the Local Government Area (LGA) level, rather than at the state-wide level, for the first time. All data were self-reported and stored directly in the CATI system.

The Victorian Health Information Surveillance System (VHISS) is an interactive website displaying public health indicators where you can select from a range of options to produce tailored graphs and tables. Date used in this report has used 2008 data and where available the 2012 revised and updated figures. The sample size for the Victorian Health Monitor was expanded in 2011/12 so that information could be analysed and presented at the Local Government Area. A total of 33,673 people completed interviews for the Victorian Population Health Survey with 800 interviews conducted in eight languages apart from English. The overall response rate for the survey was 66.8 percent.


Confidence intervals (CI): A confidence interval is a computed interval with a given probability (for example, 95% CI) that a true value of a variable, such as a percentage, is contained within the interval. The confidence interval is therefore the likely range of the true values. Throughout this report; where possible, 95% confidence intervals have been included in tables and graphs.

The maps drawn in this report have been modelled from the Victorian Population Health Survey\(^2\) and Mosaic\(^4\)

\(^4\) Preventative Health Data Profile (June 2012) Greater Geelong, Victoria. Department of Health
OVERWEIGHT AND OBESITY

Introduction
Obesity is one of the most significant health challenges facing Australians. Overweight and obesity are an excess accumulation of body fat that is a significant risk factor for hypertension, cardiovascular disease, type 2 diabetes, gall bladder disease, musculoskeletal disorders, some cancers, psychosocial disorders and breathing difficulties.\(^5\) Being overweight or obese can lead to disability and/or premature death. Furthermore, obesity is estimated to reduce life expectancy by between 3 and 14 years.\(^6\)

There are many ways to measure overweight and obesity, the most commonly used method for population health monitoring/screening is the Body Mass Index (BMI). The BMI provides a measure of body weight in relation to height that 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: \(\text{BMI} = \frac{\text{weight (kg)}}{\text{height squared (m}^2)}\).

Definition
The World Health Organization classifies adult weight status based on the following BMI scores:

<table>
<thead>
<tr>
<th>BMI Score</th>
<th>Weight Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 18.5</td>
<td>Underweight</td>
</tr>
<tr>
<td>18.5 – 24.9</td>
<td>Healthy Weight</td>
</tr>
<tr>
<td>25 – 29.9</td>
<td>Overweight</td>
</tr>
<tr>
<td>&gt; 30</td>
<td>Obese</td>
</tr>
</tbody>
</table>

Data Collection
This report uses self-reported data from the Victorian Population Health Survey 2008 and 2011/12 preliminary results. Survey respondents were asked to report their height and weight. The formula for collecting BMI was used to calculate each respondent’s BMI which was then categorised according to the WHO criteria described above.

Studies comparing self reported height and weight with actual physical measurements have shown that people tend to underestimate their weight and overestimate their height, resulting in an overall underestimate of their BMI. 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 obese.

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Adult overweight and obesity prevalence
Overweight and obesity are huge and rapidly increasing public health problems in the developed and also in the developing world. These are also huge problems in Geelong. Table 1 shows the extent of combined overweight/obesity in Greater Geelong adults, and how this has changed between 2008 and 2011/12.

Table 1 shows that adults (males and females combined) in Greater Geelong were slightly more overweight/obese than the state average in 2008 and 2011-12, and that this level needs to improve by over 7 percent (from 56% to 48.6%) to meet the Department of Health’s 2014 targets. Overweight and obesity levels for adults combined increased by 2.2 percent in Greater Geelong between 2008 and 2011/12; however, this increase is not statistically significant.

Table 1 also shows that in 2011/12, 56 percent of Greater Geelong’s approximately 160,000 adults (people aged 18+) were overweight or obese, which means that approximately 90,000 adults living in Greater Geelong are overweight or obese. To achieve the Department of Health’s 2014 target of a reduction to 48.6 percent overweight/obese adults in Geelong, 7.4 percent of the adult population – approximately 12,000 adults - need to reduce their unhealthy weight status.

Table 1: Percent overweight/obese adults (male and female) in Greater Geelong, 2008* and 2011/2**

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2011-12</th>
<th>Geelong 2014 DH target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geelong</td>
<td>53.8 (44.3-64.5)</td>
<td>56.0 (48.5-63.3)</td>
<td>48.6</td>
</tr>
<tr>
<td>Victoria</td>
<td>48.5 (47.2-49.9)</td>
<td>49.8 (48.8-50.8)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*VHISS 2008 (Revised and updated in 2012)  † † DH 2013†† (Data in brackets indicate confidence intervals)

---

Table 2 shows that the rates of overweight and obesity combined and overweight separately for adult males in Greater Geelong were slightly higher than the state averages in 2008 and 2011-12, and that the rate of obesity separately was slightly higher than the state average in 2008, and slightly lower than the state average in 2011/12. All differences are not statistically significant.

<table>
<thead>
<tr>
<th></th>
<th>Overweight</th>
<th>Obese</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Geelong</strong></td>
<td>42.4</td>
<td>46.4</td>
<td>17.7</td>
</tr>
<tr>
<td><strong>Victoria</strong></td>
<td>39.9</td>
<td>40.6</td>
<td>17.2</td>
</tr>
</tbody>
</table>
Table 3 shows that the rates of overweight and obesity combined and separately for adult females in Greater Geelong were higher than the state average in 2008 and 2011-12. The overweight and obesity combined differences and separate overweight differences between Geelong and the state average are smaller in 2011-12 than they were in 2008, and the separate obese differences are larger in 2011-12 than they are in 2008. All differences are not statistically significant.

Table 3: Percent overweight/obese adult females in Greater Geelong, 2008* and 2011/12**

<table>
<thead>
<tr>
<th></th>
<th>Overweight</th>
<th>Obese</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geelong</td>
<td>31.4</td>
<td>26.4</td>
<td>17.1</td>
</tr>
<tr>
<td>Victoria</td>
<td>24.3</td>
<td>24.6</td>
<td>16.1</td>
</tr>
</tbody>
</table>

*VHISS 2008 (Revised and updated 2012) **DH 2013

The geographic and demographic pattern of adult overweight and obesity levels within Greater Geelong reveals specific high health needs, as well as an overall high health need.

Department of Health mapping of relative risk in Geelong for unhealthy weight (combined overweight and obese categories) and separate obesity levels for adults, and an associated table that Healthy Together Geelong has produced (Table 4, pg. 17) show that unhealthy weight levels are highest in suburbs that are comparatively far out from central Geelong. This pattern may be related to demographic factors associated with likelihood of living in these areas, and may also be related to transport and infrastructure factors such as ratio of fast food to fresh food outlets. Note that there are no Greater Geelong suburbs with a predominately well below average overweight and obesity prevalence.

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**Figure 3: Percent overweight/obese adult females in Greater Geelong, 2008* and 2011/12**

*VHISS 2008 (Revised and updated 2012)* **DH 2013**

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Table 4: Colour-coded prevalence of overweight/obesity and obesity by Greater Geelong Suburb

**Key**

<table>
<thead>
<tr>
<th>% overweight/obese</th>
<th>Description</th>
<th>% obese</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 40%</td>
<td>Less than state average</td>
<td>Less than 16%</td>
<td>Less than state average</td>
</tr>
<tr>
<td>40% to 49%</td>
<td>About average</td>
<td>16% to 17.7%</td>
<td>About average</td>
</tr>
<tr>
<td>50% to 53%</td>
<td>Above average</td>
<td>17.8% to 20%</td>
<td>Above average</td>
</tr>
<tr>
<td>More than 53%</td>
<td>Higher above average</td>
<td>More than 20%</td>
<td>Higher above average</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overweight and Obese</th>
<th>Obese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barwon Heads</td>
<td>Bell Park</td>
</tr>
<tr>
<td>Bell Park</td>
<td>Bell Post Hill</td>
</tr>
<tr>
<td>Bell Post Hill</td>
<td>Clifton Springs</td>
</tr>
<tr>
<td>Clifton Springs</td>
<td>Corio</td>
</tr>
<tr>
<td>Drysdale</td>
<td>Herne Hill</td>
</tr>
<tr>
<td>Grovedale/ Marshall</td>
<td>Leopold</td>
</tr>
<tr>
<td>Lara</td>
<td>Newcomb/ Moolap</td>
</tr>
<tr>
<td>Leopold</td>
<td>Norlane/ North Shore</td>
</tr>
<tr>
<td>Ocean Grove</td>
<td>St Albans</td>
</tr>
<tr>
<td>Point Lonsdale</td>
<td>Thompson/ Breakwater</td>
</tr>
<tr>
<td>Portarlington</td>
<td>Whittington</td>
</tr>
<tr>
<td>St Albans</td>
<td>Barwon Heads</td>
</tr>
<tr>
<td>St Leonards/Indented Head</td>
<td>Belmont</td>
</tr>
<tr>
<td>Wandana Heights</td>
<td>Drysdale</td>
</tr>
<tr>
<td>Waurn Ponds</td>
<td>Grovedale/ Marshall</td>
</tr>
<tr>
<td>Belmont</td>
<td>Hamlyn Heights</td>
</tr>
<tr>
<td>Corio</td>
<td>Highton</td>
</tr>
<tr>
<td>East Geelong</td>
<td>Lara</td>
</tr>
<tr>
<td>Hamlyn Heights</td>
<td>Manifold Heights</td>
</tr>
<tr>
<td>Herne Hill</td>
<td>North Geelong/Rippleside</td>
</tr>
<tr>
<td>Highton</td>
<td>Portarlington</td>
</tr>
<tr>
<td>Newcomb/Moolap</td>
<td>St Leonards/Indented Head</td>
</tr>
<tr>
<td>Norlane/North Shore</td>
<td>Wandana Heights</td>
</tr>
<tr>
<td>Thompson/Breakwater</td>
<td>Waurn Ponds</td>
</tr>
<tr>
<td>Whittington</td>
<td>West Geelong</td>
</tr>
<tr>
<td>City/Drumcondra/South Geelong</td>
<td>City/Drumcondra/South Geelong</td>
</tr>
<tr>
<td>Manifold Heights</td>
<td>East Geelong</td>
</tr>
<tr>
<td>Newtown</td>
<td>Ocean Grove</td>
</tr>
<tr>
<td>North Geelong/Rippleside</td>
<td>Point Lonsdale</td>
</tr>
<tr>
<td>West Geelong</td>
<td>Newtown</td>
</tr>
</tbody>
</table>

**Source:** Modelled from Victorian Population Health Survey, 2008 and Mosaic©, Department of Health

**Interpretation**

Maps 1 and 2 (pg 19-20) show that levels of overweight and obesity combined are not higher in low socio economic statuses (SES) suburbs such as Corio, Norlane and Whittington than they are in higher SES suburbs, however levels of obesity separately
are higher in these areas (refer to maps 3 and 4, pg. 21-22). This information suggests that obesity levels may be associated with low SES levels in Greater Geelong, but not with overweight levels. It is important to point out that combining overweight and obesity can mask differences between socioeconomic statuses. Overweight is associated with high socioeconomic status, while obesity is associated with low socioeconomic status.\textsuperscript{15}

Map 1: Pattern of adult overweight and obesity combined in Greater Geelong

Source: Modelled from Victorian Population Health Survey, 2008 and Mosaic©, Department of Health
Map 2: Pattern of adult overweight and obesity combined in Greater Geelong

<table>
<thead>
<tr>
<th>% overweight/obese</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 40%</td>
<td>Less than state average</td>
</tr>
<tr>
<td>40% to 49%</td>
<td>About average</td>
</tr>
<tr>
<td>50% to 53%</td>
<td>Above average</td>
</tr>
<tr>
<td>More than 53%</td>
<td>Well above average</td>
</tr>
</tbody>
</table>

Source: Modelled from Victorian Population Health Survey, 2008 and Mosaic©, Department of Health
Map 3: Pattern of adult obesity in Greater Geelong

<table>
<thead>
<tr>
<th>% obese</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 16%</td>
<td>Less than state average</td>
</tr>
<tr>
<td>16% to 17.7%</td>
<td>About average</td>
</tr>
<tr>
<td>17.8% to 20%</td>
<td>Above average</td>
</tr>
<tr>
<td>More than 20%</td>
<td>Well above average</td>
</tr>
</tbody>
</table>

Source: Modelled from Victorian Population Health Survey, 2008 and Mosaic©, Department of Health
Map 4: Pattern of adult obesity on the Bellarine

<table>
<thead>
<tr>
<th>% obese</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 16%</td>
<td>Less than state average</td>
</tr>
<tr>
<td>16% to 17.7%</td>
<td>About average</td>
</tr>
<tr>
<td>17.8% to 20%</td>
<td>Above average</td>
</tr>
<tr>
<td>More than 20%</td>
<td>Well above average</td>
</tr>
</tbody>
</table>

Source: Modelled from Victorian Population Health Survey, 2008 and Mosaic©, Department of Health
HEALTHY EATING: FRUIT AND VEGETABLE CONSUMPTION

Introduction
Daily intake of fruit and vegetables is used as a proxy measure of the quality of the Australian diet. The food that people eat defines to an extent their health, growth and development, with fruit and vegetables playing a major role in this equation. Eating a variety of fruit and vegetables, and enough of them, gives people a better chance of getting all the nutrients and dietary fibre they need, and could help prevent major health conditions such as cardiovascular disease, diabetes, obesity and certain cancers.

According to the World Health Organization (WHO), low fruit and vegetable consumption is among the top ten risk factors contributing to global mortality. In 2003, low fruit and vegetable consumption was estimated to be responsible for 2.1 percent of the total burden of disease in Australia.

Definition
New Australian dietary guidelines (NHMRC, 2013) were introduced in 2013 that changed some of the serving sizes and recommendations for fruit and vegetables consumption, based on sex and age. The analysis in this report uses the 2003 guidelines so that results can be compared with previous surveys.

The 2003 Australian guidelines recommend a minimum daily vegetable intake of four serves for persons aged 12-18 years old and five serves for persons aged 19 years or over, where a serve is defined as half a cup of cooked vegetables or a cup of salad vegetables (approximately 75 grams). The recommended minimum daily fruit intake is three serves for persons 12-18 years old, and two serves for persons aged 19 years or over, where a serve is defined as one medium piece or two small pieces of fruit or one cup of diced pieces (approximately 150 grams of fresh fruit or 50 grams of dried fruit).

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18 WHO (2011) Information sheet, Promoting fruit and vegetable consumption around the world [Accessed online 20 December 2013] [Available from: http://www.who.int/dietphysicalactivity/fruit/en/]
Data Collection

This report uses self-reported data from the Victorian Population Health Survey 2008 and 2011/12 preliminary results for the reported number of serves of fruit and vegetables that people usually eat. Data for children was provided by proxy (mostly by parent’s reports), so the data reflect the parent’s knowledge of their child’s consumption. Fruit and vegetable juices were excluded from consumption measures as their fruit or vegetable content was not able to be accurately gauged.

Adults

Fruit and vegetable consumption prevalence

In 2008, only 7.1 percent of adults in Greater Geelong (approximately 10,700) ate the recommended amounts of fruit and vegetables; however, this was higher than the 5.7 percent recorded at state level. Greater Geelong’s level dropped to 3.6 percent of adults (approximately 5,900) for 2011/12 with only a slight reduction recorded over this period at state level. The data suggests that less than 6,000 adults in Greater Geelong are meeting fruit and vegetable consumption guidelines out of an adult population of approximately 160,000. Current levels of fruit and vegetables consumption need to be substantially improved to meet the 2014 Department of Health target levels.

Table 5: Percent adults (male and female) meeting both fruit and vegetable consumption guidelines* 2008**, 2011/12***

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2011-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater Geelong</td>
<td>7.1 (4.9-10.3)</td>
<td>3.6 (2.3-5.4)</td>
</tr>
<tr>
<td>Victoria</td>
<td>5.7 (5.4-6.1)</td>
<td>5.2 (4.8-5.6)</td>
</tr>
</tbody>
</table>

*NHMRC 2003  **VHISS 2008 (Revised and updated 2012) ***DH 2013 (Data in brackets indicate confidence interval)
Vegetable consumption

In 2008, only one in ten (10.3 percent) of adults in Greater Geelong surveyed ate the recommended amount of vegetables (five or more serves per day); however, this was higher than the 8.0 percent recorded at state level. Disappointingly, Greater Geelong’s level dropped greatly to approximately half that (5.1 percent) in 2011/12 with only a slight reduction over this period recorded at state level. The data suggests over 155,000 adults in Greater Geelong are not eating enough vegetables per day.

Table 6: Percent adults (male and female) meeting vegetable consumption guidelines* 2008** and 2011/12***

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2011-12</th>
<th>Geelong 2014 Dept. of Health Target: Serves per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater Geelong</td>
<td>10.3 (7.4-14.1)</td>
<td>5.1 (3.6-7.4)</td>
<td>2.49 to 3.96</td>
</tr>
<tr>
<td>Victoria</td>
<td>8.0 (7.6-8.5)</td>
<td>7.2 (6.8-7.7)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*NHMRC 2003** **VHISS 2008*** ***DH 2013*** (Data in brackets indicate confidence interval)
Fruit consumption

In 2008 more than half (53.2 percent) of adults surveyed in Greater Geelong met the recommended minimum daily intake levels for fruit (two or more serves per day). Less than half (47.8 percent) met their minimum daily intake at the State level. In 2011/12 only 41.2 percent of adults in Greater Geelong met the minimum daily intake levels for fruit, compared with a state average of 45.8 percent. This data suggests that almost 95,000 adults in Greater Geelong are not eating enough fruit per day.

Table 7: Percent adults (male and female) meeting fruit consumption guidelines* 2008** and 2011/12***

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2011-12</th>
<th>Geelong 2014 Dept. of Health Target: Serves per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geelong</td>
<td>53.2 (46.8-59.5)</td>
<td>41.8 (34.5-49.4)</td>
<td>1.72 to 2.32</td>
</tr>
<tr>
<td>Victoria</td>
<td>47.9 (47.1-48.8)</td>
<td>45.3 (44.4-46.3)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*NHMRC 200328 **VHISS 200829 ***DH 201330 (Data in brackets indicate confidence interval)


Risk Factors

Smoking, alcohol consumption and levels of physical activity are all factors that are linked to health. Data shows that risky levels of these key factors are associated with low levels of fruit and vegetable consumption. The Victorian Population Health Survey, 2008 showed that adults who consumed alcohol at risky/high risk levels or who were current smokers were twice as likely to eat no fruit and much less likely to consume two or more serves of fruit a day compared with the national average.

Women who smoked were four times as likely as women who had never smoked to eat no fruit, and much less likely to eat the recommended two serves a day. Women who consumed alcohol at risky/high risk levels were also more likely than women who had never consumed alcohol to eat no fruit and less likely to eat two or more serves of fruit a day.

Fruit consumption patterns for men who smoked, and consumed alcohol at risky/high risk levels were similar to those of women; however, the differences between men with and without smoking and risky/high risk drinking behaviours were less marked than they were for women. The effect of these behaviours on vegetable consumption was

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less obvious, although people with risky behaviours reported eating fewer serves of vegetables on the whole. People who exercised at moderate or high levels were more likely to eat two or more serves of fruit a day than people who did little or no exercise. They were also more likely to eat three or more serves of vegetables a day.
PHYSICAL ACTIVITY

Introduction
Lack of physical activity is a huge and rapidly increasing public health problem, and lack of physical activity is now the fourth leading cause of death worldwide. Regular physical activity can be protective against the development of health conditions such as obesity, diabetes, heart disease and hypertension, falls among the elderly and mental health conditions such as depression and anxiety. Physical activity improves cognitive function in the elderly, prevents weight gain and maintains current weight, and in conjunction with a low calorie diet, promotes weight loss.

Definition
The level of health benefits 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. Accruing 150 minutes or more minutes of moderate intensity physical activity, on a regular basis over a week is believed to be ‘sufficient’ for health benefits for adults.

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. Using this measure, the requirement is to participate in physical activity on at least five days per week to accrue a minimum of 150 minutes over a week, with more minutes and days being even better. Therefore, an adult satisfying these criteria of required time and number of physical activity sessions is classified as achieving sufficient physical activity to achieve adequate health benefits.

Data Collection
Data on population exercise levels comes from self-reported activity from the Victorian Population Health Survey 2008 and 2011/12 preliminary findings.

**Adults**

**Greater Geelong Physical Activity prevalence**

The proportion of adults in Greater Geelong achieving adequate physical activity (measured in both sufficient time and sessions) to meet the national guidelines, was 66.6 percent in 2008 and 67.6 percent in 2011/12. Physical Activity levels improved slightly in Geelong between 2008 and 2011/12.

Table 12 shows that adults (males and females combined) in Greater Geelong were slightly more physically active than the state average in 2008 and in 2011/12. All difference in physical activity levels between Geelong and Victoria are not statistically significant. To achieve the Department of Health’s 2014 target of 69.3 percent of adults meeting the physical activity guidelines, about 1.7 percent of the approximately 160,000 adults living in Greater Geelong will need to exercise more, which means that approximately 2,700 adults will need to exercise more.

**Table 12: Percent adults (male and female combined) meeting physical activity guidelines in 2008* and 20011/12**

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2011-12</th>
<th>Geelong 2014 DH Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geelong</td>
<td>66.6 (60.7-71.9)</td>
<td>67.6 (60.1-74.3)</td>
<td>69.3</td>
</tr>
<tr>
<td>Victoria</td>
<td>62.9 (62.1-63.8)</td>
<td>63.9 (63.0-64.9)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*VHISS 2008 (Revised and updated 2012)** DH 2013 (Data in brackets indicate 95% confidence Interval range)

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Table 13 shows that adult men and women in Greater Geelong were more physically active than the state average in 2008, with greater physical activity levels recorded in men. All difference in physical activity levels between Geelong and Victoria are not statistically significant.

**Table 13: Percent adults meeting physical activity guidelines by gender 2008* and 2001/12**

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008</td>
<td>2011-12</td>
</tr>
<tr>
<td>Geelong</td>
<td>68.4 (59.6-76.0)</td>
<td>Not available</td>
</tr>
<tr>
<td>Victoria</td>
<td>63.5 (62.2-64.8)</td>
<td>Not available</td>
</tr>
</tbody>
</table>

*VHISS 2008 (Revised and updated 2012)** DH 2013

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The geographic and demographic pattern of adult sufficient physical activity within Greater Geelong reveals specific high health needs, as well as an overall high health need. These patterns can be extrapolated from adults to children.

Variations in physical activity levels across Greater Geelong suburbs can be extrapolated from the Department of Health’s mapping of relative risk in Geelong of unhealthy weight levels, because of the high correlation between lack of physical activity and unhealthy weight. It can therefore be inferred that lack of physical activity in Greater Geelong is also highest in suburbs that are comparatively far out from central Geelong, which are indicated in the overweight/obesity maps (pg 19-20). This pattern may also be related to demographic factors associated with likelihood of living in these areas, and may also be related to transport and infrastructure factors, such as proximity to recreational opportunities and reduced likelihood of active transport.

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*VHIISS 2008 (revised and updated 2012)*

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**SMOKING**

**Introduction**
Smoking is the most significant cause of avoidable morbidity and mortality in Australia.\(^{43}\) Smoking is a major cause of lung cancer and chronic obstructive pulmonary disease (COPD), while those who smoke have an increased risk of developing cardiovascular disease (CVD), other cancers and other chronic conditions.\(^{44}\)

The majority of adult smokers began smoking as young people; therefore working to prevent young people from taking up smoking in the first place is important in reducing overall smoking prevalence over time.

**Definition**
There are several ways of classifying smoking status, depending on the questions being asked. The Victorian Population Health Survey defines smokers as ‘daily’ or ‘occasional’ and combines the two categories to report on ‘current smokers’.

**Smoking Prevalence**
In Geelong, the adult smoking prevalence is estimated at 20.8 percent of the population, which equates to over 33,000 individuals. In 2008 Greater Geelong had a lower percentage of smokers than the Victorian state average, however smoking rates in Greater Geelong increased between 2008 and 2011/12, and decreased in Victoria, and the smoking rate in 2011/12 in Greater Geelong was therefore higher than the Victorian state average.

Table 20 (pg. 42) shows that to achieve the Department’s of Health 2014 target there needs to be a reduction from the 20.8 percent of smokers in 2011/12 to 15.6 percent smokers in 2014 in Greater Geelong, which means that more than 8000 smokers out of over 33,000 current smokers need to quit.

Smoking-related death rates are two to three times higher in low-income groups than in wealthier social groups. Smoking in the routine and manual occupation groups is greater than the overall average which is why this population is a priority for interventions.

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Table 20: Percent adult smokers in Greater Geelong, 2008* and 2011/ 12**

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2011-12</th>
<th>Geelong 2014 Dept. of Health Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geelong</td>
<td>18.2 (13.2-24.6)</td>
<td>20.8 (14.7-28.4)</td>
<td>15.6</td>
</tr>
<tr>
<td>Victoria</td>
<td>19.1 (18.4-19.8)</td>
<td>15.7 (14.9-16.5)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*VHISS 2008 (Revised and updated 2012) **DH 2013 (Data in brackets indicate confidence intervals)

Figure 16: Percent adult smokers in Greater Geelong, 2008* and 2011/ 12**

The percentage of the population in the City of Greater Geelong who identified themselves as current smokers in 2008 was slightly lower than the Victorian state average (18.2 percent compared to 19.1 percent). The percentage of males who are current smokers (22.8 percent) was substantially higher than the percentage of females who are current smokers (14.1 percent) in the municipality.

Table 21: Percent smokers in Greater Geelong by gender, 2008*

<table>
<thead>
<tr>
<th></th>
<th>Male 2008</th>
<th>Female 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geelong</td>
<td>22.3 (14.3-33.1)</td>
<td>14.1 (9.5-20.5)</td>
</tr>
<tr>
<td>Victoria</td>
<td>21.4 (20.2-22.6)</td>
<td>16.9 (16.1-17.8)</td>
</tr>
</tbody>
</table>

*VHISS 2008 (Revised and updated 2012)* (Data in brackets indicate confidence intervals)

Figure 17: Percent smokers in Greater Geelong by gender, 2008*

Interpretation
Maps 5 and 6 (pg. 44-45) show that levels of smoking are higher in Greater Geelong’s lower Socio Economic Statuses (SES) suburbs; such as Corio, Norlane, Thomson, Whittington, St Albans and Newcomb. There are also pockets of high smoking levels in non low SES areas of Greater Geelong and the Bellarine Peninsular such as Leopold, Lara, Clifton Springs and Ocean Grove. There is some relationship between suburbs with high smoking levels and suburbs with high obesity levels, which are also higher in low SES suburbs.

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Map 5: Pattern of Smokers in Greater Geelong

<table>
<thead>
<tr>
<th>Percent Smoking</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 15%</td>
<td>Less than state average</td>
</tr>
<tr>
<td>15% to 19%</td>
<td>About average</td>
</tr>
<tr>
<td>20% to 24%</td>
<td>Above average</td>
</tr>
<tr>
<td>More than 24%</td>
<td>Higher above average</td>
</tr>
</tbody>
</table>

Source: Modelled from Victorian Population Health Survey, 2008 and Mosaic©, Department of Health
Map 6: Pattern of Smokers on the Bellarine

Source: Modelled from Victorian Population Health Survey, 2008 and Mosaic©, Department of Health

<table>
<thead>
<tr>
<th>Percent Smoking</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 15%</td>
<td>Less than state average</td>
</tr>
<tr>
<td>15% to 19%</td>
<td>About average</td>
</tr>
<tr>
<td>20% to 24%</td>
<td>Above average</td>
</tr>
<tr>
<td>More than 24%</td>
<td>Higher above average</td>
</tr>
</tbody>
</table>
ALCOHOL

Introduction

Alcohol related problems are a major cause of social disorder and illness in Australia.\(^{48}\) Alcohol misuse is a major risk factor for conditions such as liver disease, pancreatitis, diabetes and some types of cancer, and contributes to motor vehicle accidents, falls, burns and suicide. Alcohol is associated with social and emotional harms such as family violence, and can lead to crime and disorder, hospital admissions and not coping with stress.\(^{49}\) Foetal alcohol spectrum disorders may occur when mothers have consumed alcohol during pregnancy.\(^{50}\)

Definition

The 2001 Australian alcohol guidelines: health risks and benefits\(^{51}\) emphasise patterns of drinking as opposed to levels of consumption (the average amount consumed). There are two main patterns of drinking behaviour that create risk to an individual's health.

1. Excessive alcohol intake on a particular occasion
2. Consistent high-level intake over months and years

The guidelines also specified risks for various drinking levels for males and females of average or larger than average body size (\(>60\)kg for males and \(>50\)kg for females) over the long term.

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

Excessive alcohol intake on a particular occasion is classed as short term risk and consistent high-level intake over months and years is classed as long term risk.


Table 15: Australian alcohol guidelines (2001) - risks to health in the short term*

<table>
<thead>
<tr>
<th>Gender</th>
<th>Low Risk</th>
<th>Risky</th>
<th>High Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>Up to six drinks on any one day; no more than three days per week</td>
<td>Seven to ten drinks on any one day</td>
<td>Eleven or more drinks on any one day</td>
</tr>
<tr>
<td>Females</td>
<td>Up to four drinks on any one day; no more than three days per week</td>
<td>Five to six drinks on any one day</td>
<td>Seven or more drinks on any one day</td>
</tr>
</tbody>
</table>

* NHMRC 2001

Table 16: Australian alcohol guidelines (2001) - risks to health in the long term*

<table>
<thead>
<tr>
<th>Gender</th>
<th>Duration</th>
<th>Low Risk</th>
<th>Risky</th>
<th>High Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>On an average day</td>
<td>Up to four drinks per day</td>
<td>Five to six drinks per day</td>
<td>Seven or more drinks per day</td>
</tr>
<tr>
<td></td>
<td>Overall weekly level</td>
<td>Up to 28 drinks per week</td>
<td>29-42 drinks per week</td>
<td>43 or more drinks per week</td>
</tr>
<tr>
<td>Females</td>
<td>On an average day</td>
<td>Up to two drinks per day</td>
<td>Three to four drinks per day</td>
<td>Five or more drinks per day</td>
</tr>
<tr>
<td></td>
<td>Overall weekly level</td>
<td>Up to 14 drinks per week</td>
<td>15-28 drinks per week</td>
<td>29 or more drinks per week</td>
</tr>
</tbody>
</table>

* NHMRC 2001

Data collection

Data on population alcohol consumption comes from self-reported data and as such may underestimate the amount of alcohol consumed.

Alcohol prevalence – Short Term

Table 17 shows that the Greater Geelong short term harmful alcohol consumption rate is statistically significantly higher than the Victorian state average in 2008 and 20011/12. The data suggests that almost 86,000 adults in Greater Geelong are at risk of short-term harm from alcohol consumption.
Table 17: Percent adults in Greater Geelong at risk of short-term harm* (risky or high risk) from alcohol consumption in 2008** and 2011/12***

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2011-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geelong</td>
<td>54.9 (49.2-60.5)</td>
<td>52.4 (46.3-58.5)</td>
</tr>
<tr>
<td>Victoria</td>
<td>45.4 (44.6-46.2)</td>
<td>45.3 (44.3-46.3)</td>
</tr>
</tbody>
</table>

* NHMRC 2001
**VHISS (Revised and updated 2012)
***DH 2013
(Data in brackets indicate 95% confidence interval range)

Figure 13: Percent adults in Greater Geelong at risk of short-term harm* (risky or high risk) from alcohol consumption in 2008** and 2011/12***

The percentage of males drinking alcohol at levels for short-term risk of harm in Greater Geelong reduced from 2008 to the 2011/12 survey results. Conversely, a slight increase was recorded for women for the same time period. In 2008, approximately 69.2 percent of males and 41.2 percent of females reported drinking alcohol weekly at levels for short-term risk. In 2011/12, males recorded a slight reduction in short term harmful alcohol consumption to approximately 61.4 percent, whereas females recorded an increase to 44.7 percent.

Table 18: Percent adults in Greater Geelong at risk of short-term harm from alcohol consumption by gender in 2008** and 2011/12***

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008</td>
<td>2011-12</td>
<td>2008</td>
<td>2011-12</td>
</tr>
<tr>
<td>Greater Geelong</td>
<td>69.2 (61.5-75.9)</td>
<td>61.4 (51.0-70.8)</td>
<td>41.2 (33.8-49.1)</td>
<td>44.7 (37.3-52.3)</td>
</tr>
<tr>
<td>Victoria</td>
<td>53.9 (52.6-55.2)</td>
<td>52.6 (51.1-54.1)</td>
<td>37.3 (36.2-38.3)</td>
<td>38.3 (37.1-39.6)</td>
</tr>
</tbody>
</table>

* NHMRC 2001** **VHISS 2008 (Revised and updated 2012)** ***DH 2013*** (Data in brackets indicate 95% confidence interval range)

Figure 14: Percent adults in Greater Geelong at risk of short-term harm* from alcohol consumption by gender in 2008** and 2011/12***

Alcohol prevalence – Long Term

Table 19 (pg. 40) shows that the Greater Geelong long-term harm from alcohol consumption rate was substantially worse than the Victorian State average in 2008. The data suggests that more than 11,000 adults in Greater Geelong are at risk of long-term harm from alcohol consumption.

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Table 19: Percent adults in Greater Geelong at risk of long-term harm* (risky or high risk) from alcohol consumption in 2008**

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geelong</td>
<td>7.6 (4.8-12.0)</td>
</tr>
<tr>
<td>Victoria</td>
<td>3.7 (3.3-4.0)</td>
</tr>
</tbody>
</table>

* NHMRC 2001  **VHISS (Revised and updated 2012) (Data in brackets indicate 95% confidence interval range)

Figure 15: Per cent Adults in Greater Geelong at risk of long-term harm* (risky or high risk) from alcohol consumption in 2008**

* NHMRC 2001  **VHISS  

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BREASTFEEDING

Introduction
Breastfeeding provides the essential nutrients for healthy growth of infants and aids resistance to infection and the prevention of allergies. Breastfeeding also facilitates bonding between mother and child.

The World Health Organization (WHO), the National Health and Medical Research Council (NHMRC) and the Australian Breastfeeding Association (ABA) all currently recommend 6 months of exclusive breastfeeding and then the introduction of solids while breastfeeding continues. Exclusive breastfeeding means no other food or drink.

There is a clear case for investing in services to support breastfeeding as part of a local child health strategy. This is particularly important for mothers from low income groups, as it is known that they are less likely to breastfeed.

Breastfeeding prevalence
Table 9 shows that the percentage of Maternal Child Health enrolled children fully breastfed at 6 months of age in 2011/12 in the Greater Geelong municipality was 39.4 percent, higher than the percentage of children breastfeeding at 6 months of age in Victoria (34.8 percent).

Table 9: Percent children fully breastfed at 6 months of age 2011/12*

<table>
<thead>
<tr>
<th>% of maternal and child health enrolled children born in 2011-12</th>
<th>Greater City of Geelong</th>
<th>Victoria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>39.4</td>
<td>34.8</td>
</tr>
</tbody>
</table>

*CorVu Family Services Report 61

Table 10 shows that the rate of breast feeding in Greater Geelong in 2001/2 was slightly higher than the Victorian average at hospital discharge; the same as the Victorian average at two weeks post hospital discharge, and lower than the Victorian average at 3 and 6 months post discharge. The breast feeding rate in Greater Geelong in 2010/11 was lower for all post hospital periods than the Victorian state average. This information indicates that breast feeding rates in Greater Geelong have increased less in the 10 years from 2001/2 to 2010/11 than they have in Victoria as a whole, particularly at the hospital discharge and 2 weeks post hospital discharge time periods.

The gap between Greater Geelong’s post discharge breast feeding rate and the Victorian state average rate narrowed in the last two year periods that both Geelong and state wide figures are available – 2009/10 and 2010/11.

Table 10: Comparative breast feeding rates (discharge and 2 weeks post) between Greater Geelong and the Victorian State Average, 2001/2 – 2010/11*

<table>
<thead>
<tr>
<th></th>
<th>Discharge 2001/2</th>
<th>Discharge 2010/11</th>
<th>2 weeks post discharge 2001/2</th>
<th>2 weeks post discharge 2010/11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geelong</td>
<td>85</td>
<td>85</td>
<td>78</td>
<td>77</td>
</tr>
<tr>
<td>Victoria</td>
<td>84</td>
<td>88</td>
<td>78</td>
<td>82</td>
</tr>
</tbody>
</table>

* DEECD Annual Data Report 2011

Figure 8: Comparative breastfeeding rates (discharge and 2 weeks post) between Greater Geelong and the Victorian State average, 2001/2 – 2010/11*

* DEECD Annual data report 2011
Table 11: Comparative breast feeding rates (post discharge 3 and 6 months) between Greater Geelong and the Victorian State Average, 2001/2 – 2010/11*

<table>
<thead>
<tr>
<th></th>
<th>3 months post discharge 2001/2</th>
<th>3 months post discharge 2010/11</th>
<th>6 months post discharge 2001/2</th>
<th>6 months post discharge 2010/11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geelong</td>
<td>55</td>
<td>59</td>
<td>41</td>
<td>44</td>
</tr>
<tr>
<td>Victoria</td>
<td>59</td>
<td>62</td>
<td>44</td>
<td>47</td>
</tr>
</tbody>
</table>

*DEECD Annual Data Report 2011**

Figure 9: Comparative breastfeeding rates (post discharge 3 and 6 months) between Greater Geelong and the Victorian State average, 2001/2 – 2010/11*

* DEECD Annual Data Report 2011**

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SUMMARY OF FINDINGS

Overweight and obesity

- The percentage of adults categorised as overweight or obese in Greater Geelong according to their body mass index increased from 53.8 percent in 2008 to 56 percent in 2011/12.

Fruit and Vegetable intake

Adults

- In 2008, only 7.1 percent of adults in Greater Geelong consumed the recommended amounts of fruit (2 serves) and vegetables (5 serves); however, this was higher than the 5.7 percent recorded at state level. Greater Geelong’s level dropped to 3.6 percent of adults in 2011/12.

Physical Activity

Adults

- The percentage of adults in Greater Geelong achieving adequate physical activity (measured in both sufficient time and sessions) to meet the national guidelines, was 66.6 percent in 2008 and 67.6 percent in 2011/12. Both of which are greater than the Victorian state level percentages.

Smoking

- The proportion of adult smokers in Greater Geelong was estimated at 20.8 percent in 2011/12. This is higher than the Victorian state average of 15.7 percent.

Alcohol intake

- The percentage of males and females drinking alcohol at risky levels for short-term risk of harm in Greater Geelong in 2011/12 is statistically higher at 52.4 percent than the Victorian state average of 45.3 percent.

- The proportion of males and females drinking alcohol at risky levels for long-term harm from alcohol consumption rate was substantially worse than the Victorian state average in 2008.

Breastfeeding

- Breast feeding rates in Greater Geelong have increased less in the 10 years from 2001/2 to 2010/11 than they have in Victoria as a whole, particularly at the hospital discharge and 2 weeks post hospital discharge time periods.
The proportion of adult smokers in Greater Geelong was estimated at 20.8 percent in 2011/12. This is higher than the Victorian state average of 15.5 percent.