



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

Health and Wellbeing of Adults in Western Australia, 2019

Overview and Trend

Copyright

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.

Acknowledgements

Thanks are extended to the people of Western Australia who participate in the Health and Wellbeing Survey. Appreciation is extended to our colleagues and specialists in the field who contribute to the content and integrity of the system.

Suggested citation

Dombrovskaya M and Landrigan T. 2020. Health and Wellbeing of Adults in Western Australia 2019, Overview and Trends. Department of Health, Western Australia.

Table of Contents

EXECUTIVE SUMMARY	xi
1. INTRODUCTION	1
2. METHODOLOGY	2
2.1 Mode of administration and sampling	2
2.2 Weighting data.....	2
2.3 Review of survey collection methodology	3
2.4 Response rates.....	3
3. HOW ESTIMATES ARE REPORTED	5
3.1 Percentage and prevalence.....	5
3.2 Confidence intervals	5
3.3 Using this report.....	6
4. COMPARISONS.....	7
5. DEMOGRAPHICS	7
6. GENERAL HEALTH	11
6.1 Self-reported health status.....	11
6.2 Disability	12
7. CHRONIC HEALTH CONDITIONS	14
7.1 Arthritis and osteoporosis	14
7.2 Heart disease and stroke.....	17
7.3 Cancer and skin cancer	19
7.4 Diabetes	21
7.5 Injury.....	24
7.6 Asthma	28
7.7 Respiratory condition other than asthma	32
7.8 Mental health	34
8. LIFESTYLE BEHAVIOURS	37

8.1 Smoking.....	37
8.2 Alcohol.....	42
8.3 Nutrition	46
8.4 Physical activity and sedentary behaviour	57
8.5 Sleep	64
9. PHYSIOLOGICAL RISK FACTORS	66
9.1 Cholesterol	66
9.2 Blood pressure.....	70
9.3 Body weight	74
10. PSYCHOSOCIAL	81
10.1 Psychological distress	81
10.2 Major life events.....	83
10.3 Feeling a lack of control.....	85
10.4 Suicidal ideation.....	87
10.5 Social support.....	89
11. HEALTH SERVICE UTILISATION.....	91
12. SOCIAL CHARACTERISTICS	96
REFERENCES.....	98

List of tables

Table 1: Response rates for 2019, by month	4
Table 2: Demographic characteristics, 16 years & over, HWSS 2019	8
Table 3: Socioeconomic characteristics, 16 years & over, HWSS 2019.....	9
Table 4: Socioeconomic characteristics, 16 years & over, continued, HWSS 2019 .	10
Table 5: Self-reported health status, 16 years & over, HWSS 2019.....	11
Table 6: Rating of burden due to disability, long-term illness or pain for those with a family member with a disability, long-term illness or pain, 16 years & over, HWSS 2019	13
Table 7: Prevalence of arthritis and osteoporosis, 16 years & over, HWSS 2019....	15
Table 8: Prevalence of arthritis over time, 25 years & over, HWSS 2002-19	16
Table 9: Prevalence of osteoporosis over time, 25 years & over, HWSS 2002-19...	16
Table 10: Prevalence of heart disease and stroke, 16 years & over, HWSS 2019...	17
Table 11: Prevalence of heart disease over time, 25 years & over, HWSS 2002-19	18
Table 12: Prevalence of stroke over time, 25 years & over, HWSS 2002-19	19
Table 13: Prevalence of skin cancer and other cancer, 16 years & over, HWSS 2019	20
Table 14: Prevalence of cancer, excluding skin cancer, over time, 16 years & over, HWSS 2007–19	21
Table 15: Prevalence of diabetes and type 2 diabetes, 16 years & over, HWSS 2019	22
Table 16: Prevalence of diabetes over time, 16 years & over, HWSS 2002–19.....	23
Table 17: Prevalence of injuries and falls in the past 12 months, 16 years & over, HWSS 2019	24
Table 18: Prevalence of injuries in the past 12 months over time, 16 years & over, HWSS 2002–19	25
Table 19: Mean number of injuries in the past 12 months over time, 16 years & over, HWSS 2002-19	27
Table 20: Prevalence of asthma and asthma action plan, 16 years & over, HWSS 2019	29
Table 21: Lifetime (a) prevalence of asthma over time, 16 years & over, HWSS 2002–19	30

Table 22: Point (b) prevalence of asthma over time, 16 years & over, HWSS 2002–19	30
Table 23: Prevalence of asthma interfering with daily activities in the last 4 weeks, 16 years & over, HWSS 2019	31
Table 24: Prevalence of respiratory conditions other than asthma, 16 years & over, HWSS 2019	32
Table 25: Lifetime (a) prevalence of respiratory conditions other than asthma over time, 16 years & over, HWSS 2007-19.....	33
Table 26: Point (b) prevalence of respiratory conditions other than asthma over time, 16 years & over, HWSS 2007-19	33
Table 27: Prevalence of mental health conditions, 16 years & over, HWSS 2019 ...	34
Table 28: Current mental health status, 16 years & over, HWSS 2019.....	35
Table 29: Prevalence of current mental health condition over time, 16 years & over, HWSS 2002-19	36
Table 30: Current smoking status, 16 years & over, HWSS 2019.....	38
Table 31: Lifetime smoking status, 16 years & over, HWSS 2019	39
Table 32: Smoking within the home, 16 years & over, HWSS 2019.....	40
Table 33: Prevalence of current smokers over time, 16 years & over, HWSS 2002-19	41
Table 34: Risk of long-term alcohol related harm, 16 years & over, HWSS 2019	42
Table 35: Risk of short-term alcohol related harm, 16 years & over, HWSS 2019 ...	43
Table 36: Prevalence of high risk alcohol consumption for long-term harm (a) over time, 16 years & over, HWSS 2002-19.....	45
Table 37: Prevalence of high risk alcohol consumption for short-term harm (b) over time, 16 years & over, HWSS 2002-19.....	45
Table 38: NHMRC Australian Dietary Guidelines for fruit and vegetable daily consumption guidelines and HWSS reporting definitions, 16 years & over	47
Table 39: Serves of fruit consumed daily, 16 years & over, HWSS 2019.....	47
Table 40: Serves of vegetables consumed daily, 16 years & over, HWSS 2019	49
Table 41: Prevalence of sufficient daily fruit consumption and vegetable consumption, 16 years & over, HWSS 2019	50
Table 42: Prevalence of sufficient fruit and vegetables consumption over time, 2013 Australian Dietary Guidelines for fruit and vegetable consumption, 16 years & over, HWSS 2002-19	51

Table 43: Mean serves of fruit over time, 16 years & over, HWSS 2002-19	52
Table 44: Mean serves of vegetables over time, 16 years & over, HWSS 2002-19 .	52
Table 45: Type of milk consumed, 16 years & over, HWSS 2019.....	53
Table 46: Ran out of food and could not afford to buy more, 16 years & over, HWSS 2019	54
Table 47: Meals from fast food outlets per week, 16 years & over, HWSS 2019	55
Table 48: Meals from fast food outlets per week over time, 16 years & over, HWSS 2007-19	56
Table 49: Teeth or dentures affect food eaten, 65 years & over, HWSS 2019.....	57
Table 50: Self-reported level of physical activity, 16 years & over, HWSS 2019.....	58
Table 51: How usually spend day, 16 years & over, HWSS 2019.....	59
Table 52: Physical activity level, based on the 2014 Australian Physical Activity and Sedentary Behaviour guidelines, 18 years & over, HWSS 2019	61
Table 53: Proportion of adults completing recommended levels of physical activity over time, 18 years & over, HWSS 2007–19.....	62
Table 54: Mean time (a) spent in physical activity per week over time, 18 years & over, HWSS 2007–19.....	63
Table 55: Time spent watching TV/DVDs or using a computer/smartphone/tablet device per week, 16 years & over, HWSS 2019.....	64
Table 56: Prevalence of adults sleeping the recommended number of hours on a usual night, 16 years & over, HWSS 2019	65
Table 57: Prevalence of adults with diagnosed high cholesterol levels, 16 years & over, HWSS 2019.....	67
Table 58: Prevalence of population by when cholesterol level was last tested, 16 years & over, HWSS 2019	68
Table 59: Lifetime (a) prevalence of population with high cholesterol over time, 25 years & over, HWSS 2003-19	69
Table 60: Point (b) prevalence of population with high cholesterol over time, 25 years & over, HWSS 2003-19	70
Table 61: Prevalence of population with high blood pressure, 16 years & over, HWSS 2019	71
Table 62: Prevalence of population by when blood pressure was last tested, 16 years & over, HWSS 2019	72

Table 63: Lifetime (a) prevalence of population with high blood pressure over time, 25 years & over, HWSS 2003-19	73
Table 64: Point (b) prevalence of population with high blood pressure over time, 25 years & over, HWSS 2003-19	74
Table 65: Prevalence by BMI categories, 16 years & over, HWSS 2019	75
Table 66: Prevalence of normal BMI (not overweight or obese) over time, 16 years & over, HWSS 2002-19	77
Table 67: Prevalence of overweight over time, 16 years & over, HWSS 2002-19....	77
Table 68: Prevalence of obesity over time, 16 years & over, HWSS 2002-19.....	78
Table 69: Mean BMI over time, 16 years & over, HWSS 2002-19	78
Table 70: Prevalence of self-perception of body weight, by Body Mass Index classification, 16 years & over, HWSS 2019	80
Table 71: Prevalence of intentions to change weight, by Body Mass Index classification, 16 years & over, HWSS 2019	80
Table 72: Psychological distress as measured by Kessler Psychological Distress Scale-10, 16 years & over, HWSS 2019	82
Table 73: Prevalence of high and very high psychological distress as measured by the Kessler Psychological Distress Scale-10, 16 years & over, HWSS 2002-19.....	83
Table 74: Prevalence by major life events experienced, 16 years & over, HWSS 2019	84
Table 75: Lack of control over life in general during past four weeks, 16 years & over, HWSS 2019	85
Table 76: Lack of control over personal life during past four weeks, 16 years & over, HWSS 2019	86
Table 77: Lack of control over health during past four weeks, 16 years & over, HWSS 2019	86
Table 78: Often or always perceive a lack of control, 16 years & over, HWSS 2019	87
Table 79: Suicide thoughts over past 12 months, 16 years & over, HWSS 2019.....	88
Table 80: Friends/family suicide attempts over past 12 months, 16 years & over, HWSS 2019	89
Table 81: Number of groups/associations belonging to, 16 years & over, HWSS 2019	90
Table 82: Health service utilisation in the past 12 months, 16 years & over, HWSS 2019	92

Table 83: Mean visits to health services in the past 12 months, 16 years & over, HWSS 2019	93
Table 84: Mean visits to health services in the past 12 months of those who attended the service, 16 years & over, HWSS 2019	94
Table 85: Prevalence of flu vaccinations received, 65 years & over, HWSS 2019 ...	95
Table 86: Private health insurance status, 16 years & over, HWSS 2019.....	96
Table 87: Private health insurance status over time, 16 years & over, HWSS 2008-2019	97

List of figures

Figure 1: Prevalence of disability, long-term illness or pain within the family that puts pressure on them personally or on their family, 16 years & over, HWSS 2019	12
Figure 2: Prevalence of diabetes over time, 16 years & over, HWSS 2002–19	23
Figure 3: Prevalence of injuries in the past 12 months over time, 16 years & over, HWSS 2002–19	26
Figure 4: Prevalence of current smokers over time, 16 years & over, HWSS 2002-19	41
Figure 5: Prevalence of high risk alcohol consumption for long-term and short-term harm, 16 years & over, by geographic area of residence in WA, HWSS 2019.....	44
Figure 6: Prevalence of high risk alcohol consumption for long-term and short-term harm over time, 16 years & over, HWSS 2002-19	46
Figure 7: Prevalence of sufficient fruit and vegetables consumption over time, 2013 Australian Dietary Guidelines for fruit and vegetable consumption, 16 years & over, HWSS 2002-19	51
Figure 8: How usually spend day, 16 years & over, by geographic area of residence in WA, HWSS 2019	60
Figure 9: Proportion of adults completing recommended levels of physical activity, 18 years & over, by geographic area of residence in WA, HWSS 2019.....	62
Figure 10: Proportion of adults by BMI category, 16 years and over, by geographic area of residence in WA, HWSS 2019	76
Figure 11: Mean BMI over time, 16 years & over, HWSS 2002-19	79

EXECUTIVE SUMMARY

The Health and Wellbeing Surveillance System is a continuous data collection initiated in 2002 to monitor the health status of the population of Western Australia. In 2019, 6,361 adults aged 16 years and over were interviewed via computer assisted telephone interviews between January and December, with an average participation rate of approximately 90 per cent. The sample is randomly selected and then weighted to reflect the Western Australian adult population.

This report describes the findings from the 2019 Health and Wellbeing Surveillance System and provides the health sector and the general public with important information about a number of aspects of the health and wellbeing of the Western Australian adult population.

Some key estimates from the report include:

General health:

- Approximately half (56.3%) of adults self-reported their health status as excellent or very good.

Chronic health conditions:

- Approximately one in eight adults (12.4%), and one-third (33.4%) of those aged 65 years and older, have been diagnosed with skin cancer.
- It is estimated that one in five (19.3%) adults have suffered an injury in the past 12 months that required treatment from a health professional, with two in five (40.3%) of those injuries being due to falls.
- One in six (16.5%) adults has been diagnosed with a mental health condition in the past 12 months. The proportion of adults that had been diagnosed with a mental health condition in the past 12 months increased significantly between 2002 and 2019.

Lifestyle and physiological risk factors:

- The proportion of adults who were current smokers has declined significantly between 2002 and 2019.

- Almost one in three (30.1%) people aged 16 to 44 years reported drinking at levels considered to be high risk for long-term harm. Males were twice as likely to report drinking at levels considered high risk for long-term harm compared with females (32.8% compared with 15.4%). Males were also three times more likely than females to report drinking at levels considered high risk for short-term alcohol-related harm (18.6% compared with 5.6%).
- Fewer adults reported consuming meals from fast food outlets in 2019 compared to previous years, while the prevalence of those who never consume meals from fast food outlets in 2019 was significantly higher compared to estimates from 2007 to 2011 and 2013.
- More than one-third (36.8%) of adults spent more than 21 hours per week watching TV/DVDs or using a computer/smartphone/tablet device.
- It is estimated that a little under two-thirds (63.5%) of adults slept the recommended number of hours on a usual night in 2019.
- Approximately one-third of adults (31.2%) were estimated to be obese. The estimated prevalence of obesity was significantly higher in 2019 when compared with estimates from 2002 to 2009 and 2011 for all persons.

Psychosocial:

- About one in thirteen (7.3%) adults had high or very high levels of psychological distress.
- More than two in every five (42.8%) adults did not belong to any groups or associations.
- An estimated 4.8 per cent of adults had seriously thought about ending their own life in the past 12 months.

1. INTRODUCTION

The WA Health and Wellbeing Surveillance System (HWSS) is a continuous data collection system that was developed to monitor the health and wellbeing of Western Australians. On average, 550 people throughout Western Australia (WA) are interviewed each month. The HWSS began in March 2002 and as at December 2019 over 110,000 interviews have been conducted with WA adults.

People are asked questions on a range of health and wellbeing topics, including chronic health conditions, lifestyle risk factors, protective factors and socio-demographics. Information from the survey is used to monitor the health status of all Western Australians, to inform health education programs, to evaluate interventions and programs, to inform health research, to support health policy development, to identify and monitor emerging trends and to support health service planning and development.

The questions included in the HWSS are selected either to provide information about state or national indicators of health and wellbeing, or to provide information about areas of health, lifestyle and demography that are not available elsewhere and are necessary to understand the dynamics of healthy behaviours and outcomes. A copy of the questionnaire is available on the WA Department of Health website:

<https://ww2.health.wa.gov.au/Reports-and-publications/Population-surveys>

This report summarises what WA adults aged 16 years and over said about their health and wellbeing in 2019. The HWSS is designed to examine trends at the population level. Although major socio-demographic group estimates are possible, it is not the purpose of this system. Therefore the information provided in this report is representative of the Western Australian population as a whole but it is unlikely to be reliably representative of small or specific groups within the population, such as Aboriginal people, those who are homeless or those without telephones. People requiring information about Aboriginal health are recommended to consult the most recent results of the National Aboriginal and Torres Strait Islander Social Survey¹, which are more representative of the Aboriginal and Torres Strait Islander population.

2. METHODOLOGY

2.1 Mode of administration and sampling

The HWSS is conducted as a Computer Assisted Telephone Interview (CATI). Households are selected from the 2013 White Pages[®] by a stratified random process with oversampling of the population in rural and remote areas. An approach letter is sent to selected households informing them that their household has been selected to participate. The approach letter explains the purpose of the survey, gives the time within which they can expect to be contacted by the data collection agency and explains that one person from the household will be selected to participate. A specially prepared brochure is included with the letter, which explains more about the HWSS and provides contact numbers for people to call for further information.

All of the information provided in this report is based on self-reported data. Testing has shown that the responses to the questions on the survey are reliable but very occasionally may not be completely accurate. For example, people are likely to underestimate their weight and alcohol consumption^{2, 3} but they do so consistently, so in some cases it is possible to make adjustments for this. Although the estimates for some indicators are likely to be less than the 'true' population value because of this, changes in estimates over time are meaningful and reliable.

2.2 Weighting data

In some sections of this report, unweighted estimates or figures are provided. These estimates and figures are calculated using only the data collected from the sample. However, one of the most important features of a report describing the health and wellbeing of any population is the ability to make comparisons. In order to do this, data must be weighted to the population that is being described, rather than just using data from the sample. In this case, the estimates are weighted to the WA adult population aged 16 years and over.

The HWSS data are weighted to compensate for oversampling in the rural and remote areas of WA and then weighted by age and sex to the most recent Estimated Resident Population (ERP) for the year of the survey. For 2019, this was the 2018 ERP released by the Australian Bureau of Statistics (ABS) in September 2019.⁴

2.3 Review of survey collection methodology

As part of continuous improvement, a review of the HWSS sample frame and mode of collection is currently underway. The review is looking at the following:

- an update of the existing electronic White Pages sample frame
- trialling new sample frame data sources that include mobile phone numbers and email addresses
- providing respondents with options to complete the survey in multiple modes, including via CATI or online
- updates to the weighting methodology to ensure the estimates are still representative of the WA population, regardless of the collection mode.

Details of any methodological updates will be noted in subsequent reports and technical papers.

2.4 Response rates

A very important part of any survey is the response rate attained because low response rates may produce estimates that are unreliable, biased or not representative of the population. Each year since the HWSS began, adjusted response rates of above 80 per cent have been attained. The response rate for children and adults for each month of 2019 is shown in Table 1.

The consistency of the response rates over the year provides an excellent basis for producing reliable estimates. These high response rates are also an indication of the willingness of the people of WA to respond to surveys that they feel are important.

Table 1: Response rates for 2019, by month

Month	Sample Frame	Out of Scope (a)	Eligible Sample	No answer after 10 attempts	Eligible Contacts (b)	Refusals	Interviews	Raw Response Rate	Adjusted Response Rate (c)	Participation Rate (d)
Jan	1901	1056	845	265	580	55	511	60.5	88.1	90.3
Feb	2005	1109	896	282	614	59	538	60.0	87.6	90.1
Mar	2006	1097	909	293	616	43	554	60.9	89.9	92.8
Apr	2835	1509	1326	430	896	67	801	60.4	89.4	92.3
May	3012	1646	1366	470	896	33	822	60.2	91.7	96.1
Jun	2621	1515	1106	366	740	52	666	60.2	90.0	92.8
Jul	2201	1301	900	283	617	42	542	60.2	87.8	94.3
Aug	2400	1374	1026	333	693	54	616	60.0	88.9	91.9
Sep	2457	1480	977	345	632	55	548	56.1	86.7	90.9
Oct	2002	1143	859	275	584	56	517	60.2	88.5	90.2
Nov	1988	1125	863	275	588	50	525	60.8	89.3	91.3
Dec	1104	665	439	140	299	26	267	60.8	89.3	91.1
Total	26532	15020	11512	3757	7755	592	6907	60.0	89.1	92.1

a) Non-operational, business or dedicated fax numbers. All other numbers were considered to be part of the eligible sample, which forms the denominator for the raw response rate.

b) If the telephone is answered, the number is part of the eligible contacts. This forms the denominator of the adjusted response rate.

c) The adjusted response rate is the number of people interviewed divided by the number of eligible contacts (b)

d) The participation rate is the number of people interviewed divided by the number of people interviewed plus the number of refusals.

A full explanation of the methodology can be found in the paper titled, 'WA Health and Wellbeing Surveillance System, Technical Paper Series No 1: Design and Methodology, 2018', which is available on the WA Department of Health website:

<https://ww2.health.wa.gov.au/Reports-and-publications/Population-surveys>

3. HOW ESTIMATES ARE REPORTED

3.1 Percentage and prevalence

The information in this report is presented either as a percentage of the population who have a particular risk factor/demographic characteristic or as the prevalence of the population who have a particular health condition. Prevalence refers to the number or proportion of individuals in a community who exhibit a given condition or characteristic, and is usually expressed as a percentage. Prevalence is distinct from incidence, which is a measure of the number of new cases of a condition or characteristic. Prevalence is concerned with all individuals with a given condition or characteristic regardless of when it began. Incidence on the other hand refers only to new cases of a condition or characteristic during a specified time interval. Surveys generally do not collect or report on incidence of disease.

There are three main types of prevalence that are typically reported. Lifetime prevalence represents the proportion of the population that have ever exhibited a given condition or characteristic. Period prevalence represents the proportion of the population who have exhibited a condition or characteristic within a specified period of time, for example 12 months. Point prevalence represents the proportion of the population who exhibited a condition or characteristic at the time of the survey. In this report, most of the prevalence estimates are presented as period prevalence. In some cases, such as with asthma, lifetime and point prevalence are reported. This is because a person may have had asthma at some point in their life but not have it currently.

3.2 Confidence intervals

Survey results are estimates of 'true' population values and will always contain some error because they are based on samples and not the entire population. Therefore, each table presents both a prevalence figure for a given condition or characteristic as well as a 95 per cent confidence interval for that estimate.

The 95 per cent confidence interval is the range within which the true estimate would lie 95 out of 100 times. The wider the confidence interval is around an estimate, the less precise the estimate is and the more caution that should be applied with using it.

One way to compare two prevalence estimates is to assess whether the difference between them is statistically significant. Statistical significance is a statement about the likelihood of a finding being due to chance. Confidence intervals can be used to determine statistical significance. Overlapping confidence intervals indicate that there is probably no meaningful difference in the estimates being compared. If the confidence intervals do not overlap, then estimates are considered to be significantly different.

Further information on how to determine whether or not a difference is statistically significant can be found on the WA Department of Health website:

<http://ww2.health.wa.gov.au/Reports-and-publications/Population-surveys>

Along with helping to determine statistically significant differences, confidence intervals can also be used as a measure of the level of stability around an estimate. The level of stability around an estimate can also be guided by the relative standard error (RSE). The RSE is a measure of the extent to which the survey estimate is likely to be different from the actual population result.

For example, in this report wide confidence intervals and high RSEs can be present for young age groups (e.g. 16 to 44 years) for certain chronic health conditions, due to the fact that they are less likely to be present and detectable at younger ages. It is also possible to see wide confidence intervals and high RSEs for some variables that have multiple response options (4 or more); for example, self-reported level of physical activity and fast food intake.

Therefore, throughout this report, estimates with RSEs between 25 per cent and 50 per cent have been annotated by an asterisk and should be used with caution. Estimates with RSEs above 50 per cent have been withheld.

3.3 Using this report

This report is intended to be a reference document and therefore contains little interpretative text. The confidence intervals should be used to determine statistical significance if no text has been provided. If more detailed information is required or interpretation needed, please contact the Health Survey Unit, Epidemiology Branch, WA Department of Health at epi@health.wa.gov.au.

4. COMPARISONS

One of the strengths of the HWSS is its ability to show changes over time. Therefore, trends for selected major health conditions and risk factors have been provided. The prevalence or proportion of males and females who reported a selected condition or risk factor of interest was derived for each year from 2002 to 2019. As questions on chronic conditions were not always asked of those aged 16 to 24 years until 2006, chronic condition estimates are presented for those aged 25 years and over to ensure comparability across years. To guarantee any changes in prevalence estimates over time are not the result of changes in the age and sex distribution of the population, all years presented in trend tables have been standardised by weighting them to the 2011 Estimated Resident Population. As a result, 2019 estimates presented in trend tables may differ slightly from 2019 estimates presented in point prevalence tables due to weighting the data to different populations. Small changes in estimates from those presented in previous reports may also occur due to weighting the data to more recent population estimates.

5. DEMOGRAPHICS

In 2019, 6,361 Western Australians aged 16 years and over participated in the HWSS. Of this sample, 96 people identified as Aboriginal or Torres Strait Islander. The demographic characteristics of the adult sample that participated in the 2019 HWSS collection period are shown in Table 2. The table shows the unweighted number in the sample for each group and the weighted population prevalence estimate expressed as a percentage.

Table 2: Demographic characteristics, 16 years & over, HWSS 2019

	Unweighted Sample (n)	Estimated Per Cent (%)
Age		
16 to 24 yrs	125	14.1
25 to 44 yrs	385	36.6
45 to 64 yrs	2,177	31.1
65 yrs & over	3,674	18.2
Gender		
Females	3,858	50.3
Males	2,503	49.7
Australian Born		
Yes	4,317	65.9
No	2,039	34.1
Marital Status		
Married	3,807	56.7
De facto	353	9.9
Widowed	1,039	3.7
Divorced	476	2.8
Separated	137	1.7
Never married	516	25.3
Region of Residence		
Metro	3,184	79.8
Rural	2,515	14.3
Remote	662	5.9
Health Region		
East Metro	1034	28.6
Goldfields	310	2.2
Great Southern	505	3.0
Kimberley	194	1.8
Midwest	397	2.4
North Metro	1069	25.7
Pilbara	158	1.8
South Metro	1081	25.5
South West	1098	5.9
Wheatbelt	515	3.1
ARIA+		
Accessible	1,224	9.1
Highly Accessible	3,039	76.2
Moderately Accessible	1,281	7.7
Remote	572	4.9
Very Remote	245	2.1

The socioeconomic characteristics of the sample and the weighted population estimates are shown in Table 3 and Table 4.

Table 3: Socioeconomic characteristics, 16 years & over, HWSS 2019

	Unweighted Sample (n)	Estimated Per Cent (%)
Current Place of Living		
Rented from govt or public authority	180	1.5
Rented privately	385	11.0
Being paid off by you/your partner	1,120	38.8
Fully owned/outright owner	4,402	45.1
Other	170	3.6
Current Living Arrangement		
Living with parent(s)	160	16.9
Living with other family members	399	8.6
Living with friends	36	1.3 *
Living with a partner and children	891	29.7
Living with a partner but no children	3,075	32.8
Living alone	1,642	8.9
Living in a retirement village	65	0.3
Other living arrangement	62	1.6 *
Household Income		
Under \$20,000	536	5.0
\$20,000 to \$40,000	1,354	14.5
\$40,000 to \$60,000	596	10.5
\$60,000 to \$80,000	415	12.0
\$80,000 to \$100,000	345	9.9
\$100,000 to \$120,000	255	9.4
\$120,000 to \$140,000	210	8.9
\$140,000 to \$160,000	156	7.3
More than \$160,000	405	22.5
Household Spending		
Spend more money than earn/get	235	4.3
Have just enough money to get by	879	14.5
Spend left over money	260	5.0
Save a bit every now and then	1,829	31.2
Save some regularly	1,991	35.5
Save a lot	521	9.4

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

Table 4: Socioeconomic characteristics, 16 years & over, continued, HWSS 2019

	Unweighted Sample (n)	Estimated Per Cent (%)
Highest Level of Education (a)		
Less than Year 10	655	3.2
Year 10 or Year 11	1,253	12.8
Year 12	603	14.6
TAFE/Trade qualification	2,574	40.5
Tertiary degree or equivalent	1,206	28.9
Employment Status		
Self employed	726	12.1
Employed for wages, salary or payment in kind	1,666	49.0
Unemployed for less than one year	58	3.1
Unemployed for more than one year	36	0.7 *
Engaged in home duties	219	5.9
Retired	3,410	18.8
Unable to work	132	1.8
A student	61	8.0
Other	34	0.7 *
Working away (fly-in fly-out) (b)		
Yes	96	9.1
No	1,860	90.9
Shift worker (b)		
Yes	128	10.2
No	1,733	89.8
Receiving a Government Pension		
Yes	2,754	18.5
No	3,551	81.5
Possess a Government Health Care Card		
Yes	3,052	27.9
No	3,230	72.1
Possess Private Health Insurance		
Yes - Hospital only	164	2.3
- Ancillary only	356	5.5
- Both hospital and ancillary	3,920	65.9
No	1,797	26.2

(a) Excludes respondents who are currently still at school.

(b) Adults aged 16 to 64 years.

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

6. GENERAL HEALTH

Self-ratings of health are used internationally, with poor health ratings associated with increased mortality and psychological distress, and lower physical functioning compared with excellent or very good ratings.^{5, 6}

6.1 Self-reported health status

We asked respondents several questions regarding their general health, including their overall health status now and compared with one year ago, and questions regarding family members with disabilities. Table 5 shows Western Australian's self-reported general health status.

Table 5: Self-reported health status, 16 years & over, HWSS 2019

	Excellent		Very good		Good		Fair		Poor	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	20.4	(13.6 - 27.2)	46.9	(38.0 - 55.7)	27.5	(19.8 - 35.2)	3.4 *	(0.5 - 6.3)	NA	(NA - NA)
Females	18.0	(11.5 - 24.6)	40.2	(32.3 - 48.1)	34.8	(26.8 - 42.8)	6.2 *	(2.6 - 9.8)	NA	(NA - NA)
Persons	19.3	(14.5 - 24.0)	43.6	(37.6 - 49.6)	31.1	(25.5 - 36.7)	4.8	(2.5 - 7.1)	1.3 *	(0.2 - 2.4)
45 to 64 yrs										
Males	17.7	(14.1 - 21.3)	34.7	(30.3 - 39.1)	32.8	(28.6 - 37.0)	10.3	(7.6 - 13.0)	4.5	(2.6 - 6.4)
Females	16.6	(14.0 - 19.3)	40.2	(36.6 - 43.8)	28.5	(25.3 - 31.8)	9.7	(7.5 - 11.9)	4.9	(3.2 - 6.7)
Persons	17.2	(14.9 - 19.4)	37.5	(34.6 - 40.3)	30.6	(28.0 - 33.3)	10.0	(8.3 - 11.7)	4.7	(3.4 - 6.0)
65 yrs & over										
Males	11.1	(9.1 - 13.0)	27.0	(24.3 - 29.7)	39.1	(36.1 - 42.1)	15.6	(13.5 - 17.8)	7.2	(5.7 - 8.8)
Females	13.0	(11.3 - 14.7)	30.4	(28.1 - 32.6)	34.8	(32.4 - 37.1)	15.0	(13.3 - 16.8)	6.9	(5.6 - 8.1)
Persons	12.1	(10.8 - 13.4)	28.8	(27.0 - 30.5)	36.8	(34.9 - 38.7)	15.3	(13.9 - 16.7)	7.0	(6.1 - 8.0)
Total										
Males	18.0	(14.3 - 21.7)	39.7	(34.8 - 44.6)	31.1	(26.9 - 35.4)	7.7	(5.9 - 9.5)	3.6	(2.4 - 4.7)
Females	16.6	(13.2 - 20.0)	38.3	(34.2 - 42.4)	32.8	(28.7 - 37.0)	9.0	(7.0 - 10.9)	3.3	(2.3 - 4.2)
Persons	17.3	(14.8 - 19.8)	39.0	(35.8 - 42.2)	32.0	(29.0 - 35.0)	8.3	(7.0 - 9.7)	3.4	(2.7 - 4.1)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

The proportion of people reporting excellent or very good health was significantly lower for those aged 65 years and over than for those aged 16 to 44 years and 45 to 64 years (40.9% compared with 62.8% and 54.6%). Approximately one in eight (11.7%) people reported that their health was fair or poor. The proportion of adults reporting fair or poor health was significantly higher for those aged 65 years and over than for those aged 16 to 44 years and 45 to 64 years (22.3% compared with 6.1% and 14.7%).

6.2 Disability

Disability can be experienced in a number of different ways, including cognitive, physical, sensory and psycho-social difficulties.⁷

We asked respondents whether they or a family member had a disability, long-term illness or pain that puts pressure on them personally or on their family (Figure 1). In 2019, an estimated 20.6 per cent of WA adults were in a family where at least one person had a disability.

Figure 1: Prevalence of disability, long-term illness or pain within the family that puts pressure on them personally or on their family, 16 years & over, HWSS 2019

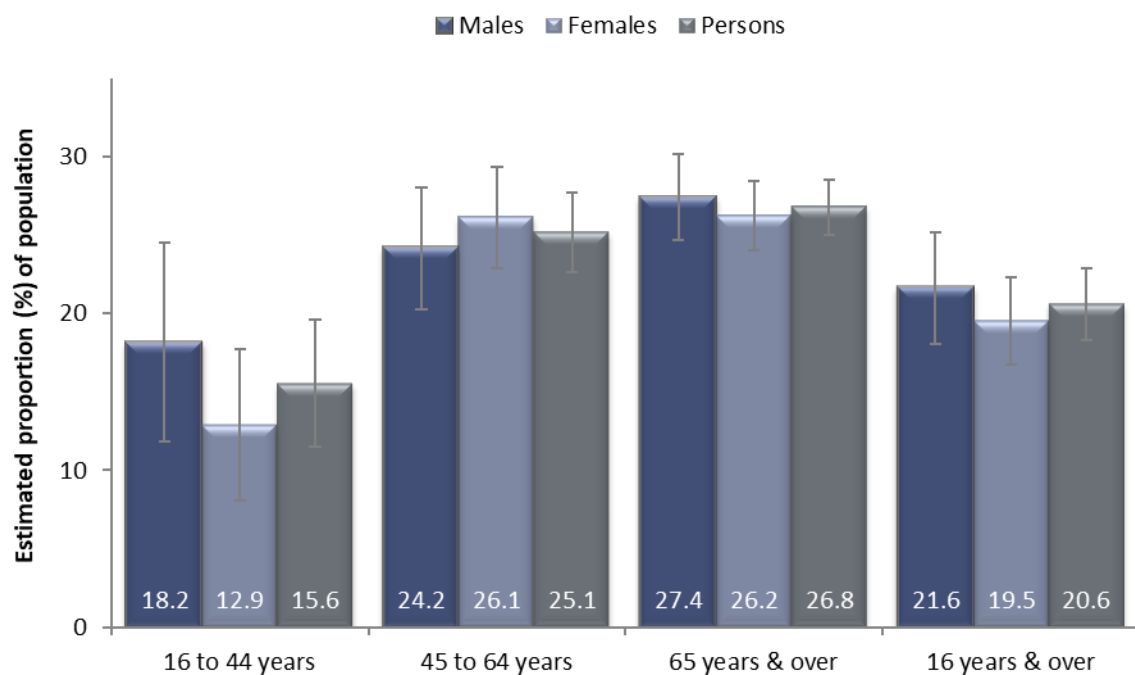


Table 6 shows how people rated the impact of the disability, long-term illness or pain on them personally, or on their family. Of those with a family member with some form of disability, long-term illness or pain, almost one in four (26.7%) reported that this put a big or very big burden on the family.

Table 6: Rating of burden due to disability, long-term illness or pain for those with a family member with a disability, long-term illness or pain, 16 years & over, HWSS 2019

	Not much of a burden at all		A little burden		A fairly big burden		A big burden		A very big burden	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	23.6 *	(7.7 - 39.6)	40.2	(21.1 - 59.3)	16.4 *	(3.9 - 28.8)	NA	(NA - NA)	6.4	(NA - NA)
Females	28.4 *	(8.9 - 47.9)	8.6 *	(0.6 - 16.7)	30.2 *	(13.4 - 47.0)	16.6 *	(1.0 - 32.2)	16.2 *	(2.3 - 30.1)
Persons	25.6	(13.2 - 38.0)	27.2	(14.4 - 40.0)	22.1	(11.8 - 32.3)	14.7 *	(4.1 - 25.3)	10.5 *	(2.9 - 18.0)
45 to 64 yrs										
Males	19.1	(11.6 - 26.5)	25.9	(18.2 - 33.6)	31.7	(22.8 - 40.6)	10.5 *	(5.2 - 15.8)	12.9 *	(6.1 - 19.6)
Females	11.6	(7.0 - 16.2)	25.5	(18.9 - 32.1)	32.1	(25.3 - 38.9)	21.6	(15.3 - 27.8)	9.3	(5.6 - 12.9)
Persons	15.2	(10.8 - 19.5)	25.7	(20.6 - 30.7)	31.9	(26.4 - 37.4)	16.3	(12.1 - 20.5)	11.0	(7.2 - 14.7)
65 yrs & over										
Males	18.0	(13.2 - 22.8)	27.6	(22.3 - 33.0)	26.7	(21.5 - 32.0)	19.4	(14.6 - 24.2)	8.2 *	(5.0 - 11.5)
Females	14.3	(10.9 - 17.6)	28.2	(23.7 - 32.7)	28.4	(23.8 - 33.0)	19.6	(15.6 - 23.7)	9.5	(6.5 - 12.5)
Persons	16.1	(13.2 - 18.9)	27.9	(24.5 - 31.4)	27.6	(24.1 - 31.1)	19.5	(16.4 - 22.6)	8.9	(6.7 - 11.1)
Total										
Males	20.8	(13.4 - 28.3)	32.5	(23.5 - 41.5)	23.9	(17.3 - 30.6)	13.7	(7.1 - 20.2)	9.1 *	(4.7 - 13.4)
Females	17.8	(10.7 - 25.0)	20.6	(16.1 - 25.1)	30.5	(24.2 - 36.9)	19.4	(13.6 - 25.3)	11.6	(6.7 - 16.5)
Persons	19.4	(14.2 - 24.6)	26.8	(21.4 - 32.2)	27.1	(22.4 - 31.8)	16.4	(12.0 - 20.9)	10.3	(7.0 - 13.6)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

7. CHRONIC HEALTH CONDITIONS

Chronic health conditions refer to long-term conditions (lasting more than six months) that can have a significant impact on a person's life. The chronic conditions collected by the HWSS are included due to their health impact and the potential to reduce their burden.⁸ To determine the prevalence of a chronic condition we asked respondents whether or not a doctor had ever diagnosed them with a number of common health conditions.

7.1 Arthritis and osteoporosis

Arthritis and osteoporosis are musculoskeletal conditions that can greatly reduce quality of life. Arthritis is an umbrella term for a wide range of inflammatory conditions affecting the bones, muscles and joints.⁹ Osteoporosis is a disease where bone density and structural quality deteriorate, leading to an increased risk of fracture.¹⁰

The lifetime prevalence of arthritis and osteoporosis in WA adults is shown in Table 7. The prevalence of arthritis and osteoporosis increased significantly with age (arthritis - 16 to 44 years: 4.8%, 45 to 64 years: 22.7%, and 65 years and over: 47.7%, osteoporosis - 45 to 64 years: 5.2%, and 65 years and over: 18.2%), with females significantly more likely than males to report having been diagnosed with arthritis (23.3% compared with 12.8%) and osteoporosis (7.4% compared with 2.5%).

Table 7: Prevalence of arthritis and osteoporosis, 16 years & over, HWSS 2019

	Arthritis		Osteoporosis	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	2.2 *	(0.1 - 4.3)	N/A	(N/A - N/A)
Females	7.4 *	(3.5 - 11.2)	N/A	(N/A - N/A)
Persons	4.8	(2.5 - 7.0)	N/A	(N/A - N/A)
45 to 64 yrs				
Males	17.0	(14.0 - 20.0)	2.8 *	(1.3 - 4.4)
Females	28.4	(25.1 - 31.6)	7.6	(5.7 - 9.5)
Persons	22.7	(20.4 - 25.0)	5.2	(4.0 - 6.4)
65 yrs & over				
Males	37.4	(34.5 - 40.4)	9.3	(7.5 - 11.1)
Females	56.9	(54.4 - 59.3)	26.2	(24.0 - 28.4)
Persons	47.7	(45.8 - 49.6)	18.2	(16.7 - 19.7)
Total				
Males	12.8	(11.0 - 14.7)	2.5	(1.9 - 3.1)
Females	23.3	(20.7 - 26.0)	7.4	(6.4 - 8.3)
Persons	18.1	(16.5 - 19.8)	4.9	(4.4 - 5.5)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

The standardised annual prevalence estimates for arthritis and osteoporosis for adults aged 25 years and over from 2002 to 2019 are shown in Table 8 and Table 9 respectively. The lifetime prevalence of arthritis was significantly lower in 2019 for males and all persons when compared to 2002. There was no difference in the lifetime prevalence of osteoporosis for males, females or all persons when the 2019 estimates are compared with 2002.

Table 8: Prevalence of arthritis over time, 25 years & over, HWSS 2002-19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2002	21.0	(18.9 - 23.1)	28.3	(26.3 - 30.3)	24.6	(23.2 - 26.1)
2003	23.0	(20.9 - 25.0)	28.7	(26.9 - 30.6)	25.9	(24.5 - 27.3)
2004	20.6	(17.5 - 23.6)	31.7	(28.6 - 34.7)	26.1	(24.0 - 28.3)
2005	21.9	(19.8 - 24.0)	28.4	(26.4 - 30.3)	25.1	(23.7 - 26.6)
2006	20.5	(18.3 - 22.6)	28.7	(26.8 - 30.7)	24.6	(23.2 - 26.1)
2007	20.0	(17.5 - 22.5)	28.3	(26.2 - 30.5)	24.2	(22.5 - 25.8)
2008	20.3	(18.0 - 22.6)	28.1	(26.0 - 30.1)	24.2	(22.6 - 25.7)
2009	19.6	(17.8 - 21.5)	27.4	(25.7 - 29.0)	23.5	(22.3 - 24.7)
2010	21.2	(19.1 - 23.4)	26.4	(24.6 - 28.1)	23.8	(22.4 - 25.2)
2011	18.1	(16.2 - 20.1)	27.0	(25.1 - 28.9)	22.6	(21.2 - 24.0)
2012	18.3	(16.1 - 20.5)	25.9	(23.9 - 27.8)	22.1	(20.6 - 23.6)
2013	18.6	(16.2 - 21.0)	26.5	(24.6 - 28.3)	22.5	(21.0 - 24.0)
2014	18.0	(15.8 - 20.2)	26.8	(24.9 - 28.7)	22.4	(21.0 - 23.9)
2015	18.3	(16.1 - 20.5)	25.9	(24.0 - 27.8)	22.1	(20.6 - 23.6)
2016	19.8	(17.0 - 22.6)	26.9	(24.4 - 29.4)	23.4	(21.5 - 25.3)
2017	19.1	(15.7 - 22.5)	27.0	(24.0 - 29.9)	23.1	(20.8 - 25.3)
2018	19.7	(16.5 - 22.9)	27.3	(24.3 - 30.3)	23.5	(21.3 - 25.7)
2019	14.1	(11.9 - 16.2)	25.0	(22.2 - 27.9)	19.6	(17.8 - 21.4)

Table 9: Prevalence of osteoporosis over time, 25 years & over, HWSS 2002-19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2003	2.0	(1.4 - 2.6)	8.2	(7.2 - 9.2)	5.1	(4.5 - 5.7)
2004	2.1	(1.2 - 2.9)	9.9	(8.0 - 11.8)	6.0	(4.9 - 7.0)
2005	2.7	(1.9 - 3.5)	8.8	(7.7 - 10.0)	5.8	(5.1 - 6.5)
2006	2.8	(2.0 - 3.5)	8.5	(7.3 - 9.6)	5.6	(4.9 - 6.3)
2007	2.8	(1.9 - 3.8)	8.2	(7.0 - 9.4)	5.5	(4.8 - 6.3)
2008	2.4	(1.7 - 3.1)	9.2	(8.0 - 10.5)	5.8	(5.1 - 6.5)
2009	2.4	(1.8 - 3.0)	8.6	(7.7 - 9.5)	5.5	(5.0 - 6.1)
2010	2.5	(1.8 - 3.1)	8.9	(8.0 - 9.9)	5.7	(5.1 - 6.3)
2011	2.6	(1.9 - 3.4)	8.1	(7.2 - 9.1)	5.4	(4.8 - 6.0)
2012	2.7	(2.0 - 3.4)	8.6	(7.5 - 9.7)	5.7	(5.0 - 6.3)
2013	2.9	(2.1 - 3.6)	8.1	(7.2 - 9.1)	5.5	(4.9 - 6.1)
2014	2.7	(2.1 - 3.3)	8.4	(7.4 - 9.5)	5.6	(5.0 - 6.2)
2015	2.7	(2.0 - 3.3)	8.4	(7.1 - 9.8)	5.6	(4.8 - 6.3)
2016	3.1	(2.1 - 4.1)	8.2	(7.0 - 9.3)	5.6	(4.9 - 6.4)
2017	2.5	(1.9 - 3.1)	9.1	(6.9 - 11.2)	5.8	(4.7 - 6.9)
2018	3.3	(2.2 - 4.4)	8.5	(6.7 - 10.3)	5.9	(4.8 - 7.0)
2019	2.6	(1.9 - 3.3)	7.9	(6.9 - 9.0)	5.3	(4.6 - 5.9)

7.2 Heart disease and stroke

Cardiovascular diseases (including heart disease and stroke) include a range of conditions that affect the heart or blood vessels¹¹ and are the third-leading cause of burden in WA.¹² Nationally, cardiovascular disease accounts for the highest proportion of health system costs, much of which is preventable.^{13, 14}

We asked respondents if they had ever been diagnosed with heart disease or stroke. Lifetime prevalence for WA adults is shown in Table 10. The prevalence of heart disease and stroke increased significantly with age (heart disease - 45 to 64 years: 5.3%, and 65 years and over: 22.0%, stroke - 45 to 64 years: 1.5%, and 65 years and over: 6.6%),

Table 10: Prevalence of heart disease and stroke, 16 years & over, HWSS 2019

	Heart Disease		Stroke	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	N/A	(N/A - N/A)	N/A	(N/A - N/A)
Females	N/A	(N/A - N/A)	N/A	(N/A - N/A)
Persons	N/A	(N/A - N/A)	N/A	(N/A - N/A)
45 to 64 yrs				
Males	6.2	(4.3 - 8.0)	1.4 *	(0.7 - 2.1)
Females	4.4	(3.0 - 5.9)	1.7 *	(0.8 - 2.5)
Persons	5.3	(4.1 - 6.5)	1.5	(1.0 - 2.1)
65 yrs & over				
Males	28.2	(25.5 - 31.0)	7.7	(6.0 - 9.3)
Females	16.5	(14.7 - 18.4)	5.6	(4.5 - 6.8)
Persons	22.0	(20.4 - 23.7)	6.6	(5.6 - 7.6)
Total				
Males	6.9	(5.9 - 7.9)	2.8	(1.2 - 4.3)
Females	4.6	(3.9 - 5.3)	1.9	(1.3 - 2.5)
Persons	5.7	(5.1 - 6.3)	2.3	(1.5 - 3.2)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

The standardised annual prevalence estimates of heart disease and stroke for adults aged 25 years and older from 2002 to 2019 are shown in Table 11 and Table 12 respectively. There was no significant difference in the lifetime prevalence of heart disease or stroke for males or females or in the case of stroke, for all persons also, when the 2019 estimates are compared with previous years. The lifetime prevalence of heart disease for all persons was significantly lower in 2019 when compared with 2002.

Table 11: Prevalence of heart disease over time, 25 years & over, HWSS 2002-19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2002	9.2	(7.6 - 10.7)	6.5	(5.5 - 7.5)	7.8	(6.9 - 8.7)
2003	9.0	(7.8 - 10.3)	4.5	(3.7 - 5.2)	6.7	(6.0 - 7.5)
2004	9.7	(7.7 - 11.6)	6.4	(5.0 - 7.8)	8.1	(6.9 - 9.2)
2005	8.8	(7.5 - 10.1)	5.9	(5.0 - 6.8)	7.3	(6.5 - 8.1)
2006	9.2	(7.9 - 10.6)	5.4	(4.5 - 6.3)	7.6	(6.5 - 8.1)
2007	9.2	(7.7 - 10.8)	5.9	(4.9 - 7.0)	7.6	(6.6 - 8.5)
2008	7.8	(6.3 - 9.3)	5.1	(4.2 - 5.9)	6.4	(5.6 - 7.3)
2009	8.3	(7.2 - 9.4)	5.5	(4.7 - 6.3)	6.9	(6.2 - 7.6)
2010	9.0	(7.7 - 10.2)	5.1	(4.3 - 5.8)	7.0	(6.3 - 7.7)
2011	8.6	(7.4 - 9.9)	5.7	(4.9 - 6.6)	7.2	(6.4 - 7.9)
2012	8.2	(6.9 - 9.6)	4.8	(4.0 - 5.6)	6.5	(5.8 - 7.3)
2013	8.9	(7.1 - 10.6)	5.2	(4.3 - 6.1)	7.0	(6.0 - 8.0)
2014	8.0	(6.8 - 9.2)	5.1	(4.3 - 5.9)	6.5	(5.8 - 7.3)
2015	7.5	(6.4 - 8.6)	4.8	(4.1 - 5.4)	6.2	(5.5 - 6.8)
2016	7.5	(6.3 - 8.7)	4.9	(3.9 - 5.9)	6.2	(5.4 - 7.0)
2017	7.7	(6.5 - 9.0)	5.0	(4.1 - 5.9)	6.4	(5.6 - 7.1)
2018	7.2	(5.5 - 9.0)	5.4	(4.3 - 6.5)	6.3	(5.3 - 7.3)
2019	7.2	(6.1 - 8.3)	4.9	(4.1 - 5.6)	6.0	(5.4 - 6.7)

Table 12: Prevalence of stroke over time, 25 years & over, HWSS 2002-19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2002	2.3	(1.6 - 3.0)	1.1	(0.7 - 1.5)	1.7	(1.3 - 2.1)
2003	2.5	(1.8 - 3.2)	2.4	(1.8 - 3.0)	2.5	(2.0 - 2.9)
2004	3.1	(2.0 - 4.1)	2.1	(1.4 - 2.8)	2.6	(2.0 - 3.2)
2005	1.9	(1.3 - 2.5)	1.9	(1.4 - 2.4)	1.9	(1.5 - 2.3)
2006	2.6	(1.9 - 3.3)	1.6	(1.1 - 2.0)	2.1	(1.7 - 2.5)
2007	3.0	(2.0 - 3.9)	1.7	(1.2 - 2.2)	2.3	(1.8 - 2.9)
2008	2.7	(2.0 - 3.3)	2.2	(1.7 - 2.8)	2.4	(2.0 - 2.9)
2009	2.6	(2.0 - 3.3)	2.0	(1.5 - 2.5)	2.3	(1.9 - 2.7)
2010	2.4	(1.9 - 3.0)	1.6	(1.2 - 2.1)	2.0	(1.7 - 2.4)
2011	2.5	(1.9 - 3.1)	1.9	(1.4 - 2.4)	2.2	(1.8 - 2.6)
2012	2.3	(1.7 - 3.0)	1.5	(1.1 - 1.9)	1.9	(1.6 - 2.3)
2013	2.0	(1.6 - 2.5)	1.5	(1.0 - 2.1)	1.8	(1.4 - 2.2)
2014	1.8	(1.3 - 2.3)	1.6	(1.2 - 2.1)	1.7	(1.4 - 2.1)
2015	2.2	(1.6 - 2.7)	1.4	(1.1 - 1.7)	1.8	(1.5 - 2.1)
2016	2.5	(1.7 - 3.4)	2.1	(1.3 - 2.9)	2.3	(1.7 - 2.9)
2017	2.1	(1.4 - 2.7)	1.8	(1.0 - 2.6)	1.9	(1.4 - 2.5)
2018	2.0	(1.3 - 2.6)	1.6	(1.0 - 2.2)	1.8	(1.3 - 2.2)
2019	3.0 *	(1.2 - 4.8)	2.1	(1.4 - 2.9)	2.6	(1.6 - 3.5)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

7.3 Cancer and skin cancer

Cancer is the name given to diseases that are characterised by the abnormal proliferation of cells that invade tissue, spread through the body and do not respond to normal growth controls.¹⁵ According to the Cancer Council Australia, approximately 33 per cent of cancer cases could be prevented by modifying lifestyle behaviours.¹⁶

We asked respondents if they had ever been diagnosed with skin cancer or another type of cancer. The prevalence of skin cancer was significantly higher than other cancer (12.4% compared with 5.8%) with the prevalence of each increasing with age (skin cancer - 16 to 44 years: 2.1%, 45 to 64 years: 17.1%, and 65 years and over: 33.4%, other cancer - 45 to 64 years: 6.5%, and 65 years and over: 18.7%) (Table 13).

Table 13: Prevalence of skin cancer and other cancer, 16 years & over, HWSS 2019

	Skin Cancer		Other Cancer	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	2.9 *	(0.7 - 5.2)	N/A	(N/A - N/A)
Females	1.2 *	(0.1 - 2.4)	N/A	(N/A - N/A)
Persons	2.1 *	(0.8 - 3.4)	N/A	(N/A - N/A)
45 to 64 yrs				
Males	18.1	(14.5 - 21.7)	4.4	(2.8 - 6.0)
Females	16.1	(13.4 - 18.8)	8.6	(6.6 - 10.7)
Persons	17.1	(14.9 - 19.3)	6.5	(5.3 - 7.8)
65 yrs & over				
Males	37.6	(34.6 - 40.5)	19.3	(16.9 - 21.7)
Females	29.7	(27.4 - 31.9)	18.2	(16.3 - 20.2)
Persons	33.4	(31.6 - 35.2)	18.7	(17.2 - 20.3)
Total				
Males	13.6	(11.6 - 15.6)	4.8	(4.0 - 5.6)
Females	11.3	(9.8 - 12.7)	6.7	(5.6 - 7.8)
Persons	12.4	(11.2 - 13.7)	5.8	(5.1 - 6.5)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

Due to changes in the way the question on cancer was asked, standardised annual prevalence estimates of other cancer for adults aged 16 years and over can only be compared since 2007 (Table 14). The prevalence of people ever diagnosed with cancer (excluding skin cancer) was similar in 2019 when compared with 2007.

Table 14: Prevalence of cancer, excluding skin cancer, over time, 16 years & over, HWSS 2007–19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2007	4.4	(3.4 - 5.4)	5.6	(3.4 - 5.4)	5.0	(4.3 - 5.7)
2008	4.5	(3.4 - 5.5)	5.3	(3.4 - 5.5)	4.9	(4.2 - 5.5)
2009	4.3	(3.5 - 5.1)	5.6	(3.5 - 5.1)	4.9	(4.4 - 5.5)
2010	4.9	(4.0 - 5.7)	5.8	(4.0 - 5.7)	5.3	(4.7 - 5.9)
2011	4.0	(3.2 - 4.7)	6.4	(3.2 - 4.7)	5.2	(4.6 - 5.8)
2012	4.4	(3.4 - 5.3)	6.6	(3.4 - 5.3)	5.5	(4.7 - 6.3)
2013	5.0	(3.6 - 6.3)	5.6	(3.6 - 6.3)	5.3	(4.5 - 6.1)
2014	4.4	(3.6 - 5.2)	6.0	(3.6 - 5.2)	5.2	(4.6 - 5.8)
2015	5.2	(4.1 - 6.3)	6.4	(4.1 - 6.3)	5.8	(4.9 - 6.6)
2016	4.2	(3.4 - 4.9)	5.2	(3.4 - 4.9)	4.7	(4.1 - 5.3)
2017	5.3	(4.1 - 6.4)	5.9	(4.1 - 6.4)	5.6	(4.8 - 6.3)
2018	5.8	(4.1 - 7.6)	6.6	(4.1 - 7.6)	6.2	(5.1 - 7.3)
2019	4.2	(3.5 - 5.0)	6.3	(3.5 - 5.0)	5.3	(4.6 - 5.9)

7.4 Diabetes

Diabetes is a chronic condition marked by high levels of glucose in the blood.¹⁷ The most common form of diabetes is type 2 diabetes.¹⁷ In Australia, diabetes contributes significantly to ill health, disability and premature death.¹⁷ The prevalence of diabetes (all types) and type 2 diabetes is shown in Table 15. Approximately one in fourteen (7.2%) people reported being diagnosed with diabetes and one in twenty (4.8%) people reported being diagnosed with type 2 diabetes.

The prevalence of diabetes increased significantly with age (all diabetes - 16 to 44 years: 4.3%, 45 to 64 years: 7.0%, and 65 years and over: 15.6%, type 2 diabetes - 16 to 44 years: 0.7%, 45 to 64 years: 5.5%, and 65 years and over: 14.8%).

Table 15: Prevalence of diabetes and type 2 diabetes, 16 years & over, HWSS 2019

	All Diabetes (a)		Type 2 diabetes (b)	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	N/A	(N/A - N/A)	N/A	(N/A - N/A)
Females	5.9 *	(0.2 - 11.6)	N/A	(N/A - N/A)
Persons	4.3 *	(1.1 - 7.5)	0.7 *	(0.1 - 1.3)
45 to 64 yrs				
Males	7.6	(5.5 - 9.6)	5.9	(4.1 - 7.7)
Females	6.5	(4.8 - 8.2)	5.0	(3.5 - 6.6)
Persons	7.0	(5.7 - 8.4)	5.5	(4.3 - 6.7)
65 yrs & over				
Males	19.2	(16.7 - 21.6)	18.1	(15.7 - 20.4)
Females	12.4	(10.9 - 14.0)	11.9	(10.4 - 13.5)
Persons	15.6	(14.2 - 17.0)	14.8	(13.4 - 16.2)
Total				
Males	7.1	(5.3 - 8.9)	5.5	(4.48 - 6.5)
Females	7.3	(4.4 - 10.2)	4.0	(3.3 - 4.76)
Persons	7.2	(5.5 - 8.9)	4.8	(4.1 - 5.4)

(a) Includes type 1 (insulin dependent, juvenile onset), type 2, gestational, other and unknown diabetes.

(b) Type 2 (non-insulin dependent, mature onset) diabetes.

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

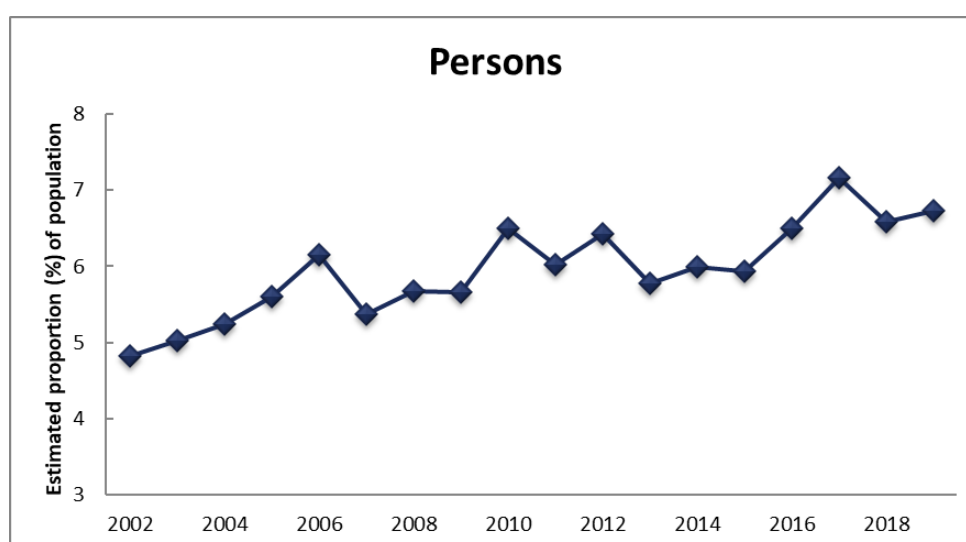
N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

The standardised annual prevalence estimates of all diabetes for adults aged 16 years and over from 2002 to 2019 are shown in Table 16 and Figure 2. Compared to 2002, the prevalence of diabetes in 2019 remained unchanged for males, females and all persons.

Table 16: Prevalence of diabetes over time, 16 years & over, HWSS 2002–19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2002	4.2	(3.4 - 5.1)	5.4	(4.4 - 6.4)	4.8	(4.2 - 5.5)
2003	5.4	(4.5 - 6.3)	4.7	(3.8 - 5.5)	5.0	(4.4 - 5.6)
2004	5.0	(3.7 - 6.3)	5.5	(4.2 - 6.7)	5.2	(4.3 - 6.1)
2005	5.8	(4.8 - 6.8)	5.4	(4.6 - 6.2)	5.6	(4.9 - 6.3)
2006	6.2	(5.0 - 7.3)	6.1	(5.2 - 7.1)	6.2	(5.4 - 6.9)
2007	5.0	(3.7 - 6.3)	5.8	(4.8 - 6.7)	5.4	(4.6 - 6.2)
2008	6.0	(5.0 - 7.1)	5.3	(4.4 - 6.2)	5.7	(5.0 - 6.4)
2009	5.8	(4.9 - 6.7)	5.5	(4.7 - 6.3)	5.7	(5.1 - 6.2)
2010	6.7	(5.7 - 7.8)	6.3	(5.3 - 7.2)	6.5	(5.8 - 7.2)
2011	6.2	(5.0 - 7.4)	5.8	(4.9 - 6.8)	6.0	(5.3 - 6.8)
2012	5.8	(4.8 - 6.8)	7.0	(5.8 - 8.3)	6.4	(5.6 - 7.2)
2013	6.1	(4.8 - 7.3)	5.5	(4.6 - 6.3)	5.8	(5.0 - 6.5)
2014	6.3	(5.0 - 7.5)	5.7	(4.8 - 6.7)	6.0	(5.2 - 6.8)
2015	5.9	(5.0 - 6.9)	5.9	(4.8 - 7.1)	5.9	(5.2 - 6.7)
2016	7.0	(5.3 - 8.6)	6.0	(5.0 - 7.1)	6.5	(5.5 - 7.5)
2017	7.0	(5.3 - 8.8)	7.3	(4.9 - 9.7)	7.2	(5.7 - 8.6)
2018	7.6	(6.0 - 9.3)	5.5	(4.3 - 6.7)	6.6	(5.6 - 7.6)
2019	6.6	(4.8 - 8.3)	6.9	(4.2 - 9.6)	6.7	(5.1 - 8.4)

Figure 2: Prevalence of diabetes over time, 16 years & over, HWSS 2002–19



7.5 Injury

Injury is a major contributor to mortality, morbidity and permanent disability in Australia.⁸ One of the primary contributors to injury burden arises from the management of injuries in older people that result from falls.¹⁸

We asked respondents whether they had any injuries in the past 12 months that required treatment from a health professional, and if so, whether these injuries were due to falls. Prevalence estimates are shown in Table 17. Approximately one in five WA adults (19.3%) reported an injury in the past 12 months that required treatment from a health professional of which around two in five (40.3%) of these injuries was the result of a fall. For the three age groups, there was no significant difference in the proportion of those who reported being injured. Of those who sustained an injury, those aged 65 years and over were more likely than other age groups to indicate that this was due to a fall (59.8% compared with 37.4% and 35.2%).

Table 17: Prevalence of injuries and falls in the past 12 months, 16 years & over, HWSS 2019

	Injury		Injuries due to falls (of those injured) (a)		Injury due to falls, all respondents (b)	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	25.3	(17.1 - 33.6)	34.8 *	(15.4 - 54.2)	8.8 *	(2.8 - 14.8)
Females	15.4	(9.7 - 21.1)	41.7	(21.9 - 61.6)	6.4 *	(2.5 - 10.4)
Persons	20.4	(15.3 - 25.5)	37.4	(23.2 - 51.6)	7.6	(4.0 - 11.3)
45 to 64 yrs						
Males	20.1	(16.4 - 23.8)	36.1	(25.8 - 46.4)	7.2	(4.7 - 9.8)
Females	17.8	(15.1 - 20.6)	34.2	(26.4 - 42.0)	6.1	(4.5 - 7.7)
Persons	18.9	(16.6 - 21.3)	35.2	(28.6 - 41.7)	6.7	(5.2 - 8.2)
65 yrs & over						
Males	18.5	(16.2 - 20.9)	50.4	(43.4 - 57.5)	9.3	(7.6 - 11.1)
Females	15.2	(13.5 - 17.0)	70.0	(64.3 - 75.8)	10.7	(9.2 - 12.2)
Persons	16.8	(15.4 - 18.3)	59.8	(55.1 - 64.5)	10.0	(8.9 - 11.2)
Total						
Males	22.5	(18.1 - 27.0)	37.4	(25.8 - 49.0)	8.4	(5.2 - 11.6)
Females	16.1	(13.1 - 19.1)	44.2	(34.3 - 54.1)	7.1	(5.1 - 9.2)
Persons	19.3	(16.6 - 22.0)	40.3	(32.4 - 48.2)	7.8	(5.9 - 9.7)

(a) As a proportion of respondents reporting an injury.

(b) As a proportion of all respondents.

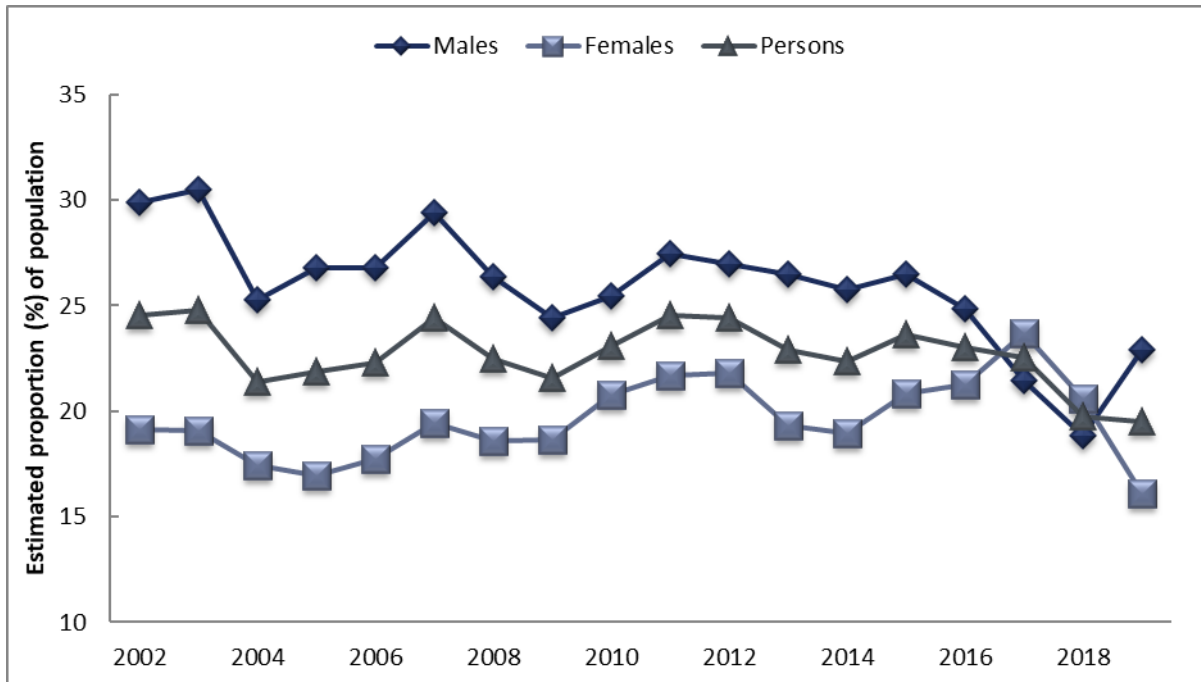
*Prevalence estimate has an RSE between 25% and 50% and should be used with caution.

The standardised annual prevalence of injury requiring treatment by a health professional for adults aged 16 years and over from 2002 to 2019 is shown in Table 18 and Figure 3. There was no significant difference between the proportion of males and females who sustained an injury requiring treatment by a health professional in 2019 compared to 2002. The proportion of all persons sustaining an injury in 2019 was significantly lower than in 2002 (19.5% compared with 24.5%).

Table 18: Prevalence of injuries in the past 12 months over time, 16 years & over, HWSS 2002–19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2002	29.9	(27.5 - 32.3)	19.2	(17.4 - 20.9)	24.5	(23.0 - 26.0)
2003	30.5	(28.3 - 32.7)	19.1	(17.5 - 20.7)	24.8	(23.4 - 26.2)
2004	25.3	(22.2 - 28.4)	17.4	(15.1 - 19.8)	21.4	(19.4 - 23.3)
2005	26.8	(24.4 - 29.2)	16.9	(15.3 - 18.5)	21.9	(20.4 - 23.3)
2006	26.8	(24.0 - 29.5)	17.7	(16.0 - 19.5)	22.3	(20.6 - 23.9)
2007	29.4	(26.1 - 32.7)	19.5	(17.5 - 21.4)	24.4	(22.5 - 26.4)
2008	26.4	(23.5 - 29.2)	18.6	(16.7 - 20.5)	22.5	(20.8 - 24.2)
2009	24.5	(22.3 - 26.6)	18.7	(17.1 - 20.3)	21.6	(20.2 - 22.9)
2010	25.4	(23.0 - 27.9)	20.8	(18.9 - 22.6)	23.1	(21.6 - 24.6)
2011	27.4	(24.5 - 30.4)	21.7	(19.6 - 23.8)	24.6	(22.8 - 26.4)
2012	27.0	(23.6 - 30.4)	21.8	(19.4 - 24.2)	24.4	(22.3 - 26.5)
2013	26.5	(23.3 - 29.8)	19.3	(17.2 - 21.4)	22.9	(21.0 - 24.9)
2014	25.8	(22.8 - 28.8)	19.0	(16.8 - 21.1)	22.4	(20.5 - 24.2)
2015	26.5	(23.2 - 29.8)	20.8	(18.4 - 23.2)	23.7	(21.6 - 25.7)
2016	24.8	(21.1 - 28.6)	21.3	(18.2 - 24.3)	23.0	(20.6 - 25.5)
2017	21.4	(17.3 - 25.6)	23.7	(19.7 - 27.7)	22.6	(19.7 - 25.4)
2018	18.8	(15.1 - 22.5)	20.6	(17.2 - 24.1)	19.7	(17.2 - 22.3)
2019	22.9	(18.3 - 27.5)	16.1	(13.1 - 19.1)	19.5	(16.7 - 22.3)

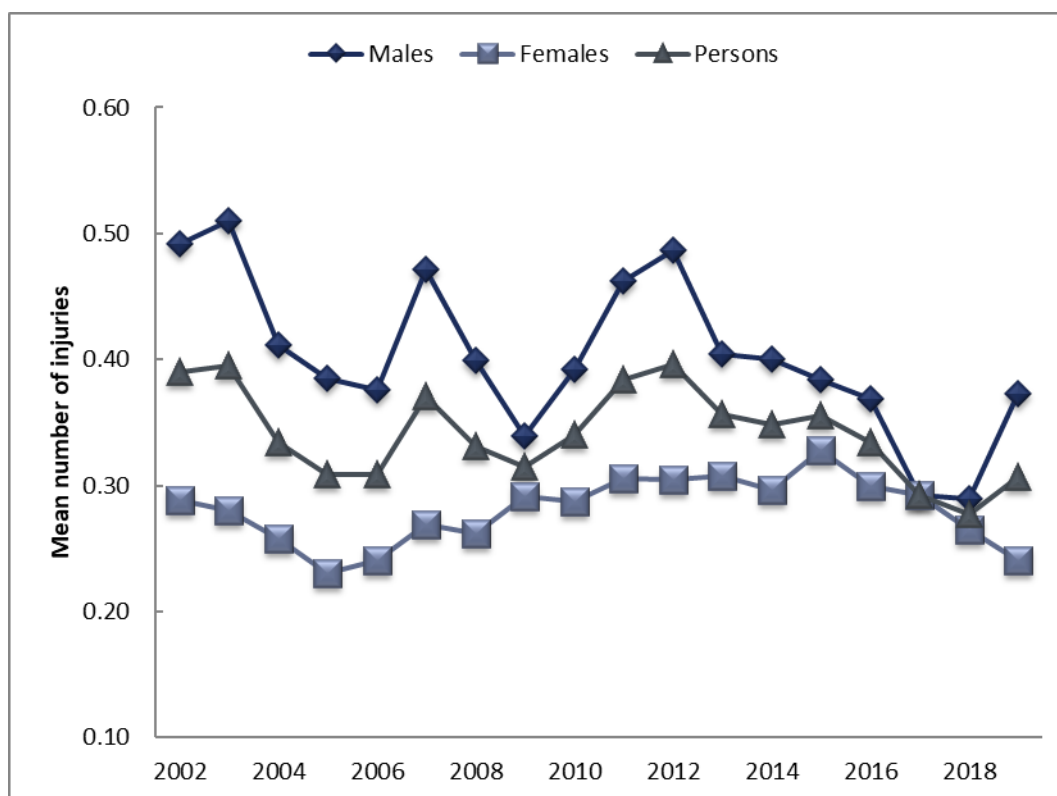
Figure 3: Prevalence of injuries in the past 12 months over time, 16 years & over, HWSS 2002–19



The mean number of injuries over time is shown in Table 19. The estimates in Table 19 are reported to two decimal places given changes over time (even those that are significant) are very small. For all persons, males and females, the mean number of injuries in 2019 was similar to previous years.

Table 19: Mean number of injuries in the past 12 months over time, 16 years & over, HWSS 2002-19

	Males		Females		Persons	
	mean	95% CI	mean	95% CI	mean	95% CI
2002	0.49	(0.43 - 0.55)	0.29	(0.25 - 0.32)	0.39	(0.36 - 0.43)
2003	0.51	(0.46 - 0.56)	0.28	(0.25 - 0.31)	0.40	(0.37 - 0.43)
2004	0.41	(0.34 - 0.48)	0.26	(0.22 - 0.30)	0.33	(0.29 - 0.38)
2005	0.39	(0.34 - 0.43)	0.23	(0.20 - 0.26)	0.31	(0.28 - 0.33)
2006	0.38	(0.33 - 0.43)	0.24	(0.21 - 0.27)	0.31	(0.28 - 0.34)
2007	0.47	(0.34 - 0.60)	0.27	(0.23 - 0.31)	0.37	(0.30 - 0.44)
2008	0.40	(0.35 - 0.45)	0.26	(0.23 - 0.29)	0.33	(0.30 - 0.36)
2009	0.34	(0.30 - 0.38)	0.29	(0.25 - 0.34)	0.32	(0.29 - 0.34)
2010	0.39	(0.34 - 0.45)	0.29	(0.26 - 0.32)	0.34	(0.31 - 0.37)
2011	0.46	(0.38 - 0.55)	0.31	(0.27 - 0.35)	0.38	(0.34 - 0.43)
2012	0.49	(0.39 - 0.59)	0.30	(0.26 - 0.35)	0.40	(0.34 - 0.45)
2013	0.40	(0.34 - 0.46)	0.31	(0.24 - 0.38)	0.36	(0.31 - 0.40)
2014	0.40	(0.33 - 0.47)	0.30	(0.22 - 0.37)	0.35	(0.30 - 0.40)
2015	0.38	(0.33 - 0.44)	0.33	(0.26 - 0.40)	0.36	(0.31 - 0.40)
2016	0.37	(0.29 - 0.45)	0.30	(0.25 - 0.35)	0.33	(0.29 - 0.38)
2017	0.29	(0.24 - 0.35)	0.29	(0.25 - 0.34)	0.29	(0.26 - 0.33)
2018	0.29	(0.21 - 0.37)	0.27	(0.22 - 0.31)	0.28	(0.23 - 0.32)
2019	0.37	(0.27 - 0.47)	0.24	(0.16 - 0.32)	0.31	(0.24 - 0.37)

Figure 4: Mean number of injuries in the past 12 months over time, 16 years & over, HWSS 2002–19

7.6 Asthma

Asthma is a common chronic lung condition defined clinically by the presence of respiratory symptoms (e.g. wheezing, coughing, chest tightness, breathing difficulty) and excessive variation in lung function (i.e. airflow limitation).¹⁹

We asked respondents whether a doctor had ever told them they had asthma and whether they had symptoms or had taken treatment for asthma during the past 12 months. Respondents who reported ever being diagnosed with asthma were also asked if they have an asthma action plan. The lifetime prevalence of asthma, prevalence of asthma over the past 12 months, and proportion of adults who have asthma action plans (for those who reported having asthma) is shown in Table 20. Approximately one in six (15.3%) WA adults had ever had asthma (lifetime asthma), with one in twelve (8.4%) reporting having symptoms or taken treatment for asthma in the past 12 months. The prevalence of having symptoms or treatment for asthma in the past 12 months did not differ for females and males. Of those who had ever

been diagnosed with asthma, around one in four (24.2%) WA adults had an action plan.

Table 20: Prevalence of asthma and asthma action plan, 16 years & over, HWSS 2019

	Lifetime (a)		Period (b)		Action plan (c)	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	22.8	(14.8 - 30.7)	8.1 *	(2.7 - 13.5)	19.3 *	(2.5 - 36.2)
Females	16.3	(10.2 - 22.4)	10.1 *	(4.8 - 15.3)	20.4 *	(5.3 - 35.5)
Persons	19.6	(14.5 - 24.6)	9.1	(5.3 - 12.9)	19.8 *	(8.1 - 31.5)
45 to 64 yrs						
Males	9.8	(7.0 - 12.6)	5.6	(3.3 - 7.9)	23.1 *	(9.5 - 36.7)
Females	14.0	(11.5 - 16.5)	11.0	(8.7 - 13.3)	38.2	(28.9 - 47.5)
Persons	11.9	(10.0 - 13.8)	8.3	(6.7 - 9.9)	32.0	(24.2 - 39.9)
65 yrs & over						
Males	7.1	(5.6 - 8.6)	4.5	(3.3 - 5.7)	22.6	(13.6 - 31.5)
Females	11.2	(9.6 - 12.7)	8.2	(6.9 - 9.6)	38.7	(31.4 - 46.1)
Persons	9.2	(8.1 - 10.3)	6.5	(5.6 - 7.4)	32.9	(27.1 - 38.7)
Total						
Males	16.0	(11.7 - 20.3)	6.7	(3.8 - 9.6)	20.3 *	(7.6 - 32.9)
Females	14.6	(11.4 - 17.7)	10.0	(7.3 - 12.7)	28.4	(19.1 - 37.7)
Persons	15.3	(12.6 - 18.0)	8.4	(6.4 - 10.4)	24.2	(16.3 - 32.1)

(a) People who reported they had been told by a doctor or nurse that they have asthma (ever).

(b) People who reported they have had symptoms of, or treatment for, asthma in the last 12 months.

(c) For respondents with lifetime asthma, written instructions developed with a doctor of what to do if their asthma worsens.

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

The standardised annual prevalence estimates for lifetime and point prevalence asthma for adults aged 16 years and over for 2002 to 2019 are shown in Table 21 and Table 22 respectively. Prevalence estimates for lifetime and point prevalence asthma in 2019 were not significantly different from 2002.

Table 21: Lifetime (a) prevalence of asthma over time, 16 years & over, HWSS 2002–19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2002	16.3	(14.4 - 18.3)	17.7	(16.1 - 19.4)	17.0	(15.7 - 18.3)
2003	15.9	(14.2 - 17.6)	18.5	(16.9 - 20.0)	17.2	(16.0 - 18.4)
2004	17.0	(14.2 - 19.9)	18.8	(16.4 - 21.3)	17.9	(16.1 - 19.8)
2005	14.5	(12.6 - 16.3)	18.1	(16.4 - 19.9)	16.3	(15.0 - 17.6)
2006	16.5	(14.2 - 18.8)	18.3	(16.4 - 20.3)	17.4	(15.9 - 18.9)
2007	15.5	(12.8 - 18.2)	21.4	(19.2 - 23.6)	18.5	(16.7 - 20.2)
2008	16.9	(14.4 - 19.4)	17.9	(16.0 - 19.8)	17.4	(15.8 - 18.9)
2009	14.0	(12.3 - 15.8)	16.3	(14.8 - 17.7)	15.2	(14.0 - 16.3)
2010	14.3	(12.4 - 16.2)	17.3	(15.6 - 19.0)	15.8	(14.5 - 17.1)
2011	13.2	(11.1 - 15.3)	17.2	(15.2 - 19.2)	15.2	(13.8 - 16.7)
2012	13.4	(10.7 - 16.1)	17.3	(15.1 - 19.5)	15.3	(13.6 - 17.1)
2013	11.5	(9.0 - 13.9)	14.9	(13.0 - 16.7)	13.2	(11.6 - 14.7)
2014	13.6	(10.9 - 16.3)	13.5	(11.7 - 15.3)	13.6	(12.0 - 15.2)
2015	13.6	(11.1 - 16.0)	16.5	(14.1 - 18.8)	15.0	(13.3 - 16.7)
2016	15.3	(12.0 - 18.7)	15.7	(13.0 - 18.4)	15.5	(13.4 - 17.7)
2017	11.2	(7.7 - 14.7)	15.6	(12.7 - 18.6)	13.4	(11.1 - 15.7)
2018	14.1	(10.6 - 17.6)	18.2	(14.7 - 21.7)	16.1	(13.7 - 18.6)
2019	16.4	(12.0 - 20.7)	14.6	(11.5 - 17.8)	15.5	(12.8 - 18.2)

(a) People who reported they had been told by a doctor or nurse that they have asthma (ever).

Table 22: Point (b) prevalence of asthma over time, 16 years & over, HWSS 2002–19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2002	8.7	(6.6 - 10.8)	11.4	(9.5 - 13.4)	10.1	(8.7 - 11.5)
2003	8.5	(7.3 - 9.8)	12.4	(11.1 - 13.7)	10.5	(9.5 - 11.4)
2004	9.9	(7.6 - 12.1)	11.7	(9.8 - 13.7)	10.8	(9.3 - 12.3)
2005	8.3	(6.9 - 9.7)	12.6	(11.1 - 14.1)	10.4	(9.4 - 11.5)
2006	9.2	(7.5 - 10.9)	12.2	(10.5 - 13.9)	10.7	(9.5 - 11.9)
2007	6.9	(5.1 - 8.7)	12.4	(10.6 - 14.1)	9.6	(8.4 - 10.9)
2008	8.9	(6.8 - 10.9)	10.6	(9.1 - 12.1)	9.7	(8.5 - 11.0)
2009	7.2	(5.9 - 8.5)	10.1	(8.9 - 11.3)	8.6	(7.8 - 9.5)
2010	6.5	(5.3 - 7.8)	11.0	(9.6 - 12.4)	8.8	(7.8 - 9.7)
2011	7.3	(5.7 - 8.9)	9.8	(8.4 - 11.2)	8.6	(7.5 - 9.6)
2012	5.4	(3.9 - 6.8)	11.0	(9.3 - 12.7)	8.2	(7.0 - 9.3)
2013	6.0	(4.1 - 7.8)	9.0	(7.6 - 10.4)	7.5	(6.3 - 8.6)
2014	7.6	(5.4 - 9.9)	9.1	(7.6 - 10.5)	8.3	(7.0 - 9.7)
2015	7.2	(5.3 - 9.0)	11.4	(9.4 - 13.4)	9.3	(7.9 - 10.7)
2016	6.9	(4.7 - 9.1)	9.9	(7.8 - 12.1)	8.4	(6.8 - 9.9)
2017	7.9	(4.6 - 11.2)	9.9	(7.5 - 12.4)	8.9	(6.9 - 10.9)
2018	5.9	(3.6 - 8.3)	11.2	(8.5 - 14.0)	8.6	(6.8 - 10.4)
2019	6.7	(3.8 - 9.6)	10.0	(7.3 - 12.7)	8.4	(6.4 - 10.4)

(b) People who reported they have had symptoms of, or treatment for, asthma in the last 12 months.

We asked respondents who have ever been diagnosed with asthma how often their asthma interfered with daily activities in the last 4 weeks. There were no significant differences found between age groups and between males and females. The prevalence of asthma interference is shown in Table 23.

Table 23: Prevalence of asthma interfering with daily activities in the last 4 weeks, 16 years & over, HWSS 2019

	All or most of the time		Some of the time		None of the time	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	N/A	(N/A - N/A)	NA	(NA - NA)	91.7	(82.6 - 100.0)
Females	N/A	(N/A - N/A)	17.5 *	(2.1 - 32.9)	75.5	(57.8 - 93.2)
Persons	N/A	(N/A - N/A)	12.1 *	(3.6 - 20.6)	85.0	(75.6 - 94.5)
45 to 64 yrs						
Males	4.9 *	(0.4 - 9.3)	13.1 *	(2.6 - 23.6)	82.0	(70.9 - 93.2)
Females	4.3 *	(0.7 - 7.9)	30.1	(21.0 - 39.2)	65.6	(56.3 - 74.9)
Persons	4.5 *	(1.7 - 7.3)	23.2	(16.1 - 30.2)	72.3	(65.0 - 79.7)
65 yrs & over						
Males	9.8 *	(3.1 - 16.5)	12.6 *	(5.5 - 19.6)	77.6	(68.5 - 86.8)
Females	4.6 *	(1.3 - 7.9)	20.8	(14.9 - 26.7)	74.6	(68.2 - 81.0)
Persons	6.5 *	(3.2 - 9.7)	17.8	(13.3 - 22.4)	75.7	(70.5 - 81.0)
Total						
Males	1.7 *	(0.6 - 2.8)	9.5 *	(2.4 - 16.6)	88.8	(81.6 - 96.1)
Females	NA	(NA - NA)	21.8	(12.6 - 30.9)	72.4	(62.1 - 82.7)
Persons	3.7 *	(0.6 - 6.8)	15.4	(9.5 - 21.3)	80.9	(74.4 - 87.5)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

7.7 Respiratory condition other than asthma

We asked respondents if a doctor had told them they had a respiratory problem other than asthma, such as chronic bronchitis, emphysema, or chronic lung disease that lasted six months or more.

The prevalence of respiratory conditions in WA adults is shown in Table 24. The lifetime and point prevalence of a respiratory problem other than asthma increased significantly with age (lifetime respiratory condition – 45 to 64 years: 3.5%, 65 years and over: 8.5%, point respiratory condition – 45 to 64 years: 2.5%, 65 years and over: 7.3%).

Table 24: Prevalence of respiratory conditions other than asthma, 16 years & over, HWSS 2019

	Lifetime (a)		Point (b)	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	N/A	(N/A- N/A)	N/A	(N/A - N/A)
Females	N/A	(N/A- N/A)	N/A	(N/A - N/A)
Persons	N/A	(N/A- N/A)	N/A	(N/A - N/A)
45 to 64 yrs				
Males	2.8 *	(1.3 - 4.3)	1.7 *	(0.7 - 2.8)
Females	4.2	(2.8 - 5.5)	3.2	(1.9 - 4.5)
Persons	3.5	(2.5 - 4.5)	2.5	(1.6 - 3.3)
65 yrs & over				
Males	9.3	(7.5 - 11.1)	7.8	(6.2 - 9.5)
Females	7.8	(6.4 - 9.2)	6.9	(5.6 - 8.2)
Persons	8.5	(7.4 - 9.6)	7.3	(6.3 - 8.4)
Total				
Males	2.7	(2.0 - 3.4)	1.9	(1.4 - 2.4)
Females	3.1	(2.3 - 3.8)	2.3	(1.8 - 2.8)
Persons	2.9	(2.4 - 3.4)	2.1	(1.8 - 2.5)

(a) People who reported they were told by a doctor or nurse that they have a respiratory condition other than asthma that lasted 6 months or more, such as bronchitis, emphysema or chronic lung disease (ever).

(b) People who reported they had a respiratory condition other than asthma that lasted 6 months or more that is still present.

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

Table 25 and Table 26 show the standardised annual lifetime and point prevalence estimates respectively of a respiratory condition other than asthma, for adults aged 16 years and over for 2007 to 2019. Due to changes in the way the question was

asked, comparisons can only be made from 2007. The lifetime and point prevalence of respiratory conditions remained unchanged from 2007 to 2019.

Table 25: Lifetime (a) prevalence of respiratory conditions other than asthma over time, 16 years & over, HWSS 2007-19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2007	3.6	(2.7 - 4.6)	3.2	(2.4 - 4.0)	3.4	(2.8 - 4.0)
2008	3.7	(2.7 - 4.7)	3.4	(2.6 - 4.2)	3.6	(2.9 - 4.2)
2009	3.9	(3.1 - 4.7)	3.0	(2.4 - 3.6)	3.4	(2.9 - 3.9)
2010	2.6	(2.0 - 3.3)	3.3	(2.6 - 3.9)	3.0	(2.5 - 3.4)
2011	3.8	(2.8 - 4.7)	3.3	(2.6 - 4.0)	3.5	(2.9 - 4.1)
2012	2.5	(1.8 - 3.2)	2.6	(1.9 - 3.3)	2.5	(2.0 - 3.1)
2013	3.9	(2.3 - 5.5)	2.6	(2.1 - 3.2)	3.3	(2.4 - 4.1)
2014	2.8	(2.0 - 3.6)	3.2	(2.4 - 4.0)	3.0	(2.5 - 3.6)
2015	3.2	(2.0 - 4.4)	3.1	(2.2 - 4.1)	3.2	(2.4 - 3.9)
2016	2.5	(1.5 - 3.5)	3.3	(2.5 - 4.1)	2.9	(2.3 - 3.6)
2017	2.8	(1.7 - 3.9)	2.2	(1.6 - 2.9)	2.5	(1.9 - 3.2)
2018	2.7 *	(1.1 - 4.2)	2.3	(1.7 - 3.0)	2.5	(1.6 - 3.3)
2019	2.4	(1.7 - 3.0)	2.9	(2.2 - 3.6)	2.6	(2.1 - 3.1)

(a) People who reported they were told by a doctor or nurse that they have a respiratory condition other than asthma that lasted 6 months or more, such as bronchitis, emphysema or chronic lung disease (ever).

* Prevalence estimate has an RSE between 25% and 50% and should be used with caution.

Table 26: Point (b) prevalence of respiratory conditions other than asthma over time, 16 years & over, HWSS 2007-19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2007	2.6	(1.9 - 3.3)	1.8	(1.3 - 2.4)	2.2	(1.8 - 2.7)
2008	2.4	(1.6 - 3.2)	2.2	(1.6 - 2.8)	2.3	(1.8 - 2.8)
2009	2.5	(1.9 - 3.1)	1.7	(1.3 - 2.0)	2.1	(1.7 - 2.4)
2010	1.7	(1.2 - 2.1)	1.9	(1.5 - 2.3)	1.8	(1.5 - 2.1)
2011	2.7	(1.9 - 3.5)	1.9	(1.5 - 2.4)	2.3	(1.9 - 2.8)
2012	1.9	(1.2 - 2.5)	1.6	(1.1 - 2.0)	1.7	(1.3 - 2.1)
2013	2.6	(1.3 - 3.8)	1.6	(1.3 - 2.0)	2.1	(1.4 - 2.8)
2014	1.8	(1.3 - 2.2)	1.8	(1.4 - 2.3)	1.8	(1.5 - 2.1)
2015	2.3	(1.2 - 3.4)	1.8	(1.4 - 2.2)	2.0	(1.4 - 2.7)
2016	1.7	(0.8 - 2.6)	2.3	(1.7 - 2.9)	2.0	(1.5 - 2.6)
2017	2.3	(1.3 - 3.4)	1.5	(1.1 - 1.9)	1.9	(1.4 - 2.5)
2018	2.2 *	(0.7 - 3.8)	1.8	(1.3 - 2.2)	2.0	(1.2 - 2.8)
2019	1.6	(1.2 - 2.1)	2.2	(1.7 - 2.7)	1.9	(1.6 - 2.2)

(b) People who reported they had a respiratory condition other than asthma that lasted 6 months or more that is still present.

* Prevalence estimate has an RSE between 25% and 50% and should be used with caution.

7.8 Mental health

Mental health problems encompass a wide range of conditions that vary in severity and duration. People with a mental health problem are at an increased risk of experiencing other disorders including physical disorders and diabetes.²⁰

We asked respondents if a doctor had diagnosed them with a common mental health conditions during the past 12 months. Table 27 shows the population prevalence of each condition. The prevalence of anxiety, depression and stress-related problems doctor diagnosed within the past 12 months was significantly lower in those aged 65 years and over compared to other age groups, apart from prevalence of depression in those aged 65 years and over compared to those aged 45 to 64 years, where there was no difference. Overall, females and males did not significantly differ.

Table 27: Prevalence of mental health conditions, 16 years & over, HWSS 2019

	Anxiety		Depression		Stress-related problem		Other mental health condition	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	10.0 *	(4.7 - 15.4)	8.8 *	(3.8 - 13.9)	11.8	(6.1 - 17.4)	NA	(NA - NA)
Females	17.4	(10.8 - 24.0)	12.0	(7.0 - 16.9)	15.0	(9.3 - 20.7)	6.7 *	(2.8 - 10.6)
Persons	13.7	(9.4 - 18.0)	10.4	(6.8 - 13.9)	13.4	(9.3 - 17.4)	4.8 *	(2.2 - 7.4)
45 to 64 yrs								
Males	6.6	(4.3 - 9.0)	7.2	(4.8 - 9.7)	6.3	(4.3 - 8.3)	0.8 *	(0.3 - 1.4)
Females	8.7	(6.5 - 10.8)	7.7	(5.8 - 9.7)	11.5	(9.1 - 14.0)	1.9 *	(0.8 - 3.1)
Persons	7.7	(6.1 - 9.3)	7.5	(5.9 - 9.0)	8.9	(7.3 - 10.5)	1.4	(0.8 - 2.0)
65 yrs & over								
Males	3.9	(2.7 - 5.1)	4.3	(3.1 - 5.5)	3.4	(2.3 - 4.5)	0.6 *	(0.1 - 1.1)
Females	6.2	(4.9 - 7.4)	6.0	(4.8 - 7.2)	6.8	(5.5 - 8.1)	1.0 *	(0.5 - 1.5)
Persons	5.1	(4.2 - 5.9)	5.2	(4.3 - 6.0)	5.2	(4.3 - 6.1)	0.8	(0.5 - 1.2)
Total								
Males	7.9	(5.0 - 10.8)	7.5	(4.8 - 10.3)	8.6	(5.6 - 11.6)	1.9 *	(0.1 - 3.7)
Females	12.5	(9.1 - 16.0)	9.5	(7.0 - 12.1)	12.4	(9.4 - 15.3)	4.1	(2.2 - 6.1)
Persons	10.2	(8.0 - 12.5)	8.5	(6.7 - 10.4)	10.5	(8.4 - 12.6)	3.0	(1.7 - 4.4)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

We asked respondents if they were currently receiving treatment for a mental health condition. Table 28 shows the prevalence of adults with any mental health condition doctor diagnosed within the past 12 months, as well as those currently receiving treatment. Approximately one in six (16.5%) WA adults reported being diagnosed with a mental health condition in the previous 12 months, with one in ten (9.4%) currently receiving treatment. The prevalence of any mental health condition and subsequent treatment for a mental health condition was significantly lower for those aged 65 years and over when compared with those aged 16 to 44 years. Overall, females were significantly more likely than males to have a mental health condition (20.5% compared with 12.5%).

Table 28: Current mental health status, 16 years & over, HWSS 2019

	Any mental health condition (a)		Any condition currently receiving treatment for (b)	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	14.9	(8.8 - 21.0)	9.5 *	(4.3 - 14.8)
Females	26.6	(19.2 - 34.0)	13.7	(8.3 - 19.1)
Persons	20.7	(15.8 - 25.5)	11.6	(7.8 - 15.4)
45 to 64 yrs				
Males	11.2	(8.3 - 14.1)	7.8	(5.2 - 10.5)
Females	16.1	(13.4 - 18.8)	8.4	(6.4 - 10.4)
Persons	13.7	(11.7 - 15.6)	8.1	(6.4 - 9.8)
65 yrs & over				
Males	7.5	(5.9 - 9.0)	4.1	(2.9 - 5.3)
Females	11.7	(10.0 - 13.4)	7.2	(5.9 - 8.5)
Persons	9.7	(8.6 - 10.9)	5.7	(4.8 - 6.6)
Total				
Males	12.5	(9.2 - 15.7)	8.1	(5.2 - 10.9)
Females	20.5	(16.6 - 24.4)	10.8	(8.0 - 13.6)
Persons	16.5	(13.9 - 19.1)	9.4	(7.4 - 11.4)

(a) People who reported that they had been diagnosed with a mental health condition in the previous 12 months

(b) People who reported that they are currently receiving treatment for a mental health condition.

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

Table 29 shows the standardised annual prevalence estimates for a current mental health condition for adults aged 16 years and over from 2002 to 2019. Compared

with 2002, the prevalence of all persons with a current mental health condition was significantly higher in 2019.

Table 29: Prevalence of current mental health condition over time, 16 years & over, HWSS 2002-19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2002	9.6	(8.1 - 11.1)	15.6	(14.0 - 17.3)	12.6	(11.5 - 13.7)
2003	10.6	(9.2 - 12.0)	18.2	(16.6 - 19.8)	14.4	(13.3 - 15.4)
2004	10.0	(7.7 - 12.2)	16.5	(13.9 - 19.1)	13.2	(11.5 - 15.0)
2005	-	(-)	-	(-)	-	(-)
2006	8.1	(6.6 - 9.6)	15.9	(14.1 - 17.8)	12.0	(10.8 - 13.2)
2007	10.7	(8.5 - 12.9)	15.8	(14.1 - 17.6)	13.3	(11.8 - 14.7)
2008	9.1	(7.4 - 10.9)	17.5	(15.7 - 19.4)	13.3	(12.1 - 14.6)
2009	10.7	(9.2 - 12.2)	16.8	(15.3 - 18.3)	13.7	(12.7 - 14.8)
2010	11.3	(9.6 - 13.1)	18.2	(16.5 - 19.9)	14.8	(13.5 - 16.0)
2011	10.7	(8.8 - 12.5)	18.3	(16.3 - 20.2)	14.4	(13.1 - 15.8)
2012	12.5	(9.9 - 15.2)	16.1	(14.1 - 18.1)	14.3	(12.7 - 16.0)
2013	11.4	(9.0 - 13.7)	19.2	(17.0 - 21.4)	15.3	(13.7 - 16.9)
2014	11.6	(9.2 - 14.0)	16.1	(14.1 - 18.0)	13.8	(12.3 - 15.4)
2015	10.3	(8.1 - 12.5)	17.3	(14.9 - 19.6)	13.8	(12.2 - 15.4)
2016	11.7	(9.2 - 14.2)	20.3	(17.2 - 23.4)	16.0	(13.9 - 18.0)
2017	12.2	(9.0 - 15.4)	22.1	(18.1 - 26.0)	17.1	(14.5 - 19.7)
2018	12.0	(9.0 - 15.1)	21.0	(17.6 - 24.5)	16.5	(14.2 - 18.9)
2019	12.7	(9.3 - 16.1)	20.7	(16.9 - 24.6)	16.7	(14.1 - 19.3)

- This information is not available for 2005

8. LIFESTYLE BEHAVIOURS

There are many factors that influence a person's health, including genetics, lifestyle, environmental and social factors. These factors may have a positive effect on health, such as a consumption of sufficient fruit and vegetables, or a negative effect, such as smoking and physical inactivity.⁸ Modifiable lifestyle behaviours such as smoking, unhealthy eating and physical inactivity are also associated with the onset of physiological risk factors, such as high cholesterol and high blood pressure.²¹

8.1 Smoking

Smoking is the leading cause of preventable death and disease in Australia.⁸ Smoking increases the risk of a number of health conditions, including cancer, respiratory diseases and cardiovascular disease.^{8, 22}

In 2019, we asked respondents about their smoking status (including cigarettes, cigars and pipes) and whether or not people smoked in their home. Table 30 shows the smoking status for WA adults. Females were significantly more likely than males to report that they had never smoked (64.4% compared with 53.5%). Persons aged 45 to 64 years were more likely than persons aged 65 years and over to report smoking daily (11.0% compared with 4.6%).

Current smoking status was categorised into those who smoke (daily or occasionally), ex-smokers, and those who have never smoked regularly according to definitions in the National Health Data Dictionary.²³

Table 30: Current smoking status, 16 years & over, HWSS 2019

	I smoke daily		I smoke occasionally		I don't smoke now but I used to		I've tried it a few times but never smoked regularly		I've never smoked	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	8.4	(4.5 - 12.3)	3.5 *	(0.4 - 6.6)	17.7	(11.1 - 24.3)	7.8 *	(3.5 - 12.1)	62.6	(54.4 - 70.9)
Females	6.5 *	(2.2 - 10.9)	N/A	(N/A - N/A)	10.3	(5.8 - 14.8)	9.2	(4.8 - 13.6)	72.9	(65.9 - 80.0)
Persons	7.5	(4.6 - 10.4)	2.3 *	(0.6 - 3.9)	14.0	(10.0 - 18.1)	8.5	(5.4 - 11.6)	67.7	(62.3 - 73.2)
45 to 64 yrs										
Males	12.2	(9.3 - 15.1)	1.9 *	(0.7 - 3.2)	33.7	(29.5 - 38.0)	5.2	(3.2 - 7.2)	46.9	(42.3 - 51.5)
Females	9.9	(7.6 - 12.2)	0.7 *	(0.2 - 1.1)	30.1	(26.7 - 33.4)	5.8	(4.2 - 7.5)	53.5	(49.9 - 57.2)
Persons	11.0	(9.2 - 12.9)	1.3 *	(0.6 - 1.9)	31.9	(29.2 - 34.6)	5.5	(4.2 - 6.8)	50.2	(47.3 - 53.2)
65 yrs & over										
Males	5.2	(3.8 - 6.6)	1.3 *	(0.6 - 1.9)	50.4	(47.4 - 53.5)	5.4	(4.0 - 6.8)	37.7	(34.8 - 40.7)
Females	4.1	(3.1 - 5.0)	0.4 *	(0.1 - 0.8)	30.6	(28.3 - 32.9)	5.2	(4.1 - 6.3)	59.7	(57.3 - 62.1)
Persons	4.6	(3.8 - 5.4)	0.8	(0.5 - 1.2)	40.0	(38.0 - 41.9)	5.3	(4.4 - 6.2)	49.3	(47.4 - 51.3)
Total										
Males	9.0	(6.8 - 11.3)	2.6 *	(1.0 - 4.3)	28.3	(24.5 - 32.2)	6.6	(4.3 - 8.9)	53.5	(48.8 - 58.1)
Females	7.1	(4.8 - 9.4)	0.8 *	(0.2 - 1.4)	20.3	(17.6 - 23.0)	7.4	(5.1 - 9.6)	64.4	(60.6 - 68.2)
Persons	8.1	(6.5 - 9.7)	1.7 *	(0.8 - 2.6)	24.3	(21.9 - 26.6)	7.0	(5.4 - 8.6)	59.0	(55.9 - 62.0)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

Those who had smoked 100 or more cigarettes in their lifetime but no longer currently smoked were classified as ex-smokers, while those who had smoked less than 100 cigarettes were classified as having never smoked or never smoked regularly (Table 31). Females were significantly more likely than males to report that they had never smoked or never smoked regularly (72.4% compared with 60.2%). Males were significantly more likely than females to be ex-smokers (28.2% compared with 19.7%). Persons aged 16 to 44 years were significantly more likely to have never smoked compared with people aged 45 to 64 years and 65 years and over (67.7% compared with 50.2% and 49.3%). Persons aged 65 years and over were significantly less likely to be current smokers compared with people aged 45 to 64 years (4.6% compared with 11). There were significantly more people who reported being ex-smokers with increasing age group.

Table 31: Lifetime smoking status, 16 years & over, HWSS 2019

	Current Smoker		Ex-smoker		Never smoked or never smoked regularly	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	11.9	(7.0 - 16.8)	18.3	(11.6 - 25.0)	69.8	(62.1 - 77.6)
Females	7.6 *	(3.1 - 12.0)	9.7	(5.5 - 14.0)	82.7	(76.8 - 88.6)
Persons	9.7	(6.4 - 13.1)	14.1	(10.0 - 18.1)	76.2	(71.3 - 81.1)
45 to 64 yrs						
Males	14.1	(11.0 - 17.2)	32.8	(28.6 - 37.1)	53.0	(48.5 - 57.6)
Females	10.6	(8.2 - 12.9)	29.8	(26.5 - 33.2)	59.6	(56.0 - 63.2)
Persons	12.3	(10.4 - 14.3)	31.3	(28.6 - 34.0)	56.3	(53.4 - 59.2)
65 yrs & over						
Males	6.5	(5.0 - 8.0)	49.3	(46.2 - 52.3)	44.3	(41.2 - 47.3)
Females	4.5	(3.5 - 5.5)	29.3	(27.1 - 31.6)	66.2	(63.8 - 68.5)
Persons	5.4	(4.5 - 6.3)	38.7	(36.8 - 40.6)	55.8	(53.9 - 57.8)
Total						
Males	11.6	(8.9 - 14.4)	28.2	(24.3 - 32.0)	60.2	(55.7 - 64.6)
Females	7.9	(5.6 - 10.3)	19.7	(17.1 - 22.3)	72.4	(69.0 - 75.7)
Persons	9.8	(8.0 - 11.6)	23.9	(21.6 - 26.3)	66.3	(63.5 - 69.1)

We asked respondents if their home was smoke free or if people occasionally or frequently smoke in their home. The majority (97.7%) of WA adults live in a smoke free home (Table 32).

Table 32: Smoking within the home, 16 years & over, HWSS 2019

	Never		Occasionally		Frequently	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	97.8	(96.1 - 99.5)	N/A	(N/A - N/A)	1.3 *	(0.0 - 2.6)
Females	99.3	(97.9 - 100.0)	N/A	(N/A - N/A)	N/A	(N/A - N/A)
Persons	98.5	(97.5 - 99.6)	N/A	(N/A - N/A)	1.0 *	(0.1 - 2.0)
45 to 64 yrs						
Males	95.5	(93.7 - 97.3)	1.6 *	(0.5 - 2.6)	2.9 *	(1.4 - 4.4)
Females	96.7	(95.2 - 98.2)	1.5 *	(0.5 - 2.5)	1.8 *	(0.7 - 3.0)
Persons	96.1	(94.9 - 97.3)	1.5	(0.8 - 2.3)	2.4	(1.4 - 3.3)
65 yrs & over						
Males	98.0	(97.2 - 98.8)	0.7 *	(0.2 - 1.2)	1.3	(0.7 - 1.9)
Females	98.4	(97.8 - 99.0)	0.6 *	(0.2 - 0.9)	1.1	(0.6 - 1.6)
Persons	98.2	(97.7 - 98.7)	0.6	(0.3 - 0.9)	1.2	(0.8 - 1.6)
Total						
Males	97.1	(96.1 - 98.2)	1.1 *	(0.4 - 1.7)	1.8	(1.0 - 1.9)
Females	98.3	(97.5 - 99.1)	0.6 *	(0.2 - 0.9)	1.1 *	(0.4 - 1.9)
Persons	97.7	(97.0 - 98.4)	0.8	(0.4 - 1.2)	1.5	(0.9 - 2.0)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

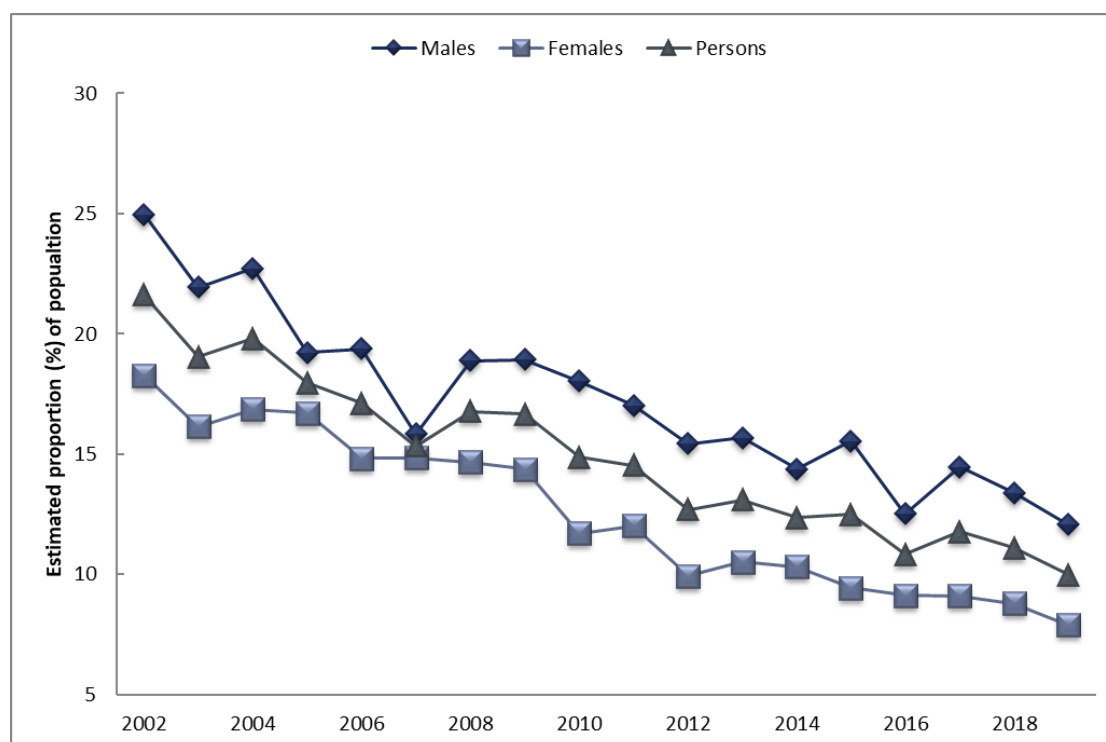
N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

The standardised annual prevalence estimate of current smoking for adults aged 16 years and over continues to decline (Table 33 and Figure 4). For all persons and females, the prevalence estimate of current smokers was significantly lower in 2019 compared with estimates from 2002 to 2011. For males, the 2019 prevalence of current smokers was significantly lower compared with estimates from 2002 to 2006, and 2008 to 2010.

Table 33: Prevalence of current smokers over time, 16 years & over, HWSS 2002-19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2002	25.0	(22.7 - 27.2)	18.3	(16.6 - 20.0)	21.6	(20.2 - 23.0)
2003	21.9	(19.9 - 23.9)	16.2	(14.7 - 17.6)	19.0	(17.8 - 20.3)
2004	22.7	(19.5 - 25.9)	16.9	(14.5 - 19.2)	19.8	(17.8 - 21.8)
2005	19.2	(17.1 - 21.4)	16.7	(15.1 - 18.4)	18.0	(16.6 - 19.3)
2006	19.4	(16.9 - 21.8)	14.8	(13.1 - 16.6)	17.1	(15.6 - 18.6)
2007	15.8	(13.4 - 18.3)	14.8	(13.1 - 16.6)	15.3	(13.8 - 16.9)
2008	18.9	(16.4 - 21.3)	14.7	(13.0 - 16.4)	16.8	(15.3 - 18.3)
2009	18.9	(17.0 - 20.9)	14.4	(13.0 - 15.8)	16.7	(15.5 - 17.9)
2010	18.0	(15.9 - 20.2)	11.7	(10.3 - 13.1)	14.9	(13.6 - 16.2)
2011	17.0	(14.6 - 19.4)	12.0	(10.4 - 13.6)	14.5	(13.1 - 16.0)
2012	15.4	(12.6 - 18.3)	9.9	(8.3 - 11.6)	12.7	(11.0 - 14.3)
2013	15.7	(12.8 - 18.5)	10.5	(8.9 - 12.1)	13.1	(11.5 - 14.7)
2014	14.4	(11.9 - 16.8)	10.3	(8.6 - 12.0)	12.3	(10.9 - 13.8)
2015	15.6	(12.6 - 18.5)	9.4	(7.8 - 11.1)	12.5	(10.8 - 14.2)
2016	12.5	(9.8 - 15.2)	9.1	(7.3 - 10.9)	10.8	(9.2 - 12.5)
2017	14.5	(11.0 - 17.9)	9.1	(6.9 - 11.3)	11.8	(9.7 - 13.8)
2018	13.4	(10.0 - 16.8)	8.8	(6.6 - 11.0)	11.1	(9.0 - 13.1)
2019	12.1	(9.2 - 14.9)	7.9	(5.6 - 10.2)	10.0	(8.2 - 11.8)

Figure 4: Prevalence of current smokers over time, 16 years & over, HWSS 2002-19



8.2 Alcohol

Excessive alcohol consumption increases the risk of some health conditions, including coronary heart disease, stroke, high blood pressure, and liver and pancreatic disease. It also increases the risk of violence and anti-social behaviour, accidents and mental illness.²⁴ The current guidelines for the consumption of alcohol in Australia were developed by the National Health and Medical Research Council (NHMRC) in 2009.²⁵

We asked respondents about their alcohol drinking habits, including how many days a week they usually drink and how many drinks they usually have. We categorised the alcohol consumption information into risk levels based on the 2009 guidelines, where any drinking by people aged less than 18 years is regarded as risky. The first risk is long-term harm over a lifetime of drinking (Table 34) and the second risk is short-term harm from injury due to a single occasion of drinking (Table 35).

Table 34: Risk of long-term alcohol related harm, 16 years & over, HWSS 2019

	Doesn't drink/ drinking level undetermined		Low risk (a)		High risk (b)	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	37.6	(29.0 - 46.3)	21.9	(14.5 - 29.3)	40.4	(31.9 - 49.0)
Females	53.5	(45.3 - 61.6)	27.0	(19.6 - 34.3)	19.6	(13.3 - 25.9)
Persons	45.5	(39.5 - 51.5)	24.4	(19.2 - 29.6)	30.1	(24.7 - 35.6)
45 to 64 yrs						
Males	21.0	(17.5 - 24.6)	36.9	(32.5 - 41.3)	42.1	(37.5 - 46.6)
Females	41.2	(37.5 - 44.8)	43.5	(39.8 - 47.1)	15.4	(12.8 - 18.0)
Persons	31.2	(28.6 - 33.8)	40.2	(37.4 - 43.1)	28.6	(25.8 - 31.3)
65 yrs & over						
Males	33.1	(30.2 - 35.9)	46.6	(43.5 - 49.6)	20.4	(18.0 - 22.8)
Females	57.7	(55.2 - 60.1)	37.9	(35.5 - 40.3)	4.4	(3.4 - 5.5)
Persons	46.0	(44.1 - 48.0)	42.0	(40.1 - 43.9)	12.0	(10.7 - 13.3)
Total						
Males	31.7	(27.0 - 36.4)	30.8	(26.7 - 35.0)	37.5	(32.8 - 42.1)
Females	50.4	(46.2 - 54.7)	34.2	(30.3 - 38.1)	15.4	(12.1 - 18.6)
Persons	41.1	(37.9 - 44.3)	32.5	(29.7 - 35.4)	26.3	(23.4 - 29.2)

(a) Drinks two or less standard drinks on any one day.

(b) Drinks more than two standard drinks on any one day.

Almost one in three (30.1%) people aged 16 to 44 years drink at levels considered to be high risk for long-term harm. Males were significantly more likely than females to report drinking at levels considered high risk for long-term harm (37.5% compared with 15.4%) (Table 34). Overall, males were significantly more likely than females to report drinking at levels considered high risk for short-term alcohol-related harm (18.6% compared with 5.6%) (Table 35). For both long-term and short-term harm, the prevalence of high risk alcohol consumption was significantly lower for those aged 65 years and over when compared with the 16 to 44 year age group and 45 to 64 year age group.

Table 35: Risk of short-term alcohol related harm, 16 years & over, HWSS 2019

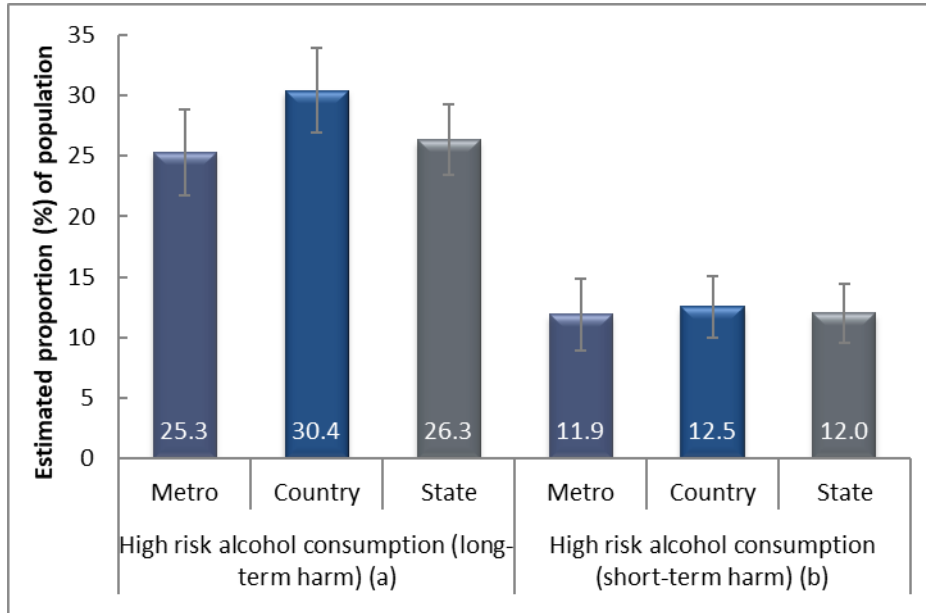
	Doesn't drink/ drinking level undetermined		Low risk (a)		High risk (b)	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	37.6	(29.0 - 46.3)	38.0	(29.6 - 46.4)	24.4	(16.8 - 32.0)
Females	53.5	(45.3 - 61.6)	37.6	(29.7 - 45.5)	9.0 *	(4.3 - 13.6)
Persons	45.5	(39.5 - 51.5)	37.8	(32.0 - 43.6)	16.8	(12.2 - 21.4)
45 to 64 yrs						
Males	21.0	(17.5 - 24.6)	62.8	(58.3 - 67.2)	16.2	(12.6 - 19.8)
Females	41.2	(37.5 - 44.8)	55.5	(51.9 - 59.2)	3.3	(1.9 - 4.6)
Persons	31.2	(28.6 - 33.8)	59.1	(56.2 - 62.0)	9.7	(7.7 - 11.6)
65 yrs & over						
Males	33.1	(30.2 - 35.9)	61.6	(58.7 - 64.6)	5.3	(4.0 - 6.7)
Females	57.7	(55.2 - 60.1)	41.9	(39.4 - 44.3)	0.5 *	(0.2 - 0.8)
Persons	46.0	(44.1 - 48.0)	51.2	(49.2 - 53.1)	2.8	(2.1 - 3.4)
Total						
Males	31.7	(27.0 - 36.4)	49.7	(44.9 - 54.5)	18.6	(14.4 - 22.7)
Females	50.4	(46.2 - 54.7)	44.0	(39.8 - 48.1)	5.6	(3.2 - 8.0)
Persons	41.1	(37.9 - 44.3)	46.8	(43.7 - 50.0)	12.0	(9.6 - 14.5)

(a) Drinks four or less standard drinks on any one day.

(b) Drinks more than four standard drinks on any one day.

Figure 5 shows the prevalence of high risk alcohol consumption for long-term and short-term harm in WA by geographic area of residence. The prevalence of high risk consumption was no different in the country areas when compared with the metro areas.

Figure 5: Prevalence of high risk alcohol consumption for long-term and short-term harm, 16 years & over, by geographic area of residence in WA, HWSS 2019



- (a) Drinks more than two standard drinks on any one day.
- (b) Drinks more than four standard drinks on any one day.

The standardised annual prevalence estimates of high risk long-term and short-term alcohol-related harm for WA adults aged 16 years and over are shown in Table 36 and Table 37 respectively, as well as in Figure 6. The prevalence of females and all persons drinking at levels associated with long-term harm was significantly lower in 2019 compared with estimates from 2002 to 2010. For males, the prevalence of drinking at levels associated with long-term harm was significantly lower in 2019 compared with estimates from 2002 to 2004, and 2006 to 2010. The prevalence of females and all persons drinking at levels associated with short-term harm was also significantly lower in 2019 compared with estimates from 2007 to 2008 (for females) and for 2002 and 2008 (for all persons). For males, the 2019 prevalence drinking at levels associated with short-term harm did not significantly differ from previous years.

Table 36: Prevalence of high risk alcohol consumption for long-term harm (a) over time, 16 years & over, HWSS 2002-19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2002	49.6	(47.1 - 52.2)	22.6	(20.7 - 24.5)	36.2	(34.5 - 37.8)
2003	46.8	(44.4 - 49.2)	23.9	(22.2 - 25.7)	35.4	(33.9 - 36.9)
2004	47.8	(44.2 - 51.5)	22.9	(20.2 - 25.6)	35.4	(33.1 - 37.7)
2005	46.8	(44.2 - 49.4)	21.8	(19.9 - 23.7)	34.3	(32.7 - 36.0)
2006	45.1	(42.1 - 48.1)	22.8	(20.5 - 25.1)	34.0	(32.1 - 35.9)
2007	48.0	(44.7 - 51.4)	23.9	(21.5 - 26.2)	36.0	(33.9 - 38.1)
2008	48.0	(44.9 - 51.1)	25.9	(23.6 - 28.1)	37.0	(35.0 - 39.0)
2009	46.9	(44.5 - 49.3)	24.4	(22.6 - 26.3)	35.7	(34.1 - 37.3)
2010	49.1	(46.5 - 51.8)	25.5	(23.4 - 27.6)	37.4	(35.6 - 39.1)
2011	48.2	(45.1 - 51.3)	25.4	(23.0 - 27.8)	36.8	(34.8 - 38.9)
2012	39.7	(36.1 - 43.3)	18.6	(16.3 - 20.9)	29.2	(27.0 - 31.4)
2013	42.1	(38.5 - 45.7)	19.1	(16.8 - 21.3)	30.6	(28.4 - 32.9)
2014	37.0	(33.7 - 40.3)	18.7	(16.3 - 21.2)	27.9	(25.8 - 30.0)
2015	38.7	(35.2 - 42.1)	17.1	(14.9 - 19.4)	27.9	(25.8 - 30.1)
2016	37.6	(33.4 - 41.7)	17.5	(14.4 - 20.6)	27.5	(24.9 - 30.2)
2017	37.5	(32.7 - 42.3)	19.3	(15.2 - 23.4)	28.4	(25.2 - 31.7)
2018	35.4	(30.8 - 39.9)	12.6	(10.2 - 15.0)	24.0	(21.3 - 26.8)
2019	38.2	(33.4 - 42.9)	16.1	(12.7 - 19.5)	27.1	(24.2 - 30.1)

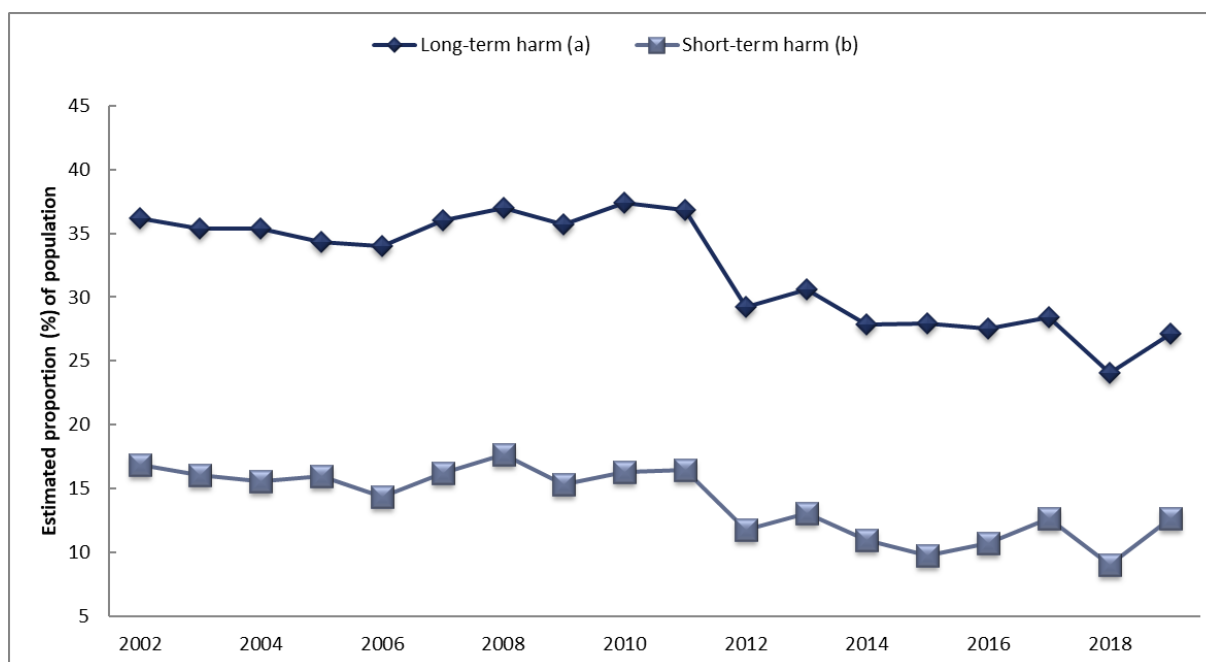
(a) Drinks more than two standard drinks on any one day.

Table 37: Prevalence of high risk alcohol consumption for short-term harm (b) over time, 16 years & over, HWSS 2002-19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2002	25.1	(22.9 - 27.4)	8.5	(7.1 - 9.8)	16.8	(15.5 - 18.2)
2003	23.7	(21.7 - 25.7)	8.3	(7.2 - 9.4)	16.0	(14.9 - 17.2)
2004	24.6	(21.4 - 27.7)	6.6	(5.2 - 8.0)	15.6	(13.8 - 17.4)
2005	23.4	(21.1 - 25.6)	8.5	(7.1 - 9.8)	15.9	(14.6 - 17.3)
2006	21.2	(18.6 - 23.8)	7.5	(5.8 - 9.2)	14.4	(12.8 - 15.9)
2007	22.2	(19.4 - 24.9)	10.3	(8.5 - 12.0)	16.2	(14.6 - 17.9)
2008	24.8	(21.8 - 27.7)	10.6	(8.9 - 12.3)	17.7	(15.9 - 19.4)
2009	21.8	(19.7 - 23.8)	8.9	(7.6 - 10.1)	15.3	(14.1 - 16.6)
2010	24.3	(21.8 - 26.8)	8.2	(6.8 - 9.7)	16.3	(14.8 - 17.7)
2011	22.6	(19.7 - 25.4)	10.3	(8.5 - 12.1)	16.4	(14.7 - 18.2)
2012	17.6	(14.6 - 20.5)	5.9	(4.4 - 7.4)	11.8	(10.1 - 13.5)
2013	20.5	(17.2 - 23.8)	5.5	(4.0 - 7.0)	13.0	(11.1 - 14.9)
2014	15.4	(12.7 - 18.0)	6.6	(4.7 - 8.5)	11.0	(9.4 - 12.6)
2015	14.8	(12.2 - 17.5)	4.5	(3.3 - 5.8)	9.7	(8.2 - 11.2)
2016	16.1	(12.6 - 19.6)	5.3	(3.4 - 7.2)	10.7	(8.7 - 12.8)
2017	20.4	(15.9 - 24.9)	4.9	(3.0 - 6.7)	12.7	(10.1 - 15.2)
2018	14.8	(11.3 - 18.3)	3.2	(1.9 - 4.4)	9.0	(7.1 - 10.9)
2019	19.2	(15.0 - 23.4)	6.0	(3.5 - 8.5)	12.6	(10.1 - 15.1)

(b) Dinks more than four standard drinks on any one day.

Figure 6: Prevalence of high risk alcohol consumption for long-term and short-term harm over time, 16 years & over, HWSS 2002-19



- (a) Drinks more than two standard drinks on any one day.
 (b) Drinks more than four standard drinks on any one day.

8.3 Nutrition

Fruit and Vegetables

Diet has an important effect on health and can influence the risk of various diseases, including coronary heart disease, type 2 diabetes, stroke, some cancers and obesity.²⁶ The current Australian Dietary Guidelines²⁶ developed in 2013 by the National Health and Medical Research Council (NHMRC) are presented in Table 38.

We asked respondents how many serves of fruit or vegetables they usually eat each day. A serve of fruit is equal to one medium piece, two small pieces of fruit or a cup of diced fruit. A serve of vegetables is equal to half a cup of cooked vegetables or one cup of salad. As the consumption of half serves is not captured in the questions currently asked in the HWSS, for the purposes of reporting, the recommended number of serves are rounded down to the nearest whole number (Table 38).

Table 38: NHMRC Australian Dietary Guidelines for fruit and vegetable daily consumption guidelines and HWSS reporting definitions, 16 years & over

	Minimum recommended serves of fruit per day	Minimum recommended serves of vegetables per day		Minimum serves of vegetables per day for HWSS reporting	
	Females and Males	Females	Males	Females	Males
16-18 years	2	5	5.5	5	5
19-50 years	2	5	6	5	6
51- 70 years	2	5	5.5	5	5
70 + years	2	5	5	5	5

Table 39 shows the proportion of adults aged 16 years and over, by the number of serves of fruit they usually eat daily. Almost all (91.6%) adults ate some fruit each day while approximately half (46.7%) ate two or more serves of fruit daily.

Table 39: Serves of fruit consumed daily, 16 years & over, HWSS 2019

	Doesn't eat fruit		Eats less than one serve of fruit daily		Eats one serve of fruit daily		Eats two or more serves of fruit daily	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	13.7	(7.6 - 19.8)	13.6	(7.5 - 19.8)	31.6	(23.3 - 39.8)	41.1	(32.5 - 49.7)
Females	7.7 *	(3.9 - 11.5)	9.2 *	(3.8 - 14.5)	38.5	(30.7 - 46.4)	44.7	(36.5 - 52.8)
Persons	10.7	(7.1 - 14.4)	11.4	(7.3 - 15.5)	35.0	(29.3 - 40.7)	42.9	(36.9 - 48.8)
45 to 64 yrs								
Males	11.5	(8.8 - 14.3)	11.1	(8.3 - 13.9)	31.3	(27.0 - 35.6)	46.1	(41.5 - 50.7)
Females	10.9	(8.5 - 13.4)	7.8	(5.9 - 9.7)	32.7	(29.3 - 36.2)	48.5	(44.9 - 52.2)
Persons	11.2	(9.4 - 13.1)	9.4	(7.8 - 11.1)	32.0	(29.3 - 34.7)	47.3	(44.4 - 50.3)
65 yrs & over								
Males	8.0	(6.3 - 9.6)	7.5	(5.9 - 9.0)	33.5	(30.6 - 36.4)	51.0	(48.0 - 54.1)
Females	6.3	(5.1 - 7.4)	4.3	(3.3 - 5.4)	28.8	(26.5 - 31.0)	60.6	(58.2 - 63.1)
Persons	7.1	(6.1 - 8.1)	5.8	(4.9 - 6.7)	31.0	(29.2 - 32.8)	56.1	(54.2 - 58.0)
Total								
Males	12.1	(8.7 - 15.4)	11.8	(8.5 - 15.1)	31.8	(27.3 - 36.3)	44.4	(39.7 - 49.1)
Females	8.4	(6.3 - 10.5)	7.8	(5.1 - 10.6)	34.9	(30.8 - 38.9)	48.9	(44.6 - 53.2)
Persons	10.2	(8.3 - 12.2)	9.8	(7.6 - 11.9)	33.3	(30.3 - 36.4)	46.7	(43.5 - 49.8)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

Table 40 shows the proportion of adults aged 16 years and over, by the number of serves of vegetables they usually eat daily. The proportion of adults aged 16 years and over meeting the 2013 Australian Dietary Guidelines for fruit and vegetable

consumption (rounded down to the nearest whole number) is shown in Table 41. It is estimated that just under half (46.7%) of adults aged 16 years and over eat sufficient daily serves of fruit. Approximately one in ten (10.1%) WA adults aged 16 years and over eat sufficient daily serves of vegetables. Females were significantly more likely to eat sufficient serves of vegetables compared with males (13.2% compared with 6.9%).

Table 40: Serves of vegetables consumed daily, 16 years & over, HWSS 2019

	Doesn't eat vegetables		Eats less than one serve of vegetables daily		Eats one to two serves of vegetables daily		Eats three to four serves of vegetables daily		Eats five or more serves of vegetables daily	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	N/A	(N/A- N/A)	N/A	(N/A- N/A)	55.8	(47.1 - 64.6)	37.0	(28.3 - 45.7)	5.7 *	(2.0 - 9.4)
Females	N/A	(N/A- N/A)	N/A	(N/A- N/A)	48.9	(40.7 - 57.1)	34.5	(26.8 - 42.3)	12.3	(7.3 - 17.3)
Persons	N/A	(N/A- N/A)	2.5 *	(0.4 - 4.6)	52.4	(46.4 - 58.4)	35.8	(30.0 - 41.6)	8.9	(5.8 - 12.0)
45 to 64 yrs										
Males	1.8 *	(0.5 - 3.1)	2.5 *	(1.1 - 3.8)	54.2	(49.6 - 58.8)	32.7	(28.4 - 37.0)	8.8	(6.1 - 11.4)
Females	1.3 *	(0.3 - 2.2)	1.6 *	(0.5 - 2.7)	39.6	(36.0 - 43.2)	41.5	(37.9 - 45.1)	15.9	(13.2 - 18.7)
Persons	1.5 *	(0.7 - 2.3)	2.0	(1.2 - 2.9)	46.9	(43.9 - 49.8)	37.2	(34.4 - 40.0)	12.4	(10.5 - 14.3)
65 yrs & over										
Males	1.3	(0.7 - 1.9)	2.6	(1.6 - 3.6)	50.2	(47.2 - 53.3)	38.6	(35.6 - 41.6)	7.3	(5.8 - 8.9)
Females	1.4	(0.9 - 2.0)	1.8	(1.2 - 2.4)	41.5	(39.0 - 43.9)	44.4	(41.9 - 46.9)	11.0	(9.4 - 12.5)
Persons	1.4	(0.9 - 1.8)	2.2	(1.6 - 2.7)	45.6	(43.7 - 47.6)	41.6	(39.7 - 43.6)	9.2	(8.2 - 10.3)
Total										
Males	1.0 *	(0.4 - 1.6)	1.8	(1.0 - 2.5)	54.4	(49.6 - 59.2)	35.9	(31.2 - 40.7)	6.9	(4.8 - 9.0)
Females	0.8	(0.5 - 1.2)	2.8 *	(0.7 - 4.9)	44.6	(40.3 - 48.9)	38.6	(34.5 - 42.6)	13.2	(10.5 - 15.8)
Persons	0.9	(0.6 - 1.3)	2.3	(1.2 - 3.4)	49.5	(46.2 - 52.7)	37.3	(34.2 - 40.4)	10.1	(8.4 - 11.8)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

Table 41: Prevalence of sufficient daily fruit consumption and vegetable consumption, 16 years & over, HWSS 2019

	Sufficient daily fruit consumption		Sufficient daily vegetable consumption	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	41.1	(32.5 - 49.7)	2.9 *	(0.2 - 5.6)
Females	44.7	(36.5 - 52.8)	12.3	(7.3 - 17.3)
Persons	41.1	(32.5 - 49.7)	7.5	(4.7 - 10.4)
45 to 64 yrs				
Males	46.1	(41.5 - 50.7)	7.9	(5.4 - 10.3)
Females	48.5	(44.9 - 52.2)	15.9	(13.2 - 18.7)
Persons	46.1	(41.5 - 50.7)	11.9	(10.1 - 13.8)
65 yrs & over				
Males	51.0	(48.0 - 54.1)	7.3	(5.8 - 8.9)
Females	60.6	(58.2 - 63.1)	11.0	(9.4 - 12.5)
Persons	51.0	(48.0 - 54.1)	9.2	(8.2 - 10.3)
Total				
Males	44.4	(39.7 - 49.1)	5.2	(3.6 - 6.8)
Females	48.9	(44.6 - 53.2)	13.2	(10.5 - 15.8)
Persons	46.7	(43.5 - 49.8)	9.2	(7.6 - 10.8)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

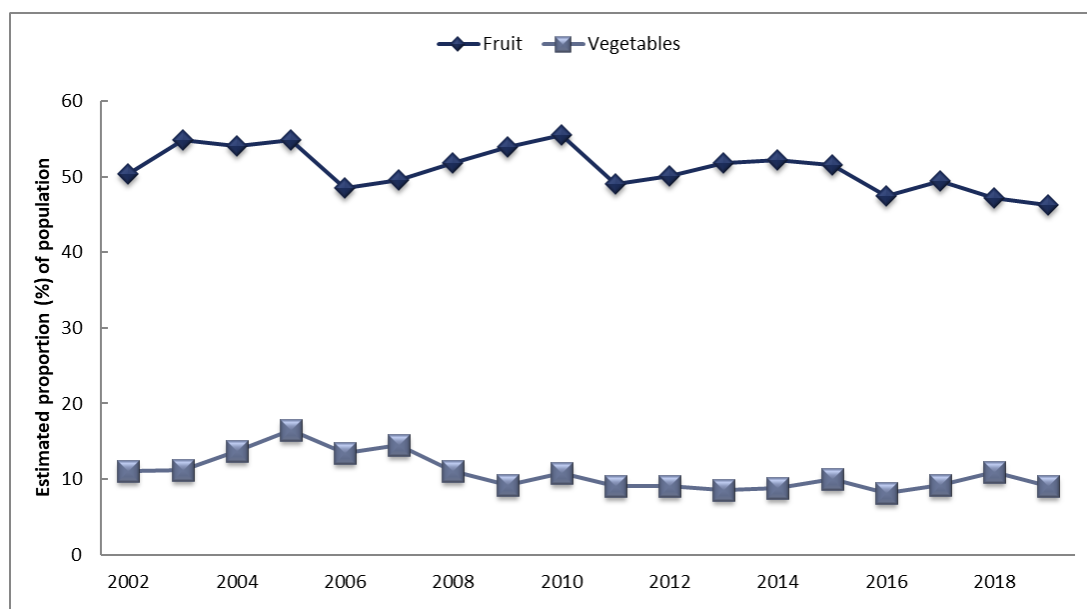
Note: See Table 38 for definitions of sufficient fruit and vegetable consumption.

The standardised annual prevalence estimates for sufficient fruit and vegetables consumed daily for adults aged 16 years and over, based on the 2013 Australian Dietary Guidelines (rounded down to the nearest whole number) are shown in Table 42 and Figure 7. The prevalence of sufficient fruit consumption and sufficient vegetable consumption in 2019 is not significantly different to 2002.

Table 42: Prevalence of sufficient fruit and vegetables consumption over time, 2013 Australian Dietary Guidelines for fruit and vegetable consumption, 16 years & over, HWSS 2002-19

	Fruit		Vegetables	
	%	95% CI	%	95% CI
2002	50.4	(48.7 - 52.1)	11.0	(10.0 - 12.1)
2003	54.9	(53.3 - 56.4)	11.2	(10.3 - 12.1)
2004	54.0	(51.6 - 56.4)	13.8	(12.1 - 15.4)
2005	54.9	(53.2 - 56.6)	16.5	(15.3 - 17.7)
2006	48.5	(46.5 - 50.4)	13.5	(12.4 - 14.6)
2007	49.6	(47.5 - 51.7)	14.5	(13.2 - 15.9)
2008	51.8	(49.8 - 53.7)	11.1	(10.0 - 12.2)
2009	53.9	(52.3 - 55.5)	9.2	(8.4 - 10.0)
2010	55.6	(53.8 - 57.3)	10.9	(9.9 - 11.8)
2011	49.1	(47.1 - 51.1)	9.1	(8.1 - 10.1)
2012	50.1	(47.8 - 52.4)	9.0	(7.9 - 10.2)
2013	51.7	(49.5 - 53.9)	8.5	(7.4 - 9.6)
2014	52.2	(49.9 - 54.4)	8.9	(7.8 - 10.0)
2015	51.5	(49.2 - 53.7)	10.0	(8.8 - 11.2)
2016	47.5	(44.7 - 50.2)	8.2	(7.0 - 9.3)
2017	49.4	(46.2 - 52.6)	9.2	(7.4 - 11.1)
2018	47.2	(44.2 - 50.2)	10.9	(9.1 - 12.8)
2019	46.3	(43.1 - 49.5)	9.2	(7.6 - 10.8)

Figure 7: Prevalence of sufficient fruit and vegetables consumption over time, 2013 Australian Dietary Guidelines for fruit and vegetable consumption, 16 years & over, HWSS 2002-19



Note: See Table 33 for definitions of sufficient fruit and vegetable consumption.

The mean serves of fruit and vegetables eaten daily from 2002 to 2019 are shown in Table 43 and Table 44 respectively. The mean serves of fruit eaten by females and

all persons in 2002 is significantly lower than 2002. The mean serves of vegetables eaten by adults in 2019 is not significantly different from 2002.

Table 43: Mean serves of fruit over time, 16 years & over, HWSS 2002-19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2002	1.6	(1.5 - 1.6)	1.8	(1.8 - 1.9)	1.7	(1.7 - 1.8)
2003	1.7	(1.7 - 1.8)	1.9	(1.9 - 2.0)	1.8	(1.8 - 1.8)
2004	1.7	(1.6 - 1.8)	1.9	(1.8 - 2.1)	1.8	(1.7 - 1.9)
2005	1.7	(1.6 - 1.7)	1.8	(1.8 - 1.9)	1.8	(1.7 - 1.8)
2006	1.5	(1.5 - 1.6)	1.7	(1.7 - 1.8)	1.6	(1.6 - 1.7)
2007	1.6	(1.5 - 1.6)	1.7	(1.7 - 1.8)	1.6	(1.6 - 1.7)
2008	1.6	(1.5 - 1.7)	1.8	(1.7 - 1.8)	1.7	(1.6 - 1.7)
2009	1.7	(1.6 - 1.7)	1.8	(1.7 - 1.8)	1.7	(1.7 - 1.8)
2010	1.7	(1.6 - 1.8)	1.8	(1.8 - 1.9)	1.8	(1.7 - 1.8)
2011	1.5	(1.5 - 1.6)	1.7	(1.6 - 1.7)	1.6	(1.6 - 1.6)
2012	1.6	(1.5 - 1.7)	1.7	(1.6 - 1.8)	1.7	(1.6 - 1.7)
2013	1.6	(1.5 - 1.7)	1.7	(1.7 - 1.8)	1.7	(1.6 - 1.7)
2014	1.6	(1.5 - 1.7)	1.8	(1.7 - 1.8)	1.7	(1.6 - 1.7)
2015	1.7	(1.6 - 1.7)	1.8	(1.7 - 1.9)	1.7	(1.6 - 1.8)
2016	1.5	(1.4 - 1.6)	1.6	(1.6 - 1.7)	1.6	(1.5 - 1.6)
2017	1.6	(1.5 - 1.7)	1.6	(1.6 - 1.7)	1.6	(1.6 - 1.7)
2018	1.5	(1.4 - 1.6)	1.6	(1.5 - 1.7)	1.5	(1.5 - 1.6)
2019	1.4	(1.3 - 1.5)	1.6	(1.5 - 1.7)	1.5	(1.4 - 1.6)

Table 44: Mean serves of vegetables over time, 16 years & over, HWSS 2002-19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2002	2.5	(2.4 - 2.7)	2.9	(2.8 - 3.0)	2.7	(2.7 - 2.8)
2003	2.5	(2.5 - 2.6)	3.0	(2.9 - 3.1)	2.8	(2.7 - 2.8)
2004	2.7	(2.6 - 2.8)	3.1	(3.0 - 3.2)	2.9	(2.8 - 3.0)
2005	3.0	(2.9 - 3.0)	3.2	(3.2 - 3.3)	3.1	(3.0 - 3.2)
2006	2.8	(2.7 - 2.9)	3.1	(3.1 - 3.2)	3.0	(2.9 - 3.0)
2007	2.8	(2.7 - 2.9)	3.2	(3.1 - 3.2)	3.0	(2.9 - 3.1)
2008	2.6	(2.5 - 2.7)	3.0	(2.9 - 3.0)	2.8	(2.7 - 2.8)
2009	2.5	(2.5 - 2.6)	2.9	(2.8 - 2.9)	2.7	(2.7 - 2.7)
2010	2.6	(2.5 - 2.7)	3.0	(3.0 - 3.1)	2.8	(2.8 - 2.9)
2011	2.5	(2.4 - 2.6)	2.9	(2.8 - 3.0)	2.7	(2.7 - 2.8)
2012	2.4	(2.3 - 2.5)	2.9	(2.8 - 3.0)	2.6	(2.6 - 2.7)
2013	2.4	(2.3 - 2.5)	2.8	(2.7 - 2.8)	2.6	(2.5 - 2.6)
2014	2.5	(2.4 - 2.6)	2.8	(2.8 - 2.9)	2.7	(2.6 - 2.7)
2015	2.6	(2.5 - 2.7)	2.9	(2.8 - 3.1)	2.8	(2.7 - 2.8)
2016	2.5	(2.4 - 2.6)	2.8	(2.7 - 2.9)	2.6	(2.5 - 2.7)
2017	2.5	(2.3 - 2.6)	2.8	(2.7 - 2.9)	2.6	(2.5 - 2.7)
2018	2.4	(2.3 - 2.6)	2.9	(2.8 - 3.0)	2.7	(2.6 - 2.8)
2019	2.5	(2.4 - 2.6)	2.8	(2.6 - 2.9)	2.6	(2.5 - 2.7)

Milk

Milk has various health benefits and is a good source of many nutrients including calcium, protein, vitamin A, vitamin D, vitamin B12 and zinc. The 2013 Australian Dietary Guidelines recommends the consumption of mostly reduced fat milk and/or alternatives to ensure that nutrition requirements are met within energy requirements.²⁶

We asked respondents what type of milk they usually consume, shown in Table 45.

Table 45: Type of milk consumed, 16 years & over, HWSS 2019

	Full fat/whole		Low/reduced fat/skim milk		Other		Don't use milk	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	53.5	(44.6 - 62.4)	28.5	(20.3 - 36.7)	7.7 *	(1.7 - 13.7)	10.3 *	(4.7 - 16.0)
Females	44.5	(36.4 - 52.6)	31.5	(24.0 - 38.9)	13.9 *	(7.1 - 20.7)	10.1	(5.5 - 14.8)
Persons	49.0	(43.0 - 55.0)	30.0	(24.5 - 35.5)	10.8	(6.2 - 15.3)	10.2	(6.6 - 13.9)
45 to 64 yrs								
Males	54.9	(50.4 - 59.5)	36.4	(32.0 - 40.9)	2.7 *	(1.3 - 4.2)	5.9	(4.1 - 7.7)
Females	36.5	(33.0 - 40.0)	47.2	(43.5 - 50.8)	5.5	(3.9 - 7.1)	10.8	(8.4 - 13.2)
Persons	45.7	(42.7 - 48.6)	41.8	(39.0 - 44.7)	4.1	(3.0 - 5.2)	8.4	(6.9 - 9.9)
65 yrs & over								
Males	50.1	(47.1 - 53.2)	41.1	(38.1 - 44.2)	2.5	(1.6 - 3.4)	6.2	(4.8 - 7.7)
Females	44.2	(41.8 - 46.7)	44.7	(42.2 - 47.2)	4.1	(3.1 - 5.0)	7.0	(5.7 - 8.2)
Persons	47.0	(45.1 - 49.0)	43.0	(41.1 - 45.0)	3.3	(2.7 - 4.0)	6.6	(5.7 - 7.6)
Total								
Males	53.3	(48.5 - 58.2)	33.2	(28.7 - 37.7)	5.2 *	(2.1 - 8.4)	8.2	(5.3 - 11.2)
Females	42.0	(37.8 - 46.2)	38.9	(34.9 - 42.9)	9.4	(5.9 - 13.0)	9.7	(7.3 - 12.2)
Persons	47.6	(44.4 - 50.8)	36.0	(33.1 - 39.0)	7.3	(5.0 - 9.7)	9.0	(7.1 - 10.9)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

Food security

We asked respondents whether there was any time in the last 12 months when they had run out of food and could not afford to buy more (Table 46). Those aged 16 to 44 years and 45 to 64 years were significantly more likely to have experienced running out of food in the last 12 months with the inability to afford more compared with those aged 65 years and over (3.7% and 1.8% compared with 0.6%).

Table 46: Ran out of food and could not afford to buy more, 16 years & over, HWSS 2019

	Yes		No	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	4.6 *	(1.1 - 8.0)	95.4	(92.0 - 98.9)
Females	2.8 *	(0.4 - 5.2)	97.2	(94.8 - 99.6)
Persons	3.7 *	(1.6 - 5.8)	96.3	(94.2 - 98.4)
45 to 64 yrs				
Males	0.8 *	(0.3 - 1.4)	99.2	(98.6 - 99.7)
Females	2.7 *	(1.4 - 4.0)	97.3	(96.0 - 98.6)
Persons	1.8	(1.0 - 2.5)	98.2	(97.5 - 99.0)
65 yrs & over				
Males	0.5 *	(0.2 - 0.8)	99.5	(99.2 - 99.8)
Females	0.7 *	(0.3 - 1.0)	99.3	(99.0 - 99.7)
Persons	0.6	(0.4 - 0.8)	99.4	(99.2 - 99.6)
Total				
Males	2.7 *	(0.9 - 4.5)	97.3	(95.5 - 99.1)
Females	2.4 *	(1.1 - 3.6)	97.6	(96.4 - 98.9)
Persons	2.5	(1.4 - 3.6)	97.5	(96.4 - 98.6)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

Fast food

We asked respondents how many times a week on average they ate fast food meals, such as burgers, pizza, chicken or chips from fast food outlets (Table 47).

Females were significantly more likely to never eat fast food meals than males (53.7% compared with 39.7%). The proportion of adults never eating from fast food outlets also increased significantly with age (16 to 44 years: 33.1%, 45 to 64 years: 54.1%, and 65 years and over: 72.5%). The mean number of meals consumed from fast food outlets per week was 0.7 meals. Females consumed significantly fewer fast food meals on average per week than males (0.5 compared with 0.9).

Table 47: Meals from fast food outlets per week, 16 years & over, HWSS 2019

	Never		Less than once a week		Once or twice a week		Three or more times per week	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	24.4	(17.0 - 31.7)	18.7	(12.1 - 25.3)	43.0	(34.2 - 51.9)	13.9	(7.7 - 20.1)
Females	42.0	(34.0 - 50.0)	17.5	(10.9 - 24.2)	37.2	(29.2 - 45.1)	3.3	* (0.7 - 0.4)
Persons	33.1	(27.5 - 38.6)	18.1	(13.5 - 22.8)	40.1	(34.2 - 46.1)	8.6	(5.2 - 12.1)
45 to 64 yrs								
Males	48.6	(44.0 - 53.2)	19.9	(16.3 - 23.5)	27.6	(23.2 - 31.9)	3.9	* (1.9 - 6.0)
Females	59.5	(55.9 - 63.1)	19.6	(16.7 - 22.4)	19.7	(16.6 - 22.8)	1.2	* (0.3 - 2.1)
Persons	54.1	(51.1 - 57.0)	19.7	(17.5 - 22.0)	23.6	(20.9 - 26.3)	2.6	* (1.4 - 3.7)
65 yrs & over								
Males	69.6	(66.8 - 72.4)	18.7	(16.3 - 21.1)	10.9	(9.0 - 12.8)	0.8	* (0.3 - 1.3)
Females	75.1	(73.0 - 77.3)	16.6	(14.7 - 18.5)	8.2	(6.8 - 9.6)	N/A	(N/A - N/A)
Persons	72.5	(70.8 - 74.3)	17.6	(16.1 - 19.1)	9.5	(8.3 - 10.6)	0.4	* (0.2 - 0.6)
Total								
Males	39.7	(35.3 - 44.1)	19.1	(15.5 - 22.7)	32.7	(27.8 - 37.6)	8.5	(5.2 - 11.8)
Females	53.7	(49.4 - 58.1)	18.0	(14.5 - 21.4)	26.2	(22.0 - 30.4)	2.0	* (0.7 - 3.3)
Persons	46.8	(43.6 - 49.9)	18.5	(16.0 - 21.0)	29.4	(26.2 - 32.7)	5.3	(3.5 - 7.1)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

The standardised annual prevalence estimates for weekly fast food consumption for adults aged 16 years and over from 2007 to 2019 are shown in Table 48. The prevalence of adults aged 16 years and over never consuming meals from fast food outlets in 2019 is significantly higher than the estimates from 2007 to 2011 and 2013, while the prevalence of adults consuming meals in 2019 less than once a week has decreased significantly compared with estimates from 2007 to 2014 and 2016.

Table 48: Meals from fast food outlets per week over time, 16 years & over, HWSS 2007-19

	Never		Less than once a week		Once or twice a week		Three or more times a week	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
2007	31.4	(29.5 - 33.2)	33.0	(31.0 - 35.0)	31.4	(29.3 - 33.4)	4.3	(3.2 - 5.3)
2008	33.7	(32.0 - 35.5)	31.2	(29.4 - 33.0)	31.5	(29.5 - 33.5)	3.5	(2.8 - 4.3)
2009	37.6	(36.2 - 39.1)	28.7	(27.3 - 30.1)	30.0	(28.5 - 31.5)	3.6	(2.9 - 4.4)
2010	33.4	(31.8 - 34.9)	30.9	(29.3 - 32.5)	31.5	(29.8 - 33.2)	4.2	(3.3 - 5.2)
2011	36.1	(34.3 - 37.9)	28.8	(27.1 - 30.6)	31.3	(29.3 - 33.4)	3.7	(2.8 - 4.6)
2012	42.3	(40.2 - 44.5)	24.0	(22.0 - 25.9)	30.3	(28.0 - 32.6)	3.4	(2.4 - 4.3)
2013	40.2	(38.1 - 42.2)	26.0	(24.1 - 27.9)	30.3	(28.1 - 32.6)	3.5	(2.3 - 4.7)
2014	44.0	(41.9 - 46.1)	24.2	(22.3 - 26.1)	28.3	(26.1 - 30.4)	3.6	(2.5 - 4.7)
2015	43.8	(41.6 - 46.0)	22.7	(20.8 - 24.6)	29.8	(27.6 - 32.0)	3.7	(2.6 - 4.8)
2016	43.0	(40.3 - 45.6)	23.7	(21.5 - 25.9)	29.9	(27.1 - 32.6)	3.4	(2.2 - 4.7)
2017	42.4	(39.3 - 45.4)	21.9	(19.5 - 24.2)	32.3	(29.1 - 35.5)	3.4 *	(1.6 - 4.6)
2018	45.4	(42.5 - 48.4)	19.9	(17.5 - 22.2)	31.1	(28.1 - 34.2)	3.6	(2.2 - 5.0)
2019	45.7	(42.5 - 48.8)	18.5	(16.0 - 21.0)	30.2	(26.9 - 33.4)	5.7	(3.8 - 7.6)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

Older adult nutrition

Respondents aged 65 years and over were asked whether their teeth or dentures affect the type of food they are able to eat. The food eaten by approximately one in ten (11.1%) adults aged 65 years and over was affected by the condition of their teeth or dentures (Table 49).

Table 49: Teeth or dentures affect food eaten, 65 years & over, HWSS 2019

	Yes		No	
	%	95% CI	%	95% CI
Males	10.3	(8.5 - 12.1)	89.7	(87.9 - 91.5)
Females	11.9	(10.3 - 13.5)	88.1	(86.5 - 89.7)
Persons	11.1	(9.9 - 12.3)	88.9	(87.7 - 90.1)

8.4 Physical activity and sedentary behaviour

Physical activity reduces the risk of cardiovascular disease, some cancers and type 2 diabetes, and also helps to improve musculoskeletal health, maintain body weight and reduce symptoms of depression.²⁷

We asked respondents to rate their own physical activity level (Table 50).

Approximately half (48.1%) of WA adults reported that they were either active or very active.

Table 50: Self-reported level of physical activity, 16 years & over, HWSS 2019

	Very active		Active		Moderately active		Not very active		Not at all active	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	27.9	(20.1 - 35.6)	25.9	(18.6 - 33.2)	27.5	(19.4 - 35.6)	16.2	(9.0 - 23.4)	2.5	* (0.5 - 4.6)
Females	18.7	(11.6 - 25.8)	29.6	(22.1 - 37.1)	41.2	(33.2 - 49.2)	8.7	(5.0 - 12.4)	N/A	(N/A - N/A)
Persons	23.3	(18.1 - 28.6)	27.7	(22.5 - 33.0)	34.3	(28.6 - 40.0)	12.5	(8.3 - 16.6)	2.1	* (0.8 - 3.5)
45 to 64 yrs										
Males	19.4	(15.9 - 23.0)	29.8	(25.5 - 34.0)	35.0	(30.6 - 39.4)	12.5	(9.7 - 15.3)	3.3	* (1.4 - 5.1)
Females	16.7	(14.0 - 19.4)	27.0	(23.7 - 30.4)	36.7	(33.3 - 40.2)	14.4	(11.9 - 17.0)	5.1	(3.2 - 6.9)
Persons	18.1	(15.8 - 20.3)	28.4	(25.7 - 31.1)	35.9	(33.1 - 38.7)	13.5	(11.6 - 15.4)	4.2	(2.9 - 5.5)
65 yrs & over										
Males	16.1	(13.8 - 18.4)	30.5	(27.6 - 33.3)	35.5	(32.6 - 38.4)	12.9	(10.8 - 14.9)	5.1	(3.8 - 6.4)
Females	13.2	(11.6 - 14.9)	26.0	(23.8 - 28.2)	39.9	(37.4 - 42.3)	14.7	(12.9 - 16.4)	6.2	(5.0 - 7.4)
Persons	14.6	(13.2 - 16.0)	28.1	(26.4 - 29.9)	37.8	(35.9 - 39.7)	13.8	(12.5 - 15.1)	5.7	(4.8 - 6.6)
Total										
Males	23.2	(19.0 - 27.4)	27.9	(23.9 - 31.9)	31.2	(26.8 - 35.6)	14.5	(10.6 - 18.3)	3.2	(2.0 - 4.4)
Females	17.0	(13.4 - 20.7)	28.1	(24.2 - 32.0)	39.6	(35.4 - 43.7)	11.6	(9.6 - 13.7)	3.6	(2.5 - 4.8)
Persons	20.1	(17.3 - 22.9)	28.0	(25.2 - 30.8)	35.4	(32.4 - 38.5)	13.0	(10.8 - 15.2)	3.4	(2.6 - 4.3)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

Respondents were also asked how they usually spend most of the day. Population estimates are shown in Table 51. Approximately half (45.5%) of adults spent their day mostly sitting. Males were significantly more likely than females to spend most of their day in heavy labour or physically demanding work (16.1% compared with 7.0%).

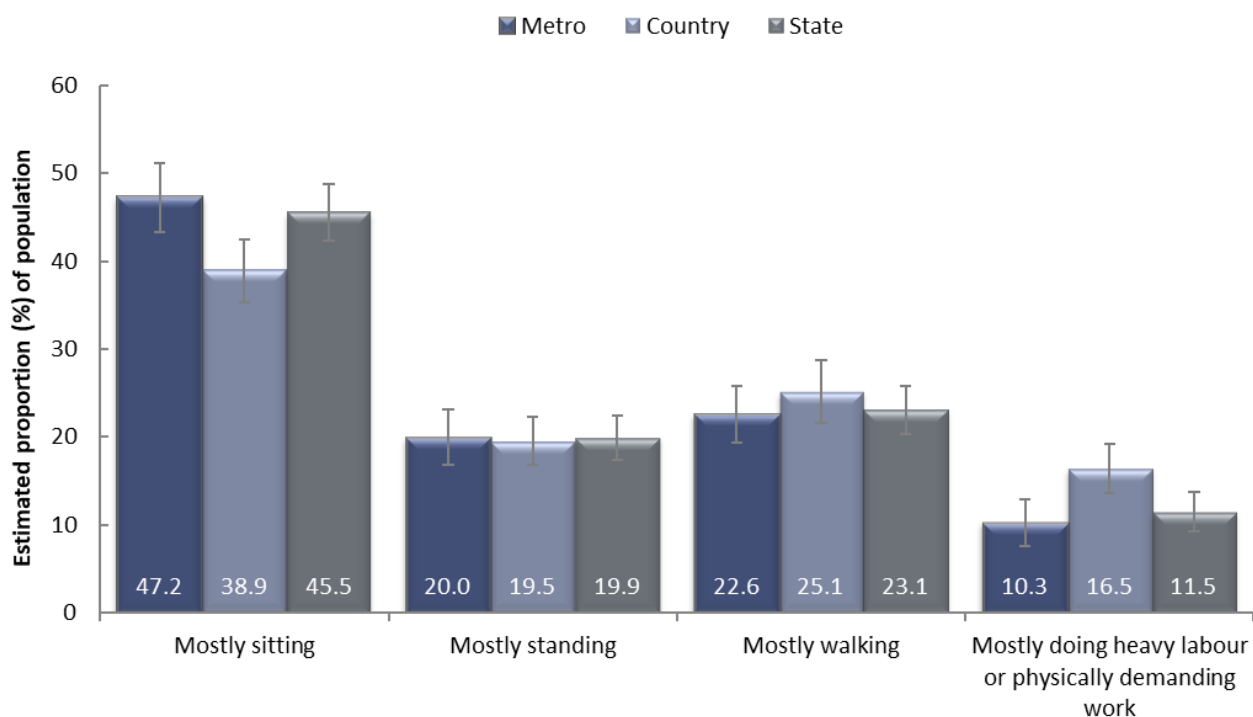
Table 51: How usually spend day, 16 years & over, HWSS 2019

	Sitting		Standing		Walking		Heavy labour/ physically demanding work	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	42.7	(34.1 - 51.4)	17.9	(10.5 - 25.2)	20.2	(12.7 - 27.7)	19.2	(13.1 - 25.3)
Females	48.0	(39.9 - 56.2)	18.4	(12.5 - 24.3)	23.8	(12.5 - 30.7)	9.7 *	(4.0 - 15.5)
Persons	45.4	(39.4 - 51.3)	18.1	(13.4 - 22.9)	22.0	(16.9 - 27.1)	14.5	(10.4 - 18.7)
45 to 64 yrs								
Males	47.0	(42.4 - 51.6)	18.4	(14.8 - 22.0)	17.6	(14.3 - 20.9)	17.0	(13.6 - 20.9)
Females	42.3	(38.6 - 45.9)	26.0	(22.7 - 29.2)	26.0	(22.8 - 29.2)	5.8	(4.1 - 7.4)
Persons	44.6	(45.7 - 49.6)	22.2	(19.8 - 24.6)	21.8	(19.5 - 24.1)	11.4	(9.4 - 13.3)
65 yrs & over								
Males	48.1	(45.0 - 51.1)	20.5	(18.0 - 23.0)	26.3	(23.6 - 29.0)	5.1	(3.9 - 6.4)
Females	47.2	(44.7 - 49.7)	21.0	(19.0 - 23.1)	30.1	(27.8 - 32.4)	1.6	(1.1 - 2.2)
Persons	47.6	(45.7 - 49.6)	20.8	(19.2 - 22.4)	28.3	(26.5 - 30.1)	3.3	(2.6 - 4.0)
Total								
Males	45.0	(40.2 - 49.7)	18.5	(14.5 - 22.5)	20.4	(16.4 - 24.5)	16.1	(12.8 - 19.4)
Females	46.1	(41.8 - 50.4)	21.2	(18.0 - 24.4)	25.7	(22.1 - 29.3)	7.0	(4.0 - 9.9)
Persons	45.5	(42.3 - 48.7)	19.9	(17.3 - 22.4)	23.1	(20.4 - 25.8)	11.5	(9.3 - 13.7)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

Figure 8 shows the prevalence of how people usually spend their day, by geographic area of residence. Those living in metro areas were significantly more likely to spend most of their day sitting compared with those living in country areas (47.2% compared with 38.9% while those living in country areas were significantly more likely to spend most of their day doing heavy labour or physically demanding work compared with those living in metro areas (16.5% compared with 10.3%).

Figure 8: How usually spend day, 16 years & over, by geographic area of residence in WA, HWSS 2019



In 2014, the Australian Department of Health released Australia's Physical Activity and Sedentary Behaviour Guidelines, stating that adults aged 18 to 64 years should complete at least 75 to 150 minutes of vigorous physical activity or 150 to 300 minutes of moderate physical activity per week.²⁸

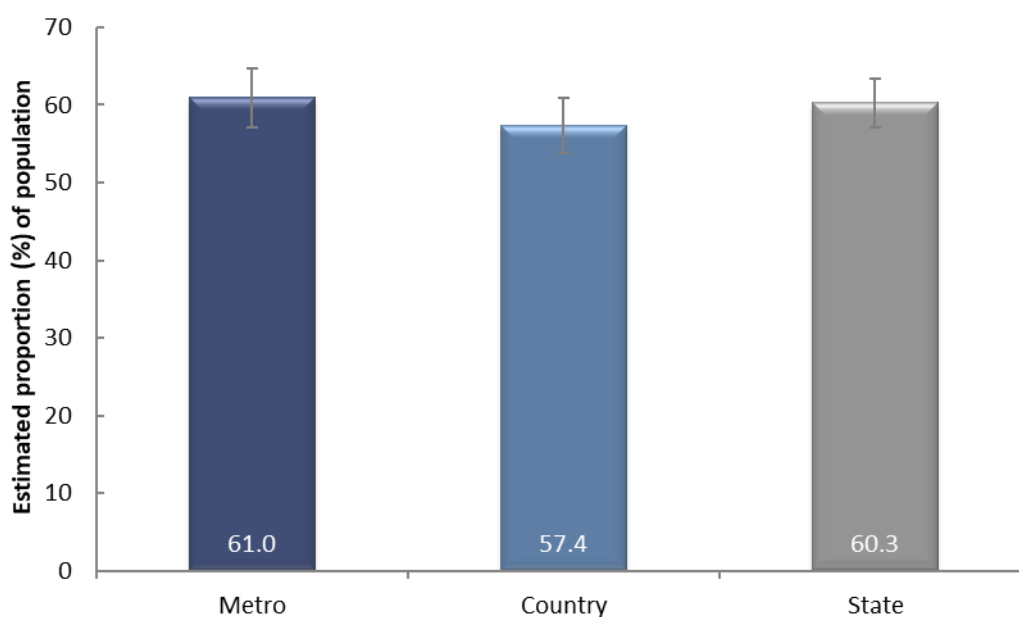
With no new guideline explicitly defined in the 2014 Physical Activity and Sedentary Behaviour guidelines for adults aged 65 years and over, the 2005 recommendation of 30 minutes of moderate physical activity most and preferably all days of the week, is the most recent advice available. To avoid reporting against multiple guidelines, all persons aged 18 years and over will be defined as completing sufficient (or recommended) levels of physical activity if they complete at least 150 minutes of moderate physical activity in the last week. The questions used to estimate the amount of physical activity undertaken in a week are taken from the Active Australia Survey.²⁹

Table 52 presents the proportion of adults aged 18 years and over completing sufficient levels of physical activity. Approximately three in five (60.3%) adults were sufficiently active for good health, while approximately one in six (15.8%) did no leisure time physical activity.

Table 52: Physical activity level, based on the 2014 Australian Physical Activity and Sedentary Behaviour guidelines, 18 years & over, HWSS 2019

	Does no leisure time physical activity per week		Does less than 150 mod mins physical activity per week		Does at least 150 mod mins physical activity per week	
	%	95% CI	%	95% CI	%	95% CI
18 to 44 yrs						
Males	10.3	(6.0 - 14.7)	23.7	(15.5 - 31.9)	65.9	(57.3 - 74.5)
Females	10.8	(5.9 - 15.8)	26.9	(19.0 - 34.8)	62.2	(53.9 - 70.6)
Persons	10.6	(7.3 - 13.9)	25.3	(19.6 - 31.0)	64.1	(58.1 - 70.1)
45 to 64 yrs						
Males	18.8	(15.3 - 22.4)	20.5	(16.8 - 24.3)	60.6	(56.1 - 65.1)
Females	16.7	(13.8 - 19.5)	21.7	(18.8 - 24.6)	61.6	(58.1 - 65.2)
Persons	17.7	(15.5 - 20.0)	21.1	(18.8 - 23.5)	61.1	(58.3 - 64.0)
65 yrs & over						
Males	23.5	(20.9 - 26.0)	22.9	(20.4 - 25.5)	53.6	(50.5 - 56.6)
Females	28.7	(26.5 - 31.0)	26.8	(24.6 - 29.0)	44.5	(42.0 - 47.0)
Persons	26.3	(24.6 - 27.9)	25.0	(23.3 - 26.7)	48.8	(46.8 - 50.7)
Total						
Males	15.5	(12.9 - 18.1)	22.5	(18.3 - 26.8)	62.0	(57.4 - 66.6)
Females	16.2	(13.5 - 18.9)	25.2	(21.2 - 29.2)	58.6	(54.3 - 62.8)
Persons	15.8	(14.0 - 17.7)	23.9	(21.0 - 26.8)	60.3	(57.1 - 63.4)

As shown in Figure 9, there is no difference in the proportion of adults aged 18 years and over who were sufficiently active for good health by geographic area of residence.

Figure 9: Proportion of adults completing recommended levels of physical activity, 18 years & over, by geographic area of residence in WA, HWSS 2019

The standardised annual estimates of the proportion of adults aged 18 years and over, completing the recommended 150 minutes or more of moderate intensity physical activity per week is shown in Table 53. The prevalence of adults 18 years and over meeting sufficient levels of physical activity in 2019 is not significantly different from 2007.

Table 53: Proportion of adults completing recommended levels of physical activity over time, 18 years & over, HWSS 2007–19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2007	59.5	(56.1 - 62.8)	53.0	(50.4 - 55.6)	56.2	(54.1 - 58.4)
2008	61.4	(58.4 - 64.5)	55.6	(53.2 - 58.1)	58.6	(56.6 - 60.5)
2009	65.7	(63.5 - 68.0)	57.7	(55.7 - 59.7)	61.7	(60.2 - 63.2)
2010	66.0	(63.5 - 68.5)	61.0	(58.8 - 63.1)	63.5	(61.8 - 65.2)
2011	66.6	(63.7 - 69.5)	59.6	(57.2 - 62.1)	63.1	(61.2 - 65.0)
2012	68.4	(65.2 - 71.6)	58.3	(55.5 - 61.1)	63.4	(61.2 - 65.5)
2013	67.8	(64.4 - 71.2)	58.7	(56.1 - 61.3)	63.2	(61.1 - 65.4)
2014	67.7	(64.7 - 70.8)	60.6	(58.0 - 63.2)	64.1	(62.1 - 66.2)
2015	68.0	(64.8 - 71.2)	59.6	(56.8 - 62.5)	63.8	(61.7 - 66.0)
2016	67.7	(63.8 - 71.5)	59.5	(56.0 - 63.0)	63.6	(61.0 - 66.2)
2017	63.1	(58.5 - 67.6)	57.8	(53.5 - 62.0)	60.4	(57.3 - 63.6)
2018	62.1	(57.7 - 66.5)	56.0	(52.1 - 60.0)	59.1	(56.1 - 62.1)
2019	62.5	(57.9 - 67.1)	58.9	(54.7 - 63.2)	60.7	(57.5 - 63.8)

The mean minutes spent in physical activity per week, for respondents who indicated some level of physical activity, are shown in Table 54. The mean minutes spent in physical activity for females in 2019 was significantly higher compared with 2007. There was no significant difference for all persons and males in mean minutes spent in physical activity in 2019 compared with 2007.

Table 54: Mean time (a) spent in physical activity per week over time, 18 years & over, HWSS 2007–19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2007	345.2	(314.5 - 375.8)	252.4	(236.4 - 268.5)	298.8	(281.3 - 316.4)
2008	352.2	(328.9 - 375.5)	271.4	(256.6 - 286.3)	312.0	(298.0 - 326.0)
2009	387.7	(368.8 - 406.6)	292.1	(279.4 - 304.8)	340.0	(328.5 - 351.6)
2010	405.8	(381.8 - 429.8)	307.3	(292.7 - 321.8)	357.2	(342.9 - 371.5)
2011	379.7	(356.7 - 402.8)	299.7	(284.0 - 315.3)	339.4	(325.4 - 353.4)
2012	397.5	(370.8 - 424.3)	302.2	(282.7 - 321.7)	350.0	(333.4 - 366.6)
2013	396.8	(370.1 - 423.4)	304.5	(287.2 - 321.8)	350.7	(333.4 - 366.6)
2014	393.4	(363.6 - 423.2)	305.5	(287.3 - 323.7)	349.1	(331.5 - 366.7)
2015	415.0	(385.8 - 444.3)	303.4	(284.3 - 322.5)	359.4	(341.6 - 377.3)
2016	423.0	(388.6 - 457.3)	293.8	(274.2 - 313.5)	359.0	(338.4 - 379.6)
2017	377.2	(337.8 - 416.6)	305.2	(276.4 - 333.9)	341.4	(316.8 - 366.1)
2018	374.0	(335.4 - 412.7)	278.0	(255.3 - 300.7)	326.1	(303.1 - 349.0)
2019	371.5	(331.7 - 411.3)	300.6	(273.2 - 328.0)	335.9	(311.6 - 360.2)

(a) Refers to the mean time spent in moderate physical activity per week, where vigorous activity has been doubled.

Sedentary leisure-time activity, such as television viewing, is strongly associated with both overweight and obesity.³⁰

Table 55 shows how many hours per week people spend in screen-based sedentary leisure time activities such as watching TV or DVDs, using a computer, smartphone or tablet device for the internet or to play games, excluding work time. More than one-third (36.8%) of adults spent 21 hours or more per week in screen-based sedentary leisure time activities. Those aged 65 years and over were significantly more likely than respondents aged 16 to 44 years and 45 to 64 years to spend 21 hours or more per week in screen-based sedentary leisure time activities (59.6% compared with 28.9% and 36.5%).

Table 55: Time spent watching TV/DVDs or using a computer/smartphone/tablet device per week, 16 years & over, HWSS 2019

	None		Less than 7 hrs		7 to less than 14 hrs		14 to less than 21 hrs		21+ hrs	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	N/A	(N/A- N/A)	11.1	(5.7 - 16.4)	27.8	(20.0 - 35.6)	30.6	(22.2 - 39.1)	30.2	(22.3 - 38.2)
Females	6.1	* (2.2 - 10.1)	7.2	* (2.8 - 11.6)	34.0	(25.9 - 42.1)	25.2	(18.2 - 32.2)	27.4	(20.2 - 34.7)
Persons	3.1	* (1.2 - 5.1)	9.2	(5.7 - 12.7)	30.8	(25.2 - 36.5)	28.0	(22.5 - 33.5)	28.9	(23.5 - 34.3)
45 to 64 yrs										
Males	2.8	* (1.1 - 4.5)	7.5	(5.0 - 10.0)	20.6	(16.7 - 24.5)	33.9	(29.6 - 38.3)	35.2	(30.9 - 39.5)
Females	2.0	(1.1 - 3.0)	5.7	(3.9 - 7.6)	19.4	(16.5 - 22.3)	35.0	(31.4 - 38.6)	37.8	(34.3 - 41.4)
Persons	2.4	(1.4 - 3.4)	6.6	(5.1 - 8.1)	20.0	(17.6 - 22.4)	34.5	(31.7 - 37.3)	36.5	(33.7 - 39.3)
65 yrs & over										
Males	1.8	* (0.8 - 2.8)	3.1	(2.1 - 4.1)	12.4	(10.4 - 14.4)	23.6	(21.0 - 26.2)	59.1	(56.1 - 62.1)
Females	1.4	(0.8 - 2.1)	3.5	(2.5 - 4.4)	9.2	(7.8 - 10.7)	25.9	(23.7 - 28.1)	60.0	(57.5 - 62.4)
Persons	1.6	(1.0 - 2.2)	3.3	(2.6 - 4.0)	10.8	(9.5 - 12.0)	24.8	(23.1 - 26.5)	59.6	(57.6 - 61.5)
Total										
Males	1.3	(0.7 - 1.9)	8.6	(5.7 - 11.5)	22.9	(18.7 - 27.2)	30.5	(25.9 - 35.1)	36.7	(32.3 - 41.1)
Females	3.9	* (2.0 - 5.9)	6.0	(3.8 - 8.3)	24.7	(20.4 - 29.0)	28.4	(24.7 - 32.1)	36.9	(33.0 - 40.8)
Persons	2.6	(1.6 - 3.7)	7.3	(5.5 - 9.2)	23.8	(20.8 - 26.8)	29.4	(26.5 - 32.4)	36.8	(33.8 - 39.8)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

8.5 Sleep

There is recognition of the importance of sleep to good health, with insufficient sleep linked to cardiovascular disease, diabetes, depression and injury.³¹ Sleep duration recommendations vary by age group. It is recommended that those aged 16 to 17 years sleep between 8 to 10 hours per night, those aged 18 to 64 years sleep 7 to 9 hours per night and adults aged 65 years and over sleep 7 to 8 hours per night.³² Note, however, that sleep needs will differ from person to person and sleeping more or less than the recommended number of hours per night may still be appropriate.³²

We asked respondents how many hours sleep they get on a usual night. Table 56 shows the prevalence of the population getting the recommended number of hours sleep. Almost two-thirds (63.5%) of adults reported sleeping the recommended number of hours per night. Those aged 65 years and over were significantly less likely than respondents aged 16 to 44 years and 45 to 64 years to sleep the recommended number of hours per night (56.1% compared with 66.0% and 63.6%) Overall, people slept on average 7.1 hours per night.

Table 56: Prevalence of adults sleeping the recommended number of hours on a usual night, 16 years & over, HWSS 2019

	Sleeps the recommended number of hours per night		Sleeps less than the recommended number of hours per night		Sleeps more than the recommended number of hours per night	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	70.7	(62.8 - 78.6)	26.8	(19.0 - 34.5)	2.5 *	(0.3 - 4.8)
Females	61.2	(52.9 - 69.4)	35.2	(27.0 - 43.4)	3.6 *	(0.8 - 6.5)
Persons	66.0	(60.2 - 71.7)	30.9	(25.2 - 36.6)	3.1 *	(1.3 - 4.9)
45 to 64 yrs						
Males	64.6	(60.2 - 69.1)	33.5	(29.2 - 37.9)	1.8 *	(0.7 - 3.0)
Females	62.7	(59.0 - 66.3)	35.4	(31.8 - 39.1)	1.9	(1.1 - 2.7)
Persons	63.6	(60.8 - 66.5)	34.5	(31.7 - 37.3)	1.9	(1.2 - 2.6)
65 yrs & over						
Males	56.4	(53.3 - 59.4)	29.1	(26.4 - 31.9)	14.5	(12.4 - 16.7)
Females	55.8	(53.4 - 58.3)	34.7	(32.4 - 37.1)	9.4	(8.1 - 10.8)
Persons	56.1	(54.1 - 58.0)	32.1	(30.3 - 33.9)	11.8	(10.6 - 13.1)
Total						
Males	66.3	(62.0 - 70.7)	29.3	(25.0 - 33.5)	4.4	(3.1 - 5.7)
Females	60.6	(56.3 - 64.9)	35.2	(30.9 - 39.4)	4.2	(2.7 - 5.7)
Persons	63.5	(60.4 - 66.5)	32.2	(29.2 - 35.3)	4.3	(3.3 - 5.3)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

9. PHYSIOLOGICAL RISK FACTORS

Biomedical factors such as high cholesterol, high blood pressure and excess body mass are major contributors to disease burden.¹³ However, they can be effectively managed through a combination of clinical practice, medications, population-based interventions and lifestyle behaviours.³³

9.1 Cholesterol

High cholesterol is a major risk factor for coronary heart disease and stroke.³³

We asked respondents when they last had their cholesterol measured and whether or not they have had high cholesterol. Table 57 shows the proportion of adults who have been told by a doctor that they have high cholesterol levels. The lifetime prevalence of high cholesterol increased significantly with age (16 to 44 years: 10.4%, 45 to 64 years: 28.6%, and 65 years and over: 44.1%). The point prevalence of high cholesterol also increased significantly with age (16 to 44 years: 4.4%, 45 to 64 years: 18.1%, and 65 years and over: 37.1%). Table 58 shows the proportion of adults by when their cholesterol was last tested.

Table 57: Prevalence of adults with diagnosed high cholesterol levels, 16 years & over, HWSS 2019

	Lifetime (a)		Point (b)	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	14.6 *	(6.6 - 22.7)	7.8 *	(1.3 - 14.4)
Females	5.8 *	(1.5 - 10.1)	N/A	(N/A - N/A)
Persons	10.4	(5.7 - 15.1)	4.4 *	(0.9 - 7.8)
45 to 64 yrs				
Males	29.8	(25.6 - 33.9)	18.2	(14.9 - 21.5)
Females	27.5	(24.1 - 30.8)	18.0	(15.1 - 20.8)
Persons	28.6	(25.9 - 31.3)	18.1	(15.9 - 20.3)
65 yrs & over				
Males	45.1	(42.0 - 48.1)	39.8	(36.7 - 42.8)
Females	43.3	(40.8 - 45.8)	34.7	(32.3 - 37.1)
Persons	44.1	(42.2 - 46.1)	37.1	(35.2 - 39.0)
Total				
Males	27.5	(23.8 - 31.3)	19.2	(16.2 - 22.3)
Females	23.8	(21.2 - 26.3)	16.1	(14.3 - 17.8)
Persons	25.7	(23.4 - 27.9)	17.6	(15.9 - 19.4)

(a) People who reported having been told by a doctor that they have high cholesterol (ever).

(b) People who reported having been diagnosed by a doctor with high cholesterol and either still have high cholesterol or are taking medication for high cholesterol.

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

Table 58: Prevalence of population by when cholesterol level was last tested, 16 years & over, HWSS 2019

	Never		Within 6 mths		6 mths to 1 yr		1 to 2 yrs		2 or more yrs ago		Unsure	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs												
Males	45.1	(36.3 - 53.9)	18.6	(12.1 - 25.1)	9.3 *	(4.6 - 14.1)	4.4 *	(1.5 - 7.4)	10.6 *	(5.2 - 16.0)	11.9 *	(6.0 - 17.9)
Females	47.5	(39.3 - 55.8)	18.1	(12.7 - 23.5)	12.4	(6.9 - 17.8)	7.5 *	(3.1 - 11.9)	2.9 *	(0.4 - 5.3)	11.7	(6.6 - 16.7)
Persons	46.3	(40.3 - 52.4)	18.3	(14.1 - 22.6)	10.8	(7.2 - 14.4)	6.0	(3.3 - 8.6)	6.8	(3.8 - 9.8)	11.8	(7.9 - 15.7)
45 to 64 yrs												
Males	5.3	(3.2 - 7.4)	45.1	(40.6 - 49.6)	25.6	(21.4 - 29.8)	10.5	(7.4 - 13.6)	9.5	(6.8 - 12.2)	4.1	(2.4 - 5.7)
Females	4.8	(3.2 - 6.3)	45.9	(42.3 - 49.5)	24.8	(21.6 - 28.0)	10.9	(8.7 - 13.2)	6.9	(5.1 - 8.8)	6.6	(4.7 - 8.6)
Persons	5.0	(3.7 - 6.3)	45.5	(42.6 - 48.4)	25.2	(22.5 - 27.8)	10.7	(8.8 - 12.6)	8.2	(6.6 - 9.9)	5.4	(4.1 - 6.7)
65 yrs & over												
Males	0.3 *	(0.0 - 0.6)	65.8	(62.9 - 68.7)	17.4	(15.1 - 19.7)	3.5	(2.4 - 4.6)	3.5	(2.5 - 4.6)	9.4	(7.6 - 11.2)
Females	1.7	(1.1 - 2.3)	55.5	(53.1 - 58.0)	23.0	(20.9 - 25.1)	5.5	(4.4 - 6.6)	3.6	(2.7 - 4.5)	10.6	(9.2 - 12.1)
Persons	1.1	(0.7 - 1.4)	60.4	(58.5 - 62.3)	20.4	(18.8 - 21.9)	4.6	(3.8 - 5.3)	3.6	(2.9 - 4.3)	10.1	(8.9 - 11.2)
Total												
Males	25.0	(19.9 - 30.1)	35.0	(30.9 - 39.1)	15.8	(12.8 - 18.7)	6.2	(4.4 - 8.0)	9.0	(6.1 - 12.0)	9.0	(5.9 - 12.2)
Females	25.5	(20.7 - 30.3)	33.9	(30.4 - 37.3)	18.3	(15.3 - 21.2)	8.2	(5.9 - 10.5)	4.3	(2.9 - 5.6)	9.9	(7.3 - 12.5)
Persons	25.2	(21.7 - 28.7)	34.4	(31.8 - 37.1)	17.0	(14.9 - 19.1)	7.2	(5.7 - 8.7)	6.6	(5.0 - 8.3)	9.5	(7.4 - 11.5)

*Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

Cholesterol information has not always been asked of adults 16 to 24 years. Therefore, the standardised annual lifetime and point prevalence estimates of high cholesterol for adults aged 25 years and over from 2003 to 2019 are shown in Table 59 and Table 60 respectively. For females and overall, the lifetime prevalence of high cholesterol was significantly lower in 2019 compared with 2003. The point prevalence of high cholesterol was not significantly different in 2019 compared with 2003.

Table 59: Lifetime (a) prevalence of population with high cholesterol over time, 25 years & over, HWSS 2003-19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2003	32.2	(29.5 - 34.9)	30.6	(28.3 - 32.9)	31.4	(29.6 - 33.2)
2004	32.8	(28.7 - 36.9)	31.9	(28.4 - 35.4)	32.3	(29.6 - 35.0)
2005	30.9	(28.2 - 33.6)	30.5	(28.2 - 32.8)	30.7	(28.9 - 32.5)
2006	29.8	(27.1 - 32.6)	30.3	(28.1 - 32.6)	30.1	(28.3 - 31.9)
2007	31.9	(28.6 - 35.3)	29.3	(26.8 - 31.7)	30.6	(28.6 - 32.7)
2008	29.5	(26.5 - 32.4)	27.3	(25.1 - 29.5)	28.4	(26.5 - 30.3)
2009	31.3	(28.9 - 33.7)	27.6	(25.7 - 29.4)	29.5	(28.0 - 31.0)
2010	32.6	(30.0 - 35.3)	31.3	(29.3 - 33.4)	32.0	(30.3 - 33.7)
2011	33.6	(30.7 - 36.5)	29.3	(27.1 - 31.4)	31.5	(29.6 - 33.3)
2012	30.2	(27.1 - 33.3)	26.1	(23.9 - 28.2)	28.1	(26.2 - 30.0)
2013	29.1	(26.0 - 32.2)	26.9	(24.8 - 29.0)	28.0	(26.1 - 29.9)
2014	30.4	(27.4 - 33.5)	27.8	(25.5 - 30.1)	29.1	(27.2 - 31.1)
2015	31.3	(28.3 - 34.3)	27.3	(25.1 - 29.6)	29.3	(27.4 - 31.1)
2016	26.6	(23.1 - 30.0)	24.1	(21.7 - 26.5)	25.4	(23.2 - 27.5)
2017	30.1	(25.9 - 34.2)	23.8	(20.9 - 26.6)	26.9	(24.4 - 29.4)
2018	24.9	(21.6 - 28.2)	25.4	(22.6 - 28.3)	25.2	(23.0 - 27.4)
2019	27.4	(23.7 - 31.1)	24.4	(21.7 - 27.1)	25.9	(23.6 - 28.2)

(a) People who reported having been told by a doctor that they have high cholesterol (ever).

Table 60: Point (b) prevalence of population with high cholesterol over time, 25 years & over, HWSS 2003-19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2003	19.8	(17.5 - 22.0)	19.2	(17.3 - 21.1)	19.5	(18.0 - 21.0)
2004	21.8	(18.1 - 25.4)	18.8	(16.0 - 21.5)	20.3	(18.0 - 22.6)
2005	16.3	(14.4 - 18.2)	14.0	(12.6 - 15.5)	15.2	(14.0 - 16.4)
2006	19.8	(17.5 - 22.1)	18.0	(16.1 - 19.8)	18.9	(17.4 - 20.4)
2007	20.3	(17.6 - 23.1)	19.8	(17.7 - 21.9)	20.1	(18.3 - 21.8)
2008	18.2	(16.0 - 20.4)	17.2	(15.5 - 19.0)	17.7	(16.3 - 19.2)
2009	20.9	(18.9 - 22.9)	18.5	(16.9 - 20.0)	19.7	(18.4 - 21.0)
2010	21.4	(19.2 - 23.7)	20.7	(18.9 - 22.4)	21.1	(19.6 - 22.5)
2011	22.9	(20.5 - 25.3)	18.5	(16.9 - 20.2)	20.7	(19.3 - 22.2)
2012	20.2	(17.7 - 22.8)	16.8	(15.2 - 18.5)	18.5	(17.0 - 20.1)
2013	19.8	(17.3 - 22.4)	18.4	(16.7 - 20.1)	19.1	(17.6 - 20.7)
2014	20.4	(17.8 - 22.9)	17.8	(16.1 - 19.4)	19.1	(17.6 - 20.6)
2015	20.9	(18.6 - 23.3)	17.1	(15.4 - 18.7)	19.0	(17.5 - 20.4)
2016	17.9	(15.2 - 20.6)	16.6	(14.6 - 18.5)	17.2	(15.6 - 18.9)
2017	18.8	(15.9 - 21.7)	15.8	(13.7 - 17.9)	17.3	(15.5 - 19.1)
2018	17.5	(14.9 - 20.1)	15.9	(14.0 - 17.9)	16.7	(15.1 - 18.3)
2019	18.4	(15.5 - 21.2)	16.3	(14.4 - 18.2)	17.3	(15.6 - 19.0)

(b) People who reported having been diagnosed by a doctor with high cholesterol and either still have high cholesterol or are taking medication for high cholesterol.

9.2 Blood pressure

High blood pressure is a major risk factor for the development of coronary artery disease, stroke and renal failure.³³

We asked respondents when they last had their blood pressure measured and if a doctor has ever told them that they have high blood pressure. Of those who have had their blood pressure measured, an estimate of the prevalence of people who have had high blood pressure as well as people who currently have high blood pressure or who are being treated for high blood pressure is shown in Table 61. The lifetime prevalence of high blood pressure increased significantly with age (16 to 44 years: 9.5%, 45 to 64 years: 25.9%, and 65 years and over: 52.8%). The point prevalence (i.e. has a current diagnosis) of high blood pressure also increased significantly with age (16 to 44 years: 3.3%, 45 to 64 years: 19.1%, and 65 years and over: 48.5%). Table 62 shows the proportion of adults by when their blood pressure was last tested.

Table 61: Prevalence of population with high blood pressure, 16 years & over, HWSS 2019

	Lifetime (a)		Point (b)	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	12.7 *	(6.4 - 19.0)	5.5 *	(2.0 - 9.0)
Females	6.2 *	(2.1 - 10.2)	1.0 *	(0.1 - 2.0)
Persons	9.5	(5.7 - 13.3)	3.3 *	(1.5 - 5.2)
45 to 64 yrs				
Males	27.0	(23.1 - 30.9)	19.2	(15.9 - 22.5)
Females	24.8	(21.8 - 27.8)	19.1	(16.3 - 21.8)
Persons	25.9	(23.4 - 28.4)	19.1	(17.0 - 21.3)
65 yrs & over				
Males	53.2	(50.2 - 56.3)	49.8	(46.8 - 52.9)
Females	52.4	(50.0 - 54.9)	47.2	(44.8 - 49.7)
Persons	52.8	(50.9 - 54.8)	48.5	(46.5 - 50.4)
Total				
Males	24.4	(20.8 - 28.0)	17.6	(15.2 - 20.1)
Females	21.1	(18.6 - 23.7)	15.8	(14.1 - 17.5)
Persons	22.7	(20.5 - 25.0)	16.7	(15.2 - 18.2)

(a) People who reported having been told by a doctor that they have high blood pressure (ever).

(b) People who reported having been diagnosed by a doctor with high blood pressure and either still have high blood pressure or are taking medication for high blood pressure.

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

Table 62: Prevalence of population by when blood pressure was last tested, 16 years & over, HWSS 2019

	Never		Within 6 mths		6 mths to 1 yr		1 to 2 yrs		2 or more yrs ago		Unsure	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs												
Males	4.1 *	(1.4- 6.9)	56.5	(47.9- 65.2)	23.9	(16.3- 31.4)	5.3 *	(1.6- 9.0)	5.0 *	(1.5- 8.5)	5.2 *	(1.9- 8.4)
Females	4.9 *	(1.3- 8.6)	59.8	(51.4- 68.1)	20.0	(12.5- 27.5)	3.9 *	(1.3- 6.6)	5.6 *	(1.7- 9.5)	5.8 *	(1.4- 10.1)
Persons	4.5 *	(2.2- 6.8)	58.1	(52.2- 64.1)	22.0	(16.6- 27.3)	4.6 *	(2.3- 6.9)	5.3 *	(2.7- 7.9)	5.5 *	(2.8- 8.2)
45 to 64 yrs												
Males	N/A	(N/A- N/A)	75.3	(71.1- 79.5)	14.7	(11.1- 18.3)	3.8	(2.2- 5.5)	3.8	(2.1- 5.5)	2.1 *	(0.6- 3.7)
Females	N/A	(N/A- N/A)	73.5	(70.2- 76.8)	15.7	(13.1- 18.4)	4.4	(2.9- 6.0)	2.9 *	(1.4- 4.3)	3.3	(1.9- 4.7)
Persons	0.2 *	(0.0- 0.3)	74.4	(71.8- 77.1)	15.2	(13.0- 17.5)	4.1	(3.0- 5.3)	3.3	(2.2- 4.5)	2.7	(1.7- 3.8)
65 yrs & over												
Males	N/A	(N/A- N/A)	90.8	(89.1- 92.5)	4.6	(3.3- 5.8)	0.7 *	(0.2- 1.2)	0.5 *	(0.2- 0.8)	3.4	(2.2- 4.5)
Females	N/A	(N/A- N/A)	87.6	(86.0- 89.2)	5.2	(4.2- 6.3)	1.1	(0.6- 1.6)	0.3 *	(0.1- 0.5)	5.7	(4.6- 6.8)
Persons	N/A	(N/A- N/A)	89.1	(87.9- 90.3)	4.9	(4.1- 5.7)	0.9	(0.6- 1.3)	0.4	(0.2- 0.6)	4.6	(3.8- 5.4)
Total												
Males	2.2 *	(0.8- 3.6)	68.3	(63.7- 73.0)	17.7	(13.6- 21.8)	4.1	(2.1- 6.0)	3.8	(2.0- 5.7)	3.9	(2.1- 5.7)
Females	2.5 *	(0.7- 4.3)	69.4	(64.9- 73.9)	15.9	(12.0- 19.8)	3.5	(2.1- 5.0)	3.7 *	(1.7- 5.7)	5.0	(2.8- 7.2)
Persons	2.3 *	(1.2- 3.5)	68.9	(65.6- 72.1)	16.8	(13.9- 19.6)	3.8	(2.6- 5.0)	3.8	(2.4- 5.2)	4.4	(3.0- 5.9)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

Blood pressure information has not always been asked of adults aged 16 to 24 years. Therefore, the standardised annual lifetime and point prevalence estimates of high blood pressure for adults aged 25 years and over from 2003 to 2018 are shown in Table 63 and Table 64 respectively. For females 25 and over, the lifetime prevalence of high blood pressure was significantly lower in 2019 compared with 2003. The point prevalence of high blood pressure was not significantly different in 2019 compared with 2003.

Table 63: Lifetime (a) prevalence of population with high blood pressure over time, 25 years & over, HWSS 2003-19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2003	24.7	(22.6 - 26.9)	29.7	(27.7 - 31.7)	27.2	(25.7 - 28.7)
2004	26.4	(23.0 - 29.8)	30.9	(27.8 - 34.0)	28.7	(26.4 - 31.0)
2005	26.2	(23.9 - 28.5)	29.1	(27.1 - 31.2)	27.7	(26.1 - 29.2)
2006	27.1	(24.6 - 29.6)	30.7	(28.7 - 32.7)	28.9	(27.3 - 30.5)
2007	28.4	(25.4 - 31.5)	30.2	(27.9 - 32.5)	29.3	(27.4 - 31.2)
2008	26.2	(23.4 - 28.9)	29.3	(27.2 - 31.5)	27.7	(26.0 - 29.5)
2009	27.0	(24.9 - 29.0)	28.8	(27.0 - 30.5)	27.9	(26.5 - 29.2)
2010	29.8	(27.3 - 32.2)	29.2	(27.3 - 31.1)	29.5	(27.9 - 31.0)
2011	26.7	(24.1 - 29.2)	27.6	(25.5 - 29.6)	27.1	(25.5 - 28.7)
2012	24.8	(22.0 - 27.7)	26.7	(24.6 - 28.9)	25.8	(24.0 - 27.6)
2013	26.4	(23.5 - 29.3)	24.6	(22.7 - 26.5)	25.5	(23.8 - 27.2)
2014	27.2	(24.3 - 30.0)	25.5	(23.5 - 27.4)	26.3	(24.6 - 28.0)
2015	25.0	(22.5 - 27.4)	26.3	(24.2 - 28.4)	25.6	(24.0 - 27.2)
2016	25.0	(22.0 - 28.1)	23.9	(21.5 - 26.3)	24.5	(22.5 - 26.4)
2017	26.3	(22.1 - 30.5)	25.2	(22.3 - 28.1)	25.8	(23.2 - 28.3)
2018	22.7	(19.5 - 25.8)	25.9	(23.0 - 28.8)	24.3	(22.1 - 26.4)
2019	27.0	(22.9 - 31.0)	22.0	(19.4 - 24.6)	24.5	(22.1 - 26.9)

(a) People who reported having been told by a doctor that they have high blood pressure (ever).

Table 64: Point (b) prevalence of population with high blood pressure over time, 25 years & over, HWSS 2003-19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2003	16.2	(14.5 - 18.0)	18.8	(17.1 - 20.4)	17.5	(16.3 - 18.7)
2004	17.1	(14.3 - 19.9)	20.4	(17.8 - 23.0)	18.8	(16.8 - 20.7)
2005	17.6	(15.7 - 19.5)	17.8	(16.2 - 19.3)	17.7	(16.5 - 18.9)
2006	18.5	(16.5 - 20.6)	19.2	(17.5 - 20.8)	18.9	(17.6 - 20.2)
2007	18.5	(16.2 - 20.8)	19.4	(17.6 - 21.2)	19.0	(17.5 - 20.4)
2008	18.2	(16.0 - 20.3)	19.4	(17.7 - 21.0)	18.8	(17.4 - 20.1)
2009	19.9	(18.1 - 21.7)	19.3	(17.9 - 20.8)	19.6	(18.5 - 20.8)
2010	21.0	(19.0 - 23.0)	19.0	(17.5 - 20.5)	20.0	(18.8 - 21.3)
2011	18.3	(16.4 - 20.3)	19.2	(17.6 - 20.8)	18.7	(17.5 - 20.0)
2012	18.6	(16.4 - 20.7)	19.0	(17.3 - 20.7)	18.8	(17.4 - 20.1)
2013	19.2	(16.8 - 21.5)	17.1	(15.7 - 18.6)	18.2	(16.8 - 19.5)
2014	19.3	(17.1 - 21.5)	17.9	(16.4 - 19.4)	18.6	(17.3 - 19.9)
2015	18.9	(16.9 - 20.9)	18.4	(16.8 - 19.9)	18.6	(17.4 - 19.9)
2016	18.5	(16.1 - 21.0)	17.0	(15.2 - 18.8)	17.8	(16.3 - 19.3)
2017	18.0	(14.7 - 21.3)	18.2	(16.1 - 20.3)	18.1	(16.1 - 20.1)
2018	16.7	(14.3 - 19.0)	19.3	(17.0 - 21.5)	18.0	(16.3 - 19.6)
2019	19.1	(16.3 - 22.0)	16.9	(15.0 - 18.7)	18.0	(16.3 - 19.7)

(b) People who reported having been diagnosed by a doctor with high blood pressure and either still have high blood pressure or are taking medication for high blood pressure.

9.3 Body weight

Overweight and obesity in adults is associated with cardiovascular disease, diabetes, some cancers, osteoarthritis, dementia and a range of other conditions.³⁴

We asked respondents how tall they were and how much they weighed. A Body Mass Index (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.³⁵ Each respondent's BMI was then classified as not overweight or obese (BMI<25), overweight (25≤BMI<30) or obese (BMI≥30).³⁶ Prevalence estimates for these BMI categories are shown in Table 65. Based on self-reported height and weight measurements, more than two-thirds (71.7%) of adults were classified as overweight or obese with almost one-third (31.2%) of adults classified as obese. The prevalence of obesity was significantly higher for persons aged 45 to 64 years compared with those aged 16 to 44 years and 65 years and over (38.4% compared with 26.2% and 32.5%). There was a significantly greater prevalence of obesity in the country population (39.4%) compared to the metro population (29.4%) when comparing by geographic area of residence (Figure 10).

Table 65: Prevalence by BMI categories, 16 years & over, HWSS 2019

	Not overweight or obese		Overweight		Obese	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	30.1	(21.8 - 38.5)	41.0	(32.2 - 49.8)	28.9	(20.6 - 37.2)
Females	37.4	(28.9 - 45.9)	39.3	(30.8 - 47.8)	23.3	(16.6 - 30.1)
Persons	33.6	(27.6 - 39.6)	40.2	(34.1 - 46.3)	26.2	(20.8 - 31.6)
45 to 64 yrs						
Males	14.3	(11.1 - 17.4)	49.5	(44.9 - 54.2)	36.2	(31.8 - 40.6)
Females	27.2	(23.9 - 30.6)	32.2	(28.7 - 35.7)	40.6	(36.9 - 44.3)
Persons	20.7	(18.4 - 23.1)	40.9	(37.9 - 43.9)	38.4	(35.5 - 41.3)
65 yrs & over						
Males	24.0	(21.3 - 26.7)	46.3	(43.3 - 49.4)	29.7	(26.9 - 32.5)
Females	29.2	(26.8 - 31.5)	35.7	(33.2 - 38.2)	35.1	(32.7 - 37.6)
Persons	26.7	(24.9 - 28.4)	40.8	(38.9 - 42.8)	32.5	(30.6 - 34.4)
Total						
Males	24.1	(19.6 - 28.6)	44.6	(39.8 - 49.4)	31.3	(26.8 - 35.8)
Females	32.6	(28.2 - 36.9)	36.3	(32.0 - 40.7)	31.1	(27.4 - 34.8)
Persons	28.3	(25.1 - 31.4)	40.5	(37.3 - 43.8)	31.2	(28.3 - 34.1)

Figure 10: Proportion of adults by BMI category, 16 years and over, by geographic area of residence in WA, HWSS 2019

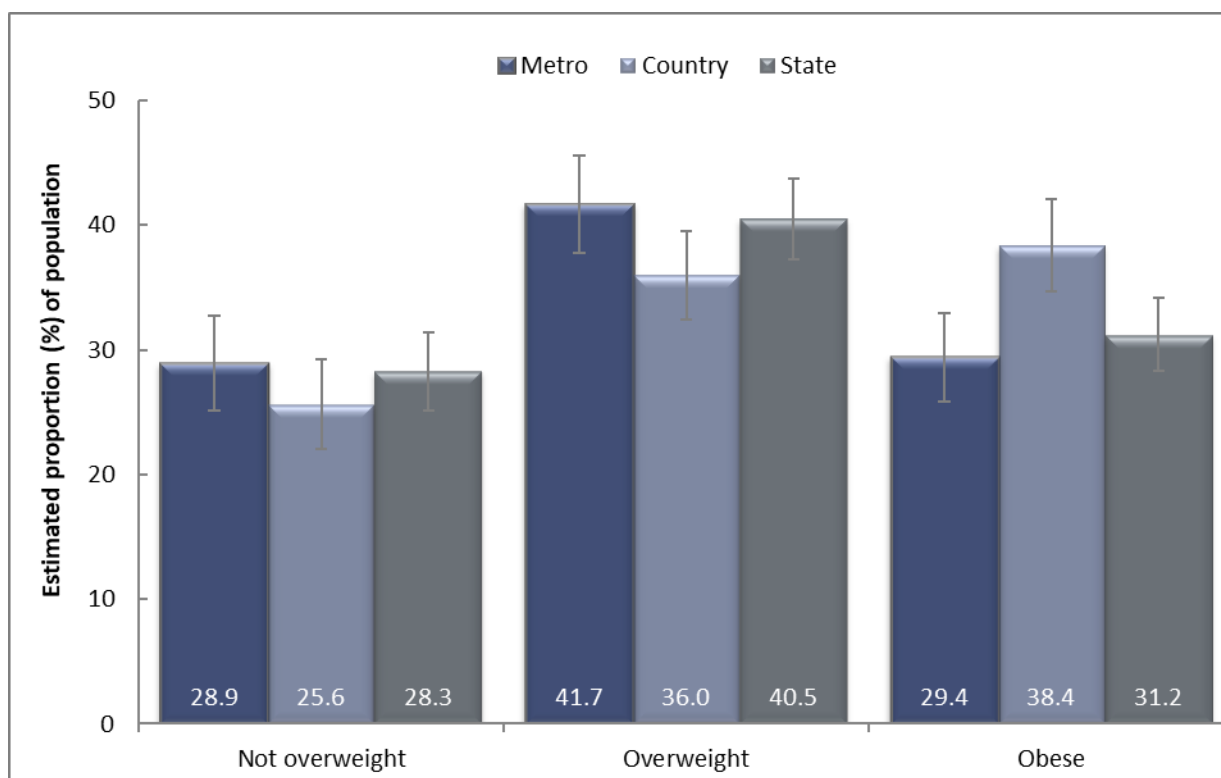


Table 66, Table 67 and Table 68 show the prevalence from 2002 to 2019 for three BMI categories; not overweight or obese, overweight, and obese respectively. The prevalence of obesity was significantly higher in 2019 when compared with estimates from 2002 to 2006 for males; 2002 to 2004, 2006 and 2008 for females; and 2002 to 2009 and 2011 for all persons. The standardised annual mean BMI estimates for adults aged 16 years and over from 2002 to 2019 are shown in Table 69 and Figure 11. The overall trend for the standardised mean BMI has been increasing steadily over time. For males, the mean BMI in 2019 was significantly higher compared with 2002 to 2005. For females and all persons, the mean BMI in 2019 was significantly higher compared with 2002 to 2009.

Table 66: Prevalence of normal BMI (not overweight or obese) over time, 16 years & over, HWSS 2002-19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2002	31.8	(29.3 - 34.2)	45.4	(43.1 - 47.7)	38.5	(36.8 - 40.2)
2003	32.1	(29.8 - 34.3)	44.8	(42.7 - 46.9)	38.3	(36.8 - 39.9)
2004	28.7	(25.4 - 32.0)	42.2	(39.0 - 45.4)	35.3	(32.9 - 37.6)
2005	28.2	(25.8 - 30.7)	44.5	(42.2 - 46.8)	36.2	(34.4 - 37.9)
2006	28.7	(25.7 - 31.7)	42.4	(40.0 - 44.9)	35.5	(33.5 - 37.4)
2007	27.6	(24.4 - 30.7)	43.0	(40.3 - 45.6)	35.2	(33.1 - 37.3)
2008	30.2	(27.1 - 33.3)	43.0	(40.5 - 45.6)	36.4	(34.4 - 38.5)
2009	26.2	(24.0 - 28.4)	40.8	(38.7 - 42.9)	33.4	(31.8 - 34.9)
2010	26.2	(23.7 - 28.7)	41.5	(39.1 - 43.9)	33.7	(31.9 - 35.4)
2011	26.3	(23.4 - 29.2)	41.3	(38.7 - 44.0)	33.6	(31.6 - 35.6)
2012	29.4	(25.8 - 33.0)	38.4	(35.5 - 41.3)	33.8	(31.5 - 36.1)
2013	26.3	(22.8 - 29.7)	41.0	(38.2 - 43.8)	33.5	(31.2 - 35.7)
2014	28.0	(24.5 - 31.5)	39.2	(36.3 - 42.1)	33.5	(31.2 - 35.7)
2015	27.3	(23.8 - 30.8)	38.7	(35.6 - 41.8)	32.8	(30.5 - 35.2)
2016	26.9	(22.9 - 31.0)	42.0	(38.2 - 45.8)	34.3	(31.5 - 37.2)
2017	23.4	(19.6 - 27.2)	38.7	(34.2 - 43.2)	31.0	(27.9 - 34.1)
2018	25.2	(21.0 - 29.5)	35.1	(31.2 - 39.0)	30.0	(27.1 - 32.9)
2019	24.6	(19.9 - 29.3)	32.9	(28.5 - 37.3)	28.7	(25.4 - 31.9)

Table 67: Prevalence of overweight over time, 16 years & over, HWSS 2002-19

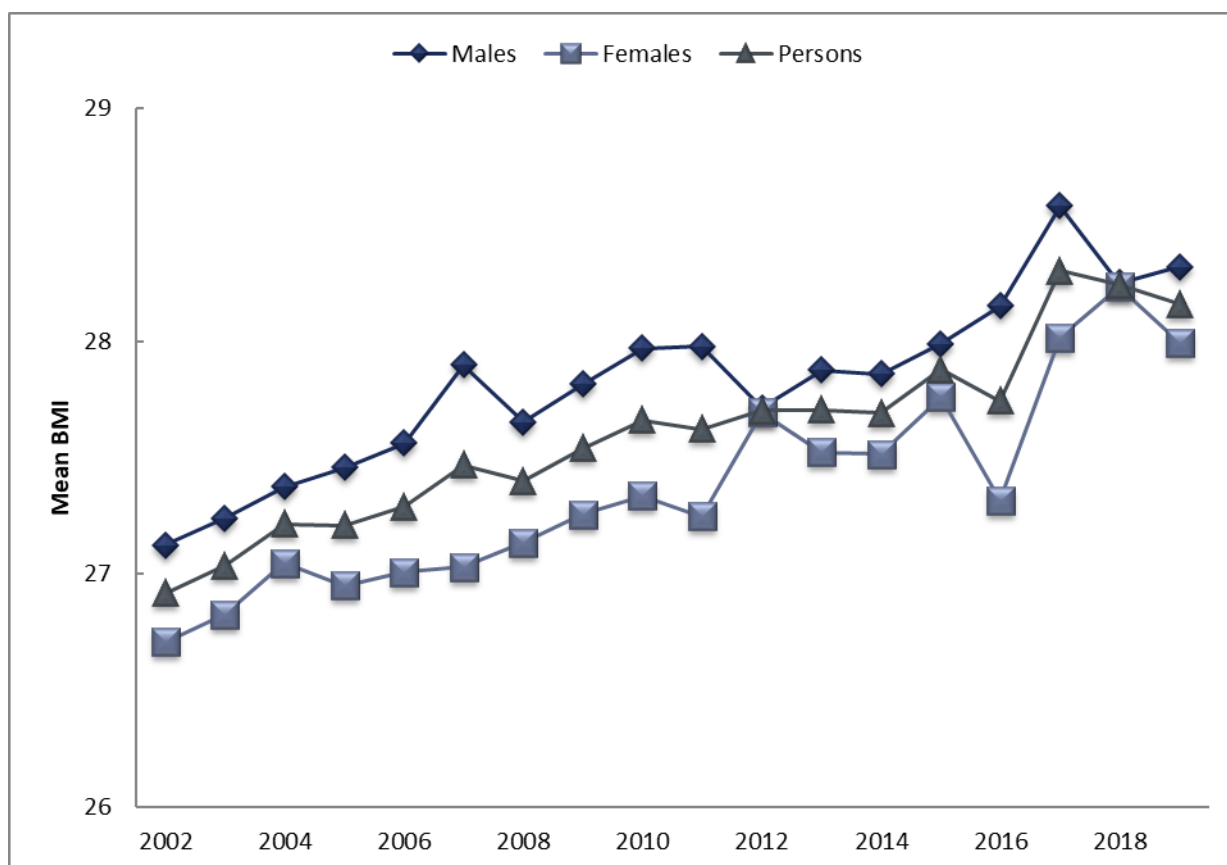
	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2002	47.8	(45.1 - 50.4)	32.5	(30.4 - 34.6)	40.2	(38.5 - 41.9)
2003	46.8	(44.4 - 49.2)	33.1	(31.2 - 35.1)	40.1	(38.5 - 41.7)
2004	49.5	(45.8 - 53.2)	33.9	(30.9 - 36.8)	41.8	(39.4 - 44.3)
2005	48.9	(46.2 - 51.5)	29.7	(27.6 - 31.7)	39.5	(37.8 - 41.2)
2006	47.4	(44.3 - 50.4)	33.3	(31.0 - 35.5)	40.4	(38.5 - 42.3)
2007	45.4	(41.9 - 48.8)	31.9	(29.4 - 34.3)	38.7	(36.5 - 40.8)
2008	44.2	(41.1 - 47.3)	31.7	(29.5 - 34.0)	38.1	(36.2 - 40.1)
2009	46.9	(44.5 - 49.4)	32.7	(30.8 - 34.6)	39.9	(38.3 - 41.5)
2010	46.9	(44.2 - 49.6)	32.3	(30.2 - 34.4)	39.7	(38.0 - 41.5)
2011	47.3	(44.2 - 50.5)	32.9	(30.5 - 35.2)	40.3	(38.3 - 42.3)
2012	43.5	(39.9 - 47.0)	32.2	(29.6 - 34.8)	38.0	(35.7 - 40.2)
2013	45.5	(42.0 - 49.1)	31.5	(29.1 - 33.9)	38.7	(36.5 - 40.9)
2014	44.2	(40.7 - 47.6)	33.3	(30.7 - 35.9)	38.9	(36.7 - 41.0)
2015	45.5	(42.1 - 49.0)	34.4	(31.5 - 37.2)	40.1	(37.8 - 42.4)
2016	43.4	(39.1 - 47.6)	30.8	(27.7 - 33.9)	37.2	(34.5 - 39.9)
2017	44.4	(39.5 - 49.2)	29.4	(25.8 - 32.9)	36.9	(33.8 - 40.1)
2018	42.6	(38.0 - 47.1)	33.3	(29.5 - 37.1)	38.1	(35.1 - 41.1)
2019	44.4	(39.5 - 49.3)	36.0	(31.7 - 40.3)	40.3	(37.0 - 43.6)

Table 68: Prevalence of obesity over time, 16 years & over, HWSS 2002-19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2002	20.5	(18.4 - 22.5)	22.1	(20.2 - 24.0)	21.3	(19.9 - 22.7)
2003	21.1	(19.2 - 23.0)	22.1	(20.4 - 23.8)	21.6	(20.3 - 22.9)
2004	21.8	(18.8 - 24.9)	24.0	(21.2 - 26.7)	22.9	(20.8 - 24.9)
2005	22.9	(20.7 - 25.0)	25.9	(23.9 - 27.8)	24.3	(22.9 - 25.8)
2006	23.9	(21.5 - 26.4)	24.3	(22.4 - 26.2)	24.1	(22.6 - 25.7)
2007	27.1	(24.1 - 30.1)	25.2	(23.0 - 27.4)	26.1	(24.3 - 28.0)
2008	25.6	(23.0 - 28.3)	25.3	(23.2 - 27.3)	25.4	(23.8 - 27.1)
2009	26.9	(24.8 - 29.0)	26.5	(24.7 - 28.2)	26.7	(25.3 - 28.1)
2010	26.9	(24.5 - 29.3)	26.2	(24.3 - 28.1)	26.6	(25.0 - 28.1)
2011	26.4	(23.8 - 28.9)	25.8	(23.8 - 27.9)	26.1	(24.5 - 27.7)
2012	27.1	(24.1 - 30.2)	29.4	(26.9 - 32.0)	28.3	(26.3 - 30.2)
2013	28.2	(25.2 - 31.2)	27.5	(25.3 - 29.7)	27.9	(26.0 - 29.7)
2014	27.9	(24.9 - 30.8)	27.5	(25.2 - 29.8)	27.7	(25.8 - 29.6)
2015	27.1	(24.3 - 30.0)	26.9	(24.7 - 29.2)	27.0	(25.2 - 28.9)
2016	29.7	(25.8 - 33.6)	27.1	(24.4 - 29.9)	28.4	(26.1 - 30.8)
2017	32.2	(27.8 - 36.6)	31.9	(27.9 - 35.9)	32.1	(29.1 - 35.1)
2018	32.2	(28.0 - 36.4)	31.6	(27.9 - 35.2)	31.9	(29.1 - 34.7)
2019	31.0	(26.5 - 35.6)	31.1	(27.4 - 34.8)	31.1	(28.1 - 34.0)

Table 69: Mean BMI over time, 16 years & over, HWSS 2002-19

	Males		Females		Persons	
	mean	95% CI	mean	95% CI	mean	95% CI
2002	27.1	(26.9 - 27.4)	26.7	(26.4 - 27.0)	26.9	(26.7 - 27.1)
2003	27.2	(27.0 - 27.5)	26.8	(26.6 - 27.1)	27.0	(26.9 - 27.2)
2004	27.4	(27.1 - 27.7)	27.0	(26.7 - 27.4)	27.2	(27.0 - 27.5)
2005	27.5	(27.2 - 27.7)	27.0	(26.7 - 27.2)	27.2	(27.0 - 27.4)
2006	27.6	(27.3 - 27.8)	27.0	(26.7 - 27.3)	27.3	(27.1 - 27.5)
2007	27.9	(27.5 - 28.3)	27.0	(26.7 - 27.3)	27.5	(27.2 - 27.7)
2008	27.7	(27.3 - 28.0)	27.1	(26.8 - 27.4)	27.4	(27.2 - 27.6)
2009	27.8	(27.6 - 28.0)	27.3	(27.0 - 27.5)	27.5	(27.4 - 27.7)
2010	28.0	(27.7 - 28.2)	27.3	(27.1 - 27.6)	27.7	(27.5 - 27.9)
2011	28.0	(27.7 - 28.3)	27.2	(27.0 - 27.5)	27.6	(27.4 - 27.8)
2012	27.7	(27.4 - 28.0)	27.7	(27.3 - 28.0)	27.7	(27.5 - 27.9)
2013	27.9	(27.5 - 28.2)	27.5	(27.2 - 27.9)	27.7	(27.5 - 27.9)
2014	27.9	(27.5 - 28.2)	27.5	(27.2 - 27.8)	27.7	(27.5 - 27.9)
2015	28.0	(27.6 - 28.3)	27.8	(27.4 - 28.1)	27.9	(27.6 - 28.1)
2016	28.2	(27.7 - 28.6)	27.3	(26.9 - 27.7)	27.7	(27.4 - 28.0)
2017	28.6	(28.1 - 29.1)	28.0	(27.4 - 28.7)	28.3	(27.9 - 28.7)
2018	28.2	(27.8 - 28.7)	28.2	(27.7 - 28.8)	28.2	(27.9 - 28.6)
2019	28.3	(27.8 - 28.9)	28.0	(27.5 - 28.4)	28.2	(27.8 - 28.5)

Figure 11: Mean BMI over time, 16 years & over, HWSS 2002-19

We asked respondents about their perceptions of their own weight (Table 70).

Perceptions of weight have been reported against BMI based weight categories derived from corrected self-reported height and weight.³⁵ Of those people with a BMI that classified them as overweight, approximately half (52.6%) perceived their weight to be normal. A similar result was seen in people with a BMI that classified them as obese; with almost four out of five (78.5%) perceiving themselves to be overweight and approximately one in ten (10.5%) perceiving themselves as a normal weight.

Respondents were then asked what they were trying to do about their weight (Table 71). Intentions to change weight have been reported against BMI calculations based on corrected self-reported height and weight. Approximately half (47.6%) of people with a BMI that classified them as overweight had intentions to lose weight, while this increased to around two thirds (71.4%) among people with a BMI that classified them as obese.

Table 70: Prevalence of self-perception of body weight, by Body Mass Index classification, 16 years & over, HWSS 2019

Body Mass index classification	Self-perception of body weight							
	Underweight		Normal weight		Overweight		Very overweight	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Underweight	N/A	(N/A - N/A)	62.3 *	(24.2 - 100.0)	N/A	(N/A - N/A)	N/A	(N/A - N/A)
Normal weight	10.5	(6.2 - 14.7)	83.9	(79.3 - 88.5)	5.6	(3.5 - 7.7)	N/A	(N/A - N/A)
Overweight	0.8 *	(0.2 - 1.5)	52.6	(47.4 - 57.7)	46.5	(41.3 - 51.6)	N/A	(N/A - N/A)
Obese	0.1 *	(0.0 - 0.1)	10.5	(7.7 - 13.4)	78.5	(74.7 - 82.4)	10.8	(8.0 - 13.7)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

Table 71: Prevalence of intentions to change weight, by Body Mass Index classification, 16 years & over, HWSS 2019

Body Mass index classification	Intentions around weight							
	Lose weight		Gain weight		Stay the same weight		I am not trying to do anything about my weight	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Underweight	N/A	(N/A - N/A)	N/A	(N/A - N/A)	N/A	(N/A - N/A)	67.6 *	(33.4 - 100.0)
Normal weight	16.2	(10.9 - 21.6)	13.6	(8.0 - 19.2)	33.2	(27.1 - 39.3)	37.0	(30.4 - 43.5)
Overweight	47.6	(42.4 - 52.8)	1.5 *	(0.4 - 2.6)	20.7	(16.8 - 24.6)	30.2	(25.8 - 34.6)
Obese	71.4	(67.1 - 75.7)	N/A	(N/A - N/A)	9.8	(7.2 - 12.4)	18.7	(15.2 - 22.2)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

10. PSYCHOSOCIAL

Mental health refers to the capacity to interact with people and the environment, and the ability to negotiate the social interactions and challenges of life without experiencing undue emotional or behavioural incapacity.³⁷ Mental health is also referred to as psychosocial health as it involves aspects of both social and psychological behaviour.

10.1 Psychological distress

Psychological distress can be determined in ways other than having been diagnosed or treated for a mental health condition. The Kessler Psychological Distress Scale-10 (K10) is a standardised instrument consisting of 10 questions that measure psychological distress by asking 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, which have then been categorised into low, moderate, high and very high levels of psychological distress (Table 72).^{38,39}

Low psychological distress is regarded as not requiring any intervention, while moderate and high levels require self-help and very high levels require professional help.³⁹ High or very high levels of psychological distress were reported for approximately 7.3 percent of the population.

Table 72: Psychological distress as measured by Kessler Psychological Distress Scale-10, 16 years & over, HWSS 2019

	Low		Moderate		High		Very high	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	75.0	(66.9 - 83.1)	15.1	(8.4 - 21.8)	8.8 *	(3.1 - 14.4)	N/A	(N/A - N/A)
Females	71.8	(64.0 - 79.6)	20.2	(12.9 - 27.5)	6.3 *	(2.8 - 9.7)	N/A	(N/A - N/A)
Persons	73.4	(67.8 - 79.0)	17.6	(12.7 - 22.6)	7.5	(4.2 - 10.9)	1.4 *	(0.0 - 2.9)
45 to 64 yrs								
Males	86.5	(83.3 - 89.6)	8.1	(5.8 - 10.5)	3.9 *	(1.9 - 5.8)	1.6 *	(0.4 - 2.7)
Females	77.9	(74.7 - 81.0)	14.3	(11.7 - 16.9)	5.3	(3.4 - 7.2)	2.5	(1.4 - 3.6)
Persons	82.1	(79.9 - 84.4)	11.2	(9.5 - 13.0)	4.6	(3.2 - 5.9)	2.0	(1.2 - 2.8)
65 yrs & over								
Males	88.1	(86.2 - 90.0)	8.1	(6.5 - 9.7)	3.0	(2.0 - 4.1)	0.7 *	(0.2 - 1.3)
Females	85.9	(84.1 - 87.6)	9.9	(8.5 - 11.4)	3.0	(2.2 - 3.9)	1.2	(0.6 - 1.7)
Persons	86.9	(85.7 - 88.2)	9.1	(8.0 - 10.2)	3.0	(2.4 - 3.7)	1.0	(0.6 - 1.3)
Total								
Males	80.8	(76.5 - 85.2)	11.7	(8.1 - 15.3)	6.3	(3.2 - 9.3)	1.2 *	(0.5 - 1.9)
Females	76.4	(72.3 - 80.5)	16.4	(12.6 - 20.2)	5.3	(3.5 - 7.2)	1.9 *	(0.4 - 3.3)
Persons	78.6	(75.6 - 81.6)	14.1	(11.5 - 16.7)	5.8	(4.0 - 7.6)	1.5 *	(0.7 - 2.3)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

The standardised annual prevalence estimates of high or very high levels of psychological distress for adults aged 16 years and over are shown in Table 73. The prevalence of high and very high psychological distress in 2019 is similar to estimates from 2002 to 2019 for males, females and all persons.

Table 73: Prevalence of high and very high psychological distress as measured by the Kessler Psychological Distress Scale-10, 16 years & over, HWSS 2002-19

	Males		Females		Persons	
	%	95% CI	%	95% CI	%	95% CI
2002	7.5	(6.2 - 8.9)	10.2	(8.9 - 11.6)	8.9	(7.9 - 9.8)
2003	8.3	(7.0 - 9.6)	10.5	(9.3 - 11.7)	9.4	(8.5 - 10.3)
2004	8.1	(6.3 - 10.0)	10.3	(8.4 - 12.2)	9.2	(7.9 - 10.5)
2005	6.6	(5.4 - 7.8)	9.4	(8.1 - 10.6)	8.0	(7.1 - 8.9)
2006	7.4	(5.9 - 9.0)	11.5	(9.8 - 13.1)	9.5	(8.3 - 10.6)
2007	6.3	(4.5 - 8.1)	7.7	(6.4 - 8.9)	7.0	(5.9 - 8.1)
2008	6.9	(5.6 - 8.3)	11.9	(10.3 - 13.5)	9.4	(8.3 - 10.5)
2009	6.8	(5.6 - 8.0)	9.4	(8.2 - 10.5)	8.1	(7.3 - 8.9)
2010	7.6	(6.0 - 9.1)	9.8	(8.4 - 11.2)	8.7	(7.6 - 9.7)
2011	6.9	(5.3 - 8.6)	9.7	(8.1 - 11.3)	8.3	(7.2 - 9.4)
2012	5.8	(4.4 - 7.2)	9.0	(7.3 - 10.8)	7.4	(6.3 - 8.5)
2013	6.4	(4.5 - 8.2)	9.9	(8.2 - 11.7)	8.2	(6.9 - 9.4)
2014	5.8	(4.2 - 7.4)	7.8	(6.2 - 9.3)	6.8	(5.7 - 7.9)
2015	8.5	(6.1 - 10.9)	9.2	(7.3 - 11.1)	8.8	(7.3 - 10.4)
2016	7.7	(5.7 - 9.8)	12.4	(9.6 - 15.3)	10.1	(8.3 - 11.9)
2017	7.2	(5.1 - 9.3)	10.1	(6.9 - 13.4)	8.7	(6.7 - 10.6)
2018	8.4	(5.5 - 11.3)	10.5	(7.7 - 13.3)	9.4	(7.4 - 11.5)
2019	7.6	(4.5 - 10.8)	7.4	(5.1 - 9.7)	7.5	(5.6 - 9.5)

10.2 Major life events

Major life events can have strong influences on a person's subjective well-being.⁴⁰ We asked respondents whether they had personally been affected by major life events in the past 12 months, shown in Table 74.

The most common major life event was the death of someone close (23.9%). Those aged 16 to 44 years were significantly more likely than those aged 45 to 64 years and those aged 65 years and over to have experienced a relationship breakdown (9.0% compared with 3.6% and 2.2%). Those aged 16 to 44 years and 45 to 64 years were significantly more likely than those aged 65 years and over to have experienced financial hardship (12.8% and 9.8% compared with 3.9%), and/or to have been robbed or burgled (6.9% and 4.7% compared with 2.7%). People aged 16 to 44 years were significantly more likely to have experienced moving house in the past 12 months, followed by those aged 45 to 64 years, with those aged 65 years and older least likely to report moving house (14.4%, 4.1% and 2.0% respectively).

Table 74: Prevalence by major life events experienced, 16 years & over, HWSS 2019

	Moved house		Robbed or burgled		Death of someone close		Relationship breakdown		Serious injury		Financial hardship		Loss of driver's licence		Seriously ill		Other major event	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs																		
Males	15.6	(8.9 - 22.2)	8.6 *	(3.9 - 13.3)	21.0	(13.9 - 28.2)	7.6 *	(3.7 - 11.4)	4.3 *	(0.8 - 7.8)	11.8	(6.1 - 17.4)	N/A	(N/A - N/A)	6.8 *	(2.2 - 11.5)	13.2	(7.0 - 19.4)
Females	13.2	(6.9 - 19.5)	5.2 *	(1.9 - 8.5)	21.4	(15.0 - 27.8)	10.5 *	(5.0 - 16.0)	3.5 *	(1.0 - 6.1)	13.9	(8.2 - 19.6)	N/A	(N/A - N/A)	8.9	(4.7 - 13.1)	7.8 *	(3.9 - 11.8)
Persons	14.4	(9.8 - 19.0)	6.9	(4.0 - 9.8)	21.2	(16.4 - 26.0)	9.0	(5.7 - 12.4)	3.9 *	(1.7 - 6.1)	12.8	(8.8 - 16.9)	N/A	(N/A - N/A)	7.8	(4.7 - 11.0)	10.6	(6.8 - 14.3)
45 to 64 yrs																		
Males	3.6	(2.0 - 5.2)	6.5	(4.1 - 8.9)	25.8	(21.9 - 29.7)	2.8	(1.5 - 4.2)	6.9	(4.6 - 9.1)	11.1	(7.9 - 14.3)	N/A	(N/A - N/A)	7.6	(5.5 - 9.8)	7.4	(5.2 - 9.6)
Females	4.5	(3.1 - 6.0)	3.0	(1.8 - 4.2)	28.6	(25.3 - 31.9)	4.4	(2.9 - 5.8)	4.2	(2.9 - 5.6)	8.6	(6.6 - 10.7)	0.6 *	(0.0 - 1.2)	11.5	(9.2 - 13.8)	7.4	(5.7 - 9.2)
Persons	4.1	(3.0 - 5.1)	4.7	(3.4 - 6.1)	27.2	(24.6 - 29.8)	3.6	(2.6 - 4.6)	5.6	(4.2 - 6.9)	9.8	(7.9 - 11.7)	0.6 *	(0.1 - 1.0)	9.6	(8.0 - 11.2)	7.4	(6.0 - 8.8)
65 yrs & over																		
Males	1.7	(0.9 - 2.4)	2.8	(2.0 - 3.7)	25.6	(23.0 - 28.3)	1.8	(1.1 - 2.5)	5.7	(4.3 - 7.1)	4.2	(3.1 - 5.3)	1.7	(0.9 - 2.5)	14.0	(11.9 - 16.1)	5.2	(3.9 - 6.5)
Females	2.2	(1.5 - 2.9)	2.6	(1.8 - 3.4)	26.3	(24.1 - 28.4)	2.6	(1.7 - 3.4)	5.6	(4.5 - 6.7)	3.6	(2.8 - 4.5)	1.2	(0.6 - 1.7)	14.2	(12.4 - 16.0)	5.8	(4.7 - 7.0)
Persons	2.0	(1.4 - 2.5)	2.7	(2.1 - 3.3)	26.0	(24.3 - 27.7)	2.2	(1.7 - 2.8)	5.7	(4.8 - 6.5)	3.9	(3.2 - 4.6)	1.4	(1.0 - 1.9)	14.1	(12.7 - 15.5)	5.5	(4.7 - 6.4)
Total																		
Males	9.5	(5.9 - 13.0)	7.0	(4.4 - 9.5)	23.3	(19.4 - 27.2)	5.1	(3.1 - 7.1)	5.3	(3.4 - 7.3)	10.2	(7.1 - 13.3)	0.8 *	(0.3 - 1.3)	8.3	(5.8 - 10.8)	10.0	(6.7 - 13.3)
Females	8.4	(5.2 - 11.7)	4.0	(2.3 - 5.7)	24.6	(21.2 - 28.0)	7.1	(4.3 - 9.9)	4.2	(2.8 - 5.5)	10.3	(7.4 - 13.2)	1.0 *	(0.0 - 1.9)	10.7	(8.5 - 13.0)	7.3	(5.3 - 9.4)
Persons	8.9	(6.5 - 11.3)	5.5	(4.0 - 7.0)	23.9	(21.4 - 26.5)	6.1	(4.4 - 7.8)	4.7	(3.5 - 5.9)	10.3	(8.1 - 12.4)	0.9 *	(0.3 - 1.4)	9.5	(7.8 - 11.2)	8.7	(6.7 - 10.6)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

10.3 Feeling a lack of control

Perceptions of control relate to an individual's belief as to whether outcomes are determined by external events outside their control or by their own actions.⁴¹

Feelings of a lack of control have been found to have an adverse effect on health and to increase the risk of mortality.⁴² It has also been revealed that higher self-control is related to better self-reported general health, higher emotional wellbeing, higher vegetable and fruit intake, lower consumption of alcohol and cigarettes, as well as a lower BMI.⁴³

We asked respondents to rate how often during the past four weeks they felt a lack of control over their life in general, their personal life and their health. Table 75 shows self-reported lack of control over life in general.

Table 75: Lack of control over life in general during past four weeks, 16 years & over, HWSS 2019

	Never		Rarely		Sometimes		Often		Always	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	63.4	(54.8 - 72.0)	17.1	(10.1 - 24.1)	13.0	(6.7 - 19.3)	5.4 *	(2.1 - 8.6)	N/A	(N/A - N/A)
Females	57.9	(49.7 - 66.1)	19.8	(13.0 - 26.7)	18.9	(12.2 - 25.6)	3.2 *	(1.2 - 5.3)	N/A	(N/A - N/A)
Persons	60.7	(54.7 - 66.6)	18.5	(13.6 - 23.4)	15.9	(11.3 - 20.5)	4.3	(2.4 - 6.2)	N/A	(N/A - N/A)
45 to 64 yrs										
Males	69.1	(64.9 - 73.4)	13.9	(10.9 - 16.9)	13.1	(9.9 - 16.4)	3.5	(1.8 - 5.2)	0.3 *	(0.0 - 0.6)
Females	61.3	(57.7 - 64.9)	17.0	(14.3 - 19.8)	16.9	(14.0 - 19.9)	3.0	(1.8 - 4.2)	1.7 *	(0.9 - 2.6)
Persons	65.2	(62.4 - 68.0)	15.5	(13.4 - 17.5)	15.0	(12.8 - 17.2)	3.3	(2.2 - 4.3)	1.0	(0.6 - 1.5)
65 yrs & over										
Males	77.6	(75.0 - 80.1)	11.3	(9.3 - 13.2)	9.0	(7.2 - 10.7)	1.3	(0.7 - 2.0)	0.9 *	(0.3 - 1.4)
Females	76.0	(73.9 - 78.2)	10.7	(9.2 - 12.3)	11.0	(9.5 - 12.6)	1.6	(1.0 - 2.2)	0.6 *	(0.2 - 0.9)
Persons	76.8	(75.1 - 78.4)	11.0	(9.8 - 12.2)	10.1	(8.9 - 11.2)	1.5	(1.0 - 1.9)	0.7	(0.4 - 1.0)
Total										
Males	67.6	(63.0 - 72.3)	15.1	(11.3 - 18.8)	12.3	(8.9 - 15.8)	4.1	(2.3 - 5.9)	0.8 *	(0.1 - 1.6)
Females	62.4	(58.1 - 66.7)	17.2	(13.7 - 20.8)	16.8	(13.3 - 20.3)	2.8	(1.8 - 3.9)	0.7	(0.4 - 1.0)
Persons	65.0	(61.8 - 68.2)	16.2	(13.6 - 18.8)	14.6	(12.1 - 17.0)	3.5	(2.4 - 4.5)	0.8 *	(0.4 - 1.2)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

Table 76 shows how often people reported feeling a lack of control over their personal life in the past four weeks. Table 77 shows how often people reported feeling a lack of control over their health in the past four weeks.

Table 76: Lack of control over personal life during past four weeks, 16 years & over, HWSS 2019

	Never		Rarely		Sometimes		Often		Always	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	70.8	(62.8 - 78.8)	10.6	(5.7 - 15.5)	12.9 *	(6.3 - 19.5)	4.6 *	(1.5 - 7.7)	N/A	(N/A - N/A)
Females	61.1	(53.0 - 69.3)	20.0	(13.2 - 26.9)	14.8	(8.7 - 20.9)	3.9 *	(0.7 - 7.2)	N/A	(N/A - N/A)
Persons	66.0	(60.3 - 71.8)	15.3	(11.0 - 19.6)	13.8	(9.3 - 18.3)	4.3 *	(2.0 - 6.5)	N/A	(N/A - N/A)
45 to 64 yrs										
Males	75.4	(71.5 - 79.3)	12.5	(9.6 - 15.4)	10.3	(7.3 - 13.2)	1.5 *	(0.5 - 2.5)	0.3 *	(0.0 - 0.6)
Females	68.9	(65.5 - 72.3)	13.6	(11.2 - 16.1)	14.2	(11.5 - 16.9)	2.1 *	(1.0 - 3.2)	1.1 *	(0.5 - 1.8)
Persons	72.1	(69.5 - 74.7)	13.1	(11.2 - 15.0)	12.3	(10.3 - 14.3)	1.8	(1.1 - 2.6)	0.7 *	(0.4 - 1.1)
65 yrs & over										
Males	81.8	(79.5 - 84.1)	10.0	(8.2 - 11.8)	6.0	(4.6 - 7.5)	1.2 *	(0.6 - 1.8)	1.0 *	(0.4 - 1.5)
Females	80.2	(78.3 - 82.2)	9.8	(8.3 - 11.3)	8.4	(7.0 - 9.7)	1.2	(0.7 - 1.7)	0.4 *	(0.2 - 0.7)
Persons	81.0	(79.5 - 82.5)	9.9	(8.7 - 11.1)	7.3	(6.3 - 8.3)	1.2	(0.8 - 1.6)	0.7	(0.4 - 1.0)
Total										
Males	74.1	(69.8 - 78.5)	11.1	(8.4 - 13.8)	10.9	(7.3 - 14.5)	3.0 *	(1.4 - 4.7)	0.8 *	(0.1 - 1.6)
Females	67.2	(62.9 - 71.5)	16.1	(12.6 - 19.6)	13.4	(10.2 - 16.6)	2.8 *	(1.2 - 4.5)	0.5 *	(0.2 - 0.7)
Persons	70.6	(67.6 - 73.7)	13.6	(11.4 - 15.9)	12.2	(9.8 - 14.5)	2.9 *	(1.8 - 4.1)	0.7 *	(0.3 - 1.1)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

Table 77: Lack of control over health during past four weeks, 16 years & over, HWSS 2019

	Never		Rarely		Sometimes		Often		Always	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	71.3	(63.2 - 79.4)	9.7 *	(4.8 - 14.7)	15.2	(8.2 - 22.2)	2.4 *	(0.5 - 4.3)	N/A	(N/A - N/A)
Females	61.4	(53.2 - 69.6)	14.5	(8.1 - 20.8)	17.0	(10.8 - 23.1)	6.3 *	(1.9 - 10.8)	N/A	(N/A - N/A)
Persons	66.4	(60.6 - 72.2)	12.1	(8.0 - 16.1)	16.1	(11.4 - 20.7)	4.4 *	(1.9 - 6.8)	1.1 *	(0.1 - 2.1)
45 to 64 yrs										
Males	72.2	(68.2 - 76.2)	13.0	(10.0 - 16.0)	11.2	(8.5 - 14.0)	1.8 *	(0.7 - 2.8)	1.9 *	(0.7 - 3.1)
Females	65.1	(61.6 - 68.6)	13.0	(10.6 - 15.4)	15.1	(12.5 - 17.8)	4.2	(2.7 - 5.7)	2.5	(1.3 - 3.7)
Persons	68.6	(66.0 - 71.3)	13.0	(11.1 - 14.9)	13.2	(11.3 - 15.1)	3.0	(2.1 - 3.9)	2.2	(1.4 - 3.1)
65 yrs & over										
Males	72.8	(70.1 - 75.5)	11.1	(9.1 - 13.0)	11.2	(9.3 - 13.1)	2.4	(1.5 - 3.2)	2.5	(1.6 - 3.4)
Females	71.7	(69.4 - 73.9)	10.5	(9.0 - 12.1)	13.1	(11.4 - 14.8)	3.2	(2.4 - 4.1)	1.4	(0.9 - 2.0)
Persons	72.2	(70.5 - 73.9)	10.8	(9.6 - 12.0)	12.2	(11.0 - 13.5)	2.8	(2.2 - 3.4)	2.0	(1.4 - 2.5)
Total										
Males	71.8	(67.5 - 76.2)	11.0	(8.2 - 13.7)	13.3	(9.6 - 17.0)	2.2	(1.2 - 3.3)	1.7 *	(0.8 - 2.6)
Females	64.5	(60.2 - 68.8)	13.3	(10.0 - 16.6)	15.7	(12.5 - 18.8)	5.1	(2.8 - 7.4)	1.5 *	(0.7 - 2.2)
Persons	68.1	(65.1 - 71.2)	12.1	(10.0 - 14.3)	14.5	(12.0 - 16.9)	3.7	(2.4 - 4.9)	1.6 *	(1.0 - 2.2)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

Table 78 shows the prevalence of adults who reported often or always feeling a lack of control. Adults aged 65 years and over were significantly less likely than those aged 16 to 44 years and 45 to 64 years to report often or always feeling a lack of control over life in general (2.2% compared with 4.9% and 4.3%). Adults aged 65 years and over were also significantly less likely than those aged 16 to 44 years to report often or always feeling a lack of control over their personal life (1.9% compared with 4.8%).

Table 78: Often or always perceive a lack of control, 16 years & over, HWSS 2019

	General		Personal		Health	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	6.5 *	(2.9 - 10.0)	5.7 *	(2.2 - 9.1)	3.7 *	(1.3 - 6.2)
Females	3.4 *	(1.3 - 5.4)	4.0 *	(0.8 - 7.3)	7.2 *	(2.5 - 11.8)
Persons	4.9	(2.9 - 7.0)	4.8	(2.5 - 7.2)	5.4	(2.8 - 8.1)
45 to 64 yrs						
Males	3.9	(2.2 - 5.6)	1.9 *	(0.8 - 2.9)	3.7	(2.1 - 5.2)
Females	4.7	(3.2 - 6.2)	3.2	(2.0 - 4.5)	6.7	(4.8 - 8.6)
Persons	4.3	(3.2 - 5.4)	2.6	(1.7 - 3.4)	5.2	(3.9 - 6.4)
65 yrs & over						
Males	2.2	(1.4 - 3.0)	2.2	(1.3 - 3.0)	4.9	(3.7 - 6.1)
Females	2.2	(1.4 - 2.9)	1.6	(1.0 - 2.2)	4.7	(3.6 - 5.7)
Persons	2.2	(1.6 - 2.7)	1.9	(1.4 - 2.4)	4.8	(4.0 - 5.6)
Total						
Males	4.9	(3.0 - 6.8)	3.9	(2.1 - 5.7)	3.9	(2.5 - 5.3)
Females	3.6	(2.4 - 4.7)	3.3 *	(1.7 - 5.0)	6.6	(4.1 - 9.0)
Persons	4.2	(3.1 - 5.3)	3.6	(2.4 - 4.8)	5.2	(3.8 - 6.6)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

10.4 Suicidal ideation

Mental health problems are associated with higher rates of death from many causes, including suicide.⁴⁴ We asked respondents whether or not they had suicidal thoughts in the past 12 months and if friends or family had attempted suicide in the past 12 months.

Table 79 shows the prevalence of adults who had suicidal thoughts over the past 12 months and Table 80 shows the prevalence of adults who had a friend or family member attempt suicide over the past 12 months. There were no significant

differences between age groups when reporting on whether they have thought about ending their own life in the past 12 months.

Table 79: Suicide thoughts over past 12 months, 16 years & over, HWSS 2019

	Seriously thought about ending own life	
	%	95% CI
16 to 44 yrs		
Males	4.9 *	(1.6 - 8.3)
Females	7.1 *	(3.0 - 11.2)
Persons	6.0	(3.4 - 8.7)
45 to 64 yrs		
Males	4.8	(2.6 - 6.9)
Females	3.3	(2.0 - 4.6)
Persons	4.0	(2.8 - 5.3)
65 yrs & over		
Males	3.6	(2.4 - 4.7)
Females	2.4	(1.6 - 3.1)
Persons	2.9	(2.3 - 3.6)
Total		
Males	4.6	(2.8 - 6.5)
Females	5.0	(2.9 - 7.1)
Persons	4.8	(3.4 - 6.2)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

The proportion of adults who reported that friend(s) had tried to end their own life in the past 12 months was significantly higher for adults aged 16 to 44 years and 45 to 64 years compared with adults aged 65 years and over (8.8% and 7.2% compared with 2.1%). The proportion of adults who reported that family had tried to end their own life in the past 12 months was significantly higher for adults aged 45 to 64 years compared with adults aged 65 years and over (5.5% compared with 2.0%).

Table 80: Friends/family suicide attempts over past 12 months, 16 years & over, HWSS 2019

	Friend(s) attempted		Family attempted	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	10.4 *	(5.3 - 15.5)	5.8 *	(1.7 - 9.9)
Females	7.1 *	(3.6 - 10.7)	4.0 *	(1.4 - 6.6)
Persons	8.8	(5.6 - 11.9)	4.9 *	(2.5 - 7.4)
45 to 64 yrs				
Males	7.1	(4.6 - 9.5)	3.0 *	(1.4 - 4.5)
Females	7.4	(5.3 - 9.5)	8.0	(6.0 - 10.0)
Persons	7.2	(5.6 - 8.9)	5.5	(4.2 - 6.8)
65 yrs & over				
Males	2.4	(1.6 - 3.3)	1.5	(0.8 - 2.3)
Females	1.7	(1.1 - 2.3)	2.5	(1.7 - 3.3)
Persons	2.1	(1.5 - 2.6)	2.0	(1.5 - 2.6)
Total				
Males	8.0	(5.2 - 10.7)	4.2 *	(2.0 - 6.4)
Females	6.2	(4.3 - 8.1)	5.0	(3.5 - 6.4)
Persons	7.1	(5.4 - 8.7)	4.6	(3.3 - 5.9)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

10.5 Social support

Social support relates to the resources available within communities and is believed to have a positive influence on health status.^{45,46} As a surrogate measure of social support, We asked respondents how many groups/associations they belong to, including church, social groups, political and professional groups, shown in Table 81.

More than two in every five (42.8%) adults reported belonging to no groups or associations of any kind. Adults aged 45 to 64 years were significantly more likely to report belonging to no groups or associations of any kind, compared with adults aged 65 years and over (45.5% compared with 38.3%), or to belong to one group or association (23.7% compared with 28.7%).

Table 81: Number of groups/associations belonging to, 16 years & over, HWSS 2019

	None		One		Two		Three		Four or more	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	39.4	(31.0 - 47.9)	23.5	(15.5 - 31.4)	19.1	(12.3 - 25.9)	6.4 *	(2.4 - 10.3)	11.6 *	(5.6 - 17.7)
Females	46.3	(38.0 - 54.6)	25.3	(18.3 - 32.3)	13.2	(8.2 - 18.1)	9.1	(4.9 - 13.2)	6.2 *	(2.8 - 9.6)
Persons	42.8	(36.8 - 48.8)	24.4	(19.1 - 29.7)	16.2	(11.9 - 20.4)	7.7	(4.8 - 10.6)	8.9	(5.4 - 12.5)
45 to 64 yrs										
Males	45.0	(40.4 - 49.6)	25.9	(21.9 - 29.8)	15.3	(12.0 - 18.7)	7.3	(5.1 - 9.5)	6.5	(4.2 - 8.8)
Females	46.0	(42.3 - 49.6)	21.6	(18.7 - 24.5)	15.6	(12.9 - 18.2)	8.1	(6.2 - 10.1)	8.7	(6.8 - 10.7)
Persons	45.5	(42.5 - 48.4)	23.7	(21.3 - 26.2)	15.5	(13.3 - 17.6)	7.7	(6.2 - 9.2)	7.6	(6.1 - 9.1)
65 yrs & over										
Males	39.6	(36.6 - 42.6)	29.1	(26.3 - 31.9)	14.4	(12.3 - 16.6)	8.8	(7.1 - 10.6)	8.0	(6.4 - 9.7)
Females	37.2	(34.8 - 39.5)	28.3	(26.1 - 30.6)	17.3	(15.4 - 19.1)	8.8	(7.4 - 10.1)	8.5	(7.2 - 9.8)
Persons	38.3	(36.4 - 40.2)	28.7	(26.9 - 30.5)	15.9	(14.5 - 17.3)	8.8	(7.7 - 9.9)	8.3	(7.2 - 9.3)
Total										
Males	41.2	(36.6 - 45.8)	25.2	(20.9 - 29.5)	17.1	(13.5 - 20.8)	7.1	(4.9 - 9.3)	9.4	(6.2 - 12.7)
Females	44.5	(40.1 - 48.8)	24.7	(21.1 - 28.3)	14.7	(12.1 - 17.3)	8.7	(6.6 - 10.9)	7.4	(5.6 - 9.3)
Persons	42.8	(39.6 - 46.0)	24.9	(22.1 - 27.8)	15.9	(13.6 - 18.2)	7.9	(6.4 - 9.4)	8.4	(6.5 - 10.3)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

11. HEALTH SERVICE UTILISATION

Health services are the way in which health care is provided to patients and the general population and consist of many different forms, including GP, hospital, dental, mental and alternative health services. We asked respondents whether they had used a number of common health services within the past 12 months, shown in Table 82 and how often they visited them, shown in Table 83 and Table 84.

While approximately nine out of ten (89.9%) adults used primary health services (e.g. visited a GP) within the past 12 months, about one out of eight (11.9%) reported having used mental health services during this period. A significantly higher proportion of females reported using allied health services compared with males (62.5% compared with 49.7%). Persons aged 65 years and over were significantly more likely than those aged 16 to 44 years and 45 to 64 years to use primary, hospital based and allied services but significantly less likely than these younger age groups to use mental health or alternative health services. Persons were significantly more likely to use allied health services with increasing age group, however significantly less likely to use mental health services. The most commonly used health service at a population level was primary health care services, with a mean of 4.5 visits in the past 12 months, followed by allied health services with 3.2 visits. Persons aged 65 years and over had a significantly higher mean number of visits for primary health services compared to the younger age groups, and a significantly higher mean number of visits for hospital services compared to those aged 25 to 44 years (Table 83). The mean number of mental health service visits decreased significantly with age group, while those aged 65 years and over had significantly fewer mean visits to allied health services compared to the younger age groups (Table 83).

Table 84 presents the mean number of visits to health services amongst those who used the type of service at least once in the past 12 months.

Table 82: Health service utilisation in the past 12 months, 16 years & over, HWSS 2019

	Primary (a)		Hospital based (b)		Allied (c)		Dental		Mental (d)		Alternative (e)	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs												
Males	83.8	(77.7 - 90.0)	30.0	(21.4 - 38.5)	41.7	(33.2 - 50.3)	50.6	(41.8 - 59.4)	14.7	(8.5 - 20.9)	9.7 *	(4.1 - 15.3)
Females	88.4	(81.9 - 95.0)	21.9	(15.7 - 28.0)	55.2	(47.0 - 63.4)	58.6	(50.6 - 66.7)	21.0	(13.9 - 28.1)	11.7	(6.8 - 16.6)
Persons	86.1	(81.6 - 90.6)	26.0	(20.6 - 31.3)	48.4	(42.4 - 54.4)	54.6	(48.6 - 60.5)	17.8	(13.1 - 22.6)	10.7	(6.96 - 14.4)
45 to 64 yrs												
Males	89.7	(86.9 - 92.6)	28.1	(24.1 - 32.1)	51.9	(47.3 - 56.5)	58.1	(53.6 - 62.6)	6.6	(4.2 - 8.9)	6.0	(3.9 - 8.1)
Females	93.8	(92.0 - 95.5)	27.7	(24.4 - 31.0)	67.3	(63.8 - 70.8)	64.8	(61.2 - 68.3)	8.1	(6.0 - 10.2)	12.1	(9.7 - 14.6)
Persons	91.8	(90.1 - 93.4)	27.9	(25.3 - 30.5)	59.6	(56.7 - 62.5)	61.4	(58.6 - 64.3)	7.3	(5.8 - 8.9)	9.1	(7.4 - 10.7)
65 yrs & over												
Males	97.2	(96.1 - 98.2)	40.5	(37.5 - 43.5)	69.7	(67.0 - 72.5)	59.3	(56.4 - 62.3)	2.0	(1.1 - 2.8)	2.4	(1.6 - 3.3)
Females	97.0	(96.1 - 97.8)	35.5	(33.1 - 37.9)	73.7	(71.5 - 75.9)	59.8	(57.4 - 62.3)	3.8	(2.8 - 4.8)	5.9	(4.7 - 7.1)
Persons	97.1	(96.4 - 97.7)	37.9	(36.0 - 39.8)	71.8	(70.1 - 73.6)	59.6	(57.7 - 61.5)	2.9	(2.3 - 3.6)	4.3	(3.5 - 5.01)
Total												
Males	88.0	(84.7 - 91.3)	31.2	(26.6 - 35.8)	49.7	(44.9 - 54.5)	54.4	(49.7 - 59.2)	10.0	(6.7 - 13.3)	7.3	(4.3 - 10.3)
Females	91.7	(88.4 - 95.1)	26.3	(22.9 - 29.6)	62.5	(58.1 - 66.8)	60.8	(56.6 - 64.9)	13.7	(10.0 - 17.4)	10.7	(8.2 - 13.3)
Persons	89.9	(87.5 - 92.2)	28.7	(25.8 - 31.6)	56.1	(52.8 - 59.4)	57.6	(54.4 - 60.8)	11.9	(9.4 - 14.3)	9.0	(7.1 - 11.0)

(a) e.g. medical specialist, general practitioner, community health centre, community or district nurses.

(b) e.g. overnight stay, accident and emergency Department or outpatients.

(c) e.g. optician, physiotherapist, chiropractor, podiatrist, dietician, nutritionist, occupational therapist, diabetes/other health educator.

(d) e.g. psychiatrist, psychologist or counsellor.

(e) e.g. acupuncturist, naturopath, homeopath or any other alternative health service.

* Mean estimate has an RSE between 25%-50% and should be used with caution.

Table 83: Mean visits to health services in the past 12 months, 16 years & over, HWSS 2019

	Primary (a)		Hospital based (b)		Allied (c)		Dental		Mental (d)		Alternative (e)	
	mean	95% CI	mean	95% CI	mean	95% CI	mean	95% CI	mean	95% CI	mean	95% CI
16 to 44 yrs												
Males	3.8	(2.7 - 4.9)	0.6 *	(0.2 - 1.0)	3.2 *	(1.6 - 4.8)	1.0	(0.6 - 1.5)	1.4 *	(0.5 - 2.2)	0.3 *	(0.1 - 0.6)
Females	4.4	(3.6 - 5.2)	0.3	(0.2 - 0.5)	3.1	(2.2 - 4.1)	0.9	(0.7 - 1.1)	1.1	(0.6 - 1.6)	0.6 *	(0.2 - 1.0)
Persons	4.1	(3.4 - 4.8)	0.5	(0.2 - 0.7)	3.2	(2.2 - 4.1)	1.0	(0.7 - 1.2)	1.2	(0.7 - 1.7)	0.5 *	(0.2 - 0.7)
45 to 64 yrs												
Males	3.7	(3.3 - 4.0)	0.5	(0.4 - 0.7)	2.3	(1.9 - 2.7)	1.1	(0.9 - 1.2)	0.5 *	(0.2 - 0.7)	0.3 *	(0.2 - 0.5)
Females	4.8	(4.4 - 5.1)	0.6	(0.4 - 0.7)	4.2	(3.6 - 4.7)	1.2	(1.1 - 1.3)	0.5	(0.3 - 0.7)	0.8	(0.6 - 1.1)
Persons	4.2	(3.9 - 4.5)	0.6	(0.4 - 0.7)	3.2	(2.9 - 3.6)	1.1	(1.1 - 1.2)	0.5	(0.3 - 0.6)	0.6	(0.4 - 0.7)
65 yrs & over												
Males	6.3	(5.9 - 6.6)	0.8	(0.7 - 0.9)	3.2	(2.8 - 3.5)	1.1	(1.0 - 1.2)	0.1 *	(0.1 - 0.2)	0.1	(0.1 - 0.1)
Females	6.2	(5.8 - 6.5)	0.7	(0.6 - 0.8)	3.8	(3.5 - 4.0)	1.1	(1.0 - 1.2)	0.2 *	(0.1 - 0.3)	0.3	(0.2 - 0.5)
Persons	6.2	(6.0 - 6.5)	0.7	(0.7 - 0.8)	3.5	(3.3 - 3.7)	1.1	(1.1 - 1.2)	0.2	(0.1 - 0.2)	0.2	(0.2 - 0.3)
Total												
Males	4.2	(3.6 - 4.7)	0.6	(0.4 - 0.8)	2.9	(2.1 - 3.8)	1.1	(0.8 - 1.3)	0.9 *	(0.4 - 1.3)	0.3	(0.2 - 0.4)
Females	4.8	(4.4 - 5.3)	0.5	(0.4 - 0.6)	3.6	(3.1 - 4.1)	1.0	(0.9 - 1.1)	0.8	(0.5 - 1.0)	0.6	(0.4 - 0.9)
Persons	4.5	(4.2 - 4.9)	0.5	(0.4 - 0.7)	3.2	(2.8 - 3.7)	1.0	(0.9 - 1.2)	0.8	(0.5 - 1.1)	0.5	(0.3 - 0.6)

(a) e.g. medical specialist, general practitioner, community health centre, community or district nurses.

(b) e.g. overnight stay, emergency department or outpatients.

(c) e.g. optician, physiotherapist, chiropractor, podiatrist, dietician, nutritionist, occupational therapist, diabetes/other health educator.

(d) e.g. psychiatrist, psychologist or counsellor.

(e) e.g. acupuncturist, naturopath, homeopath or any other alternative health service.

* Mean estimate has an RSE between 25%-50% and should be used with caution.

Table 84: Mean visits to health services in the past 12 months of those who attended the service, 16 years & over, HWSS 2019

	Primary (a)		Hospital based (b)		Allied (c)		Dental		Mental (d)		Alternative (e)	
	mean	95% CI	mean	95% CI	mean	95% CI	mean	95% CI	mean	95% CI	mean	95% CI
16 to 44 yrs												
Males	4.5	(3.3 - 5.7)	2.0 *	(0.7 - 3.4)	7.7	(4.3 - 11.2)	2.0	(1.2 - 2.9)	9.2 *	(4.6 - 13.8)	3.4 *	(1.7 - 5.1)
Females	5.0	(4.2 - 5.8)	1.5	(1.2 - 1.9)	5.7	(4.1 - 7.3)	1.5	(1.3 - 1.7)	5.3	(3.6 - 7.0)	5.3 *	(2.8 - 7.9)
Persons	4.8	(4.0 - 5.5)	1.8	(1.0 - 2.6)	6.6	(4.8 - 8.3)	1.8	(1.4 - 2.2)	6.9	(4.7 - 9.2)	4.5	(2.8 - 6.1)
45 to 64 yrs												
Males	4.1	(3.7 - 4.5)	1.9	(1.4 - 2.3)	4.5	(3.7 - 5.2)	1.9	(1.7 - 2.0)	7.0	(4.0 - 10.1)	5.7	(3.8 - 7.6)
Females	5.1	(4.7 - 5.5)	2.1	(1.6 - 2.6)	6.2	(5.5 - 6.9)	1.9	(1.7 - 2.0)	6.2	(4.7 - 7.7)	6.9	(5.5 - 8.2)
Persons	4.6	(4.3 - 4.9)	2.0	(1.6 - 2.3)	5.4	(4.9 - 6.0)	1.9	(1.7 - 2.0)	6.6	(5.0 - 8.2)	6.5	(5.4 - 7.6)
65 yrs & over												
Males	6.5	(6.1 - 6.8)	1.9	(1.7 - 2.1)	4.5	(4.1 - 5.0)	1.9	(1.8 - 2.0)	5.7	(4.2 - 7.2)	4.1	(2.8 - 5.4)
Females	6.3	(6.0 - 6.7)	2.0	(1.7 - 2.2)	5.1	(4.7 - 5.5)	1.9	(1.8 - 2.0)	6.2	(3.6 - 8.7)	5.9	(4.0 - 7.8)
Persons	6.4	(6.2 - 6.6)	1.9	(1.8 - 2.1)	4.8	(4.6 - 5.1)	1.9	(1.8 - 1.9)	6.0	(4.3 - 7.8)	5.4	(4.0 - 6.8)
Total												
Males	4.8	(4.1 - 5.4)	2.0	(1.3 - 2.6)	5.9	(4.4 - 7.4)	1.9	(1.6 - 2.3)	8.6	(5.1 - 12.2)	4.0	(2.7 - 5.4)
Females	5.3	(4.9 - 5.7)	1.8	(1.6 - 2.1)	5.7	(5.0 - 6.5)	1.7	(1.6 - 1.8)	5.5	(4.1 - 6.9)	5.9	(4.5 - 7.4)
Persons	5.0	(4.7 - 5.4)	1.9	(1.5 - 2.3)	5.8	(5.0 - 6.6)	1.8	(1.6 - 2.0)	6.8	(5.1 - 8.6)	5.2	(4.1 - 6.3)

(a) e.g. medical specialist, general practitioner, community health centre, community or district nurses.

(b) e.g. overnight stay, emergency department or outpatients.

(c) e.g. optician, physiotherapist, chiropractor, podiatrist, dietician, nutritionist, occupational therapist, diabetes/other health educator.

(d) e.g. psychiatrist, psychologist or counsellor.

(e) e.g. acupuncturist, naturopath, homeopath or any other alternative health service.

* Mean estimate has an RSE between 25%-50% and should be used with caution.

Annual flu vaccinations are recommended for adults aged 65 years and over and are available free of charge.⁴⁷ Respondents aged 65 years and over were asked if they had received the flu vaccination since the first of April 2019 (Table 85). Between April and September 2019, it is estimated that 54.5 per cent of adults aged 65 years and over in WA had received a flu vaccination.

Table 85: Prevalence of flu vaccinations received, 65 years & over, HWSS 2019

	%	95% CI
Males	55.1	(51.1 - 59.0)
Females	53.9	(50.7 - 57.2)
Persons	54.5	(51.9 - 57.0)

Note: Based on data collected from April to September 2019.

12. SOCIAL CHARACTERISTICS

In Australia, private health insurance operates in conjunction with the publicly-funded universal healthcare cover, Medicare. Private health insurance can be purchased by individuals to contribute to the cost of private patient hospital care as well as ancillary medical services such as dental care, optical, chiropractic and physiotherapy treatments.

We asked respondents about their health insurance status. Population estimates for 2019 are shown in Table 86 and the standardised annual prevalence estimates over are shown in (Table 87). The prevalence of adults aged 16 years and over with both hospital and ancillary private health insurance increased significantly between 2008 and 2019 while the prevalence of people without any form of private health insurance decreased significantly during the same period.

Table 86: Private health insurance status, 16 years & over, HWSS 2019

	None		Hospital Only		Ancillary Only		Both Hospital and Ancillary	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	31.7	(22.9 - 40.6)	N/A	(N/A - N/A)	3.7 *	(0.5 - 6.9)	61.3	(52.2 - 70.4)
Females	26.7	(19.4 - 34.0)	N/A	(N/A - N/A)	7.8 *	(1.9 - 13.7)	64.4	(56.2 - 72.7)
Persons	29.2	(23.5 - 35.0)	2.2 *	(0.4 - 4.0)	5.7 *	(2.4 - 9.1)	62.8	(56.7 - 69.0)
45 to 64 yrs								
Males	23.7	(19.9 - 27.5)	2.2 *	(1.0 - 3.5)	4.6	(2.8 - 6.3)	69.5	(65.3 - 73.6)
Females	17.1	(14.4 - 19.8)	2.5 *	(1.2 - 3.7)	6.1	(4.5 - 7.6)	74.3	(71.2 - 77.5)
Persons	20.4	(18.1 - 22.7)	2.4	(1.5 - 3.3)	5.3	(4.2 - 6.5)	71.9	(69.3 - 74.5)
65 yrs & over								
Males	28.6	(25.9 - 31.3)	2.3	(1.5 - 3.1)	4.5	(3.1 - 5.8)	64.6	(61.7 - 67.5)
Females	27.6	(25.4 - 29.8)	2.7	(1.9 - 3.6)	6.2	(4.9 - 7.4)	63.5	(61.1 - 65.9)
Persons	28.1	(26.4 - 29.8)	2.5	(1.9 - 3.1)	5.4	(4.5 - 6.3)	64.0	(62.2 - 65.9)
Total								
Males	28.7	(24.0 - 33.4)	2.8 *	(1.0 - 4.5)	4.1	(2.4 - 5.8)	64.5	(59.6 - 69.3)
Females	23.8	(20.1 - 27.5)	1.9	(1.1 - 2.6)	6.9	(4.0 - 9.8)	67.4	(63.2 - 71.6)
Persons	26.2	(23.2 - 29.2)	2.3	(1.4 - 3.3)	5.5	(3.8 - 7.2)	65.9	(62.7 - 69.1)

* Prevalence estimate has an RSE between 25%-50% and should be used with caution.

N/A Prevalence estimate has an RSE greater than 50% and is considered too unreliable for general use.

Table 87: Private health insurance status over time, 16 years & over, HWSS 2008-2019

	None		Hospital Only		Ancillary Only		Both Hospital and Ancillary	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
2008	34.9	(33.0 - 36.8)	3.0	(2.4 - 3.6)	4.4	(3.6 - 5.1)	57.8	(55.8 - 59.7)
2009	33.2	(31.7 - 34.7)	2.7	(2.1 - 3.2)	4.1	(3.4 - 4.7)	60.1	(58.6 - 61.7)
2010	30.9	(29.2 - 32.5)	2.7	(2.1 - 3.3)	4.3	(3.6 - 4.9)	62.1	(60.4 - 63.9)
2011	28.1	(26.4 - 29.9)	2.9	(2.3 - 3.6)	5.5	(4.6 - 6.4)	63.4	(61.5 - 65.4)
2012	29.1	(27.0 - 31.1)	3.1	(2.1 - 4.1)	5.0	(4.2 - 5.9)	62.8	(60.6 - 65.0)
2013	26.7	(24.7 - 28.7)	2.9	(2.1 - 3.6)	5.2	(4.3 - 6.2)	65.2	(63.0 - 67.3)
2014	26.8	(24.8 - 28.9)	2.1	(1.5 - 2.7)	5.5	(4.6 - 6.4)	65.6	(63.4 - 67.7)
2015	22.7	(20.9 - 24.6)	2.0	(1.3 - 2.7)	6.5	(5.3 - 7.6)	68.8	(66.7 - 70.9)
2016	25.7	(23.3 - 28.2)	3.0	(1.8 - 4.3)	5.1	(3.9 - 6.2)	66.2	(63.5 - 68.9)
2017	23.6	(20.9 - 26.4)	2.3	(1.3 - 3.3)	5.8	(4.4 - 7.2)	68.3	(65.3 - 71.3)
2018	27.3	(24.4 - 30.2)	2.5	(1.5 - 3.5)	5.4	(4.2 - 6.7)	64.8	(61.8 - 67.8)
2019	26.4	(23.3 - 29.4)	2.3	(1.4 - 3.3)	5.4	(3.8 - 7.1)	65.9	(62.6 - 69.1)

REFERENCES

1. Australian Bureau of Statistics, 2016, National Aboriginal and Torres Strait Islander Health Survey, 2018-19, cat. no. 4715.0, ABS, Canberra. Accessed: 6 September 2019. Available from: <https://www.abs.gov.au/ausstats/abs@.nsf/mf/4715.0>
2. Taylor A.W., Dal Grande E., Gill T.K., Chittleborough C.R., Wilson D.H., Adams R.J., Grant J.F., Phillips P.J., Appleton S. and Ruffin R.E., 2006, 'How valid are self-reported height and weight? A comparison between CATI self-report and clinic measurements using a large representative cohort study', *Australian and New Zealand Journal of Public Health*, 30(3): 238-46.
3. Stockwell T., Donath S., Cooper-Stanbury M., Chikritzhs T., Catalano P. and Mateo C., 2004, 'Under-reporting of alcohol consumption in household surveys: a comparison of quantity-frequency, graduated-frequency and recent recall', *Addiction*, 99(8): 1024-33.
4. Australian Bureau of Statistics, 2019, Regional Population by Age and Sex, Australia, 2018, cat. no. 3235.0, ABS, Canberra. Accessed: 18 June 2020. Available from: <https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3235.02018?>
5. DeSalvo K.B., Bloser N., Reynolds K., He J. and Muntner P., 2005, 'Mortality prediction with a single general self-rated health question', *Journal of General Internal Medicine*, 21(3): 267-75.
6. French D., Browning C., Kendig H., Luszcz M., Saito Y., Sargent-Cox K. and Anstey K., 2012, 'A simple measure with complex determinants: investigation of correlates of self-rated health in older men and women from three continents', *BMC Public Health*, 12: 649.
7. Commonwealth of Australia, 2011, National Disability Strategy 2010-2020: an initiative of the Council of Australian Governments, Commonwealth of Australia, Canberra. Accessed: 6 September 2019. Available from: https://www.dss.gov.au/sites/default/files/documents/05_2012/national_disability_strategy_2010_2020.pdf.
8. Australian Institute of Health and Welfare, 2018, Australia's Health 2018, cat. no. AUS 221, AIHW, Canberra. Accessed: 9 September 2019. Available from: <https://www.aihw.gov.au/reports/australias-health/australias-health-2018/contents/table-of-contents>.

9. Australian Institute of Health and Welfare, 2018, Arthritis snapshot, AIHW, Canberra. Accessed: 9 July, 2019. Available from: <https://www.aihw.gov.au/reports/chronic-musculoskeletal-conditions/arthritis-snapshot/contents/arthritis>.
10. Australian Institute of Health and Welfare, 2018, Osteoporosis snapshot, AIHW, Canberra. Accessed: 9 July, 2019. Available from: <https://www.aihw.gov.au/reports/chronic-musculoskeletal-conditions/osteoporosis/contents/what-is-osteoporosis>.
11. Australian Institute of Health and Welfare, 2018, Heart, stroke and vascular diseases, AIHW, Canberra. Accessed: 6 September 2019, Available from: <https://www.aihw.gov.au/reports-statistics/health-conditions-disability-deaths/heart-stroke-vascular-diseases/overview>.
12. WA Department of Health, 2016, Overview of the burden of disease in Western Australia, 2011, WA Department of Health, Perth. Accessed: 6 September 2019. Available from: http://ww2.health.wa.gov.au/~/_/media/Files/Corporate/general%20documents/Population%20health/PDF/WA_Burden_of_Disease_Fact_Sheet.pdf.
13. Australian Institute of Health and Welfare, 2016, Australian Burden of Disease Study: impact and causes of illness and death in Australia, 2011. Australian Burden of Disease Study series no. 3. BOD 4, AIHW, Canberra. Accessed: 6 September 2019. Available from: <https://www.aihw.gov.au/reports/burden-of-disease/abds-impact-and-causes-of-illness-death-2011/contents/highlights>.
14. Australian Institute of Health and Welfare, 2011, Cardiovascular disease: Australian facts 2011, cat. no. CVD 53, AIHW, Canberra. Accessed: 6 September 2019. Available from: <http://www.aihw.gov.au/publication-detail/?id=10737418510>.
15. Australian Institute of Health and Welfare and Australasian Association of Cancer Registries, 2014, Cancer in Australia: in brief 2014. Cancer series no 91, cat. no. 89, AIHW, Canberra. Accessed: Available from: <https://www.aihw.gov.au/getmedia/f6e80a97-a8a3-4709-bcc3-ea3d76175c31/18302.pdf.aspx?inline=true>.
16. Cancer Council Australia, 2015, Preventing cancer. Accessed: 6 September, 2019. Available from: <http://www.cancer.org.au/preventing-cancer/>.
17. Australian Institute of Health and Welfare, 2015, Diabetes mellitus, AIHW, Canberra. Accessed: 6 September 2019. Available from: <http://www.aihw.gov.au/diabetes/>.

18. Australian Institute of Health and Welfare, 2013, Hospitalisations due to falls by older people, Australia 2009-10. Injury research and statistics series no. 70. cat. no. INJCAT 146, AIHW, Canberra. Accessed: 9 September 2019. Available from: <https://www.aihw.gov.au/reports/injury/hospitalisations-falls-older-people-2009-10/contents/table-of-contents>.
19. National Asthma Council Australia, 2015, Australian Asthma Handbook, quick reference guide (version 1.1), National Asthma Council Australia, Melbourne. Accessed: 9 September 2019 Available from: <http://www.astmahandbook.org.au/uploads/555143d72c3e3.pdf>.
20. Australian Institute of Health and Welfare, 2017, Mental health services-in brief 2017, cat. no. HSE 192, AIHW, Canberra. Accessed: 9 September 2019. Available from: <https://www.aihw.gov.au/reports/mental-health-services/mental-health-services-in-brief-2017/contents/table-of-contents>.
21. Piot P. and Ebrahim S., 2010, 'Prevention and control of chronic diseases', *BMJ*, 341: c4865.
22. Australian Institute of Health and Welfare, 2008, Indicators for chronic disease and their determinants, 2008, cat. no. PHE 75, AIHW, Canberra. Accessed: 9 September 2019. Available from: <http://www.aihw.gov.au/publication-detail/?id=6442468072>.
23. Australian Institute of Health and Welfare, 2015, National Health Data Dictionary: version 16.2, National Health Data Dictionary series. Cat. no. HWI 131., AIHW, Canberra. Accessed: 5 September, 2018. Available from: <https://www.aihw.gov.au/getmedia/95a1c4b5-01ab-4524-9ea2-fd45df130a8e/18488-dictionary-v16-2.pdf.aspx?inline=true>.
24. Australian Institute of Health and Welfare, 2017, National Drug Strategy Household Survey 2016: detailed findings. Drug statistics series no. 31, cat. no. PHE 214, AIHW, Canberra. Accessed: 9 September 2019. Available from: <https://www.aihw.gov.au/getmedia/15db8c15-7062-4cde-bfa4-3c2079f30af3/21028a.pdf.aspx?inline=true>.
25. National Health and Medical Research Council, 2009, Australian guidelines to reduce health risks from drinking alcohol, NHMRC, Canberra. Accessed: 13 June, 2018. Available from: http://www.nhmrc.gov.au/files_nhmrc/publications/attachments/ds10-alcohol.pdf.
26. National Health and Medical Research Council, 2013, Australian dietary guidelines, NHMRC, Canberra, ACT. Accessed: 7 September, 2018. Available from: <https://www.nhmrc.gov.au/guidelines-publications/n55>.

27. World Health Organization, 2009, Global health risks: mortality and burden of disease attributable to selected major risks, WHO, Geneva, Switzerland. Accessed: 13 June, 2018. Available from: http://www.who.int/healthinfo/global_burden_disease/GlobalHealthRisks_report_full.pdf.
28. Australian Government Department of Health, 2014, Australia's physical activity and sedentary behaviour guidelines: adults, Department of Health, Canberra.
29. Australian Institute of Health and Welfare, 2003, The Active Australia Survey, a guide and manual for implementation, analysis and reporting, cat. no. CVD 22, AIHW, Canberra. Accessed: 13 June, 2018. Available from: <http://www.aihw.gov.au/publication-detail/?id=6442467449>.
30. Giles-Corti B., Macintyre S., Clarkson J., Pikora T. and Donovan R., 2003, 'Environmental and lifestyle factors associated with overweight and obesity in Perth, Australia', *The Science of Health Promotion*, 18(1): 93-102.
31. Access Economics, 2017, Asleep on the job: costs of inadequate sleep in Australia, Deloitte Access Economics, Canberra. Accessed: 19 June, 2018. Available from: https://www.sleephealthfoundation.org.au/files/Asleep_on_the_job/Asleep_on_the_Job_SHF_report-WEB_small.pdf.
32. Sleep Health Foundation, 2015, Sleep health facts: sleep needs across the lifespan, Sleep Health Foundation, Blacktown, NSW. Accessed: 7 September, 2018. Available from: <http://www.sleephealthfoundation.org.au/files/pdfs/Sleep-Needs-Across-Lifespan.pdf>.
33. Australian Institute of Health and Welfare, 2016, Australia's health 2016. Australia's health series no. 15, cat. no. AUS 199, AIHW, Canberra. Accessed: 7 September, 2018. Available from: <https://www.aihw.gov.au/getmedia/9844cefb-7745-4dd8-9ee2-f4d1c3d6a727/19787-AH16.pdf.aspx?inline=true>.
34. Australian Institute of Health and Welfare, 2017, Impact of overweight and obesity as a risk factor for chronic conditions: Australian Burden of Disease Study. Australian Burden of Disease Study series no.11, cat. no. BOD 12. BOD, AIHW, Canberra.
35. Hayes A., Kortt M., Clarke P. and Brandup J., 2008, 'Estimating equations to correct self-reported height and weight: implications for prevalence of overweight and obesity in Australia', *Australian and New Zealand Journal of Public Health*, 32(6): 542-45.

36. Centers for Disease Control and Prevention, 2015, Healthy weight - it's not a diet, it's a lifestyle! About BMI for adults, CDC, Atlanta, Georgia. Accessed: 13 June, 2018. Available from: http://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/.
37. Mental Health Commission, n.d., Mental health 2020: making it personal and everybody's business, Mental Health Commission, Perth. Accessed: June 18, 2018. Available from: <https://www.mhc.wa.gov.au/media/1316/mhc-strategic-plan.pdf>.
38. Australian Bureau of Statistics, 2003, Information paper: use of the Kessler Psychological Distress Scale in ABS health surveys, Australia 2001, cat. no. 4817.0.55.001, ABS, Canberra. Accessed: 13 June, 2018. Available from: <http://www.abs.gov.au/ausstats/abs@.nsf/mf/4817.0.55.001>.
39. Saunders D. and Daly A., 2000, Collaborative Health and Well-being Survey: psychological distress in the Western Australian population, Department of Health, Western Australia, Perth.
40. Luhamann M., Hofmann W., Eid M. and Lucas R., 2012, 'Subjective well-being and adaptation to life events: a meta-analysis on differences between cognitive and affective well-being', *Journal of Personality and Social Psychology*, 102(3): 592-615.
41. Australian Bureau of Statistics, 2004, Information paper, measuring social capital: an Australian framework and indicators, cat. no. 1378.0, ABS, Canberra. Accessed: 3 July, 2017. Available from: [http://www.ausstats.abs.gov.au/ausstats/free.nsf/0/13C0688F6B98DD45CA256E360077D526/\\$File/13780_2004.pdf](http://www.ausstats.abs.gov.au/ausstats/free.nsf/0/13C0688F6B98DD45CA256E360077D526/$File/13780_2004.pdf).
42. Bailis D.S., Seagall A., Mahon M.J., Chipperfield J.G. and Dunn E.M., 2001, 'Perceived control in relation to socioeconomic and behavioural resources for health', *Social Science and Medicine*, 52: 1661-76.
43. De Ridder D.T.D. and Gillebaart M., 2019, 'Distinguishing between self-control and perceived control over the environment to understand disadvantaged neighbourhood health and lifestyle outcomes', *Psychology and Health*, DOI: 10.1080/08870446.2019.1591409.
44. World Health Organization, n.d., Information sheet: premature death among people with severe mental disorders, WHO, Accessed: 6 September 2019. Available from: http://www.who.int/mental_health/management/info_sheet.pdf.

45. Pevalin D.J. and Rose D., 2003, Social capital for health: investigating the links between social capital and health using the British Household Panel Survey, University of Essex for NHS, Essex, United Kingdom. Accessed: 6 September 2019. Available from:

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.503.2810&rep=rep1&type=pdf>.

46. Australian Bureau of Statistics, 2004, Characteristics of people reporting good or better health, 2001, cat. no. 4828.0.55.001, ABS, Canberra. Accessed: 7 September, 2018. Available from:

<http://www.abs.gov.au/ausstats/abs@.nsf/ProductsbyReleaseDate/E8CD6F5CEDC9587CA2572E6001858BF?OpenDocument>.

47. Australian Technical Advisory Group on Immunisation (ATAGI), 2018, Australian Immunisation Handbook, Department of Health, Canberra. Accessed: 6 September 2019. Available from: <https://immunisationhandbook.health.gov.au/>.



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

© Department of Health 2020

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.