Obesity: Evidence Summary

Introduction:

Overweight and obesity are significant public health problems that are associated with a broad range of chronic clinical conditions and with premature mortality. Rates of obesity in Australia are alarming, today it is estimated that 60 per cent of the population are overweight and obese. Both physical inactivity and sedentary lifestyles are independent risk factors for obesity, while obesity is a contributing factor for major health problems and chronic diseases.

In Australia, rates of obesity have more than doubled in the past two decades, with over seven million Australian adults overweight or obese. The fundamental driver of overweight and obesity is an imbalance of calories consumed to calories expended. While there are many factors such as genetics, socioeconomic status, race, ethnicity and gender that impact an individual's weight and health, the two key, and importantly, modifiable risk factors that play a crucial role in the development of overweight and obesity are physical inactivity and excessive intake of unhealthy food.

Despite attempts to halt the obesity epidemic, little progress has been achieved in combating the epidemic worldwide. Efforts have predominately focused on understanding and modifying individual's characteristics that influence both dietary intake and physical activity levels. Public health researchers have continued to investigate the various psychological, behavioural and genetic risk factors associated with obesity aetiology, yet no substantive theory that explains the continued rising prevalence of overweight and obesity has emerged.

Campaspe data:

Obesity: All Campaspe SLAs had a higher rate of males who were obese, compared to regional Victoria and Victoria. Within the PCP region, Campaspe - Rochester had the highest rate of males who were obese. Campaspe – Rochester males, compared to the Victorian average, were also more likely to be overweight (not obese). All Campaspe SLAs had a higher rate of females who were obese and who were overweight, compared to Victoria. Within the PCP region, Campaspe – South SLA had the highest rate of females who were obese.

Nutrition: A higher proportion of Campaspe Shire population aged 18 years and over (7.8%) met the vegetable consumption guidelines, compared to the Victorian average (7.1%). However, a lower proportion (23.4%) met the fruit consumption guidelines, compared to Victoria (28.1%).

Soft drink Consumption: In 2013. Compared to Victoria Campaspe has a much higher proportion of people who drink soft drink every day. However the daily number of millilitres consumed each day was lower than the state average.

Daily Water intake: Compared to Victoria (1.25), Loddon Mallee Region (1.25) and Regional Victoria(1.24), in 2011-12 Campaspe (1.39) population had a higher mean daily intake of water.

Physical inactivity: Compared to Victoria, Campaspe had a higher proportion of the population was sedentary[(b)] (6%), but a slightly lower proportion that had insufficient physical activity time and sufficient time for physical activity. Campaspe residents were much more likely to have occupations that involved physical exercise through: mostly walking (28.7%) or; mostly heavy labour or other physically demanding work (20.1%).

Obesity: In 2011-12, compared to Victoria, a higher proportion of Campaspe males and females aged 18 years and over were obese. A significantly lower number of Campaspe females compared to the Victorian average were overweight. The same can not be said for males whom compared to Victoria a higher proportion were overweight.

Food Insecurity and Access

"Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. The four pillars of food security are availability, access, utilization and stability." *Source: Food and Agriculture Organization, Final Declaration at the World Summit on Food Security November 2009 www.fao.org/*

Compared to Victoria in 2011-12 there was a higher proportion of the Campaspe population aged 18 years and over that stated they ran out of food in the previous 12 months and could not afford to buy more. However, compared to Victoria, there was a much higher proportion of Campaspe population that reported they did not always have the quality of variety of food they wanted because they could not always get the right quality or variety or due to inadequate and unreliable public transport.

Access to food (2008)

	Ran out of food in the previous 12 months & couldn't afford to buy anymore	Stated reasons why people don't always have the quality or variety of foods they want:				
		Some foods are too expensive	Can't always get right quality	Can't always get right variety	Can't always get culturally appropriate	Inadequate and unreliable public transport
Campaspe	5.1*	**20.7**	24.8	9.8	3.2*	7.9
Loddon Mallee Region	*7.7*	*24.5*	*25.1*	*11.1*	*3.2*	*7.5*

Rural Victoria	*6.1*	*22.8*	*23.4*	*8.8*	*3.7*	*6.5*
Victoria	**4.6**	**21.3**	**19.8**	**9.3**	**4.2**	**5.8**

Victorian Population Health Survey (2011-12), Department of Health 2014 Data age standardised to the 2011 Victorian population
**VPHS states that this figure has a relative standard error of 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:

- Females were slightly more likely than males to report running out of food in the previous 12 months (5.0% v's 4.2%)
- Males and females aged 18-24 years, followed by those aged 25-34 years, reported the highest rate of food insecurity compared to other age groups, and
- The most common reason stated for why people don't always have the quality or variety of foods they want was that 'Some foods are too expensive'.

Nutrition

Local Government Area and state trends

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.

A higher proportion of Campaspe Shire population aged 18 years and over met the vegetable consumption guidelines, compared to the Victorian average. However, a lower proportion met the fruit consumption guidelines, compared to Victoria.

Fruit and Vegetable Intake, Population Aged 18 Years and Over (2011-12)

	Campaspe	Victoria
5 or more serves of vegetables per day	7.8	**7.1**
2 or more serves of fruit per day	23.4	**28.1**

*Victorian Population Health Survey 2011-12 * 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.

Daily Vegetable consumption, Population Aged 18 Years and Over (2011-12)

	None or <1 Serve	1 Serve	2 Serves	3 or more Serves
Campaspe	9	66.8	15.3	7.8*
Loddon Mallee Region	7.8	73.2	10.4	7.1
Rural Victoria	7.4	71.6	12.3	7.9
Victoria	6.6	73.1	11.4	8.3

*Victorian Population Health Survey 2011-12 * Estimate has a relative standard error between 25 and 50 per cent and should be interpreted with caution.*

Daily Fruit consumption, Population Aged 18 Years and Over (2011-12)

	None or <1 Serve	1 Serve	2 Serves	3 or more Serves
Campaspe	22.3	34.4	23.4	18.3
Loddon Mallee Region	16.4	36.6	28.1	17.8
Rural Victoria	18.4	37.1	27.9	15.9
Victoria	18.6	38.7	25.4	16.4

Victorian Population Health Survey 2011-12

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

- 95% of people aged ≥18 years did not meet the guidelines for vegetable intake in 2011-12
- More males than females did not meet the vegetable intake guidelines
- The 25-34 years age group had the lowest intake of 3 or more daily serves of vegetables
- 54.6% of persons aged ≥18 years did not meet the guidelines for fruit intake
- Females were more than twice as likely as males to meet vegetable intake guidelines
- More males than females did not meet the fruit intake guidelines, and
- The 25-34 years age group had the lowest intake of 2 or more daily serves of fruit.

Statistical Local Area

An estimate of the proportion of people aged 12 years or over that consume two or more services of fruit per day was undertaken in 2008 by the Public Health Information Development Unit at the University of Adelaide, using data from the 2007-08 National Health Survey.

Compared to the Victorian average, Campaspe – Echuca and Kyabram SLAs had a lower proportion of population aged 5 to 17 years that had consumed a usual daily intake of two or more serves of fruit. Campaspe – Echuca had the lowest proportion and Campaspe – Rochester had the highest.

Compared to the Victorian average, all Campaspe SLAs had a lower proportion of population aged 18 years and over years that had consumed a usual daily intake of two or more serves of fruit. Campaspe - South SLA had the lowest proportion and Campaspe - Rochester SLA had the highest.

Usual Daily Intake of Two or More Serves of Fruit[#] (2007-08)

	persons aged 5 to 17 years		persons aged 18 years and over	
	No.	Rate per 100	No.	Rate per 100
Campaspe – Echuca	1,462	59.4	4,763	47.7
Campaspe – Kyabram	1,439	60.1	4,676	48.1

Campaspe – Rochester	1,127	64.0	3,104	48.5
Campaspe - South	402	62.4	1,477	47.2
Regional Victoria	*161,026*	*62.1*	*532,109*	*48.9*
Victoria	**552,472**	**63.2**	**2,064,664**	**50.9**

Public Health Information Development Unit – 2011 *#Persons aged 18 years and over*

Soft Drink Consumption

Local Government Area and State Trends

In 2013. Compared to Victoria Campaspe has a much higher proportion of people who drink soft drink every day. Of the 78 Victorian LGA's Campaspe Shire ranked 15.

Population who drink soft drink every day (2013)

	%	Rank
Campaspe	21.3	15
Loddon Mallee Region	19.1	
Rural Victoria	18.8	
Victoria	15.9	

Department of Health, LGA Profiles 2013

Millilitres of soft drink consumed

The 2011-12 Victorian Population Health Survey also measured consumption of sugar-sweetened soft drinks. It found that Campaspes population aged 18 years and over were more likely to consume sugar-sweetened soft drinks each day than the state average. However the daily number of millilitres consumed each day was lower than the state average.

Figure 1. Population who drink sugar-sweetened soft drink every day (2011-12)

	%	Average no. of millilitres consumed each day
Campaspe	21.3	473
Victoria	15.9	595

Victorian Population Health Survey 2011-12

Daily water intake

Compared to Victoria, Loddon Mallee Region and Regional Victoria, in 2011-12 Campaspe population had a higher mean daily intake of water.

Mean daily water intake (litres per day) (2011-12)

	Mean litres
Campaspe	1.39
Loddon Mallee Region	1.25
Rural Victoria	1.24
Victoria	1.25

Victorian Population Health Survey 2011-12

Physical Inactivity

Local Government Area and state trends

Compared to Victoria, Campaspe had a higher proportion of the population was sedentary[b] (6%), but a slightly lower proportion that had insufficient physical activity time and sufficient time for physical activity. Campaspe residents were much more likely to have occupations that involved physical exercise through: mostly walking (28.7%) or; mostly heavy labour or other physically demanding work (20.1%).

Physical Inactivity, Population Aged 18 Years and Over (2011-12)

	Campaspe	Victoria
Physical activity levels[a]		
• Sedentary [b]	6	**5.5**
• Insufficient time and/or sessions	25.9	**26.6**
• Sufficient time and sessions	63.0	**63.9**
Type of Physical Activity undertaken in previous		
• None	6.0	**5.5**
• Walking only	20.9	**25.0**
• Vigorous only	8.8*	**5.0**
• Walking & Vigorous	60.9	**60.8**
Occupational physical activity		
• Mostly standing	21.7	**18.5**
• Mostly sitting	24.9	**48.1**
• Mostly walking	28.7	**19.3**
• Mostly heavy labour or physically	20.1	**12.5**

*Victorian Population Health Survey 2011-12 [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 * 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:

- Males were more likely than females to have sufficient physical activity
- Males aged 18-24 yrs had the highest incidence of sufficient physical activity
- Females aged 18-24 yrs had the highest incidence of sufficient physical activity out of all females
- Persons aged 65 yrs and over reported the lowest incidence of sufficient physical activity
- Males with tertiary education levels, who were employed, had a total household income of more than $100,000, met the fruit and/or vegetable guidelines, had self reported excellent/very good health and who had normal body weight status had the highest rates of sufficient physical activity levels (time and sessions)
- Males with primary level education levels, who were unemployed, had a total household income of less than $40,000, had very high psychological distress levels, met neither the fruit or vegetable guidelines, were alcohol abstainers, were current smokers, who had self reported fair/poor health levels, were obese and had diabetes had the lowest rates of sufficient physical activity levels (time and

sessions)

- Females with tertiary education levels, who were employed, had a total household income of more than $100,000, met the fruit and/or vegetable guidelines, who were at low risk of long term of alcohol-related harm, who were ex-smokers, had self reported excellent/very good health and who had normal body weight status had the highest rates of sufficient physical activity levels (time and sessions)
- Females who had a total household income of less than $40,000, had high or very high psychological distress levels, met neither the fruit or vegetable guidelines, were alcohol abstainers, who had self reported fair/poor or good health levels, and who were obese had the lowest rates of sufficient physical activity levels (time and sessions)

In 2011, compared to Victoria, Campaspe had a much lower proportion of people who sit for more than 7 hours every day. Of the 78 Victorian LGAs, Campaspe Shire ranked 75th.

Population who sit for more than 7 hours every day (2011)

	%	Rank
Campaspe	18.5	75
Loddon Mallee Region	25.5	
Rural Victoria	31.1	
Victoria	32.6	

Department of Health, LGA Profiles 2013, Victorian Population Health Survey 2011-12

In 2011, compared to Victoria Campaspe Shire had a lower proportion of people who visit green space at least once per week. Of the 78 LGAs Campaspe ranked 77.

Population who visit green space at least once per week (2011)

	%	Rank
Campaspe	35.4	77
Loddon Mallee Region	43.8	
Rural Victoria	51.1	
Victoria	50.7	

Department of Health, LGA Profiles 2013, Victorian Population Health Survey 2011-12

Statistical Local Area analysis

Estimates of physical inactivity were undertaken in 2008 by the Public Health Information Development Unit using the 2007-08 National Health Survey data. The table below sets out the number (rate in 1000) of people who are not physically active.

Compared to regional Victoria, Campaspe – Kyabram, Rochester and South SLAs all had a higher rate of physical inactivity per 100 population. Within the PCP region, Campaspe – South had the highest rate and Campaspe – Echuca had the lowest.

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

	No.	Rate per 100
Campaspe – Echuca	3,577	33.6
Campaspe – Kyabram	3,531	34.3
Campaspe – Rochester	2,298	34.0
Campaspe - South	1,252	38.0
Regional Victoria	*389,323*	*33.8*
Victoria	**1,396,639**	**32.6**

Public Health Information Development Unit – 2011 #Synthetic prediction

Body Weight

Local Government Area and state trends

In 2011-12, compared to Victoria, a higher proportion of Campaspe males and females aged 18 years and over were obese. A significantly lower number of Campaspe females compared to the Victorian average were overweight. The same can not be said for males whom compared to Victoria a higher proportion were overweight.

Overweight and Obese(A) Population, Population Aged 18 Years and Over (2011-12)

	Campaspe		Victoria	
	Males	Females	Males	Females
Overweight	50.7	17.3	**40.6**	**24.6**
Obese	19.8	19	**17.4**	**17.2**

Victorian Population Health Survey, 2011-12 *(a) Determined by calculation of body mass index (BMI).*

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

- Rates of obesity are the same in males and females
- Obesity is most prevalent in the 45-64 years age cohort
- The prevalence of obesity in males and females has increased significantly between 2003 and 2011-12, and
- Males and females living in rural areas are more likely to be obese than those living in metropolitan areas.

Statistical Local Area analysis

Estimates of obesity were undertaken in 2008 by the Public Health Information Development Unit using the 2007-08 National Health Survey data.

All Campaspe SLAs had a higher rate of males who were obese, compared to regional Victoria and Victoria. Within the PCP region, Campaspe - Rochester had the highest rate of males who were obese. Campaspe – Rochester males, compared to the Victorian average, were also more likely to be overweight (not obese).

Compared to Victoria, all Campaspe SLAs had a higher rate of females who were obese or who were overweight. Within the PCP region, Campaspe – South SLA had

the highest rate of females who were obese and Campaspe – Rochester and South SLAs shared the highest rate of female population that was overweight (not obese).

Overweight and Obese Persons #, 18 Years and Over (2007-08)

		Overweight (not obese)		Obese	
		No.	Rate per 100	No.	Rate per 100
Males	Campaspe – Echuca	1,664	35.6	1,026	21.9
	Campaspe – Kyabram	1,694	35.6	1,061	22.0
	Campaspe – Rochester	1,186	36.0	759	22.2
	Campaspe - South	573	34.6	368	21.3
	Regional Victoria	*189,696*	*35.8*	*111,020*	*20.7*
	Victoria	**709,572**	**35.7**	**355,824**	**18.0**
Females	Campaspe – Echuca	1,229	23.5	919	17.5
	Campaspe – Kyabram	1,147	23.7	858	17.5
	Campaspe – Rochester	746	24.0	567	17.7
	Campaspe - South	345	24.0	293	19.3
	Regional Victoria	*130,217*	*23.6*	*97,116*	*17.4*
	Victoria	**467,525**	**22.6**	**330,289**	**16.0**

Public Health Information Development Unit – 2011 #Synthetic prediction

Policy Review:

National Policy Context

The National Partnership Agreement on Preventive Health

In 2014 the Federal government ceased funding to the National Partnership Agreement on Preventive Health. The National Partnership Agreement on Preventive Health (NPAPH) was established by the Council of Australian Governments (COAG) in 2008 to address lifestyle risk factors for chronic disease. The Agreement set targets to increase the proportion of children and adults with a healthy body weight by three per cent within 10 years, and to increase the proportion of children and adults meeting healthy eating and physical activity guidelines by 15% within six years. The NPAPH provided funding to state and territory initiatives that supported healthy behaviours, addressing the rising prevalence of largely preventable chronic diseases. In Victoria, the funding was mostly directed to the State wide initiative Health Together Victoria (HTV).

The National Prevention Health Taskforce

That National Prevention Health Taskforce was formed in 2009 to develop *Australia: the healthiest country by 2020 strategy*. A blueprint for tackling the burden of chronic disease currently caused by obesity, tobacco, and excessive consumption of alcohol. It is directed at primary prevention and addresses all relevant arms of policy and all available points of leverage, in both the health and non-health sectors.

The obesity control component of the Strategy (obesity in Australia: a need for urgent action) supports the specific obesity targets set by the National Partnership Agreement on Preventive Health and further, aims to halt and reverse the rise in overweight and obesity in Australia by 2020. The Strategy outlines a series of evidence-based recommendations that provide a comprehensive approach to targeting the underlying determinants of obesity. The recommendations focus on preventive health program priorities and infrastructure requirements. The Taskforce recommendations are consistent with global strategies including the World Health Organisation Global Strategy on Diet, Physical Activity and Health and the World Cancer Research Fund report, Policy and Action for Cancer Prevention: Food, Nutrition and Physical Activity, a Global Perspective.

Victorian Context:

The Victorian Public Health & Wellbeing Plan (2015-2019)

The Victorian public health and wellbeing plan 2015-2019 outlines the government's key priorities over the next four years to improve the health and wellbeing of all Victorians, particularly the most disadvantaged. The health and wellbeing priorities for 2015-19 are:

1. Healthier eating and active living
2. Tobacco-free living
3. Reducing harmful alcohol and drug use
4. Improving mental health
5. Preventing violence and injury
6. Improving sexual and reproductive health

The *Healthy Eating and Active Living – strategic direction* component includes the following

- Promote consumption of healthy, sustainable and safe food consistent with the Australian dietary guidelines.
- Support healthy food choices to be the easier choices for all Victorians by working across the entire food system.
- Encourage and support people to be as physically active as often as possible throughout their lives. Strategies may include active transport (such as walking or cycling to work), neighbourhood design that promotes activity and social connectedness and participation in sport and recreation.
- Encourage interaction with nature in Victoria's parks and open spaces.

The Obesity Policy Coalition (OPC)

The Obesity Policy Coalition OPC is a coalition between the Cancer Council Victoria, Diabetes Australia (Vic) and the WHO Collaborating Centre on Obesity Prevention at Deakin University. The OPC was established with the aim of influencing change in policy and regulation to support obesity prevention, particularly in Australian children.

The broad objectives of the Obesity Policy Coalition are to identify, analyse and advocate for evidence-based policy and regulatory initiatives to reduce overweight and obesity, particularly in children, at a local, state and national level. The major areas of policy interest are:

- analyse and prioritise policy initiatives that are likely to have an impact on reducing obesity, particularly in children
- undertake research to provide the evidence base for policy proposals
- encourage all levels of government to support evidence-based policy initiatives to address the overweight and obesity epidemic, and
- provide leadership to guide and assist researchers and policy professionals working on obesity and overweight issues in Australia.

Legal and regulatory focus the Obesity Policy Coalition aims to help bring about:

- enforcement of existing laws that support obesity prevention – by persuading regulatory agencies to take enforcement action, particularly in relation to food marketing practices
- law reform to support obesity prevention – by advocating for reform or

development of law and regulation that may help prevent obesity, for example, in relation to: food composition, pricing, availability, marketing – including food advertising, promotion and labeling, urban planning, and transport.

VicHealth

The Victorian Health Promotion Foundation (VicHealth) - Action Agenda for Health Promotion 2013–2023 focuses on five strategic imperatives with associated goals and three-year priorities. In relation to obesity, there are 2 strategic imperatives that VicHealth focuses on promoting healthy eating and encouraging regular physical activity;

- Promoting Healthy Eating - a broad approach to the issue by investigating the barriers that prevent people from accessing nutritious food for healthy eating.
- Encouraging Regular Physical Activity - partner with sports, active travel and recreation agencies, the arts, and workplaces to create new opportunities for Victorians to make physical activity a part of their daily lives.

These priorities are consistent with VicHealth's obligations under the Tobacco Act of 1987. They also align with State Government policy and program directions, and national and international health promotion priorities and policies such as the World Health Organization (WHO) charters and declarations for Health Promotion.

Healthy Together Victoria (HTV)

Healthy Together Victoria was funded through the National Partnership Agreement on Preventive Health (NPAPH), with local government as a core partner in leading and engaging with communities in 12 sites across the State. However, due to Federal funding cuts in 2014 (mentioned above), the State Government committed funds to keep the initiative going beyond 2014.

Together with three levels of government, peak organisations, schools, workplaces and communities, HTV creates opportunities for eating healthier and being more active where we live, learn, work and play.

HTV is doing this by:

- helping schools, early childhood services and workplaces to become healthier places for people
- providing a healthy eating advice service to guide organisations in providing good food for their students, employees and patients
- working with a range of organisations to create a vibrant healthy eating culture across Victoria
- building a better understanding of how we can continue working to support good health
- using health promotion, media and marketing to support Victorians live a healthier life

- working closely with local communities to support good health throughout 12 Healthy Together Communities.

Clinical Guidelines:

Clinical practice guidelines for the management of overweight and obesity in adults, adolescents and children in Australia

The Australian Government Department of Health and Ageing funded the National Health and Medical Research Council (NHMRC) to review and update the Clinical Practice Guidelines for the Management of Overweight and Obesity in Adults, Adolescents and Children in Australia. It is intended the Guidelines be used by primary healthcare professionals, including general practitioners (GPs), nurses, Aboriginal health workers and allied health professionals (e.g. dieticians, psychologists, exercise physiologists, diabetes educators, social workers, occupational therapists, physiotherapists, mental health nurses).

The Guidelines are a result of a comprehensive assessment of the current scientific evidence. They provide detailed, evidence-based guidance for clinicians to assess and manage overweight and obesity, and give specific advice on weight management for:

- adults and adolescents aged more than 18 years who have a body mass index (BMI) > 25 kg/m2 and are at risk of, or have, one or more overweight or obesity-related comorbidities;
- children and adolescents aged between 2 and 18 years who have a BMI greater than the 85th percentile according to the United States Center for Disease Control and Prevention (US-CDC) or World Health Organization (WHO) percentile charts; and
- infants and children under 2 years of age who demonstrate rapid weight gain as assessed using WHO growth charts.

The National Physical Activity and Sedentary Behaviour Guidelines

The National Physical Activity and Sedentary Behaviour Guidelines developed by the Australian Department of Health and Aging provides information about the health benefits of leading an active lifestyle, as well as offering suggestions for how to incorporate physical activity and minimise sedentary behaviour in everyday life.

The Guidelines are supported by a rigorous evidence review process that considered the relationship between physical activity (including the amount, frequency, intensity and type of physical activity) and health outcome indicators, including the risk of chronic disease and obesity; and the relationship between sedentary behaviour/sitting time and health outcome indicators, including the risk of chronic disease and obesity.

The Australian Dietary Guidelines

The Australian Dietary Guidelines are evidence based guidelines, providing information on the types and amounts of foods, food groups and dietary patterns

that aim to promote health and wellbeing, reduce the risk of diet-related conditions and reduce the risk of chronic disease.

The guidelines visually represent the proportion of the five food groups recommended for consumption each day and are for use by health professionals, policy makers, educators, food manufacturers, food retailers and researchers. However, compliance with dietary guidelines is low in Australia. A large survey of compliance with dietary guidelines by middle ages Australian women found that only one-third of women complied with more than half of the guidelines (Ball).

A National Healthy Weight Guide

To help Australians to achieve or maintain a healthy weight, the Australian Government is developing a National Healthy Weight Guide for consumers which provides information and advice that reflects their lifestage. The key messages and format has been developed in close consultation with consumers and health experts. The Department of Health commissioned a consortium comprising RaggAhmed, the Boden Institute and Inca Consulting to develop the National Healthy Weight Guide.

Evidence based strategies/ Intervention evidence:

Protection and Health Promotion:

Social Marketing Campaigns

Increasing evidence suggests that well designed and executed social marketing campaigns can be effecting in changing health knowledge, beliefs, attitudes and behaviours across large populations (1). Social marketing campaigns have been shown to be effective in increasing physical activity and improving nutrition. Limited evidence has supported the success of social marketing interventions in targeting rising rates of obesity in regional Australia (2) (i.e.) Live Lighter Campaign

NATIONAL CONTEXT: Commonwealth government 'Girls make your move' social marketing campaign

The campaign aims to encourage and support young women aged 12-19 to be more active and reinforce the benefits of an active life, whether through recreation, sport or other physical activity. The campaign creative materials primarily target young women aged 15-18 to generate intentions to participate in a wide range of physical activities and sport. It also encourages parents of young women to provide support, be active themselves, and encourage family activity.

The campaign supports the Australian Sports Commission's Play.Sport.Australia strategy which promotes participation in sport with a focus on young people.

The Girls Make Your Move campaign uses a range of campaign materials to engage with young women, including television, social media, print, out-of-home and digital.

Health Promotion Interventions

A range of health promotion strategies have been undertaken by state and territory governments to address overweight and obesity, physical inactivity, and poor nutrition on a state level. Structured settings in which individuals sped large amounts of their time have the capacity to heavily influence health behaviours. Settings based interventions targeting schools, workplaces and communities have demonstrated some success with regard to improving rates of overweight and obesity, levels of physical; activity, and nutrition.

Workplaces:

Workplace presents enormous opportunity to access large numbers of people to improve the health and productivity of the workforce. Strong evidence supports workplace interventions are effective in targeting overweight and obesity, physical inactivity and poor nutrition. Effective workplace based strategies include prompts to

increase physical activity such as stair use, improved opportunities for physical activity, promoting health food and beverage options, educations and involvement of employees in program development and implementation.

Schools:
Evidence suggests that school based program approaches targeting overweight and obesity, physical activity and nutrition are most effective when a whole of school approach is taken. A whole-of-school approach involves the integration of supportive school policies (healthy canteen), curriculum (nutrition education), environmental (availability of recreational space) and support by contact with family involvement. The *Eat Well Be Active* project, comprising of walk to school program, canteen menu changes, healthy breakfast days and improved access to sports equipment and coaching resulted in significantly lower increase in body weight amongst children exposed to the program. There is little published evidence relating to childcare, but evidence available suggests that programs involving families/parents are most effective.

- National Walk to School/Ride to School, Stephanie Alexander Kitchens, Achievement Program (healthy eating & physical activity priority area),

Community:
Community-wide interventions have demonstrated some effectiveness in slowing the increase of obesity rates. Internationally, a number of community based nutrition and lifestyle interventions have sown success in stabilising obesity rates and decreasing chronic disease mortality. Typically, effective community based obesity prevention interventions integrate multiple strategies, utilising a number of community networks including health professionals, food retails, voluntary organisations and the local media .

Healthy Together Victoria Achievement Program
The Achievement Program is a simple, evidence-based framework to support whole-organisation health and wellbeing approaches for;

- early childhood services,
- schools and
- workplaces (including Creating Healthier Hospitals and Health Services focus).

The Achievement Program supports settings to coordinate health and wellbeing actions across relevant health priority areas, including healthy eating, physical activity and mental health and wellbeing. There are eight health priority areas for schools and six for early childhood services.

LOCAL CONTEXT:

HTV Achievement Program - Register in the Shire of Campaspe	Total Number
Early Childhood and Education Centres	8
Primary Schools	6

Secondary School	2
Total Workplaces	5
Total	**21**

WORKSHOP DISCUSSION: Consideration to HTV Creating Healthier Hospitals and Health Services + workplaces achievement program.

LOCAL CONTEXT:

Go for Your Life

In 2006 Campaspe PCP secured funding to be one of the six state-wide Health Promoting Communities – Being Active Eating Well Community Development Projects. The aim of the project was to increase physical activity and healthy eating and to promote healthy weight for 12-18 year olds across the shire of Campaspe by June 2010. The project was implemented through a range of initiatives including, capacity building, fruit and veg at school, sport and rec at school, incidental physical activity, active recreation for older adults and people with a disability, water at school, community fruit and veg access and availability, water in the community, body image and evaluation.

Murray Campaspe 'Get Active Eat Well' project

Through the NPAPH the Australian Government supported Local Government Areas with funding for the HCI, to deliver community-based physical activity and healthy eating programs. A successful funding submission was developed by the Murray and Campaspe Shires, Campaspe Primary Care Partnership and partner agencies in 2011 to gain Healthy Communities Initiative (HCI) funding from the Commonwealth government. The aim of the HCI was to reduce the prevalence of overweight and obesity in disadvantaged adults within the Murray and Campaspe areas by increasing participation in physical activity and healthy eating. The target group included older adults (18+), Aboriginals, people with a disability and those who are predominately unemployed.

The HCI involved a number of programs and achievements including: Community Gardens, Healthy Eating; Activity Lifestyle program (HEAL), Heart Foundation Walking Groups, Infrastructure Development, Strength and Balance Exercise for older adults, Making a Move, Beat It, Community Kitchens, Fruit and Vegetable Accessibility project.

LOCAL CONTEXT: The City of Greater Bendigo was selected as one of the 12 HTV sites. Healthy Together Bendigo is a partnership between the City of Greater Bendigo and Bendigo Community Health Services. Using partnerships and a skilled health promotion workforce, Healthy Together Bendigo encourages healthy eating and physical activity and a reduction in smoking and harmful alcohol use.

Illness Prevention

The *Life!* Program

- (Refer to diabetes evidence summary also)

The *Life!* Program is a Victorian lifestyle modification program helping to reduce the risk of type 2 diabetes and cardiovascular disease. Run by expert health professionals, the program is delivered as a Group Course or a Telephone Health Coaching service.

The *Life!* program provides motivation and support needed to make and maintain positive changes to adopt healthy behaviours and a more active lifestyle. This approach has been shown to be more effective than taking medication and has a long-term positive effect on your health.

Since the program began in 2008 over 35,000 Victorians have learnt more about the steps they can take to live a healthy life. Funded by the Victorian Government and managed by Diabetes Victoria it is the biggest prevention program of its type in Australia.

LOCAL CONTEXT: Lifestyle Modification courses and Life! Programs are supported by Kyabram District Health, Rochester and Elmore District Health, Goulburn Valley Health Rushworth and Echuca Moama Family Medical Practice.

HEAL

The Healthy Eating Activity and Lifestyle (HEAL™) program is a lifestyle modification program that enables participants to develop lifelong healthy eating and physical activity behaviours. HEAL™ consists of 8 weekly group education and group exercise sessions as well as individual consultations pre- and post-program and 5 and 12 month follow-up health consultations. Each week participants undertake 1 hour of supervised group-based low to moderate intensity physical activity followed by a 1 hour group-based healthy lifestyle education class. The HEAL™ program was developed by Sydney South West GP Link who conducted programs in the South Western Sydney area for 10 years.

LOCAL CONTEXT: HEAL programs were funded to Rochester and Elmore District Health Service and Community Living and Respite Services through the Murray Campaspe Get Active Eat Well project.

Get Healthy NSW

Get Healthy Information and Coaching Service® is a free information and health coaching service developed by the NSW Government. Helping people to achieve goals in relation to healthy eating, physical activity and adopting a healthy lifestyle. It's a free, confidential telephone-based coaching service, delivered by qualified health professionals.

Primary/Secondary Care/Tertiary Care/Quaternary Care:

General Practice

Around 86 per cent of Australians visit the GP every year (8). GP's are often the first healthcare providers to identify overweight or obesity. Treatment should be individualised with careful consideration given to the severity of the problem and associated complications. The Royal College of General Practitioners supports GPs to address overweight and obesity, physical inactivity and poor nutrition with a range of evidence-based guides on preventative health and behavioural risk factors. The Australian Department of Health and Ageing funded the *Lifescripts program*, which provided evidence-based tools to GPs to help patients address lifestyle risk factors for chronic disease. All Lifescripts resources have been withdrawn from circulation, as they are no longer consistent with the current evidence and guidelines endorsed by the National Health and Medical Research Council (NHMRC). While limited evidence suggests brief GP interventions can produce short-term increases in physical activity and small changes in dietary behavior, interventions that encompasses multidisciplinary teams may be more effecting at maintaining weight loss (1).

- The NHMRC Guidelines - using the 5As approach for weight management: *Ask and Assess, Advise, Assist and Arrange* (refer to above info)
- It is important for GP's to assess the level of obesity by BMI, distribution of weight (waist circumference), and the extent of co-morbidity, in order to provide effective treatment and assess level of disease risk (Table 3). Patient engagement as a central agent in management is fundamental. The therapeutic partnership is critical in delivering long term health outcomes as for any other chronic disease.

Classification of disease risks* by WHO BMI classification and WC thresholds

BMI (kg/m²)	Classification	Men WC 94–102 cm Women WC 80–88 cm	Men WC >102 cm Women WC >88 cm
18.5–24.9	Normal weight	–	–
25–29.9	Overweight	Increased	High
30–34.9	Obese class I	High	Very high
35–39.9	Obese class II	Very high	Very high
≥40.0	Obese class III	Extremely high	Extremely high

The Chronic Disease Management (formerly Enhanced Primary Care or EPC) — GP services on the Medicare Benefits Schedule (MBS) enable GPs to plan and coordinate the health care of patients with chronic or terminal medical conditions, including patients with these conditions who require multidisciplinary, team-based

care from a GP and at least two other health or care providers. However, reluctant to use obesity as cause.

Allied Health

There is evidence that multidisciplinary teams that can comprise nurses, dieticians, exercise physiologist, behavioural therapist and GPs can deliver effective diet and physical activity interventions (9). The capacity to deliver effective physical activity and dietary interventions programs in Australia will require substantial workface development, and development of effective funding models for prevention interventions in primary care settings (1).

- The NHMRC Guidelines - using the 5As approach for weight management: *Ask and Assess, Advise, Assist and Arrange* (refer to above info).

LOCAL CONTEXT: GP Chronic disease MBS data for 2014-2015 indicates that;

- 5,367 patients had a GP Management Plan (item 721), and of those patients, 3,852 had a GPMP review (item 732);
- 3,340 patients had a Team Care Arrangement (item 723) utilising 5,678 visits to Allied Health as follows -
  - 3 dietetics service providers providing service to 356 patients accessed this MBS item (10954) under a dietitian for an average of 1.26 visits.
  - 6 physiotherapy providers - 246 patients accessed this MBS item (10960) under a physiotherapist for an average of 2.4 visits.
  - 9 Chiropractors (MBS item 10964), 6 Osteopaths (MBS item 10966) and 5 Psychology (MBS item 10968) providers providing service under the Team Care Arrangements of the MBS to Campaspe patients.
  - Unknown number of Exercise Physiology or Diabetes Education providers or services (10953, 10951 not in data set).
  - 6 Multidisciplinary Case Conferences, organized and coordinated by a General Practitioner (MBS item 739) were accessed.

Secondary/Tertiary Care/Quaternary Care

Very low energy diets (VLEDs)

VLEDs (<800 kcal/day or <3350 kJ/day] are indicated for use in patients with a BMI >30 or BMI >27 with obesity related comorbidities. When used under the medical supervision of a GP and dietician, VLEDs are able to induce rapid weight loss and have been shown to achieve an average weight loss of 18–20% with better sustained weight reduction. In addition to weight loss effects, the rapid weight loss offered by VLEDs has been shown to improve glycaemic control in patients with type 2 diabetes, improve blood pressure and reduce total cholesterol.

VLEDs involve replacing all meals with a specific meal replacement formula (additional food can be carefully added) during the intensive early phase. These

high protein-low carbohydrate diets induce fat burning and mild ketosis, which results in suppression of hunger and promotion of satiety. Treatment duration with a VLED is generally 8–12 weeks, however, safe year-long use under strict medical supervision has been reported. In addition, VLEDs are safe and effective when used to assist with long term weight maintenance in either an intermittent or on-demand fashion.

VLEDs may not be suitable for use for all obese patients and it is important to consider the costs associated with purchasing suitable nutritionally complete meal replacements. VLEDs are contraindicated for use in pregnant or lactating women, infants, children, adolescents (under 18 years), elderly (over 65 years), patients with a history of psychological disturbances, alcohol misuse or drug abuse, in the presence of porphyria, recent myocardial infarction or unstable angina.

Pharmacotherapy

Pharmacotherapy for the treatment of obesity should be considered for use as an adjunct to lifestyle intervention in patients with a BMI >30 or BMI >27 with obesity related comorbidities. Weight loss medications used in the treatment of obesity can act centrally to increase levels of satiety or act on the gastrointestinal tract to restrict nutrient absorption. Care, consideration and close monitoring is essential when prescribing these medications. The United States Food and Drug Administration (FDA) has recently approved two new medications: lorcaserin and phentermine-topiramate. These medicines are not yet approved for use by the Therapeutic Goods Administration (TGA) in Australia. It is important to note that the safety and efficacy of co-administration of lorcaserin or phentermine-topiramate with other products for weight loss, and the effects of these medications on cardiovascular morbidity and mortality, have not yet been established.

Surgery or bariatric surgery

Surgery or bariatric surgery can help some people to lose weight by changing the way the body digests and absorbs food. Bariatric surgery should be considered for patients with a BMI >40 or with a BMI >35 with obesity related comorbidities. Bariatric surgery is the most effective available treatment for obesity in terms of achieving and maintaining substantial weight loss long term. The three most commonly performed procedures in Australia include laparoscopic adjustable gastric banding (LAGB), Roux-en-Y gastric bypass (RYGB) and sleeve gastrectomy (SG). To date, the long term safety of LAGB and RYGB has been documented, however evidence on long term safety is lacking for the SG. Each procedure is accompanied by its own advantages and disadvantages, and these need to be taken into consideration when assessing a patient's suitability for surgery.

Current medical and psychological comorbidities, as well as ability to provide informed consent, will all influence a patient's suitability for undergoing a particular procedure. Patients considering bariatric surgery should be made aware of the

commitment to indefinite post-surgical care and long term monitoring from an experienced team.

Bariatric hospital rooms/equipment

Bendigo Health's new hospital will have 27 custom-designed "bariatric" rooms, exclusively to be used by obese patients. Every ward will house one or two such rooms.

The Bariatric rooms are four m^2 larger than a standard hospital room, and will be equipped with a bigger, reinforced bed, a larger toilet, shower, wheelchair and trolley, and will be fitted with an electronically operated ceiling track hoist capable of moving patients weighing up to 300 kilograms.

LOCAL CONTEXT: Kyabram District Health Service has no bariatric equipment for patients >180kg; Echuca Regional Health are purchasing bariatric chairs and have a BMI limit of <40 in place for surgeries; Rochester and Elmore District Health Service have a BMI limit of <35 for day procedures.

WORKSHOP DISCUSSION: Consideration to consistent bariatric management policies across services.

End of Life:

Palliative care:

Early referral to palliative care can improve quality of life and in some cases survival. Referral should be based on need, not prognosis. Ensure that an advance care plan is in place.

Programs and Services:

Current local service access

Physical Activity and Healthy Eating programs – community
Walking Groups – heart foundation walking groups exist across the Murray and Campaspe area
Older Adults Strength and Balance – programs occur in most locations across Campaspe and were introduced in the Murray Shire in 2012.
Community Kitchens – operate in Rochester, Kyabram and Echuca
Community Gardens – operate across Campaspe.

Dietitians provide therapeutic nutritional advice to consumers in the community to improve and complement their health and wellbeing and are available at the following services;

- Echuca Regional Health ~
- Rich River Health Group
- Njernda Medical Service
- Echuca Moama Family Medical Practice
- Kyabram District Health Service
- Rochester and Elmore District Health Service

~ indicates number of practitioners listed on the Dietitians Association of Australia (DAA) website as an Accredited Practising Dietitian.

Campaspe PCP Integrated Health Promotion Plan 2013-2017
Campaspe PCP continues a strong catchment wide focus for integrated health promotion reducing fragmentation and duplication of effort. The current catchment wide prevention plan pools the resources and skills of 12 member organisations for greater impact for the 2013-2017 period with the extension of mental health and healthy eating priority areas. This prevention focus in the last four years resulted in 15 workplaces engaged in workplace health promotion – Wellness at Work initiatives that engaged staff to create healthy policies, provide staff education and information and complete WorkHealth checks.

The current PCP prevention plan identifies the priority area of healthy eating and mental wellbeing linking to address obesity as follows;

Healthy Eating – The goal of this priority area is to increase knowledge of and access to affordable nutritious foods for 'at risk' groups in the Campaspe area
Objectives

- By 2017 create supportive environments which facilitate increased access and availability to fresh and nutritious foods

- By 2017 deliver a range of programs to address the food security issues identified for 'at risk' population groups

Mental Health - The goal of this priority area is to improve the mental wellbeing of the wider community through participation in physical activity

Objectives

- By 2017 promote and raise awareness of physical activity opportunities within the Campaspe catchment and increase member and target group knowledge of physical activity benefits to mental health and wellbeing
- Ensure availability of a range of physical activity programs continues within the Campaspe area particularly rural townships

Shire of Campaspe Municipal Public Health and Wellbeing Plan 2013 – 2017 (MPHWP)

This four-year plan provides a blueprint on how Council will work with other levels of government and community agencies to ensure a holistic approach to addressing the health and wellbeing needs of all residents. The MPHWP sets objectives, strategies and measures in the priority areas of:

- reducing the impact of alcohol and other drugs;
- climate change adaptation and mitigation;
- reducing violence against women and children;
- promoting oral health;
- encouraging healthy eating;
- increasing physical activity;
- reducing tobacco use;
- promoting mental health.

The plan is in alignment with objectives of the Council Plan 2013-2017 and the catchment-wide Campaspe Primary Care Partnership Integrated Health Promotion Plan 2013-2017. Rather than replicating initiatives or objectives within these plans, the plan serves to strengthen them to improve community outcomes.

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