



Government of **Western Australia**
Department of **Health**

Western Australian Health Promotion Strategic Framework 2017–2021

**A five-year plan to reduce preventable chronic disease and
injury in our communities**

© Department of Health Western Australia 2017

Copyright to this material is vested in the State of Western Australia unless otherwise indicated. Apart from any fair dealing for the purposes of private study, research, criticism or review, as permitted under the provisions of the *Copyright Act 1968*, no part may be reproduced or re-used for any purposes whatsoever without written permission of the State of Western Australia.

Suggested citation

Chronic Disease Prevention Directorate. *Western Australian Health Promotion Strategic Framework 2017–2021*. Perth: Department of Health, Western Australia; 2017.

Important disclaimer

All information and content in this material is provided in good faith by the WA Department of Health, and is based on sources believed to be reliable and accurate at the time of development. The State of WA, the WA Department of Health and their respective officers, employees and agents, do not accept legal liability or responsibility for the material, or any consequences arising from its use.

Note on terminology

Within WA, the term Aboriginal is used in preference to Aboriginal and Torres Strait Islander, in recognition that Aboriginal people are the original inhabitants of WA. Aboriginal and Torres Strait Islander may be referred to in the national context and Indigenous may be referred to in the international context. No disrespect is intended to our Torres Strait Islander colleagues and community. The terms 'Aboriginal and Torres Strait Islander' and 'Indigenous' are retained in this document where they are included as part of an already-existing formal title.

Acknowledgements

The Chronic Disease Prevention Directorate led the development of the *Western Australian Health Promotion Strategic Framework 2017–2021* (WA HPSF), with input and advice from Government and non-government associates. A draft of the WA HPSF was available for stakeholder and public feedback from 20 September – 17 October 2016. More than 50 organisations and individuals responded during this period, and the Chronic Disease Prevention Directorate gratefully acknowledges the thoughtful and constructive comments received from a diverse range of perspectives.

Western Australian Health Promotion Strategic Framework 2017–2021

**A five-year plan to reduce preventable chronic disease and
injury in our communities**

Contents

Foreword	1
Executive summary	2
Part 1: Introduction	6
1.1 About the <i>WA Health Promotion Strategic Framework 2017–2021</i>	6
1.2 Understanding chronic disease and injury	6
1.3 Understanding health promotion and disease and injury prevention	9
1.4 Who can use the <i>WA Health Promotion Strategic Framework</i> ?	10
1.5 The <i>WA Public Health Act 2016</i>	11
Part 2: Our state of health	12
Part 3: A framework for action	16
3.1 Overarching goal	16
3.2 Priorities	16
3.3 Target groups	16
3.4 Guiding principles	16
3.5 Domains for action	20
Part 4: The five-year plan	23
4.1 Curbing the rise in overweight and obesity	23
A snapshot of overweight and obesity in WA	23
Priorities for curbing the rise in overweight and obesity in WA	24
Strategic directions for curbing the rise in overweight and obesity in WA	26
4.2 Healthy eating	28
A snapshot of nutrition and diet in WA	28
Priorities for healthier eating in WA	29
Strategic directions for healthier eating in WA	32
4.3 A more active WA	34
A snapshot of physical activity and sedentary behaviour in WA	34
Priorities for a more active WA	34
Strategic directions for a more active WA	37
4.4 Making smoking history	39
A snapshot of smoking in WA	39
Priorities for making smoking history in WA	39
Strategic directions for making smoking history in WA	42
4.5 Reducing harmful levels of alcohol use	44
A snapshot of alcohol use in WA	44
Priorities for reducing harmful levels of alcohol use in WA	45
Strategic directions for reducing harmful levels of alcohol use in WA	46

4.6	Preventing injury and promoting safer communities	48
	A snapshot of injuries in WA	48
	Priorities for preventing injury and promoting safer communities in WA	49
	Strategic directions for preventing injury and promoting safer communities in WA	51
Part 5: Monitoring progress		53
5.1	Reporting frameworks	53
5.2	Program evaluation and monitoring	55
5.3	Promoting a priority-driven research agenda	55
5.4	Documenting a more complete picture of progress	55
Appendix 1: Complementary policies and strategies		56
Appendix 2: State, Commonwealth and international frameworks and policies		58
Appendix 3: Broad indicator set for chronic disease and injury prevention in WA		62
References		69

Text boxes, tables and figures

Text boxes

1	The <i>WA Health Promotion Strategic Framework 2017–2021</i> at a glance	5
2	What is meant by health promotion and disease and injury prevention?	9
3	The <i>WA Public Health Act 2016</i>	11
4	Cancer – a case study in prevention	15
5	The need for coordinated action	17
6	A life-course approach to preventing chronic disease and injury	18
7	Health inequalities and inequities	18
8	How healthy weight is assessed	25
9	<i>Australian Dietary Guidelines</i>	31
10	<i>Australia's Physical Activity and Sedentary Behaviour Guidelines</i>	36
11	<i>Australian Guidelines to Reduce Health Risks from Drinking Alcohol</i>	45
12	Definitions relating to injury	48

Tables

1	Associations between risk factors and selected chronic diseases and injury	7
2	Proportion (%) of burden of disease and illness attributable to selected risk factors, Australia, 2011	8
3	Person years of life lost in WA due to premature death associated with preventable conditions per 1,000 persons, 2005–2014	53
4	<i>National Healthcare Agreement 2016</i> performance benchmarks	54
5	Selected <i>WHO Global Action Plan</i> voluntary targets	54

Figure

1	A conceptual framework for the determinants of health	19
---	---	----

Foreword

I am pleased to introduce the *Western Australian Health Promotion Strategic Framework 2017–2021* (WA HPSF), the third in a series first launched in 2007. These high-level strategic plans have all aimed to reduce the toll of preventable chronic disease and injury in the community, chiefly by targeting common risk factors: being overweight or obese, having a poor diet, getting insufficient physical activity, smoking, and consuming alcohol at harmful levels.

Comprehensive health promotion programs are a key component in disease and injury prevention, and the Department of Health has a proud and productive record of working in partnership with Government and not-for-profit stakeholders in delivering them. As a result, we are seeing a noticeable improvement across a number of risk factors. Since the launch of the first WA HPSF a decade ago, the prevalence of smoking has continued its downward trend, and substantially fewer Western Australian adults are drinking alcohol at risky levels. More people are physically active. In the field of injury prevention, we've seen a decline in the rate of hospitalisation and deaths due to injury in children since the 1990s. However, it will take ongoing work to maintain these positive trends, and in the meantime substantial challenges remain. Supporting healthier eating and reducing the prevalence of overweight and obesity remain priority work areas for the Department. The innovative *LiveLighter* campaign, launched in mid-2012, is one of the Department's flagship health promotion campaigns, and has helped place obesity on the public agenda.

The Department of Health is committed to supporting Western Australians in making healthy lifestyle choices for mind and body, but it is beyond the scope of the health sector to address all of the factors which contribute to good health. The WA Department of Health will continue to work closely with other State Government departments and agencies to align policies so that we all work towards reducing preventable chronic disease and injury together.

The *Public Health Act 2016* provides a mandate for State and local Governments to develop public health plans that consider, among other things, the prevention of disease, injury, disability and premature death. This legislation also provides wonderful opportunities for greater collaboration and coordination of effort across our large and diverse State. It is an exciting and challenging time for chronic disease and injury prevention in WA, and I look forward to seeing further progress over the life of the *WA Health Promotion Strategic Framework 2017–2021* and beyond.



Dr D J Russell-Weisz
DIRECTOR GENERAL

December 2016

Executive summary

The *Western Australian Health Promotion Strategic Framework 2017–2021* (WA HPSF) sets out a strategic plan for reducing the prevalence of chronic disease and injury over the next five years.

Understanding chronic disease and injury

Chronic diseases (often described as non-communicable diseases) are broadly defined as health conditions that usually have a number of contributing factors, develop gradually, and have long-lasting effects. They include diseases such as cardiovascular disease, type 2 diabetes, respiratory disease and some cancers.

It is estimated that in WA in 2011, 435,000 years of healthy life were lost to premature death or living with disability or illness due to chronic disease or injury.¹

Many chronic diseases are associated with a cluster of common risk factors that can be prevented or modified: being overweight or obese, having a poor diet, getting insufficient physical activity, smoking, and consuming alcohol at harmful levels.²

Injuries are also an important cause of death and disability in WA.¹ Lifestyle interventions and the creation of safer environments can be effective in preventing many types of injuries, and factors such as alcohol use¹ and physical inactivity³ also influence the risk of injury. Because of this connection, strategies to prevent chronic diseases and injury are often implemented together.

Understanding health promotion and disease prevention

There are significant opportunities to improve the health of the WA population by facilitating behaviour change and creating healthier environments across the community.

The WA HPSF supports evidence-based, population-wide approaches, accompanied by complementary targeted approaches to assist populations with a higher prevalence of risk factors for chronic disease and injury.

Who can use the *WA Health Promotion Strategic Framework*?

The WA HPSF has been developed primarily for use by the WA health system^a, but it is anticipated that the document will be useful for all agencies and organisations across a diverse range of sectors with a shared interest in promoting better health in WA, particularly those that work in partnership with Government.

The WA HPSF may be used to guide policy related to chronic disease and injury prevention in State and local public health plans.

The WA HPSF sets broad strategic priorities to achieve the greatest health gains for the WA population. Decisions regarding appropriate interventions will differ between organisations, depending on their responsibilities and priorities, the settings in which they work, and the population that they serve.

Complementary policies and strategies

The WA HPSF is complementary to, and does not duplicate or replace the range of policies that address other aspects of health in WA.

^a The WA health system incorporates the following entities: the Department of Health, North Metropolitan Health Service, South Metropolitan Health Service, East Metropolitan Health Service, Child and Adolescent Health Service, WA Country Health Service, Quadriplegic Centre and Health Support Services.

Our state of health

People in WA are leading longer, healthier and more injury-free lives due to a range of factors, including improved disease control, safer living and working conditions, and medical advances. Declines in tobacco use have also helped to improve the health of Western Australians.^{4, 5}

Modifiable lifestyle behaviours are still a major contributor to death and ill-health in WA. It is estimated that in 2006, 64 per cent of all deaths in people in WA aged under 75 years were potentially avoidable. The majority of those deaths were due to chronic disease.⁵

In Australia in 2011, the risk factors responsible for the greatest burden of disease were tobacco use (9%), dietary risks (7%), and high body mass (6%).⁶ In 2011, injury was the fifth-leading cause of burden by health problem in WA, contributing 10 per cent of the total years of healthy life lost.⁷

The prevalence of risk factors associated with chronic disease and injury is not distributed equally across the community. People who live in areas of socioeconomic disadvantage or outside major cities, have lower levels of education, lower incomes, experience mental health problems or live with disability are more likely to report health risk behaviours, with many having multiple risk factors.²

Aboriginal people^{8, 9} and some culturally and linguistically-diverse (CaLD) communities¹⁰ also have a higher prevalence of risk factors for chronic disease.

Life expectancy for Aboriginal men living in WA in 2010–2012 was more than 15 years shorter than the State average, and this gap was more than 13 years for Aboriginal women.⁸ These differences in life expectancy are largely due to injury and earlier onset of chronic disease.¹¹

In coming decades, strong population growth, increased longevity and a higher proportion of older adults in WA will translate to a greater burden of chronic disease and injury, with higher economic costs and increased strain on the healthcare system.

The hospital costs in 2013 attributable to chronic disease exceeded \$715 million in WA. In the same year, hospital costs in WA for injury were just short of \$350 million.¹²

There is good evidence that prevention offers cost-effective ways to improve health outcomes in Australia.¹³

A framework for action

The goal of the WA HPSF is to lower the incidence of avoidable chronic disease and injury in WA by facilitating improvements in health behaviours and environments.

The priority areas for the WA HPSF are:

- curbing the rise in overweight and obesity
- healthy eating
- a more active WA
- making smoking history
- reducing harmful levels of alcohol use
- preventing injury and promoting safer communities.

The main target groups are the population of WA who are currently well, and population groups with a higher risk of developing chronic disease or experiencing injury than the general population.

The WA HPSF is guided by four principles:

1. adopting a comprehensive whole-of-population approach
2. working in partnership and building capacity
3. intervening early and throughout life
4. promoting equity and inclusivity.

The WA HPSF supports a comprehensive approach to health promotion, combining interventions across these eight domains:

1. healthy policies
2. legislation and regulation
3. economic interventions
4. supportive environments
5. public awareness and engagement
6. community development
7. targeted interventions
8. strategic coordination, building partnerships and workforce development.

Monitoring progress

The Department of Health takes a rigorous and systematic approach to monitoring progress in the areas of chronic disease and injury, drawing on State and Commonwealth data sets.

The WA HPSF supports robust program evaluation as an important component of health promotion planning and service delivery.

The pursuit of a priority-driven research agenda is also critical to help accelerate necessary policy changes in appropriate health promotion interventions.

As there is often considerable delay between health promotion activity and changes in behaviour or improvements in disease and injury outcomes, progress in health promotion is typically realised over the longer term and it can be difficult to measure progress in the interim.

Mapping progress in chronic disease and injury prevention in WA requires an approach that also captures the range of activities that contribute to changes in health behaviours, and ultimately health outcomes.

Developing a 'narrative' describing what has been achieved in chronic disease and injury prevention, taking into account changes in the broader public health field, will be a priority for the WA Department of Health during the life of this Framework.

In parallel, the Department will monitor various lifestyle and behavioural risk factors, biomedical states and injury events, and morbidity and mortality outcomes relating to chronic disease and injury, using State and national data collections.

Box 1: The WA Health Promotion Strategic Framework 2017–2021 at a glance

Goal

To lower the incidence of avoidable chronic disease and injury in WA by facilitating improvements in health behaviours and environments

Target population

People who are currently well, and those who are at risk of developing disease or experiencing injury by engaging in risky lifestyle behaviours

Guiding principles

- Adopting a comprehensive whole-of-population approach
- Working in partnership and building capacity
- Intervening early and throughout life
- Promoting equity and inclusivity

A framework for action

- Development of healthy policy at government and organisational level
- Legislation and regulation
- Economic intervention
- Creating environments for living, working and relaxing that support healthy choices
- Raising public awareness and engagement
- Community development
- Targeted interventions
- Strategic coordination, building partnerships and workforce development

Priority areas

Curbing the rise in overweight and obesity	Healthy eating	A more active WA	Making smoking history	Reducing harmful levels of alcohol use	Preventing injury and promoting safer communities
<ul style="list-style-type: none"> Promote environments that support people to achieve and maintain a healthy weight Prevent and reverse childhood overweight and obesity Motivate behaviour to achieve and maintain a healthy weight among adults 	<ul style="list-style-type: none"> Foster environments that promote and support healthy eating patterns Increase availability and accessibility of quality, affordable nutritious food for all Increase the knowledge and skills necessary to choose a healthy diet 	<ul style="list-style-type: none"> Promote environments that support physical activity and reduce sedentary behaviour Reduce barriers and increase opportunities for physical activity across all populations Increase understanding of the benefits of physical activity and encourage increased activity at all stages of life Motivate lifestyle changes to reduce sedentary behaviour 	<ul style="list-style-type: none"> Continue efforts to lower smoking rates Eliminate exposure to second-hand smoke in places where the health of others can be affected Reduce smoking in groups with higher smoking rates Improve regulation of contents, product disclosure and supply Monitor emerging products and trends 	<ul style="list-style-type: none"> Change community attitudes towards alcohol use Influence the supply of alcohol Reduce demand for alcohol 	<ul style="list-style-type: none"> Protect children from injury Prevent falls in older people Reduce road crashes and road trauma Improve safety in, on and around water Reduce interpersonal violence Develop the injury prevention and safer communities sector Monitor emerging issues in injury prevention

Measuring progress

- Key Performance Indicators for WA health system annual reporting
- National Healthcare Agreement*
- Voluntary targets set by the *WHO Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020*

Part 1: Introduction

1.1 About the *WA Health Promotion Strategic Framework 2017–2021*

The *Western Australian Health Promotion Strategic Framework 2017–2021* (WA HPSF) sets out a strategic plan for reducing the prevalence of chronic disease and injury over the next five years. It articulates a goal, policy priorities, and areas for action to improve the health of the population of WA.

The WA HPSF builds on the achievements of the previous two HPSFs (2007–2011 and 2012–2016^b) and takes into account new evidence, policy changes, relevant national and international developments and feedback from stakeholder consultations. The WA HPSF complements a range of other health strategies and policies that have been developed by the WA Department of Health and other agencies.

1.2 Understanding chronic disease and injury

Chronic diseases, also known as non-communicable diseases, are broadly defined as health conditions that usually have a number of contributing factors, develop gradually, and have long-lasting effects. Some diseases may lead to many years of disability and require long-term management, while others cause premature death.² They include diseases such as cardiovascular disease, type 2 diabetes, respiratory diseases, musculoskeletal conditions (including back problems, arthritis and osteoporosis), mental and substance use disorders, some cancers,⁴ and oral diseases.¹⁴

It is estimated that in WA, 435,000 years of healthy life were lost to premature death or living with disability or illness due to chronic disease or injury in 2011.¹ Chronic disease and injury have a profound impact on an individual's health and wellbeing and place an enormous burden on families, carers and the healthcare system.²

Many chronic diseases are associated with a cluster of risk factors that can be prevented or modified (see Table 1). These risk factors are:²

- being overweight or obese
- poor diet
- insufficient physical activity
- smoking
- harmful levels of alcohol use.

^b Available in summary form from <http://ww2.health.wa.gov.au/Reports-and-publications/WA-Health-Promotion-Strategic-Framework-2012-2016-HPSF>

Table 1: Associations between risk factors and selected chronic diseases and injury

Conditions	Cardiovascular diseases	Type 2 diabetes	Mental illness	Chronic kidney disease	Some cancers	Injury	Musculo-skeletal	Oral diseases	Respiratory diseases
Risk factors									
Behavioural risk factors									
Tobacco smoking	✓	✓	✓	✓	✓	✓	✓	✓	✓
Physical inactivity	✓	✓	✓	✓	✓	✓	✓		
Harmful levels of alcohol use	✓	✓	✓		✓	✓	✓	✓	
Poor nutrition	✓	✓	✓	✓	✓	✓	✓	✓	
Biomedical risk factors									
Overweight and obesity	✓	✓	✓	✓	✓	✓			
High blood pressure	✓			✓					
High blood cholesterol	✓	✓							
High blood sugar	✓	✓		✓					
Early life factors (including low birthweight)	✓	✓	✓			✓		✓	✓

Sources: AIHW,^{2, 6, 15} Oral Health Monitoring Group¹⁴

The WA HPSF focuses on overweight or obesity, poor diet, insufficient physical activity, smoking, and harmful levels of alcohol use because they are among the risk factors that cause the greatest burden of disease. In Australia in 2011, tobacco use was responsible for 9 per cent of the burden of disease, followed by dietary factors (7%), overweight and obesity (6%), alcohol use and insufficient physical activity (both 5%) (see Table 2).⁶ It is estimated that by avoiding these risk factors, the total burden of disease in Australia could be reduced by almost one-third (31%).¹ Influencing these risk factors therefore has the potential to significantly reduce the prevalence and severity of chronic disease and improve the health of people in WA.

The leading four disease groups that cause the greatest burden are cancer, cardiovascular disease, mental and substance use disorders and musculoskeletal conditions. The fifth-greatest burden of premature death and disability is due to injuries.¹ Lifestyle interventions and the creation of safer environments can be effective in preventing many types of injuries, and factors such as alcohol use¹ and physical inactivity³ also influence the risk of injury. Strategies to prevent chronic diseases and injury are therefore often implemented together. The WA HPSF includes preventing injury and promoting safer communities as a priority area for action.

The risk factors on which the WA HPSF focuses are common in the Western Australian community. Most people have at least one risk factor and many have several risk factors.² Often, these risk factors occur together. For example, people who consume alcohol at risky levels are also more likely to be daily smokers. Daily smoking is also more common among people with lower levels of physical activity. Having more risk factors is usually associated with higher levels of chronic disease.²

Table 2: Proportion (%) of burden of disease and injury attributable to selected risk factors, Australia, 2011*

Conditions	Cardiovascular diseases	Type 2 diabetes	Mental illness	Chronic kidney disease	Some cancers	Injury	Musculo-skeletal	Respiratory diseases	Total burden of disease caused by specific risk factor
Risk factors									
Behavioural risk factors									
Tobacco use	12	4			22			36	9
Dietary risks (joint effect [†])	35	33			7				7
Physical inactivity	21	30			6				5
Harmful levels of alcohol use	5	2	12		3	21			5
Biomedical risk factors									
Overweight and obesity	21	49		28	5		<1		6
High blood pressure	32			22					5
High blood sugar	3	96		3					3
High blood cholesterol	16								2

* Note that there are some minor inconsistencies between Table 1 and Table 2. Table 2 shows results from the *Australian Burden of Disease Study 2016*, which does not quantify the disease burden for the full range of known risk factor/health outcomes identified in Table 1.

[†] Dietary risk factors include high consumption of processed meat and saturated fats; and low vegetable, fruit, nut, seed, wholegrain and fibre intake.

Source: Derived from AIHW^{1, 6}

There is also evidence that these risk factors and the prevalence of chronic disease and injury are not distributed equally across the community. People who live in areas of socioeconomic disadvantage or outside major cities, have lower levels of education, lower incomes, experience mental health problems or live with disability are more likely to report engaging in health risk behaviours, with many having multiple risk factors.²

Nationally, Aboriginal people and Torres Strait Islanders have higher rates of chronic disease and injury and also experience the onset of these diseases at a younger age compared to the general population.¹⁶ Chronic diseases accounted for 70 per cent of the total gap in health between the Aboriginal and Torres Strait Islander population and the rest of the population in 2011.¹¹

When considering the prevention of chronic disease and injury, it is also important to consider protective factors that can have a positive effect on health. For example, regular physical activity can assist with lowering blood pressure or management of body weight.² Physical activity that includes a strong focus on improving strength and balance can help prevent falls in older people.³ A diet high in fruits and vegetables, and low in saturated fat, can protect against certain cancers and heart disease.^{2, 17}

1.3 Understanding health promotion and disease and injury prevention

There are significant opportunities to improve the health of the WA population by facilitating behaviour change and creating healthier environments across the community.

Box 2: What is meant by health promotion and disease and injury prevention?

The WA HPSF uses the World Health Organization's broad definition of health promotion, which states that *health promotion is the process of enabling people to increase control over, and to improve, their health. It moves beyond a focus on individual behaviour towards a wide range of social and environmental interventions.*¹⁸

In the WA HPSF, prevention refers to reducing the risk of developing chronic disease or being injured through modifying risk factors.

Strategies to encourage healthier and safer populations require a sustained, long-term investment in health promotion and approaches that take into account the wider socioeconomic, cultural and environmental conditions that shape behaviour. Effective health promotion provides substantial savings to the community in terms of health and non-health related costs.¹³

The WA HPSF continues to support evidence-based, population-wide approaches that have already successfully delivered improvements in health, including declines in prevalence of smoking and harmful levels of drinking, and an increase in the proportion of adults who are being sufficiently physically active. Despite these improvements, challenges remain. For example, figures show that:

- 43 per cent of adults in WA report that they spend most of their day sitting¹⁹
- around two-thirds of people aged 16 years and over,¹⁹ and about one in five children aged 5–15 years are classified as overweight or obese²⁰
- 88 per cent of people aged 16 years and over do not consume the recommended servings of vegetables¹⁹
- The prevalence of daily smoking among Aboriginal people in WA remains high at 40 per cent⁹
- 28 per cent of adults in WA drink at levels considered high risk for long-term harm, and 10 per cent drink at levels considered high risk for short-term alcohol-related harm¹⁹
- drowning is still the leading cause of preventable death for 0–4 year-olds.²¹

The WA HPSF supports complementary targeted approaches to assist populations with a higher prevalence of risk factors for chronic disease and injury.

1.4 Who can use the *WA Health Promotion Strategic Framework*?

The WA HPSF has been developed primarily for use by the WA health system, but it is anticipated that the document will be useful for all agencies and organisations with an interest in promoting better health in WA, particularly those that work in partnership with Government. Working to prevent disease and improve health is a shared responsibility, and influencing the wider determinants of health to achieve a healthier WA will require the involvement of many partners, including:

- Government departments and agencies
- local governments
- non-government organisations
- professional and voluntary organisations
- trade and industry groups
- educational bodies
- public and private sector workplaces
- health professionals
- community groups
- the general public
- the media.

Each of these groups has the capacity to contribute to better health across the community and many of these groups are already taking action that will improve the health of Western Australians.

As in previous versions of the Framework, the WA HPSF sets broad strategic priorities to achieve the greatest health gains for the Western Australian population. Decisions regarding appropriate interventions will differ between organisations, depending on their responsibilities and priorities, the settings in which they work, and the population that they serve.

The WA HPSF is complementary to, and does not duplicate or replace the range of policies that address other aspects of health in WA. Some of these are listed in Appendix 1.

1.5 The WA Public Health Act 2016

The WA *Public Health Bill 2014* was passed by the State Government in June 2016 and received Royal Assent on 25 July 2016. The new legislation repeals much of the *Health Act 1911* and takes a broader approach to public health and the factors that determine health status (see Box 3).

Box 3: The WA Public Health Act 2016

The *Public Health Act 2016*²² is intended to protect, promote and improve the health and wellbeing of the public of Western Australia and to reduce the incidence of preventable illness, among other things.

For the purposes of the Act, public health means the health of individuals in the context of:

- a. the wider health and wellbeing of the community
- b. the combination of safeguards, policies and programs designed to protect, maintain, promote and improve the health of individuals and their communities and to prevent and reduce the incidence of illness and disability

The objectives of the Act are to:

- a. promote and improve public health and wellbeing and to prevent disease, injury, disability and premature death
- b. protect individuals and communities from diseases and other public health risks and to provide, to the extent reasonably practicable, a healthy environment for all Western Australians
- c. promote the provision of information to individuals and communities about public health risks
- d. encourage individuals and communities to plan for, create and maintain a healthy environment
- e. provide for the prevention or early detection of diseases and other public health risks, and certain other conditions of health
- f. support programs and campaigns intended to improve public health
- g. facilitate the provision of information to decision-making authorities about public health risks and benefits to public health that may result from certain proposals
- h. provide for the collection, disclosure and use of information about the incidence and prevalence of diseases and other public health risks in the State, and certain other conditions of health, for research or public health purposes
- i. reduce the inequalities in public health of disadvantaged communities
- j. provide for functions relating to public health to be performed by the State and local governments.

The *Public Health Act 2016*²² requires the State's Chief Health Officer to develop a Public Health Plan that identifies the public health needs of the State; and establishes objectives and policy priorities for the promotion, improvement and protection of public health, and the development and delivery of public health services in the State.

Each local government is required to develop a local public health plan that is consistent with the State plan. State and local governments are encouraged to link with other agencies that have shared goals.

The WA HPSF may be used to guide policy related to chronic disease and injury prevention in State and local public health plans.

Part 2: Our state of health

Relatively speaking, the majority of Western Australians enjoy good health...

Australia has among the longest life expectancies in the world, and in WA, the average life expectancy of a current newborn is 85 years for females and 80 years for males – just above the national average.²⁴

The self-reported health of people living in WA continues to improve and is the best it has been since data collection began in 2001.²⁵

People in WA are leading longer, healthier and more injury-free lives due to a range of factors, including improved control of many infectious diseases, better sanitation and hygiene, safer living and working conditions, and advances in medicine and healthcare technology. Declines in tobacco use and effective health promotion campaigns have also helped to improve the health of Western Australians.^{4, 5}



...self-reported health of people living in WA continues to improve...

...but there is still room for improvement

- 31 per cent of the burden of disease experienced by the Australian population in 2011 could have been prevented by reducing exposure to modifiable risk factors.⁶ The figure for Aboriginal and Torres Strait Islander people was higher, at 37 per cent.¹¹
- In Australia in 2011, the risk factors responsible for the greatest burden of disease were tobacco use (9%), dietary risks (7%), high body mass (6%) and insufficient physical activity and alcohol use (both 5%).⁶ In 2011, injury was the fifth-leading cause of burden by health problem in WA, contributing 10 per cent of the total years of healthy life lost.⁷
- Between 2010 and 2014, chronic diseases were responsible for more than 950,000 hospitalisations in WA, and over 200,000 hospitalisations in 2014 alone.²⁶
- Injuries were responsible for over 250,000 hospitalisations and nearly 1.1 million emergency department visits in WA between 2010 and 2014.²⁷
- In 2013, there were 3,177 deaths in WA from coronary heart disease, cerebrovascular disease and lung cancer combined – all chronic diseases that are linked to modifiable lifestyle behaviours.²⁶
- From 2009–2013, 83% of injury deaths in WA were caused by self-harm, falls, transportation and poisoning.²⁷
- Deaths resulting from injury also make a substantial contribution to years of life lost. In 2014, each death in WA caused by drowning, transport accident, poisoning and intentional self-harm resulted in an average loss of more than 30 years of expected life.²⁸

Almost one-third of the burden of disease in the Australian population in 2011 could have been prevented by reducing exposure to modifiable risk factors...

Some groups are still at greater risk than others

Some sub-populations in WA are also at a greater risk of chronic disease and injury than the general population. Living with disability, with a greater degree of socioeconomic disadvantage, lower levels of education, and dwelling outside metropolitan areas are factors that increase the likelihood of exposure to risk factors for chronic disease.²⁵ Aboriginal people^{8, 9} and some culturally and linguistically-diverse (CaLD) communities¹⁰ also have a higher prevalence of risk factors for chronic disease.

- People with severe or profound disability are more likely to develop chronic disease, and to do so earlier than those without disability.²⁹
- Life expectancy for Aboriginal men living in WA in 2010–2012 was more than 15 years shorter than the State average, and this gap was more than 13 years for Aboriginal women.⁸ These differences in life expectancy are largely due to injury and earlier onset of chronic disease.¹¹

- People experiencing mental health problems also often have poorer physical health outcomes than other people.³⁰ National research shows that people with a mental or behavioural condition are more likely to have a range of chronic diseases, including respiratory diseases, diabetes (type 1 and 2 combined), cancer, and cardiovascular diseases.³¹ It has been estimated that from 1985–2005 in WA, the gap in life expectancy for psychiatric patients compared with the total WA population increased from 14 years to 16 years for males, and from 10 years to 12 years for females. Seventy-eight per cent of excess deaths were due to physical health conditions, including cardiovascular disease and cancers.³²
- WA is one of the most culturally-diverse States in Australia, with 31 per cent of its population born overseas.³³ Some CaLD communities have a higher prevalence of risk factors for chronic disease and injury. This may be due to cultural and social reasons related to their country of origin; because they may be at greater risk of being disadvantaged; or due to psychosocial impacts on health associated with migration and settlement.¹⁰

Our changing demographic profile will bring new challenges

In addition to continuing increases in life expectancy, the population of WA continues to grow. Between 2000 and 2015, the population of WA increased from 1.9 million to almost 2.6 million.³⁴

- Increased life expectancy coupled with lower birth rates means that the proportion of older adults is increasing in WA relative to the rest of the population. In WA, the proportion of adults over the age of 65 increased from 11 per cent to 13 per cent between 2000 and 2015,³⁴ and is projected to jump to 22 per cent by 2050.³⁵
- People over 65 years of age are more likely than the rest of the population to suffer from multiple chronic diseases and are at significant risk of fall-related injuries.¹⁹ Falls currently account for more than half of injury deaths and three-quarters of injury hospitalisations in WA people over 65 years of age.²⁷
- The changing demographic profile in WA means many of the challenges currently being faced are likely to intensify over the coming decades. Strong population growth, increased longevity and a higher proportion of older adults in WA will translate to higher economic costs and a greater strain on the healthcare system.

Hospital costs for chronic disease and injury are already high, and set to increase

The hospital costs in 2013 attributable to chronic disease exceeded \$715 million in WA. In the same year, hospital costs in WA for injury were just short of \$350 million.¹²

- Osteoarthritis, coronary heart disease and chronic kidney disease cost WA more than \$400 million in 2013 (57% of chronic disease hospital costs).¹²
- Falls and transportation injuries alone accounted for almost \$200 million (57% of all injury hospital costs) in 2013.¹²
- Hospital costs of admissions due to alcohol-related causes in WA exceeded \$478 million over the period 2007–2011.³⁶
- Overweight and obesity cost WA \$237 million in emergency department and inpatient admissions in 2011. It is estimated that these costs will double by 2021 if high body mass is not successfully addressed.³⁷
- If current trends continue, the hospital costs of chronic disease are estimated to reach \$971 million in 2026 in WA. For injury, the estimate for 2026 is \$586 million.¹²

The overall costs of chronic disease and injury are much higher when healthcare costs other than hospitalisations are considered, as well as the impact on the workforce and the community.

- For example, while hospital costs attributed to tobacco use in WA in 2009–10 were estimated at \$94 million, the overall tangible cost (including all healthcare costs, workforce and household labour impacts) of tobacco use were estimated to be \$1.3 billion.
- If intangible costs are also included (that is, estimated costs of pain and suffering), then the overall cost of tobacco use in WA in 2009–10 was an estimated \$3 billion.³⁸

Prevention makes good sense

There is good evidence that prevention offers cost-effective ways to improve health outcomes in Australia.

- The *Australian Burden of Disease Study for 2011* has shown that between 2003 and 2011, the overall burden of death and disease in the population declined by 10 per cent.⁶ In 2011, burden attributable to tobacco use, high body mass, alcohol use and physical inactivity were all substantially lower than anticipated, possibly because of reduced exposure to risk factors or improved treatment options. In addition, the proportion of burden attributable to high cholesterol, high blood pressure and tobacco use declined between 2003 and 2011. Importantly, preventing or delaying premature deaths did not result in more years of ill-health or disability.⁶
- It has been estimated that the \$176 million (in year 2000 dollars) invested in tobacco prevention in Australia between 1971 and 2010 averted approximately \$8.6 billion nationally in costs over this period through increases to life span, improved life quality and lower health care costs.³⁹
- Another economic analysis has estimated that if smoking prevalence in WA declined to 4.3 per cent over 15 years, the social benefit (tangible and intangible costs) would amount to almost \$3.6 billion. This is about \$17,000 for each person prevented from smoking.³⁸ The same study estimated that reducing the prevalence of smoking to less than 5 per cent within the next 15 years would justify annual expenditures in WA of up to \$150 million at 2009/10 prices.³⁸
- Similarly, a 2010 report on the cost-effectiveness of preventive interventions in Australia projected that by implementing 20 cost-effective interventions over the lifetime of the Australian population born in 2003, \$4.6 billion would have been spent on interventions, averting \$11 billion in healthcare costs, and saving the equivalent of one million years of healthy life. Most of these gains could be achieved through taxation and regulation interventions on salt, alcohol and tobacco, and a preventive medication for cardiovascular disease.¹³

\$176 million invested in tobacco prevention in Australia between 1971 and 2010 averted approximately \$8.6 billion in health costs over that period

A comprehensive, risk-factor based approach to prevention has yielded positive results in cancer prevention (see Box 4).

Box 4: Cancer – a case study in prevention

It is not so long ago that a diagnosis of cancer was likened to receiving a death sentence. But as time has gone by and now that some of the more common cancers are better understood, it is known that many cases of cancer can potentially be avoided. Some other types of cancer now have much better survival rates due to earlier detection and improved treatments, meaning that some people may continue to live for many years with cancer.

Almost 12,000⁴⁰ Western Australians are diagnosed with cancer every year, and it is estimated that up to 40 per cent⁴¹ (or 4,800) of these could be prevented by modifying certain risk factors. Ninety per cent of potentially avoidable cancers can be attributed to just six key risk factors: smoking, UV radiation, poor diet, being overweight, physical inactivity and alcohol use. Although trends in smoking continue downwards in WA and nationally, cancer deaths lag about 20 to 30 years behind levels of consumption,⁴² meaning that tobacco is still the leading cause of cancer in Australia, and the cause of one in eight cancers.⁴³

By setting up systems and environments that encourage and support making healthier choices, there is a great opportunity to reduce the toll of disability and death due to cancer. As an example, the success seen in the tobacco program *Make Smoking History* shows the power of effective public education campaigns; forging strategic, cross-sectoral partnerships; the importance of backing them up with strong State and Commonwealth legislation, and gaining the support of the wider community.⁴⁴ But until population levels of overweight and obesity are arrested, weight-related cancers (along with other chronic diseases such as diabetes and cardiovascular disease) can be expected to increase.⁴⁵ Lessons learned from tobacco control may provide pointers to approaches that could potentially be applied to other risk factors.

One risk factor for cancer that cannot be prevented is getting older, and as WA's ageing population increases, an increase in the numbers of people diagnosed with and surviving with cancer may be expected.⁴⁶ While greater survivorship is undoubtedly good news, cancer survivors may experience emotional, physical and financial hardship, which in turn impact on their families and carers. As they age, they will continue to be vulnerable to recurrences of cancer, as well as the development of other chronic diseases, including new cancers. Carers themselves may be elderly and in poor health.⁴ Seeking and seizing opportunities for cancer prevention has never been more important than it is now.

Part 3: A framework for action

3.1 Overarching goal

The goal of the WA HPSF is to lower the incidence of avoidable chronic disease and injury in WA by facilitating improvements in health behaviours and environments.

3.2 Priorities

- healthy eating
- a more active WA
- curbing the rise in overweight and obesity
- making smoking history
- reducing harmful levels of alcohol use
- preventing injury and promoting safer communities.

3.3 Target groups

The WA HPSF adopts a whole-of-population approach to preventing chronic disease and injury. Complementary to the whole-of-population approach is the development of targeted interventions to reduce health inequities and assist those in the community who are at higher risk of chronic disease or injury because of a high prevalence of the associated risk factors.

In line with this approach, the main target groups for the WA HPSF are:

- people in WA who are currently well
- population groups with a higher risk of developing chronic disease or experiencing injury than the general population. These groups include:
 - those living in low socioeconomic circumstances
 - Aboriginal people
 - people with mental illness
 - people with disabilities
 - carers and families of people with sickness and disability
 - populations living in rural and remote areas
 - some CaLD populations, particularly new arrivals
 - the prison population.

3.4 Guiding principles

Four principles underpin the approaches taken to health promotion in the WA HPSF:

1. adopting a comprehensive whole-of-population approach
2. working in partnership and building capacity
3. taking a life-course approach
4. promoting equity and inclusivity.

These principles are supported by a commitment to evidence-based health promotion practice. Where there is a lack of evidence for successful interventions, initiatives will be informed by a sound theoretical basis and expert advice while the evidence base is being developed.

Principle 1: Adopting a comprehensive, whole-of-population approach

Complex problems require a comprehensive, long-term set of solutions. Influencing issues and behaviours such as obesity, poor eating patterns and insufficient physical activity cannot occur through single interventions. Experience demonstrates that prevention activities work best with a combination of universal and targeted approaches, and with multiple strategies and interventions addressing the many factors that influence behaviour.⁴ The domains for action that combine to make a comprehensive approach are detailed later in this section.

Implementing a population-wide approach is integral to achieving the goal of lowering the incidence of avoidable chronic disease and injury in WA. It is sound public health practice to place population-wide approaches at the centre of health promotion strategies for preventing chronic disease and reducing injury. A small shift in the average population levels of several risk factors can lead to a large overall reduction of the burden of chronic disease.⁴⁷

The WA HPSF promotes a whole-of-population approach that is complemented by strategies directed to groups that have a greater risk of developing chronic disease and experiencing injury, due to their age or circumstances.

Principle 2: Working in partnership and building capacity

Providing effective public health responses to chronic disease and injury prevention requires strong partnerships within and between Commonwealth, State and local governments, as well as the non-government sector and groups such as industry, research organisations and the community. To maximise effectiveness, it is of critical importance to identify shared goals and form partnerships to amplify the impact of expertise, skills and resources. The WA HPSF supports the strengthening of existing partnerships and exploring opportunities to develop new partnerships, and provides a common agenda to guide planning and collaboration. An important part of this is fostering a common health-promoting culture and value system throughout partnerships and communities of practice.

To ensure that interventions are effectively implemented and able to be sustained over time, a capacity-building approach is adopted throughout the WA HPSF.

In the context of health promotion, capacity building is the process of developing sustainable skills, organisational structures, resources and commitment to health improvement in health and other sectors, to ... *prolong and multiply health gains many times over.*^{48 p. 2}

At a practical level, this concept includes:^{48 p. 1}

- *building (organisational) infrastructure to deliver health promotion programs*
- *building partnerships and organisational environments so that programs are sustained – and health gains are sustained*
- *building problem-solving capability.*

Encouraging greater coordination of interventions to improve health across different sectors and within various agencies ensures that prevention efforts are complementary and integrated for target groups, that risk of duplication is reduced, and that strategic gaps are identified and appropriately addressed (see Box 5).

Box 5: The need for coordinated action

The prerequisites and prospects for health cannot be ensured by the health sector alone. More importantly, health promotion demands coordinated action by all concerned: by governments, by health and other social and economic sectors, by non-governmental and voluntary organisations, by local authorities, by industry and by the media. People in all walks of life are involved as individuals, families and communities. Professional and social groups and health personnel have a major responsibility to mediate between differing interests in society for the pursuit of health. The Ottawa Charter, World Health Organization.^{49 p. 2}

An important measure of the success of the WA HPSF will be its ability to act as a catalyst for inter-sectoral cooperation and facilitate coordinated approaches to improve health outcomes for Western Australians.

Principle 3: A life-course approach

A life-course approach is an important element of the WA HPSF (see Box 6). Health promotion and prevention efforts must start early in life, and address key ages and stages across the life course.⁵⁰ The foundations for lifelong health and wellbeing are established in childhood, and early experiences have a considerable influence on physical and psychological health, health behaviours and life achievements.⁵¹

High quality preventive programs can substantially change the impact of poor early childhood experiences, and there is substantial evidence that by acting early, governments and other agencies can help to reduce the impact of poor quality environments and disrupt the cycle of disadvantage from one generation to the next.⁵²

Box 6: A life-course approach to preventing chronic disease and injury

A life-course approach to promoting health and wellbeing and preventing chronic disease and injury acknowledges that at every stage of life, there is the potential to prevent the development of disease or reduce the risk of injury, and improve health and wellbeing.⁵³

The risk of developing chronic disease begins even before birth. Maternal health and nutrition, and exposures to risk factors such as alcohol and tobacco use, can have an impact on infant and child health. Breastfeeding in infancy and good nutrition in childhood help to enhance healthy development and protect against obesity, tooth decay and the early onset of chronic diseases. Home, school, neighbourhood and cultural environments shape eating behaviours and patterns of physical activity during childhood, and set the stage for attitudes towards tobacco, alcohol and other drug use during adolescence.⁵³

In adulthood, pregnancy and parenthood mark a key time for re-evaluating lifestyle behaviours. Adults with unhealthy lifestyle behaviours are at greatest immediate risk of developing chronic diseases and suffering injury, and significant health gains can be made by bringing about changes in unhealthy practices. Other key opportunities arise for promoting healthy lifestyles as adults develop symptoms of, or are diagnosed with, chronic diseases and become aware of increasing rates of illnesses and deaths among family and friends.⁵⁴

The risk of developing a chronic disease increases with age.² Adopting healthier behaviours can slow disease progression, improve health outcomes, and prevent the onset of additional health problems. Moving into older age provides opportunities for promoting active and healthy ageing.⁵³

Adopting a healthier lifestyle at any age can improve health and wellbeing and increase vitality.

Principle 4: Equity and inclusivity

Health inequalities and inequities (see Box 7) may arise from the conditions in which people are born, grow, live, work and age – often referred to as the determinants of health (see Figure 1).² Individual physical and psychological factors, as shown at the base of Figure 1, interact with biomedical factors; health and safety factors; psychological influences such as stress and trauma; socioeconomic circumstances; and knowledge, attitudes and beliefs. Broader influences of society, the environment, and place of dwelling also influence health outcomes.

Box 7: Health inequalities and inequities

Health inequalities *are differences in health status between population groups.*

Health inequities *are differences in health status between population groups that are socially produced, systematic in their unequal distribution across the population, avoidable, and unfair.*^{55 p. 4}

Some groups in the population experience poorer health than the rest of the population. In general, people living in the lowest socioeconomic circumstances suffer significantly poorer health than other groups.⁵⁶ Aboriginal people,⁸ those living in rural and remote areas,² people with disabilities and mental illness,²⁹ and some CaLD communities also experience significantly poorer health than the general community.²⁵

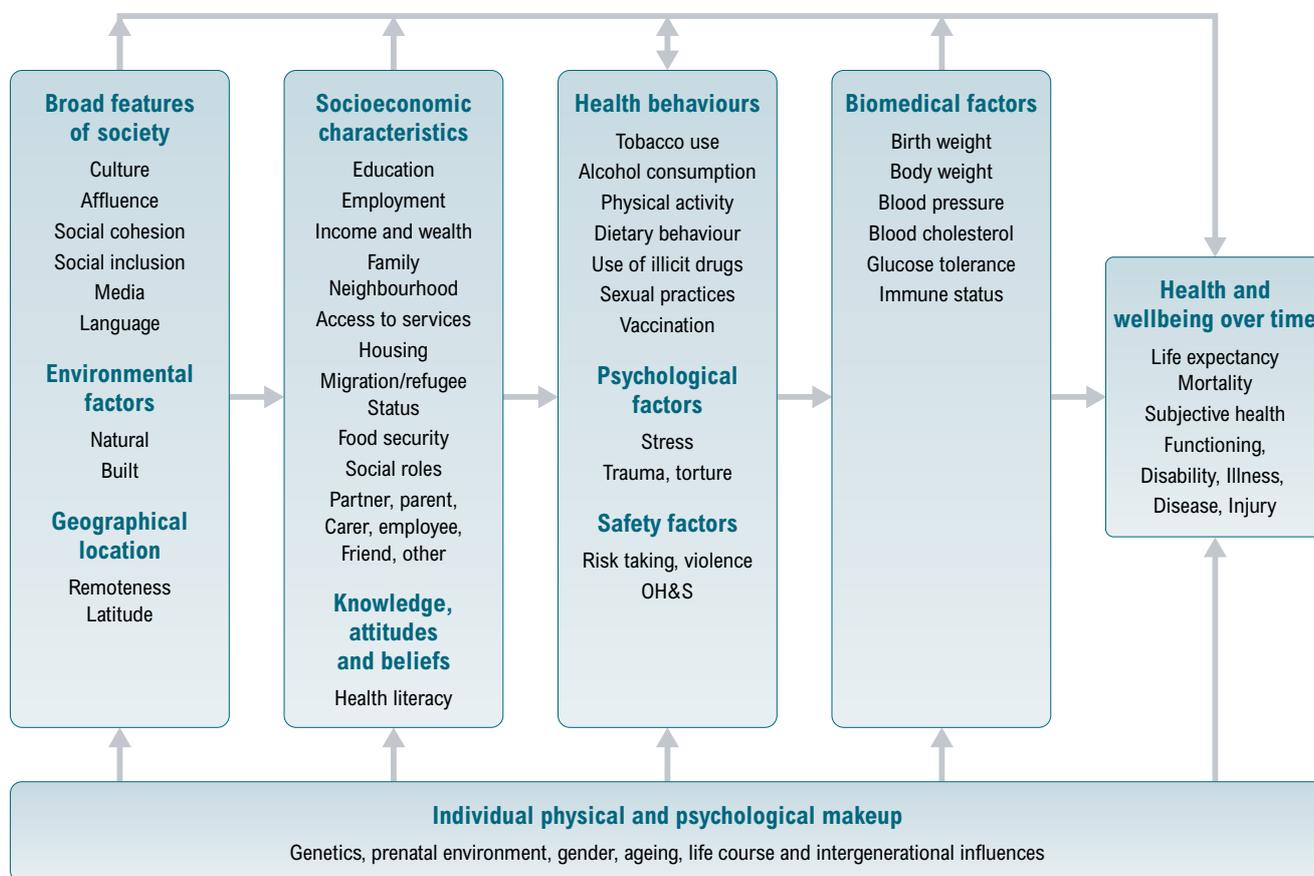


Figure 1: A conceptual framework for the determinants of health

Source: Australian Institute of Health and Welfare²

Interventions intended for these groups should carefully consider the full complexity of the environments in which they live and the barriers they can pose to behavioural change. These interventions should also consider, and seek to address the impact of lower health literacy and issues of accessibility.⁴

Strategies that address the environmental, economic and social influences on health are pivotal to reducing health inequities (see Box 7) and improving health status. Governments and their partners have the potential to take collaborative and coordinated action to alter determinants in areas such as early childhood experiences, access to health, housing, education and employment.⁵⁵ The WA HPSF recognises the importance of the social, cultural and physical environments on health behaviours, as well as the effect of individual circumstances on shaping personal priorities and decision-making about health and other behaviours.

Well-designed mainstream programs, developed with a focus on equity, inclusiveness and cultural security have the capacity to be effective in specific population groups as well as the wider population. However, in some cases it may be necessary to develop additional interventions to meet particular needs.

Policy makers and practitioners must carefully examine the potential impact of health promotion interventions to ensure that these programs do not widen existing inequalities (see Box 7). Interventions should prioritise the inclusion of population groups with a higher risk of chronic disease and injury, and identify whether there is a need to provide further targeted approaches.

3.5 Domains for action

A comprehensive approach to health promotion requires a combination of interventions that challenge the fundamental causes of chronic disease and injury. These action areas for change may be grouped into eight domains:

1. healthy policies
2. legislation and regulation
3. economic interventions
4. supportive environments
5. public awareness and engagement
6. community development
7. targeted interventions
8. strategic coordination, building partnerships and workforce development.

Introducing an intervention in a single domain is likely to limit its effectiveness, but operating across a combination of domains has the potential to cause real change. For example, initiatives to improve the built environment as a way of encouraging more physical activity and reducing risk of injury will probably involve work across several domains, including the development of appropriate policy; engagement with planning, zoning or building regulatory authorities; and consultation with community groups.

Development of appropriate healthy policy, based on consultation and endorsement of relevant groups or authorities, will often be needed before specific initiatives can be successfully introduced.

Interventions must also be coordinated to ensure consistency of approach. As an example, workplace programs to support more nutritious eating behaviours are likely to be undermined if the onsite canteen offers low cost, unhealthy food choices.

Healthy policies

The WA Department of Health has a significant role to play in developing policies to improve the health of all Western Australians. However, as many of the most important influences on the population's health do not fall within the direct control of the health sector, it is vital to ensure that health and wellbeing are fundamental considerations in public policy development across all levels of Government. Industry, non-government organisations, the education sector, professional organisations and the wider community also have an important role to play in ensuring healthy policies.

Encouraging and supporting the adoption of healthy policies and practices helps to extend the reach of health messages, provides a supportive environment for behavioural change, and positively influences cultural norms regarding health behaviours.

Legislation and regulation

Laws and regulations provide the cornerstone for safeguarding and improving public health.⁴⁷ Laws can be used to restrict the sales, promotion and use of harmful or potentially harmful substances (as in the cases of tobacco and alcohol), or to protect public safety (for example laws on seatbelts in cars and drink-driving). The production, processing, transport, sales and labelling of food are all subject to regulations intended to protect public health and safety. By introducing and enforcing appropriate legislation to underpin health promoting behaviours, governments demonstrate a firm commitment to healthy public policy and provide a strong foundation for building environments to support health interventions.

While the introduction of legislation is the responsibility of governments, the health sector, non-government organisations and the wider community make an important contribution to public debate about the need for and content of legislation, as well as providing ongoing support and promotion once legislation has been passed.

Economic interventions

Economic interventions are an effective way of influencing consumer behaviours and consumption patterns. Higher tobacco prices in Australia due to increases in taxation are credited with helping to bring down the prevalence of smoking, particularly in young people.⁵⁷ There are also precedents for allocating money raised from taxes on harmful or potentially harmful products to funding of health campaigns. The World Health Organization has identified the potential for tax and other economic measures (including grants, pricing, incentives and subsidies) to be used to influence healthier nutritional behaviours and reduce harmful levels of alcohol use.⁵⁸

Supportive environments

All of the environments we encounter – including the neighbourhood where we live; workplaces, schools and community settings; our social and cultural networks and in the home – have the potential to influence health outcomes. Environments that support good health may do so by promoting healthy behaviours; for example by making healthy choices the easier or more attractive choices; by ensuring equitable access to nutritious food; by providing safe and accessible active transport options; and by denormalising unhealthy or risky behaviours.

Public awareness and engagement

Raising awareness and engaging public interest prompt and motivate the population to consider their lifestyle behaviours and the potential for changing their behaviour to reduce the risk of chronic disease and injury. Engaging the public by providing reliable, consistent and motivating messages that are relevant at a personal, family, organisational or community level also increases the effectiveness of other health promotion activities. Mass media campaigns have the capacity to deliver real public health gains when they are well-designed and delivered with appropriate reach and intensity.⁵⁹

There are a number of other effective ways of conveying health messages and information. For example, clear product information (such as food and alcohol labelling or health warnings on tobacco packs) has an important role in elevating public awareness and knowledge. Professional groups (such as health professionals and researchers), organisations and the media also have a vital role in disseminating information and contributing to the public discourse about health issues.

Community development

Community approaches to health promotion take into account the social, cultural, economic, environmental, geographical and other factors that make individual communities distinct. The community is directly engaged in identifying the factors that contribute to ill-health in their particular setting, deciding on priorities and working towards finding and implementing solutions. In some circumstances health and other professionals may work in partnership with communities, participating in decision-making and helping to control implementation of initiatives. In other settings, communities steer their own course, with health professionals acting as co-facilitators.⁶⁰

Community development fosters participation, empowerment and sustainability. These important elements help to build more equitable, healthy and resilient communities.

Targeted interventions

Targeted interventions refer to delivery of health interventions in specific settings (such as workplaces, schools, leisure centres and GP surgeries), specific communities (such as remote Aboriginal communities or local government areas) or to particular groups (for example parents, and CaLD groups), or a combination of these. Targeted interventions need to include, or be part of a larger integrated suite of activities that take into account the environmental and individual determinants of health. Targeted interventions also need to take account of, and support, the improvement of health literacy skills.

Providing public health messages in specific settings increases the likelihood that they will reach their target audiences, and enables tailoring of messages and associated support activities that will increase their likelihood of success.

Strategic coordination, building partnerships and workforce development

As noted in Principle 2, a coordinated, partnership approach to tackling chronic disease and injury prevention is essential to ensure that the reach and impact of health-promoting interventions are as effective as possible.

As the underlying determinants of non-communicable diseases often lie outside the health sector, strategies need the involvement of both public and private actors in multiple sectors such as agriculture, finance, trade, transport, urban planning, education and sport.^{61 p. 19}

The Department of Health is well-positioned to act as a coordinating agency to assist in aligning strategic planning and policy priorities and developing productive partnerships across sectors that may not traditionally be seen as active participants in the health domain, but that have the capacity to influence health and wellbeing; especially the upstream, systemic factors that influence the determinants of health (see Figure 1). There is the potential for the development of synergistic policies with a number of Government departments and agencies (many of which already take public health concerns into consideration), and the non-government organisations that are active within those sectors. There is also an enhanced role for local governments, with the passage of the WA *Public Health Act 2016* (see Box 3). The Department of Health can provide a leadership role by guiding evidence-based policy-making; providing expert information and resources, facilitating access to relevant, quality data, and connecting partners to broader health-promoting networks.

The health sector comprises a large, diverse and specialised workforce, and the existing statewide health infrastructure offers great potential for contributing to health promotion. Nurturing and maintaining a workforce with specialist skills in health promotion and chronic disease prevention is vital, and facilitating ongoing workforce development is a crucial element in maximising opportunities for improving public health. There is a need to ensure awareness of health promotion priorities, and competency in best-practice methods to contributing to health promotion across the continuum of care.⁶¹ There is also scope for increasing the capacity and competency of the workforce in sectors beyond the health sector that have an overlapping interest in, or responsibility for, factors that influence health.

Part 4: The five-year plan

4.1 Curbing the rise in overweight and obesity

Obesity is the result of many complex, man-made systems, including: food supply, transport, urban design, business, socio-cultural, marketing, communications, education, health, trade, legal, economic, and governance systems. All could potentially be re-oriented for better population and environmental outcomes – World Obesity Federation, 2015⁶²

A snapshot of overweight and obesity in WA

- In 2015, just over two-thirds (67%) of adults aged 16 years and over were classified as overweight (40%) or obese (27%), based on self-reported height and weight.¹⁹
- Males were more likely than females to be overweight or obese (73% compared with 61%). Males aged 45–64 years had the highest rate of overweight and obesity of any group (85%).¹⁹
- Rates of overweight and obesity among adults have increased over time, driven by a general increase in Body Mass Index (BMI; see Box 8: How healthy weight is assessed). Since 2002, there has been a significant increase in the mean BMI for men and women.¹⁹
- In 2015, more than one in five (22%) children aged 5–15 years were classified as overweight (16%) or obese (6%).²⁰
- Rates of childhood overweight and obesity have remained relatively stable over the last decade.²⁰
- In 2012–13, 67 per cent of Aboriginal people living in WA were classified as overweight or obese.⁹ However Aboriginal people were almost 1.5 times more likely to be obese than non-Aboriginal people.⁹
- In 2014–15, rates of overweight and obesity were higher in women living in areas of most disadvantage (61%) compared to those living in areas of least disadvantage (48%) in Australia. This pattern was not observed in men.²⁵
- Rates of overweight and obesity were higher among people living in rural or remote areas, some overseas-born populations, and people with severe or profound disability.^{4, 25, 29}
- A healthy diet contributes significantly to maintaining a healthy weight, but the majority of Western Australians are not consuming a diet in line with the *Australian Dietary Guidelines*⁶³ (for a snapshot of nutrition and diet in WA see p. 31).
- In 2011–12, Western Australians obtained over one-third of their energy (36%) from discretionary food and drinks^c.⁶⁴ More than half of all Australians exceeded the WHO recommendations around sugar intake with around half of free^d sugars in the diet consumed from beverages such as soft drinks.⁶⁶
- Physical inactivity and sedentary behaviour are also associated with overweight and obesity. In 2015, nearly 40 per cent of adults were not sufficiently active and 43 per cent reported spending most of their day sitting¹⁹ (see p. 37).



One in five children in WA were classified overweight or obese

WA adults gained 36% of their daily total energy intake from unhealthy foods



^c The *Australian Dietary Guidelines* define foods and drinks as ‘discretionary’ when they are not necessary to provide the nutrients the body needs (although do add variety to the diet). Many are high in saturated fats, sugars, salt and or alcohol and are energy dense. Guideline 3 recommends limiting intake of these items (see Box 9).

^d ‘Free sugars’ extends the definition of added sugars to include sugars naturally present in honey, fruit juice and fruit juice concentrates. In 2015, the WHO issued a recommendation that adults and children reduce their daily intake of free sugars to less than 10 per cent of their total energy intake.⁶⁵

Priorities for curbing the rise in overweight and obesity in WA

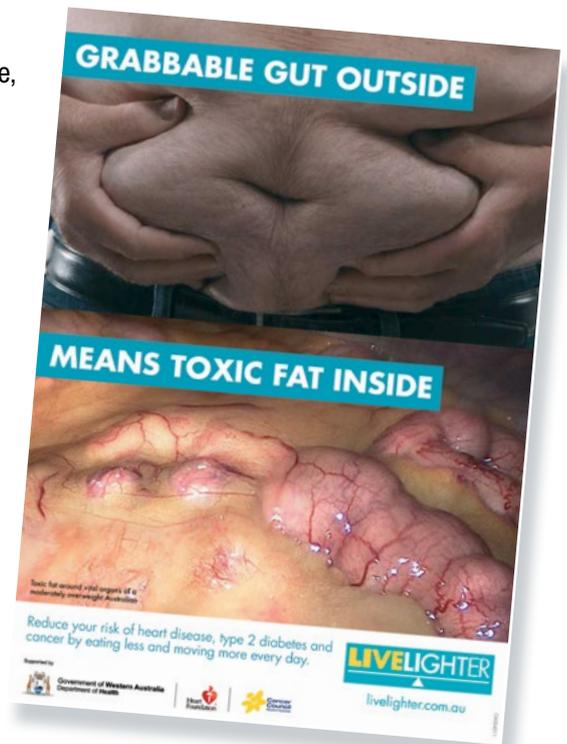
The interconnected nature of overweight and obesity, patterns of eating and extent of physical activity means that some degree of overlap between the priorities and strategic directions presented in this section and those outlined in the following sections (**Healthy eating** and **A more active WA**). Approaches for preventing overweight and obesity should also recognise that increasing physical activity and healthier eating can improve health outcomes, independent of weight loss.

Promote environments that support people to achieve and maintain a healthy weight

Today's environment has been referred to as obesity-promoting or 'obesogenic',⁶⁷ in that it encourages people to consume more energy than their bodies need and to be less physically active. A comprehensive, cross-sectoral approach is needed to create an environment that supports people to achieve and maintain a healthy weight.^{52, 58}

The way in which our neighborhoods and cities are designed can have a profound impact on the degree to which people can lead healthy lifestyles (particularly in relation to active living and access to healthy food). The creation of health-promoting environments in child and adult settings, through policy, physical environments, food supply, education, partnerships and services, can also support healthy eating, physical activity and reduced sedentary behaviour.⁵⁸

There is a need to address children's exposure to the promotion and marketing of discretionary foods and drinks. There is evidence that advertising influences children's attitudes to food and dietary preferences, and in turn, what they consume.⁶⁸ In Australia, children are still exposed to high levels of advertising and promotion for food, most of this being for unhealthy products.^{69, 70} The growth in the supply of relatively cheap energy-dense, nutrient-poor foods high in saturated fat, salt and sugar⁷¹ undermines and reinforces the need to step up efforts that encourage a diet consistent with the Australian Dietary Guidelines (see Box 9).¹⁷ Growing evidence suggests that taxes and subsidies may act as an incentive for dietary changes and improve population health outcomes.^{72, 73}



Prevent and reverse childhood overweight and obesity

The risk of becoming overweight or obese starts early in life and is influenced by factors including maternal overweight and obesity, antenatal and postnatal care and infant feeding practices (including breastfeeding). The quality and nature of environments to which children are exposed (for example at home, in child care, or at school) are important influences on future dietary and physical activity habits.⁵⁸

Overweight and obesity in childhood has a range of short- and long-term health impacts and is associated with a high risk of obesity in adulthood.⁷⁴ The later into adolescence that overweight persists and the more overweight children are, the greater the chance they will be obese as adults.⁷⁵ Therefore, preventing and addressing overweight and obesity in children and adolescents offers significant longer-term benefits.

It should be noted that the focus of initiatives targeting children should be on healthy growth and development (including physical, psychological and cognitive development) rather than weight. This helps to manage the risks of under-nutrition or an unhealthy obsession with weight loss in children of a healthy weight.⁷⁶

Motivate behaviour to achieve and maintain a healthy weight among adults

Common misperceptions about what is a healthy weight need to be challenged. Studies show that adults consistently underestimate their weight status and parents mistake the weight status of their children.^{77, 78} These misperceptions are likely to continue as rates of overweight and obesity increase in the community, as much of how people view themselves is informed by social comparison.⁷⁹

Being overweight or obese puts people at greater risk of a range of health problems including heart disease, stroke, type 2 diabetes and some cancers.⁸⁰ The associated health risks appear to increase with increasing BMI.⁸¹ There has been a general increase in adult weight and BMI since 2002 in WA.¹⁹ Given this, it is important to address gradual weight gain through adult life by encouraging behaviour that supports maintenance of a healthy weight and early reversal of small weight gains. With a large proportion of the adult population overweight or obese, the benefits of even small, sustained weight loss must also be emphasised. A modest loss of 5–10 per cent of body weight can lead to significant health benefits.⁸¹



A modest loss of 5 to 10 per cent of body weight can lead to significant health benefits

Box 8: How healthy weight is assessed

The following information is based on material provided by the National Health and Medical Research Council.⁸¹

In adults

Body mass index (BMI) is the most common approach to assess weight classification in adults. It is calculated by dividing weight (in kilograms) by height (in metres) squared (kg/m^2). BMI is a measure of body size that is widely used as an index of relative risk of mortality and morbidity at the population level, with risk lowest in the healthy weight range. BMI categories for adults are:

BMI (kg/m^2)	Classification
< 18.5	Underweight
18.5–24.9	Healthy weight range
25.0–29.9	Overweight
30.0–34.9	Obese class I
35.0–39.9	Obese class II
≥ 40.0	Obese class III

The BMI classification may not be suitable for all population groups; for example athletes, Aboriginal and Torres Strait Islander people, some CaLD communities and older people.

Waist circumference is another indicator of total body fat and can be a better predictor of health risk than BMI.

Waist circumference	Disease risk
Men ≥ 94 cm	Increased risk
Women ≥ 80 cm	Increased risk
Men ≥ 102 cm	High risk
Women ≥ 88 cm	High risk

In children

For children and adolescents, it is not possible to have a single set of numerical values for BMI cut-offs that apply to both sexes and all ages. Growth (percentile) charts are a valuable tool for monitoring growth and screening for inadequate growth or overweight and obesity. These show the normal ranges of height for age, weight for age and BMI, by sex. Given that growth is a dynamic process, several measures are preferable when assessing infants and children.

There are a number of widely-accepted tools available for assessment including those developed by the WHO⁸² and the United States Centres for Disease Control and Prevention.⁸³

Strategic directions for curbing the rise in overweight and obesity in WA

The strategic directions presented in this section overlap with and complement those outlined in the following sections on **Healthy eating** and **A more active WA**. Approaches for preventing overweight and obesity should also recognise that increasing physical activity and healthier eating can improve health outcomes, independent of weight loss.

Healthy policies

- Support the development and implementation of policies that have a positive impact on obesity and its determinants
- Support the development and implementation of organisational policies that facilitate increased physical activity, healthy eating and reduced sedentary behaviour.

Legislation and regulation

- Support stronger controls across all levels of government to reduce exposure to the marketing and promotion of discretionary food and drinks, particularly for children
- Support food regulation to improve the nutrition content of food products through reformulation and portion control and assist consumers to make informed food choices (nutrition labelling and information at point of sale).

Economic interventions

- Investigate and consider fiscal policies with the potential to reduce consumption of unhealthy food and drinks and increase consumption of healthy foods.

Supportive environments

- Work across government and key sectors to encourage and support environmental changes that facilitate increased physical activity and access to healthy foods
- Support and implement initiatives that engage with key sectors within the food industry to increase the production, marketing and availability of healthier food and drinks
- Facilitate the creation of health-promoting environments that support physical activity, healthy eating and reduced sedentary behaviour within key settings such as workplaces, schools and child care
- Support and implement initiatives that limit exposure to the marketing and promotion of discretionary food and drinks, both in children's settings and the broader community.

Public awareness and engagement

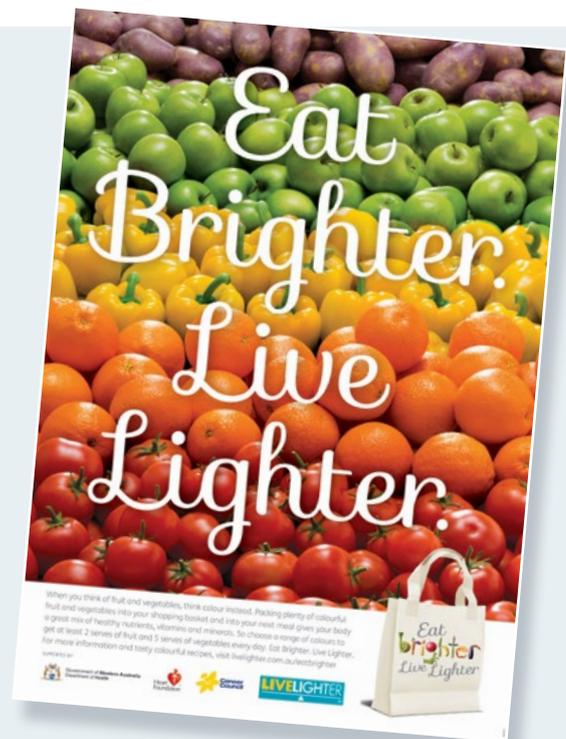
- Invest in sustained, high-quality statewide public education campaigns that increase community understanding about the risks of overweight and obesity and motivate behaviour necessary to support achievement and maintenance of a healthy weight
- Increase access to evidence-based advice across multiple settings about what is a healthy weight and how to prevent unhealthy weight gain across key life stages
- Implement strategies that stimulate debate and increase community demand and support for measures aimed at obesity prevention.

Community development

- Engage with the community and key stakeholders, including local governments, to identify and implement priority actions that support obesity prevention at a local level
- Encourage and support community-based obesity prevention initiatives in partnership with key stakeholders to maximise their reach and impact
- Work with local government to develop local public health plans that include measures to address overweight and obesity.

Targeted interventions

- Implement strategies targeting those planning pregnancy, pregnant women and parents/families to increase behaviours that support the healthy growth and development of children
- Invest in initiatives for children who are identified as above a healthy weight and their families to support adoption of healthy lifestyle behaviours
- Complement population approaches with targeted approaches that are inclusive of needs and issues of specific sub-populations at higher risk of overweight and obesity (for example Aboriginal people, CaLD groups with higher obesity rates, people with disabilities).



Strategic coordination, building partnerships and workforce development

- Strengthen existing and develop new partnerships across all sectors to ensure a comprehensive, consistent and effective approach to addressing overweight and obesity and its determinants
- Strengthen, upskill and support relevant sectors of the workforce (public health, broader health and non-health) to address overweight and obesity, poor diet and physical inactivity in their programs, policy and plans
- Support and undertake research in line with the *National Preventive Health Research Strategy 2013–2018: Priority-driven research agenda for obesity prevention*⁸⁴
- Continue to collect evidence to inform new approaches and monitor the effectiveness of existing initiatives targeting overweight and obesity and its related risk factors
- Support continued population monitoring of overweight and obesity as well as individual and key environmental factors that impact on obesity rates.

4.2 Healthy eating

The overarching message is optimistic. A range of high-impact, cost-effective nutrition interventions exists... any country that wants to achieve rapid improvements in nutrition can do so. Margaret Chan, Director-General, World Health Organization, 2015⁸⁵

A snapshot of nutrition and diet in WA

- The most recent national dietary survey^{63, 66, 86} found that most Western Australians aged two years and over did not meet the *Australian Dietary Guidelines* (see Box 9) recommendations for healthy foods – vegetables, fruit, grain (cereal) foods, milk and meat, or their alternatives
- Western Australian adults consumed 36 per cent of their total energy intake from unhealthy discretionary foods^e and drinks high in saturated fat, salt, sugar or alcohol and children consumed 38 per cent of their energy intake from these foods⁸⁶
- In WA in 2011–12, over half (51%) of the population aged two years and over usually exceeded the WHO recommendation that adults and children consume less than 10 per cent of their total daily energy intake from free sugars^f.⁸⁷
- The prevalence of WA adults over the age of 16 years who met the *Australian Dietary Guidelines* recommendations for daily fruit and vegetable intake remained consistently low from 2002–2015. Only one in two adults consumed two or more serves of fruit, and one in ten consumed at least five serves of vegetables.¹⁹
- The prevalence of WA children aged 2–15 years who met recommendations for daily fruit intake was also relatively stable from 2002–2015, at around 80 per cent. Likelihood of meeting fruit and vegetable recommendations declined with age. There was a significant increase in vegetable consumption between 2003 (14%) and 2015 (21%).²⁰
- In WA in 2012, 44 per cent of adults aged 18–64 years reported eating a diet low in fat, though half (52%) reported they were trying to cut down on the amount of fat they consumed.⁸⁸
- Although the *Australian Dietary Guidelines* recommend consuming mostly reduced fat milk, more than a third (39%) of adults aged over 16 years,¹⁹ and more than half (56%) of children aged 2–15²⁰ usually consumed full fat milk in WA in 2015.
- Breastfeeding initiation rates in WA were 96 per cent in 2015.²⁰ Although Australian Guidelines⁸⁹ recommend breastfeeding infants exclusively until around six months of age, 30 per cent of babies were given other fluids before one month of age.²⁰
- Approximately one-third of WA adults¹⁹ and children²⁰ consumed fast food at least once a week in 2015.
- In WA in 2012, almost 1 in 5 (19%) WA adults aged 18–64 years reported having consumed one or more sugar-sweetened soft drink(s) on the day before. Males (30%) were more than four times more likely to have consumed a sugar-sweetened soft drink than females (7%).⁸⁸
- In 2015, almost 1 in 20 (4%) WA adults over the age of 16 years reported running out of food during the previous year and not being able to afford more.¹⁹
- In 2012–13, 22 per cent of Aboriginal and Torres Strait Islander people reported running out of food, and 7 per cent reported running out of food and not being able to afford more. Among Aboriginal and Torres Strait Islander people living remotely, almost 1 in 10 (9%) reported running out of food and not being able to afford more.⁹⁰

In 2015, only one in ten adults consumed five or more serves of vegetables daily



^e The Australian Dietary Guidelines define foods and drinks as ‘discretionary’ when they are not necessary to provide the nutrients the body needs (although do add variety to the diet). Many are high in saturated fats, sugars, salt and or alcohol and are energy dense. Guideline 3 recommends limiting intake of these items (see Box 9).

^f ‘Free sugars’ extends the definition of added sugars to include sugars naturally present in honey, fruit juice and fruit juice concentrates. In 2015, the WHO issued a recommendation that adults and children reduce their daily intake of free sugars to less than 10 per cent of their total energy intake.⁶⁵

- Two-adult families living on welfare in WA in 2013 needed to spend 44 per cent of their weekly disposable income in order to purchase all the food required for a weekly meal plan, compared to just 14 per cent for an average income family.⁹¹
- In 2012, 93 per cent of adults in WA rated themselves as reasonably competent cooks. However, 75 per cent reported that knowing more about preparing healthy foods, and 60 per cent said that knowing more about cooking, would help them and their families have a healthier diet.⁹²



60% of adults said that knowing more about cooking would help them have a healthier diet...

Note on data sets: Publications reporting on the *2011–12 Australian Health Survey*^{63, 66, 86} provide a more accurate and detailed record of dietary intake, with some state-specific data available.

Priorities for healthier eating in WA

Foster environments that promote and support healthy eating patterns

The current environment promotes poor dietary patterns, contributing to excess energy intake from manufactured foods and drinks high in saturated fat, added sugar and salt, and inadequate intake of unprocessed and minimally-processed nutritious foods and drinks, including vegetables, fruit and wholegrain cereals from the five food groups⁹³⁻⁹⁵ (see Box 9). In Australia, discretionary foods are heavily marketed, easy to obtain and prepare, and relatively cheap.⁷¹ The ready availability of sugar-sweetened drinks, increases in portion sizes, and food packaging and promotion all impact on dietary intakes.⁹⁶⁻¹⁰⁰

There has been substantial effort to improve the supply and promotion of nutritious foods (while limiting discretionary foods) provided through food outlets in some settings, such as schools, health services and workplaces, and continued action is needed in these as well as in other settings where Western Australians live, work, learn and play.

Healthy dietary patterns can be promoted and supported across all segments of the food system, including production, processing, trade, distribution, food service, marketing and retail. There is evidence for a range of interventions that have potential to help improve the Western Australian diet, such as financial incentives and disincentives for industry and consumers in the form of taxes, pricing policies and subsidies; planning provisions supporting local primary production and healthy food retailers; food reformulation to reduce saturated fat, added sugar and salt and increase fibre; portion size limits; nutrition standards in food service settings; policies reducing exposure to discretionary food marketing, particularly to children; and provision of point-of-purchase nutrition information on food labels and menus.¹⁰¹

Both health and environmental benefits are likely if healthy dietary patterns are widely adopted. Over-consumption, particularly of discretionary foods, leads to greater use of natural resources and puts more pressure on the environment, including increased disposal of food waste and packaging.⁸⁹ A food system that supports healthy dietary patterns will require a combined effort from different levels and sectors of government, industry and the community.

A multifaceted approach involving a range of sectors is also needed to foster and maintain an environment that supports breastfeeding.¹⁰² There is a high level of social acceptability for breastfeeding in public places in WA,¹⁰³ and although breastfeeding initiation rates are high in WA,²⁰ mothers need a range of environmental supports to encourage and enable them to continue to feed for an optimal time.⁸⁹ These could include education and support for mothers, the fostering of supportive community and family environments, and enforcement of already-existing restrictions on the marketing and labelling of infant formula.^{102, 104, 105}



There is a high level of social acceptance for breastfeeding in public places in WA

Increase availability and accessibility of safe, nutritious, sustainable, and affordable food for all

The price of healthy foods, particularly fruits and vegetables, has increased.¹⁰⁶ Access to fresh, good quality, nutritious and affordable food in WA is influenced by where people live and their income.⁹¹ Due to transport time and costs, food is generally more expensive and of poorer quality as distance from Perth increases. A 2013 study showed that a healthy food basket cost 26 per cent more in remote areas than in metropolitan areas of WA.⁹¹

People at risk of experiencing food insecurity^{107 g} and hunger include low income earners, the unemployed or underemployed, the homeless, sole parents and Aboriginal and Torres Strait Islander people,¹⁰⁸ as well as those living with physical disabilities or mental illness,¹⁰⁹ and some CaLD communities.¹¹⁰

Other barriers to healthy eating include limited access to food outlets; inadequate skills and facilities to store and prepare food; lack of time or mobility to shop for and prepare meals at home; and social isolation.¹⁰⁹

Increase the knowledge, skills and confidence necessary to choose a healthy diet

Australians are increasingly exposed to conflicting nutrition messages and misinformation.⁹³ The *Australian Dietary Guidelines* (see Box 9)⁸⁹ are based on scientific evidence,¹¹¹ take account of Australian eating patterns¹¹² and recommend the best approach to eating for a longer and healthier life.¹⁷ However, adherence to the Guidelines is generally poor, and there is a significant disparity across economic status.^{93, 113-115} Socioeconomic differences in nutrition knowledge, particularly diet-disease relationships, can contribute to inequalities in food purchasing choices.^{116, 117} Lower levels of nutrition knowledge have also been reported in the unemployed, the less educated and among men.⁸⁸ Maternal diet quality, socioeconomic status and nutrition knowledge are important influencers of children's dietary patterns.^{118, 119}

Although many individuals regard their diet as healthy,⁸⁸ providing credible, reliable, easily-understood nutrition information, for example in the media, at point-of-sale and on food labels, can help people make more informed decisions about the foods they eat. Research shows that the majority of WA adults support the need for clear information through appropriate food labelling.¹²⁰

Increasing food literacy skills such as food planning, shopping, meal preparation and confidence in cooking can help improve dietary choices.¹²¹ There are concerns that there has been a population-wide reduction in food literacy skills with the increase in the need for convenience.^{122, 123} Low food literacy may contribute to consumption of highly-processed foods.¹²⁴

⁹ Food insecurity may be defined as a *situation that exists when people lack secure access to sufficient amounts of safe and nutritious food for normal growth and development and an active and healthy life... Food insecurity may be chronic, seasonal or transitory.*^{107 p. 53}

Box 9: Australian Dietary Guidelines⁸⁹

Guideline 1: To achieve and maintain a healthy weight, be physically active and choose amounts of nutritious food and drinks to meet your energy needs.

- Children and adolescents should eat sufficient nutritious foods to grow and develop normally. They should be physically active every day and their growth should be checked regularly
- Older people should eat nutritious foods and keep physically active to help maintain muscle strength and a healthy weight.

Guideline 2: Enjoy a wide variety of nutritious foods from these five groups every day:

- Plenty of vegetables, including different types and colours, and legumes/beans
- Fruit
- Grain (cereal) foods, mostly wholegrain and/or high cereal fibre varieties, such as breads, cereals, rice, pasta, noodles, polenta, couscous, oats, quinoa and barley
- Lean meats and poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans
- Milk, yoghurt, cheese and/or their alternatives, mostly reduced fat (reduced fat milks are not suitable for children under the age of 2 years)
- And drink plenty of water.

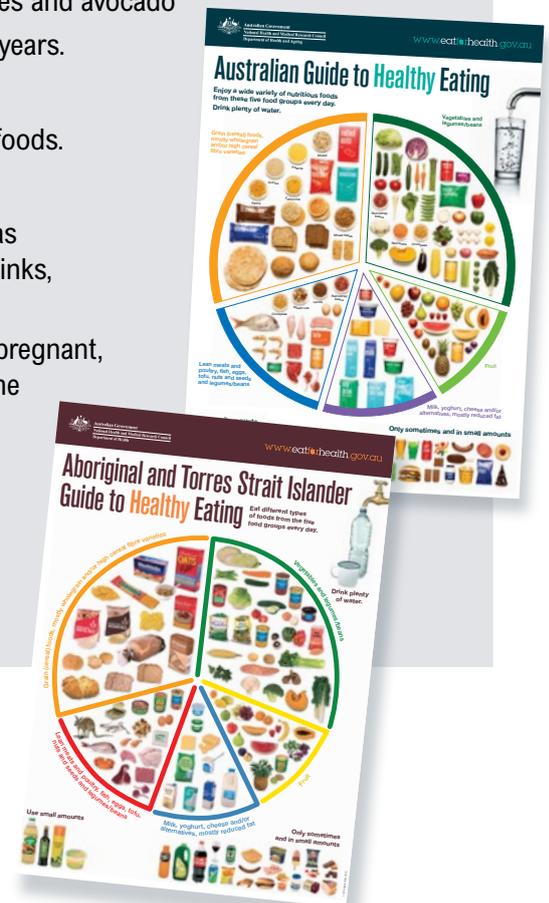
Guideline 3: Limit intake of foods containing saturated fat, added salt, added sugars and alcohol.

- Limit intake of foods high in saturated fat such as many biscuits, cakes, pastries, pies, processed meats, commercial burgers, pizza, fried foods, potato chips, crisps and other savoury snacks
 - Replace high fat foods which contain predominantly saturated fats such as butter, cream, cooking margarine, coconut and palm oil with foods which contain predominantly polyunsaturated and monounsaturated fats such as oils, spreads, nut butters/pastes and avocado
 - Low fat diets are not suitable for children under the age of 2 years.
- Limit intake of foods and drinks containing added salt
 - Read labels to choose lower sodium options among similar foods.
 - Do not add salt to foods in cooking or at the table
- Limit intake of foods and drinks containing added sugars such as confectionary, sugar-sweetened soft drinks and cordials, fruit drinks, vitamin waters, energy and sports drinks
- If you choose to drink alcohol, limit intake. For women who are pregnant, planning a pregnancy or breastfeeding, not drinking alcohol is the safest option.

Guideline 4: Encourage, support and promote breastfeeding

Guideline 5: Care for your food; prepare and store it safely

Specific advice on healthy eating by age and life stage is available from www.eatforhealth.gov.au/eating-well/healthy-eating-throughout-all-life



Strategic directions for healthier eating in WA

Healthy policies

- Encourage, shape and support the development and implementation of public policies across the food system^h to improve the availability and accessibility of healthy foods and reduce that of less healthy foods
- Encourage and support the development and implementation of food and nutrition policies within key settings
- Strengthen and elevate the priority of breastfeeding policies, including support for breastfeeding mothers, in health services, child care services, workplaces and community venues.

Legislation and regulation

- Support food regulation to protect and promote public health consistent with the *Australian Dietary Guidelines*⁸⁹
- Support food regulation to improve the nutrition content of food products through reformulation and portion control; and assist consumers to make informed food choices
- Support regulations and policy to ensure that food advertising and promotion is not misleading or deceptive, and to reduce exposure to the marketing and promotion of discretionary foods and drinks, particularly to children.

Economic interventions

- Investigate and consider fiscal policies with potential to increase the consumption of healthy foods, and improve the availability and accessibility of healthy foods and reduce that of less healthy foods
- Reinforce the health and economic benefits of breastfeeding, and investigate fiscal policies that support breastfeeding mothers.

Supportive environments

- Work with key food system^h stakeholders to improve the availability, relative affordability, acceptability and promotion of nutritious foods
- Work across government and key sectors to influence planning to ensure urban design promotes and supports healthy dietary patterns
- Facilitate the creation of health-promoting environments that encourage healthy dietary patterns and support breastfeeding in key settings
- Support and implement initiatives that limit exposure to the marketing and promotion of discretionary food and drinks, and encourage promotion of healthy products
- Investigate, develop and implement effective strategies to improve equitable access to quality and affordable nutritious foods.

Public awareness and engagement

- Invest in sustained, high quality statewide public education campaigns and programs that increase awareness, skills, beliefs and attitudes regarding a healthy dietary pattern
- Increase access to reliable, practical, culturally-appropriate nutrition information about the healthy eating patterns needed at all stages of life for good health.

^h The food system includes primary food production, food processing, food distribution, food marketing, food retail, food service, food purchasing and consumption.¹⁰⁰

Community development

- Engage with the community and key stakeholders, including local governments, to identify and prioritise actions that support healthy dietary patterns and community food security
- Work with local governments to develop local public health plans that include support for healthier eating.



Targeted interventions

- Support initiatives that increase the availability, accessibility and affordability of nutritious food, particularly among those groups most vulnerable to poor nutrition
- Invest in programs that increase food and nutrition knowledge and skills of parents, children and other groups most vulnerable to poor nutrition
- Integrate messages about healthy eating with other healthy lifestyle initiatives, and develop links between programs and services that are targeted at specific populations who are more likely to be at risk of poor nutrition
- Complement population approaches with targeted programs that are culturally-appropriate and/or meet the needs of those at higher risk of poor nutrition (such as pregnant women and new mothers, adolescents, Aboriginal people and CaLD groups with poorer nutrition).

Strategic coordination, building partnerships and workforce development

- Strengthen existing and develop new partnerships across all sectors to ensure a comprehensive, consistent and effective approach to promoting healthy eating
- Strengthen, upskill and support relevant parts of the workforce (nutrition, public health, child health, food industry and other non-health) to address public health nutrition in their programs, services, policies and plans
- Continue to collect evidence to inform new approaches and monitor the effectiveness of existing initiatives targeting nutrition and dietary patterns
- Support continued population monitoring and surveillance of nutrition and food consumption and related environmental factors.

4.3 A more active WA

The potential benefits of physical activity to health are huge. If a medication existed which had a similar effect, it would be regarded as a 'wonder drug' or 'miracle cure' – Sir Liam Donaldson, UK Chief Medical Officer, 2010^{125 p. 21}

A snapshot of physical activity and sedentary behaviour in WA

- In 2015, nearly two-thirds (64%) of people in WA aged 18 years and over reported being sufficiently active for good health (according to *Australia's physical activity and sedentary behaviour guidelines* – see Box 10). This has increased significantly since 2007 (56%).¹⁹
- In 2015, males aged 18 and over in WA were more likely to be sufficiently active than females (68% compared with 59%).¹⁹
- The prevalence of males aged 18 and over who met sufficient levels of physical activity in 2015 (68%) was higher than in 2007 (60%). The prevalence of females meeting sufficient levels of physical activity in 2015 (60%) was also higher than in 2007 (53%).¹⁹
- One in four (26%) adults aged 65 years and over reported doing no physical activity in WA in 2015.¹⁹
- In 2015, 43 per cent of people in WA aged 18 years and over reported spending most of their day sitting.¹⁹
- In 2015, 38 per cent of children in WA aged 5–15 years were sufficiently active for good health.²⁰
- Boys aged 5–15 years were more likely to be sufficiently active than girls in 2015 (49% compared to 28%).²⁰
- Over one third (36%) of children aged 0–15 years exceeded their age-related recommendations for electronic media use in 2015, with children aged between 2 and 5 years the most likely to exceed these (68%).²⁰
- In 2015, adults living in the most disadvantaged areas of WA were less likely to be physically active than those in the least disadvantaged areas (55% compared to 70%).¹⁹ People who lived in rural or remote areas were also less likely to be physically active.¹⁶
- In 2012–13, just under 40 per cent of Aboriginal and Torres Strait Islander adults living in non-remote areas of Australia were sufficiently active. Similar to the rest of the population, rates of physical activity declined with age.¹²⁶
- In 2014, 61 per cent of Australian adults living with disability participated in sport and physical recreation, compared to 76 per cent of those with no disability.¹²⁷



Priorities for a more active WA

Create environments that support physical activity and reduce sedentary behaviour

Over past decades, lifestyles have changed for much of the population. The emergence of more passive forms of entertainment, labour-saving devices, more sedentary occupations, higher density housing and increased car use have fundamentally changed how much time people spend being physically active at home, at work, during travel and in their recreational pursuits.¹²⁸

Given this, many different factors need to be addressed in order to create a more supportive environment for increasing physical activity and reducing sedentary behaviour.^{58, 129} Creating environments that support physical activity requires: good town planning and urban design that enables a variety of daily activities within walking distance of where people live, work and play; active travel infrastructure for walking, cycling and public transport use; and the provision of high-quality parks and public open spaces.¹³⁰⁻¹³⁴

The number of health-promoting child and adult settings that support physical activity and reduced sedentary behaviour can be increased through influencing organisational policy and physical environments, providing education and information, and building partnerships and services.⁵⁸

Reduce barriers and increase opportunities for physical activity across all populations

There are many barriers to participation in physical activity including cost, lack of access to appropriate facilities, long working hours, perceived or real threats to safety, a lack of social support and insufficient culturally-inclusive activities.¹²⁹ Some groups, such as Aboriginal people, CaLD groups, people living with disability, people who live in rural or remote places, older adults and those who live with socioeconomic disadvantage, may face a greater range of barriers than others.^{16, 135} Interventions should ensure that all members of the community have equitable, accessible, safe, convenient and affordable options to incorporate physical activity into their daily routines.¹²⁹

Increase understanding of the benefits of physical activity and encourage increased activity at all stages of life

There are still a substantial number of Western Australians who are not sufficiently active for good health. People of all ages need to be encouraged and supported to increase physical activity in line with *Australia's physical activity and sedentary behaviour guidelines* (see Box 10).¹³⁶ The guidelines provide minimum recommendations, noting that increasing the duration and intensity of activity above the minimum for all age groups may result in additional health and fitness benefits.¹³⁶ Increasing levels of physical activity in people who are currently inactive is also an important goal for public health.^{137, 138}

As there are several stages in a person's life where physical activity levels are likely to change and decrease, it is important to take a life-course approach to encouraging engagement in physical activity. This starts in childhood with gaining confidence in the basic movement skills (such as running, jumping, catching and throwing) that become the building blocks of more complex skills used in a wide range of physical activities, games, sports and recreational pursuits.¹³⁹ Ongoing physical activity is important for older Western Australians, as it is of vital importance for maintaining good health, as well as improving mobility, strength and balance and protecting against falls.¹⁴⁰



...it is important to take a life course approach to encouraging engagement in physical activity...

Motivate lifestyle changes to reduce sedentary behaviour

People may meet the recommended levels of physical activity but still be sedentary, if they spend a large amount of their day sitting or lying down at home, at work, while studying, travelling, or during leisure time. Adherence to both adult and child sedentary behaviour guidelines is low.^{19, 20}

There is evidence that sedentary behaviour is associated with poorer health outcomes, independent of physical activity levels.¹⁴¹ It is recommended that the amount of time spent sedentary each day should be minimised, and broken up as often as possible with movement integrated through daily activities. This can include structured exercise as well as incidental physical activity while working, playing, carrying out household chores, travelling and engaging in recreational pursuits such as gardening, walking or cycling for leisure.¹³⁶ There is a need to educate adults, parents and children about this emerging area and the national recommendations for adults and children.



Box 10: Australia's Physical Activity and Sedentary Behaviour Guidelines¹³⁶

For children aged 0–5 years:

- For healthy development in infants (birth–1 year) physical activity—particularly supervised floor-based play in safe environments—should be encouraged from birth.
- Toddlers (1–3 years) and pre-schoolers (3–5 years) should be physically active every day for at least three hours, spread throughout the day.
- Children under 2 should not spend any time watching television or using other electronic media (DVDs, computer and other electronic games) and children aged 2–5 years should be limited to less than one hour per day.
- Infants, toddlers and pre-schoolers (all children birth–5 years) should not be sedentary, restrained, or kept inactive, for more than one hour at a time, with the exception of sleeping.

For children and young people aged 5–17 years:

- Children and young people should accumulate at least 60 minutes (and up to several hours for additional health benefits) of moderate to vigorous intensity physical activity every day. This should include a variety of aerobic activities as well as activities that strengthen muscle and bone.
- Break up long periods of sitting as often as possible. Children and young people should not spend more than two hours a day using electronic media for entertainment, particularly during daylight hours.

For adults aged 18–64 years:

- Doing any physical activity is better than doing none. If you currently do no physical activity, start by doing some, and gradually build up to the recommended amount.
- Be active on most, preferably all, days every week.
- Accumulate 150–300 minutes (2–5 hours) of moderate intensity physical activity or 75–150 minutes (1–2 hours) of vigorous intensity physical activity, or an equivalent combination of both moderate and vigorous activities, each week.
- Do muscle strengthening activities on at least 2 days each week.
- Minimise the amount of time spent in prolonged sitting.
- Break up long periods of sitting as often as possible.

For older adults (65 years and older):

- Older people should do some form of physical activity, no matter what their age, weight, health problems or abilities.
- Older people should be active every day in as many ways as possible, doing a range of physical activities that incorporate fitness, strength, balance and flexibility.
- Older people should accumulate at least 30 minutes of moderate intensity physical activity on most, preferably all, days.
- Older people who have stopped physical activity, or who are starting a new physical activity, should start at a level that is easily manageable and gradually build up the recommended amount, type and frequency of activity.
- Older people who continue to enjoy a lifetime of vigorous physical activity should carry on doing so in a manner suited to their capability into later life, provided recommended safety procedures and guidelines are adhered to.

Strategic directions for a more active WA

Healthy policies

- Support the development and implementation of policies that positively influence physical activity and reduce sedentary behaviour
- Encourage and support the development and implementation of organisational policies that facilitate increased physical activity and reduced sedentary behaviour, particularly in key settings such as schools and workplaces.

Legislation and regulation

- Support regulatory initiatives that will positively influence physical activity and sedentary behaviour, including those that address planning, transport, land use and the design of built environments.

Economic interventions

- Investigate and consider fiscal policies with the potential to remove barriers to participation in physical activity.

Supportive environments

- Work across government and key sectors to influence the design of natural and built environments that support physical activity and active travel
- Facilitate the creation of health-promoting environments to increase physical activity (including the development of fundamental movement skills) and reduce sedentary behaviour in key settings (including schools and workplaces).

Public awareness and engagement

- Invest in sustained, high-quality statewide public education campaigns that raise awareness of the benefits of physical activity and motivate and support increased physical activity and reduced sedentary behaviour across the life-course
- Increase access to evidence-based advice across multiple settings about the quantity and quality of physical activity needed at all stages of life to maintain good health.



Community development

- Engage with the community and key stakeholders, including local governments, to identify and prioritise actions that create environments and opportunities for physical activity at a local level
- Work with local governments to develop local public health plans that include measures to address physical inactivity and sedentary behaviour.

Targeted interventions

- Complement population approaches with targeted programs that meet the needs of those who are less likely to engage in physical activity, including adolescents, young females, Aboriginal people, some CaLD groups, people living with disability, people who live in rural and remote areas, and older people
- Deliver family-oriented initiatives that increase the ability of parents and carers to establish and maintain physically active lifestyles in children
- Integrate messages about increasing physical activity and reducing sedentary behaviour with other healthy lifestyle initiatives, and develop links between programs and services that are targeted at specific populations who are more likely to be physically inactive and/or sedentary.



Strategic coordination, building partnerships and workforce development

- Strengthen existing and develop new partnerships across all sectors to ensure a comprehensive, consistent and effective approach to increasing physical activity levels and reducing sedentary behaviour
- Strengthen, upskill and support relevant parts of the workforce (public health, broader health and non-health workforce) to address physical inactivity and sedentary behaviour in their programs, policies and plans
- Continue to collect evidence to inform new approaches and monitor the effectiveness of existing initiatives targeting physical inactivity and sedentary behaviour
- Support continued population monitoring of physical activity and sedentary behaviour levels in the population as well as individual and key environmental factors that impact on these behaviours.

4.4 Making smoking history

Tackling smoking remains a key priority area for improving the health of Western Australians: two out of three long-term smokers are likely to die from their tobacco use.¹⁴² While smoking rates overall are lower than ever,^{19, 143} challenges remain. Some groups still have much higher smoking rates, new nicotine delivery products are being developed, and there are currently few controls on the contents, product disclosure and supply of tobacco in Australia.¹⁴⁴

A snapshot of smoking in WA

- Tobacco use was responsible for an estimated 1,673 deaths of Western Australians in 2013, and 19,196 hospitalisations in 2015.¹⁴⁵
- In 2015, 9 per cent of the WA population aged 18 years and over were daily smokers, down from 17 per cent in 2002.¹⁴⁶
- 5 per cent of WA secondary school students aged 12–17 years reported that they were regular smokers in 2014. Prevalence was the same for boys and girls.¹⁴⁷ From 1984–2014, weekly smoking rates among 12–17 year-olds fell from 21 per cent to 5 per cent.¹⁴⁷
- 40 per cent of Aboriginal people aged 15 years and over in WA were daily smokers in 2012–13, close to the national prevalence for Aboriginal people and Torres Strait Islanders of 41 per cent.⁹ Taking into account daily and occasional smokers, between 1994 and 2012–13 the prevalence of smoking among Aboriginal people in WA declined from 51 per cent to 43 per cent.⁸
- In WA in 2013, 19 per cent of adults aged 18 years and over who had been diagnosed and/or treated with a mental illness in the previous 12 months were daily smokers. Among Western Australians who had not been diagnosed and/or treated for a mental health disorder in the previous 12 months, 12 per cent of people aged 18 years and older were daily smokers.¹⁴⁸
- Lower socioeconomic groups,¹⁴⁹ people who live outside major cities,¹⁴⁹ prison inmates,¹⁵⁰ gay, lesbian and bisexual people,¹⁴⁹ and some overseas-born communities¹⁵¹ also have a higher prevalence of smoking than the general population.
- In WA in 2013, 11 per cent of women reported smoking during the first 20 weeks of pregnancy, and 9 per cent reported smoking after the first 20 weeks of pregnancy. Prevalence of smoking during pregnancy is higher in some groups, including Aboriginal women, younger women, and women who are disadvantaged.¹⁵²
- Most homes in WA are smoke free. In 2015, only 2 per cent of adults reported smoking in their home on a frequent basis,¹⁹ and between 2002 and 2015 the prevalence of children aged 15 years and under living in a smoke-free home increased from 91 per cent to 99 per cent.²⁰



In 2015, 9% of people in WA aged 18 and over were daily smokers...

Priorities for making smoking history in WA

Continue efforts to lower smoking rates

Although there has been significant progress made in reducing the prevalence of tobacco use in WA,^{19, 143} smoking continues to have a major impact on public health.¹ The greatest burden of tobacco-caused death and disease occurs among some of the most disadvantaged groups in the community.

Encouraging and supporting smokers to quit, and discouraging non-smokers from taking up tobacco use, are primary objectives of tobacco control. Quitting smoking at any age results in immediate health benefits, irrespective of how long a person has been smoking.¹⁵³⁻¹⁵⁵

Quitting smoking at any age results in immediate health benefits...

Decades of experience gained from tobacco control in Australia and internationally have provided clear direction about best practice in reducing the prevalence of smoking. The comprehensive approach required to reduce tobacco-related harm has been articulated by the National Preventative Health Taskforce,⁵² the *National Tobacco Strategy 2012–2018* (NTS),¹⁴⁴ and in the World Health Organization's *Framework Convention on Tobacco Control* (WHO FCTC),¹⁵⁶ to which Australia is a signatory.

Consistent with commitments detailed within the NTS and in Article 5.3 of the WHO FCTC, the WA Government and other Australian Governments at state, territorial and national levels share a long track-record of protecting tobacco control policy from tobacco industry interference. This has enabled the introduction of innovative and world-leading tobacco control programs.

The delivery of high-quality mass media education campaigns remains a critical factor in driving down smoking rates.¹⁵⁷ Over the years there has been some debate about whether tobacco public education campaigns should focus primarily on youth or on adults. The weight of evidence shows that the most appropriate means of reaching young people is through mainstream campaigns that they see as personally relevant, and that are effective in promoting negative attitudes to smoking.¹⁵⁷

Eliminate exposure to second hand smoke in places where the health of others can be affected

The harmful effects of exposure to second-hand smoke are well documented and indisputable.¹⁵⁸ The primary goal of smoke free regulation is the immediate protection of others from tobacco smoke. There is strong evidence that smoke-free legislation has reduced the mortality from smoking-related illness at a population level. There is also strong evidence of other improvements in health outcomes such as reduced admissions for acute coronary syndrome.^{159, 160} Smoke-free laws also shift broader social norms and have a flow-on effect of increasing the numbers of smokers who choose to keep their homes and cars smoke free, and to refrain from smoking in other people's homes.¹⁶¹

Reduce smoking in groups with higher smoking rates

Although the prevalence of smoking in Aboriginal people is falling, it is still substantially higher than among other Australians, leading to poorer health outcomes for Aboriginal people. Maintaining an ongoing commitment to a comprehensive approach to Aboriginal tobacco control is considered to be the most effective means of driving down tobacco use.¹⁶² This includes conducting mainstream, population-wide public education campaigns that include messages that are particularly salient to Aboriginal people; providing advice and support to quit; and using health promotion messages that continue to reinforce and enhance social norms about quitting smoking and being smoke free.¹⁶²

Higher prevalence of smoking also contributes to health and financial inequalities in some other groups in our communities, including among people in lower socioeconomic groups, people living with mental illness, and the prison population. These people may be more likely to encounter social environments where smoking remains the norm and where quit attempts may be less supported.¹⁶³ Strengthening efforts to reduce smoking rates in populations with a higher prevalence of smoking is one of the nine priority action areas within the NTS.¹⁴⁴

Improve regulation of contents, product disclosure and supply

While progress has been made in reducing the fire risk associated with cigarettes, and some Australian states and territories have banned the sales of fruit and confectionery-flavoured cigarettes, the NTS notes that there are currently few controls on the contents, product disclosure and supply of tobacco in Australia.¹⁴⁴

There is concern that current policy arrangements for product disclosure are inadequate.¹⁶⁴ Articles 9 and 10 of the WHO FCTC¹⁵⁶ call for the implementation of measures for testing, measuring and regulating contents and emissions of tobacco products, and for the disclosure by tobacco manufacturers and importers of information about the toxic content of and emissions from their products. Correspondingly, the NTS states that *the contents of tobacco products and of tobacco product disclosures is an important area of tobacco control that warrants additional investigations and analysis to inform future policies.*^{144 p. 30}

Supply of tobacco products to children remains a concern. Research from 2014 showed that 44 per cent of Western Australian children aged 12–17 years who had smoked in the past week had obtained cigarettes from their friends¹⁴⁷ and that 20 per cent had asked somebody else to make the purchase.¹⁶⁵ It is encouraging that fewer tobacco retailers are selling cigarettes to children in WA than previously.¹⁶⁶



There is evidence from interstate¹⁶⁷ and Western Australian^{166, 168-171} compliance monitoring activities that some sales assistants who appear to be under the age of 18 years are more likely to sell tobacco products to minors. It may be that younger sales assistants find it more difficult to refuse to sell tobacco products to their peers, or do not feel as confident about asking to view identification. Article 16 of the WHO FCTC calls for appropriate measures to be taken to stop minors from selling tobacco products.¹⁵⁶

Monitor emerging products and trends

Alternative nicotine delivery products such as electronic cigarettes (e-cigarettes, also known as electronic nicotine delivery systems, electronic non-nicotine delivery systems, or 'ENDS') have recently gained prominence in Australia and around the world.¹⁷²

These products give rise to important considerations of consumer safety, product regulation and protection of young people.

Following the sixth session of the Conference of the Parties to the WHO FCTC in October 2014, the WHO advised that *Governments should consider that if their country has already achieved a very low prevalence of smoking and that prevalence continues to decrease steadily, use of ENDS will not significantly decrease smoking-attributable disease and mortality even if the full theoretical risk reduction potential of ENDS were to be realized.*^{173 p. 11}

Many of these products are marketed online as a method to assist smokers to quit, or a 'safe alternative' to conventional tobacco cigarettes; however there is currently insufficient evidence to support these claims and further research is needed to enable the safety, quality and efficacy of e-cigarettes to be assessed.¹⁷² In Australia, the Therapeutic Goods Authority is responsible for evaluating and regulating the availability of products that make therapeutic claims.¹⁷⁴ The pace of industry innovation reinforces the need to monitor and ensure appropriate policy responses to emerging products and issues.

Strategic directions for making smoking history in WA

Healthy policies

- Continue to safeguard public health policy, including tobacco control policies, from tobacco industry interference
- Support the development and implementation of state and national policies that will reduce the health, social and economic harms caused by tobacco, in line with the NTS and the WHO FCTC
- Support the development and implementation of smoke-free policies, particularly in environments where children are exposed to tobacco smoke.

Legislation and regulation

- Eliminate exposure to second-hand smoke in workplaces and public places, especially where children are present
- Maintain monitoring, enforcement and review of legislative controls on the sale, supply, marketing and use of tobacco products
- Ensure that the legislative environment is responsive to changing market conditions and industry innovations
- Support further regulatory initiatives in alignment with the WHO FCTC, including initiatives related to protecting tobacco control policies from industry interference, ingredients disclosure and regulation of ingredients and additives.

Economic interventions

- Support Commonwealth Government fiscal policies to discourage tobacco use.

Supportive environments

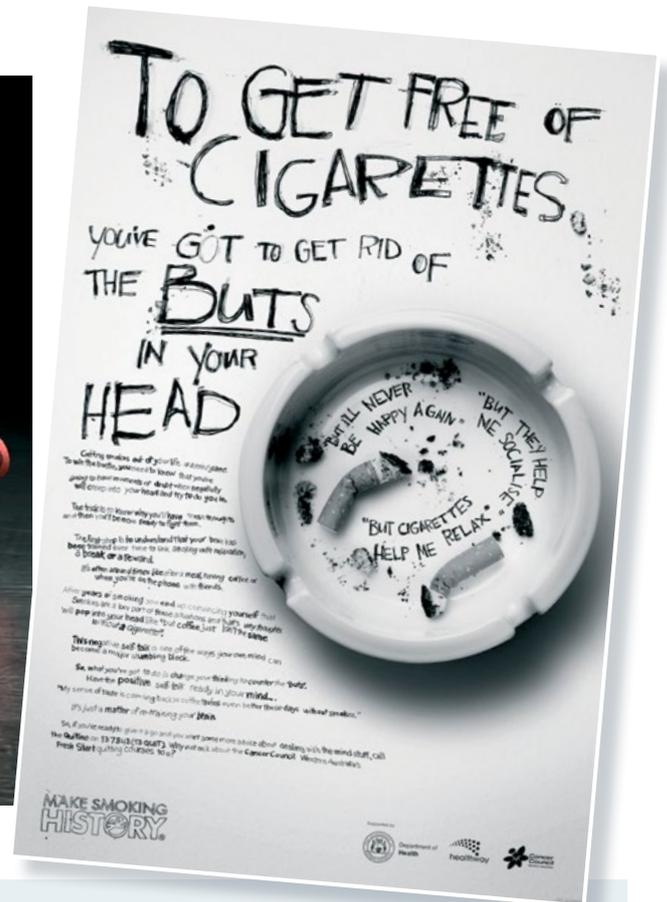
- Continue to build on strong public support for tobacco control measures
- Encourage the expansion of smoke-free environments
- Encourage and embed provision of evidence-based smoking cessation support and information throughout workplaces, educational and community settings and health service providers.

Public awareness and engagement

- Invest in sustained, high-quality statewide public education campaigns to encourage and support quitting, and discourage uptake of smoking
- Evaluate and adopt new technologies where appropriate to enhance and extend public education activities
- Support communities and stakeholders to adopt local policies that will reduce the prevalence of smoking and exposure to tobacco smoke in places where the health of others can be affected.

Community development

- Engage with the community and key stakeholders, including local governments, to identify and implement priority actions to reduce exposure to second-hand tobacco smoke and promote smoking cessation
- Work with local government to develop local public health plans that include measures to address tobacco control.



Targeted interventions

- Complement population approaches with targeted programs that are culturally-secure and/or meet the needs of people with higher smoking prevalence (including Aboriginal people, those with mental illness and the prison population), or who are particularly vulnerable to the harmful effects of smoking (such as pregnant women and infants)
- Collaborate on the range of initiatives implemented under the Commonwealth *Tackling Indigenous Smoking* programⁱ
- Integrate smoking prevention and cessation messages with other healthy lifestyle initiatives, and develop links between programs and services that are targeted at specific populations with higher prevalence of smoking, or more vulnerable to its effects.

Strategic coordination, building partnerships and workforce development

- Strengthen existing and develop new partnerships across all sectors to ensure a comprehensive, consistent and effective approach to reducing the prevalence of smoking and exposure to second-hand smoke
- Strengthen, upskill and support relevant parts of the workforce (public health, broader health and non-health sectors) to address tobacco control in their programs, policies and plans
- Improve and maintain the capacity of the wider health and allied workforce to provide reliable cessation information, advice and support to smokers
- Support and undertake research in line with the *National Preventive Health Research Strategy 2013–2018 Priority-driven research agenda for tobacco control in Australia*⁸⁴ and ensure that policies and programs are best-practice and evidence-based
- Support continued population monitoring of smoking prevalence as well as individual and key environmental factors that impact on smoking behaviour.

ⁱ www.health.gov.au/internet/main/publishing.nsf/content/indigenous-tis-lp

4.5 Reducing harmful levels of alcohol use

Alcohol continues to be a priority drug of concern for Western Australia. There is a need to continue efforts to change the drinking culture from one of harmful use to one where low-risk drinking is encouraged and supported. – Mental Health Commission WA.^{175 p. 31}

A snapshot of alcohol use in WA

- In 2015, 62 per cent of the WA population aged 16 years and over reported that they consumed alcohol, and the remainder (38%) reported that they were non-drinkers, or their drinking level was not determined.¹⁹
- According to the *Australian Guidelines to Reduce Health Risks from Drinking Alcohol* (see Box 11), 28 per cent of the WA population aged 16 years and over in 2015 were drinking at levels considered to be high risk for long-term harm and 10 per cent drank at levels considered to be high risk for short-term harm.¹⁹
- The prevalence of drinking at risk of long-term harm and short-term harm declined among males and females aged 16 and over in WA from 2002 to 2015.¹⁹
- Males in all age groups were significantly more likely than females to report drinking at high-risk levels for long-term harm (39% compared with 17%). Males were also significantly more likely than females to report drinking at high-risk levels for short-term harm (15% compared with 4%).¹⁹
- Although Aboriginal and Torres Strait Islander people were more likely to abstain from drinking alcohol than the rest of the Australian population in 2013 (28% and 22%, respectively), among those who consumed alcohol, a higher proportion of Aboriginal and Torres Strait Islander people drank at risky levels.¹⁴⁹
- From 2010–13, there was a significant decline in the proportion of Aboriginal and Torres Strait Islander people consuming alcohol at levels that exceeded the NHMRC guidelines for risk of long-term harm (from 32% to 23%). There were also fewer Aboriginal and Torres Strait Islander people drinking alcohol at least once a month in 2013 at levels that put them at risk of short-term harm (from 45% to 38%).¹⁴⁹
- From 1984–2014, rates of alcohol use among secondary school students declined. There were notable declines over this period in the proportion of students who reported drinking in the past year (80% to 44%), in the past month (50% to 24%) and in the past week (34% to 14%).¹⁷⁶
- From 2010–2013, the proportion of pregnant women abstaining from alcohol increased slightly from 49 per cent to 53 per cent. About three-quarters (78%) of pregnant women who consumed alcohol while pregnant drank monthly or less, and 17 per cent drank two to four times a month.¹⁴⁹
- From 2007–2011, the rate of alcohol-related deaths was nearly twice as high in people living in very remote areas relative to the State average. For people living in remote and moderately-accessible areas, the rate of alcohol-related deaths was approximately 1.4 times higher than the state average.¹⁷⁷
- In 2012, there were almost 19,000 hospitalisations in WA attributable to alcohol. This accounted for more than 88,500 bed-days and cost in excess of \$114 million.¹⁷⁸



In 2015, 28% of people in WA aged 16 years and over were drinking at levels considered to be at high risk of long-term harm

Alcohol use is the most significant risk factor for injuries, and was a factor in 21 per cent of all injuries that occurred in Australia in 2011. Alcohol was responsible for 28 per cent of the burden of injury due to road traffic crashes, and 23 per cent of the burden of injury due to suicide and self-inflicted injuries.¹ **Introducing effective strategies to reduce harmful drinking in the community will also reduce injuries caused by alcohol use.**

Priorities for reducing harmful levels of alcohol use in WA

Change community attitudes towards alcohol use

Alcohol use is embedded in national culture¹⁷⁹ and the majority of Western Australians consume alcohol at some level.¹⁹ The greatest number of alcohol-related problems occurs in people who often drink moderately, and drink to harmful levels only occasionally. A large proportion of the general drinking population has this pattern of consumption.¹⁸⁰

Australian children are initiated into a culture of drinking at an early age.¹⁷⁹ In 2014, among WA secondary school children who drank in the last week, more than one quarter (27%) of those aged 12–15 years, and more than one-third (36%) of those aged 16–17 years, reported that they drank alcohol with the aim of getting drunk.¹⁷⁶ Community attitudes to drinking, role-modelling and the availability, price and advertising of alcohol all influence the drinking behaviour of young people.¹⁷⁹

Alcohol use poses unique problems during pregnancy and breastfeeding, adolescence, young adulthood and later in life.¹⁸¹ Efforts to influence community attitudes towards alcohol need to take into account the range of effects that alcohol can have at key life stages.

The traditional Australian tolerance of harmful levels of drinking⁵² is increasingly being countered by community concern and awareness about the damage it causes. In a WA survey in 2011, 60 per cent of respondents thought that it was unacceptable to get drunk.¹⁸² Support for and development of a culture that discourages harmful levels of alcohol use is required to achieve sustainable change.

Box 11: Australian Guidelines to Reduce Health Risks from Drinking Alcohol¹⁸¹

The National Health and Medical Research Council recommend that:

- For healthy men and women, drinking no more than two standard drinks on any day reduces the lifetime risk of harm from alcohol-related disease or injury.
- For healthy men and women, drinking no more than four standard drinks on a single occasion reduces the risk of alcohol related injury arising from that occasion.
- Parents and carers should be advised that children under 15 years of age are at the greatest risk of harm from drinking and that for this age group, not drinking alcohol is especially important.
- For young people aged 15–17 years, the safest option is to delay the initiation of drinking for as long as possible.
- For women who are pregnant or planning a pregnancy, not drinking is the safest option.
- For women who are breastfeeding, not drinking is the safest option.

Australian^{183, 184} and international¹⁸⁵ health authorities do not recommend drinking alcohol as a way of preventing or treating heart disease.



For women who are pregnant, not drinking alcohol is the safest option

Influence the supply of alcohol

How alcohol is made available influences the extent to which alcohol-related harm occurs. Risk can be reduced by controlling alcohol sales and supply through location, density and type of licensed outlets.⁵² Increasingly, communities are engaging in the decision-making process about how alcohol is managed in their localities. Some remote communities in WA have opted for a complete ban on alcohol.¹⁸⁶

The most common sources for obtaining alcohol for under-aged drinkers are their friends (31%) and parents (30%).¹⁷⁶ Community concern about the supply of liquor to under-aged people was a significant factor in the introduction of secondary supply laws. In November 2015, legislation came into effect in WA that makes it an offence to supply liquor to anyone under the age of 18 years without their parent's or guardian's permission.¹⁸⁷

There is a need for ongoing public education about the harms of underage drinking, the dangers and penalties of supplying alcohol to young people and the importance of delaying initiation to alcohol use, as well as increasing awareness about adult responsibilities and obligations to protect children and adolescents from alcohol use.

There is a need for ongoing public education about the harms of underage drinking...

Reduce demand for alcohol

A range of options have been demonstrated to influence demand for alcohol products and can be employed to help shape lower-risk patterns of drinking behaviour or abstinence for population groups for whom this is considered to be the safest option, such as women during pregnancy. These include changes to taxation and pricing; regulation of access and availability; drink-driving countermeasures; regulation of alcohol advertising and promotion; public education; and provision of appropriate treatment and rehabilitation options.¹⁷⁹

Strategic directions for reducing harmful levels of alcohol use in WA

Healthy policies

- Support the development and implementation of policies that reduce or prevent alcohol-related harm, and encourage, create and support low-risk drinking settings, particularly where children and young people are present.

Legislation and regulation

- Support the development and implementation of legislative controls on the sale, supply and use of alcohol
- Support effective controls at all levels of government to reduce the exposure of children and adolescents to alcohol consumption and the promotion of alcohol
- Encourage partnerships with State and Commonwealth agencies to support a comprehensive approach to preventing and reducing harmful levels of alcohol consumption.

Economic interventions

- Support reforms of alcohol taxation and pricing that will discourage harmful levels of alcohol consumption.

Supportive environments

- Support the development of settings that discourage harmful levels of alcohol use and promote a lower-risk drinking culture
- Support strategies that reduce exposure of children to alcohol consumption, marketing and promotion.

Public awareness and engagement

- Invest in sustained, high-quality statewide public education campaigns to reduce short-term and long-term harmful levels of alcohol use, influence cultural and social attitudes to alcohol and support the development of a safer, lower-risk drinking culture
- Adopt and evaluate new technologies where appropriate to enhance and extend public education activities
- Provide ongoing education regarding patrons' and licensees' responsibility to act in accordance with current legislation, including the responsible supply and service of alcohol
- Increase access to reliable, practical, culturally-appropriate information about reducing harmful levels of drinking.

Community development

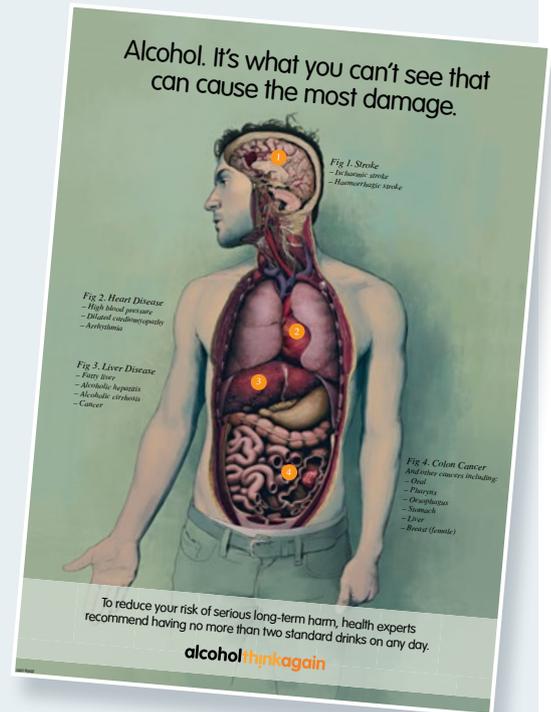
- Engage with the community and key stakeholders, including local governments, to identify and implement priority actions to prevent alcohol-related harm
- Work with local governments to develop local public health plans that include strategies to prevent alcohol-related harm.

Targeted interventions

- Promote the compulsory delivery of appropriate, evidence-based alcohol education in schools and associated workforce development for teachers
- Complement population approaches with targeted programs that are culturally-secure and/or meet the needs of people at greater risk of experiencing alcohol-related harm (including Aboriginal people and people who live outside the metropolitan areas) or who are particularly vulnerable to the harmful effects of alcohol use (such as children, pregnant women, and woman who are breastfeeding)
- Integrate messages about reducing harmful levels of alcohol use with other healthy lifestyle initiatives, and develop links between programs and services that are targeted at specific populations with levels of risky drinking, or who are more vulnerable to its effects.

Strategic coordination, building partnerships and workforce development

- Strengthen existing and develop new partnerships across all sectors to ensure a comprehensive, consistent and effective approach to reducing alcohol-related harm
- Strengthen, upskill and support relevant parts of the workforce (public health, broader health and non-health sectors) to address harmful levels of alcohol use in their programs, policies and plans
- Improve and maintain the capacity of the wider health and allied workforce to address harmful levels of alcohol consumption in their clients and patients using evidence-based tools
- Support and undertake research in line with the *National Preventive Health Research Strategy 2013–2018 Priority-driven research agenda for prevention of alcohol related harm in Australia*⁸⁴ and ensure that policies and programs are based on best information available
- Support continued population monitoring of alcohol consumption as well as individual and key environmental factors that impact on drinking behaviour.



4.6 Preventing injury and promoting safer communities

Whether intended or accidental, most physical injuries can be prevented by identifying their causes and removing these, or reducing people's exposure to them. – National Injury Prevention and Safety Promotion Plan 2004–2014^{188 p. 2}

Box 12: Definitions relating to injury

The WHO defines injury as *the physical damage to the body from a sudden exposure to energy at levels that exceed the normal human tolerance or as a result of the lack of one or more vital elements, such as oxygen.*^{189 p. 1}

Injuries are often described as unintentional and intentional. Unintentional injuries include most transport, poisoning, falls, drowning, fire and burn injuries. Intentional injuries include interpersonal violence, suicide and self-harm. In some cases it may not be possible to determine whether an injury has been intentional or unintentional.¹⁹⁰

Community injuries are those that are typically sustained in places such as the home, workplace or street. They do not include injuries due to complications of medical or surgical care, or other unclassified injuries.¹⁹¹

A snapshot of injuries in WA

- Injuries are responsible for around 1,000 deaths, 50,000 hospitalisations and more than 250,000 emergency department presentations each year in WA.²⁷
- In 2015, 24 per cent of WA adults¹⁹ aged 16 years or older and 21 per cent of children sustained an injury that required treatment from a health professional, with the highest risk of injury among 10–15 year olds (32%).²⁰
- The rate of child injury deaths in WA decreased from 20 children per 100,000 during 1989–2000 to 14 per 100,000 during 2001–2010.¹⁹² Child injury hospitalisation rates also decreased from an average of 1,979 per 100,000 from 1989–2000 in WA, to an average rate of 1,860 per 100,000 during 2002–2011.¹⁹²
- The top five causes of injury-related death in WA from 2009–2013 were self-harm, falls, transportation, poisoning and other unintentional injuries (defined in Box 12).²⁷
- For injury-related hospitalisations from 2010–2014, the top five causes were falls, other unintentional injuries, transportation, interpersonal violence, and self-harm.²⁷
- From 2009–2013, half of all WA deaths caused by community injury were attributed to falls (20%), transportation (19%) or poisoning (12%).²⁷
- In infancy to 4 years, the most frequent causes of death from community injury were other unintentional injuries, drowning and transportation. In 5–14 year-olds, leading causes of injury death were transportation, other unintentional injuries and self-harm. Among people aged 15–64, self-harm, transportation and poisoning were leading causes of injury death. In older Western Australians, falls were the leading cause of injury death (all data are for 2009–2013).²⁷
- In infancy to 4 years, the leading causes of hospitalisation for community injury were falls, followed by other unintentional injuries and poisoning. Among 15–14 year olds, the leading causes of hospitalisation for community injury were falls, other unintentional injuries and transportation. In people aged 15–64, leading causes of hospitalisation for community injury were unintentional injuries, transportation and falls, with prevalence of falls rising with age (all data are for 2010–2014).²⁷



Injuries are responsible for around 1,000 deaths, 50,000 hospitalisations and more than 250,000 emergency department presentations each year in WA



Half of all community deaths due to injury are caused by falls, transportation or poisoning

- In WA in 2015, 46 per cent of all injuries in adults aged 65 years or older were due to falls.¹⁹ From 2009–2013, 77 per cent of hospitalisations and 54 per cent of deaths attributed to injury in this age group were the result of a fall.²⁷
- From 2009–2013 males were more likely to die or be hospitalised from injury than females. Falls-related injuries were the only injury type where females were at greater risk of dying or being hospitalised than males.¹⁹³
- In 2013, Aboriginal people living in WA were more than three times as likely as non-Aboriginal people to die or be hospitalised as a result of community injury.²⁷
- From 2000–2008, people living in the most disadvantaged areas had approximately twice the risk of dying from injury compared with people living with greater advantage. Those living in regional or remote areas were also at higher risk.¹⁹¹

The most significant risk factor for injuries is alcohol use, which was a factor in one in five (21%) injuries that occurred in Australia in 2011.¹ Introducing effective strategies to reduce harmful drinking in the community will have a positive impact on the amount of injury caused by alcohol use.

Self-harm and suicide prevention are addressed by the Mental Health Commission in *Suicide Prevention 2020: Together we can save lives*.¹⁹⁴

Priorities for preventing injury and promoting safer communities in WA

The WA Department of Health works with a range of external stakeholders, including other government departments and funded non-government agencies, to improve injury prevention and encourage safer communities in this State. In some areas the WA Department of Health takes a lead role, but in areas led by other agencies – such as road safety, mental health, suicide prevention, family and domestic violence, occupational health and safety, product safety and crime prevention – the Department provides support by offering a skills base, models of practice, and data provision and analyses.

Protect children from injury

Children’s developmental stages influence the kinds of injury that are more likely to occur, and the types of interventions needed to counter them. Leading causes of child injury include motor vehicle crashes, drowning, self-harm, poisoning and falls.¹⁹³

Promoting home-safety strategies, such as keeping medicines and household products out of reach; creating safer environments for backyard and playground equipment; and promoting good mental health and reducing risk-taking behaviours are key strategies for protecting toddlers, children and teenagers from harm.¹⁹²

Childhood injury is predictable and preventable and can be reduced by raising awareness of childhood injuries, informing and educating parents about how they can protect their children from harm, providing education and training to health professionals and community groups, and advocating for improvements to the design of products that are intended for use by children.¹⁸⁸



Prevent falls in older people

Falls are the leading cause of death and hospitalisation due to injury in people aged over 65 years (Aboriginal people aged over 55 years) in WA. Falls injuries may lead to further problems such as a loss of confidence, independence and mobility, and the onset of depression.¹⁴⁰ WA's ageing population makes falls prevention a priority.

Interventions to prevent falls in WA target older people in the community who are well and specific groups at increased risk of falls. The most effective type of exercise to prevent falls involves activities that include a moderate or high challenge to balance (for example Tai Chi), and strength training. Other interventions include modifications to hazards in the home, and ensuring that poor vision and use of medications (and combinations of medications) that can impair balance are addressed to the extent possible.³

It is vital that interventions developed for older people are based on collaborative health promotion partnerships, and take account of the diversity of older peoples' activity levels and care needs.

Reduce road crashes and road trauma

The Department of Health actively supports the Road Safety Commission's *Towards Zero, Road safety strategy to reduce road trauma in Western Australia for 2008–2020*.¹⁹⁵

Road crashes, including those involving on and off-road use of motor vehicles, motorcycles and bicycles as well as pedestrian activity, remain a leading cause of injury and hospitalisation in WA. Contributing factors include alcohol, speed and increased use of motorcycles.¹⁹⁶

Towards Zero focuses on safe road use, safe roads and roadsides, safe speeds, and safe vehicles. The strategy supports public education, enforcement of road rules, targeting of risk-taking behaviour, and the development and implementation of a 'safe system' that to the extent possible, anticipates and reduces the risk of crashes.¹⁹⁵ Since the launch of *Towards Zero*, road fatalities have dropped by about one-third.¹⁹⁶

Improve safety in, on and around water

WA's environment and culture promote water-based recreational activities. Coastal locations, home swimming pools, rivers, lakes and dams are the most common sites for fatal and non-fatal drowning in WA. Males, Aboriginal people and people of CaLD backgrounds are at greater risk of drowning.¹⁹¹

Evidence for measures for drowning prevention in Australia focuses on three key drivers to prevent drowning: taking a life-stages approach, targeting high-risk locations, and focusing on key drowning challenges. Strategies include child drowning prevention programs, teaching rescue and resuscitation skills, learning to swim, preventing drinking and drowning, wearing a lifejacket when on water, raising awareness of the influence of pre-existing medical conditions, and partnering with relevant groups.¹⁹⁷

Reduce interpersonal violence

The Department of Child Protection and Family Support leads *Western Australia's Family and Domestic Violence Prevention Strategy to 2022*.¹⁹⁸

Interpersonal violence, including assault, domestic violence, family violence, sexual violence and community violence is a leading cause of preventable injury in WA, especially in people aged 15–64 years.¹⁹³ Injuries from interpersonal violence are more common in males than females, among Aboriginal people, people living in lower socioeconomic areas, and those living in rural and remote areas.¹⁹¹ Alcohol use is an important factor, contributing to about 45 per cent of hospitalisations and deaths from interpersonal violence.¹⁹¹ Some illicit drugs, including methamphetamines, are related to an increase in violent behaviour.¹⁹⁹



Approaches to reduce the incidence of interpersonal violence in WA include population-wide initiatives to increase awareness of and challenge community attitudes to violence, as well as targeted prevention activities for high-risk groups.¹⁹⁸ *Western Australia's Family and Domestic Violence Prevention Strategy to 2022* identifies action areas for prevention and early intervention of violence, with a focus on education programs, awareness raising campaigns, media collaboration and coordinated organisational responses.¹⁹⁸ These action areas are applicable to all forms of violence across the community.

Develop the injury prevention and safer communities sector

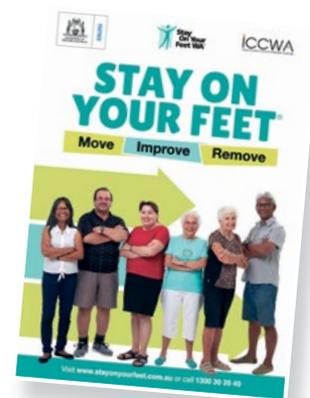
The importance of a coordinated approach to disease and injury prevention is a constant theme throughout the WA HPSF, and because of the breadth of organisations with an active interest and engagement in injury prevention, a coordinated approach is critical. Organisations and agencies with an interest in injury prevention include those concerned with law enforcement; mental health; alcohol and drug use; road safety; product safety packaging; occupational health and safety; drowning prevention; and urban design. Injury prevention is vital for population groups at all life stages from infancy to old age; Aboriginal people; and some CaLD populations, particularly new arrivals. Injury prevention therefore falls within the remit of all levels of government, public and private sector organisations, community organisations, and communities themselves, across metropolitan, rural and remote parts of WA. A range of health professionals and specialist groups are also directly engaged in injury prevention, and treating and rehabilitating people who have experienced injuries.

While it is the role of the health sector to provide leadership in the provision of evidence-based policy guidance, quality data, and access to skills and expertise, the capacity for outreach and access to established networks and specialist knowledge that are the domain of the many partners concerned with injury prevention are essential to fostering a positive safety culture and building safer communities.

The breadth of the injury stakeholder group gives rise to the need for a coordinated approach to strategic planning that will support communication, ensure consistency of public health messaging, maximise the impact of limited resources, and minimise unnecessary duplication.

Monitor emerging issues in injury prevention

New causes of injury constantly arise in the community with changing products and behaviours. Some examples of emerging injury issues include gastrointestinal burns in children from swallowing button batteries,²⁰⁰ injuries from misuse of quad bikes,²⁰¹ and injuries from hoverboards²⁰² and other personal motorised transport devices such as mobility scooters.²⁰³ Emerging injury risks require an immediate, coordinated response to inform the community and, where appropriate, the development of policies and practices to reduce ongoing risk of injury.



Strategic directions for preventing injury and promoting safer communities in WA

Healthy policies

- Support the development and implementation of policies that will lower the incidence of avoidable injury and promote safer communities.

Legislation and regulation

- Support the development, implementation and monitoring of legislation relevant to injury prevention, such as consumer protection, alcohol and other drug use, and road safety legislation
- Support the regulation of products and environments to improve community safety.

Economic interventions

- Investigate and support fiscal interventions to prevent injury and promote safer communities.

Supportive environments

- Encourage the development of health-promoting environments, including workplaces, that support injury prevention and safer communities
- Work across government and other key sectors to influence the design and planning of natural and built environments that promote community safety and reduce the risk of injury.

Public awareness and engagement

- Invest in sustained, high-quality statewide public education campaigns to reduce the risk of injury and promote a cultural acceptance that injuries are preventable
- Adopt and evaluate new technologies where appropriate to enhance and extend public education activities
- Increase access to reliable, practical, culturally-appropriate information about reducing the risk of injury
- Support industry and the community to increase their awareness of the role of safe design in injury prevention.

Community development

- Engage with the community and key stakeholders, including local governments, to identify and implement priority actions to prevent injury and promote safer communities
- Work with local governments to develop local public health plans that include strategies to prevent injury and promote safer communities.

Targeted interventions

- Complement population approaches with targeted programs that meet the needs of people at greater risk of experiencing injury at various stages of the life-course, or who have higher risk of injury, including Aboriginal people, people who live in regional or remote areas, and people who live in disadvantaged areas.
- Integrate messages about avoiding injury with other healthy lifestyle initiatives, and develop links between programs and services that are targeted at specific populations that are at higher risk of injury.

Strategic coordination, building partnerships and workforce development

- Strengthen existing and develop new partnerships across all sectors to ensure a comprehensive, consistent and effective approach to preventing injury and promoting safer communities
- Strengthen, upskill and support relevant parts of the workforce (public health, broader health and non-health sectors) to address injury prevention in their programs, policies and plans
- Improve and maintain the capacity of the wider health and allied workforce to provide reliable information, advice and support on preventing injury
- Support and undertake research in injury prevention and ensure that policies and programs are based on best information available
- Support continued population monitoring of injury as well as individual and key environmental factors that impact on risk of injury.

Part 5: Monitoring progress

5.1 Reporting frameworks

The WA Department of Health takes a rigorous and systematic approach to monitoring progress in the areas of chronic disease and injury, drawing on State and Commonwealth data sets.

WA health system annual reporting

As part of annual reporting procedures, the WA Department of Health reports on person years of life lost per 1,000 persons due to lung cancer, ischaemic heart disease and falls. Improvements have been observed across all of these measures from 2005–2014 (see Table 3).²⁰⁴

Table 3: Person years of life lost in WA due to premature death associated with preventable conditions per 1,000 persons, 2005–2014

Cause	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Target 2014
Lung cancer	1.9	2.0	2.0	1.8	2.2	1.7	1.8	1.8	1.6	1.6	1.8
IHD*	3.3	3.3	3.6	3.3	3.2	3.0	3.1	2.5	2.6	2.5	2.5
Falls	0.4	0.3	0.5	0.4	0.7	0.5	0.4	0.3	0.5	0.2	0.2

*Ischaemic heart disease

Source: WA Department of Health Annual Report.²⁰⁴

National Healthcare Agreement

All Australian State and Territory Governments are signatories to the *National Healthcare Agreement 2016*.²³ Fundamental to this agreement are the principles that Australia's health system should focus on the prevention of disease and injury, maintaining health, supporting an integrated approach to the promotion of healthy lifestyles, and the prevention of illness and injury across the continuum of care. The *National Healthcare Agreement* sets specific performance benchmarks, some of which relate directly to chronic disease and injury prevention (see Table 4). The WA Department of Health reports against these indicators to the Commonwealth.

Table 4: National Healthcare Agreement 2016 performance benchmarks

Diabetes in people over 25 years	Reduce the age-adjusted prevalence of Type 2 diabetes to 2000 levels by 2023 (7.1% nationally)
Healthy body weight in Australian adults and children	Increase by 5 percentage points the proportion of Australian adults and children at a healthy weight by 2018, over the 2009 baseline
Smoking in the Australian population	Reduce the national smoking rate to 10 per cent of the population by 2018, over the 2009 baseline
Smoking in the Aboriginal and Torres Strait Islander population	Halve the smoking rate in Aboriginal and Torres Strait Islander people by 2018, over the 2009 baseline
Potentially preventable hospital admissions	Reduce the proportion of potentially preventable hospital admissions by 7.6 per cent, over the 2006–07 baseline

Source: National Healthcare Agreement²³

WHO *Global Action Plan for the Prevention and Control of Noncommunicable Diseases* targets

Australia is also a signatory to the WHO's *Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020*.⁵⁸ As part of the agreement, voluntary global targets have been set (see Table 5). The WA Department of Health reports against these indicators to the Commonwealth, which in turn reports to the WHO.

Table 5: Selected WHO Global Action Plan voluntary targets

Harmful levels of alcohol use	At least a 10 per cent relative reduction in the harmful use of alcohol, as appropriate, within the national context
Insufficient physical activity	A 10 per cent relative reduction in prevalence of insufficient physical activity
Tobacco use	A 30 per cent reduction in prevalence of current tobacco use in persons aged 15+ years
Raised blood pressure	A 30 per cent relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances
Obesity	Halt the rise in diabetes and obesity
Premature mortality	A 25 per cent relative reduction in the risk of premature mortality from cardiovascular disease, cancer, diabetes, or chronic respiratory diseases

Source: *Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020*.⁵⁸

5.2 Program evaluation and monitoring

Rigorous program evaluation is an important component of health promotion planning and service delivery. Proper evaluation ensures that all aspects of programs are assessed, lessons are learnt, strengths are built on, and future directions and policies are properly-informed. Robust evaluation also ensures that the WA community is benefitting from the programs put in place.

The WA Department of Health, with the assistance of Edith Cowan University, has developed the *Research and Evaluation Framework Implementation Guide*²⁰⁵ to assist with the delivery and reporting of health promotion program evaluation, including initiatives funded by the Department.

In order to inform future planning, the WA Department of Health will also continue to monitor health promotion activity across the State to assist with identifying shortfalls and gaps in current programming as well as duplication and overlap.

5.3 Promoting a priority-driven research agenda

The National Health and Medical Research Council describes priority-driven research as work that contributes directly, in the short to medium term, to population health and the effectiveness, efficiency and equity of the health system.²⁰⁶ Priority-driven research helps to accelerate necessary policy changes in appropriate health promotion interventions. The *National Preventive Health Research Strategy*⁸⁴ provides a useful guide to researchers on how to direct their research so that their work can make a practical contribution to the evidence base for tobacco control, obesity prevention and prevention of alcohol-related harm.

5.4 Documenting a more complete picture of progress

Monitoring progress in chronic disease and injury prevention is a complex task. The most widely-used measures of progress typically focus on trends in behavioural risk factors and health outcomes. While these indicators are important, they do not provide the whole picture. There is often considerable delay between health promotion activity and changes in behaviour or improvements in disease and injury outcomes. Consequently, progress in health promotion is typically only realised over the longer term and we are often left with an incomplete picture of progress in the interim.

Mapping progress in chronic disease and injury prevention in WA requires a more complete approach that also captures the vast array of activities that precede and may precipitate changes in health behaviours, and ultimately health outcomes. Factors that could be considered include:

- changes to, and compliance with, relevant policy and legislation
- the broader adoption of healthy policies across government and other sectors
- changes to the environment (built; natural; food and so forth)
- public knowledge, attitudes and beliefs, and motivation to change health behaviours
- reach (throughout population/s and geographically), appropriateness and effectiveness of preventive health programs and interventions
- development of professional networks between relevant stakeholders
- efforts and outcomes in capacity-building in the health and other workforces as appropriate to support healthy behaviours.

Developing a narrative describing what has been achieved in chronic disease and injury prevention, taking into account changes in the broader public health field will be a priority for the WA Department of Health during the life of this Framework.

In parallel, the Department will monitor various lifestyle and behavioural risk factors, biomedical states and injury events, and morbidity and mortality outcomes relating to chronic disease and injury, using State and national data collections. An early example of this evolving data set is provided in Appendix 3.

Appendix 1: Complementary policies and strategies

The WA HPSF is complementary to, and does not duplicate or replace the range of policies that address other aspects of health in WA. These include:

- **The WA Department of Health’s overarching policy**, the *WA Health Strategic Intent 2015–2020*, supports the WA community to become healthier, with a focus on promoting healthy habits and behaviours, and supporting people to make healthy lifestyle choices for the mind and body.
ww2.health.wa.gov.au/Reports-and-publications/WA-Health-Strategic-Intent-2015-2020
- **The health of Aboriginal people** is addressed by the *WA Aboriginal Health and Wellbeing Framework 2015–2030* and the *Aboriginal Cultural Learning Framework 2012–2016*.
ww2.health.wa.gov.au/Improving-WA-Health/About-Aboriginal-Health/WA-Aboriginal-Health-and-Wellbeing-Framework-2015-2030
ww2.health.wa.gov.au/Improving-WA-Health/About-Aboriginal-Health/Aboriginal-Cultural-Learning-Framework-2012-2016
- **Mental health, suicide prevention and alcohol and other drugs issues** are addressed by the Mental Health Commission in policies that include *Better Choices. Better Lives – The WA Mental Health, Alcohol, and other Drug Services Plan 2015–2025*; *Suicide Prevention 2020: Together we can save lives*; and the *Drug and Alcohol Interagency Strategic Framework for Western Australia*.
www.mentalhealth.wa.gov.au/ThePlan.aspx
www.mentalhealth.wa.gov.au/Libraries/pdf_docs/Suicide_Prevention_2020_Strategy_Final_6.sflb.ashx
www.dao.health.wa.gov.au/Informationandresources/Nationalandstatepolicies.aspx
- **Communicable (infectious) diseases**, including **sexual health** and associated chronic diseases that may arise from infectious diseases, are addressed in plans and policies managed by the Communicable Disease Control Directorate within the Public Health Division of the WA Department of Health, including the *WA Sexual Health and Blood-borne Virus Strategy 2015-2018*.
ww2.health.wa.gov.au/Articles/U_Z/WA-Sexual-Health-and-Blood-borne-Virus-Strategy-2015-2018
- **Prevention and management of cancer** is discussed in the *WA Cancer Plan 2012–2017*.
www.healthnetworks.health.wa.gov.au/cancer/docs/12196_WA_Cancer_PLAN.pdf
- **Injury prevention** is also addressed in the *WA Non-Major Trauma Framework* and the *Falls Prevention Model of Care in WA*.
www.healthnetworks.health.wa.gov.au/docs/NonMajorTraumaFramework.pdf
www.healthnetworks.health.wa.gov.au/modelsofcare/docs/Falls_Model_of_Care.pdf

- **Prevention and management of chronic disease in people who have already been diagnosed with a disease or have been injured** is discussed in the *WA Chronic Conditions Framework 2011–2016*, the *WA Chronic Conditions Self-management Strategic Framework 2011–2015* and models of care for individual chronic diseases.

www.healthnetworks.health.wa.gov.au/docs/1112_ChronicHealthConditionsFramework.pdf

www.healthnetworks.health.wa.gov.au/docs/1112_CCSM_Strategic_Framework.pdf

www.healthnetworks.health.wa.gov.au/modelsofcare

- **Health and wellbeing of people living with disability** is addressed in the *WA Disability Health Framework 2015–2025*.

www.healthnetworks.health.wa.gov.au/docs/Disability_Health_Framework.pdf

- **Active ageing** is led by the Department of Local Government and Communities through the *Seniors Strategic Planning Framework*.

www.dlgc.wa.gov.au/Publications/Pages/Seniors-Strategic-Planning-Framework.aspx

- **Monitoring and advocacy to strengthen the wellbeing of WA children and young people** is one of the three key concerns of the Commissioner for Children and Young People. See *Our approach and priorities 2016–2020*.

<https://www.cyp.wa.gov.au/media/2220/our-approach-and-priorities-final-lr2.pdf>

- **Prevention in the primary care setting** is addressed in the *WA Primary Health Care Strategy*.

www.healthnetworks.health.wa.gov.au/docs/1112_WAPrimaryHealthCareStrategy.pdf

- **Oral health promotion, and prevention and treatment of oral health conditions** are addressed in the *State Oral Health Plan 2016–2020*.

ww2.health.wa.gov.au/Reports-and-publications/State-Oral-Health-Plan

WA Government Departments of Agriculture and Food; Child Protection and Family Support; Commerce; Corrective Services; Culture and the Arts; Education; Local Government and Communities; Parks and Wildlife; Planning; Sport and Recreation; Training and Workforce Development; and Transport; and the Disabilities Services Commission are among other leading WA Government agencies that develop policies and strategies that provide for the support and promotion of healthier lifestyles for Western Australians.

At the national level, the WA HPSF aligns with the *National Healthcare Agreement*²³ and the *National Strategic Framework for Chronic Conditions* (in draft), which may be accessed via www.health.gov.au once publicly available.

Links to other important Commonwealth and State policies and relevant international frameworks are included in Appendix 2.

Appendix 2: State, Commonwealth and international frameworks and policies

Web addresses correct as of December 2016

General

State

WA Health Strategic Intent 2015–2020

ww2.health.wa.gov.au/Reports-and-publications/WA-Health-Strategic-Intent-2015-2020

WA Aboriginal Health and Wellbeing Framework 2015–2030

ww2.health.wa.gov.au/Improving-WA-Health/About-Aboriginal-Health/WA-Aboriginal-Health-and-Wellbeing-Framework-2015-2030

WA Disability Health Framework 2015–2025

www.healthnetworks.health.wa.gov.au/docs/Disability_Health_Framework.pdf

State Oral Health Plan 2016–2020

ww2.health.wa.gov.au/Reports-and-publications/State-Oral-Health-Plan

National

Australia: The healthiest country by 2020. National Preventative Health Strategy—the roadmap for action (2009)

www.health.gov.au/internet/preventativehealth/publishing.nsf/Content/nphs-roadmap

National Aboriginal and Torres Strait Islander Health Plan 2013–2023

www.health.gov.au/internet/main/publishing.nsf/Content/natsih-plan

National Arts and Health Framework (2013; updated annually)

www.arts.gov.au/national-arts-and-health-framework

National Strategic Framework for Chronic Conditions

www.health.gov.au/internet/main/publishing.nsf/content/nsfcc

National Healthcare Agreement (2016)

<http://meteor.aihw.gov.au/content/index.phtml/itemId/598643>

National Preventive Health Research Strategy 2013–2018

www.saxinstitute.org.au/wp-content/uploads/ANPHA-Research-Strategy-2013-18.pdf

Oral Health Monitoring Group. Healthy Mouths, Healthy Lives: Australia's National Oral Health Plan 2015–2024

www.coaghealthcouncil.gov.au/Portals/0/Australia%27s%20National%20Oral%20Health%20Plan%202015-2024_uploaded%20170216.pdf

International

WHO Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020

www.who.int/nmh/events/ncd_action_plan/en/

Curbing the rise in overweight and obesity

Note: Policies for maintaining a healthy weight overlap with policies for healthy eating and a more active WA, listed below.

National

Clinical Practice Guidelines for the Management of Overweight and Obesity in Adults, Adolescents and Children in Australia (2013) www.nhmrc.gov.au/guidelines-publications/n57

International

Report of the Commission on Ending Childhood Obesity (2016)
www.who.int/end-childhood-obesity/en/

Healthy eating

National

Australian Dietary Guidelines (2013)
www.nhmrc.gov.au/guidelines-publications/n55

Australian National Breastfeeding Strategy 2010–2015
www.health.gov.au/internet/main/publishing.nsf/content/aust-breastfeeding-strategy-2010-2015

Food and Nutrition Policy 1992
<http://webarchive.nla.gov.au/gov/20080810054928/http://www.health.gov.au/internet/main/publishing.nsf/Content/phd-nutrition-fnp-1992>

Infant Feeding Guidelines for Health Workers (2012)
www.nhmrc.gov.au/guidelines-publications/n56

A more active WA

State

Active Living for All: A Framework for Physical Activity in Western Australia 2012–2016 (under review)
www.beactive.wa.gov.au/assets/files/PATF%20Strategic%20Plans%20and%20Committee%20Docs/PATF%20Strategic%20Plans/Be%20Active%20-%20Active%20Living%20for%20All%20Report.pdf

An Age-friendly WA: the Seniors Strategic Planning Framework 2012–2017
www.dlgs.wa.gov.au/Publications/Pages/Seniors-Strategic-Planning-Framework.aspx

Directions 2031 and Beyond: Metropolitan planning beyond the horizon (2010)
www.planning.wa.gov.au/publications/826.asp

Liveable Neighbourhoods (currently under review)
<http://planning.wa.gov.au/650.asp>

Public Transport Plan for Perth 2031
www.transport.wa.gov.au/projects/public-transport-plan-2031.asp

Perth and Peel@3.5 million
www.planning.wa.gov.au/publications/3.5million.asp

SD6 Strategic Directions for the Western Australian Sport and Recreation Industry 2016–2020
www.dsr.wa.gov.au/about/plan-for-the-future/industry-strategic-plan

State Planning Strategy 2050

www.planning.wa.gov.au/6561.asp

Western Australian Bicycle Network Plan 2014–2031

www.transport.wa.gov.au/mediaFiles/active-transport/AT_CYC_P_WABN_Plan.pdf

National

Blueprint for an Active Australia 2014–2017

<https://www.heartfoundation.org.au/images/uploads/publications/Blueprint-for-an-active-Australia-second-edition.pdf>

National Cycling Strategy 2011–2016

www.bicyclecouncil.com.au/files/publication/National-Cycling-Strategy-2011-2016.pdf

Australia's Physical Activity and Sedentary Behaviour Guidelines

www.health.gov.au/internet/main/publishing.nsf/content/health-pubhlth-strateg-phys-act-guidelines

Our Cities Our Future – A National Urban Policy for a Productive, Sustainable Future (2011)

<http://infrastructureaustralia.gov.au/policy-publications/publications/Our-Cities-Our-Future-2011.aspx>

Making smoking history

National

National Drug Strategy 2010–2015

www.nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/Content/nds2015

Note: the above strategy will be superseded by:

National Drug Strategy 2016–2025 (in draft at time of writing)

www.nationaldrugstrategy.gov.au/internet/drugstrategy/Publishing.nsf/content/draftnds

National Tobacco Strategy 2012–2018

[www.nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/content/D4E3727950BDBAE4CA257AE70003730C/\\$File/National%20Tobacco%20Strategy%202012-2018.pdf](http://www.nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/content/D4E3727950BDBAE4CA257AE70003730C/$File/National%20Tobacco%20Strategy%202012-2018.pdf)

International

WHO Framework Convention on Tobacco Control (2003)

www.who.int/fctc/en/

Reducing harmful levels of alcohol use and other drug use

State

Drug and Alcohol Interagency Strategic Framework for Western Australia

www.dao.health.wa.gov.au/Informationandresources/Nationalandstatepolicies.aspx

The Western Australian Mental Health, Alcohol, and other Drug Services Plan 2015–2025. Better Choices. Better Lives

www.mentalhealth.wa.gov.au/ThePlan.aspx

Strong Spirit Strong Mind – Aboriginal Drug and Alcohol Framework for Western Australia 2011–2015

www.dao.health.wa.gov.au/DesktopModules/Bring2mind/DMX/Download.aspx?Command=Core_Download&EntryId=614&PortalId=0&TabId=211

National

National Alcohol Strategy 2016–2021

www.health.gov.au/internet/main/publishing.nsf/Content/health-publth-strateg-drugs-alcohol-index.htm

National Drug Strategy 2010–2015

www.nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/Content/nds2015

Note: the above strategy will be superseded by:

National Drug Strategy 2016–2025

www.nationaldrugstrategy.gov.au/internet/drugstrategy/Publishing.nsf/content/draftnds

Australian Guidelines to Reduce Health Risks from Drinking Alcohol (2009)

www.nhmrc.gov.au/guidelines-publications/ds10

Injury prevention and promoting safer communities

State

Towards Zero. Road Safety Strategy to Reduce Road Trauma in Western Australia 2008–2020

<https://rsc.wa.gov.au/About-us/Towards-Zero>

Falls Prevention Model of Care (2012)

www.healthnetworks.health.wa.gov.au/modelsofcare/docs/Falls_Model_of_Care.pdf

National

Australian Work Health and Safety Strategy 2012–2022

www.safeworkaustralia.gov.au/sites/swa/about/publications/pages/australian-work-health-and-safety-strategy-2012-2022

National Falls Prevention for Older People Plan: 2004 Onwards

www.health.vic.gov.au/archive/archive2014/nphp/publications/sipp/fallplan.pdf

National Injury Prevention and Safety Promotion Plan: 2004–2014

www.health.vic.gov.au/archive/archive2014/nphp/publications/sipp/nipspp.pdf

National Road Safety Strategy, 2011–2020

http://infrastructure.gov.au/roads/safety/national_road_safety_strategy/index.aspx

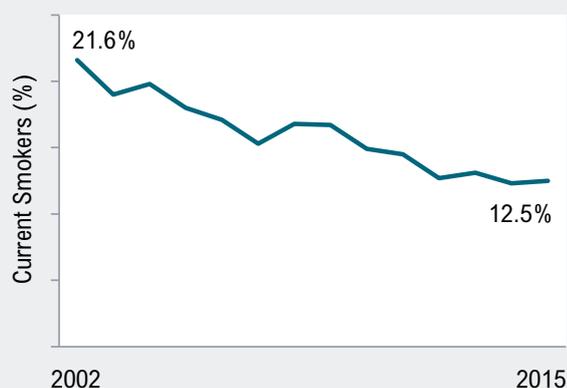
Appendix 3: Broad indicator set for chronic disease and injury prevention in WA

Progress in WA for chronic disease and injury prevention is partly informed by population level changes in behaviour, disease prevalence and rates of injury. For monitoring purposes, a set of indicators based on data collected via the *WA Health and Wellbeing Surveillance System* and *WA Hospital Morbidity Data System* is provided for monitoring progress in chronic disease and injury prevention in WA across the life of this framework.

The indicators are divided into three categories – (1) modifiable behaviour, (2) disease and biomedical and (3) injury events. It should be noted that these indicators are broad examples only and do not represent specific sub-populations that may be associated with greater risk and priority.

1. Modifiable behaviour

Tobacco smoking



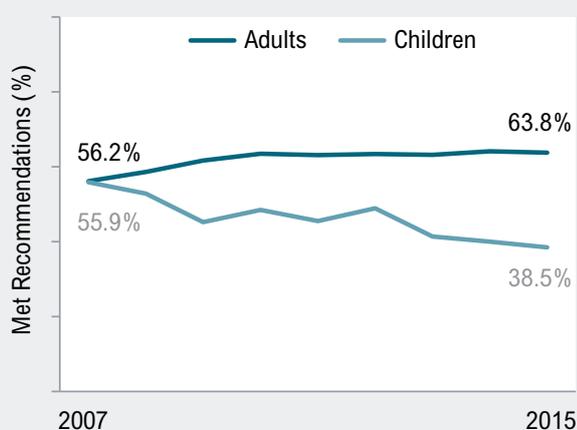
Source:

WA Health and Wellbeing Surveillance System

Trend:

Tobacco smoking in WA in people 16 years of age and older declined steadily between 2002 and 2015.

Physical activity



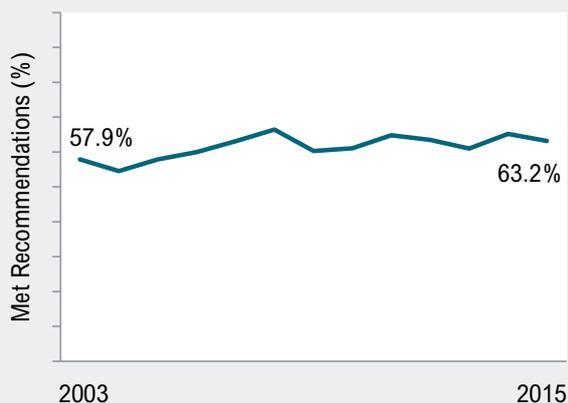
Source:

WA Health and Wellbeing Surveillance System

Trends:

Compliance with physical activity recommendations in WA adults (16+ years) increased slightly but significantly between 2007 and 2015. For children aged 5 to 15 years, compliance with physical activity recommendations has gradually decreased between 2007 and 2015.

Sedentary behaviour in children



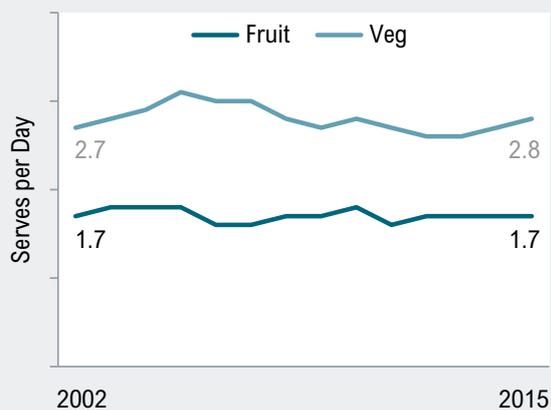
Source:

WA Health and Wellbeing Surveillance System

Trend:

Compliance with sedentary behaviour recommendations in WA children aged 0 to 15 years has increased slightly since 2003 but compliance in 2015 was not significantly higher than in 2004.

Fruit and vegetable consumption in adults



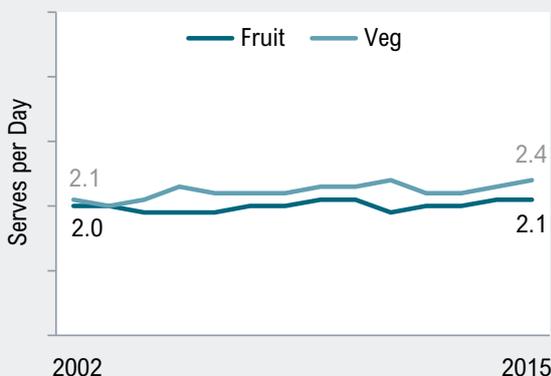
Source:

WA Health and Wellbeing Surveillance System

Trends:

Mean serves of fruit and vegetable consumed by adults over the age of 16 years remained steady between 2002 and 2015.

Fruit and vegetable consumption in children



Source:

WA Health and Wellbeing Surveillance System

Trends:

Mean serves of fruit and vegetables consumed by children aged 2 to 15 years remained steady between 2002 and 2015.

Harmful levels of alcohol use



Source:

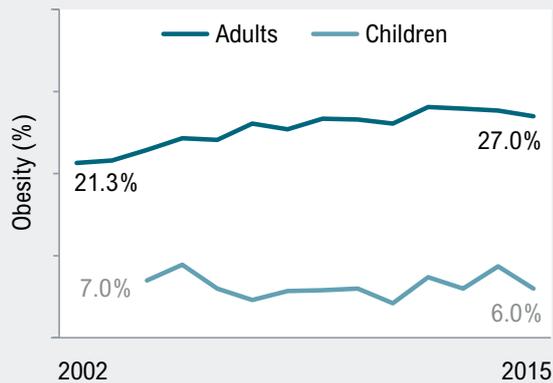
WA Health and Wellbeing Surveillance System

Trends:

High risk alcohol consumption for long-term and short-term harm in people aged 16 years and over decreased between 2002 and 2015.

2. Disease and biomedical

Obesity



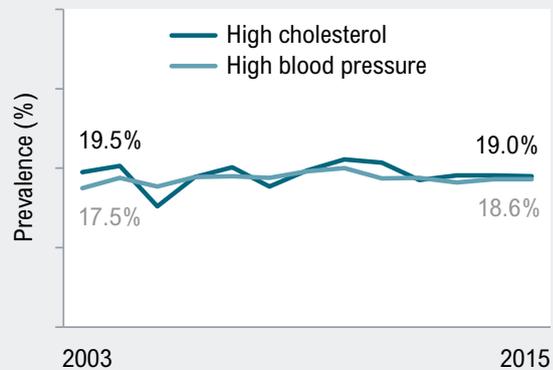
Source:

WA Health and Wellbeing Surveillance System

Trends:

The prevalence of obesity in people 16 years and over increased steadily between 2002 and 2015. For children aged 5 to 15 years, the prevalence of obesity remained steady between 2004 and 2015.

Cholesterol and blood pressure



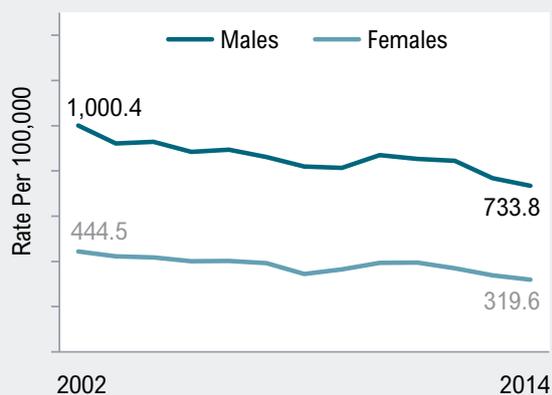
Source:

WA Health and Wellbeing Surveillance System

Trends:

The prevalence of high cholesterol and high blood pressure in adults aged 25 years and over remained steady between 2003 and 2015.

Coronary heart disease hospitalisations



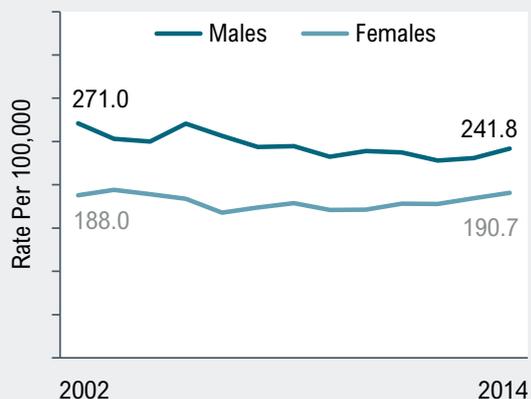
Source:

WA Hospital Morbidity Data System

Trends:

The age-standardised rate of hospitalisations due to coronary heart disease declined steadily for males and females between 2002 and 2014.

Cerebrovascular disease hospitalisations



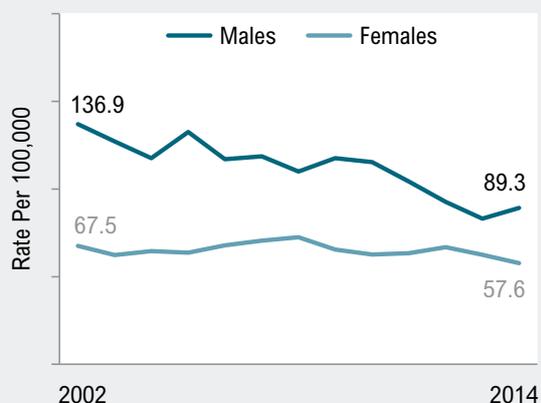
Source:

WA Hospital Morbidity Data System

Trends:

The age-standardised rate of hospitalisations due to cerebrovascular disease declined slightly for males but remained steady for females between 2002 and 2014.

Lung cancer hospitalisations



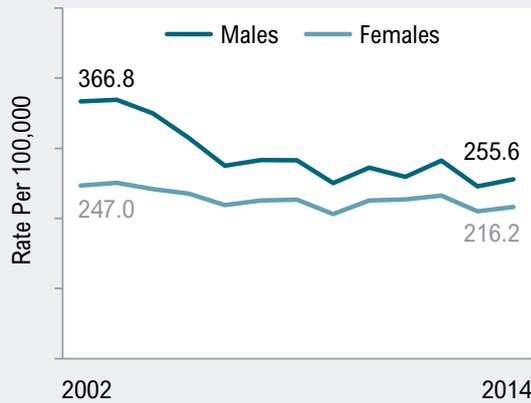
Source:

WA Hospital Morbidity Data System

Trends:

The age-standardised rate of hospitalisations due to lung cancer declined for males but remained relatively steady for females between 2002 and 2014.

COPD hospitalisations



Source:

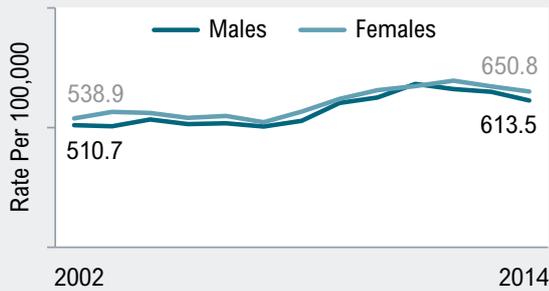
WA Hospital Morbidity Data System

Trends:

The age-standardised rate of hospitalisations due to chronic obstructive pulmonary disease declined for both males and females between 2002 and 2014.

3. Injury events

Falls hospitalisations



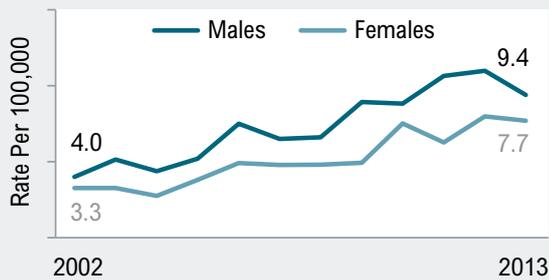
Source:

WA Hospital Morbidity Data System

Trends:

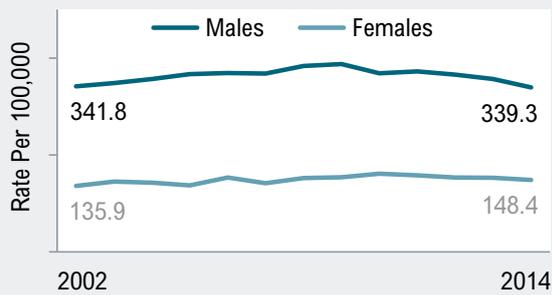
The age-standardised rate of hospitalisations due to fall-related injuries increased between 2002 and 2012 but decreased between 2012 and 2014 for both males and females.

Falls deaths



The age-standardised rate of deaths due to falls increased between 2002 and 2013 for both males and females.

Transport hospitalisations



Source:

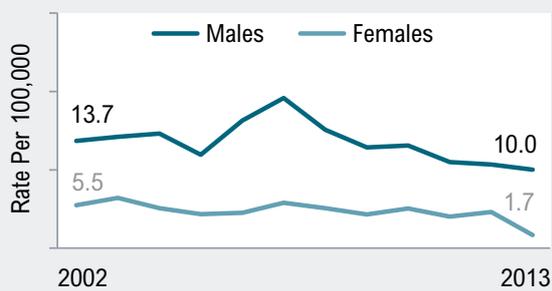
WA Hospital Morbidity Data System

Trends:

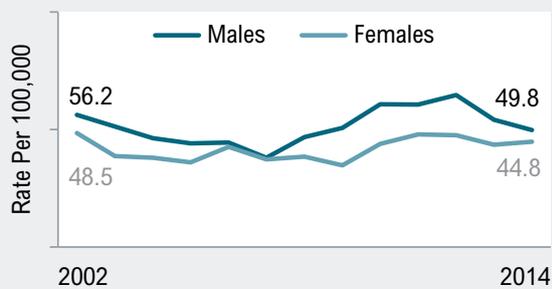
The age-standardised rate of hospitalisations due to transportation accidents increased for males between 2002 and 2009 but decreased between 2009 and 2014. For females, hospitalisations increased between 2002 and 2010 but remained steady between 2010 and 2014.

The age-standardised rate of deaths due to transportation accidents increased for males between 2002 and 2007 but decreased between 2007 and 2013. For females, deaths remained steady between 2002 and 2012 but declined in 2013.

Transport deaths



Accidental poisoning hospitalisations



Source:

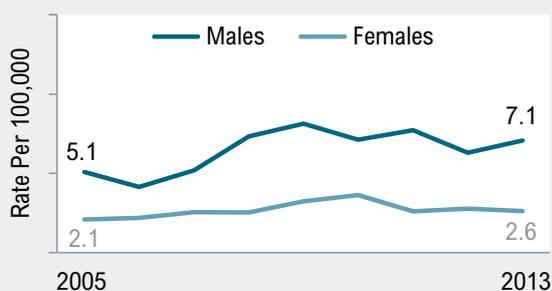
WA Hospital Morbidity Data System

Trends:

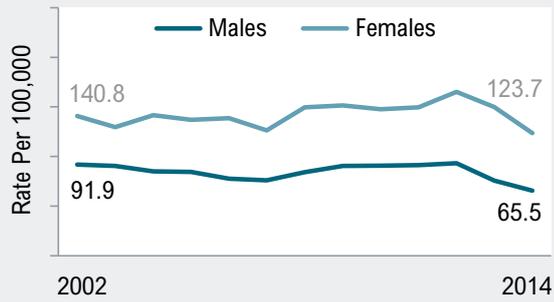
The age-standardised rate of hospitalisations due to accidental poisoning remained relatively consistent for both males and females between 2002 and 2014.

The age-standardised rate of deaths due to accidental poisoning remained relatively consistent for both males and females between 2005 and 2013.

Accidental poisoning deaths



Intentional self-harm hospitalisations



Source:

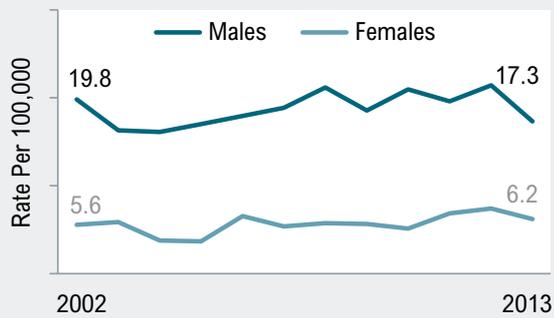
WA Hospital Morbidity Data System

Trends:

The age-standardised rate of hospitalisations due to intentional self-harm remained consistent between 2002 and 2012 but declined between 2012 and 2014 for both males and females.

The age-standardised rate of deaths due to intentional self-harm remained relatively consistent for males and females between 2002 and 2013.

Intentional self-harm deaths



References

1. Australian Institute of Health and Welfare. Australian Burden of Disease Study: impact and causes of illness and death in Australia 2011. Series no. 3. Cat. no. BOD 4. Canberra: Australian Institute of Health and Welfare, 2016. Available from: www.aihw.gov.au/publication-detail/?id=60129555173
2. Australian Institute of Health and Welfare. Risk factors contributing to chronic disease. Canberra: Australian Institute of Health and Welfare, 2012. Available from: www.aihw.gov.au/publication-detail/?id=10737421466
3. Sherrington C, Tiedemann A, Fairhall N, Close JC, Lord SR. Exercise to prevent falls in older adults: an updated meta-analysis and best practice recommendations. NSW Public Health Bull. 2011;22:78-83. Available from: www.ncbi.nlm.nih.gov/pubmed/21632004
4. Australian Institute of Health and Welfare. Australia's health 2014. Australia's health series no. 12. Cat. no. AUS 178. Canberra: Australian Institute of Health and Welfare; 2014; Available from: www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=60129548150
5. Hocking S, Draper G, Somerford P, Xiao J, Weeramanthri T. The Western Australian Chief Health Officer's report 2010. Perth: Department of Health, Western Australia, 2010. Available from: www.health.wa.gov.au/publications/documents/WA_chief_health_officers_report_2010.pdf
6. Australian Institute of Health and Welfare. Australian Burden of Disease Study: Impact and causes of illness and death in Australia 2011-Summary report. Australian Burden of Disease Study series no. 4. BOD 5. Canberra: AIHW, 2016. Available from: www.aihw.gov.au/publication-detail/?id=60129556205
7. Epidemiology Branch, Public Health Division, Western Australian Department of Health. Overview of the burden of disease in Western Australia 2011. Perth: Department of Health, 2016.
8. Australian Institute of Health and Welfare. Aboriginal and Torres Strait Islander Health Performance Framework 2014 Report. Canberra: Australian Institute of Health and Welfare, 2015. Available from: www.health.gov.au/indigenous-hpf
9. Australian Bureau of Statistics. 47270D0003_20122013 Australian Aboriginal and Torres Strait Islander Health Survey: First Results, 2012–13 — Australia [Data cubes] - Selected health characteristics by State/Territory - 2012-13, Proportion of Aboriginal and Torres Strait Islander persons. Canberra: ABS, 2014. Available from: www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4727.0.55.0012012-13?OpenDocument
10. National Health and Medical Research Council. Cultural competency in health: a guide for policy, partnerships and participation. Canberra: National Health and Medical Research Council, 2006. Available from: www.nhmrc.gov.au/guidelines-publications/hp19-hp26
11. Australian Institute of Health and Welfare. Australian Burden of Disease Study: impact and causes of illness and death in Aboriginal and Torres Strait Islander people 2011. Australian Burden of Disease Study series no. 6. Cat. no. BOD 7. Canberra: AIHW, 2016. Available from: www.aihw.gov.au/publication-detail/?id=60129557110
12. Epidemiology Branch. Costs and cost projections for injury and chronic disease hospitalisations, HMDS. Perth: Department of Health, Western Australia, 2016.
13. Vos T, Carter R, Barendregt J, Mihalopoulos C, Veerman JL, Magnus A, et al. Assessing cost-effectiveness in prevention (ACE–Prevention): final report: University of Queensland, Brisbane, 2010. Available from: http://public-health.uq.edu.au/filething/get/1836/ACE-Prevention_final_report.pdf
14. Oral Health Monitoring Group. Healthy Mouths, Healthy Lives: Australia's National Oral Health Plan 2015–2024. Canberra: COAG Health Council, 2015. Available from: www.coaghealthcouncil.gov.au/Portals/0/Australia%27s%20National%20Oral%20Health%20Plan%202015-2024_uploaded%20170216.pdf

15. Australian Institute of Health and Welfare. A picture of Australia's children 2012. Cat. no. PHE 167. Canberra: Australian Institute of Health and Welfare, 2012. Available from: www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=10737423340
16. Australian Institute of Health and Welfare. Australia's health 2016. Australia's health series no. 15. Cat. no. AUS 199. Canberra: AIHW, 2016. Available from: www.aihw.gov.au/publication-detail/?id=60129555544
17. National Health and Medical Research Council. Australian Dietary Guidelines. Canberra: National Health and Medical Research Council, 2013. Available from: www.nhmrc.gov.au/guidelines-publications/n55
18. World Health Organization. Health topics. Health promotion. Geneva: WHO; 2016 [cited 12 August 2016]; Available from: www.who.int/topics/health_promotion/en/
19. Tomlin S, Joyce S, Radomiljac A. Health and wellbeing of adults in Western Australia 2015, overview and trends. Perth: Department of Health, Western Australia, 2016. Available from: ww2.health.wa.gov.au/~media/Files/Corporate/Reports%20and%20publications/Population%20surveys/Health-and-Wellbeing-of-Adults-in-Western-Australia-2015-Overview-and-Trends.ashx
20. Tomlin S, Joyce S, Radomiljac A. Health and wellbeing of children in Western Australia in 2015, overview and trends. Perth: Department of Health, Western Australia, 2016. Available from: ww2.health.wa.gov.au/Reports-and-publications/Population-surveys
21. Royal Life Saving Society, Western Australia, and Department of Health, Western Australia. A 10-year analysis of drowning in toddlers aged 0–4 years in Western Australia (2003/4 to 2012/13). Perth: Royal Life Saving Society Western Australia, 2015. Available from: <https://lifesavingwa.com.au/~media/files/rlsswa/research-and-reports/drowning-reports/a10yearanalysisofdrowningintoddlersaged0-4.pdf?la=en>
22. Parliament of Western Australia. Public Health Act 2016. Perth: Parliament of Western Australia, 2016. Available from: www.slp.wa.gov.au/legislation/statutes.nsf/main_mrtitle_13791_homepage.html
23. Australian Institute of Health and Welfare. National Healthcare Agreement (2016). Canberra: Australian Institute of Health and Welfare, 2016. Available from: <http://meteor.aihw.gov.au/content/index.phtml/itemId/598643>
24. Australian Bureau of Statistics. 3302.0.55.001 - Life tables, states, territories and Australia, 2012-2014. Canberra: Australian Bureau of Statistics; 2015. Available from: www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3302.0.55.0012012-2014?OpenDocument
25. Australian Bureau of Statistics. 4364.0.55.001 - National Health Survey: first results, 2014-2015 - Australia. Canberra: Australian Bureau of Statistics; 2015. Available from: www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4364.0.55.0012014-15?OpenDocument
26. Epidemiology Branch. Chronic disease hospitalisations and deaths, HMDS. Perth: Department of Health, Western Australia, 2016.
27. Epidemiology Branch. Injury hospitalisations, deaths, and emergency department presentations, HMDS. Perth: Department of Health, Western Australia, 2016.
28. Australian Bureau of Statistics. 3303.0 - Causes of death, Australia, 2014. Underlying cause of death, all causes, Western Australia 2014 [data cube]. Canberra: Australian Bureau of Statistics, 2016. Available from: www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3303.02014?OpenDocument
29. Australian Institute of Health and Welfare. Health of Australians with disability: health status and risk factors. Canberra: Australian Institute of Health and Welfare, 2010. Available from: www.aihw.gov.au/publications/aus/bulletin83/11608.pdf
30. Mental Health Commission, Western Australia. Mental health 2020: making it personal and everybody's business. Perth: Mental Health Commission, Western Australia. Available from: http://www.mentalhealth.wa.gov.au/Libraries/pdf_docs/Mental_Health_Commission_strategic_plan_2020.sflb.ashx

31. Australian Bureau of Statistics. 4329.0.00.004 - National Health Survey: mental health and co-existing physical health conditions, 2014-2015. Canberra: Australian Bureau of Statistics, 2015. Available from: www.abs.gov.au/ausstats%5Cabs@.nsf/0/COA4290EF1E7E7FDCA257F1E001C0B84?Opendocument
32. Lawrence D, Hancock K, Kisely S. The gap in life expectancy from preventable physical illness in psychiatric patients in Western Australia: retrospective analysis of population based registers. *BMJ*. 2013;346:f2539 doi: 10.1136/bmj.f2539. Available from: www.bmj.com/content/346/bmj.f2539
33. Office of Multicultural Interests. Cultural diversity in Western Australia: a demographic profile. Perth: Department of Local Government and Communities, 2013. Available from: www.omi.wa.gov.au/publications/omi_cultural_diversity.cfm
34. Australian Bureau of Statistics. 3101.0 - Australian demographic statistics, December 2015. Canberra: Australian Bureau of Statistics; 2016. Available from: www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3101.0Dec%202015?OpenDocument
35. Australian Bureau of Statistics. 3222.0 - Population projections, Australia, 2006 to 2101. Canberra: Australian Bureau of Statistics, 2008. Available from: www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/3222.0Main+Features12006%20to%202101?OpenDocument
36. Drug and Alcohol Office, Western Australia, and Department of Health, Western Australia. Alcohol-related hospitalisations and deaths in Western Australia. State Profile. Drug and Alcohol Office surveillance report. Perth: Drug and Alcohol Office, 2014. Available from: www.dao.health.wa.gov.au/DesktopModules/Bring2mind/DMX/Download.aspx?Command=Core_Download&EntryId=1129&PortalId=0&TabId=211
37. Scalley B, Xiao J, Somerford P. The cost of excess body mass to the acute hospital system in Western Australia: 2011. Perth, Western Australia: Department of Health WA, 2013. Available from: ww2.health.wa.gov.au/Reports-and-publications/The-cost-of-excess-body-mass-to-the-acute-hospital-system-in-Western-Australia-2011
38. Collins D, Lapsley H. The social costs of smoking in Western Australia in 2009/10 and the social benefits of public policy measures to reduce smoking prevalence. Perth: Cancer Council Western Australia, 2014. Available from: www.cancerwa.asn.au/resources/2014-10-28-Social-Costs-of-Smoking-Final.pdf
39. Applied Economics. Returns on investment in public health: an epidemiological and economic analysis prepared for the Department of Health and Ageing. Canberra: Department of Health and Ageing, Australian Government, 2003. Available from: www.applieconomics.com.au/pubs/reports/health/ph00.htm
40. Threlfall TJ, Thompson JR. Cancer incidence and mortality in Western Australia, 2013. Statistical Series Number 101. Perth: Department of Health, Western Australia, 2015. Available from: www.health.wa.gov.au/docreg/Reports/Diseases/Cancer/WACR_Cancer_incidence_mortality_main_2013.pdf
41. Parkin DM, Boyd L, Walker LC. 16. The fraction of cancer attributable to lifestyle and environmental factors in the UK in 2010: summary and conclusions. *Brit J Cancer*. 2011;105(Suppl 2):S77-S81. Available from: www.ncbi.nlm.nih.gov/pmc/articles/PMC3252065/
42. US Department of Health and Human Services. The health consequences of smoking: cancer. A report of the Surgeon General. Rockville, MD: US Department of Health and Human Services, 1982. Available from: <https://profiles.nlm.nih.gov/NN/B/C/D/W/>
43. Whiteman D, Webb P, Green A, Neale R, Fritschi L, Bain C, et al. Cancers in Australia in 2010 attributable to modifiable factors: summary and conclusions. *Aust NZ J Publ Health*. 2015;39:477-84. Available from: www.ncbi.nlm.nih.gov/pmc/articles/PMC4606779/
44. Cancer Council Western Australia. History in the making: the first 10 years of the Make Smoking History Campaign. Perth: Cancer Council Western Australia, 2010. Available from: www.cancerwa.asn.au/resources/2010-05-25-Make-Smoking-History-10th-Anniversary-Book.pdf
45. Feletto E, Sitas F, Gibberd A, Kahn C, Weber M, Grogan P, et al. The state of cancer control in Australia. Cancer Council NSW research report summary. Sydney: Cancer Council NSW, 2013. Available from: www.cancercouncil.com.au/wp-content/uploads/2013/05/State-of-Cancer-Control-May-2012_PRESS_HighRes_09052013.pdf

46. Girschik J, Miller LJ, Sun W, Jardine A, Weeramanthri TS. Priorities and preferences for cancer control in Western Australia. Perth: Department of Health, Western Australia, 2016. Available from: ww2.health.wa.gov.au/~media/Files/Corporate/general%20documents/Population%20health/PDF/cancer%20control%20in%20WA%20report.ashx
47. World Health Organization. Preventing chronic diseases. A vital investment. WHO global report. Geneva: World Health Organization, 2005. Available from: www.who.int/chp/chronic_disease_report/contents/en/index.html
48. Hawe P, King L, Noort M, Jordens C, Lloyd B. Indicators to help with capacity building in health promotion. Sydney: NSW Health, 2000. Available from: www.bvsde.paho.org/bvsacd/cd64/capbuild.pdf
49. World Health Organization. Milestones in health promotion. Statements from global conferences. Geneva: WHO, 2009. Available from: www.who.int/healthpromotion/Milestones_Health_Promotion_05022010.pdf
50. National Health Priority Action Council, Australian Health Ministers' Conference. National Chronic Disease Strategy. Canberra: Department of Health and Ageing, Australian Government, 2006. Available from: [http://content.webarchive.nla.gov.au/gov/wayback/20141215061219/http://www.health.gov.au/internet/main/publishing.nsf/Content/66EC52273873D375CA257BF0001F3FED/\\$File/stratal3.pdf](http://content.webarchive.nla.gov.au/gov/wayback/20141215061219/http://www.health.gov.au/internet/main/publishing.nsf/Content/66EC52273873D375CA257BF0001F3FED/$File/stratal3.pdf)
51. Australian Institute of Health and Welfare. Headline indicators for children's health, development and wellbeing, 2011. Cat. no. PHE 144. Canberra: Australian Institute of Health and Welfare, 2011. Available from: www.aihw.gov.au/publication-detail/?id=10737419587
52. National Preventative Health Taskforce. Australia: the healthiest country by 2020. National Preventative Health Strategy - the roadmap for action. Canberra: Commonwealth of Australia, 2009. Available from: [www.health.gov.au/internet/preventativehealth/publishing.nsf/content/a06c2fcf439ecda1ca2574dd0081e40c/\\$file/discussion-28oct.pdf](http://www.health.gov.au/internet/preventativehealth/publishing.nsf/content/a06c2fcf439ecda1ca2574dd0081e40c/$file/discussion-28oct.pdf)
53. National Public Health Partnership. Preventing chronic disease: a strategic framework background paper. Melbourne: National Public Health Partnership, 2001. Available from: www.health.vic.gov.au/archive/archive2014/nphp/publications/strategies/chrondis-bgpaper.pdf
54. Cohen DJ, Clark EC, Lawson PJ, Casucci BA, Flocke SA. Identifying teachable moments for health behavior counseling in primary care. *Pat Ed Couns.* 2011;85:e8-e15. Available from: <http://dx.doi.org/10.1016/j.pec.2010.11.009>
55. VicHealth. Fair Foundations: the VicHealth framework for health equity. Melbourne: Victorian Health Promotion Foundation, 2015. Available from: www.vichealth.vic.gov.au/media-and-resources/publications/the-vichealth-framework-for-health-equity
56. World Health Organization. Commission on social determinants: final report. Geneva: World Health Organization, 2010. Available from: www.who.int/social_determinants/thecommission/finalreport/en/
57. Hayes L. Smokers' responses to the 2010 increase to tobacco excise; findings from the 2009 and 2010 Victorian Smoking and Health Surveys. Melbourne: Centre for Behavioural Research in Cancer, Cancer Council Victoria, 2011.
58. World Health Organization. Global action plan for the prevention and control of noncommunicable diseases 2013-2020. Geneva: World Health Organization, 2013. Available from: www.who.int/nmh/events/ncd_action_plan/en/
59. Wakefield MA, Loken B, Hornik RC. Use of mass media campaigns to change health behaviour. *The Lancet.* 2010;376:1261-71. Available from: [www.thelancet.com/journals/lancet/article/PIIS0140-6736\(10\)60809-4/abstract](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(10)60809-4/abstract)
60. Keleher H. Reframing health promotion. In: Keleher H, MacDougall C, Murphy B, editors. Understanding health promotion. Melbourne: Oxford University Press; 2007.

61. World Health Organization. 2008–2013 action plan for the global strategy for the prevention and control of noncommunicable diseases. Geneva: WHO, 2008. Available from: www.who.int/nmh/publications/9789241597418/en/
62. World Obesity Federation. Lancet Commission on Obesity. London: Lancet; 2015; Available from: www.worldobesity.org/what-we-do/lancetcommission/lancet-background/
63. Australian Bureau of Statistics. 4364.0.55.012 - Australian Health Survey: consumption of food groups from the Australian Dietary Guidelines, 2011–12. Canberra: Australian Bureau of Statistics; 2016; Available from: www.abs.gov.au/ausstats/abs@.nsf/mf/4364.0.55.012
64. Australian Bureau of Statistics. 4364.0.55.009 - Australian Health Survey: Nutrition - State and Territory results, 2011-12. Canberra: Australian Bureau of Statistics, 2015. Available from: www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4364.0.55.0092011-12?OpenDocument
65. World Health Organization. Guideline: Sugars intake for adults and children. Geneva: WHO, 2015. Available from: www.who.int/nutrition/publications/guidelines/sugars_intake/en/
66. Australian Bureau of Statistics. 4364.0.55.011 - Australian Health Survey: Consumption of added sugars, 2011-12 Canberra: Australian Bureau of Statistics, 2016. Available from: www.abs.gov.au/ausstats/abs@.nsf/mf/4364.0.55.011
67. Egger G, Swinburn B. An “ecological” approach to the obesity pandemic. *BMJ*. 1997;315(7106):477-80. Available from: <http://dx.doi.org/10.1136/bmj.315.7106.477>
68. Cairns G, Angus K, Hastings G. The extent, nature and effects of food promotion to children. A review of the evidence to December 2008. Geneva: World Health Organization, 2009. Available from: www.who.int/dietphysicalactivity/Evidence_Update_2009.pdf
69. Kelly B, Chapman K, King L, Hebden L. Trends in food advertising to children on free-to-air television in Australia. *Aust N Z J Publ Health*. 2011;35:131–4. Available from: www.ncbi.nlm.nih.gov/pubmed/21463408
70. Kelly B, Bochynska K, Kornman K, Chapman K. Internet food marketing on popular children’s websites and food product websites in Australia. *Public Health Nutr*. 2008;11:1180–87. Available from: www.ncbi.nlm.nih.gov/pubmed/18298882
71. Australian Institute of Health and Welfare. Australia’s food and nutrition 2012. Cat. no. PHE 163. Canberra: Australian Institute of Health and Welfare, 2012. Available from: www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=10737422837
72. World Health Organization. Using price policies to promote healthier diets. Geneva: World Health Organization, 2015. Available from: www.euro.who.int/_data/assets/pdf_file/0008/273662/Using-price-policies-to-promote-healthier-diets.pdf?ua=1
73. Veerman J, Sacks G, Antonopoulos N, Martin J. The impact of a tax on sugar-sweetened beverages on health and health care costs: A modelling study. *PloS ONE*. 2016;11:e0151460. Available from: <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0151460>
74. Singh A, Mulder C, Twisk J, van Mechelen W, Chinapaw M. Tracking of childhood overweight into adulthood: a systematic review of the literature. *Obesity Reviews*. 2008;9:474-88. Available from: www.ncbi.nlm.nih.gov/pubmed/18331423
75. Must A, Strauss R. Risks and consequences of childhood and adolescent obesity. *Int J Obes Relat Metab Disord*. 1999;23(S2):S2–S11. Available from: www.ncbi.nlm.nih.gov/pubmed/10340798
76. Kleinert S, Horton R. Rethinking and reframing obesity. *The Lancet*. 2015;385:2326-8. Available from: [www.thelancet.com/journals/lancet/article/PIIS0140-6736\(15\)60163-5/abstract](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(15)60163-5/abstract)
77. Donath S. Who’s overweight? Comparison of the medical definition and community views. *Med J Aust*. 2000;172:375-7. Available from: www.ncbi.nlm.nih.gov/pubmed/10840489

78. Merema MR, Sullivan DL, Pollard CM, Abraham JA, Tomlin SM, Radomiljac AL. Parents' perception of their child's weight status and intention to intervene: a Western Australian cross-sectional population survey, 2009-12. *Aust N Z J Publ Health*. 2015 2015/11/11;40:68-70. Available from: <http://dx.doi.org/10.1111/1753-6405.12483>
79. Buunk B, Gibbons F, Reis-Bergan M. Social comparison in health and illness: a historical overview. In: Gibbons F, Buunk A, editors. *Health, coping and well-being: perspectives from Social Comparison Theory*. New York: Psychology Press; 2013.
80. Guh D, Zhang W, Bansback N, et al. The incidence of co-morbidities related to obesity and overweight: a systematic review and meta-analysis. *BMC Public Health*. 2009;9:Article no. 88. Available from: <http://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-9-88>
81. National Health and Medical Research Council. *Clinical practice guidelines for the management of overweight and obesity in adults, adolescents and children in Australia*. Melbourne: National Health and Medical Research Council, 2013. Available from: www.nhmrc.gov.au/guidelines-publications/n57
82. World Health Organization. *WHO growth charts: child growth standards*. Geneva: World Health Organization; 2016; Available from: www.who.int/childgrowth/en/
83. Centers for Disease Control and Prevention. *CDC growth charts*. Atlanta: Centers for Disease Control and Prevention; 2010; Available from: www.cdc.gov/growthcharts/cdc_charts.htm
84. Australian National Preventive Health Agency. *National Preventive Health Research Strategy 2013-2018*. Canberra: Australian National Preventive Health Agency, 2013. Available from: www.saxinstitute.org.au/wp-content/uploads/ANPHA-Research-Strategy-2013-18.pdf
85. International Food Policy Research Institute. *Global Nutrition Report 2015: actions and accountability to advance nutrition and sustainable development*. Washington, DC: International Food Policy Research Institute, 2015. Available from: www.ifpri.org/publication/global-nutrition-report-2015
86. Australian Bureau of Statistics. 4364.0.55.009 - *Australian Health Survey: nutrition - state and territory results, 2011-12. Western Australia - key facts – food and nutrients, 2011-12*. Canberra: Australian Bureau of Statistics, 2015. Available from: www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/4364.0.55.009~2011-12~Main%20Features~Western%20Australia%20~7
87. Australian Bureau of Statistics. *Customised report drawn from National Nutrition and Physical Activity Survey, 2011-12*. Canberra, Australian Bureau of Statistics, 2016.
88. Pollard C, Harray A, Daly A, Kerr D. *Nutrition Monitoring Survey Series 2012 key findings*. Perth: Department of Health, Western Australia, 2015. Available from: ww2.health.wa.gov.au/~media/Files/Corporate/Reports%20and%20publications/Population%20surveys/13032-nutrition-monitoring-survey-series-2012.ashx
89. National Health and Medical Research Council. *Eat for health: Australian Dietary Guidelines. Providing the scientific evidence for healthier Australian diets*. Canberra: National Health and Medical Research Council, 2013. Available from: www.nhmrc.gov.au/guidelines-publications/n55
90. Australian Bureau of Statistics. 4727.0.55.005 - *Australian Aboriginal and Torres Strait Islander Health Survey: nutrition results - food and nutrients, 2012-13*. Canberra: Australian Bureau of Statistics, 2015. Available from: www.abs.gov.au/ausstats/abs@.nsf/Lookup/4727.0.55.005main+features12012-13
91. Pollard C, Savage V, Landrigen L, Hanbury A, Kerr D. *Food access and cost survey*. Perth: Department of Health, Western Australia, 2015. Available from: www.public.health.wa.gov.au/cproot/6185/2/Food%20Access%20and%20Cost%20Survey%20Report%202013.pdf
92. Department of Health Western Australia. *Nutrition Monitoring Survey Series 2015 key findings: Unpublished Results*.

93. Lee A, Baker P, Stanton R, Friel S, Weightman A. Scoping study to inform the development of the new national nutrition policy for Australia. Queensland: Queensland University of Technology, 2013. Available from: <http://eprints.qut.edu.au/93234/>
94. Moubarac J-C, Parra DC, Cannon G, Monteiro CA. Food classification systems based on food processing: significance and implications for policies and actions: a systematic literature review and assessment. *Curr Obes Rep.* 2014;3(2):256-72. Available from: <http://link.springer.com/article/10.1007/s13679-014-0092-0>
95. Monteiro CA, Moubarac JC, Cannon G, Ng SW, Popkin B. Ultra-processed products are becoming dominant in the global food system. *Obes Rev.* 2013;14:21-8. Available from: <http://dx.doi.org/10.1111/obr.12107>
96. Ossei-Assibey G, Dick S, Macdiarmid J, Semple S, Reilly J, Ellaway A, et al. The influence of the food environment on overweight and obesity in young children: a systematic review. *BMJ.* 2016;2:e001538 doi:10.1136. Available from: www.ncbi.nlm.nih.gov/pubmed/23253872
97. World Health Organization. Set of recommendations on the marketing of foods and non-alcoholic beverages to children. Geneva: World Health Organization, 2010. Available from: www.who.int/dietphysicalactivity/publications/recsmarketing/en/
98. Menella J. Ontogeny of taste preferences: basic biology and implications for health. *Am J Clin Nutr.* 2014;99(3):704S-11S. Available from: www.ncbi.nlm.nih.gov/pubmed/24452237
99. Drewnowski A, Mennella J, Johnson S, Bellisle F. Sweetness and food preference. *J Nutr.* 2012;142(6):1142S-8S. Available from: www.ncbi.nlm.nih.gov/pubmed/22573785
100. Australian Bureau of Statistics. 4364.0.55.007 - Australian Health Survey: nutrition first results - foods and nutrients, 2011-12. Canberra: Australian Bureau of Statistics, 2014. Available from: www.abs.gov.au/ausstats/abs@.nsf/Lookup/4364.0.55.007main+features12011-12
101. Hawkes C, Jewell J, Allen K. A food policy package for healthy diets and the prevention of obesity and diet-related non-communicable diseases: the NOURISHING framework. *Obesity Reviews.* 2013;14(S2):159-68. Available from: <http://onlinelibrary.wiley.com/doi/10.1111/obr.12098/full>
102. Department of Health, Australian Government. Australian National Breastfeeding Strategy 2010-2015. Canberra: Commonwealth of Australia, 2009. Available from: [www.health.gov.au/internet/main/publishing.nsf/Content/6FD59347DD67ED8FCA257BF0001CFD1E/\\$File/Breastfeeding_strat1015.pdf](http://www.health.gov.au/internet/main/publishing.nsf/Content/6FD59347DD67ED8FCA257BF0001CFD1E/$File/Breastfeeding_strat1015.pdf)
103. Meng X, Daly A, Pollard C, Binns C. Community attitudes toward breastfeeding in public places among Western Australia adults, 1995-2009. *J Hum Lact* 2013;29(2):183-9. Available from: www.ncbi.nlm.nih.gov/pubmed/23504475
104. Maycock B, Binns CW, Dhaliwal S, Tohotoa J, Hauck Y, Burns S, et al. Education and support for fathers improves breastfeeding rates: a randomized controlled trial. *J Hum Lact.* 2013;29(4):484-90. Available from: <http://jhl.sagepub.com/content/29/4/484.abstract>
105. Hector D, King L, Webb K. Factors affecting breastfeeding practices: applying a conceptual framework. *NSW Public Health Bull.* 2005;16(3-4). Available from: www.ncbi.nlm.nih.gov/pubmed/16106273
106. Australian Bureau of Statistics. 6401.0 - December quarter 2015 consumer price index. Canberra: Commonwealth of Australia, 2016. Available from: [www.ausstats.abs.gov.au/ausstats/meisubs.nsf/0/C3ABD893ED8188C7CA257F45000D8059/\\$File/64010_dec%202015.pdf](http://www.ausstats.abs.gov.au/ausstats/meisubs.nsf/0/C3ABD893ED8188C7CA257F45000D8059/$File/64010_dec%202015.pdf)
107. Food and Agriculture Organization, United Nations, the International Fund for Agricultural Development, and the World Food Programme. The state of food insecurity in the world, 2015. Meeting the 2015 international hunger targets: taking stock of uneven progress. Rome: Food and Agriculture Organization, United Nations, 2015. Available from: www.fao.org/3/a-i4646e.pdf
108. King S, Moffitt A, Bellamy J, Carter S, McDowell C, Mollenhauer J. When there's not enough to eat: a national study of food insecurity among emergency relief clients. *State of the Family Report, Vol 2.* Sydney: Anglicare, 2012. Available from: www.anglicare.org.au/sites/default/files/public/Anglicare_WTIETE_VOLUME%202%20FA.pdf

109. NSW Centre for Public Health Nutrition. Food security options paper: a planning framework and menu of options for policy and practice interventions. Sydney: NSW Centre for Public Health Nutrition, 2003. Available from: http://sydney.edu.au/science/molecular_bioscience/cphn/pdfs/food_security.pdf
110. Palacios V, Eaton D, O'Malley H. Perceptions, barriers and enablers of physical activity, food, alcohol and smoking among selected culturally and linguistically diverse ethnicity groups in WA. Perth: Department of Health, Western Australia, 2014.
111. Department of Health and Ageing, Australian Government, and the National Health and Medical Research Council. A review of the evidence to address targeted questions to inform the revision of the Australian Dietary Guidelines. Canberra: Commonwealth of Australia, 2011. Available from: www.nhmrc.gov.au/files/nhmrc/file/publications/n55d_australian_dietary_guidelines_evidence_report.pdf
112. Department of Health and Ageing, Australian Government, and the National Health and Medical Research Council. A modelling system to inform the revision of the Australian Guide to Healthy Eating. Canberra: Commonwealth of Australia, 2011. Available from: www.eatforhealth.gov.au/sites/default/files/files/the_guidelines/n55c_australian_dietary_guidelines_food_modelling_140121.pdf
113. Ball K, Mishra GD, Thane CW, Hodge A. How well do Australian women comply with dietary guidelines? *Public Health Nutr.* 2004;7(3):443-52. Available from: <http://dx.doi.org/10.1079/phn2003538>
114. Giskes K, Turrell G, Patterson C. Socioeconomic differences among Australian adults in consumption of fruit and vegetables and intakes of vitamins A, C and folate. *J Hum Nutr Diet.* 2002;15:375-85. Available from: www.ncbi.nlm.nih.gov/pubmed/12270018
115. Giskes K, Turrell G, Patterson C, Newman B. Socio-economic differences in fruit and vegetable consumption among Australian adolescents and adults. *Public Health Nutr.* 2002;5:663-69. Available from: www.ncbi.nlm.nih.gov/pubmed/12372160
116. Hendrie GA, Coveney J, Cox D. Exploring nutrition knowledge and the demographic variation in knowledge levels in an Australian community sample. *Public Health Nutr.* 2008;11(12):1365-71. Available from: www.ncbi.nlm.nih.gov/pubmed/18671887
117. McKinnon L, Giskes K, Turrell G. The contribution of three components of nutrition knowledge to socio-economic differences in food purchasing choices. *Public health nutr.* 2014;17(8):1814-24. Available from: www.ncbi.nlm.nih.gov/pubmed/23920283
118. McLeod ER, Campbell KJ, Hesketh KD. Nutrition knowledge: a mediator between socioeconomic position and diet quality in Australian first-time mothers. *J Am Diet Assoc.* 2011;111(5):696-704. Available from: www.sciencedirect.com/science/article/pii/S0002822311001350
119. Collins LJ, Lacy KE, Campbell KJ, McNaughton SA. The predictors of diet quality among Australian children aged 3.5 years. *J Acad Nutr Diet.* 2016;116(7):1114-26. Available from: [www.andjrnl.org/article/S2212-2672\(15\)01812-2/abstract](http://www.andjrnl.org/article/S2212-2672(15)01812-2/abstract)
120. Pollard CM, Daly A, Moore M, Binns CW. Public say food regulatory policies to improve health in Western Australia are important: population survey results. *Aust NZ J Publ Health.* 2013;37(5):475-82. Available from: <http://onlinelibrary.wiley.com/doi/10.1111/1753-6405.12128/abstract>
121. Vidgen HA, Gallegos D. Defining food literacy and its components. *Appetite.* 2014;76:50-9. Available from: <http://dx.doi.org/10.1016/j.appet.2014.01.010>
122. Soliah LAL, Walter JM, Jones SA. Benefits and barriers to healthful eating: what are the consequences of decreased food preparation ability? *Am J Lifestyle Med.* 2012;6(2):152-8. Available from: <http://ajl.sagepub.com/content/6/2/152.abstract>
123. Department of Agriculture, Australian Government. Australian food statistics 2012–13. Canberra: Commonwealth of Australia, 2014. Available from: www.agriculture.gov.au/SiteCollectionDocuments/ag-food/publications/food-stats/australian-food-statistics-2012-13.pdf

124. The LDCP Food Skills Team. Making something out of nothing: food literacy among youth, young pregnant women and young parents who are at risk for poor health. Ontario, Canada: Public Health Ontario, 2013. Available from: <http://foodsecurecanada.org/resources-news/resources-research/making-something-out-nothing-food-literacy-among-youth-young-0>
125. Department of Health [UK]. 2009 Annual Report of the Chief Medical Officer. London: Department of Health, 2010. Available from: www.sthc.co.uk/Documents/CMO_Report_2009.pdf?bcsi_scan_c221d61a0ea4ff4c=0&bcsi_scan_filename=CMO_Report_2009.pdf
126. Australian Bureau of Statistics. 4727.0.55.001 - Australian Aboriginal and Torres Strait Islander Health Survey: first results, 2012-13. Canberra: Australian Bureau of Statistics, 2013. Available from: www.abs.gov.au/ausstats/abs@.nsf/mf/4727.0.55.001
127. Australian Bureau of Statistics. 4159.0 - General Social Survey, summary results, Australia 2014. Canberra: Australian Bureau of Statistics, 2015. Available from: www.abs.gov.au/ausstats/abs@.nsf/mf/4159.0
128. Garrard J. Taking action on obesogenic environments: building a culture of active connected communities. An options paper prepared by Dr Jan Garrard for the National Preventative Health Taskforce. Canberra: National Preventative Health Taskforce, 2009. Available from: [www.health.gov.au/internet/preventativehealth/publishing.nsf/Content/0FBE203C1C547A82CA257529000231BF/\\$File/commpaper-obes-env-garrard.pdf](http://www.health.gov.au/internet/preventativehealth/publishing.nsf/Content/0FBE203C1C547A82CA257529000231BF/$File/commpaper-obes-env-garrard.pdf)
129. National Heart Foundation of Australia. Blueprint for an active Australia, 2nd edition. Melbourne: National Heart Foundation of Australia, 2014. Available from: <http://heartfoundation.org.au/images/uploads/publications/Blueprint-for-an-active-Australia-second-edition.pdf>
130. National Heart Foundation of Australia. WA's healthy active by design. Perth: Heart Foundation WA, 2013. Available from: www.healthyactivebydesign.com.au/
131. Kent J, Thompson S, Jalaludin B. Healthy built environments: a review of the literature. Sydney: University of NSW, 2011. Available from: <http://apo.org.au/resource/healthy-built-environments-review-literature>
132. Shigematsu R, Sallis JF, Conway TL, Saelens BE, Frank LD, Cain KL, et al. Age differences in the relation of perceived neighborhood environment to walking. Med Sci Sports Exerc. 2009;41(2):314-21. Available from: www.ncbi.nlm.nih.gov/pubmed/19127195
133. Giles-Corti B, Broomhall MH, Knuiaman M, Collins C, Douglas K, Ng K, et al. Increasing walking: how important is distance to attractiveness and size of public open space? Am J Prev Med. 2005;28(2):169-76. Available from: <http://dx.doi.org/10.1016/j.amepre.2004.10.018>
134. Panter JR, Jones AP, van Sluijs EMF. Environmental determinants of active travel in youth: a review and framework for future research. Int J Behav Nutr Phys Act. 2008;5(1):34. Available from: <http://dx.doi.org/10.1186/1479-5868-5-34>
135. Friel S, and the Department of Epidemiology and Public Health, University College London. Health equity in Australia: a policy framework based on action on the social determinants of obesity, alcohol and tobacco. Canberra: Australian National Preventative Health Taskforce, 2009. Available from: [www.health.gov.au/internet/preventativehealth/publishing.nsf/content/0fbe203c1c547a82ca257529000231bf/\\$file/commpaper-hlth-equity-friel.pdf](http://www.health.gov.au/internet/preventativehealth/publishing.nsf/content/0fbe203c1c547a82ca257529000231bf/$file/commpaper-hlth-equity-friel.pdf)
136. Department of Health, Government of Australia. Australia's physical activity and sedentary behaviour guidelines. Canberra: Commonwealth of Australia, 2014. Available from: www.health.gov.au/internet/main/publishing.nsf/content/health-pubhlth-strateg-phys-act-guidelines
137. Powell K, Paluch A, Blair S. Physical activity for health: What kind? How much? How intense? On top of what? Annu Rev Public Health. 2011;32:349-65. Available from: www.ncbi.nlm.nih.gov/pubmed/21128761
138. Powell K, Thompson P, Caspersen C, Kendrick J. Physical activity and the incidence of coronary heart disease. Annu Rev Public Health. 1987;8:253-87. Available from: www.annualreviews.org/doi/abs/10.1146/annurev.pu.08.050187.001345

139. Hands B. How fundamental are fundamental movement skills. *Active and Healthy Magazine*. 2012;19(1):14-7. Available from: http://researchonline.nd.edu.au/cgi/viewcontent.cgi?article=1066&context=health_article
140. World Health Organization. WHO global report on falls prevention in older age. Geneva: World Health Organization, 2007. Available from: www.who.int/ageing/publications/Falls_prevention7March.pdf
141. Brown W, Bauman A, Bull F, Burton N. Development of evidence-based physical activity recommendations for adults (18-64 years). Canberra: Commonwealth of Australia, 2012. Available from: [www.health.gov.au/internet/main/publishing.nsf/Content/health-pubhlth-strateg-phys-act-guidelines/\\$File/DEB-PAR-Adults-18-64years.pdf](http://www.health.gov.au/internet/main/publishing.nsf/Content/health-pubhlth-strateg-phys-act-guidelines/$File/DEB-PAR-Adults-18-64years.pdf)
142. Banks E, Joshy G, Weber MF, Liu B, Grenfell R, Egger S, et al. Tobacco smoking and all-cause mortality in a large Australian cohort study: findings from a mature epidemic with current low smoking prevalence. *BMC Med*. 2015;13(1):38. Available from: <http://dx.doi.org/10.1186/s12916-015-0281-z>
143. Cancer Council Western Australia. The progress of tobacco control in Western Australia: achievements, challenges and hopes for the future. Perth: Cancer Council Western Australia, 2008. Available from: www.cancerwa.asn.au/resources/2010-07-07-Tobacco-Control-Monograph.pdf
144. Intergovernmental Committee on Drugs. National Tobacco Strategy 2012–2018. Canberra: Department of Health and Ageing, 2012. Available from: [www.nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/Content/D4E3727950BDBAE4CA257AE70003730C/\\$File/National%20Tobacco%20Strategy%202012-2018.pdf](http://www.nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/Content/D4E3727950BDBAE4CA257AE70003730C/$File/National%20Tobacco%20Strategy%202012-2018.pdf)
145. Epidemiology Branch, Public Health Division, Western Australia Department of Health 2016. Tobacco-related hospitalisations and deaths. Perth: WA Department of Health, 2016.
146. Epidemiology Branch. Lifestyle risk factor and chronic health condition information for WA children and adults, 2002–15, HWSS. Perth: Department of Health, Western Australia, 2016.
147. Department of Health, Western Australia. Australian Secondary Students' Alcohol and Drug Survey 2014: Western Australian results: tobacco. Perth: Department of Health, Western Australia, 2016. Available from: ww2.health.wa.gov.au/~media/Files/Corporate/general%20documents/Chronic%20disease/WA_Tobacco_Results_Bulletin_2014.ashx
148. Australian Institute of Health and Welfare. AIHW analysis of 2013 National Drug Strategy Household Survey. Canberra: AIHW, 2016.
149. Australian Institute of Health and Welfare. National Drug Strategy Household Survey detailed report 2013. Drug statistics series no. 28. Cat. no. PHE 283. Canberra: Australian Institute of Health and Welfare, 2014. Available from: www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=60129549848
150. Australian Institute of Health and Welfare. The health of Australia's prisoners 2015. Cat. no. PHE 207. Canberra: AIHW, 2015. Available from: www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=60129553682
151. Australian Institute of Health and Welfare. National Drug Strategy Household Survey detailed report 2013. Supplementary tables. Specific population groups tables. Canberra: Australian Institute of Health and Welfare, 2013. Available from: www.aihw.gov.au/publication-detail/?id=%2060129549469&tab=3
152. Australian Institute of Health and Welfare. Perinatal data portal. Smoking. Canberra: Australian Institute of Health and Welfare, 2015. Available from: www.aihw.gov.au/perinatal-data/
153. US Department of Health and Human Services. The health consequences of smoking—50 years of progress: A report of the Surgeon General. Atlanta, GA: US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014. Available from: [www.cdc.gov/tobacco/data_statistics/sgr/50th-anniversary/index.htm?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+TobaccoRelatedSGRs+\(CDC+-+Smoking+and+Tobacco+Use+-+Surgeon+General+Reports\)](http://www.cdc.gov/tobacco/data_statistics/sgr/50th-anniversary/index.htm?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+TobaccoRelatedSGRs+(CDC+-+Smoking+and+Tobacco+Use+-+Surgeon+General+Reports))

154. US Department of Health and Human Services. The health benefits of smoking cessation. A report of the Surgeon General. Atlanta, Georgia [USA]: Centers for Disease Control, Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1990. Available from: www.cdc.gov/tobacco/data_statistics/sgr/pre_1994/index.htm
155. US Department of Health and Human Services. The health consequences of smoking. A report of the Surgeon General. Rockville, MD: US Department of Health and Human Services, Public Health Service, Office of the Surgeon General, 2004. Available from: www.surgeongeneral.gov/library/smokingconsequences/
156. World Health Organization. Framework Convention on Tobacco Control. Geneva: World Health Organization, 2003. Available from: www.who.int/fctc/text_download/en/index.html
157. National Cancer Institute. The role of the media in promoting and reducing tobacco use. Tobacco control monograph no. 19. Bethesda, MD: US Department of Health and Human Services, National Institutes of Health, National Cancer Institute, 2008. Available from: http://cancercontrol.cancer.gov/brp/tcrb/monographs/19/m19_complete.pdf?bcsi_scan_2F83426B613409AB=S8WEo/BOq+mLOblS6ll+fJ0eW7gUAAAADweDeA==&bcsi_scan_filename=m19_complete.pdf
158. US Department of Health and Human Services. The health consequences of involuntary exposure to tobacco smoke: A report of the Surgeon General. Atlanta, GA: US Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006. Available from: www.surgeongeneral.gov/library/secondhandsmoke/report/
159. Jones MR, Barnoya J, Stranges S, Losonczy L, Navas-Acien A. Cardiovascular events following smoke-free legislations: an updated systematic review and meta-analysis. *Current environmental health reports*. *Curr Environ Health Rep*. 2014;1:239-49. doi:10.1007/s40572-014-0020-1. Available from: www.ncbi.nlm.nih.gov/pmc/articles/PMC4198310/
160. Frazer K, Callinan JE, McHugh J, van Baarsel S, Clarke A, Doherty K, et al. Legislative smoking bans for reducing harms from secondhand smoke exposure, smoking prevalence and tobacco consumption. *Cochrane Database of Systematic Reviews*. 2016:Article no. CD005992. Available from: <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD005992.pub3/epdf/abstract>
161. Queensland Health. Review of smokefree laws: discussion paper. Brisbane: Queensland Health, 2007. Available from: <http://pandora.nla.gov.au/pan/136214/20120914-1300/www.health.qld.gov.au/tobaccolaws/documents/33161.pdf>
162. Thomas DP, Davey ME, Briggs VL, Borland R. Talking About The Smokes: summary and key findings. *Med J Aust*. 2015;202(10):3-4. Available from: <http://dx.doi.org/10.5694/mja15.00464>
163. Cancer Council Victoria. Smoking and disadvantage: an evidence brief. Canberra: Australian National Preventive Health Agency, 2013. Available from: [www.health.gov.au/internet/anpha/publishing.nsf/Content/667CA10FF85FD2CDCA257B8C0031F7D3/\\$File/Screen%20res-Smoking&Disad_ev%20brief.pdf](http://www.health.gov.au/internet/anpha/publishing.nsf/Content/667CA10FF85FD2CDCA257B8C0031F7D3/$File/Screen%20res-Smoking&Disad_ev%20brief.pdf)
164. Ipsos-Eureka Social Research Institute. Public health value of disclosed cigarette ingredients and emissions data. Prepared for the Department of Health and Ageing. Ipsos-Eureka Project 4241, January 2009. Sydney: Ipsos-Eureka Social Research Institute, 2009. Available from: <http://webarchive.nla.gov.au/gov/20140801094939/http://www.health.gov.au/internet/main/publishing.nsf/Content/phd-tobacco-phv-cig-ing-em-data>
165. Department of Health WA. Australian Secondary Students' Alcohol and Drug Survey 2014. Unpublished dataset, cited with permission. Perth: Chronic Disease Prevention Directorate, Public Health Division, Department of Health WA, 2016.
166. Tobacco Control Branch. Report on the Tobacco Compliance Survey 2015. Perth: Department of Health, Government of Western Australia, 2016. Available from: ww2.health.wa.gov.au/~media/Files/Corporate/general%20documents/Tobacco/PDF/2015-Tobacco-retailer-compliance-survey-final.ashx

167. NSW Health. Protecting children from tobacco: A NSW Government discussion paper on the next steps to reduce tobacco-related harm, 2008. Sydney: Department of Health, Government of New South Wales, 2008. Available from: www.health.nsw.gov.au/tobacco/Publications/protecting-children.pdf
168. Tobacco Control Branch. Tobacco Retailer Compliance Survey, 2002. Perth: Government of Western Australia, Department of Health, 2002.
169. Tobacco Control Branch. Tobacco Retailer Compliance Survey, 2004. Perth: Government of Western Australia, Department of Health, 2004.
170. Tobacco Control Branch. Tobacco Retailer Compliance Survey, 2011. Perth: Government of Western Australia, Department of Health, 2011.
171. Tobacco Control Branch. Tobacco Retailer Compliance Survey 2013. Perth: Government of Western Australia, Department of Health, 2014.
172. National Health and Medical Research Council. NHMRC CEO statement: electronic cigarettes (e-cigarettes). March 2015. Canberra: National Health and Medical Research Council, 2015. Available from: www.nhmrc.gov.au/guidelines-publications/ds13
173. Conference of the Parties to the WHO Framework Convention on Tobacco Control. Electronic nicotine delivery systems. Report by WHO. 21 July 2014. Geneva: World Health Organization 2014. Available from: http://apps.who.int/gb/fctc/PDF/cop6/FCTC_COP6_10-en.pdf?ua=1
174. Therapeutic Goods Administration. What the TGA regulates. Canberra: Therapeutic Goods Administration, Department of Health; Undated [cited 12 August 2016]; Available from: www.tga.gov.au/what-tga-regulates
175. Mental Health Commission, Western Australia. Better Choices. Better Lives. Western Australian Mental Health, Alcohol and Other Drug Services Plan 2015-2025. Perth: Mental Health Commission, Western Australia, 2015. Available from: www.mentalhealth.wa.gov.au/Libraries/pdf_docs/The_Plan_81215_3.sflb.ashx
176. Bridle R, Harrison A, Goggin L. Australian School Students Alcohol and other Drug Survey. Western Australian results 2014. Perth: Mental Health Commission, Western Australia, 2016. Available from: www.dao.health.wa.gov.au/Informationandresources/Publicationsandresources/Researchandstatistics/Statistics/AustralianSchoolStudentsAlcoholandDrugsurvey.aspx
177. Epidemiology Branch in collaboration with the CRC for Spatial Information. HealthTracks reporting 1.1 (2016). Alcohol drug-caused deaths – comparison between ARIA classifications. Perth: Department of Health, Western Australia, 2016.
178. Epidemiology Branch in collaboration with the CRC for Spatial Information. HealthTracks reporting 1.1 (2016). Alcohol drug-caused hospitalisations – state of Western Australia. Perth: Department of Health, Western Australia, 2016.
179. Alcohol Working Group. Australia: the healthiest country by 2020. Technical report no. 3. Preventing alcohol-related harm in Australia: a window of opportunity. Including addendum for October 2008 to June 2009. Prepared for the National Preventative Health Taskforce by the Alcohol Working Group. Canberra: Commonwealth of Australia, 2009. Available from: [www.health.gov.au/internet/preventativehealth/publishing.nsf/Content/09C94C0F1B9799F5CA2574DD0081E770/\\$File/alcohol-jul09.pdf](http://www.health.gov.au/internet/preventativehealth/publishing.nsf/Content/09C94C0F1B9799F5CA2574DD0081E770/$File/alcohol-jul09.pdf)
180. Stockwell T, Hawks D, Lang E, Rydon P. Unravelling the preventive paradox for acute alcohol problems. Drug Alcohol Rev. 1996 1996/03/01;15(1):7-15. Available from: www.ncbi.nlm.nih.gov/pubmed/16203346
181. National Health and Medical Research Council. Australian guidelines to reduce health risks from drinking alcohol. Canberra: Commonwealth of Australia, 2009. Available from: www.nhmrc.gov.au/guidelines-publications/ds10
182. Steer A, Coase P. Alcohol. Think Again post-campaign evaluation. Prepared for the Drug and Alcohol Office by TNS Social Research. Perth: Drug and Alcohol Office, 2011.

183. National Heart Foundation of Australia. Position statement. Antioxidants in food, drinks and supplements for cardiovascular health. Canberra: National Heart Foundation of Australia, 2010. Available from: <http://heartfoundation.org.au/images/uploads/publications/Antioxidants-Position-Statement.pdf>
184. Winstanley MH, Pratt S, Chapman K, Griffin H, Croager E, Olver I, et al. Alcohol and cancer: a position statement from Cancer Council Australia. *Med J Aust.* 2011;194:479-82. Available from: www.mja.com.au/public/issues/194_09_020511/win10641_fm.html
185. World Health Organization. Prevention of cardiovascular disease. Guidelines for assessment and management of cardiovascular risk. Geneva: World Health Organization, 2007. Available from: www.who.int/cardiovascular_diseases/guidelines/Full%20text.pdf
186. Education and Health Standing Committee of the Legislative Assembly, Parliament of Western Australia. Alcohol restrictions in the Kimberley: a 'window of opportunity' for improved health, education, housing and employment. Report No. 8. Perth: Legislative Assembly, Parliament of Western Australia, 2011. Available from: [www.parliament.wa.gov.au/Parliament/commit.nsf/\(Report+Lookup+by+Com+ID\)/460AD36276677B1B482578560022E6EE/\\$file/35607530.pdf](http://www.parliament.wa.gov.au/Parliament/commit.nsf/(Report+Lookup+by+Com+ID)/460AD36276677B1B482578560022E6EE/$file/35607530.pdf)
187. Department of Racing Gaming and Liquor. Liquor Legislation Amendment Act 2015. Perth: Department of Racing, Gaming and Liquor, Western Australia, 2016. Available from: www.rgl.wa.gov.au/liquor/liquor-legislation-amendment-act
188. National Public Health Partnership. The National Injury Prevention and Safety Promotion Plan: 2004-2014. Canberra: National Public Health Partnership, 2005. Available from: www.health.vic.gov.au/archive/archive2014/nphp/publications/sipp/nipspp.pdf
189. World Health Organization. World report on child injury prevention: summary. Geneva: WHO; 2008; Available from: www.who.int/violence_injury_prevention/child/injury/world_report/en/
190. Tovell A, McKenna K, Bradley C, Pointer S. Hospital separations due to injury and poisoning, Australia 2009–10. Injury research and statistics series no. 69. Cat. no. INJCAT 145. Canberra: AIHW, 2012. Available from: www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=60129542180
191. Ballestas T, Xiao J, McEvoy S, Somerford P. The epidemiology of injury in Western Australia, 2000-2008. Perth: Department of Health, Western Australia, 2011. Available from: www.public.health.wa.gov.au/cproot/4228/2/injury_report_2011.pdf
192. Leeds M, Richards J, Stepan A, Xiao A, Skarin S. WA childhood injury report: patterns of injuries among 0-19 year olds in Western Australia, 2001-2011. Perth: Kidsafe WA, 2015. Available from: www.kidsafewa.com.au/assets/files/KidsafeWACHildhoodInjuryReport.pdf
193. Epidemiology Branch, Department of Health, Western Australia. Leading causes of death 2009-2013 and hospitalisation 2010-2014 by injury in WA. Perth: Department of Health, Western Australia, 2016.
194. Mental Health Commission, Western Australia. Suicide prevention 2020: together we can save lives. Perth: Mental Health Commission, Western Australia, 2015. Available from: www.mentalhealth.wa.gov.au/Libraries/pdf_docs/Suicide_Prevention_2020_Strategy_Final_6.sflb.ashx
195. Office of Road Safety. Towards Zero. Road safety strategy to reduce road trauma in Western Australia 2008-2020. Perth: Government of Western Australia, 2008. Available from: <https://rsc.wa.gov.au/>
196. Road Safety Commission. Western Australia. 2016 summary. Preliminary fatal and critical injuries on Western Australian roads. Perth: Road Safety Commission, Western Australia, 2017. Available from: <https://rsc.wa.gov.au/Road-data/Statistics/Annual-Crash-Statistics>
197. Australian Water Safety Council. Australian Water Safety Strategy 2016-2020. Sydney: Australian Water Safety Council, 2016. Available from: www.watersafety.com.au/Portals/0/AWSC%20Strategy%202016-20/RLS_AWSS2016_Report_2016LR.pdf

198. Department of Child Protection, Western Australia. Western Australia's Family and Domestic Violence Prevention Strategy to 2022. Creating Safer Communities. Perth: Department of Child Protection, Western Australia, Undated. Available from: www.dcp.wa.gov.au/Documents/WA%20FDV%20Prevention%20Strategy%20to%202022.pdf
199. McKetin R, Lubman D, Najman J, Dawe S, Butterworth P, Baker A. Does methamphetamine use increase violent behaviour? Evidence from a prospective longitudinal study. *Addiction*. 2014;109:798-806.
200. Australian Competition and Consumer Commission. National strategy for improving the safety of button battery consumer products 2016-18. Canberra: ACCC, 2016. Available from: www.productsafety.gov.au/publication/national-strategy-for-improving-the-safety-of-button-battery-consumer-products
201. Australian Competition and Consumer Commission. ACCC urges safe riding after quad bike deaths rise this year. ACCC Media Release Number MR267/15. Canberra: ACCC; 18 December 2015 [cited 2 November 2016]; Available from: www.accc.gov.au/media-release/accc-urges-safe-riding-after-quad-bike-deaths-rise-this-year
202. Australian Competition and Consumer Commission. Hoverboards interim ban to remain. Canberra: ACCC; 23 April 2016 [cited 2 November 2016]; Available from: www.productsafety.gov.au/news/hoverboards-interim-ban-to-remain
203. Australian Competition and Consumer Commission. Mobility scooters. Canberra: ACCC; undated [cited 2 November 2016]; Available from: www.productsafety.gov.au/products/transport/personal-transport/mobility-scooters
204. Department of Health. Annual Report 2015-16. Perth: Government of Western Australia, Department of Health, 2016. Available from: ww2.health.wa.gov.au/~media/Files/Corporate/Reports%20and%20publications/Annual%20reports/2016/doh-annual-report-2015-16.ashx
205. Department of Health, Western Australia. Research and evaluation framework and implementation guide. Perth: Chronic Disease Prevention Directorate, Department of Health, Western Australia, 2013. Available from: ww2.health.wa.gov.au/Articles/A_E/Evaluation
206. National Health and Medical Research Council. The virtuous cycle. Working together for health and medical research. Health and medical research strategic review: summary. Canberra: Commonwealth of Australia, 1998.

This document can be made available in alternative formats on request for a person with disability.

Produced by the Chronic Disease Prevention Directorate
© Department of Health 2017

Copyright to this material is vested in the State of Western Australia unless otherwise indicated. Apart from any fair dealing for the purposes of private study, research, criticism or review, as permitted under the provisions of the *Copyright Act 1968*, no part may be reproduced or re-used for any purposes whatsoever without written permission of the State of Western Australia.