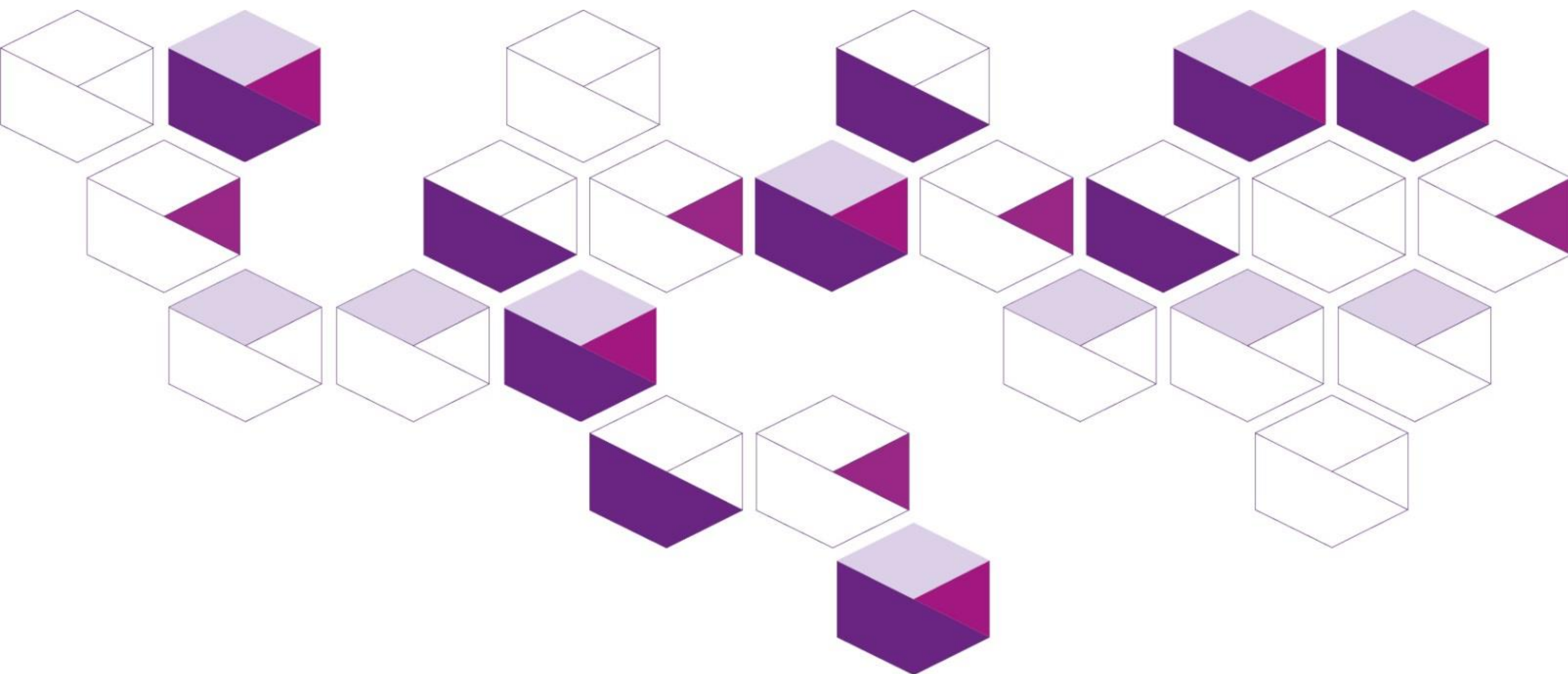
Government of **Western Australia**
South Metropolitan Health Service

Peel region Health and Wellbeing Profile 2019

South Metropolitan Health Service
Health Promotion



Acknowledgment

The South Metropolitan Health Service (SMHS) respectfully acknowledges the Aboriginal Noongar people both past and present, the traditional owners of the land on which we work.

Notes

In this report:

The use of the term 'Aboriginal' within this document refers to Australians of both Aboriginal and Torres Strait Islander people.

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 Western Australia, 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.

Abbreviations

ABS	Australian Bureau of Statistics
AIHW	Australian Institute of Health and Welfare
BMI	Body mass index
CI	Confidence interval
DoH	Department of Health, Western Australia
ERP	Estimated resident population
HWSS	Health and Wellbeing Surveillance System
LGA	Local government area
NHPA	National Health Priority Areas
RSE	Relative standard error
SMHS	South Metropolitan Health Service
SMHS- HP	South Metropolitan Health Service – Health Promotion
WA	Western Australia

About this profile

The purpose of this profile is to provide the Peel* Health and Wellbeing Steering Committee with demographic and health-specific data to support the development of a long-term integrated health and wellbeing model for the Peel region.

The information collected provides evidence to inform the Steering Committee, the public, partners and other stakeholders on a range of public health indicators. This profile is a useful tool for the Committee to:

- plan effectively to improve the health and wellbeing of the community
- identify specific health concerns, high-risk groups and unmet needs
- clarify built, social, economic and natural barriers to health and wellbeing
- focus attention on health priorities
- establish the resources available to the community to respond to priority health needs
- stimulate the ‘buy-in’ of the community and other stakeholders.

The data presented in this profile is divided into the following sections:

- population overview
- lifestyle risk factors
- physiological risk factors
- health conditions
- communicable diseases
- deaths.

***The Peel region is comprised of five Local Governments (Mandurah, Murray, Waroona, Serpentine-Jarrahdale and Boddington)**

Suggested citation

Epidemiology Branch, 2019, Combined LGA Health Profile – Mandurah, Waroona, Serpentine Jarrahdale & Boddington, HWSS 2017, WA Department of Health: Perth.

All information/data provided in this report is accurate and up to date at the time of release. The Epidemiology Branch cannot be held liable for any damages arising from the use of this data.

Background

The information contained in this profile was taken from population data from the Australian Bureau of Statistics (ABS), as well as from the WA Health and Wellbeing Surveillance System (HWSS) from January to December 2017. All other data provided are sourced from within the Epidemiology Branch, Public Health Division, Department of Health, Western Australia.

WA Health and Wellbeing Surveillance System

The HWSS was developed to monitor the health and wellbeing of Western Australians. The HWSS is an ongoing data collection interviewing over 6,000 people each year by a Computer Assisted Telephone Interview (CATI). Households are selected from the White Pages by a stratified random process with over-sampling representative to the population in rural and remote areas. Respondents self-report on a range of questions related to health and wellbeing including chronic health conditions, lifestyle risk factors, protective factors and socio-demographics.

Weighting the data

The Health and Wellbeing Surveillance System is designed to provide information at a population level. In his report information was collected from a random sample of the population and weighted to represent the age and sex distribution of the WA population using the 2016 Estimated Resident Population. The data is also adjusted to compensate for oversampling in the remote and rural areas of WA. Data can be considered representative of the general population but will not be representative of small or specific groups such as Aboriginal people or people from non-English speaking backgrounds.

Variables

Information is provided for adults aged 16 years and over on a range of self-reported variables including: smoking, fruit, vegetable, fast food and risky alcohol consumption, sedentary leisure time, physical activity, high blood pressure, cholesterol, weight, psychological distress, primary health care service attendance and a range of doctor diagnosed health conditions.

Limitation of the data

It is important to be cautious when comparing the HWSS data in this profile to that in the previous profile because:

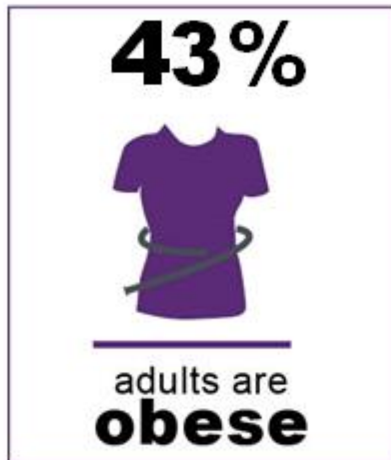
- Changes could be due to a change in the demographic mix of the population, particularly as there have been some minor revisions to boundaries over time.
- As small numbers of people were surveyed in each, the 95 per cent confidence intervals around the results are wide meaning that it is difficult to show any statistically significant changes from the last results.
- There are only two time points to compare so it is difficult to determine whether any increase or decrease is due to a trend or to random variability.

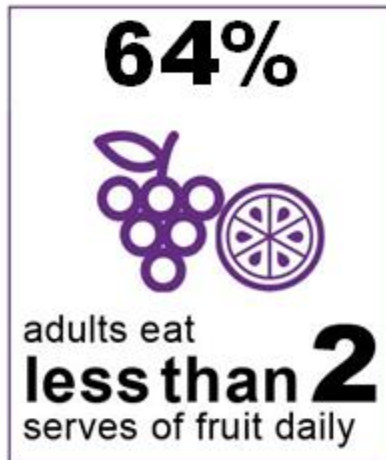
For these reasons, it is important not to overstate any perceived differences between the results in the last profile compared to this one.

Results are also not comparable between LGAs because, for each LGA, the minimum number of years necessary to make up a sufficient sample has been used.

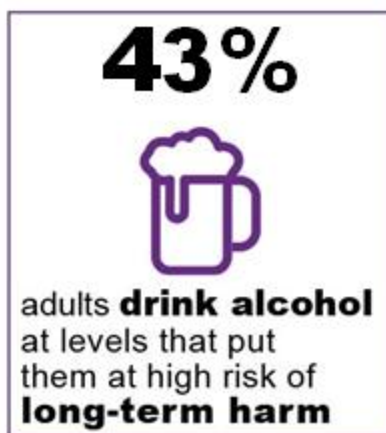
This means that the time period for other LGAs may differ.

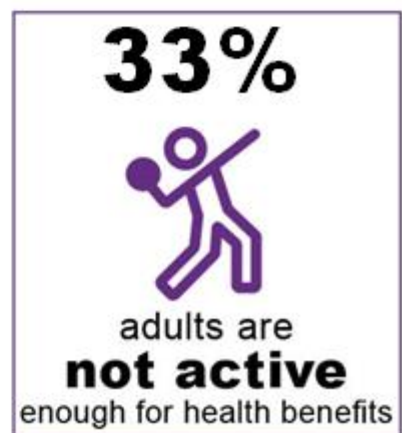
Prevalence of lifestyle and psychosocial behaviours and risk factors for the Peel region





Behaviour and risk factors





Source: Western Australian Health and Wellbeing Surveillance System, WA Department of Health: Peel region self-reported measures of health and wellbeing for adults, 2017.

Note: "Estimates are presented for persons aged 16 years and over except for physical activity where estimates are presented for persons aged 18 years and over."

Population overview

The Peel region comprises five Local Government Areas (LGAs), the City of Mandurah and the Shires of Murray, Waroona, Serpentine Jarrahdale and Boddington.

The estimated resident population of the Peel region was 130,336 in 2016, accounting for approximately five per cent of Western Australia's population. The City of Mandurah is the urban centre and home for 80,813 persons, equivalent to 62 per cent of the region's population. Peel has a rapidly growing population, aided by proximity to metropolitan Perth, infrastructure and lifestyle advantages.

Table 1: Population by LGA in the Peel region; 2006, 2011 and 2016

LGA	2006	2011	2016
Boddington (S)	1,380	2,228	1,844
Mandurah (C)	55,817	69,903	80,813
Murray (S)	11,973	14,150	16,698
Serpentine-Jarrahdale (S)	12,893	17,745	26,833
Waroona (S)	3,448	3,582	4,148
Peel (Total)	**85,511**	**107,608**	**130,336**

Source: ABS (2006, 2011, 2016). Socio-economic Indexes for Areas (SEIFA).

Age profile

Compared to the Western Australia and national averages, Peel has a relatively old population. The largest age bracket is 25 to 49 years with an above average population aged over 65, when compared to Perth. In summary, Peel's population is skewed towards older age categories.

Table 2: Population for the Peel region by age group, 2016

Age group	Peel region LGA		WA
	Number	Percentage (%)	Percentage (%)
0 – 14	25,267	19.4	19.1
15 – 24	15,078	11.6	12.5
25 – 49	39,810	30.5	36.4
50 – 69	32,800	25.2	22.7
70 +	17,366	13.3	9.3
Peel (Total)	**130,336**	**100**	**100**

Source: ABS (2016). Socio-economic Indexes for Areas (SEIFA).

Aboriginal population

Western Australia's Aboriginal population is an average of 3.1%. Mandurah has an Aboriginal population share of 2.1%; Serpentine-Jarrahdale 2.0%; Shire of Murray 2.4%; Shire of Waroona 2.4%; and Shire of Boddington 4.5%. The Aboriginal population profile identifies a young population with strong growth characteristics. The older population figures reflect high mortality rates when compared to the non-Aboriginal population.

The Noongar people of the south west of Western Australia are acknowledged as the original inhabitants of the region who continue to maintain their cultural and heritage at the same time as creating economic and social development opportunities.

Table 3: Aboriginal population of young people for the Peel region by age group, 2016

Age Group	Number	Percentage (%)
10 – 14	337	1.4
15 – 19	301	1.3
20 – 24	221	1.0
Peel (Total)	**859**	**3.7**

Source: ABS (2016), Census of Population and Housing.

Socio-economic disadvantage

Although the overall level of health and wellbeing of Australians is relatively high compared with other countries, there are significant disparities in the health outcomes of different populations within Australia. In particular, people who live in areas with lower socio-economic conditions tend to have worse health than people from other areas. Previous analysis has shown that disadvantaged Australians have higher levels of disease risk factors and lower use of preventative health services than those who experience socio-economic advantage (ABS, 2016).

The socio-economic indexes for areas (SEIFA) scores are made up of four indices which summarise a variety of social and economic variables such as income, educational attainment, employment and number of unskilled workers. SEIFA scores are based on a national average of 1000 and areas with the lowest scores are the most disadvantaged.

Based on the 2016 ABS census data, the SEIFA index scores for LGAs within the Peel region ranged of scores from 945 to 1,040.

Table 4: SEIFA Index of Relative Socio-Economic Disadvantage scores by LGA, Peel region, 2016

LGA	SEIFA score	Usual resident population
Boddington (S)	991	1,844
Mandurah (C)	971	80,813
Murray (S)	962	16,698
Serpentine-Jarrahdale (S)	1,040	26,833
Waroona (S)	945	4,148
Peel (Total)	**982**	**130,336**

Source: SEIFA scores for each census collection (CD) district in the Peel region is available from: Australian Bureau of Statistics. Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia. Canberra: ABS.

Life expectancy

Life expectancy at birth, 2017 (Table 5), for residents in the Peel region is lower than that of the WA State for males and is higher than that of the WA State for females; 81.1 years and 86.7 years respectively.

Table 5: Life expectancy at birth for the Peel region, 2017

Population	Male	Female	Total
Peel region	81.1	86.7	83.7
WA State	81.3	85.8	83.6

Source: Epidemiology Branch, Public and Aboriginal Health Division. Life expectancy of selected Local Government Authorities in South Metropolitan areas of Western Australia, 2013-2015. Department of Health, Western Australia

Health and wellbeing data

Data from the WA HWSS, ABS Census and AEDC are presented as the proportion of the population (or prevalence) reporting a particular attribute. While data from Census (ABS and AEDC) reports point prevalence, representing the proportion of the population who have a condition at the time of the survey, data from the HWSS reports period prevalence, measuring the proportion of the population who have a condition within a specified period of time.

Lifestyle risk factors

The data for lifestyle risk factors shown in Tables 6 and 7 is based on responses to HWSS from 283 adults (aged 16 years and older) within the LGAs of Mandurah, Murray, Waroona, Serpentine-Jarrahdale, Boddington, and 5,927 adults within the state, who were surveyed over the period. This data was weighted to compensate for oversampling in the rural and remote areas of WA and then adjusted to the age and sex distribution of the WA population using the 2016 Estimated Resident Population.

Curbing the rise in overweight and obesity

Being overweight or obese can contribute to the development of chronic conditions, such as cardiovascular disease, type 2 diabetes, osteoarthritis, some cancers and sleep apnoea. As excess body weight increases, so does the risk of chronic disease and mortality. Respondents were asked about their height and weight. Body mass index (BMI) was derived from these figures by dividing weight in kilograms by height in metres squared, after adjustment for errors.

Healthy eating

Eating fruit and vegetables is important for health and protects against the risk of various diseases, including coronary heart disease, type 2 diabetes, stroke and digestive system cancers. It is recommended that Australian adults aged 18 years and over eat two serves of fruit and five serves of vegetables daily.

A more active SMHS

Physical inactivity is associated with several chronic health conditions, including coronary heart disease, stroke and diabetes. Being physically active reduces the risk of developing such conditions and improves general physical and mental wellbeing. The Australian Physical Activity and Sedentary Guidelines for adults aged 18 to 64 years recommend accumulating 150 to 300 minutes of moderate intensity physical activity or 75 to 150 minutes of vigorous intensity physical activity, or an equivalent combination of both moderate and vigorous activities, each week.

Making smoking history

Smoking increases the risk of developing a number of health conditions, including respiratory disease, coronary heart disease, stroke and several cancers including lung and mouth cancers. Respondents were asked about their smoking status (including cigarettes, cigars and pipes). Current smoking status was re-categorised into those who smoke (daily or occasionally), ex-smokers and those who have never smoked regularly. Respondents who had tried cigarettes and had smoked 100 or more cigarettes in their lifetime were classified as ex-smokers, while those who had smoked less than 100 cigarettes were classified as having never smoked.

Reducing harmful levels of alcohol use

Excessive alcohol consumption increases the risk of some health conditions, including coronary heart disease, some cancers, stroke, blood pressure, liver and pancreatic disease. It also increases the risk of accidents and mental illness.

Respondents were asked about their alcohol drinking habits, including how many days a week they usually drink and how many drinks they usually consume. The information was categorised into risk levels based on the 2009 National Health and Medical Research Council guidelines (which categorise any drinking by children and young people under 18 years of age as risky drinking).

Lifetime risky drinking has the potential for alcohol-related harm over a lifetime of drinking. 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.

Single-occasion risky drinking is the risk of harm due to a single occasion of drinking and 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.

For women who are pregnant, planning a pregnancy or breastfeeding not consuming alcohol is the safest option (National Health and Medical Research Council, 2009).

Preventing injury and promoting safer communities

Injuries are often described as unintentional and intentional. Unintentional injuries include most transport, poisoning, falls, drowning, and 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.

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.

Table 6: Prevalence of lifestyle risk factors for adults (aged 16 years and over), Peel region and WA State, 2017

Risk factors	Peel region Prevalence estimate	WA Prevalence estimate
Currently smokes	10.2*	11.6
Eats less than 2 serves of fruit daily	63.5	50.4
Eats less than 5 serves of vegetables daily	90.2	89.3
Risky/high risk drinking for long term harm (a)	43.3	28.2
Risky/high risk drinking for short term harm (b)	14.1*	12.4
Spends 21+ hours per week in sedentary leisure time	32.7	38.6
Insufficient physical activity (c)	32.7	40.0
Eats fast food at least weekly	35.8	35.2
Injury (d)	17.7	22.5

Source: WA Health and Wellbeing Surveillance System, Epidemiology Branch, DoH WA.
Notes:
* Prevalence estimate has a relative standard error between 25 per cent and 50 per cent and should be used with caution.
(a) As a proportion of all adult respondents 16 years and over. Drinks more than 2 standard drinks on any day. Any alcohol consumption by persons 16 or 17 years classified as high risk.
(b) As a proportion of all adult respondents 16 years and over. Drinks more than 4 standard drinks on any day. Any alcohol consumption by persons 16 or 17 years classified as high risk.
(c) Completes less than 150 minutes of physical activity per week (adults 18+ years)
(d) Injury in the last 12 months requiring treatment from a health professional.

Physiological risk factors

Physiological risk factors such as high cholesterol, high blood pressure, and overweight or obesity can be major contributors to ill health and chronic disease. These risk factors are expressed through physical changes in the body and are highly interrelated (AIHW, 2016). They can be managed through a combination of medications, population-based interventions and modification of lifestyle behaviours.

Blood pressure

High blood pressure is a major risk factor for the development of coronary artery disease, stroke and renal failure.

Cholesterol level

Cholesterol is a fatty substance produced by the liver and carried by the blood to the rest of the body. Its natural function is to supply material for cell walls and hormones, but high blood cholesterol can form plaque that clogs the blood vessels supplying blood to the heart and certain other parts of the body. High blood cholesterol can be a major risk factor for coronary heart disease, ischaemic stroke and peripheral vascular disease (AIHW, 2016).

Body weight

Being overweight or obese can contribute to the development of chronic conditions, such as cardiovascular disease, type 2 diabetes, osteoarthritis, some cancers and sleep apnoea. Excess body weight increases the risk of chronic disease and mortality exponentially (Hruby et al 2016). Respondents were asked how tall they are and how much they weigh. A BMI was derived from these figures by dividing weight in kilograms by height in metres squared, after adjustment for errors in the self-reported height and weight. The BMIs were then categorised. Adults with a BMI greater than 25kg/m^2 are considered to be overweight, and those with a BMI greater than 30kg/m^2 to be obese. BMI may not be a suitable measure for athletes who have a muscular build, older people and some ethnic groups.

Obesity

Obesity is the result of many complex systems including food supply, transport, urban design, business, socio-cultural, marketing, communications, education, health, trade, legal, economic, and governance systems (World Obesity Federation, 2015). Rates of overweight and obesity among adults have increased over time, driven by a general increase in body mass index (BMI). Since 2002, there has been a significant increase in the mean BMI for both men and women (Tomlin et al, 2015).

Table 7: Prevalence of physiological risk factors for adults (aged 16 years and over), Peel region and WA State, 2017

Risk factors	Peel region Persons (%)	WA Persons (%)
Current high blood pressure (a)	28.1	16.5
Current high cholesterol (b)	19.7	17.0
Overweight (c)	36.5	37.1
Obese (c)	42.5	32.2

Source: 2017 WA Health and Wellbeing Surveillance System, Epidemiology, Department of Health: Perth.
Notes: (a) Currently have high blood pressure or take medication for high blood pressure. Of those who have had their blood pressure measured.
(b) Currently have high cholesterol or take medication for high cholesterol. Of those who have had their cholesterol measured.
(c) BMI of 25 to < 30 = overweight; BMI of 30+ = obese. Self-reported height and weight have been adjusted for under-reporting (i.e. over-estimating of height and under-estimating of weight).

Health conditions

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 can cause premature death. 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, and oral diseases.

Chronic health conditions are a major concern because they can have a significant impact on a person's life, particularly because of the ageing population. They have a profound impact on an individual's health and wellbeing and place an enormous burden on families, carers and the healthcare system. These conditions develop over a long period of time and can often be modified by changes in lifestyle.

Diabetes mellitus

Diabetes is a condition where the body is unable to maintain normal blood glucose levels and contributes significantly to ill health, disability and premature death in Australia (AIHW, 2015).

Cardiovascular disease

Cardiovascular disease (CVD) is the term used for group of conditions that affect the heart and blood vessels. CVD includes heart, stroke and vascular diseases, coronary heart disease. Stroke and heart failure are the most common and serious types of cardiovascular diseases. Despite declining mortality and hospitalisation rates CVD are a leading underlying cause of death in Australia and remain a major health problem (AIHW, Welfare, 2018).

Cancer (excluding skin cancer)

Cancer is a diverse group of diseases in which some of the body's cells become defective and multiply out of control. These abnormal cells form tumours and invade and damage the tissues around them. They can also spread to other parts of the body and cause further damage. If the spread of tumours is not controlled they can result in death (AIHW, 2017).

Asthma

Asthma is a reversible narrowing of the airways in the lungs. Symptoms include wheezing, coughing, tightness of the chest, breathing difficulties and shortness of breath.

Arthritis and musculoskeletal conditions

Arthritis and osteoporosis are musculoskeletal conditions that can greatly reduce a person's quality of life. Arthritis causes inflammation of the joints, while osteoporosis is a disease where bone density and structural quality deteriorate, leading to an increased risk of fracture.

Table 8: Prevalence of self-reported health conditions for adults (aged 16 years and over), Peel region and WA State, 2017

Condition	Peel Persons (%)	WA Persons (%)
Diabetes (a)	7.7	7.4
Heart disease (a)	9.8	5.9
Cancer (excluding skin cancer) (a)	6.7	5.8
Current asthma	13.5	8.9
Respiratory problem (b)	6.4	2.6
Stroke (a)	3.4	1.7
Arthritis	27.3	20.2
Osteoporosis (a)	7.5	5.2

Source: WA Health and Wellbeing Surveillance System, Epidemiology Branch, DoH WA.
Notes:
* Prevalence estimate has a relative standard error between 25 per cent and 50 per cent and should be used with caution.
(a) Diagnosed by a doctor in the last 12 months.
(b) Respiratory problem diagnosed by a doctor lasting more than six months (e.g. Bronchitis, Emphysema, Chronic Lung Disease; excludes Asthma).

Mental health

Mental health conditions include short-term conditions, such as depression and anxiety, and long-term conditions, such as chronic depression and schizophrenia. Mental health problems are associated with higher rates of death, poorer physical health and increased exposure to health risk factors.

Mental health involves the capacity to interact with people and the environment and refers to the ability to negotiate the social interactions and challenges of life without experiencing undue emotional or behavioural incapacity. Mental health is also referred to as psychosocial health, as it involves aspects of both social and psychological behaviour.

Table 9: Prevalence of psychosocial risk factors for adults (aged 16 years and over), Peel region and WA State, 2017

Risk factors	Peel region	WA
	Persons (%)	Persons (%)
Mental health problem (a)	20.1*	17.2
High/very high psychological distress	15.5*	8.7
Stress related problem (b)	13.7*	10.1
Anxiety (b)	12.6*	9.4
Depression (b)	13.4*	9.5

Source: 2017 WA Health and Wellbeing Surveillance System, Epidemiology, Department of Health: Perth.
Notes:
* Prevalence estimate has a relative standard error between 25 per cent and 50 per cent and should be used with caution.
(a) Diagnosed by a doctor with a stress related problem, depression, anxiety or any other mental health problem in the last 12 months.
(b) Diagnosed by a doctor in the last 12 months.

Psychological distress

Psychological distress may be determined in ways other than having been diagnosed or treated for a mental health condition. The Kessler 10 (K10) is a standardised instrument that measures psychological distress by asking ten questions about levels of anxiety and depressive symptoms experienced in the past four weeks. Each item on the K10 is scored and then summed, resulting in a range of possible scores from 10 to 50. These are then categorised into low, moderate, high and very high levels of psychological distress. Low level psychological distress is regarded as not requiring any intervention, moderate and high levels require self-help, and high and very high levels require professional help.

Communicable diseases

Notifiable diseases

Under the Western Australian Health Act of 1911 and following the recent enactment of the Public Health Act 2016 (Part 9), any medical practitioner or nurse practitioner attending a patient who is known, or suspected, to have a notifiable disease has a legal obligation to report it to the WA Department of Health (DoH). In addition, laboratory notification is mandatory for all notifiable diseases.

Notifiable diseases are entered into the **Western Australian Notifiable Infectious Diseases Database (WANIDD)** and cross-checked for duplication. Some diseases, including suspected meningococcal disease and measles, require the practitioner to notify the DoH urgently by telephone and these are marked on the notification form.

Communicable disease notifications are used to inform public health interventions and enhance the prevention and control of these diseases. The data for notifiable diseases are shown in Table 11.

Table 11: Notification rates (per 100,000) by disease category Peel and WA, 2018

Disease category	Peel	WA
Blood borne diseases	56.2	50.9
Enteric diseases	233.3	326.6
Sexually transmitted diseases	568.0	631.2
Vector borne diseases	27.2	98.3
Vaccine preventable diseases	431.4	600.5
Other diseases	9.0	12.3
Zoonotic diseases	0.7	2.6
Total	**1325.7**	**1722.4**

Source: WA Notifiable Infectious Diseases Database, Public Health Division, Western Australian Department of Health.

Childhood immunisation

Childhood immunisation coverage is the percentage of children in Australia who have had all the vaccines recommended for their age in the National Immunisation Program Schedule. Measuring childhood immunisation coverage lets us keep track of how protected we are against vaccine-preventable diseases. When enough people are vaccinated against a disease to prevent it from spreading, this is known as 'herd immunity'. Herd immunity offers indirect protection to:

- unvaccinated people including children too young to be vaccinated
- people unable to be vaccinated for a range of valid medical reasons
- people for whom vaccination has not been fully effective.

To achieve herd immunity for infectious diseases, coverage needs to be high. For example, measles is highly infectious so it needs a coverage rate of about 92% to 94%. Australia's national aspirational coverage target is 95%. Reaching this aspirational target will give us enough herd immunity to stop the spread of measles and other vaccine-preventable diseases.

Table 12: Immunisation coverage in the Peel region, metro region and WA State, 2018

Age Group	Region	No. of fully vaccinated children	Total children in region	Immunisation coverage (%)
1 year	Peel	1,547	1,696	92.4
	Metro	25,438	27,151	93.7
	WA	31,599	33,801	93.5
2 years	Peel	1,551	1,723	90.0
	Metro	25,351	28,044	90.4
	WA	31,700	35,150	90.2
5 years	Peel	1,652	1,761	93.8
	Metro	25,872	27,755	93.2
	WA	32,611	34,907	93.4

Source: Epidemiology Branch, Public Health Division, Department of Health WA. Generated using data from the Australian Immunisation Register.

Table 13: Immunisation coverage in the Peel region by LGA, 2018

Local Government Area (LGA)	Age Group	Number of Fully Vaccinated Children	Total children in region	Immunisation coverage (%)
Boddington	1 year	30	31	96.77
	2 years	27	31	87.10
	5 years	27	38	97.37
Mandurah	1 year	760	829	91.68
	2 years	745	838	88.90
	5 years	798	855	93.33
Murray	1 year	227	248	91.53
	2 years	227	255	89.02
	5 years	264	282	93.62
Serpentine-Jarrahdale	1 year	511	545	93.76
	2 years	514	552	93.12
	5 years	504	534	94.38
Waroona	1 year	39	43	90.70
	2 years	38	47	80.85
	5 years	49	52	94.23

Source: Epidemiology Branch, Public Health Division, Department of Health WA. Generated using data from the Australian Immunisation Register.

Deaths

Avoidable mortality is defined as deaths before the age of 75 years from conditions which are potentially avoidable given the present health system, available knowledge about social and economic policy impacts, and health behaviours. The data for the top 10 avoidable deaths for the Peel region by condition are shown in Table 14.

Table 14: Top 10 total avoidable deaths for Peel region residents by condition, 2007- 2016

Condition	Number of persons	Age Standardised Rates
Ischaemic heart disease	273	18.0
Suicide and self-inflicted injuries	152	14.3
Colorectal cancer	126	8.2
Transport accidents	105	9.7
Breast cancer	95	6.7
Chronic Obstructive Pulmonary Disease (COPD)	88	5.2
Diabetes	72	4.8
Skin cancer	68	4.6
Cerebrovascular diseases	59	3.8
Accidental poisoning by and exposure to noxious substances	57	5.6

Source: Epidemiology Branch, Public Health Division, Department of Health WA in collaboration with the Cooperative Research Centre for Spatial Information (CRCSI). Generated using data from the Death Registrations, Registry of Births, Deaths and Marriages; Cause of Death, Australian Bureau of Statistics.

Conclusion

The increasing prevalence of preventable chronic health conditions due to lifestyle, physiological and psychosocial risk factors, outlined in this profile present challenges for all tiers of government.

The focus on the prevention of health conditions is expected to continue and will target risk factors such as physical inactivity, unhealthy eating, harmful alcohol use, injury and smoking as well as the promotion of psychological wellbeing.

This profile informs the Steering Committee, the public, partners and other stakeholders about the health and wellbeing of the general population and different groups within the community. It is important to consider the entire community and pay particular attention to those who might be more vulnerable to poor health and wellbeing.

The information gathered in this health and wellbeing profile provides the evidence to support local government to develop local public health plans to protect and promote health.

In developing a local public health plan, this profile provides support to:

- identifying specific health concerns
- clarifying built, social, economic and natural barriers to health and wellbeing
- focusing attention on health priorities
- Identifying high risk groups and unmet needs
- establishing the resources available to the community
- responding to priority health needs
- stimulating the ‘buy-in’ of the community and other stakeholders.

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