



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

Health and Wellbeing of Adults in Western Australia 2014,

Overview and Trends

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EXECUTIVE SUMMARY

This report describes the findings from the 2014 Health and Wellbeing Surveillance System and provides the health sector and the general public with important information about a number of aspects of health and wellbeing of the Western Australian adult population.

The Health and Wellbeing Surveillance System is a continuous data collection which was initiated in 2002 to monitor the health status of the general population. In 2014, 6,200 adults aged 16 years and over were interviewed via computer assisted telephone interviews between January and December, reflecting an average participation rate of just over 90%. The sample is randomly selected and then weighted to reflect the Western Australian adult population.

Some key findings from the report include:

General health:

- Almost nine out of ten adults aged 16 years and over reported that their health was the same or better than it had been the previous year (87.5%).
- In 2014, persons aged 65 years and over were significantly more likely to report being the primary carer of a family member with a disability or long-term illness compared with persons aged 16-44 years (74.5% compared with 51.5%).

Chronic health conditions:

- The prevalence of arthritis, osteoporosis, heart disease, skin cancer, any other cancer and diabetes all increased significantly with age.
- In 2014, just over one in five adult respondents (22.4%) reported having an injury in the past 12 months that required treatment by a health care professional.
- The lifetime prevalence of asthma decreased significantly for all persons aged 16 years and over from 2002 (17.0%) to 2014 (13.5%).

Lifestyle and physiological risk factors:

- In 2014, persons aged 65 years and over were significantly less likely to be a current smoker compared with those aged 16-44 years (4.4% compared with 13.7% and 14.0%).
- For all persons aged 16 years and over the prevalence of current smoking decreased significantly from 2002 (21.6%) to 2014 (12.3%).
- According to the 2009 guidelines for alcohol consumption introduced by the National Health and Medical Research Council (NHMRC), 27.9% of the Western Australian population in 2014 were drinking at levels likely to increase their risk of long-term alcohol related harm and 11.1% drink at levels that increase their likelihood of short-term alcohol related harm.
- In 2014, the prevalence of males meeting the recommended level of physical activity was significantly higher when compared with the 2007-2008 prevalence estimates, while the prevalence of females meeting the recommended level of physical activity was significantly higher when compared with the 2007 prevalence.
- The mean serves of vegetables for males in 2014 was significantly lower than the 2004-2007 means. For females the mean serves of vegetables was significantly lower than the 2003-2007 and 2010 mean serves recorded. While for all adults the mean serves of vegetables in 2014 was significantly lower than the means recorded in 2003-2008 and 2010.
- There has been a significant increase in the prevalence of obesity in adults from 2002 to 2014, increasing from 21.3% to 27.7%.

Health service utilisation:

- In 2014, 9 out of 10 respondents visited a primary health care service in the last 12 months. Females were significantly more likely than males to visit primary, allied, dental and alternative health care services.

1. INTRODUCTION

The WA Health & Wellbeing Surveillance System (HWSS) is a continuous data collection system which was developed to monitor the health and wellbeing of Western Australians. On average, 600 people throughout Western Australia are interviewed each month. The HWSS began in March 2002 and as at December 2014 over 80,000 adults have been interviewed.

People are asked questions on a range of indicators related to health and wellbeing. Topics include 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 and support health policy development, to identify and monitor emerging trends and to inform and support health service planning and development.

The questions that are included on 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.

This report presents what WA adults aged 16 years and over were saying about their health and wellbeing in 2014. 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 in a very few cases, may not be completely accurate. For example, people are likely to underestimate their weight and alcohol consumption^{1,2}, but they do so consistently. This means that although the estimates for these are likely to be less than the 'true' estimate in the population, the estimates reliably show patterns of change over time. The identification of patterns over time is the basis of a monitoring and surveillance system.

Another feature of a surveillance system is that it is population based. That is, it is designed to examine trends at the population level and although major socio-

demographic group estimates are possible, it is not the purpose of the 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 minority groups within the population such as Aboriginal people, the homeless or those without telephones. People requiring information about Aboriginal health are recommended to consult the results of the 2007-08 National Aboriginal and Torres Strait Islander Social Survey³ or the 2012-13 Australian Aboriginal and Torres Strait Islander Health Survey⁴, 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 over sampling representative of the population in rural and remote areas. An approach letter is sent to selected households informing them about the survey and 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 about the HWSS and provides contact numbers for people to call for more information.

2.2 Weighting data

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, which in this case is the WA population.

The HWSS data are weighted to compensate for the over-sampling 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 2014, this was the 2013 ERP released by the Australian Bureau of Statistics (ABS) in August 2013.⁵

2.3 Response rates

A very important part of any survey is the response rate attained because low response rates may produce estimates that are not representative of the population or that are unreliable or biased. Each year since the HWSS began raw response rates of over 70% have been attained. The response rate for each month of 2014 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 judge to be important.

Table 1: Response rates for 2014 HWSS, 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	Participation Rate (c)
Jan	1030	223	807	116	691	59	589	73.0	85.2	90.9
Feb	1102	246	856	116	740	72	625	73.0	84.5	89.7
Mar	1103	258	845	120	725	72	614	72.7	84.7	89.5
Apr	1205	274	931	160	771	77	653	70.1	84.7	89.5
May	1103	260	843	140	703	53	605	71.8	86.1	91.9
Jun	1354	322	1032	202	830	62	701	67.9	84.5	91.9
Jul	1103	296	807	178	629	39	552	68.4	87.8	93.6
Aug	1053	268	785	102	683	74	553	70.4	81.0	88.2
Sep	1124	338	786	122	664	46	564	71.8	84.9	92.5
Oct	1066	309	757	129	628	54	548	72.4	87.3	91.0
Nov	1204	370	834	145	689	58	597	71.6	86.6	91.1
Dec	658	373	285	8	277	7	260	91.2	93.9	97.4
Total	13105	3537	9568	1538	8030	673	6861	71.7	85.4	91.1

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 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 (WAHWSS), Design and Methodology, Technical Paper No 1. September 2011 – Version 2. This document is available both on the Epidemiology Website on the Department of Health (DoH) Intranet and the DoH internet at the following web addresses:

intranet.health.wa.gov.au/epidemiology/resources/index.cfm

health.wa.gov.au/publications/pop_surveys.cfm

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 prevalence of the population who have a particular health condition. Prevalence is the description of the number or proportion of individuals in a community with a given condition 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. Prevalence involves all affected individuals, regardless of the date of contraction, whereas incidence only involves individuals who have newly contracted the disease during a specified time interval. Surveys generally do not collect or report 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 had a condition, period prevalence represents the proportion of the population who have a condition within a specified period of time, e.g. twelve months, and point prevalence represents the proportion of the population who have a condition at the time of the survey. In this report, most of the prevalence estimates presented are period prevalence. With some conditions, such as asthma, both 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. A copy of the questionnaire is available on the intranet at: intranet.health.wa.gov.au/epidemiology/resources/index.cfm

Non DoH employees are asked to contact the Health Survey Unit, Epidemiology Branch, (WA Department of Health) for a copy of the questionnaire.

3.2 Confidence intervals

Each table presents the estimate of the prevalence of a condition or the estimate of the proportion of the population with a particular characteristic along with the 95% confidence interval around that estimate.

The 95 per cent confidence interval is the range between which the true estimate would lie 95 out of 100 times. Overlapping confidence intervals indicate that there is probably no difference in the estimates being compared. If the confidence intervals do not overlap, then the estimates are considered to be significantly different. Along with determining statistically significant differences confidence intervals can also be used to determine the level of stability around an estimate. The wider the confidence interval is around an estimate the less precise that estimate is and the more caution that should be applied with using it.

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. Estimates with RSEs above 25% are considered unreliable for general use. Therefore, throughout this report, estimates between 25% and 50% have been annotated by an asterisk and should be used with caution. Estimates with RSEs above 50% have been withheld.

In this report wide confidence intervals and high RSEs can be present for young age groups (16-44 years) for certain chronic health conditions, due to the fact that they are more likely to be present and detectable at older 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.

Further information on how to determine whether or not a difference is statistically significant can be found at: health.wa.gov.au/publications/pop_surveys.cfm

3.3 Using this report

This report has been generated 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.

4. PREVALENCE OVER TIME

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/risk factor of interest was derived for each year from 2002 to 2014.

As chronic conditions were not always asked of 16-24 year olds until 2006, chronic condition estimates are presented for 25 year olds and over to ensure comparability across years. To guarantee any changes in prevalence estimates 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, 2014 estimates presented in trend tables may differ slightly from 2014 estimates presented in prevalence tables due to the standardising of estimates to different populations.

Physical activity prevalence over time are shown for adults aged between 18 and 64 years as until 2006, adults aged 65 years and over were not asked the questions that the physical activity estimates are based on.

Small changes in estimates from those presented in previous reports may occur due to the standardisation of the estimates using updated population estimates.

5. DEMOGRAPHICS

The demographic characteristics of the adult sample that participated in the 2014 HWSS collection period are shown in Table 2. The table shows the unweighted number in the sample for each group and the weighted prevalence expressed as a percent.

Table 2: Demographic characteristics, 16 years & over, HWSS 2014

	Unweighted Sample (n)	Estimated Prevalence (%)
Age		
16 to 24 yrs	281	15.7
25 to 44 yrs	1,016	38.1
45 to 64 yrs	2,517	30.5
65 yrs & over	2,390	15.7
Gender		
Females	3,799	49.6
Males	2,405	50.4
Australian Born		
Yes	4,276	64.3
No	1,926	35.7
Aboriginal or Torres Strait Islander		
Yes	108	1.6
No	6,088	98.4
Marital Status		
Married	3,661	58.1
De facto	446	11.6
Widowed	742	3.5
Divorced	501	3.6
Separated	177	1.7
Never married	656	21.5
Region of Residence		
Metro	3,014	78.2
Rural	2,448	14.5
Remote	742	7.2
Health Region		
Goldfields	333	2.5
Great Southern	480	2.8
Kimberley	204	1.9
Midwest	408	2.5
North Metro	1,530	38.5
Pilbara	205	2.9
South Metro	1,484	39.8
South West	1,037	6.3
Wheatbelt	523	3.0

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

Table 3: Socio-demographic characteristics, 16 years & over, HWSS 2014

	Unweighted Sample (n)	Estimated Prevalence (%)
Current Place of Living		
Rented from govt or public authority	258	3.3
Rented privately	601	14.4
Being paid off by you/your partner	1,513	36.6
Fully owned/outright owner	3,553	40.8
Other	217	4.9
Current Living Arrangement		
Living with parent(s)	275	14.5
Living with other family members	389	6.1
Living with friends	58	2.9
Living with a partner and children	1,498	35.1
Living with a partner but no children	2,447	31.0
Living alone	1,372	8.5
Living in a nursing home	12	0.1 *
Living in a retirement village	64	0.5
Other living arrangement	74	1.5
Household Income		
Under \$20,000	699	7.3
\$20,000 to \$40,000	1,011	11.8
\$40,000 to \$60,000	593	9.9
\$60,000 to \$80,000	547	13.0
\$80,000 to \$100,000	510	14.0
\$100,000 to \$120,000	378	9.4
\$120,000 to \$140,000	282	9.3
More than \$140,000	780	25.4
Household Spending		
Spend more money than earn/get	230	4.1
Have just enough money to get by	890	15.0
Spend left over money	341	6.2
Save a bit every now and then	1,837	28.0
Save some regularly	1,910	35.9
Save a lot	533	10.8

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

Table 4: Socio-demographic characteristics, 16 years & over, continued, HWSS 2014

	Unweighted Sample (n)	Estimated Prevalence (%)
Highest Level of Education (a)		
Less than Year 10	488	3.8
Year 10 or Year 11	1,215	13.9
Year 12	631	12.9
TAFE/Trade qualification	2,455	40.7
Tertiary degree or equivalent	1,354	28.7
Employment Status		
Self employed	722	12.0
Employed for wages, salary or payment in kind	2,238	50.2
Unemployed for less than one year	98	2.7
Unemployed for more than one year	47	1.0
Engaged in home duties	419	7.6
Retired	2,393	16.7
Unable to work	119	1.4
A student	130	7.8
Other	33	0.5 *
Receiving a Government Pension		
Yes	2,152	18.5
No	4,018	81.5
Possess a Government Health Care Card		
Yes	2,465	23.9
No	3,699	76.1
Possess Private Health Insurance		
Yes - Hospital only	136	2.1
- Ancillary only	360	5.4
- Both hospital and ancillary	3,828	65.6
No	1,786	26.9

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

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

People aged 16-64 years who were employed were asked whether they did fly-in fly-out work which took them away from home for a set period each week or month, and whether they were a shift worker. The prevalence of working away and shift work are shown in Table 5.

Table 5: Prevalence of working away and shift work, 16-64 years, HWSS 2014

	Working Away		Shift Work	
	Unweighted Sample (n)	Estimated Prevalence (%)	Unweighted Sample (n)	Estimated Prevalence (%)
Age				
16 to 44 years	40	7.0	78	10.2
45 to 64 years	67	5.8	121	6.9
16 to 64 years	107	6.5	199	8.9
Sex				
Males	93	11.2	107	10.2
Females	14	0.6 *	92	7.4
Persons	107	6.5	199	8.9

* Prevalence estimate has a 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.^{6, 7} Respondents were asked several questions regarding their general health, including their overall health status now and compared with one year ago, the SF-8™ (a quality of life measure) and questions regarding family members with disabilities. Table 6 shows respondents' self-reported general health status.

Table 6: Self-reported health status, by age and sex, 16 years & over, HWSS 2014

	Excellent		Very good		Good		Fair		Poor	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	21.5	(16.3 - 26.6)	42.7	(36.8 - 48.5)	29.8	(24.5 - 35.0)	5.3 *	(2.6 - 8.0)	N/A	(N/A - N/A)
Females	25.3	(21.0 - 29.6)	42.1	(37.3 - 46.8)	27.3	(23.1 - 31.6)	3.8 *	(1.9 - 5.8)	1.5 *	(0.3 - 2.6)
Persons	23.3	(19.9 - 26.7)	42.4	(38.6 - 46.2)	28.6	(25.2 - 32.0)	4.6	(2.9 - 6.2)	1.1 *	(0.4 - 1.9)
45 to 64 yrs										
Males	18.5	(15.2 - 21.9)	34.5	(30.6 - 38.4)	30.8	(27.0 - 34.5)	14.0	(10.9 - 17.0)	2.3	(1.3 - 3.2)
Females	19.2	(16.8 - 21.7)	40.2	(37.1 - 43.4)	29.6	(26.6 - 32.5)	8.2	(6.6 - 9.9)	2.7	(1.7 - 3.8)
Persons	18.9	(16.8 - 21.0)	37.3	(34.8 - 39.9)	30.2	(27.8 - 32.5)	11.1	(9.4 - 12.9)	2.5	(1.8 - 3.2)
65 yrs & over										
Males	13.8	(11.1 - 16.4)	29.2	(25.8 - 32.5)	38.4	(34.9 - 42.0)	13.2	(10.8 - 15.6)	5.4	(3.8 - 7.0)
Females	13.5	(11.3 - 15.6)	30.5	(27.6 - 33.4)	37.1	(34.0 - 40.1)	14.9	(12.7 - 17.1)	4.1	(2.9 - 5.3)
Persons	13.6	(11.9 - 15.3)	29.9	(27.7 - 32.1)	37.7	(35.4 - 40.0)	14.1	(12.4 - 15.7)	4.7	(3.7 - 5.7)
Total										
Males	19.5	(16.4 - 23.9)	38.2	(34.8 - 41.7)	31.3	(28.2 - 34.5)	9.1	(7.3 - 10.9)	1.9	(1.3 - 2.5)
Females	21.4	(19.0 - 23.9)	39.6	(36.8 - 42.3)	29.7	(27.2 - 32.1)	7.0	(5.8 - 8.2)	2.3	(1.6 - 3.0)
Persons	20.4	(18.5 - 22.4)	38.9	(36.7 - 41.1)	30.5	(28.5 - 32.5)	8.1	(7.0 - 9.1)	2.1	(1.6 - 2.6)

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

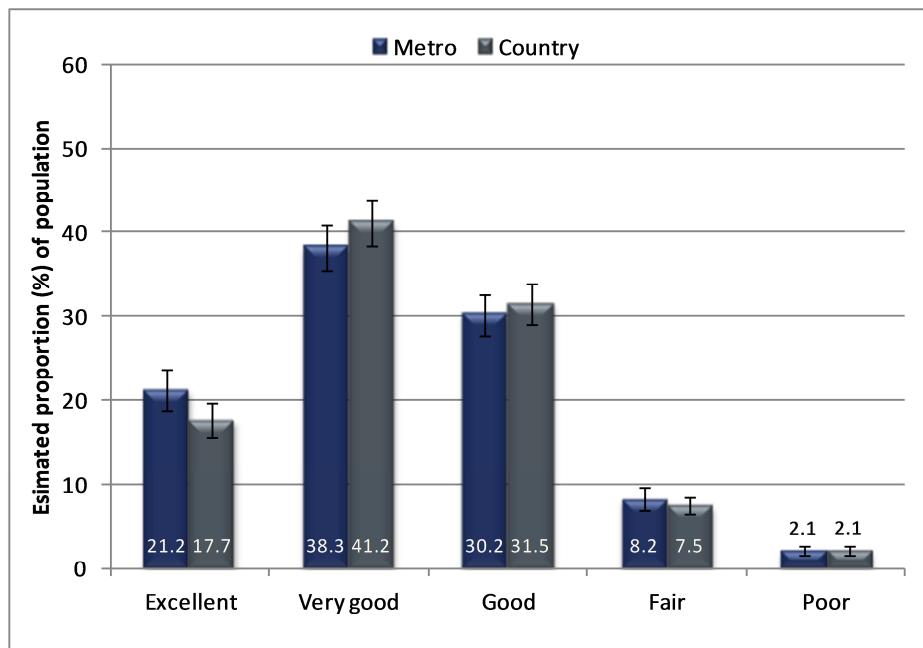
N/A Prevalence estimate has a RSE greater than 50% and is considered too unreliable for general use.

The proportion of people reporting excellent or very good health decreased significantly with age (16-44 years: 65.7%, 45-64 years: 56.2% and 65 years and over: 43.5%).

About one in ten respondents (10.2%) reported that their health was fair or poor. The proportion reporting fair or poor health status increased significantly with age.

Figure 1 shows respondents' self-reported general health by geographic area of residence.

Figure 1: Self-reported health status, by geographic area of residence in WA, 16 years & over, HWSS 2014



There were no significant differences in self-reported health status by geographic area of residence.

Respondents were asked how they would rate their health in general now compared with one year ago, as shown in Table 7.

Table 7: Self-reported health status compared with one year ago, 16 years & over, HWSS 2014

	Much better		Somewhat better		About the same		Somewhat worse		Much worse	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	14.0	(9.7- 18.3)	19.1	(14.5- 23.7)	54.8	(48.9- 60.6)	11.4	(7.8- 15.1)	N/A	(N/A - N/A)
Females	17.4	(13.7- 21.0)	18.1	(14.4- 21.9)	56.6	(51.8- 61.4)	6.8	(4.4- 9.3)	1.1 *	(0.3- 1.8)
Persons	15.6	(12.8- 18.5)	18.6	(15.7- 21.6)	55.7	(51.9- 59.5)	9.2	(7.0- 11.4)	0.9 *	(0.3- 1.4)
45 to 64 yrs										
Males	8.1	(5.7- 10.5)	13.9	(11.0- 16.7)	66.6	(62.8- 70.5)	10.1	(7.8- 12.4)	1.3 *	(0.4- 2.2)
Females	8.5	(6.7- 10.3)	13.4	(11.2- 15.6)	63.2	(60.1- 66.3)	13.1	(10.9- 15.3)	1.8	(1.0- 2.6)
Persons	8.3	(6.8- 9.8)	13.6	(11.8- 15.4)	64.9	(62.4- 67.4)	11.6	(10.0- 13.2)	1.6	(1.0- 2.2)
65 yrs & over										
Males	4.1	(2.7- 5.5)	9.4	(7.2- 11.5)	68.4	(65.0- 71.8)	15.7	(13.1- 18.3)	2.4	(1.4- 3.5)
Females	5.3	(3.9- 6.6)	10.4	(8.5- 12.3)	64.1	(61.1- 67.1)	17.2	(14.8- 19.6)	3.0	(1.9- 4.0)
Persons	4.7	(3.7- 5.7)	9.9	(8.5- 11.4)	66.1	(63.9- 68.4)	16.5	(14.7- 18.3)	2.7	(2.0- 3.5)
Total										
Males	10.8	(8.3- 13.3)	16.1	(13.4- 18.8)	60.4	(56.9- 63.9)	11.6	(9.5- 13.8)	1.1	(0.6- 1.7)
Females	12.6	(10.6- 14.6)	15.4	(13.3- 17.5)	59.9	(57.2- 62.7)	10.5	(9.0- 12.0)	1.6	(1.1- 2.1)
Persons	11.7	(10.1- 13.3)	15.7	(14.0- 17.4)	60.1	(57.9- 62.4)	11.1	(9.7- 12.4)	1.4	(1.0- 1.7)

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

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

While three in five respondents (60.1%) reported their health status as about the same as one year ago, one in nine (11.7%) regarded their health as much better. Self-reported improvement in health status decreased significantly with age, with respondents aged 65 years and over being less than half as likely than those aged 16-44 years to report their health status as much better or somewhat better than one year ago (14.6% compared with 34.2%).

6.1 Mental and physical functioning

Health status was also measured using the SF-8™ instrument, a quality-of-life measure that determines the effects of physical and mental health on day-to-day functioning. Two overall scores were derived from the SF-8™: a Mental Component Score (MCS), which measures the level of emotional wellbeing (shown in Figure 2) and a Physical Component Score (PCS), which measures the level of physical functioning (shown in Figure 3). Scores are standardised. Scores greater than 50 indicate a better than average health functioning while scores less than 50 indicate a lower than average functioning.⁸

Figure 2: Mean mental component scores (MCS), 16 years & over, HWSS 2014

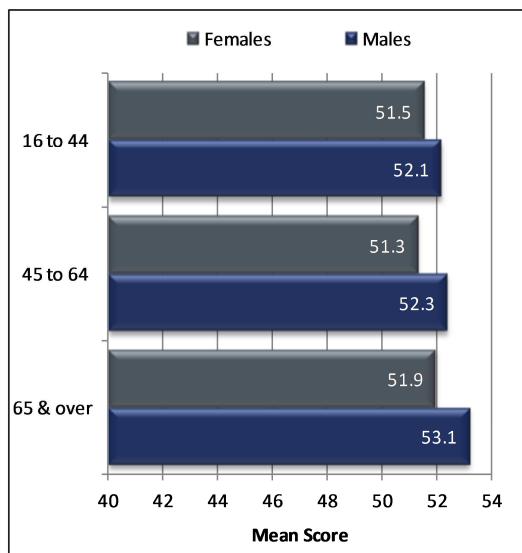
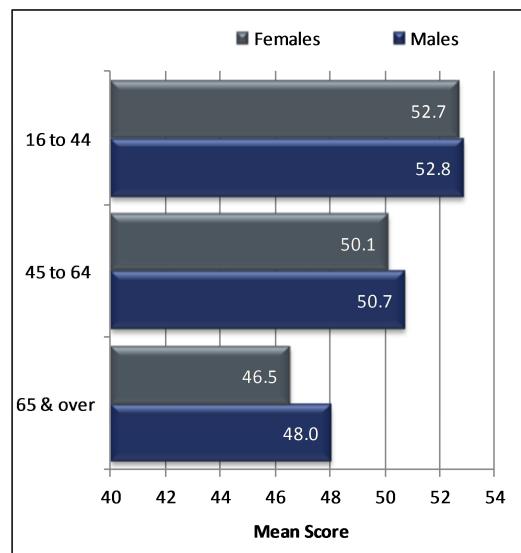


Figure 3: Mean physical component scores (PCS), 16 years & over, HWSS 2014



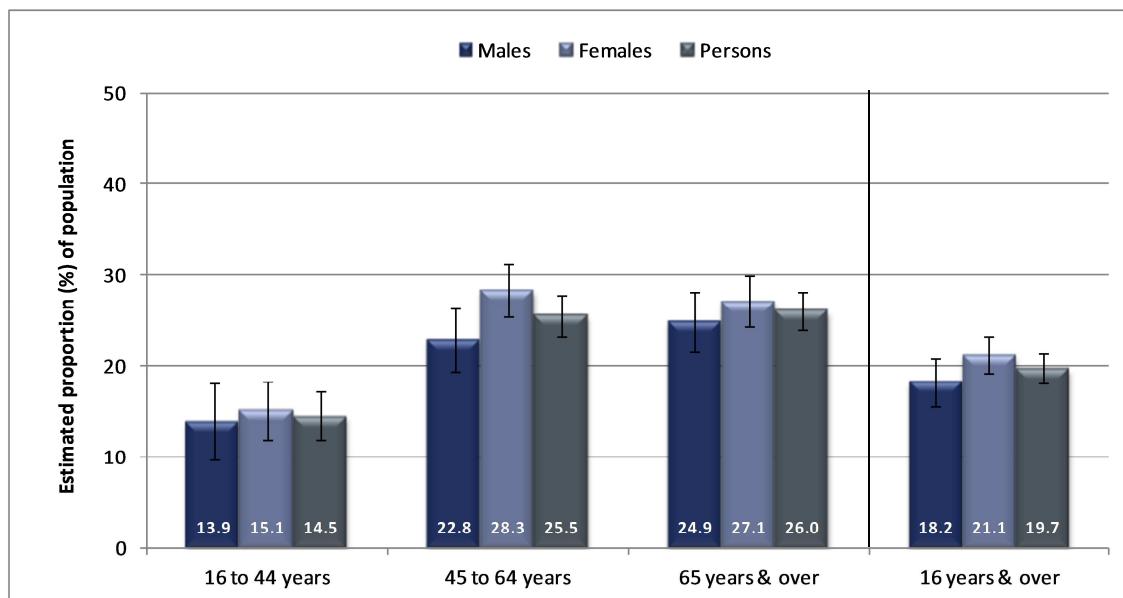
The PCS shows a significant decrease in age-related functioning for both males and females.

6.2 Disability

Disability may be experienced in terms of impairments of body functions and structures, activity limitations or participation restrictions.⁹ Respondents were asked whether they or a family member had a disability, long-term illness or pain that put a burden on either them personally or on their family. Figure 4 shows the proportion of respondents who reported having a family member with a disability, long-term illness

or pain that put a burden on either them personally or on their family. A significantly lower prevalence of adults aged 16-44 years reported a family member with a disability compared with those aged 45-64 years and 65 years and over (14.5% compared with 25.5% and 26.0%). In 2014, an estimated 394,278 Western Australians (19.7%) were in a family where at least one person had a disability. This is not significantly different to the 2013 estimate of 19.4%.¹⁰

Figure 4: Families where at least one person had a disability, long-term illness or pain that put a burden on either them personally or on their family, 16 years & over, HWSS 2014



As illustrated in Figure 5, there were no significant differences in the proportion of the population affected by disability by geographic area of residence for adults 16 years and over.

Figure 5: Families where at least one person had a disability, long-term illness or pain that put a burden on either them personally or on their family, 16 years & over, by geographic area of residence in WA, HWSS 2014

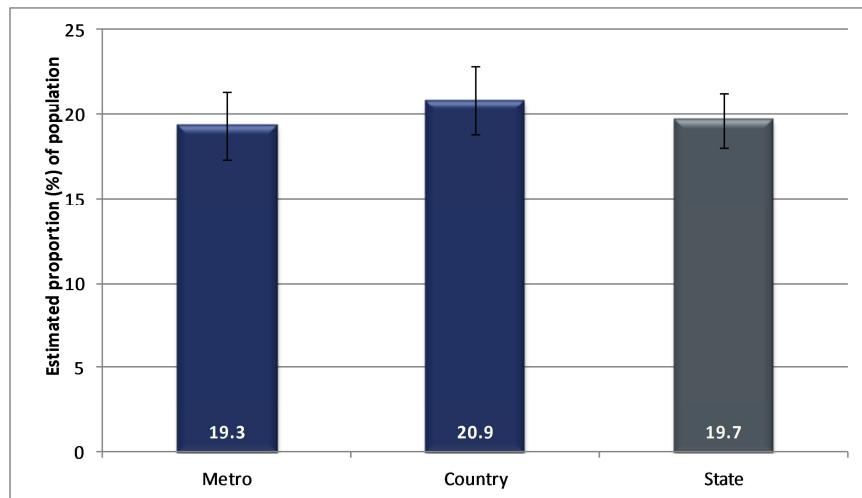


Table 8 shows how respondents rated the burden of the disability, long-term illness or pain on either them personally, or on their family.

Table 8: Rating of burden on the family due to a disability, long-term illness or pain, 16 years & over, HWSS 2014

	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	15.9	(4.8 - 27.1)	46.6	(29.8 - 63.5)	18.3	(6.1 - 30.4)	10.6	(1.2 - 20.0)	N/A	(N/A - N/A)
Females	19.8	(10.3 - 29.2)	43.1	(31.8 - 54.4)	18.5	(11.2 - 25.8)	5.6	(1.9 - 9.2)	13.0	(4.7 - 21.4)
Persons	17.9	(10.6 - 25.2)	44.8	(34.7 - 54.9)	18.4	(11.4 - 25.4)	8.0	(3.1 - 13.0)	10.9	(4.6 - 17.1)
45 to 64 yrs										
Males	17.7	(10.3 - 25.2)	31.1	(23.7 - 38.6)	27.0	(19.2 - 34.9)	14.4	(8.5 - 20.3)	9.7	(5.0 - 14.4)
Females	13.7	(9.1 - 18.2)	32.5	(26.9 - 38.2)	28.5	(23.1 - 33.8)	14.9	(10.4 - 19.4)	10.4	(6.7 - 14.1)
Persons	15.5	(11.3 - 19.7)	31.9	(27.4 - 36.5)	27.8	(23.2 - 32.4)	14.7	(11.1 - 18.3)	10.1	(7.1 - 13.0)
65 yrs & over										
Males	20.9	(14.6 - 27.3)	37.0	(29.6 - 44.4)	23.1	(16.7 - 29.5)	12.7	(7.6 - 17.8)	6.3	(2.7 - 9.8)
Females	16.9	(12.1 - 21.7)	40.5	(34.2 - 46.7)	22.3	(17.2 - 27.4)	10.0	(6.4 - 13.6)	10.3	(6.5 - 14.1)
Persons	18.7	(14.8 - 22.6)	38.9	(34.1 - 43.7)	22.7	(18.7 - 26.7)	11.2	(8.2 - 14.2)	8.5	(5.9 - 11.1)
Total										
Males	17.6	(12.0 - 23.2)	38.7	(30.7 - 46.7)	22.6	(16.5 - 28.7)	12.5	(7.8 - 17.1)	8.5	(4.3 - 12.8)
Females	16.7	(12.5 - 20.8)	38.2	(33.2 - 43.3)	23.4	(19.6 - 27.2)	10.4	(7.8 - 12.9)	11.4	(7.8 - 14.9)
Persons	17.1	(13.7 - 20.5)	38.4	(33.9 - 43.0)	23.0	(19.6 - 26.5)	11.3	(8.8 - 13.9)	10.0	(7.3 - 12.8)

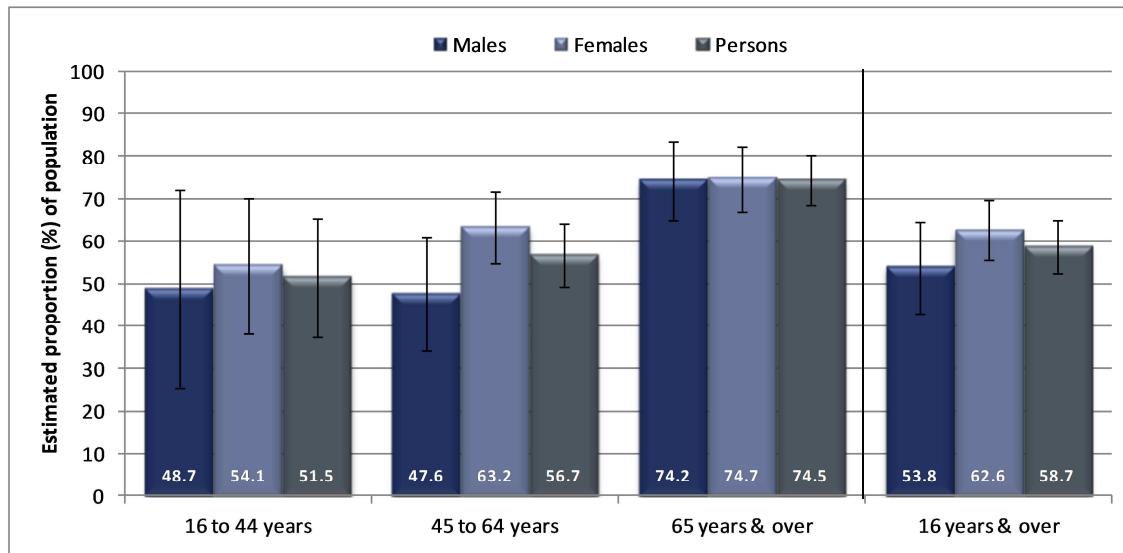
* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

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

Of those respondents with a family member with some form of disability, long-term illness or pain, one in five reported that this puts a big or very big burden on the family.

Respondents who reported themselves or a family member with a disability, long-term illness or pain that put a burden on themselves or their family were also asked if they are the principal carer of this family member. The estimated prevalence of principal carers is shown in Figure 6.

Figure 6: Principal carers, 16 years & over, HWSS 2014



Respondents aged 65 years and over were significantly more likely to report being the principal carer of a family member with a disability or long-term illness compared with those aged 16-44 years (74.5% compared with 51.5%).

Respondents were asked whether they currently have any health problem that requires the use of special equipment, such as a cane, a wheelchair, a special bed or a special telephone, as shown in Table 9.

Table 9: Need aids or special equipment, 16 years & over, HWSS 2014

	Yes		No	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	1.8 *	(0.4 - 3.2)	98.2	(96.8 - 99.6)
Females	0.4 *	(0.1 - 0.8)	99.6	(99.2 - 99.9)
Persons	1.2 *	(0.4 - 1.9)	98.8	(98.1 - 99.6)
45 to 64 yrs				
Males	5.0	(3.3 - 6.7)	95.0	(93.3 - 96.7)
Females	2.7	(1.7 - 3.7)	97.3	(96.3 - 98.3)
Persons	3.9	(2.9 - 4.8)	96.1	(95.2 - 97.1)
65 yrs & over				
Males	12.9	(10.4 - 15.4)	87.1	(84.6 - 89.6)
Females	14.9	(12.8 - 17.1)	85.1	(82.9 - 87.2)
Persons	14.0	(12.4 - 15.6)	86.0	(84.4 - 87.6)
Total				
Males	4.4	(3.4 - 5.4)	95.6	(94.6 - 96.6)
Females	3.6	(3.0 - 4.1)	96.4	(95.9 - 97.0)
Persons	4.0	(3.4 - 4.6)	96.0	(95.4 - 96.6)

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

In 2014, 4.0% of respondents reported that they had a health problem requiring the use of special equipment, such as a cane, a wheelchair, a special bed or a special telephone. This is equivalent to an estimated 80,059 people in WA.

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 chosen are collected by the HWSS due to their health impact and the potential to reduce their burden.¹¹ In the HWSS, chronic conditions were determined by asking 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 causes inflammation of the joints, while osteoporosis is a disease where bone density and structural quality deteriorate, leading to an increased risk of fracture.¹² The lifetime prevalence of arthritis and/or osteoporosis is shown in Table 10.

Table 10: Prevalence of arthritis and/or osteoporosis, 16 years & over, HWSS 2014

	Arthritis		Osteoporosis	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	5.5	(2.9 - 8.0)	N/A	(N/A - N/A)
Females	5.7	(3.7 - 7.6)	0.8 *	(0.1 - 1.6)
Persons	5.6	(3.9 - 7.2)	0.5 *	(0.1 - 0.9)
45 to 64 yrs				
Males	19.6	(16.6 - 22.6)	2.9	(1.8 - 4.0)
Females	30.7	(27.8 - 33.6)	6.8	(5.2 - 8.3)
Persons	25.1	(23.0 - 27.3)	4.8	(3.9 - 5.8)
65 yrs & over				
Males	42.4	(38.7 - 46.0)	8.7	(6.7 - 10.8)
Females	63.1	(60.0 - 66.1)	27.7	(24.9 - 30.5)
Persons	53.4	(51.0 - 55.8)	18.8	(17.0 - 20.7)
Total				
Males	15.1	(13.2 - 17.0)	2.3	(1.8 - 2.8)
Females	23.0	(21.2 - 24.7)	7.2	(6.3 - 8.0)
Persons	19.0	(17.7 - 20.3)	4.7	(4.2 - 5.2)

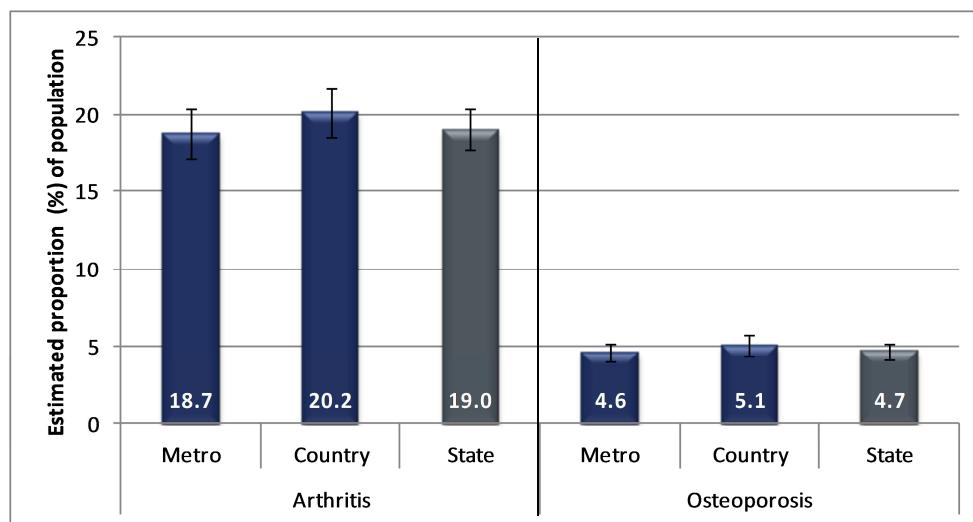
* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

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

Females were significantly more likely than males to report having been diagnosed with arthritis and/or osteoporosis. The prevalence of arthritis and osteoporosis increased significantly with age.

Figure 7 shows the lifetime prevalence of arthritis and osteoporosis by geographic area of residence.

Figure 7: Prevalence of arthritis and osteoporosis, 16 years & over, by geographic area of residence in WA, HWSS 2014



There was no significant difference in the prevalence of arthritis and osteoporosis by geographic area of residence.

The standardised annual prevalence estimates of arthritis and osteoporosis for adults aged 25 years and over are shown in Table 11.

Table 11: Prevalence of arthritis and osteoporosis over time, 25 years & over, HWSS 2002 – 2014

	Arthritis			Osteoporosis		
	Males	Females	Persons	Males	Females	Persons
2002	21.0	28.3	24.6	-	-	-
2003	23.0	28.7	25.9	2.0	8.2	5.1
2004	20.6	31.7	26.1	2.1	9.9	6.0
2005	21.9	28.4	25.1	2.7	8.8	5.8
2006	20.5	28.7	24.6	2.8	8.5	5.6
2007	20.0	28.3	24.2	2.8	8.2	5.5
2008	20.3	28.1	24.2	2.4	9.2	5.8
2009	19.6	27.4	23.5	2.4	8.6	5.5
2010	21.2	26.4	23.8	2.5	8.9	5.7
2011	18.1	27.0	22.6	2.6	8.1	5.4
2012	18.3	25.9	22.1	2.7	8.6	5.7
2013	18.6	26.5	22.5	2.9	8.1	5.5
2014	18.0	26.8	22.4	2.7	8.4	5.6
Average	20.1	27.7	23.9	2.6	8.7	5.7

- This information is not available in 2002.

The prevalence of arthritis for males in 2014 was the lowest recorded since data collection began in 2002, and was significantly lower than the 2003 estimate. For females, the prevalence of arthritis in 2014 was significantly lower than the 2004 prevalence estimate and, for all persons the 2014 estimate was significantly lower when compared with 2003-2004 estimates.

There were no significant differences when the 2014 prevalence of osteoporosis was compared with previous years.

7.2 Heart disease and stroke

Cardiovascular disease, such as heart disease and stroke, is the largest cause of premature death in Australia and accounts for the highest proportion of health system costs, much of which is preventable.¹³ The lifetime prevalence of heart disease and/or stroke is shown in Table 12.

Table 12: Prevalence of heart disease and/or stroke, 16 years & over, HWSS 2014

	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	0.7 *	(0.1 - 1.3)	N/A	(N/A - N/A)
45 to 64 yrs				
Males	7.9	(5.7 - 10.0)	1.5 *	(0.6 - 2.3)
Females	4.9	(3.4 - 6.3)	1.8	(0.9 - 2.6)
Persons	6.4	(5.1 - 7.7)	1.6	(1.0 - 2.2)
65 yrs & over				
Males	28.0	(24.6 - 31.3)	7.3	(5.4 - 9.3)
Females	15.3	(13.1 - 17.5)	4.5	(3.3 - 5.7)
Persons	21.2	(19.2 - 23.2)	5.8	(4.7 - 6.9)
Total				
Males	6.7	(5.7 - 7.7)	1.5	(1.1 - 2.0)
Females	4.6	(3.8 - 5.4)	1.4	(1.0 - 1.7)
Persons	5.6	(5.0 - 6.3)	1.5	(1.2 - 1.7)

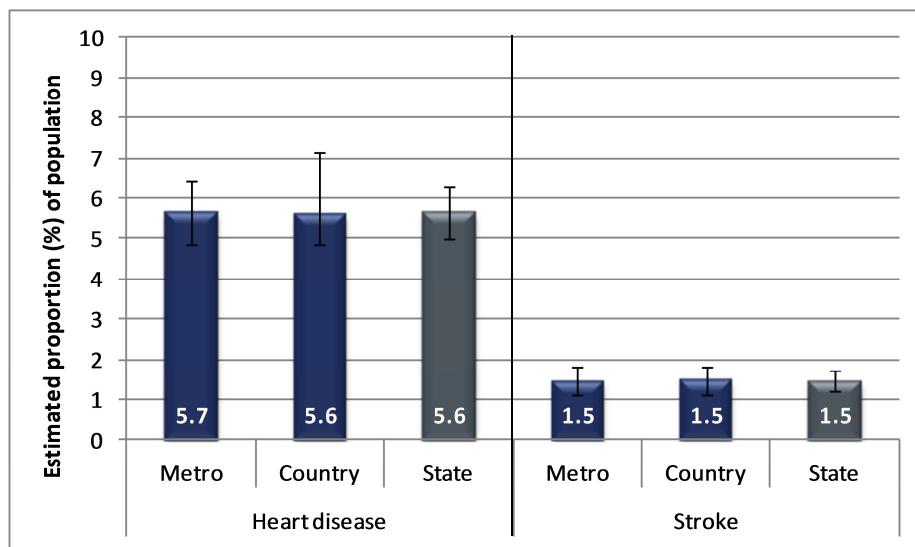
* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

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

The prevalence of heart disease was significantly higher in males compared with females (6.7% compared with 4.6%). Respondents aged 65 years and over were three times more likely to report heart disease compared with those aged 45-64 years.

There were no significant differences when the prevalence of heart disease and stroke is compared by geographic area of residence, as shown in Figure 8.

Figure 8: Prevalence of heart disease and stroke, 16 years & over, by geographic area of residence in WA, HWSS 2014



The standardised annual prevalence estimates of heart disease and stroke for adults aged 25 years and older are shown in Table 13. For both heart disease and stroke, the prevalence has remained relatively stable over time.

Table 13: Prevalence of heart disease and stroke over time, 25 years & over, HWSS 2002 – 2014

	Heart disease			Stroke		
	Males	Females	Persons	Males	Females	Persons
2002	9.2	6.5	7.8	2.3	1.1	1.7
2003	9.0	4.5	6.7	2.5	2.4	2.5
2004	9.7	6.4	8.1	3.1	2.1	2.6
2005	8.8	5.9	7.3	1.9	1.9	1.9
2006	9.2	5.4	7.6	2.6	1.6	2.1
2007	9.2	5.9	7.6	3.0	1.7	2.3
2008	7.8	5.1	6.4	2.7	2.2	2.4
2009	8.3	5.5	6.9	2.6	2.0	2.3
2010	9.0	5.1	7.0	2.4	1.6	2.0
2011	8.6	5.7	7.2	2.5	1.9	2.2
2012	8.2	4.8	6.5	2.3	1.5	1.9
2013	8.9	5.2	7.0	2.0	1.5	1.8
2014	8.0	5.1	6.5	1.8	1.6	1.7
Average	8.7	5.4	7.0	2.4	1.8	2.1

7.3 Cancer and skin cancer

Cancer is regarded as a complex set of diseases characterised by the abnormal proliferation of cells that do not respond to normal growth controls.⁹ In WA, there were 11,743 new cases of cancer recorded in 2013.¹² According to the Cancer Council Australia, approximately 30% of cancer cases could have been prevented through modified lifestyle behaviours.¹⁴

Respondents were asked if they had ever been diagnosed with skin cancer or a cancer other than skin cancer, as shown in Table 14.

Table 14: Prevalence of cancer and skin cancer, 16 years & over, HWSS 2014

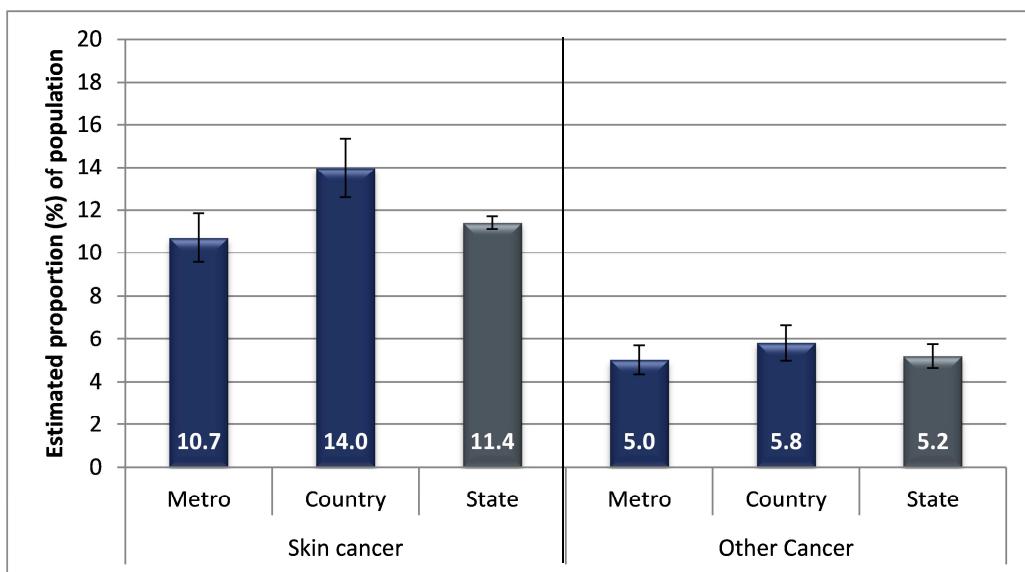
	Skin Cancer		Other Cancer	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	2.7 *	(1.2 - 4.2)	0.4 *	(0.1 - 0.7)
Females	3.2	(1.9 - 4.6)	1.5 *	(0.8 - 2.3)
Persons	3.0	(1.9 - 4.0)	0.9	(0.5 - 1.3)
45 to 64 yrs				
Males	18.2	(15.3 - 21.1)	5.6	(3.8 - 7.4)
Females	12.9	(10.9 - 14.9)	7.3	(5.7 - 8.9)
Persons	15.6	(13.8 - 17.4)	6.5	(5.2 - 7.7)
65 yrs & over				
Males	36.5	(32.9 - 40.0)	17.1	(14.4 - 19.8)
Females	28.8	(25.9 - 31.6)	17.7	(15.3 - 20.1)
Persons	32.4	(30.1 - 34.6)	17.4	(15.6 - 19.2)
Total				
Males	12.3	(10.8 - 13.8)	4.4	(3.6 - 5.2)
Females	10.5	(9.3 - 11.7)	6.0	(5.2 - 6.8)
Persons	11.4	(10.5 - 12.4)	5.2	(4.6 - 5.8)

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

The prevalence of skin cancer was significantly higher than all other cancer for all age groups (16-44 year olds; 3.0% compared with 0.9%, 45-64 year olds; 15.6% compared with 6.5%, 65 years and over; 32.4% compared with 17.4%). The prevalence of skin cancer and any other cancer both increased significantly with age.

Figure 9 shows the prevalence of skin cancer and other cancer by geographic area of residence. The prevalence of skin cancer was significantly higher in the country areas compared with the metro areas (14.0% compared with 10.7%).

Figure 9: Prevalence of skin cancer and cancer, 16 years & over, by geographic area of residence in WA, HWSS 2014



The cancer information is not comparable from 2002 due to changes in the way the question was asked. However, since 2007 question wording has been consistent and the standardised annual prevalence estimates of cancer for adults aged 16 years and over since 2007 are shown in Table 15.

Table 15: Prevalence of cancer, excluding skin cancer, over time, 16 years & over, HWSS 2007 – 2014

	Males	Females	Persons
2007	4.4	5.6	5.0
2008	4.5	5.3	4.9
2009	4.3	5.6	4.9
2010	4.9	5.8	5.3
2011	4.0	6.4	5.2
2012	4.4	6.6	5.5
2013	5.0	5.6	5.3
2014	4.4	6.0	5.2
Average	5.0	6.4	5.7

The prevalence estimate in 2014 is not significantly different to previous years.

7.4 Diabetes

Diabetes is a condition where the body is unable to maintain normal blood glucose levels. Diabetes contributes significantly to ill health, disability and premature death in Australia.¹⁵ Table 16 shows the prevalence estimate of diabetes (of any type).

Table 16 also shows the proportion of those with diabetes who are diagnosed with type 2 diabetes.

Table 16: Prevalence of all diabetes and proportion of those with type 2 diabetes, 16 years & over, HWSS 2014

	All Diabetes (a)		Proportion of all Diabetes being Type 2 Diabetes (b)	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	N/A (N/A - N/A)		70.5 * (28.0 - 100.0)	
Females	3.3 (1.9 - 4.6)		24.3 * (7.6 - 41.0)	
Persons	2.2 (1.3 - 3.2)		37.7 * (16.0 - 59.5)	
45 to 64 yrs				
Males	10.0 (7.4 - 12.6)		89.2 (81.7 - 96.7)	
Females	5.5 (4.0 - 7.1)		70.3 (57.1 - 83.6)	
Persons	7.8 (6.3 - 9.3)		82.5 (75.4 - 89.6)	
65 yrs & over				
Males	16.9 (14.1 - 19.6)		93.2 (88.8 - 97.7)	
Females	13.9 (11.8 - 16.1)		91.1 (86.5 - 95.7)	
Persons	15.3 (13.6 - 17.0)		92.2 (89.0 - 95.4)	
Total				
Males	6.2 (5.0 - 7.4)		88.7 (82.4 - 95.0)	
Females	5.8 (4.8 - 6.7)		65.0 (56.1 - 73.8)	
Persons	6.0 (5.2 - 6.8)		77.4 (71.5 - 83.2)	

(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 a RSE between 25%-50% and should be used with caution.

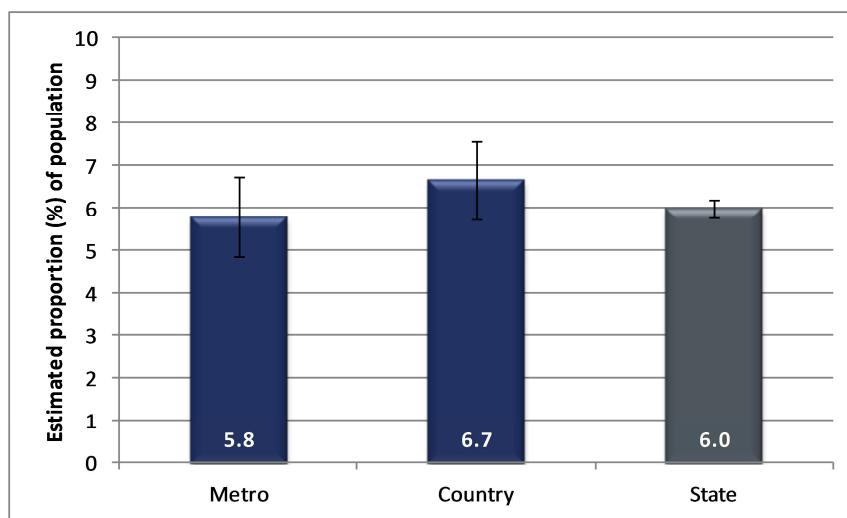
N/A Prevalence estimate has a RSE greater than 50% and is considered too unreliable for general use.

Approximately one in eighteen respondents (6.0%) reported having ever been diagnosed with diabetes; this represents approximately 120,108 people in WA. The prevalence of diabetes increased significantly with age, with those aged 65 years and over almost seven times more likely to report diabetes when compared with

those aged 16-44 years. Of those persons 16 years and over who reported ever being diagnosed with diabetes, three in four (77.4%) were diagnosed with type 2 diabetes.

Figure 10 illustrates the prevalence of diabetes in WA adults by geographic area of residence. There were no significant differences when the prevalence of diabetes was compared by geographic area of residence.

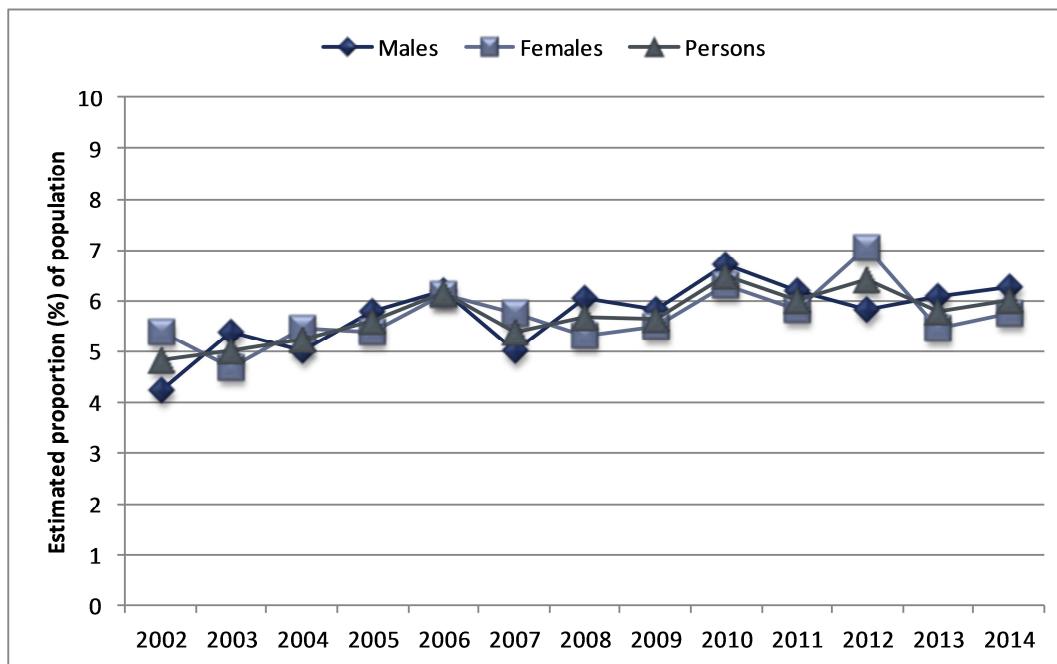
Figure 10: Prevalence of diabetes, 16 years & over, by geographic area of residence in WA, HWSS 2014



The standardised annual prevalence estimates of diabetes for adults aged 16 years and over are shown in Table 17 and Figure 11.

Table 17: Prevalence of diabetes over time, 16 years & over, HWSS 2002-2014

	Males	Females	Persons
2002	4.2	5.4	4.8
2003	5.4	4.7	5.0
2004	5.0	5.5	5.2
2005	5.8	5.4	5.6
2006	6.2	6.1	6.2
2007	5.0	5.8	5.4
2008	6.0	5.3	5.7
2009	5.8	5.5	5.7
2010	6.7	6.3	6.5
2011	6.2	5.8	6.0
2012	5.8	7.0	6.4
2013	6.1	5.5	5.8
2014	6.3	5.7	6.0
Average	5.8	5.7	5.7

Figure 11: Prevalence of diabetes over time, 16 years & over, HWSS 2002-2014

There are no significant differences when the 2014 prevalence estimate for diabetes is compared with previous year's estimates.

7.5 Injury

Injury is a major cause of hospitalisation and death in Australia.¹⁶ One of the primary contributors to the injury burden arises from the management of injuries in older people that resulted from falls.¹⁷ Respondents were asked 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, shown in Table 18.

Table 18: Prevalence of injuries and falls in past 12 months, 16 years & over, HWSS 2014

	Injury		Proportion of injuries due to falls (a)		Injury due to falls, all respondents (b)	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	29.4	(24.2 - 34.6)	23.7	(14.1 - 33.4)	7.0	(3.7 - 10.2)
Females	19.6	(15.9 - 23.4)	22.5	(13.1 - 31.8)	4.4	(2.3 - 6.5)
Persons	24.7	(21.4 - 27.9)	23.2	(16.3 - 30.2)	5.7	(3.8 - 7.7)
45 to 64 yrs						
Males	23.4	(20.0 - 26.8)	19.0	(12.7 - 25.4)	4.4	(2.8 - 6.1)
Females	19.4	(16.8 - 21.9)	32.9	(25.9 - 39.9)	6.4	(4.8 - 8.0)
Persons	21.4	(19.3 - 23.5)	25.3	(20.5 - 30.1)	5.4	(4.3 - 6.5)
65 yrs & over						
Males	16.8	(14.1 - 19.6)	50.0	(41.1 - 59.0)	8.4	(6.4 - 10.4)
Females	15.9	(13.6 - 18.1)	63.9	(56.3 - 71.5)	10.1	(8.2 - 11.9)
Persons	16.3	(14.5 - 18.1)	57.2	(51.3 - 63.1)	9.3	(7.9 - 10.6)
Total						
Males	25.7	(22.7 - 28.8)	24.9	(18.5 - 31.3)	6.4	(4.5 - 8.3)
Females	18.9	(16.8 - 21.1)	31.6	(25.8 - 37.3)	6.0	(4.7 - 7.2)
Persons	22.4	(20.5 - 24.2)	27.7	(23.3 - 32.1)	6.2	(5.1 - 7.3)

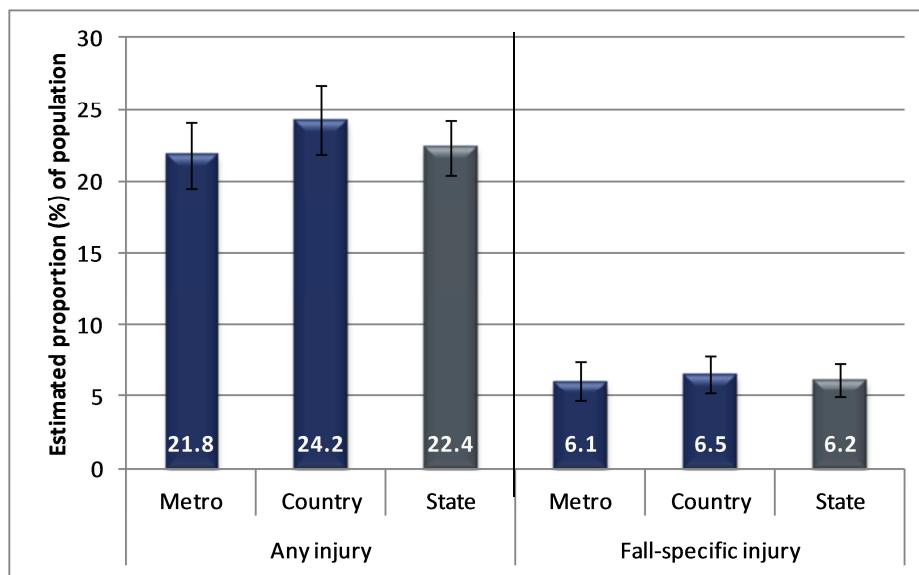
(a) As a proportion of respondents reporting an injury.

(b) As a proportion of all respondents.

More than one in five respondents (22.4%) reported an injury in the past 12 months that required treatment from a health professional with almost one-third of these injuries (27.7%) being the result of a fall.

As shown in Figure 12, there were no significant differences in the prevalence of injuries or falls by geographic area of residence.

Figure 12: Prevalence of any injury and fall in the past 12 months, 16 years & over, by geographic area of residence in WA, HWSS 2014



The standardised annual prevalence estimates of injury requiring treatment by a health professional for adults aged 16 years and over are shown in Table 19 and the mean numbers of injuries are shown in Table 20. There were no significant differences in the prevalence of injuries over time or in the mean number of injuries over time.

Table 19: Prevalence of injuries (a), in the past 12 months, over time, 16 years & over, HWSS 2002 – 2014

	Males	Females	Persons
2002	29.9	19.2	24.5
2003	30.5	19.1	24.8
2004	25.3	17.4	21.4
2005	26.8	16.9	21.9
2006	26.8	17.7	22.3
2007	29.4	19.5	24.4
2008	26.4	18.6	22.5
2009	24.5	18.7	21.6
2010	25.4	20.8	23.1
2011	27.4	21.7	24.6
2012	27.0	21.8	24.4
2013	26.5	19.3	22.9
2014	25.8	19.0	22.4
Average	27.3	19.3	23.3

(a) Injuries in the past 12 months that required treatment from a health professional

Table 20: Mean number of injuries (a) in the past 12 months over time, 16 years & over, HWSS 2002 – 2014

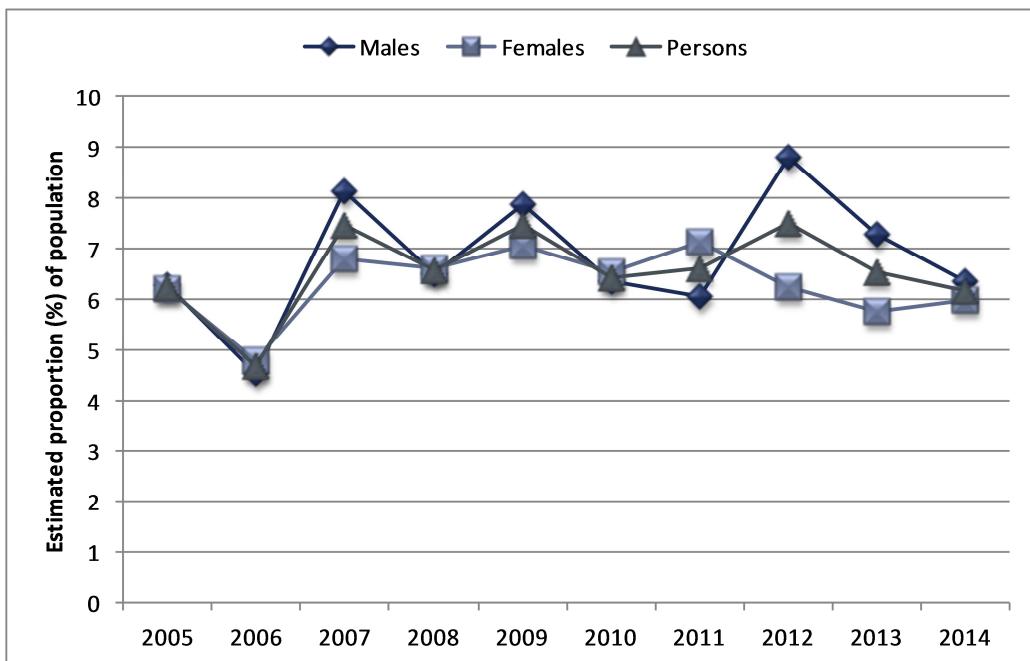
	Males	Females	Persons
2002	0.5	0.3	0.4
2003	0.5	0.3	0.4
2004	0.4	0.3	0.3
2005	0.4	0.2	0.3
2006	0.4	0.2	0.3
2007	0.5	0.3	0.4
2008	0.4	0.3	0.3
2009	0.3	0.3	0.3
2010	0.4	0.3	0.3
2011	0.5	0.3	0.4
2012	0.5	0.3	0.4
2013	0.4	0.3	0.4
2014	0.4	0.3	0.3
Average	0.4	0.3	0.4

(a) Injuries in the past 12 months that required treatment from a health professional

It is possible to have a mean number of injuries that is less than one as the majority of respondents did not experience any injury in the previous year. However, a mean of 0.4 injuries still equates to 448,611 injuries that required treatment by a health care professional in 2014 alone.

Figure 13 illustrates the annual prevalence estimates for falls in the past 12 months, over time.

Figure 13: Prevalence of falls (a) in the last 12 months over time, 16 years & over, HWSS 2005 – 2014



(a) Falls in the past 12 months that required treatment from a health professional

7.6 Asthma

Asthma is a common chronic condition defined clinically as the combination of variable respiratory symptoms (such as wheezing, coughing, tightness of the chest, breathing difficulty and shortness of breath) and excessive variation in lung function.

¹⁸ Respondents were asked 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 prevalence of asthma and asthma action plans (of those who reported having asthma) is shown in Table 21.

Table 21: Prevalence of asthma and asthma action plan, 16 years & over, HWSS 2014

	Lifetime (ever)		Period (current) (a)		Action plan (b)	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	17.3	(12.6 - 22.0)	9.7	(5.7 - 13.7)	22.5 *	(7.8 - 37.2)
Females	13.9	(10.8 - 17.0)	8.9	(6.4 - 11.4)	21.5	(11.9 - 31.1)
Persons	15.7	(12.8 - 18.5)	9.3	(6.9 - 11.7)	22.0	(12.7 - 31.4)
45 to 64 yrs						
Males	9.9	(7.3 - 12.4)	5.3	(3.5 - 7.1)	24.6	(12.8 - 36.5)
Females	13.1	(10.9 - 15.3)	9.5	(7.6 - 11.4)	29.0	(20.7 - 37.3)
Persons	11.5	(9.8 - 13.1)	7.4	(6.1 - 8.7)	27.1	(20.1 - 34.1)
65 yrs & over						
Males	7.4	(5.5 - 9.3)	4.7	(3.1 - 6.3)	20.5 *	(9.7 - 31.3)
Females	13.0	(10.9 - 15.2)	8.6	(6.9 - 10.4)	30.6	(22.5 - 38.7)
Persons	10.4	(8.9 - 11.9)	6.8	(5.6 - 8.0)	27.2	(20.7 - 33.7)
Total						
Males	13.6	(10.9 - 16.3)	7.6	(5.3 - 9.9)	22.8	(12.1 - 33.4)
Females	13.5	(11.7 - 15.3)	9.0	(7.6 - 10.5)	25.2	(19.3 - 31.1)
Persons	13.6	(11.9 - 15.2)	8.3	(7.0 - 9.7)	24.0	(17.9 - 30.1)

(a) Current asthma is defined as having had symptoms of, or treatment for, asthma in the previous twelve months.

(b) Written instructions, developed with a doctor, of what to do if the asthma is worse or out of control.

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

Approximately one in twelve respondents (8.3%) reported having symptoms of or taking treatment for asthma in the past 12 months. This is defined as current asthma and is equivalent to over 167,261 people in WA. Respondents in the 16-44 year age group were significantly more likely to report ever having symptoms of or taking treatment for asthma when compared with those aged 65 years and older.

Figure 14 shows the prevalence of asthma (ever and current) and Figure 15 shows the prevalence of asthma action plans by geographic area of residence. There were no significant differences in the prevalence of asthma (ever or current) or asthma action plans by geographic area or residence.

Figure 14: Prevalence of asthma, 16 years & over, by geographic area of residence in WA, HWSS 2014

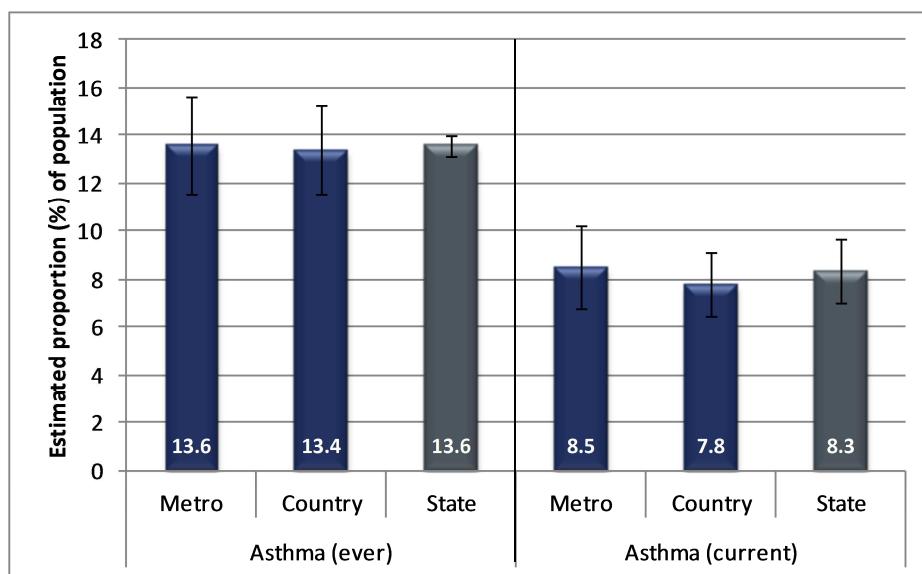
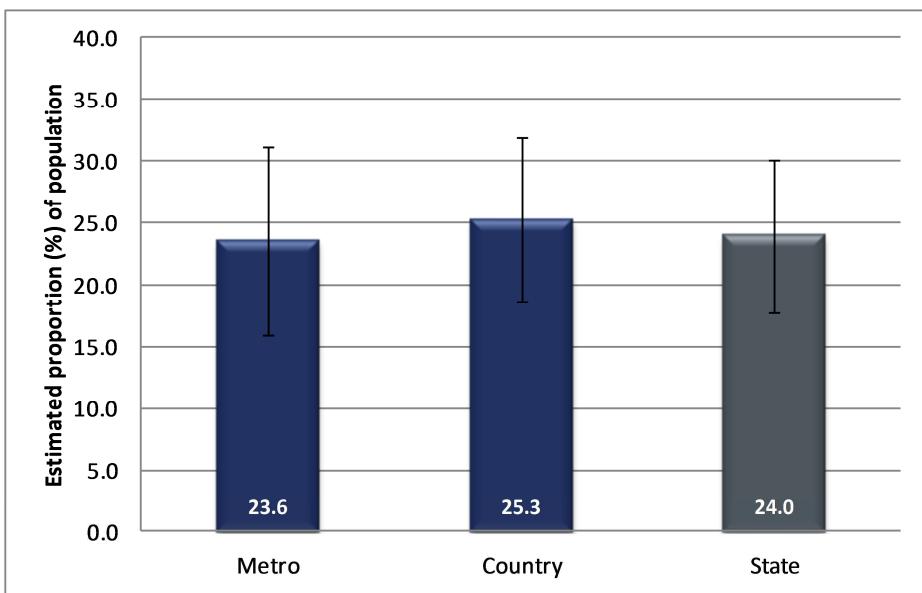


Figure 15: Prevalence of asthma action plans, 16 years & over, by geographic area of residence in WA, HWSS 2014



The standardised annual prevalence estimates of asthma for adults aged 16 years and over are shown in Table 22 and Figure 16. For females, the prevalence of lifetime asthma in 2014 was significantly lower than the 2002-2008 and 2010 estimates. For all persons, the 2014 estimate was significantly lower than the 2002-2004 estimates and the 2006-2008 estimates. In regards to current asthma, the 2014

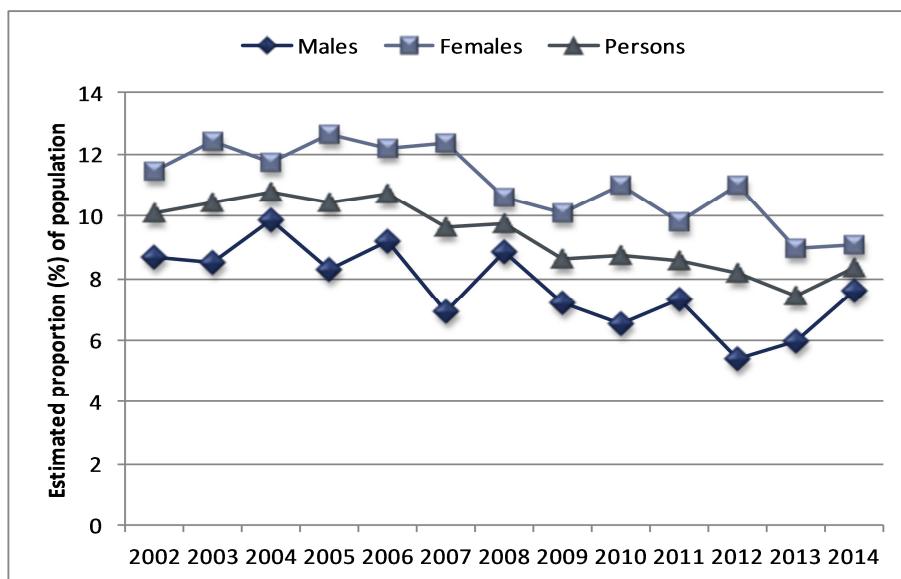
prevalence for females was significantly lower than the 2003, 2005 and 2007 prevalence estimates.

Table 22: Prevalence of asthma over time, 16 years & over, HWSS 2002-2014

	Lifetime (ever)			Period (current) (a)		
	Males	Females	Persons	Males	Females	Persons
2002	16.3	17.7	17.0	8.7	11.4	10.1
2003	15.9	18.5	17.2	8.5	12.4	10.5
2004	17.0	18.8	17.9	9.9	11.7	10.8
2005	14.5	18.1	16.3	8.3	12.6	10.4
2006	16.5	18.3	17.4	9.2	12.2	10.7
2007	15.5	21.4	18.5	6.9	12.4	9.6
2008	16.9	17.9	17.4	8.9	10.6	9.7
2009	14.0	16.3	15.2	7.2	10.1	8.6
2010	14.3	17.3	15.8	6.5	11.0	8.8
2011	13.2	17.2	15.2	7.3	9.8	8.6
2012	13.4	17.3	15.3	5.4	11.0	8.2
2013	11.5	14.9	13.2	6.0	9.0	7.5
2014	13.6	13.5	13.6	7.6	9.1	8.3
Average	14.8	17.5	16.2	7.6	11.1	9.4

(a) Current asthma is defined as having had symptoms of, or treatment for, asthma in the previous twelve months.

Figure 16: Prevalence of current asthma (a) over time, 16 years & over, HWSS 2002 – 2014



(a) Current asthma is defined as having had symptoms of, or treatment for, asthma in the previous twelve months.

Respondents who report having ever been diagnosed with asthma are asked how often, in the last 4 weeks, their asthma interfered with daily activities. Of those respondents who have been diagnosed with asthma, approximately one in five

(21.6%) said that during the last four weeks, their asthma interfered with their daily activities some, all or most of the time. 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 2014

	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)	16.6 *	(5.5 - 27.6)	80.8	(69.0 - 92.6)
Females	N/A	(N/A - N/A)	16.3 *	(7.8 - 24.8)	80.7	(71.7 - 89.7)
Persons	N/A	(N/A - N/A)	16.5	(9.1 - 23.8)	80.8	(73.0 - 88.6)
45 to 64 yrs						
Males	7.8 *	(0.3 - 15.2)	12.4 *	(2.9 - 21.9)	79.8	(68.5 - 91.2)
Females	7.9 *	(2.9 - 13.0)	23.5	(15.7 - 31.3)	68.6	(60.1 - 77.0)
Persons	7.9 *	(3.6 - 12.2)	18.7	(12.6 - 24.8)	73.4	(66.5 - 80.3)
65 yrs & over						
Males	N/A	(N/A - N/A)	15.0 *	(5.4 - 24.6)	80.7	(70.1 - 91.3)
Females	5.1 *	(1.3 - 8.8)	20.7	(13.5 - 27.9)	74.2	(66.5 - 81.9)
Persons	4.8 *	(1.7 - 7.9)	18.8	(13.0 - 24.6)	76.4	(70.1 - 82.7)
Total						
Males	N/A	(N/A - N/A)	15.5 *	(7.5 - 23.6)	80.6	(71.9 - 89.3)
Females	4.8 *	(2.3 - 7.3)	19.2	(13.9 - 24.5)	76.0	(70.3 - 81.7)
Persons	4.3 *	(2.0 - 6.7)	17.3	(12.5 - 22.2)	78.3	(73.1 - 83.6)

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

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

7.7 Respiratory condition other than asthma

Respondents were asked whether 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 problems is shown in Table 24. Both the prevalence of ever having respiratory problems and currently having respiratory problems increased significantly with age.

Table 24: Prevalence of respiratory conditions other than asthma, 16 years & over, HWSS 2014

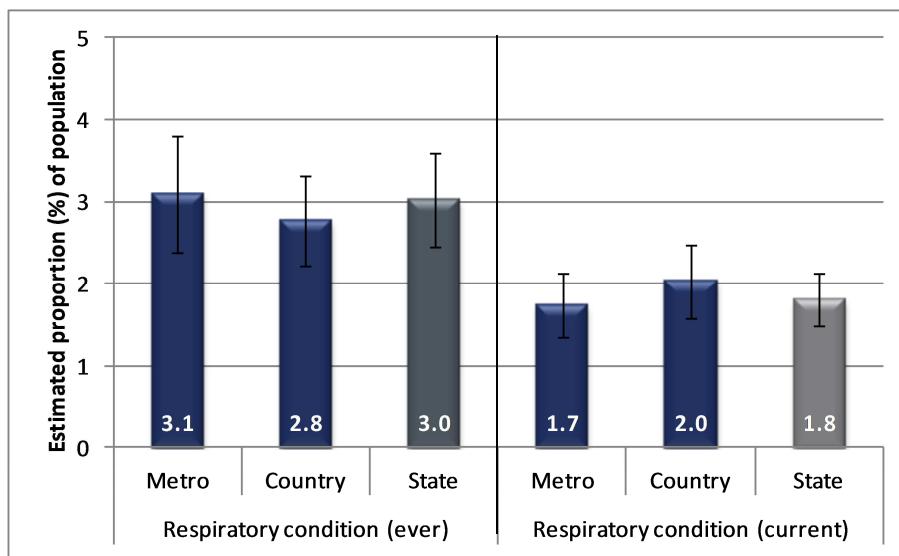
	Lifetime (ever)		Period (current)	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	N/A	(N/A - N/A)	N/A	(N/A - N/A)
Females	1.6 *	(0.4 - 2.7)	N/A	(N/A - N/A)
Persons	1.3 *	(0.5 - 2.2)	0.2 *	(0.0 - 0.3)
45 to 64 yrs				
Males	3.0	(1.7 - 4.3)	2.3 *	(1.1 - 3.4)
Females	3.7	(2.4 - 5.0)	1.8	(1.0 - 2.7)
Persons	3.3	(2.4 - 4.3)	2.0	(1.3 - 2.8)
65 yrs & over				
Males	8.8	(6.8 - 10.9)	7.3	(5.5 - 9.1)
Females	7.6	(6.0 - 9.3)	6.6	(5.0 - 8.2)
Persons	8.2	(6.9 - 9.5)	6.9	(5.7 - 8.1)
Total				
Males	2.8	(2.0 - 3.7)	1.8	(1.3 - 2.2)
Females	3.2	(2.4 - 4.0)	1.8	(1.4 - 2.3)
Persons	3.0	(2.5 - 3.6)	1.8	(1.5 - 2.1)

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

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

Figure 17 shows the prevalence of respiratory conditions, excluding asthma, by geographic area of residence. There were no statistically significant differences in the prevalence of respiratory conditions (ever or current) by geographic area.

Figure 17: Prevalence of respiratory conditions, other than asthma, 16 years & over, by geographic area of residence in WA, HWSS 2014



The respiratory condition information is not comparable over time from 2002 due to changes in the way the question was asked. However, the standardised annual prevalence estimates of a respiratory condition other than asthma for adults aged 16 years and over since 2007 are shown in Table 25. The prevalence estimates for ever or current respiratory conditions have not changed significantly over this time period.

Table 25: Prevalence of respiratory conditions other than asthma over time, 16 years & over, HWSS 2007 – 2014

	Lifetime (ever)			Period (current)		
	Males	Females	Persons	Males	Females	Persons
2007	3.6	3.2	3.4	2.6	1.8	2.2
2008	3.7	3.4	3.6	2.4	2.2	2.3
2009	3.9	3.0	3.4	2.5	1.7	2.1
2010	2.6	3.3	3.0	1.7	1.9	1.8
2011	3.8	3.3	3.5	2.7	1.9	2.3
2012	2.5	2.6	2.5	1.9	1.6	1.7
2013	3.9	2.6	3.3	2.6	1.6	2.1
2014	2.8	3.2	3.0	1.8	1.8	1.8
Average	3.6	3.3	3.5	2.5	2.0	2.3

7.8 Mental health

Mental health conditions include both short-term conditions, such as depression and anxiety as well as long-term conditions, such as chronic depression and schizophrenia. Mental health problems are associated with high rates of co-morbid disorders such as physical disorders, epilepsy and diabetes.¹⁹

Respondents were asked whether or not a doctor had diagnosed them with a number of common mental health conditions during the past 12 months. The prevalence of each condition is shown in Table 26.

Table 26: Prevalence of mental health conditions, 16 years & over, HWSS 2014

	Anxiety		Depression		Stress-related problem		Other mental health condition	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	6.8 *	(3.4 - 10.3)	7.4	(3.9 - 10.9)	9.2	(5.4 - 12.9)	2.2 *	(0.6 - 3.9)
Females	9.5	(6.8 - 12.2)	8.1	(5.8 - 10.5)	10.9	(8.0 - 13.9)	1.5 *	(0.4 - 2.5)
Persons	8.1	(5.9 - 10.3)	7.7	(5.6 - 9.9)	10.0	(7.6 - 12.4)	1.9 *	(0.9 - 2.8)
45 to 64 yrs								
Males	5.1	(3.4 - 6.9)	7.1	(4.9 - 9.2)	7.5	(5.3 - 9.7)	1.3 *	(0.4 - 2.2)
Females	9.9	(8.0 - 11.8)	9.9	(8.0 - 11.8)	10.7	(8.7 - 12.7)	1.6	(0.9 - 2.4)
Persons	7.5	(6.2 - 8.8)	8.5	(7.0 - 9.9)	9.1	(7.6 - 10.6)	1.4	(0.9 - 2.0)
65 yrs & over								
Males	3.4	(2.1 - 4.7)	3.6	(2.3 - 4.9)	2.6	(1.5 - 3.7)	0.5 *	(0.1 - 0.9)
Females	6.7	(5.1 - 8.3)	6.9	(5.3 - 8.6)	6.8	(5.2 - 8.3)	0.9 *	(0.3 - 1.6)
Persons	5.1	(4.1 - 6.2)	5.4	(4.3 - 6.5)	4.8	(3.8 - 5.8)	0.7 *	(0.3 - 1.1)
Total								
Males	5.8	(3.8 - 7.8)	6.7	(4.7 - 8.8)	7.7	(5.5 - 9.9)	1.7 *	(0.7 - 2.6)
Females	9.1	(7.6 - 10.7)	8.5	(7.1 - 9.9)	10.1	(8.5 - 11.8)	1.4	(0.8 - 2.1)
Persons	7.5	(6.2 - 8.7)	7.6	(6.4 - 8.8)	8.9	(7.5 - 10.3)	1.6	(1.0 - 2.1)

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

Adults aged 16-44 years had a higher prevalence of anxiety, depression, stress-related problems as well as other mental health conditions diagnosed within the last 12 months when compared with adults aged 65 years and over, however only the difference in stress-related problems was statistically significant (10.0% compared

with 4.8%). Respondents were also asked whether they were currently receiving treatment for any of their mental health conditions, as shown in Table 27.

Table 27: Current mental health status, 16 years & over, HWSS 2014

	Any mental health condition (a)		Any condition currently receiving treatment for (b)	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	13.3	(9.1 - 17.4)	6.5	(3.6 - 9.4)
Females	16.7	(13.2 - 20.1)	8.0	(5.8 - 10.3)
Persons	14.9	(12.2 - 17.6)	7.2	(5.4 - 9.1)
45 to 64 yrs				
Males	11.4	(8.8 - 14.1)	6.9	(4.8 - 8.9)
Females	16.8	(14.4 - 19.2)	10.9	(8.9 - 12.9)
Persons	14.1	(12.3 - 15.9)	8.9	(7.4 - 10.3)
65 yrs & over				
Males	5.6	(4.0 - 7.3)	3.8	(2.4 - 5.2)
Females	12.6	(10.5 - 14.7)	6.8	(5.2 - 8.4)
Persons	9.3	(8.0 - 10.7)	5.4	(4.3 - 6.4)
Total				
Males	11.6	(9.2 - 14.1)	6.2	(4.5 - 7.9)
Females	16.0	(14.0 - 18.0)	8.7	(7.3 - 10.1)
Persons	13.8	(12.2 - 15.4)	7.5	(6.3 - 8.6)

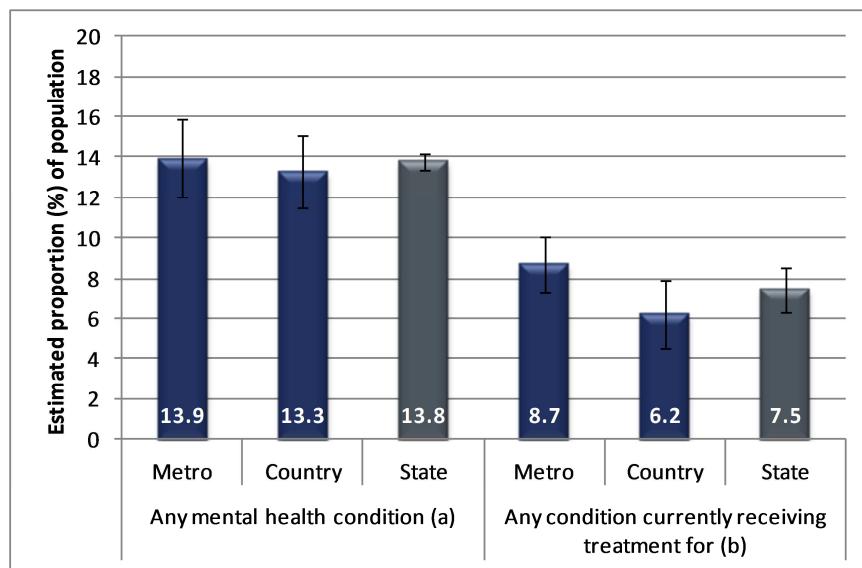
- (a) People who reported that they had been diagnosed with a mental health condition in the previous 12 months
 (b) People who reported that they are currently receiving treatment for a mental health condition.

Almost one in seven respondents (13.8%) reported having been diagnosed with a mental health condition during the past 12 months while one in thirteen (7.5%) respondents were currently receiving treatment for such a mental health condition.

A significantly lower proportion of respondents aged 65 years and over reported being diagnosed with any mental health condition in the past 12 months compared with respondents aged 16-44 years and 45-64 years (9.3% compared with 14.9% and 14.1% respectively).

Figure 18 shows the prevalence of mental health conditions and current treatment by geographic area of residence.

Figure 18: Prevalence of current mental health conditions, by geographic area of residence in WA, HWSS 2014



There were no significant differences in the prevalence of mental health conditions or of receiving treatment for a current mental health condition by area of residence.

The standardised annual prevalence estimates for a current mental health condition for adults aged 16 years and over are shown in Table 28. There are no significant differences in the prevalence of mental health conditions over time.

Table 28: Prevalence of current mental health condition over time, 16 years & over, HWSS 2002 – 2014

	Males	Females	Persons
2002	9.6	15.6	12.6
2003	10.6	18.2	14.4
2004	10.0	16.5	13.2
2005	-	-	-
2006	8.1	15.9	12.0
2007	10.7	15.8	13.3
2008	9.1	17.5	13.3
2009	10.7	16.8	13.7
2010	11.3	18.2	14.8
2011	10.7	18.3	14.4
2012	12.5	16.1	14.3
2013	11.4	19.2	15.3
2014	11.6	16.1	13.8
Average	10.3	17.0	13.6

- 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 high consumption of fruit and vegetables, or a negative effect, such as smoking and physical inactivity.²⁰ Modifiable lifestyle behaviours are also associated with the onset of physiological risk factors, such as high cholesterol, high blood pressure and obesity.

8.1 Smoking

Smoking increases the risk of a number of health conditions, including respiratory disease, coronary heart disease, stroke and several cancers, such as lung and mouth cancers.²¹ Respondents were asked their smoking status, including cigarettes, cigars and pipes and whether or not people smoke in their home. Current smoking status is shown in Table 29.

Females were significantly more likely than males to report having never smoked (58.0% compared with 49.0%). Persons aged 16-44 and 45-65 years were significantly more likely than persons aged 65 years and over to report smoking daily (9.9% and 11.7% compared with 3.6%).

Table 29: Current smoking status, 16 years & over, HWSS 2014

	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		I've never smoked	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	12.4	(8.6 - 16.2)	3.7 *	(1.6 - 5.7)	18.5	(14.2 - 22.8)	8.0	(5.0 - 11.1)	57.4	(51.7 - 63.2)
Females	7.3	(4.9 - 9.6)	3.9 *	(1.8 - 6.1)	18.8	(15.4 - 22.1)	7.4	(4.9 - 9.9)	62.6	(58.0 - 67.2)
Persons	9.9	(7.6 - 12.2)	3.8	(2.3 - 5.3)	18.6	(15.9 - 21.4)	7.7	(5.7 - 9.7)	59.9	(56.2 - 63.6)
45 to 64 yrs										
Males	13.7	(10.9 - 16.4)	2.0 *	(0.9 - 3.1)	34.8	(30.9 - 38.7)	9.2	(6.8 - 11.7)	40.3	(36.2 - 44.4)
Females	9.7	(7.9 - 11.6)	2.6	(1.6 - 3.6)	31.8	(28.8 - 34.8)	6.1	(4.6 - 7.6)	49.8	(46.6 - 53.0)
Persons	11.7	(10.0 - 13.3)	2.3	(1.6 - 3.1)	33.3	(30.9 - 35.7)	7.7	(6.2 - 9.1)	45.0	(42.4 - 47.6)
65 yrs & over										
Males	4.2	(2.9 - 5.5)	0.8 *	(0.3 - 1.3)	54.1	(50.4 - 57.7)	6.0	(4.2 - 7.7)	35.0	(31.5 - 38.5)
Females	3.1	(2.0 - 4.2)	0.8 *	(0.2 - 1.4)	30.0	(27.1 - 32.8)	7.7	(6.0 - 9.4)	58.3	(55.2 - 61.4)
Persons	3.6	(2.8 - 4.5)	0.8	(0.4 - 1.2)	41.3	(38.9 - 43.6)	6.9	(5.7 - 8.1)	47.4	(45.0 - 49.8)
Total										
Males	11.6	(9.3 - 13.8)	2.7	(1.6 - 3.9)	28.6	(25.8 - 31.4)	8.1	(6.2 - 10.0)	49.0	(45.4 - 52.5)
Females	7.3	(6.0 - 8.7)	3.0	(1.8 - 4.2)	24.6	(22.5 - 26.7)	7.1	(5.6 - 8.5)	58.0	(55.3 - 60.6)
Persons	9.5	(8.1 - 10.8)	2.9	(2.0 - 3.7)	26.6	(24.9 - 28.4)	7.6	(6.4 - 8.8)	53.4	(51.2 - 55.6)

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

Current smoking status was re-categorised into those who smoke (daily or occasionally), ex-smokers and those who have never smoked regularly.

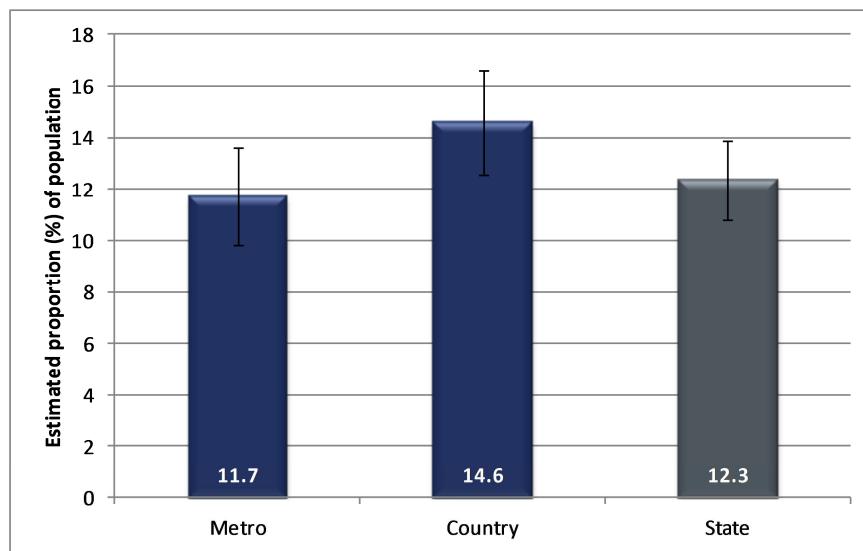
Respondents who had smoked 100 or more cigarettes in their lifetime but no longer currently smoked were classified as ex-smokers, while those who had smoked less than 100 cigarettes were classified as having never smoked, or having never smoked regularly (Table 30).

Table 30: Lifetime smoking status, 16 years & over, HWSS 2014

	Smoker		Ex-smoker		Never smoked or never smoked regularly	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	16.0	(11.8 - 20.2)	17.7	(13.4 - 22.0)	66.3	(60.8 - 71.7)
Females	11.2	(8.1 - 14.3)	17.8	(14.5 - 21.0)	71.0	(66.8 - 75.2)
Persons	13.7	(11.1 - 16.4)	17.7	(15.0 - 20.4)	68.6	(65.1 - 72.0)
45 to 64 yrs						
Males	15.7	(12.8 - 18.6)	36.7	(32.7 - 40.6)	47.7	(43.6 - 51.8)
Females	12.3	(10.3 - 14.4)	31.0	(28.0 - 33.9)	56.7	(53.5 - 59.9)
Persons	14.0	(12.2 - 15.8)	33.8	(31.4 - 36.3)	52.2	(49.6 - 54.8)
65 yrs & over						
Males	5.0	(3.5 - 6.4)	53.1	(49.4 - 56.7)	42.0	(38.3 - 45.6)
Females	4.0	(2.7 - 5.2)	29.0	(26.2 - 31.8)	67.1	(64.1 - 70.0)
Persons	4.4	(3.5 - 5.3)	40.2	(37.9 - 42.6)	55.3	(53.0 - 57.7)
Total						
Males	14.3	(11.8 - 16.8)	28.6	(25.7 - 31.4)	57.1	(53.7 - 60.5)
Females	10.3	(8.6 - 12.1)	23.7	(21.6 - 25.8)	66.0	(63.5 - 68.4)
Persons	12.3	(10.8 - 13.9)	26.2	(24.4 - 27.9)	61.5	(59.4 - 63.6)

Respondents aged 65 years and over were significantly less likely to be current smokers when compared with people aged 16-44 years and 45-64 years (4.4% compared with 13.7% and 14.0%). Respondents aged 16-44 years were significantly more likely to have never smoked or never smoked regularly compared with people aged 45-64 years and 65 years and over (68.6% compared with 52.2% and 55.3%).

Figure 19 shows the proportion of current smokers by geographic area of residence. There were no significant differences in the prevalence of current smokers by geographic area of residence.

Figure 19: Proportion of current smokers, 16 years & over, by geographic area of residence in WA, HWSS 2014

Respondents were asked whether or not their home was smoke free or, if people occasionally or frequently smoke in their home (Table 31). Almost all respondents (96.6%) reported living in a smoke free home.

Table 31: Smoking within the home, 16 years & over, HWSS 2014

	Never		Occasionally		Frequently	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	96.1	(93.8 - 98.4)	1.4 *	(0.2 - 2.6)	2.5 *	(0.5 - 4.5)
Females	96.8	(94.8 - 98.7)	1.4 *	(0.5 - 2.2)	1.8 *	(0.0 - 3.6)
Persons	96.4	(94.9 - 98.0)	1.4 *	(0.6 - 2.1)	2.2 *	(0.8 - 3.5)
45 to 64 yrs						
Males	96.6	(95.3 - 98.0)	1.0 *	(0.4 - 1.7)	2.4 *	(1.2 - 3.5)
Females	96.2	(95.0 - 97.4)	1.8	(1.0 - 2.6)	2.0	(1.1 - 2.9)
Persons	96.4	(95.5 - 97.3)	1.4	(0.9 - 1.9)	2.2	(1.5 - 2.9)
65 yrs & over						
Males	96.7	(95.4 - 98.0)	1.4 *	(0.5 - 2.2)	1.9 *	(1.0 - 2.9)
Females	97.9	(97.0 - 98.8)	0.9 *	(0.4 - 1.5)	1.2 *	(0.5 - 1.9)
Persons	97.3	(96.6 - 98.1)	1.1	(0.6 - 1.6)	1.5	(1.0 - 2.1)
Total						
Males	96.3	(95.0 - 97.7)	1.3 *	(0.6 - 2.0)	2.4 *	(1.2 - 2.8)
Females	96.8	(95.7 - 97.9)	1.4	(0.9 - 1.9)	1.8	(0.8 - 2.8)
Persons	96.6	(95.7 - 97.4)	1.4	(0.9 - 1.8)	2.1	(1.3 - 2.8)

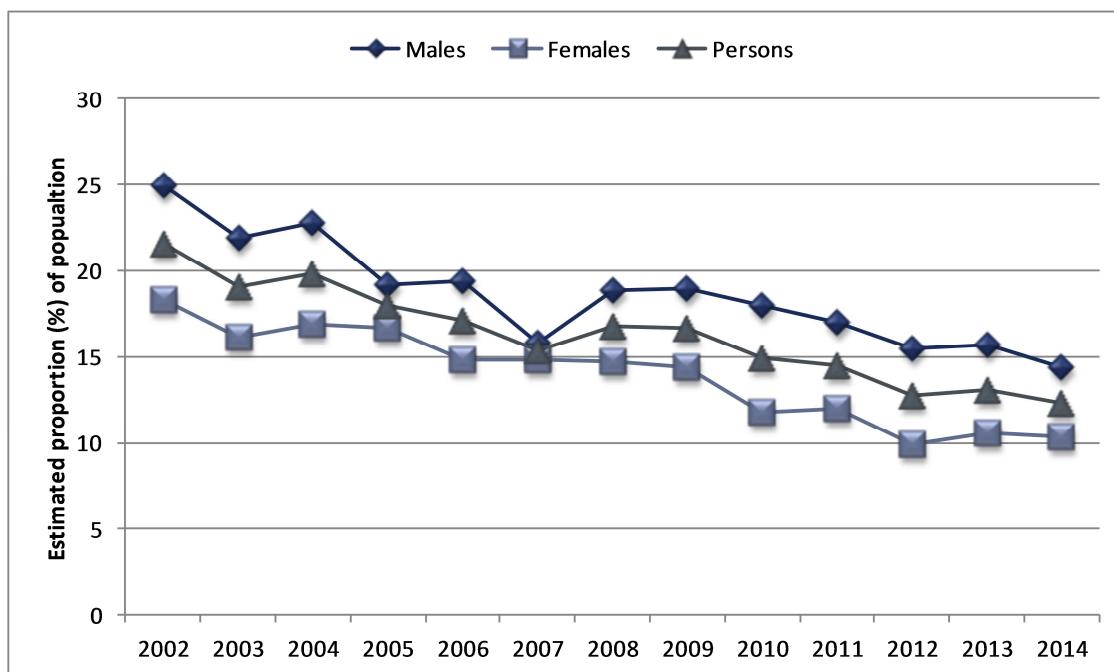
* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

The standardised annual prevalence estimates of current smoking for adults aged 16 years and over are shown in Table 32 and Figure 20. For males, the 2014 prevalence estimate of current smokers was significantly lower compared with estimates recorded from 2002-2006 and 2009. For females, the proportion of current smokers in 2014 was significantly lower than the prevalence recorded from 2002-2009. The 2014 prevalence of smoking for all persons was significantly lower than the 2002-2006 and 2008-2009 prevalence estimates.

Table 32: Prevalence of current smokers over time, 16 years & over, HWSS 2002 – 2014

	Males	Females	Persons
2002	25.0	18.3	21.6
2003	21.9	16.2	19.0
2004	22.7	16.9	19.8
2005	19.2	16.7	18.0
2006	19.4	14.8	17.1
2007	15.8	14.8	15.3
2008	18.9	14.7	16.8
2009	18.9	14.4	16.7
2010	18.0	11.7	14.9
2011	17.0	12.0	14.5
2012	15.4	9.9	12.7
2013	15.7	10.5	13.1
2014	14.4	10.3	12.3
Average	19.1	14.2	16.7

Figure 20: Prevalence of current smokers over time, 16 years & over, HWSS 2002 – 2014



8.2 Alcohol

Excessive alcohol consumption increases the risk of some health conditions, including coronary heart disease, stroke, blood pressure, liver and pancreatic disease, as well as the risk of accidents and mental illness.⁹ The current guidelines for the consumption of alcohol in Australia were developed by the National Health and Medical Research Council (NHMRC) in 2009.²²

Respondents were asked about their alcohol drinking habits, including how many days a week they usually drink and how many drinks they usually have. The alcohol information was categorised into risk levels based on the 2009 guidelines which categorises any drinking by adults aged less than 18 years as risky. The first is the potential for alcohol-related harm over a lifetime of drinking (Table 33) and the second is the risk of injury due to a single occasion of drinking (Table 34).

Table 33: Risk of long-term alcohol related harm, 16 years & over, HWSS 2014

	Doesn't drink/ drinking level undetermined		Low risk (a)		High risk (b)	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	32.8	(27.2 - 38.4)	25.7	(20.4 - 31.0)	41.5	(35.8 - 47.2)
Females	45.7	(40.8 - 50.5)	29.3	(25.1 - 33.4)	25.0	(20.7 - 29.4)
Persons	39.0	(35.3 - 42.8)	27.4	(24.0 - 30.8)	33.5	(29.9 - 37.2)
45 to 64 yrs						
Males	24.0	(20.5 - 27.6)	38.3	(34.3 - 42.3)	37.7	(33.7 - 41.6)
Females	38.6	(35.5 - 41.8)	45.0	(41.8 - 48.2)	16.4	(14.1 - 18.7)
Persons	31.3	(28.9 - 33.7)	41.6	(39.1 - 44.2)	27.1	(24.7 - 29.4)
65 yrs & over						
Males	30.1	(26.8 - 33.4)	51.2	(47.5 - 54.8)	18.7	(15.9 - 21.5)
Females	55.2	(52.1 - 58.4)	41.8	(38.6 - 44.9)	3.0	(2.0 - 4.1)
Persons	43.5	(41.1 - 45.8)	46.2	(43.8 - 48.6)	10.4	(8.9 - 11.8)
Total						
Males	29.8	(26.5 - 33.1)	33.2	(30.0 - 36.5)	37.0	(33.6 - 40.4)
Females	45.1	(42.4 - 47.9)	36.2	(33.7 - 38.7)	18.7	(16.2 - 21.2)
Persons	37.4	(35.2 - 39.6)	34.7	(32.6 - 36.7)	27.9	(25.8 - 30.1)

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

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

Table 34: Risk of short-term alcohol related harm, 16 years & over, HWSS 2014

	Doesn't drink/ drinking level undetermined		Low risk (a)		High risk (b)	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	32.8	(27.2 - 38.4)	46.8	(40.9 - 52.6)	20.4	(15.8 - 25.0)
Females	45.7	(40.8 - 50.5)	43.0	(38.3 - 47.7)	11.3	(7.7 - 14.9)
Persons	39.0	(35.3 - 42.8)	44.9	(41.1 - 48.7)	16.0	(13.1 - 18.9)
45 to 64 yrs						
Males	24.0	(20.5 - 27.6)	64.3	(60.3 - 68.2)	11.7	(9.2 - 14.2)
Females	38.6	(35.5 - 41.8)	59.3	(56.2 - 62.5)	2.0	(1.1 - 3.0)
Persons	31.3	(28.9 - 33.7)	61.8	(59.3 - 64.3)	6.9	(5.6 - 8.2)
65 yrs & over						
Males	30.1	(26.8 - 33.4)	65.7	(62.2 - 69.1)	4.2	(2.9 - 5.6)
Females	55.2	(52.1 - 58.4)	44.4	(41.2 - 47.5)	0.4 *	(0.0 - 0.8)
Persons	43.5	(41.1 - 45.8)	54.3	(52.0 - 56.7)	2.2	(1.5 - 2.8)
Total						
Males	29.8	(26.5 - 33.1)	54.8	(51.3 - 58.4)	15.4	(12.8 - 18.1)
Females	45.1	(42.4 - 47.9)	48.2	(45.5 - 51.0)	6.6	(4.7 - 8.6)
Persons	37.4	(35.2 - 39.6)	51.6	(49.3 - 53.8)	11.1	(9.4 - 12.7)

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

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

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

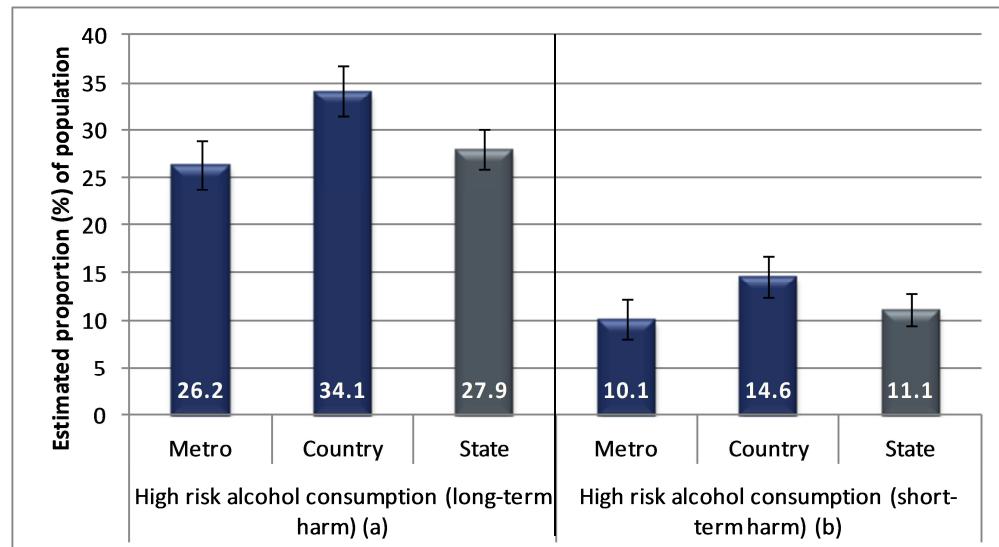
Approximately one-third of respondents aged 16-44 years (33.5%) reported drinking at levels considered to be high risk for long-term harm. Males in all age groups were significantly more likely to report drinking at levels considered high risk for long-term harm when compared with females. For all persons, the proportion drinking at high risk levels for long-term harm significantly decreased with increasing age (Table 33).

Similarly, the prevalence of the population drinking at levels considered high risk for short-term harm decreased significantly with age. Overall males were significantly more likely than females to report drinking at levels considered high risk for short-term alcohol related harm (15.4% compared with 6.6%) (Table 34).

Figure 21 shows the proportion of people who consume alcohol at high risk levels for long-term and short-term harm by geographic area of residence. The prevalence of

alcohol consumption for high risk levels of both long-term and short-term harm was significantly higher in the country areas compared with the metropolitan area.

Figure 21: Prevalence of high risk alcohol consumption for long-term (a) and short-term (b) harm, 16 years & over, by geographic area of residence in WA, HWSS 2014



(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 adults aged 16 years and over, based on the 2009 guidelines, are shown in Table 35 and Figure 22.

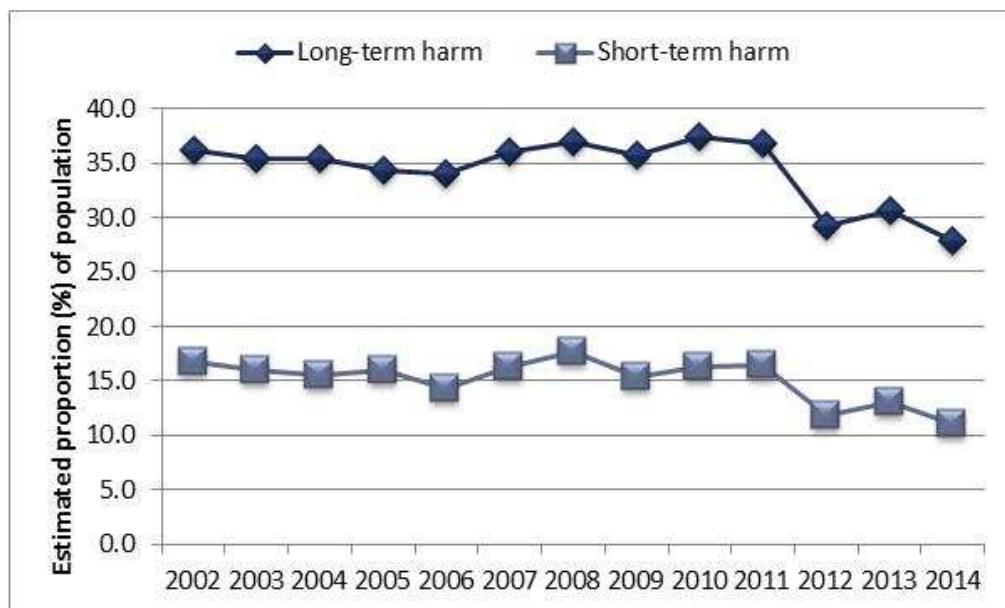
Table 35: Prevalence of high risk alcohol consumption for long-term & short-term harm over time, 16 years & over, HWSS 2002 – 2014

	Risk of long-term harm (a)			Risk of short-term harm (b)		
	Males	Females	Persons	Males	Females	Persons
2002	49.6	22.6	36.2	25.1	8.5	16.8
2003	46.8	23.9	35.4	23.7	8.3	16.0
2004	47.8	22.9	35.4	24.6	6.6	15.6
2005	46.8	21.8	34.3	23.4	8.5	15.9
2006	45.1	22.8	34.0	21.2	7.5	14.4
2007	48.0	23.9	36.0	22.2	10.3	16.2
2008	48.0	25.9	37.0	24.8	10.6	17.7
2009	46.9	24.4	35.7	21.8	8.9	15.3
2010	49.1	25.5	37.4	24.3	8.2	16.3
2011	48.2	25.4	36.8	22.6	10.3	16.4
2012	39.7	18.6	29.2	17.6	5.9	11.8
2013	42.1	19.1	30.6	20.5	5.5	13.0
2014	37.0	18.7	27.9	15.4	6.6	11.0
Average	46.4	23.2	34.9	22.6	8.4	15.5

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

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

Figure 22: Prevalence of high risk alcohol consumption for long-term & short-term harm over time, 16 years & over, HWSS 2002 – 2014



In 2014 the prevalence of males and all persons drinking at levels associated with long-term harm was the lowest recorded since data collection began in 2002, and was significantly lower than the estimates recorded from 2002-2011. The prevalence of females drinking at levels associated with long-term harm in 2014 was the second lowest recorded since 2002, and was significantly lower when compared with the 2003 and 2007-2011 estimates.

A similar pattern was evident for consumption levels associated with short-term harm. In 2014 the prevalence of males and all persons drinking at levels associated with short-term harm was the lowest recorded since data collection began in 2002, and was significantly lower than the estimates recorded from 2002-2011. The prevalence of females drinking at levels associated with short-term harm in 2014 was the third lowest recorded since 2002, and was significantly lower than previous years with the exception of 2004, 2006, 2010 and 2012-13.

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.²³ Revised Australian dietary guidelines were released by the National Health and Medical Research Council (NHMRC) in 2013 and Table 36 presents the fruit and vegetable recommendations for adults 16 years and over. There are three major changes in the vegetable recommendations for males between the 2003 and 2013 guidelines: (a) different guidelines for males compared to females (b) inclusion of half serves in the recommended daily serves and (c) changes in the recommended daily serves for some age groups.

Respondents in the HWSS were asked to self-report how many serves of fruit they usually eat each day, where a serve of fruit is equal to one medium piece, two small pieces of fruit or a cup of diced fruit. They were also asked to self-report how many serves of vegetables they usually eat each day, where 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 will be rounded down to the nearest whole number (Table 36).

Table 36: NHMRC 2013 fruit and vegetable daily consumption guidelines, adults 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	
2013 guidelines		2003 guidelines		2013 guidelines		2003 guidelines	
Adults		Adults		Females	Males	Adults	
16-18 years	2	3		5	5.5	4	
19-50 years	2	2		5	6	5	
51- 70 years	2	2		5	5.5	5	
70 + years	2	2		5	5	5	

While the guidelines for fruit and vegetable consumption have changed, the mean number of serves of fruit and vegetables that people are eating has not varied greatly over time (Table 37).

Table 37: Mean serves of fruit and vegetables over time, 16 years & over, HWSS 2002 – 2014

	Fruit			Vegetables		
	Males	Females	Persons	Males	Females	Persons
2002	1.6	1.8	1.7	2.5	2.9	2.7
2003	1.7	1.9	1.8	2.5	3.0	2.8
2004	1.7	1.9	1.8	2.7	3.1	2.9
2005	1.7	1.8	1.8	3.0	3.2	3.1
2006	1.5	1.7	1.6	2.8	3.1	3.0
2007	1.6	1.7	1.6	2.8	3.2	3.0
2008	1.6	1.8	1.7	2.6	3.0	2.8
2009	1.7	1.8	1.7	2.5	2.9	2.7
2010	1.7	1.8	1.8	2.6	3.0	2.8
2011	1.5	1.7	1.6	2.5	2.9	2.7
2012	1.6	1.7	1.7	2.4	2.9	2.6
2013	1.6	1.7	1.7	2.4	2.8	2.6
2014	1.6	1.8	1.7	2.5	2.8	2.7
Average	1.6	1.8	1.7	2.6	3.0	2.8

The mean serves of vegetables in 2014 was significantly lower for males (compared with 2004-2007), females (compared with 2003-2007 and 2010) and all persons (compared with 2003-2008 and 2010).

At a population level, WA adults have not met the dietary guidelines for either fruit or vegetable consumption in any year since data collection began (Figure 23 and Figure 24).

Figure 23: Mean serves of fruit over time, 16 years & over and Australian dietary guidelines, HWSS 2002-2014

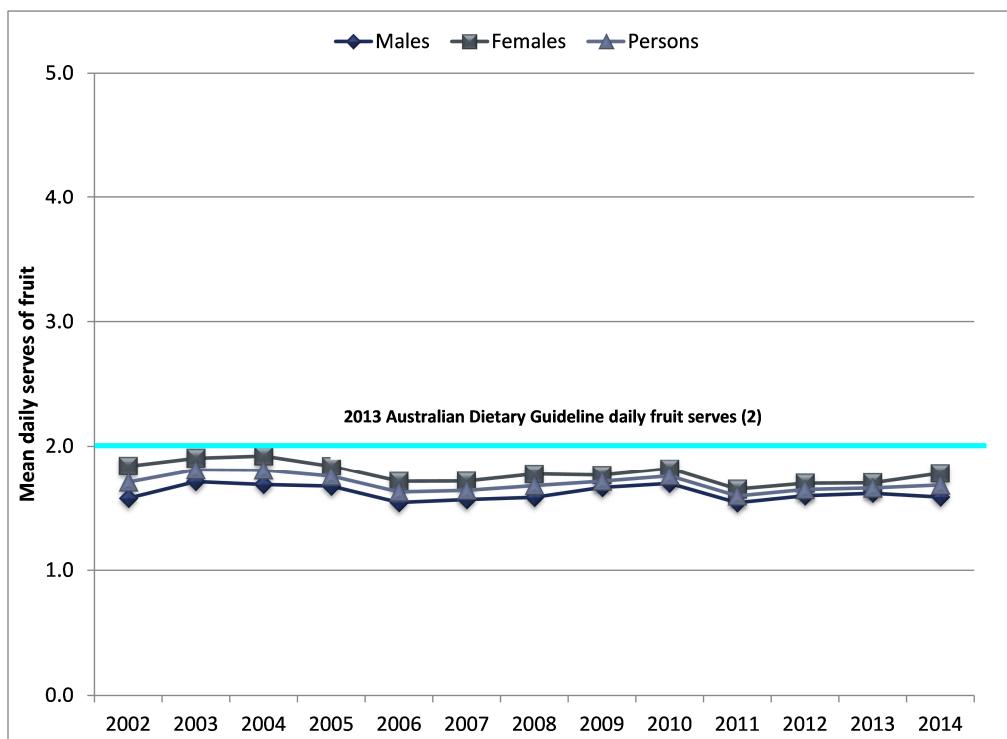
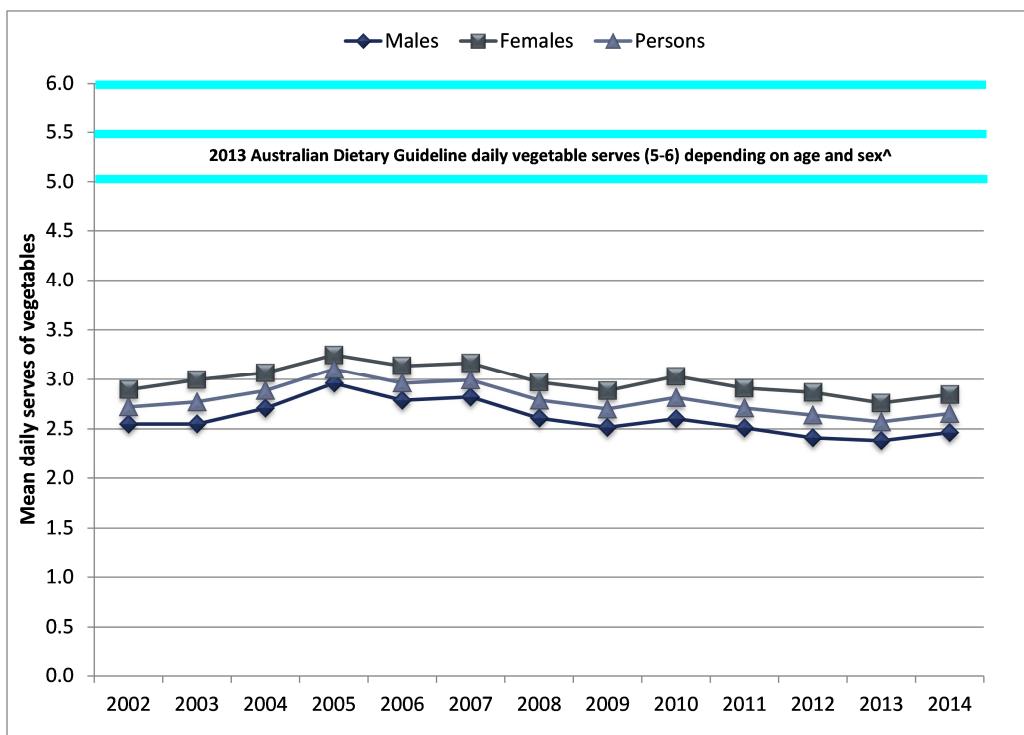


Figure 24: Mean serves of vegetables over time, 16 years & over and Australian dietary guidelines, HWSS 2002-2014



[^] See Table 36.

Table 38 shows the proportion of adults, 16 years and over, by the number of serves of fruit they usually eat daily. Just over half (52.0%) of adults 16 years and over reported eating two or more serves of fruit daily. Females were significantly more likely than males to eat two or more serves of fruit each day, particularly in the 16-44 and 65 years and over age groups. Respondents aged 65 years and over were significantly more likely than those aged 16-44 years and 45-64 years to eat two or more serves of fruit each day (61.6% compared with 49.5% and 51.7%).

Table 38: Serves of fruit consumed daily, 16 years & over, HWSS 2014

	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	5.7	(3.4 - 7.9)	11.8	(7.9 - 15.7)	38.9	(33.0 - 44.8)	43.6	(37.7 - 49.4)
Females	5.8	(3.7 - 7.9)	5.2	(3.4 - 10.3)	33.2	(28.7 - 37.7)	55.7	(51.0 - 60.5)
Persons	5.8	(4.2 - 7.3)	8.6	(6.4 - 10.8)	36.2	(32.4 - 39.9)	49.5	(45.6 - 53.3)
45 to 64 yrs								
Males	6.4	(4.4 - 8.4)	13.1	(10.4 - 15.8)	32.2	(28.4 - 36.1)	48.2	(44.1 - 52.3)
Females	5.4	(4.0 - 6.8)	8.5	(6.7 - 10.3)	30.8	(27.8 - 33.8)	55.2	(52.0 - 58.4)
Persons	5.9	(4.7 - 7.1)	10.8	(9.2 - 12.5)	31.5	(29.1 - 34.0)	51.7	(49.1 - 54.3)
65 yrs & over								
Males	5.0	(3.4 - 6.6)	8.5	(6.6 - 10.5)	31.3	(27.9 - 34.7)	55.2	(51.5 - 58.8)
Females	3.8	(2.6 - 4.9)	5.9	(4.3 - 7.4)	23.1	(20.4 - 25.8)	67.3	(64.3 - 70.2)
Persons	4.3	(3.4 - 5.3)	7.1	(5.9 - 8.3)	27.0	(24.8 - 29.1)	61.6	(59.3 - 63.9)
Total								
Males	5.8	(4.4 - 7.2)	11.7	(9.4 - 14.0)	35.8	(32.3 - 39.3)	46.7	(43.2 - 50.2)
Females	5.4	(4.2 - 6.6)	6.3	(5.2 - 7.5)	30.8	(28.2 - 33.3)	57.5	(54.8 - 60.2)
Persons	5.6	(4.7 - 6.5)	9.1	(7.8 - 10.4)	33.3	(31.1 - 35.5)	52.0	(49.8 - 54.3)

Table 39 show the proportion of adults, 16 years and over, by the number of serves of vegetables they usually eat daily. The majority of adults ate two (29.4%) or three (24.6%) serves of vegetables daily.

Table 39: Serves of vegetables consumed daily, 16 years & over, HWSS 2014

	Doesn't eat vegetables		Eats vegetables less often than daily		Eats one serve of vegetables daily		Eats two serves of vegetables daily		Eats three serves of vegetables daily		Eats four serves of vegetables daily		Eats five or more serves of vegetables daily	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs														
Males	2.0	(0.6 - 3.4)	3.9	(1.1 - 6.7)	21.8	(16.8 - 26.7)	29.8	(24.4 - 35.3)	22.1	(17.4 - 26.9)	13.7	(9.6 - 17.8)	6.6	(3.7 - 9.5)
Females	0.9	(0.1 - 1.6)	2.5	(0.9 - 4.1)	15.5	(12.0 - 19.0)	30.1	(25.6 - 34.5)	25.4	(21.0 - 29.7)	12.2	(9.3 - 15.1)	13.5	(10.3 - 16.7)
Persons	1.5	(0.6 - 2.3)	3.2	(1.6 - 4.9)	18.7	(15.6 - 21.8)	30.0	(26.4 - 33.5)	23.7	(20.5 - 26.9)	13.0	(10.4 - 15.5)	10.0	(7.8 - 12.1)
45 to 64 yrs														
Males	0.7	(0.2 - 1.1)	2.6	(1.3 - 3.9)	20.5	(17.2 - 23.8)	33.5	(29.5 - 37.4)	20.1	(16.8 - 23.4)	14.7	(11.8 - 17.7)	7.9	(5.7 - 10.0)
Females	0.7	(0.1 - 1.2)	1.4	(0.7 - 2.2)	12.1	(10.1 - 14.2)	26.8	(24.0 - 29.7)	28.9	(26.0 - 31.8)	15.9	(13.6 - 18.3)	14.1	(11.9 - 16.2)
Persons	0.7	(0.3 - 1.0)	2.0	(1.3 - 2.8)	16.4	(14.4 - 18.3)	30.2	(27.7 - 32.6)	24.5	(22.3 - 26.7)	15.3	(13.4 - 17.2)	11.0	(9.4 - 12.5)
65 yrs & over														
Males	0.8	(0.3 - 1.4)	2.3	(1.2 - 3.4)	17.2	(14.5 - 20.0)	28.2	(24.9 - 31.6)	25.0	(21.8 - 28.3)	16.8	(14.1 - 19.5)	9.6	(7.3 - 11.8)
Females	1.0	(0.4 - 1.6)	1.8	(1.0 - 2.5)	10.7	(8.7 - 12.6)	24.2	(21.5 - 26.9)	30.6	(27.6 - 33.5)	18.1	(15.6 - 20.5)	13.8	(11.6 - 16.0)
Persons	0.9	(0.5 - 1.3)	2.0	(1.3 - 2.7)	13.7	(12.1 - 15.4)	26.1	(24.0 - 28.2)	28.0	(25.8 - 30.2)	17.5	(15.6 - 19.3)	11.8	(10.3 - 13.4)
Total														
Males	1.4	(0.6 - 2.2)	3.3	(1.7 - 4.9)	20.7	(17.8 - 23.7)	30.7	(27.5 - 34.0)	21.9	(19.1 - 24.8)	14.4	(12.0 - 16.9)	7.4	(5.7 - 9.2)
Females	0.8	(0.4 - 1.3)	2.1	(1.2 - 2.9)	13.6	(11.7 - 15.6)	28.1	(25.5 - 30.7)	27.3	(24.8 - 29.8)	14.3	(12.6 - 16.1)	13.7	(11.9 - 15.6)
Persons	1.1	(0.7 - 1.6)	2.7	(1.8 - 3.6)	17.2	(15.4 - 19.0)	29.4	(27.3 - 31.5)	24.6	(22.7 - 26.5)	14.4	(12.9 - 15.9)	10.6	(9.3 - 11.8)

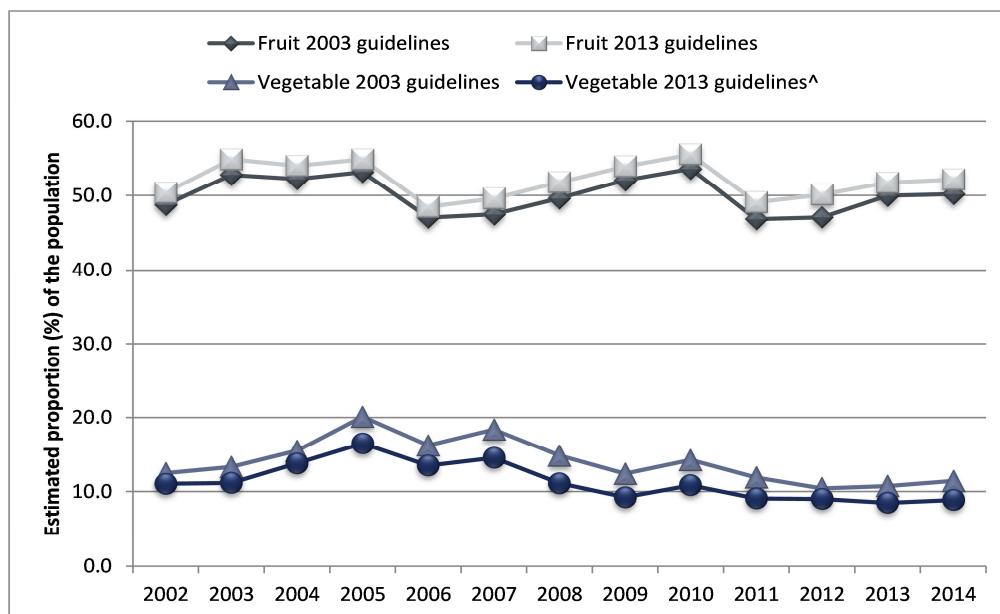
* Prevalence estimate has a RSE between 25%-50% and should be used with caution.

As outlined earlier, some of the vegetable recommendations for males in the 2013 Australian Dietary Guidelines now include half serves which are unable to be measured by the HWSS. For the purposes of reporting sufficient fruit and vegetable consumption against the 2013 guidelines, the recommended number of serves will be rounded down to the nearest whole number.

Figure 25 illustrates the impact of the new guidelines on the estimates of sufficient fruit and vegetable consumption. The proportion of the population eating sufficient serves of fruit daily increases slightly when measured against the 2013 guidelines because 16-18 year olds are now only recommended to eat two serves of fruit daily, down from three serves of fruit daily recommended by the 2003 Australian Dietary Guidelines.

Despite using a more lenient interpretation of the recommendation for some male age groups, the proportion of the population eating sufficient serves of vegetables decreases when measured against the 2013 guidelines because males aged 19-50 years are now recommended to eat six serves of vegetables daily, up from five serves of vegetables recommended by the 2003 Australian Dietary Guidelines. These findings are consistent over time.

Figure 25: Prevalence of sufficient fruit & vegetables consumption over time, 2003 and 2013 Australian fruit and vegetable guidelines, 16 years & over, HWSS 2002 – 2014



[^] For reporting purposes guidelines that include half serves have been rounded down to the nearest whole number.

Future HWSS publications will only report against the 2013 Australian Dietary Guidelines. Any recommendation that includes a half serve will be rounded down to the nearest whole number.

The proportion of adults aged 16 years and over meeting the 2013 guidelines for fruit and vegetable consumption is shown in Table 40.

Table 40: Prevalence of sufficient daily fruit consumption and vegetable consumption[^], 16 years and over, HWSS 2014

	Sufficient daily fruit consumption		Sufficient daily vegetable consumption	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	43.6	(37.7 - 49.4)	1.7 *	(0.5 - 2.9)
Females	55.7	(51.0 - 60.5)	13.5	(10.3 - 16.7)
Persons	49.5	(45.6 - 53.3)	7.4	(5.7 - 9.2)
45 to 64 yrs				
Males	48.2	(44.1 - 52.3)	5.6	(3.8 - 7.5)
Females	55.2	(52.0 - 58.4)	14.1	(11.9 - 16.2)
Persons	51.7	(49.1 - 54.3)	9.8	(8.4 - 11.2)
65 yrs & over				
Males	55.2	(51.5 - 58.8)	9.6	(7.3 - 11.8)
Females	67.3	(64.3 - 70.2)	13.8	(11.6 - 16.0)
Persons	61.6	(59.3 - 63.9)	11.8	(10.3 - 13.4)
Total				
Males	46.7	(43.2 - 50.2)	4.0	(3.1 - 5.0)
Females	57.5	(54.8 - 60.2)	13.7	(11.9 - 15.6)
Persons	52.0	(49.8 - 54.3)	8.8	(7.8 - 9.9)

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

[^] See Table 36.

About half (52.0%) of respondents aged 16 years and over reported eating sufficient daily serves of fruit. Females were significantly more likely to eat sufficient serves of fruit daily compared with males (57.5% compared with 46.7%) and respondents aged 65 years and over were also significantly more likely to eat sufficient serves of fruit daily compared with respondents aged 16-64 years (61.6% compared with 49.5% and 51.7%).

Approximately one in eleven (8.8%) adults aged 16 years and over reported eating sufficient daily serves of vegetables. Females were significantly more likely to eat

sufficient serves of vegetables compared with males (13.7% compared with 4.0%). Respondents aged 16-44 were significantly less likely to eat sufficient serves of vegetables compared with adults aged 65 years and over (7.4% compared with 11.8%).

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.²³ Respondents were asked what type of milk they usually consume, shown in Table 41.

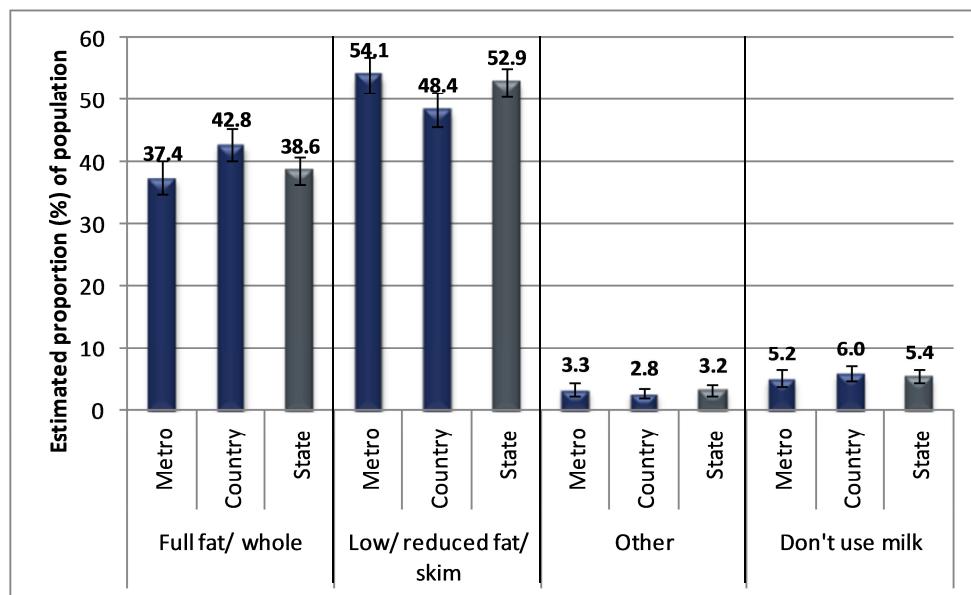
Table 41: Type of milk consumed, 16 years & over, HWSS 2014

	Full fat/whole milk		Low/reduced fat/ skim milk		Other		Don't use milk	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	48.6	(42.7 - 54.5)	43.2	(37.4 - 49.1)	2.9 *	(0.8 - 5.0)	5.3 *	(2.2 - 8.3)
Females	38.8	(34.1 - 43.6)	51.2	(46.4 - 56.1)	4.5	(2.3 - 6.7)	5.4	(3.3 - 7.5)
Persons	43.9	(40.0 - 47.7)	47.1	(43.3 - 50.9)	3.7	(2.1 - 2.1)	5.3	(3.5 - 7.2)
45 to 64 yrs								
Males	37.1	(37.4 - 49.1)	55.5	(51.4 - 59.5)	1.8 *	(0.8 - 2.8)	5.6	(3.7 - 7.5)
Females	26.2	(23.4 - 32.8)	65.1	(62.1 - 68.1)	4.2	(2.9 - 5.4)	4.6	(3.3 - 5.8)
Persons	31.7	(29.3 - 34.1)	60.2	(57.7 - 62.8)	3.0	(2.2 - 3.8)	5.1	(4.0 - 6.2)
65 yrs & over								
Males	38.2	(34.7 - 41.8)	54.3	(50.6 - 57.9)	1.5	(0.6 - 2.4)	6.0	(4.2 - 4.2)
Females	30.0	(27.2 - 32.8)	61.6	(58.5 - 64.6)	2.5	(1.6 - 3.4)	5.9	(4.4 - 7.4)
Persons	33.9	(31.6 - 36.1)	58.2	(55.8 - 60.5)	2.0	(1.4 - 2.7)	5.9	(4.8 - 7.1)
Total								
Males	43.6	(40.1 - 47.1)	48.6	(45.1 - 52.1)	2.4	(1.1 - 3.6)	5.5	(3.7 - 7.2)
Females	33.5	(30.8 - 36.2)	57.2	(54.4 - 60.0)	4.1	(2.8 - 5.3)	5.3	(4.1 - 6.5)
Persons	38.6	(36.3 - 40.8)	52.9	(50.6 - 55.1)	3.2	(2.3 - 4.1)	5.4	(4.3 - 6.4)

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

Females were significantly more likely to report using low/reduced fat or skim milk compared with males (57.2% compared with 48.6%), particularly over the age of 45 years. Adults aged 16-44 years were less likely to report using low/reduced fat or skim milk compared with adults aged 45 years and over. Figure 26 shows the consumption of different milk types by geographic area of residence. While the majority of adults living in both the metro and country consume low/reduced fat or skim milk, the proportion is significantly higher in the metro areas (54.1% compared with 48.4%). In contrast a higher proportion of country residents consume whole/ full fat milk compared with metro residents (42.8% compared with 37.4%), however this difference was not statistically significant.

Figure 26: Milk type consumed, 16 years & over, by geographic area of residence in WA, HWSS 2014



Food security

Respondents were asked 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 42). An estimated 66,180 people reported not being able to afford to buy food within the previous twelve months with the majority of these being in the 16-44 year age group.

Table 42: Ran out of food and could not afford to buy more, 16 years & over, HWSS 2014

	Yes		No	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	3.8 *	(1.9 - 5.6)	96.2	(94.4 - 98.1)
Females	5.3	(2.8 - 7.7)	94.7	(92.3 - 97.2)
Persons	4.5	(2.9 - 6.0)	95.5	(94.0 - 97.1)
45 to 64 yrs				
Males	2.6 *	(1.3 - 3.9)	97.4	(96.1 - 98.7)
Females	2.4	(1.5 - 3.3)	97.6	(96.7 - 98.5)
Persons	2.5	(1.7 - 3.3)	97.5	(96.7 - 98.3)
65 yrs & over				
Males	N/A	(N/A - N/A)	99.5	(99.1 - 100.0)
Females	1.1 *	(0.5 - 1.7)	98.9	(98.3 - 99.5)
Persons	0.8 *	(0.4 - 1.2)	99.2	(98.8 - 99.6)
Total				
Males	2.9	(1.8 - 4.0)	97.1	(96.0 - 98.2)
Females	3.7	(2.3 - 5.0)	96.3	(95.0 - 97.7)
Persons	3.3	(2.4 - 4.2)	96.7	(95.8 - 97.6)

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

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

Fast food

Respondents were asked how many times a week on average they would eat fast food meals, such as burgers, pizza, chicken or chips from fast food outlets, as shown in Table 43.

Table 43: Meals from fast food outlets per week, 16 years & over, HWSS 2014

	Never		Less than once a week		Once or twice a week		Three or four times per week		Five or more times per week	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	24.0	(19.0-29.1)	23.2	(18.3-28.1)	44.2	(38.4-50.1)	5.8 *	(2.7-9.0)	2.7 *	(0.8-4.7)
Females	40.4	(35.7-45.1)	27.1	(22.7-31.5)	30.2	(25.8-34.6)	N/A	(N/A-N/A)	1.3 *	(0.1-2.5)
Persons	32.0	(28.4-35.5)	25.1	(21.8-28.4)	37.4	(33.7-41.1)	3.5 *	(1.8-5.2)	2.1 *	(0.9-3.2)
45 to 64 yrs										
Males	45.3	(41.2-49.4)	24.4	(21.0-27.7)	27.5	(23.6-31.3)	2.6 *	(1.2-4.1)	N/A	(N/A-N/A)
Females	58.6	(55.4-61.8)	23.2	(20.5-25.9)	17.6	(15.0-20.1)	0.6 *	(0.2-1.0)	N/A	(N/A-N/A)
Persons	51.9	(49.3-54.5)	23.8	(21.6-25.9)	22.5	(20.2-24.9)	1.6	(0.9-2.4)	N/A	(N/A-N/A)
65 yrs & over										
Males	63.6	(60.1-67.2)	24.1	(20.9-27.2)	11.4	(9.0-13.7)	0.8 *	(0.2-1.5)	N/A	(N/A-N/A)
Females	74.8	(72.1-77.6)	19.9	(17.3-22.4)	5.2	(3.7-6.6)	N/A	(N/A-N/A)	N/A	(N/A-N/A)
Persons	69.6	(67.4-71.8)	21.8	(19.8-23.8)	8.1	(6.7-9.4)	0.5 *	(0.2-0.8)	N/A	(N/A-N/A)
Total										
Males	36.3	(33.1-39.5)	23.7	(20.7-26.6)	34.3	(30.9-37.8)	4.1	(2.4-5.9)	1.6 *	(0.5-2.7)
Females	51.8	(49.0-54.6)	24.7	(22.2-27.2)	22.1	(19.7-24.6)	0.7 *	(0.1-1.3)	0.7 *	(0.1-1.3)
Persons	44.0	(41.8-46.1)	24.2	(22.2-26.1)	28.3	(26.1-30.4)	2.4	(1.5-3.4)	1.1 *	(0.5-1.8)

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

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

Males were significantly more likely to eat fast food meals each week than females (40.0% compared with 23.5 %). The proportion of people never eating from fast food outlets increased significantly with age.

The mean fast food consumption per week was 0.6 meals, (0.5 for females and 0.8 for males).

Older adult nutrition

Respondents aged 65 years and over were asked how many meals they eat each day, shown in Table 44, and whether their teeth or dentures affects the type of food they are able to eat, shown in Table 45. The majority of respondents (83.5%) reported eating three meals a day. Just under one in ten (9.5%) of respondents aged 65 years and over reported that the type of food they ate was affected by the condition of their teeth or dentures.

Table 44: Number of meals eaten each day, 65 years & over, HWSS 2014

	One		Two		Three		Four or more	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Males	1.4 *	(0.6 - 2.2)	14.0	(11.6 - 16.4)	83.2	(80.7 - 85.8)	1.3 *	(0.6 - 2.1)
Females	1.6 *	(0.7 - 2.4)	12.7	(10.7 - 14.8)	83.7	(81.4 - 86.0)	2.0	(1.2 - 2.8)
Persons	1.5	(0.9 - 2.1)	13.3	(11.8 - 14.9)	83.5	(81.7 - 85.2)	1.7	(1.1 - 2.3)

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

Table 45: Teeth or dentures affect food eaten, 65 years & over, HWSS 2104

	Yes		No	
	%	95% CI	%	95% CI
Males	8.4	(6.4 - 10.3)	91.6	(89.7 - 93.6)
Females	10.5	(8.6 - 12.4)	89.5	(87.6 - 91.4)
Persons	9.5	(8.2 - 10.9)	90.5	(89.1 - 91.8)

8.4 Physical activity and sedentary behaviour

Physical activity reduces the risk of cardiovascular disease, some cancers and type 2 diabetes as well as helps to improve musculoskeletal health, control body weight and reduce symptoms of depression.²⁴

Respondents were asked to rate their own physical activity level, as shown in Table 46. Just over half of all respondents reported that they were either active or very active (51.4%).

Table 46: Self-reported level of physical activity, 16 years & over, HWSS 2014

	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	27.0	(21.6-32.4)	34.0	(28.4-39.7)	27.8	(22.7-32.9)	8.5	(5.5-11.6)	2.6 *	(0.8- 4.5)
Females	16.6	(12.9-20.3)	31.4	(26.9-35.9)	39.4	(34.7-44.1)	11.7	(8.7-14.6)	0.9 *	(0.1- 1.7)
Persons	22.0	(18.6-25.3)	32.7	(29.1-36.4)	33.4	(29.9-37.0)	10.0	(7.9-12.2)	1.8 *	(0.8- 2.8)
45 to 64 yrs										
Males	19.8	(16.5-23.1)	32.7	(28.9-36.5)	31.5	(27.7-35.4)	14.0	(11.0-17.0)	1.9 *	(0.9- 2.9)
Females	16.7	(14.2-19.1)	27.8	(24.9-30.6)	39.9	(36.8-43.1)	12.6	(10.5-14.7)	3.0	(1.9- 4.1)
Persons	18.3	(16.2-20.3)	30.3	(27.9-32.6)	35.7	(33.2-38.2)	13.3	(11.4-15.2)	2.5	(1.7- 3.2)
65 yrs & over										
Males	18.5	(15.7-21.4)	29.8	(26.5-33.0)	34.7	(31.2-38.2)	13.3	(10.8-15.8)	3.8	(2.3- 5.2)
Females	13.9	(11.7-16.1)	29.3	(26.4-32.2)	36.9	(33.9-40.0)	15.3	(13.0-17.5)	4.6	(3.4- 5.9)
Persons	16.1	(14.3-17.8)	29.5	(27.3-31.7)	35.9	(33.6-38.2)	14.3	(12.7-16.0)	4.2	(3.3- 5.2)
Total										
Males	23.6	(20.4-26.8)	33.0	(29.6-36.4)	30.0	(26.9-33.1)	10.9	(8.9-12.9)	2.6	(1.5- 3.6)
Females	16.2	(14.0-18.3)	29.9	(27.3-32.5)	39.2	(36.5-41.9)	12.5	(10.8-14.3)	2.2	(1.6- 2.8)
Persons	19.9	(18.0-21.8)	31.5	(29.4-33.6)	34.5	(32.4-36.6)	11.7	(10.4-13.0)	2.4	(1.8- 3.0)

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

Respondents were asked how they usually spend most of the day, as shown in Table 47.

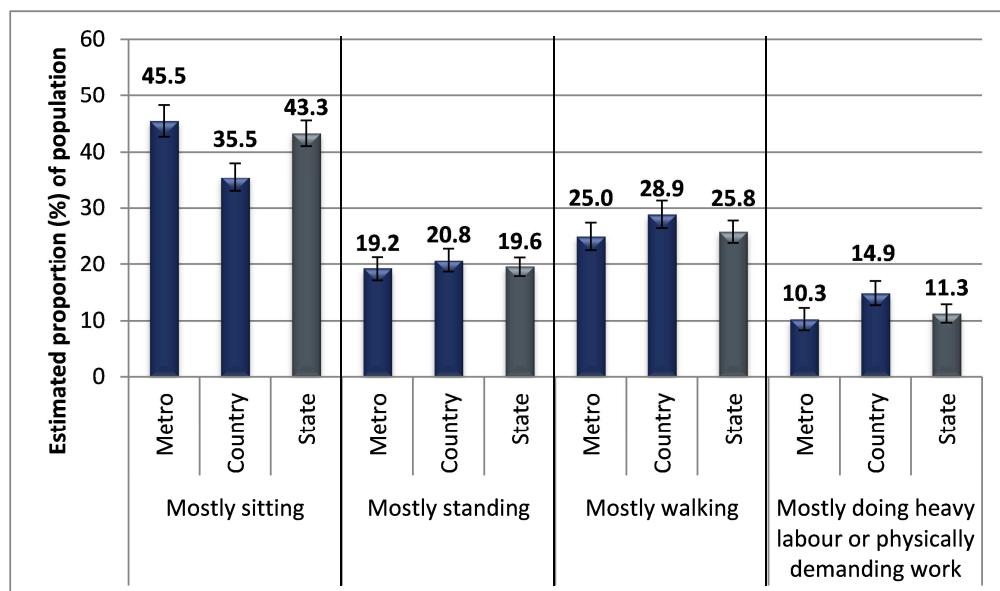
Table 47: How usually spend day, 16 years & over, HWSS 2014

	Sitting		Standing		Walking		Heavy labour/ physically demanding work	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	47.1	(41.2 - 53.0)	14.7	(10.4 - 18.9)	16.7	(12.1 - 21.4)	21.5	(16.7 - 26.3)
Females	39.6	(34.9 - 44.4)	22.2	(18.2 - 26.1)	33.3	(18.2 - 38.0)	5.0	(2.6 - 7.3)
Persons	43.5	(39.7 - 47.3)	18.3	(15.4 - 21.2)	24.7	(21.4 - 28.1)	13.5	(10.7 - 16.3)
45 to 64 yrs								
Males	45.9	(41.8 - 50.1)	17.0	(13.9 - 20.2)	20.7	(17.5 - 24.0)	16.3	(13.3 - 24.0)
Females	39.1	(35.9 - 42.2)	24.0	(21.3 - 26.7)	31.4	(28.4 - 34.4)	5.6	(4.1 - 7.1)
Persons	42.5	(41.8 - 46.7)	20.5	(18.4 - 22.6)	26.1	(23.8 - 28.3)	10.9	(9.3 - 12.6)
65 yrs & over								
Males	46.2	(42.5 - 49.9)	19.3	(16.3 - 22.2)	28.6	(25.2 - 32.0)	6.0	(4.3 - 7.6)
Females	42.5	(39.4 - 45.7)	24.9	(22.1 - 27.7)	30.1	(27.2 - 33.0)	2.5	(1.5 - 3.4)
Persons	44.2	(41.8 - 46.7)	22.3	(20.2 - 24.3)	29.4	(27.2 - 31.6)	4.1	(3.2 - 5.0)
Total								
Males	46.6	(43.1 - 50.2)	16.0	(13.5 - 18.6)	19.6	(16.8 - 22.4)	17.7	(14.9 - 20.5)
Females	39.9	(37.2 - 42.7)	23.2	(20.9 - 25.5)	32.2	(29.5 - 34.8)	4.7	(3.4 - 6.1)
Persons	43.3	(41.1 - 45.5)	19.6	(17.8 - 21.3)	25.8	(23.9 - 27.8)	11.3	(9.7 - 12.9)

Males were significantly more likely than females to spend most of their day in heavy labour/physically demanding work (17.7% compared with 4.7%) or sitting (46.6% compared with 39.9%). Females were significantly more likely to spend most of their day standing (23.2% compared with 16.0%) or walking (32.2% compared with 19.6%).

Figure 27 shows how people usually spend their day by geographic area of residence. While the majority of adults living in both the metro and country spend most of the day sitting, the proportion is significantly higher for metro residents. A significantly higher proportion of adults in country areas spend most of their day in heavy labour/ physically demanding work when compared with metro residents.

Figure 27: How usually spend day, 16 years & over, by geographic area of residence in WA, HWSS 2014



In 2014, the Australian Department of Health reviewed Australia's Physical Activity and Sedentary Behaviour Guidelines. Based on the 2014 guidelines, adults aged 18 to 64 years are required to complete at least 75 to 150 minutes of vigorous physical activity or 150 to 300 minutes of moderate physical activity per week.²⁵ Where respondents report doing vigorous activity the number of minutes is doubled in order to calculate a total number of minutes of moderate activity.

Under these new guidelines, adults aged 18-64 years no longer have a specification for the number of times physical activity should occur within the week to be deemed sufficiently active. That is, whether 150 minutes of moderate physical activity is completed over 2 days or 5 days in a week, the recommended amount of physical activity is still achieved.

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 days of the week, preferably all, is the most recent advice available.

To avoid reporting against multiple guidelines, this and future HWSS publications will only report against the 2014 guidelines. As such, 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.²⁶

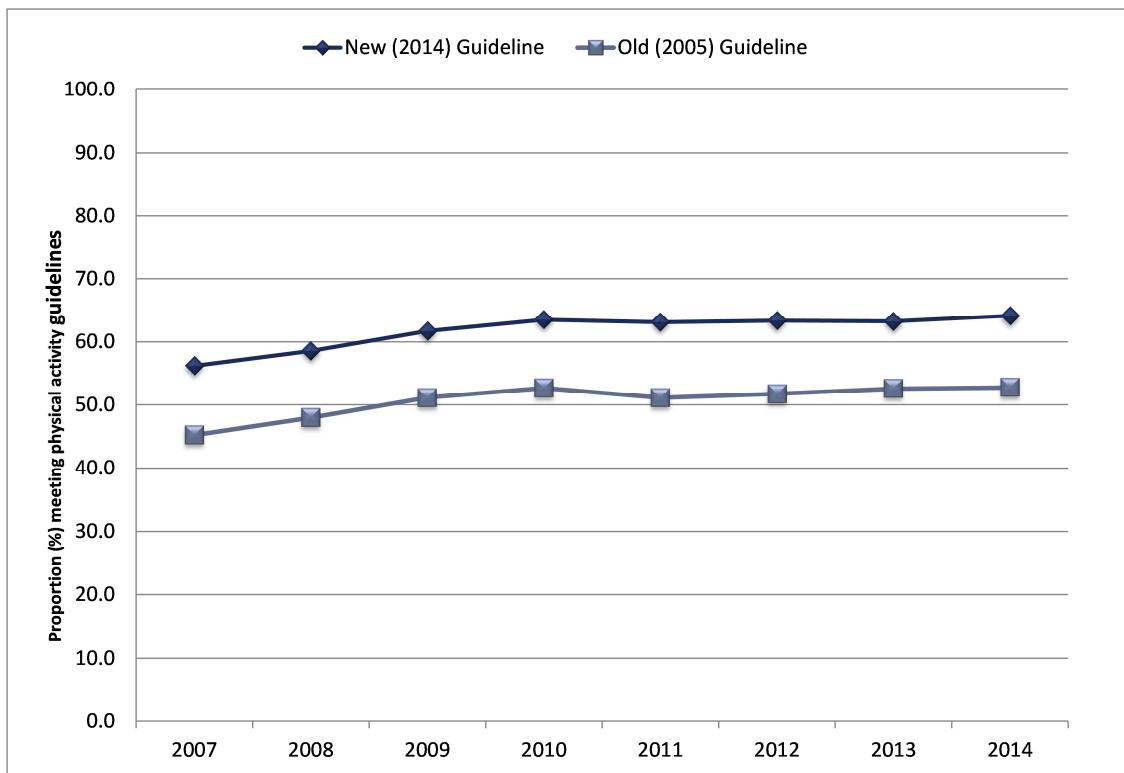
Removing the number of times physical activity should occur within a week from the definition of sufficient physical activity has led to an increase in the proportion of adults aged 18 years and over meeting sufficient levels of physical activity when compared with the stricter 2005 guidelines (Table 48).

Table 48: Comparison of recommended levels of physical activity by new and old physical activity guidelines, 18 years & over, HWSS 2014

	New guideline- Does 150 minutes or more of moderate physical activity per week	Old guideline- Does 150 minutes or more of moderate physical activity over at least 5 session per week		
	%	95% CI	%	95% CI
18 yrs & over				
Males	67.9	(64.8 - 71.0)	54.3	(50.8 - 57.8)
Females	60.7	(58.0 - 63.3)	51.3	(48.5 - 54.1)
Persons	64.3	(62.2 - 66.4)	52.8	(50.5 - 55.0)

While the new guideline has led to a significant increase in the proportion of adults aged 18 years and over classified as completing sufficient weekly physical activity, the trend over time has remained similar to what was observed when the 2005 guidelines were used (Figure 28). Physical activity questions have only been consistent for all adults since 2007 therefore the standardised annual prevalence estimates are only shown from 2007 to 2014.

Figure 28: Comparison of recommended levels of physical activity over time by new and old guidelines, 18 years & over, HWSS 2007 – 2014



NB - Old guideline defined as 150 minutes of moderate physical activity over 5 or more sessions in the last week.
 New guideline defined as 150 minutes of moderate physical activity in the last week.

Using the 2014 guideline, the standardised annual prevalence estimates of sufficient physical activity by sex for adults 18 years and over are shown in Table 49.

Table 49: Proportion adults completing recommended levels of physical activity over time by sex, 18 years & over, HWSS 2007 - 2014

	Males	Females	Persons
2007	59.5	53.0	56.2
2008	61.4	55.6	58.6
2009	65.7	57.7	61.7
2010	66.0	61.0	63.5
2011	66.6	59.6	63.1
2012	68.4	58.3	63.4
2013	67.8	58.7	63.2
2014	67.7	60.6	64.1
Average	64.4	57.3	60.9

The prevalence of adults 18 years and over meeting sufficient levels of physical activity (64.1%) in 2014 was the highest recorded since 2007, and was significantly higher than the 2007-2008 estimates (Figure 28 and Table 49). The prevalence of males meeting sufficient levels of physical activity in 2014 (67.7%) was significantly higher than 2007-2008 and the prevalence of females meeting sufficient levels of physical activity (60.6%) was significantly higher than 2007 (Table 49).

The mean minutes spent in physical activity per week, for respondents who indicated some level of physical activity, are shown in Table 50.

Table 50: Trend for mean time (a) spent in physical activity per week, 18 years & over, HWSS 2007 – 2014

	Males	Females	Persons
2007	345.2	252.4	298.8
2008	352.2	271.4	312.0
2009	387.7	292.1	340.0
2010	405.8	307.3	357.2
2011	379.7	299.7	339.4
2012	397.5	302.2	350.0
2013	396.8	304.5	350.7
2014	393.4	305.5	349.1
Average	386.2	292.7	339.5

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

The mean time spent in physical activity for females and all persons in 2014 was significantly higher compared to 2007-2008. There were no significant changes over time for males.

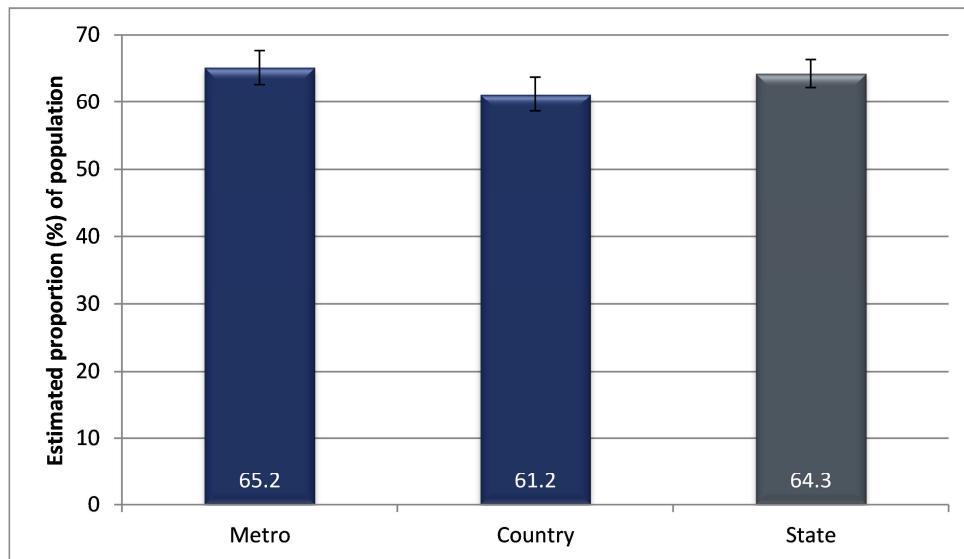
Table 51 further illustrates that almost two-thirds (64.3%) of all adults 18 years and over completed the recommended level of physical activity in 2014. Males are significantly more likely to complete recommended levels of physical activity compared with females (67.9% compared with 60.7%) and the proportion of people completing 150 minutes of physical activity per week decreased significantly with age.

Table 51: Proportion of people completing recommended levels of physical activity, 18 years & over, HWSS 2014

Does no physical activity			Does less than 150 minutes of moderate physical activity per week		Does 150 minutes or more of moderate physical activity per week	
	%	95% CI	%	95% CI	%	95% CI
18 to 44 yrs						
Males	12.4	(8.7 - 16.2)	15.6	(11.6 - 19.7)	72.0	(66.7 - 77.2)
Females	9.4	(6.8 - 12.1)	23.7	(19.5 - 27.9)	66.8	(62.2 - 71.4)
Persons	10.9	(8.6 - 13.2)	19.6	(16.7 - 22.6)	69.4	(65.9 - 72.9)
45 to 64 yrs						
Males	14.9	(12.1 - 17.6)	19.1	(11.6 - 19.7)	66.0	(62.2 - 69.8)
Females	17.0	(14.6 - 19.4)	24.0	(21.3 - 26.7)	59.0	(55.9 - 62.1)
Persons	15.9	(14.1 - 17.7)	21.5	(19.5 - 23.6)	62.5	(60.0 - 65.0)
65 yr & over						
Males	22.1	(19.1 - 25.1)	19.7	(16.8 - 22.6)	58.1	(54.5 - 61.8)
Females	27.6	(24.8 - 30.4)	26.9	(24.0 - 29.7)	45.5	(42.3 - 48.7)
Persons	25.0	(23.0 - 27.1)	23.5	(21.5 - 25.6)	51.5	(49.0 - 53.9)
Total						
Males	14.7	(12.5 - 16.9)	17.4	(15.0 - 19.8)	67.9	(64.8 - 71.0)
Females	14.9	(13.3 - 16.6)	24.4	(22.0 - 26.7)	60.7	(58.0 - 63.3)
Persons	14.8	(13.4 - 16.2)	20.9	(19.2 - 22.6)	64.3	(62.2 - 66.4)

Figure 29 shows the proportion of adults, 18 years and over, meeting the recommended levels of physical activity by geographic area of residence. There were no significant differences in the proportion of the population meeting the recommended levels of physical activity by geographic area of residence.

Figure 29: Proportion of people meeting the physical activity recommendation, 18 years & over, by geographic area of residence in WA, HWSS 2014



Sedentary leisure-time activity, such as television viewing, is strongly associated with both overweight and obesity.²⁷

Table 52 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.

Table 52: Time spent watching TV/DVDs or using a computer/Smartphone/tablet device per week, 16 years & over, HWSS 2014

	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	1.4 *	(0.2- 2.7)	17.9	(13.5-22.2)	24.4	(19.4-29.5)	30.7	(25.1-36.3)	25.6	(20.4-30.7)
Females	1.1 *	(0.1- 2.1)	18.7	(15.0-22.3)	30.0	(25.5-34.5)	28.1	(23.7-32.6)	22.1	(18.1-26.0)
Persons	1.3 *	(0.5- 2.1)	18.3	(15.4-21.1)	27.1	(23.7-30.5)	29.4	(25.9-33.0)	23.9	(20.6-27.2)
45 to 64 yrs										
Males	N/A	(N/A - N/A)	13.1	(10.2-15.9)	20.4	(17.0-15.9)	34.3	(30.4-38.2)	31.7	(27.9-35.5)
Females	2.1	(1.3- 3.0)	10.4	(8.5-12.3)	20.2	(17.6-22.8)	35.1	(32.0-38.2)	32.1	(29.1-35.0)
Persons	1.4	(0.8- 1.9)	11.8	(10.1-13.5)	20.3	(18.1-22.4)	34.7	(32.2-37.2)	31.9	(29.5-34.3)
65 yrs & over										
Males	0.9 *	(0.4- 1.5)	6.0	(4.3- 7.7)	15.6	(13.0-18.3)	28.4	(25.0-31.7)	49.0	(45.3-52.7)
Females	1.1 *	(0.5- 1.7)	6.4	(4.8- 8.0)	10.7	(8.7-12.7)	26.5	(23.7-29.3)	55.4	(52.2-58.5)
Persons	1.0	(0.6- 1.4)	6.2	(5.1- 7.4)	13.0	(11.4-14.6)	27.4	(25.2-29.5)	52.4	(50.0-54.8)
Total										
Males	1.1 *	(0.4- 1.8)	14.7	(12.1-17.3)	21.9	(18.9-24.9)	31.4	(28.1-34.8)	30.8	(27.7-34.0)
Females	1.4	(0.8- 2.0)	14.1	(12.1-16.2)	23.8	(21.2-26.3)	30.0	(27.4-32.6)	30.7	(28.3-33.1)
Persons	1.3	(0.8- 1.7)	14.4	(12.8-16.1)	22.8	(20.9-24.8)	30.7	(28.6-32.8)	30.8	(28.8-30.8)

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

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

8.5 Sleep

There is growing recognition of the importance of sleep to good health, with insufficient sleep linked to cardiovascular disease, increased risk of mortality, depression as well as injury and/or accidents.²⁸ Sleep duration recommendations vary by age group. Those aged 16-17 years are recommended to sleep between 8 to 10 hours a night, 18-64 year olds are recommended to sleep 7 to 9 hours a night and adults aged 65 years and over are recommended to receive 7 to 8 hours of sleep per night.²⁹

Respondents were asked how many hours sleep they get on a usual night. Table 53 shows the prevalence of the population meeting the recommended hours of sleep. Two thirds of respondents (66.3%) reported sleeping the recommended number of hours per night. Those aged 65 years and over were significantly less likely than respondents aged 16-44 years and 45-64 years to sleep the recommended number of hours a night (50.2% compared with 72.1% and 64.4%). Overall, respondents reported sleeping an average of 7.2 hours per night.

Table 53: Proportion of adults sleeping the recommended number of hours on a usual night, 16 years & over, HWSS 2014

	Sleeps the recommended number of hours per night		Does not sleep the recommended number of hours per night	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	71.8	(66.4 - 77.2)	28.2	(22.8 - 33.6)
Females	72.3	(68.1 - 76.6)	27.7	(23.4 - 31.9)
Persons	72.1	(68.6 - 75.6)	27.9	(24.4 - 31.4)
45 to 64 yrs				
Males	62.1	(58.0 - 66.1)	37.9	(33.9 - 42.0)
Females	66.7	(63.7 - 69.7)	33.3	(30.3 - 36.3)
Persons	64.4	(61.8 - 66.9)	35.6	(33.1 - 38.2)
65 yrs & over				
Males	52.0	(48.3 - 55.7)	48.0	(44.3 - 51.7)
Females	48.6	(45.4 - 51.8)	51.4	(48.2 - 54.6)
Persons	50.2	(47.8 - 52.6)	49.8	(47.4 - 52.2)
Total				
Males	66.0	(62.7 - 69.3)	34.0	(30.7 - 37.3)
Females	66.7	(64.2 - 69.2)	33.3	(30.8 - 35.8)
Persons	66.3	(64.3 - 68.4)	33.7	(31.6 - 35.7)

9. PHYSIOLOGICAL RISK FACTORS

Biomedical factors such as high cholesterol, high blood pressure, and overweight or obesity can be major contributors to ill health and chronic disease. These risk factors are expressed through bodily changes and are highly interrelated.²⁰ Biomedical risk factors, such as high blood pressure and high cholesterol are managed through a combination of clinical practice, medications, population-based interventions and lifestyle behaviours.³⁰

9.1 Cholesterol level

High cholesterol is a major risk factor for coronary heart disease and some types of stroke.³⁰ Respondents were asked when they last had their cholesterol measured, shown in Table 55, and whether or not they have had high cholesterol. Table 54 shows the proportion of respondents who have been told by a doctor that they have high cholesterol levels. The prevalence of ever and current high cholesterol diagnosis increased significantly with age for both sexes.

Table 54: Prevalence of diagnosed high cholesterol levels, 16 years & over, HWSS 2014

	Lifetime (ever)		Point (current)	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	14.6	(9.8 - 19.4)	7.7 *	(3.8 - 11.5)
Females	15.9	(11.2 - 20.6)	4.3	(2.3 - 6.2)
Persons	15.2	(11.8 - 18.6)	6.1	(3.8 - 8.4)
45 to 64 yrs				
Males	39.2	(35.1 - 43.4)	25.9	(22.1 - 29.7)
Females	26.2	(23.3 - 29.0)	16.6	(14.2 - 18.9)
Persons	32.8	(30.2 - 35.3)	21.3	(19.0 - 23.6)
65 yrs & over				
Males	39.8	(36.2 - 43.5)	32.7	(29.2 - 36.2)
Females	46.3	(43.1 - 49.5)	39.0	(35.8 - 42.1)
Persons	43.3	(40.9 - 45.7)	36.1	(33.7 - 38.4)
Total				
Males	28.5	(25.6 - 31.5)	19.1	(16.7 - 21.6)
Females	26.5	(24.2 - 28.8)	16.6	(15.0 - 18.2)
Persons	27.5	(25.7 - 29.4)	17.9	(16.4 - 19.4)

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

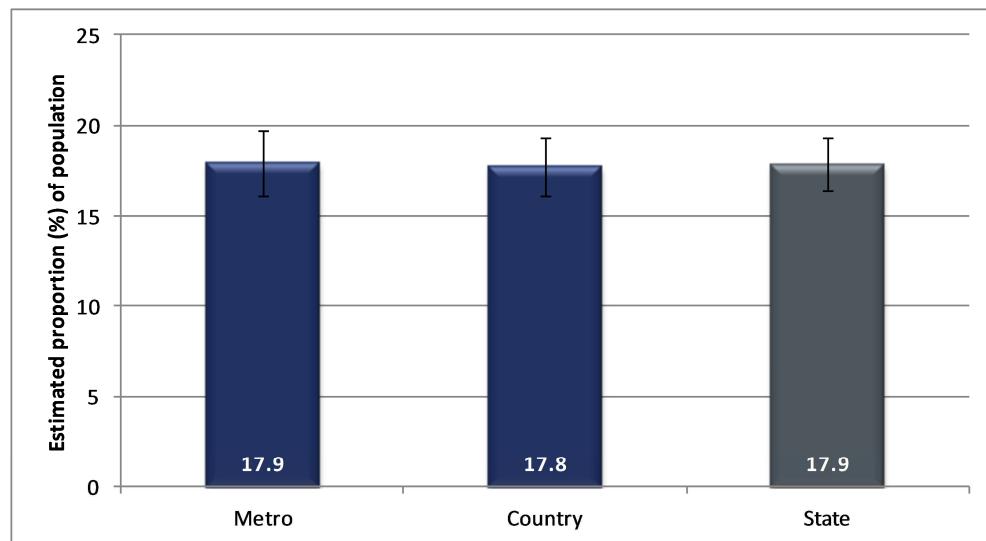
Table 55: Cholesterol level last tested, 16 years & over, HWSS 2014

	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	38.6	(32.8 - 44.4)	25.7	(20.7 - 30.7)	12.8	(8.6 - 17.1)	8.0	(5.1 - 10.9)	8.2	(5.2 - 11.2)	6.7	(3.8 - 9.5)
Females	43.0	(38.1 - 47.9)	19.3	(15.6 - 23.1)	11.6	(8.7 - 14.4)	8.8	(6.0 - 11.6)	5.2	(3.4 - 7.1)	12.1	(9.1 - 15.0)
Persons	40.7	(36.9 - 44.5)	22.6	(19.4 - 25.8)	12.2	(9.7 - 14.8)	8.4	(6.4 - 10.4)	6.8	(5.0 - 8.6)	9.3	(7.2 - 11.3)
45 to 64 yrs												
Males	4.6	(2.9 - 6.3)	49.3	(45.2 - 53.4)	22.6	(19.2 - 26.0)	12.7	(9.9 - 26.0)	7.1	(5.1 - 9.1)	3.7	(2.3 - 5.1)
Females	5.9	(4.4 - 7.3)	45.9	(42.7 - 49.1)	22.5	(19.8 - 25.2)	11.8	(9.7 - 13.8)	8.5	(6.7 - 10.3)	5.5	(4.1 - 6.8)
Persons	5.2	(0.9 - 6.3)	47.6	(45.0 - 50.2)	22.6	(20.4 - 24.7)	12.2	(10.5 - 14.0)	7.8	(6.4 - 9.1)	4.6	(3.6 - 5.6)
65 yrs & over												
Males	1.4 *	(0.6 - 2.2)	67.0	(63.5 - 70.4)	16.7	(14.0 - 19.5)	4.0	(2.6 - 5.4)	3.9	(2.5 - 5.3)	7.0	(5.3 - 8.8)
Females	1.5 *	(0.8 - 2.3)	59.2	(56.1 - 62.3)	20.8	(18.2 - 23.4)	5.5	(4.1 - 6.9)	2.7	(1.7 - 3.6)	10.3	(8.4 - 12.1)
Persons	1.5	(0.9 - 2.0)	62.8	(60.5 - 65.1)	18.9	(17.0 - 20.8)	4.8	(3.8 - 5.8)	3.2	(2.4 - 4.1)	8.8	(7.5 - 10.0)
Total												
Males	22.9	(19.4 - 26.4)	38.9	(35.6 - 42.1)	16.4	(13.8 - 18.3)	8.8	(7.0 - 10.7)	7.2	(5.4 - 9.0)	5.8	(4.2 - 7.5)
Females	24.6	(21.7 - 27.5)	34.2	(31.8 - 36.6)	16.5	(14.7 - 18.3)	9.2	(7.5 - 10.8)	5.8	(4.7 - 6.9)	9.7	(8.1 - 11.4)
Persons	23.7	(21.5 - 26.0)	36.6	(34.5 - 38.6)	16.4	(14.9 - 18.0)	9.0	(7.8 - 10.2)	6.5	(5.5 - 7.6)	7.8	(6.6 - 8.9)

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

Figure 30 shows the proportion of adults with current high cholesterol by geographic area of residence. There were no statistically significant differences.

Figure 30: Prevalence of current high cholesterol, 16 years & over, by geographic area of residence in WA, HWSS 2014



The cholesterol information has not always been asked of adults 16-24 years. Therefore, the standardised annual prevalence estimates of high cholesterol for adults aged 25 years and over are shown in Table 56. For lifetime and current high cholesterol, there are no significant differences when the 2014 prevalence estimate is compared to previous years.

Table 56: Prevalence of high cholesterol over time, 25 years & over, HWSS 2003 – 2014

	Lifetime (ever)			Period (current) (a)		
	Males	Females	Persons	Males	Females	Persons
2003	32.2	30.6	31.4	19.8	19.2	19.5
2004	32.8	31.9	32.3	21.8	18.8	20.3
2005	30.9	30.5	30.7	16.3	14.0	15.2
2006	29.8	30.3	30.1	19.8	18.0	18.9
2007	31.9	29.3	30.6	20.3	19.8	20.1
2008	29.5	27.3	28.4	18.2	17.2	17.7
2009	31.3	27.6	29.5	20.9	18.5	19.7
2010	32.6	31.3	32.0	21.4	20.7	21.1
2011	33.6	29.3	31.5	22.9	18.5	20.7
2012	30.2	26.1	28.1	20.2	16.8	18.5
2013	29.1	26.9	28.0	19.8	18.4	19.1
2014	30.4	27.8	29.1	20.4	17.8	19.1
Average	31.5	29.0	30.3	20.3	18.3	19.3

(a) Current high cholesterol is defined as having high cholesterol or taking medication.

9.2 Blood pressure

High blood pressure is a major risk factor for the development of coronary artery disease, stroke and renal failure.³¹ Respondents were asked when they last had their blood pressure measured (Table 58) and if a doctor has ever told them that they have high blood pressure. For respondents who reported having 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 57. The prevalence for ever being diagnosed with high blood pressure and a current diagnosis of high blood pressure both increased significantly with age.

Table 57: Prevalence of high blood pressure, 16 years & over, HWSS 2014

	Lifetime (ever)		Point (current)	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	11.4	(7.8 - 15.0)	3.7 *	(1.8 - 5.6)
Females	9.6	(7.0 - 12.1)	1.9	(1.0 - 2.7)
Persons	10.5	(8.3 - 12.7)	2.8	(1.7 - 3.8)
45 to 64 yrs				
Males	33.1	(29.2 - 37.0)	25.0	(21.5 - 28.6)
Females	28.1	(25.3 - 31.0)	20.2	(17.7 - 22.8)
Persons	30.6	(28.2 - 33.0)	22.6	(20.4 - 24.9)
65 yrs & over				
Males	47.9	(44.2 - 51.6)	43.4	(39.7 - 47.0)
Females	51.9	(48.7 - 55.0)	46.7	(43.5 - 49.9)
Persons	50.0	(47.6 - 52.4)	45.1	(42.8 - 47.5)
Total				
Males	23.6	(21.1 - 26.2)	16.3	(14.4 - 18.2)
Females	22.6	(20.7 - 24.5)	15.3	(14.0 - 16.6)
Persons	23.1	(21.6 - 24.7)	15.8	(14.6 - 16.9)

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

Table 58: Blood pressure last tested, 16 years & over, HWSS 2014

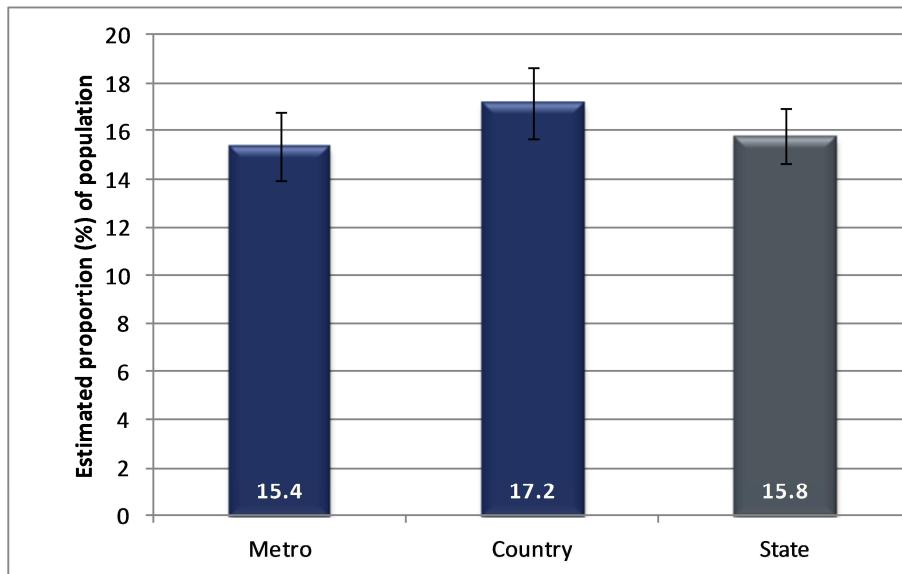
	Never		Within 6 mths		6 mths to 1 yr		1 to 2 yrs		2 or more yrs ago		Unsure	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs												
Males	5.1 *	(2.3 - 7.8)	57.2	(51.4 - 63.0)	18.9	(14.2 - 23.6)	8.7	(5.4 - 12.0)	4.7 *	(2.3 - 7.0)	5.5	(3.1 - 7.8)
Females	3.7 *	(1.7 - 5.7)	63.4	(58.6 - 68.1)	18.8	(15.0 - 22.7)	5.3	(3.1 - 7.6)	4.1	(2.1 - 6.1)	4.6	(2.7 - 6.5)
Persons	4.4	(2.7 - 6.1)	60.2	(56.4 - 64.0)	18.9	(15.8 - 21.9)	7.1	(5.1 - 9.1)	4.4	(2.9 - 5.9)	5.1	(3.5 - 6.6)
45 to 64 yrs												
Males	N/A	(N/A - N/A)	74.0	(70.3 - 77.6)	15.2	(12.2 - 18.2)	6.3	(4.2 - 8.3)	2.2 *	(1.0 - 3.3)	2.0 *	(1.0 - 3.0)
Females	N/A	(N/A - N/A)	75.0	(72.3 - 77.8)	14.1	(11.8 - 16.3)	4.7	(3.4 - 6.0)	2.6	(1.5 - 3.6)	3.5	(2.3 - 4.6)
Persons	0.3 *	(0.0 - 0.6)	74.5	(72.2 - 76.8)	14.6	(12.8 - 16.5)	5.5	(4.3 - 6.7)	2.4	(1.6 - 3.1)	2.7	(1.9 - 3.5)
65 yrs & over												
Males	N/A	(N/A - N/A)	91.5	(89.5 - 93.5)	5.3	(3.6 - 6.9)	0.5 *	(0.0 - 1.0)	0.6 *	(0.2 - 0.9)	2.0 *	(1.0 - 3.0)
Females	0.0	(0.0 - 0.0)	90.0	(88.2 - 91.8)	5.7	(4.2 - 7.2)	1.1 *	(0.6 - 1.7)	0.5 *	(0.1 - 0.9)	2.7	(1.8 - 3.6)
Persons	N/A	(N/A - N/A)	90.7	(89.4 - 92.0)	5.5	(4.4 - 6.6)	0.9	(0.5 - 1.3)	0.5 *	(0.2 - 0.8)	2.4	(1.7 - 3.0)
Total												
Males	2.9 *	(1.4 - 4.5)	67.3	(63.8 - 70.8)	15.8	(13.0 - 18.6)	6.8	(4.9 - 8.7)	3.3	(2.0 - 4.6)	3.9	(2.6 - 5.2)
Females	2.0 *	(0.9 - 3.1)	71.4	(68.7 - 74.1)	15.2	(13.0 - 17.3)	4.4	(3.2 - 5.7)	3.0	(1.9 - 4.1)	3.9	(2.9 - 5.0)
Persons	2.5	(1.5 - 3.4)	69.3	(67.1 - 71.5)	15.5	(13.7 - 17.2)	5.6	(4.5 - 6.8)	3.2	(2.3 - 4.0)	3.9	(3.1 - 4.8)

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

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

Figure 31 shows the proportion of adults with current high blood pressure by geographic area of residence.

Figure 31: Prevalence of current high blood pressure, 16 years & over, by geographic area of residence in WA, HWSS 2014



The blood pressure information has not always been asked of adults 16-24 years. Therefore, the standardised annual prevalence estimates of high blood pressure for adults aged 25 years and over are shown in Table 59.

Table 59: Prevalence of high blood pressure over time, 25 years & over, HWSS 2003 – 2014

	Lifetime (ever)			Period (current) (a)		
	Males	Females	Persons	Males	Females	Persons
2003	24.7	29.7	27.2	16.2	18.8	17.5
2004	26.4	30.9	28.7	17.1	20.4	18.8
2005	26.2	29.1	27.7	17.6	17.8	17.7
2006	27.1	30.7	28.9	18.5	19.2	18.9
2007	28.4	30.2	29.3	18.5	19.4	19.0
2008	26.2	29.3	27.7	18.2	19.4	18.8
2009	27.0	28.8	27.9	19.9	19.3	19.6
2010	29.8	29.2	29.5	21.0	19.0	20.0
2011	26.7	27.6	27.1	18.3	19.2	18.7
2012	24.8	26.7	25.8	18.6	19.0	18.8
2013	26.4	24.6	25.5	19.2	17.1	18.2
2014	27.2	25.5	26.3	19.3	17.9	18.6
Average	27.1	28.7	27.9	19.1	19.0	19.0

(a) Refers to having been diagnosed by a doctor with high blood pressure and either still having high blood pressure or still taking medication for high blood pressure.

For lifetime high blood pressure, the 2014 prevalence estimate for females was significantly lower than 2003-2004 and 2006-2007 prevalence estimates. For males and all persons there were no significant differences from the 2014 estimates over time. There have been no significant changes over time in the prevalence of current high blood pressure.

9.3 Body Weight

Obesity is associated with type 2 diabetes, cardiovascular disease, some cancers and arthritis.³²

Respondents were asked how tall they are and how much they weigh. 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.³³ The BMIs were then classified as not overweight or obese (BMI<25), overweight ($25 \leq \text{BMI} < 30$) or obese (BMI ≥ 30),³⁴ as shown in Table 60.

Two thirds of respondents (66.4%) reported height and weight measurements that classified them as overweight or obese. Over one quarter of those interviewed reported height and weight measurements that classified them as obese. Females were significantly more likely to be classified as not overweight or obese than males (39.3% compared with 28.2%). The proportion of respondents classified as overweight was significantly higher for persons aged 65 years and over compared with those aged 16-44 years, while the proportion of respondents classified as obese was significantly higher for persons aged 45 years and over compared with those aged 16-44 years.

Table 60: Prevalence by BMI categories, 16 years & over, HWSS 2014

	Not overweight or obese		Overweight		Obese	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	36.5	(30.5 - 42.5)	40.6	(34.8 - 46.5)	22.9	(18.2 - 27.6)
Females	48.0	(43.0 - 53.1)	31.2	(26.7 - 35.7)	20.7	(16.9 - 24.6)
Persons	41.9	(38.0 - 45.9)	36.2	(32.4 - 39.9)	21.9	(18.8 - 24.9)
45 to 64 yrs						
Males	15.6	(12.7 - 18.6)	48.1	(44.0 - 52.3)	36.2	(32.2 - 40.2)
Females	29.7	(26.8 - 32.7)	34.9	(31.7 - 38.0)	35.4	(32.3 - 38.5)
Persons	22.5	(20.4 - 24.7)	41.6	(39.0 - 44.3)	35.8	(33.3 - 38.4)
65 yrs & over						
Males	23.4	(20.3 - 26.5)	48.7	(45.0 - 52.4)	27.9	(24.6 - 31.3)
Females	29.8	(26.8 - 32.8)	37.3	(34.1 - 40.6)	32.8	(29.7 - 36.0)
Persons	26.7	(24.6 - 28.9)	42.8	(40.4 - 45.3)	30.5	(28.2 - 32.7)
Total						
Males	28.2	(24.6 - 31.7)	44.1	(40.6 - 47.6)	27.7	(24.8 - 30.7)
Females	39.3	(36.4 - 42.2)	33.4	(30.7 - 36.0)	27.3	(25.0 - 29.7)
Persons	33.6	(31.3 - 35.9)	38.9	(36.7 - 41.1)	27.5	(25.6 - 29.4)

Figure 32 shows adults aged 16 years and over by BMI categories and geographic area of residence. The proportion of adults classified as obese was significantly lower among metropolitan residents compared to country residents.

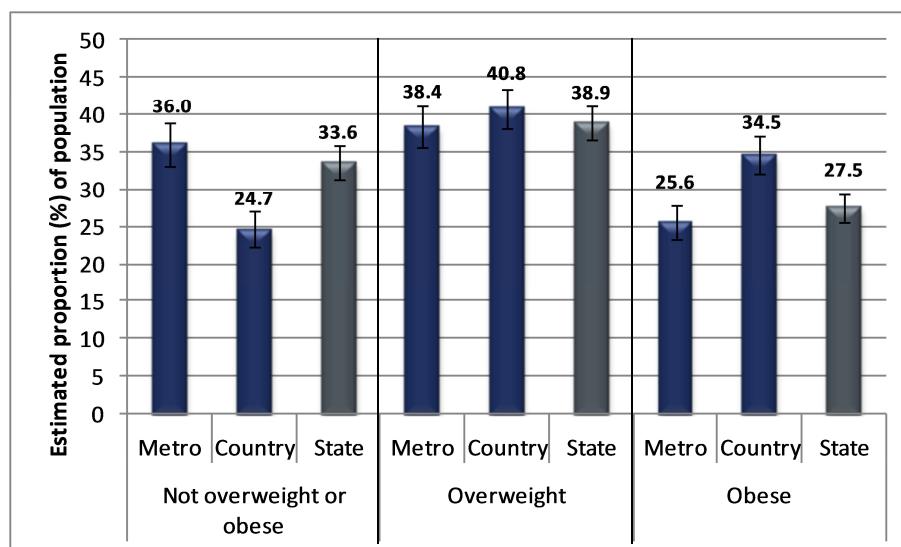
Figure 32: Prevalence by BMI categories, 16 years & over, by geographic area of residence in WA, HWSS 2014

Table 61 shows the prevalence over time for three BMI categories; not overweight or obese, overweight and obese. For males, the 2014 obese prevalence estimate was significantly higher than the 2002- 2004 estimates. For all persons the 2014 prevalence estimate was significantly higher than the 2002-2006 estimates.

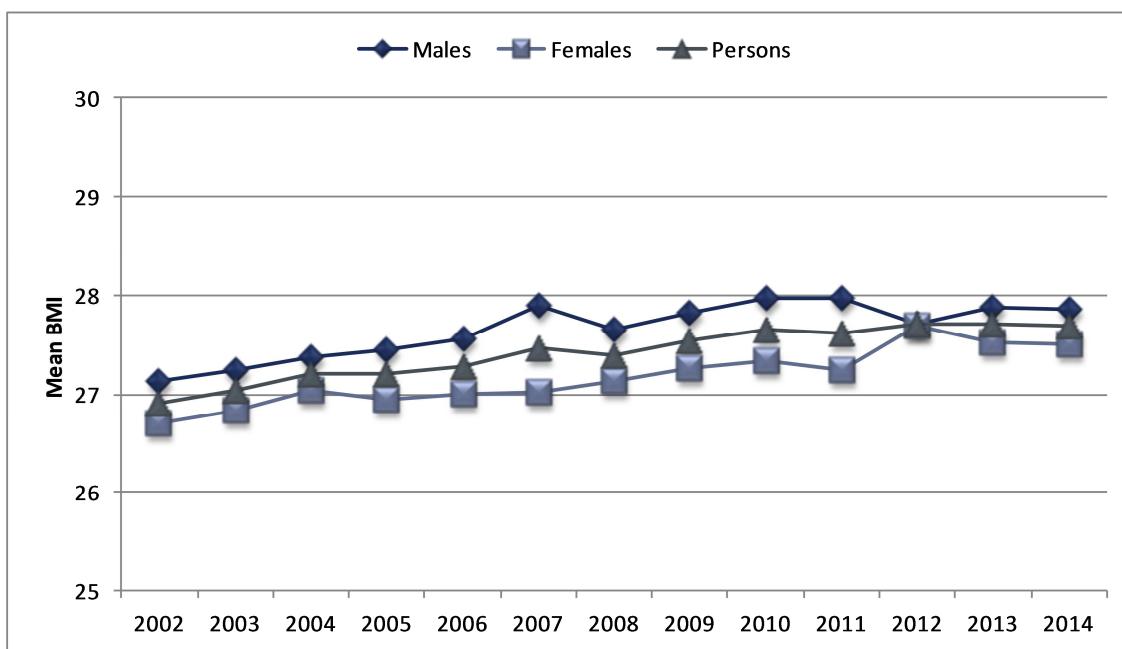
Table 61: Prevalence by BMI categories over time, 16 years & over, HWSS 2002 – 2014

	Not overweight or obese			Overweight			Obese		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
2002	31.8	45.4	38.5	47.8	32.5	40.2	20.5	22.1	21.3
2003	32.1	44.8	38.3	46.8	33.1	40.1	21.1	22.1	21.6
2004	28.7	42.2	35.3	49.5	33.9	41.8	21.8	24.0	22.9
2005	28.2	44.5	36.2	48.9	29.7	39.5	22.9	25.9	24.3
2006	28.7	42.4	35.5	47.4	33.3	40.4	23.9	24.3	24.1
2007	27.6	43.0	35.2	45.4	31.9	38.7	27.1	25.2	26.1
2008	30.2	43.0	36.4	44.2	31.7	38.1	25.6	25.3	25.4
2009	26.2	40.8	33.4	46.9	32.7	39.9	26.9	26.5	26.7
2010	26.2	41.5	33.7	46.9	32.3	39.7	26.9	26.2	26.6
2011	26.3	41.3	33.6	47.3	32.9	40.3	26.4	25.8	26.1
2012	29.4	38.4	33.8	43.5	32.2	38.0	27.1	29.4	28.3
2013	26.3	41.0	33.5	45.5	31.5	38.7	28.2	27.5	27.9
2014	28.0	39.2	33.5	44.2	33.3	38.9	27.9	27.5	27.7
Average	28.4	42.3	35.2	46.6	32.2	39.6	25.0	25.5	25.2

The standardised annual mean BMI estimates for adults aged 16 years and over are shown in Table 62 and Figure 33.

Table 62: Mean BMI overtime, 16 years & over, HWSS 2002 – 2014

	Males	Females	Persons
2002	27.1	26.7	26.9
2003	27.2	26.8	27.0
2004	27.4	27.0	27.2
2005	27.5	27.0	27.2
2006	27.6	27.0	27.3
2007	27.9	27.0	27.5
2008	27.7	27.1	27.4
2009	27.8	27.3	27.5
2010	28.0	27.3	27.7
2011	28.0	27.2	27.6
2012	27.7	27.7	27.7
2013	27.9	27.5	27.7
2014	27.9	27.5	27.7
Average	27.6	27.2	27.4

Figure 33: Mean BMI over time, 16 years & over, HWSS 2002 – 2014

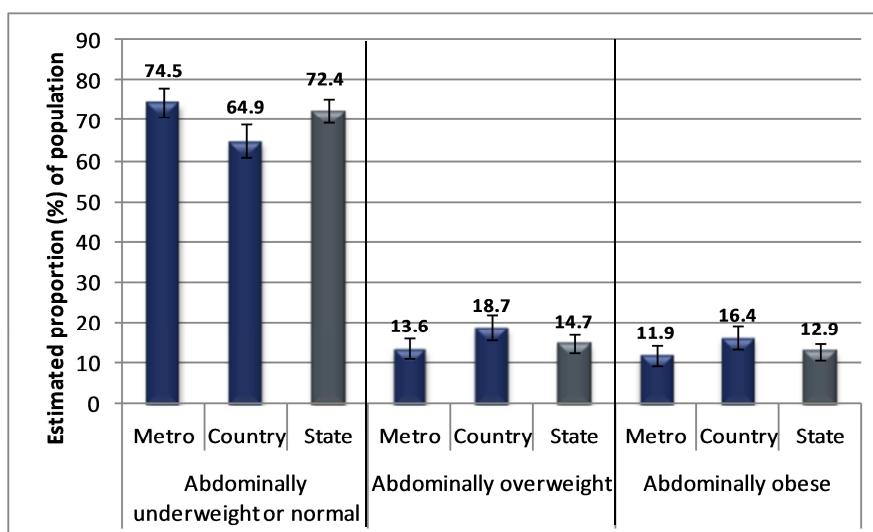
The standardised mean BMI has been increasing slightly over time. For males and females, the mean BMI in 2014 is significantly higher than 2002-2003, and for all persons, the mean BMI in 2014 is significantly higher than the 2002-2003 and 2005.

Respondents were also asked to estimate their waist circumference as this may predict future health risks more accurately than BMI alone. Respondents with a waist circumference of 80-87cm for females and 94-101cm for males were categorised as abdominally overweight and having an increased risk of developing chronic conditions, while respondents with a waist circumference of $\geq 88\text{cm}$ for females and $\geq 102\text{cm}$ for males were categorised as abdominally obese and having a highly increased risk of developing chronic conditions.³⁵ The results are displayed in Table 63. Over one-quarter of respondents (27.6%) reported waist measurements that classified them as overweight or obese. Males were significantly more likely than females to be abdominally underweight or normal weight. The proportion of respondents classified as abdominally overweight or obese was significantly higher for persons aged 45 years and over compared with those aged 16-44 years.

Table 63: Classification of waist circumference, 16 years & over, HWSS 2014

	Abdominally underweight or normal		Abdominally overweight		Abdominally obese	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	85.9	(81.3-90.5)	6.7	(3.5-9.8)	7.5	(3.9-11.0)
Females	59.2	(46.6-71.7)	24.6	(14.3-34.9)	16.2 *	(8.1-24.3)
Persons	81.6	(77.2-85.9)	9.5	(6.4-12.7)	8.9	(5.6-12.1)
45 to 64 yrs						
Males	69.3	(64.8-73.7)	18.0	(14.3-21.7)	12.8	(9.5-16.0)
Females	49.7	(41.6-57.9)	23.1	(16.2-30.1)	27.1	(19.9-34.4)
Persons	65.7	(61.7-69.7)	18.9	(15.6-22.2)	15.4	(12.4-18.4)
65 yrs & over						
Males	55.5	(51.0-60.1)	25.6	(21.6-29.6)	18.9	(15.3-22.5)
Females	37.1	(28.7-45.5)	23.4	(15.7-31.1)	39.5	(30.8-48.2)
Persons	52.3	(48.2-56.3)	25.2	(21.6-28.7)	22.6	(19.2-26.0)
Total						
Males	76.4	(73.3-79.5)	12.9	(10.6-15.1)	10.7	(8.5-13.0)
Females	52.7	(45.3-60.1)	23.9	(18.1-29.7)	23.4	(18.1-28.7)
Persons	72.4	(69.5-75.3)	14.7	(12.6-16.9)	12.9	(10.8-15.0)

Figure 34 shows prevalence by classification of waist circumference by geographic area of residence. There were no significant differences in the prevalence of abdominal overweight or obesity by geographic area of residence; however residents in the country were significantly less likely to be abdominally underweight or normal weight compared to metro residents.

Figure 34: Classification of waist circumference, 16 years & over, by geographic area of residence in WA, HWSS 2014

Respondents were also asked for their perceptions of their own weight (Table 64). Persons aged 16-44 years were significantly less likely to perceive themselves as overweight compared with those aged 45 years and over, and less likely to perceive themselves as very overweight compared with those aged 45-64 years.

Table 64 Prevalence by self-perception of body weight, 16 years & over, HWSS 2014

	Underweight		Normal weight		Overweight		Very overweight	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	7.1	(3.9 - 10.4)	58.3	(52.6 - 64.1)	32.9	(27.5 - 38.4)	1.6 *	(0.3 - 2.9)
Females	3.5 *	(1.7 - 5.4)	60.1	(55.4 - 64.7)	33.3	(28.9 - 37.8)	3.1	(1.8 - 4.3)
Persons	5.4	(3.5 - 7.3)	59.2	(55.4 - 62.9)	33.1	(29.6 - 36.7)	2.3	(1.4 - 3.2)
45 to 64 yrs								
Males	3.0	(1.7 - 4.3)	40.5	(36.5 - 44.5)	53.0	(48.9 - 57.1)	3.4	(1.9 - 5.0)
Females	1.3	(0.7 - 1.9)	38.1	(35.0 - 41.1)	54.3	(51.1 - 57.5)	6.4	(4.7 - 8.0)
Persons	2.2	(1.4 - 2.9)	39.3	(36.8 - 41.8)	53.7	(51.1 - 56.3)	4.9	(3.8 - 6.0)
65 yrs & over								
Males	4.7	(3.2 - 6.2)	51.0	(47.3 - 54.6)	42.6	(39.0 - 46.3)	1.7 *	(0.7 - 2.7)
Females	4.0	(2.8 - 5.1)	45.7	(42.5 - 48.8)	48.6	(45.4 - 51.7)	1.8	(1.0 - 2.6)
Persons	4.3	(3.4 - 5.2)	48.2	(45.8 - 50.6)	45.8	(43.4 - 48.2)	1.8	(1.1 - 2.4)
Total								
Males	5.5	(3.7 - 7.4)	51.9	(48.4 - 55.4)	40.4	(37.1 - 43.8)	2.2	(1.3 - 3.1)
Females	2.9	(1.9 - 3.9)	50.9	(48.1 - 53.7)	42.3	(39.6 - 45.0)	3.9	(3.0 - 4.7)
Persons	4.2	(3.2 - 5.3)	51.4	(49.1 - 53.6)	41.4	(39.2 - 43.5)	3.0	(2.4 - 3.6)

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

Respondents were then asked what they were trying to do about their weight (Table 65). Females were significantly more likely than males to state that they were trying to lose weight, particularly in the 45-64 year age group (59.5% compared with 50.4%). Males were significantly more likely than females to state that they were trying to gain weight (7.0% compared with 1.7%).

Table 65: Prevalence by intentions regarding weight, 16 years & over, HWSS 2014

	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
16 to 44 yrs								
Males	38.3	(32.6 - 44.0)	11.0	(7.4 - 14.7)	22.7	(17.7 - 27.8)	27.9	(22.6 - 33.3)
Females	45.6	(40.8 - 50.4)	2.1 *	(0.6 - 3.5)	26.1	(21.7 - 30.5)	26.2	(21.9 - 30.5)
Persons	41.8	(38.1 - 45.6)	6.7	(4.6 - 8.7)	24.4	(21.0 - 27.7)	27.1	(23.7 - 30.6)
45 to 64 yrs								
Males	50.4	(46.3 - 54.5)	1.6 *	(0.6 - 2.7)	24.0	(20.5 - 27.5)	23.9	(20.5 - 27.4)
Females	59.5	(56.4 - 62.6)	0.8 *	(0.3 - 1.3)	19.9	(17.3 - 22.5)	19.8	(17.3 - 22.3)
Persons	54.9	(52.3 - 57.5)	1.2	(0.7 - 1.8)	22.0	(19.8 - 24.1)	21.9	(19.7 - 24.0)
65 yrs & over								
Males	35.9	(32.4 - 39.5)	3.0	(1.8 - 4.2)	27.5	(24.2 - 30.8)	33.6	(30.2 - 37.0)
Females	39.6	(36.5 - 42.7)	2.0	(1.2 - 2.7)	26.8	(24.0 - 29.6)	31.7	(28.8 - 34.6)
Persons	37.9	(35.5 - 40.2)	2.4	(1.8 - 3.1)	27.1	(25.0 - 29.2)	32.6	(30.3 - 34.8)
Total								
Males	41.7	(38.2 - 45.1)	7.0	(4.9 - 9.1)	23.8	(20.8 - 26.8)	27.5	(24.4 - 30.7)
Females	48.9	(46.1 - 51.6)	1.7	(0.9 - 2.4)	24.3	(21.8 - 26.8)	25.2	(22.7 - 27.6)
Persons	45.2	(43.0 - 47.4)	4.4	(3.2 - 5.5)	24.1	(22.1 - 26.0)	26.4	(24.4 - 28.4)

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

10. 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 services.²⁰ Respondents were asked whether they had used a number of common health services within the past 12 months, shown in Table 66 and how often they visited them, shown in Table 67.

While nine in ten respondents (90.0%) reported having used primary health services (e.g. visiting a GP) within the past 12 months, only 6.1% reported having used mental health services during this period. A significantly higher proportion of females reported using primary, allied, dental and alternative health services when compared with males. Persons aged 65 years and over were significantly more likely than those aged 16-64 to use primary or hospital based services, but significantly less likely than these younger age groups to use mental health or alternative health services.

The most used health service was primary health services, with a mean of 4.2 visits, followed by allied health services, with 2.8 visits. Females had a significantly higher mean number of visits for primary, allied and dental health services when compared with males.

Table 66: Health service utilisation in the past 12 months, 16 years & over, HWSS 2014

	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	82.8	(78.4 - 87.3)	21.4	(17.0 - 25.8)	37.8	(32.2 - 43.5)	49.2	(43.3 - 55.1)	6.1	(3.6 - 8.5)	9.7	(5.6 - 13.8)
Females	92.2	(89.7 - 94.8)	29.3	(24.9 - 33.7)	47.4	(42.6 - 52.2)	56.1	(51.3 - 61.0)	8.7	(6.3 - 11.1)	12.6	(9.7 - 15.4)
Persons	87.4	(84.7 - 90.0)	25.2	(22.1 - 28.4)	42.5	(38.7 - 46.2)	52.6	(48.7 - 56.4)	7.3	(5.6 - 9.0)	11.1	(8.6 - 13.6)
45 to 64 yrs												
Males	90.4	(88.1 - 92.7)	26.2	(22.7 - 29.7)	51.6	(47.5 - 55.7)	54.2	(50.1 - 58.3)	4.7	(3.1 - 6.4)	7.3	(5.0 - 9.6)
Females	92.2	(90.5 - 93.9)	25.5	(22.7 - 28.2)	63.7	(60.6 - 66.7)	65.3	(62.3 - 68.3)	7.2	(5.6 - 8.7)	14.2	(12.0 - 16.5)
Persons	91.3	(89.9 - 92.7)	25.8	(23.6 - 28.0)	57.6	(55.0 - 60.2)	59.7	(57.2 - 62.3)	6.0	(4.8 - 7.1)	10.8	(9.1 - 12.4)
65 yrs & over												
Males	95.6	(94.1 - 97.1)	34.4	(30.9 - 37.9)	57.1	(53.5 - 60.7)	56.7	(53.1 - 60.3)	1.5 *	(0.7 - 2.3)	2.6	(1.5 - 3.6)
Females	97.4	(96.5 - 98.3)	29.8	(26.9 - 32.6)	64.3	(61.2 - 67.3)	56.3	(53.2 - 59.4)	2.7	(1.7 - 3.7)	6.3	(4.8 - 7.8)
Persons	96.6	(95.7 - 97.4)	31.9	(29.7 - 34.2)	60.9	(58.6 - 63.3)	56.5	(54.1 - 58.9)	2.2	(1.5 - 2.8)	4.5	(3.6 - 5.5)
Total												
Males	87.0	(84.4 - 89.5)	24.7	(22.0 - 27.5)	44.8	(41.4 - 48.3)	51.8	(48.3 - 55.3)	5.0	(3.5 - 6.4)	7.9	(5.5 - 10.3)
Females	93.1	(91.6 - 94.5)	28.2	(25.7 - 30.7)	55.2	(52.4 - 58.0)	59.0	(56.2 - 61.7)	7.2	(5.9 - 8.6)	12.0	(10.4 - 13.7)
Persons	90.0	(88.5 - 91.5)	26.5	(24.6 - 28.3)	50.0	(47.7 - 52.2)	55.4	(53.1 - 57.6)	6.1	(5.1 - 7.1)	10.0	(8.5 - 11.4)

(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, dietitian, 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.

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

Table 67: Mean visits to health services in the past 12 months, 16 years & over, HWSS 2014

	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	2.8	(2.4- 3.2)	0.4	(0.3- 0.5)	1.9	(1.3- 2.5)	0.8	(0.7- 1.0)	0.4 *	(0.1- 0.6)	0.4 *	(0.2- 0.6)
Females	4.7	(4.2- 5.3)	0.5	(0.4- 0.6)	3.3	(2.6- 3.9)	1.1	(0.9- 1.3)	0.7	(0.4- 1.0)	0.7	(0.5- 0.9)
Persons	3.7	(3.4- 4.1)	0.4	(0.4- 0.5)	2.6	(2.1- 3.0)	1.0	(0.9- 1.1)	0.5	(0.3- 0.7)	0.5	(0.4- 0.7)
45 to 64 yrs												
Males	4.2	(3.7- 4.7)	0.6	(0.4- 0.8)	2.3	(1.9- 2.6)	1.0	(0.9- 1.1)	0.3 *	(0.1- 0.4)	0.3	(0.2- 0.5)
Females	4.4	(4.1- 4.8)	0.5	(0.4- 0.7)	3.7	(3.2- 4.2)	1.4	(1.2- 1.5)	0.6	(0.3- 0.8)	0.8	(0.6- 1.0)
Persons	4.3	(4.0- 4.6)	0.6	(0.4- 0.7)	3.0	(2.7- 3.3)	1.2	(1.1- 1.3)	0.4	(0.3- 0.6)	0.5	(0.4- 0.7)
65 yrs & over												
Males	5.8	(5.4- 6.3)	0.9	(0.7- 1.2)	2.4	(2.1- 2.8)	1.1	(1.0- 1.2)	0.1 *	(0.0- 0.1)	0.1 *	(0.1- 0.2)
Females	5.6	(5.3- 6.0)	0.5	(0.4- 0.6)	3.6	(3.1- 4.1)	1.1	(1.0- 1.2)	0.2 *	(0.1- 0.2)	0.3	(0.2- 0.4)
Persons	5.7	(5.4- 6.0)	0.7	(0.6- 0.8)	3.0	(2.7- 3.3)	1.1	(1.0- 1.2)	0.1	(0.1- 0.2)	0.2	(0.2- 0.3)
Total												
Males	3.6	(3.4- 3.9)	0.5	(0.4- 0.6)	2.1	(1.7- 2.4)	0.9	(0.8- 1.0)	0.3 *	(0.1- 0.4)	0.3	(0.2- 0.5)
Females	4.8	(4.5- 5.1)	0.5	(0.4- 0.6)	3.4	(3.1- 3.8)	1.2	(1.1- 1.3)	0.6	(0.4- 0.7)	0.6	(0.5- 0.8)
Persons	4.2	(4.0- 4.4)	0.5	(0.5- 0.6)	2.8	(2.5- 3.0)	1.1	(1.0- 1.1)	0.4	(0.3- 0.5)	0.5	(0.4- 0.6)

(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, dietitian, 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 a RSE between 25%-50% and should be used with caution.

Annual flu vaccinations and a single pneumonia vaccination are recommended for adults aged 65 years and over and are available free of charge.³⁶ Respondents 65 years and older were asked about flu and pneumonia vaccinations, as shown in Table 68.

Table 68: Vaccinations received, 65 years & over, HWSS 2014

	Pneumonia vaccine within 5 years		Flu vaccine since 1st March 2014	
	%	95% CI	%	95% CI
Males	35.3	(31.7 - 38.9)	60.0	(56.0 - 63.9)
Females	44.0	(40.8 - 47.2)	62.7	(59.3 - 66.0)
Persons	40.0	(37.5 - 42.4)	61.4	(58.8 - 64.0)

Of those aged 65 years and over, a significantly higher proportion of females reporting having the pneumonia vaccination within the last five years when compared with males (44.0% compared with 35.3%).

11. PSYCHOSOCIAL

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

11.1 Psychological distress

Psychological distress may be determined in ways other than having been diagnosed or treated for a mental health condition.²⁰ The Kessler 10 (K10) is a standardised instrument consisting of ten 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 69).^{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

Table 69: Psychological distress, as measured by Kessler 10, 16 years & over, HWSS 2014

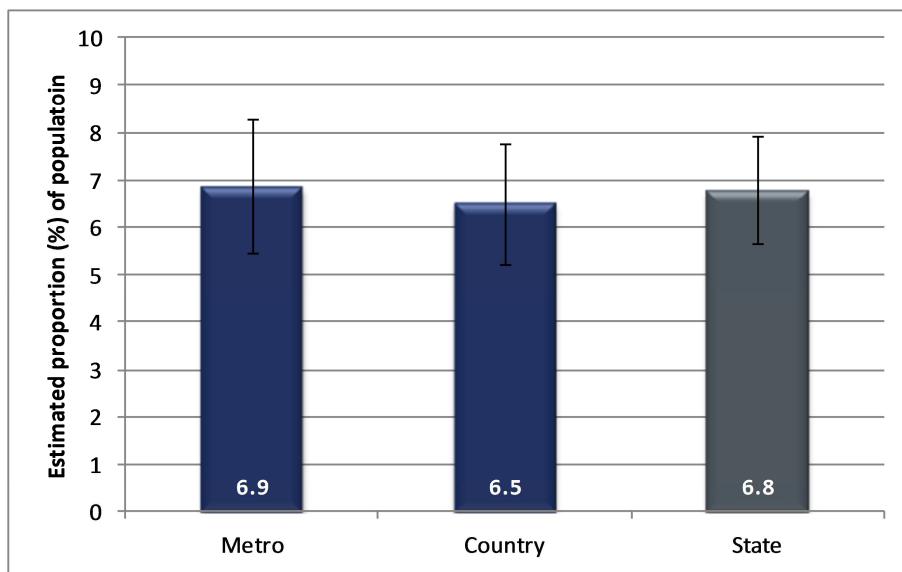
	Low		Moderate		High		Very high	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs								
Males	81.0	(76.5 - 85.5)	12.9	(9.0 - 16.7)	3.1 *	(1.4 - 4.7)	3.0 *	(0.7 - 5.3)
Females	76.5	(72.4 - 80.6)	15.2	(11.8 - 18.6)	6.3	(3.8 - 8.7)	2.0 *	(0.7 - 3.4)
Persons	78.8	(75.8 - 81.9)	14.0	(11.4 - 16.6)	4.6	(3.2 - 6.1)	2.5 *	(1.2 - 3.9)
45 to 64 yrs								
Males	83.6	(80.7 - 86.6)	10.4	(8.0 - 12.9)	4.3	(2.7 - 6.0)	1.6 *	(0.7 - 2.5)
Females	76.6	(73.9 - 79.4)	15.1	(12.8 - 17.4)	5.9	(4.5 - 7.4)	2.3	(1.3 - 3.4)
Persons	80.1	(78.1 - 82.2)	12.7	(11.1 - 14.4)	5.1	(4.0 - 6.3)	2.0	(1.3 - 2.7)
65 yrs & over								
Males	87.3	(84.9 - 89.7)	8.1	(6.2 - 10.1)	3.6	(2.2 - 5.0)	1.0 *	(0.3 - 1.7)
Females	81.3	(78.8 - 83.8)	13.6	(11.4 - 15.8)	3.7	(2.6 - 4.8)	1.4 *	(0.6 - 2.2)
Persons	84.1	(82.4 - 85.8)	11.0	(9.6 - 12.5)	3.7	(2.8 - 4.5)	1.2	(0.7 - 1.7)
Total								
Males	82.7	(80.0 - 85.4)	11.4	(9.2 - 13.7)	3.5	(2.5 - 4.6)	2.3 *	(1.0 - 3.6)
Females	77.3	(75.0 - 79.7)	14.9	(13.0 - 16.9)	5.7	(4.4 - 7.1)	2.0	(1.2 - 2.8)
Persons	80.1	(78.3 - 81.8)	13.2	(11.7 - 14.7)	4.6	(3.8 - 5.5)	2.2	(1.4 - 2.9)

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

High or very high levels of psychological distress were reported for 6.8% of the population, which is equivalent to approximately 136,198 people.

Figure 35 shows the proportion of adults with high/ very high levels of psychological distress by geographic area of residence. There was no difference in the proportion of adults with high/ very high levels of psychological distress based on geographic area of residence.

Figure 35: Prevalence of high/ very high psychological distress, measured by the Kessler 10, 16 years & over, by geographic area of residence in WA, HWSS 2014



The standardised annual prevalence estimates of high or very high levels of psychological distress for adults aged 16 years & over are shown in Table 70.

Table 70: Prevalence of high and very high psychological distress, as measured by the Kessler 10, 16 years & over, HWSS 2002 – 2014

	Males	Females	Persons
2002	7.5	10.2	8.9
2003	8.3	10.5	9.4
2004	8.1	10.3	9.2
2005	6.6	9.4	8.0
2006	7.4	11.5	9.5
2007	6.3	7.7	7.0
2008	6.9	11.9	9.4
2009	6.8	9.4	8.1
2010	7.6	9.8	8.7
2011	6.9	9.7	8.3
2012	5.8	9.0	7.4
2013	6.4	9.9	8.2
2014	5.8	7.8	6.8
Average	7.1	9.7	8.4

The prevalence of psychological distress has remained relatively stable over time for males. For females the prevalence estimate in 2014 was the second lowest recorded since data collection began, and was significantly lower than 2006 and 2008. For all persons the prevalence estimate in 2014 was the lowest recorded since data collection began, and was significantly lower than 2002-2003, 2006 and 2008.

11.2 Major life events

Major life events can have strong influences on a person's subjective well-being.⁴⁰

Respondents were asked whether they had personally been affected by major life events in the past 12 months, shown in Table 71.

The most frequently reported major life events were the death of someone close (23.6%) followed by moving house (12.3%) and financial hardship (9.9%).

Respondents aged 16-44 years were significantly more likely to have moved house or had a relationship breakdown in the last 12 months than those aged 45 years and over, and more likely to have been robbed or burgled or experienced financial hardship in the last 12 months than those aged 65 years and over.

Table 71: Prevalence by major life events experienced, 16 years & over, HWSS 2014

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	17.9 (13.3 - 22.6)	7.2 (4.2 - 10.2)	20.7 (16.1 - 25.4)	8.6 (5.6 - 11.6)	9.8 (6.4 - 13.2)	11.1 (7.6 - 14.5)	2.5 *(0.8 - 4.2)	5.6 (3.0 - 8.1)	9.4 (6.2 - 12.7)	Females	17.3 (13.2 - 21.4)	7.1 (4.2 - 10.0)	21.6 (17.8 - 25.5)	9.3 (6.4 - 12.2)	5.3 (3.1 - 7.6)	13.0 (9.8 - 16.3)	1.7 *(0.1 - 3.2)	9.7 (6.9 - 12.5)	10.4 (7.3 - 13.6)
Persons	17.6 (14.5 - 20.7)	7.1 (5.0 - 9.3)	21.2 (18.1 - 24.2)	8.9 (6.8 - 11.0)	7.7 (5.6 - 9.7)	12.0 (9.6 - 14.4)	2.1 *(0.9 - 3.3)	7.6 (5.7 - 9.4)	9.9 (7.6 - 12.2)										
45 to 64 yrs																			
Males	7.3 (5.2 - 9.4)	6.3 (4.2 - 8.5)	25.0 (21.5 - 28.4)	4.7 (3.3 - 6.2)	5.3 (3.7 - 6.9)	8.7 (6.5 - 10.9)	N/A (N/A - N/A)	11.0 (8.4 - 13.7)	7.0 (5.1 - 8.8)	Females	6.5 (4.8 - 8.1)	4.3 (3.0 - 5.6)	27.1 (24.3 - 29.9)	5.6 (4.1 - 7.0)	4.6 (3.2 - 6.0)	9.5 (7.5 - 11.4)	1.1 *(0.4 - 1.7)	11.6 (9.6 - 13.6)	13.8 (11.5 - 16.1)
Persons	6.9 (5.6 - 8.2)	5.3 (4.1 - 6.6)	26.0 (23.8 - 28.2)	5.2 (4.1 - 6.2)	5.0 (3.9 - 6.0)	9.1 (7.6 - 10.5)	0.9 *(0.4 - 1.4)	11.3 (9.7 - 13.0)	10.4 (8.9 - 11.9)										
65 yrs & over																			
Males	4.0 (2.5 - 5.6)	2.6 (1.4 - 3.7)	26.8 (23.5 - 30.0)	3.7 (2.3 - 5.2)	4.2 (2.7 - 5.7)	4.5 (3.1 - 5.9)	1.6 *(0.6 - 2.6)	10.6 (8.5 - 12.8)	4.8 (3.3 - 6.3)	Females	4.4 (3.1 - 5.6)	3.1 (2.0 - 4.3)	27.5 (24.7 - 30.4)	2.9 (1.9 - 4.0)	6.3 (4.8 - 7.8)	4.3 (3.0 - 5.6)	1.3 (0.7 - 1.9)	11.2 (9.2 - 13.2)	5.2 (3.8 - 6.7)
Persons	4.2 (3.2 - 5.2)	2.9 (2.1 - 3.7)	27.2 (25.0 - 29.3)	3.3 (2.4 - 4.2)	5.3 (4.3 - 6.4)	4.4 (3.4 - 5.3)	1.4 (0.9 - 2.0)	10.9 (9.5 - 12.4)	5.0 (4.0 - 6.1)										
Total																			
Males	12.7 (10.0 - 15.4)	6.3 (4.5 - 8.1)	22.9 (20.1 - 25.7)	6.7 (5.0 - 8.4)	7.6 (5.7 - 9.6)	9.4 (7.3 - 11.4)	1.8 *(0.8 - 2.8)	8.0 (6.3 - 9.6)	8.0 (6.1 - 9.9)	Females	11.8 (9.5 - 14.1)	5.6 (4.0 - 7.2)	24.3 (22.0 - 26.5)	7.1 (5.5 - 8.7)	5.3 (4.0 - 6.6)	10.5 (8.6 - 12.3)	1.4 *(0.6 - 2.3)	10.5 (8.9 - 12.2)	10.6 (8.8 - 12.4)
Persons	12.3 (10.5 - 14.0)	5.9 (4.7 - 7.1)	23.6 (21.8 - 25.4)	6.9 (5.7 - 8.1)	6.5 (5.3 - 7.6)	9.9 (8.5 - 11.3)	1.6 *(1.0 - 2.3)	9.2 (8.1 - 10.4)	9.3 (8.0 - 10.6)										

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

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

11.3 Feeling 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 lack of control have been found to have adverse effects on health and to increase the risk of mortality.^{42,43}

Respondents were asked 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 72 shows self-reported lack of control over life in general.

Table 72: Lack of control over life in general during past four weeks, 16 years & over, HWSS 2014

	Never		Rarely		Sometimes		Often		Always	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	67.6	(62.2-73.0)	15.7	(11.4-19.9)	11.7	(8.3-15.2)	3.6 * (1.5- 5.7)</td <td>N/A (N/A - N/A)</td> <td></td> <td></td>	N/A (N/A - N/A)		
Females	65.3	(60.9-73.0)	18.4	(14.7-22.0)	12.1	(9.2-15.0)	3.0 *(1.4- 4.6)	1.2 *(0.3- 2.0)		
Persons	66.5	(63.0-70.1)	17.0	(14.2-19.8)	11.9	(9.6-14.2)	3.3 (2.0- 4.6)	1.2 *(0.3- 2.2)		
45 to 64 yrs										
Males	67.3	(63.5-71.1)	16.3	(13.2-19.3)	12.8	(10.1-15.6)	2.6 (1.4- 3.8)	1.0 *(0.2- 1.7)		
Females	61.3	(58.2-64.4)	18.7	(16.1-21.2)	16.2	(13.8-18.6)	2.7 (1.7- 3.8)	1.1 *(0.5- 1.7)		
Persons	64.3	(61.8-66.8)	17.5	(15.5-19.4)	14.5	(12.7-16.3)	2.7 (1.9- 3.5)	1.0 (0.5- 1.5)		
65 yrs & over										
Males	78.9	(75.9-81.8)	9.8	(7.6-11.9)	8.1	(6.2-10.1)	2.7 (1.4- 3.9)	0.6 *(0.1- 1.1)		
Females	69.4	(66.4-72.3)	15.9	(13.5-18.3)	12.0	(10.0-14.1)	2.2 (1.3- 3.1)	0.5 *(0.0- 1.0)		
Persons	73.8	(71.7-75.9)	13.0	(11.4-14.6)	10.2	(8.8-11.6)	2.4 (1.6- 3.1)	0.5 *(0.2- 0.9)		
Total										
Males	69.2	(65.9-72.4)	15.0	(12.5-17.5)	11.6	(9.4-13.7)	3.2 (2.0- 4.4)	1.1 *(0.2- 2.0)		
Females	64.8	(62.2-67.4)	18.0	(15.9-20.2)	13.4	(11.6-15.1)	2.8 (1.9- 3.7)	1.0 (0.5- 1.5)		
Persons	67.0	(64.9-69.1)	16.5	(14.9-18.2)	12.4	(11.1-13.8)	3.0 (2.2- 3.7)	1.1 *(0.6- 1.6)		

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

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

How often people reported feeling a lack of control over their personal life in the past four weeks is shown in Table 73 and how often people reported feeling a lack of control over their health in the past four weeks is shown in Table 74.

Table 73: Lack of control over personal life during past four weeks, 16 years & over, HWSS 2014

	Never		Rarely		Sometimes		Often		Always	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	68.4	(62.9 - 73.9)	19.8	(15.0 - 24.6)	8.1	(5.1 - 11.0)	2.3 *	(0.3 - 4.2)	1.5 *	(0.1 - 2.9)
Females	66.1	(61.6 - 70.7)	17.7	(14.0 - 21.5)	12.2	(9.1 - 15.3)	2.6 *	(1.2 - 4.0)	1.2 *	(0.1 - 2.4)
Persons	67.3	(63.7 - 70.9)	18.8	(15.7 - 21.8)	10.1	(7.9 - 12.2)	2.4 *	(1.2 - 3.7)	1.4 *	(0.5 - 2.3)
45 to 64 yrs										
Males	71.7	(68.0 - 75.3)	15.8	(12.8 - 18.8)	10.1	(7.7 - 12.5)	1.9 *	(0.9 - 2.9)	N/A	(N/A - N/A)
Females	65.7	(62.7 - 68.8)	16.4	(14.0 - 18.9)	14.7	(12.4 - 17.0)	2.0	(1.2 - 2.8)	1.1 *	(0.5 - 1.8)
Persons	68.7	(66.3 - 71.1)	16.1	(14.2 - 18.1)	12.4	(10.7 - 14.1)	1.9	(1.3 - 2.6)	0.8	(0.4 - 1.2)
65 yrs & over										
Males	80.8	(77.9 - 83.6)	10.9	(8.6 - 13.2)	6.2	(4.5 - 7.8)	1.6 *	(0.7 - 2.5)	0.6 *	(0.1 - 1.0)
Females	75.8	(73.1 - 78.5)	13.2	(11.0 - 15.4)	9.0	(7.2 - 10.8)	1.6 *	(0.8 - 2.4)	0.4 *	(0.0 - 0.8)
Persons	78.1	(76.1 - 80.1)	12.1	(10.5 - 13.7)	7.7	(6.4 - 8.9)	1.6	(1.0 - 2.2)	0.5 *	(0.2 - 0.8)
Total										
Males	71.2	(67.9 - 74.4)	17.3	(14.5 - 20.1)	8.4	(6.6 - 10.2)	2.1 *	(0.9 - 3.2)	1.1 *	(0.3 - 1.9)
Females	67.6	(65.0 - 70.3)	16.6	(14.5 - 18.7)	12.4	(10.6 - 14.2)	2.3	(1.5 - 3.1)	1.1 *	(0.4 - 1.7)
Persons	69.4	(67.3 - 67.3)	16.9	(15.2 - 18.7)	10.4	(9.1 - 11.7)	2.2 *	(1.5 - 2.8)	1.1 *	(0.6 - 1.6)

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

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

Table 74: Lack of control over health during past four weeks, 16 years & over, HWSS 2014

	Never		Rarely		Sometimes		Often		Always	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	74.1	(69.1 - 79.2)	14.1	(10.0 - 18.2)	9.8	(6.5 - 13.0)	N/A	(N/A - N/A)	N/A	(N/A - N/A)
Females	64.9	(60.3 - 69.4)	16.9	(13.2 - 20.6)	13.7	(10.5 - 16.8)	3.3	(1.8 - 4.9)	1.2 *	(0.4 - 2.0)
Persons	69.6	(66.2 - 73.1)	15.4	(12.7 - 18.2)	11.7	(9.4 - 13.9)	2.2	(1.2 - 3.1)	1.1 *	(0.4 - 1.8)
45 to 64 yrs										
Males	69.5	(65.7 - 73.3)	13.4	(10.5 - 16.3)	12.1	(9.6 - 14.6)	3.6	(2.0 - 5.2)	1.4 *	(0.5 - 2.3)
Females	61.9	(58.8 - 65.0)	14.9	(12.5 - 17.2)	17.2	(14.8 - 19.7)	4.1	(2.8 - 5.3)	1.9	(1.1 - 2.7)
Persons	65.7	(63.3 - 68.2)	14.1	(12.3 - 16.0)	14.7	(12.9 - 16.4)	3.8	(2.8 - 4.9)	1.7	(1.1 - 2.3)
65 yrs & over										
Males	72.8	(69.6 - 76.1)	11.5	(9.2 - 13.9)	12.1	(9.7 - 14.4)	2.4	(1.4 - 3.5)	1.2 *	(0.5 - 1.9)
Females	67.0	(64.0 - 70.0)	13.8	(11.6 - 16.0)	14.9	(12.6 - 17.2)	2.8	(1.8 - 3.9)	1.5 *	(0.7 - 2.2)
Persons	69.7	(67.5 - 71.9)	12.7	(11.1 - 14.3)	13.6	(11.9 - 15.2)	2.6	(1.9 - 3.4)	1.3	(0.8 - 1.9)
Total										
Males	72.5	(69.5 - 75.6)	13.5	(11.0 - 15.9)	10.8	(8.8 - 12.8)	2.0	(1.3 - 2.8)	1.1 *	(0.4 - 1.8)
Females	64.3	(61.7 - 67.0)	15.8	(13.7 - 17.9)	15.0	(13.1 - 16.8)	3.5	(2.5 - 4.4)	1.5	(1.0 - 2.0)
Persons	68.5	(66.4 - 70.5)	14.6	(13.0 - 16.2)	12.9	(11.5 - 14.2)	2.8	(2.1 - 3.4)	1.3 *	(0.9 - 1.7)

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

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

Table 75 shows the prevalence of respondents who reported often or always feeling a lack of control.

Table 75: Respondents who often or always perceive a lack of control, 16 years & over, HWSS 2014

	General		Personal		Health	
	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs						
Males	4.9	* (2.3 - 7.5)	3.8	* (1.4 - 6.2)	2.0	* (0.4 - 3.6)
Females	4.2	(2.4 - 6.0)	3.9	(2.1 - 5.7)	4.5	(2.8 - 6.3)
Persons	4.6	(3.0 - 6.2)	3.8	(2.3 - 5.3)	3.2	(2.1 - 4.4)
45 to 64 yrs						
Males	3.6	(2.2 - 5.0)	2.4	(1.3 - 3.5)	5.0	(3.2 - 6.9)
Females	3.8	(2.6 - 5.0)	3.2	(2.1 - 4.2)	6.0	(4.5 - 7.4)
Persons	3.7	(2.8 - 4.6)	2.8	(2.0 - 3.5)	5.5	(4.3 - 6.7)
65 yrs & over						
Males	3.2	(1.9 - 4.5)	2.2	(1.1 - 3.2)	3.6	(2.3 - 4.9)
Females	2.7	(1.7 - 3.7)	2.0	(1.1 - 2.9)	4.3	(3.0 - 5.6)
Persons	2.9	(2.1 - 3.8)	2.1	(1.4 - 2.8)	4.0	(3.1 - 4.9)
Total						
Males	4.3	(2.8 - 5.8)	3.1	(1.8 - 4.5)	3.2	(2.1 - 4.2)
Females	3.8	(2.8 - 4.8)	3.3	(2.3 - 4.3)	4.9	(3.9 - 6.0)
Persons	4.1	(3.1 - 5.0)	3.2	(2.4 - 4.1)	4.0	(3.3 - 4.8)

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

11.4 Suicide ideation

Mental health problems are associated with higher rates of death from many causes, including suicide.²⁰ Respondents were asked whether or not they had suicidal thoughts in the past 12 months (Table 76) or, if friends or family had attempted suicide in the past 12 months (Table 77).

Table 76: Suicide thoughts over past 12 months, 16 years & over, HWSS 2014

Seriously thought about ending own life		
	%	95% CI
16 to 44 yrs		
Males	3.1 *	(1.0 - 5.3)
Females	5.9	(3.6 - 8.1)
Persons	4.5	(2.9 - 6.0)
45 to 64 yrs		
Males	3.2	(1.7 - 4.6)
Females	3.8	(2.5 - 5.0)
Persons	3.5	(2.5 - 4.4)
65 yrs & over		
Males	2.7	(1.7 - 3.8)
Females	2.3	(1.5 - 3.2)
Persons	2.5	(1.8 - 3.2)
Total		
Males	3.1	(1.8 - 4.4)
Females	4.6	(3.4 - 5.9)
Persons	3.8	(3.0 - 4.7)

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

Respondents aged 16-44 years were almost twice as likely to report having thought about ending their own life in the last 12 months compared with respondents aged 65 years and over (4.5% compared with 2.5%). However, this difference was not statistically significant.

Table 77: Friends/ family suicide attempts over past 12 months, 16 years & over, HWSS 2014

	Friend(s) attempted		Family attempted	
	%	95% CI	%	95% CI
16 to 44 yrs				
Males	10.7	(6.8 - 14.7)	4.9 *	(1.8 - 8.0)
Females	11.6	(8.3 - 15.0)	5.8	(3.5 - 8.1)
Persons	11.2	(8.6 - 13.8)	5.3	(3.4 - 7.3)
45 to 64 yrs				
Males	5.1	(3.4 - 6.8)	3.3	(1.8 - 4.7)
Females	6.2	(4.6 - 7.7)	6.7	(5.0 - 8.4)
Persons	5.6	(4.5 - 6.8)	5.0	(3.9 - 6.1)
65 yrs & over				
Males	1.9	(1.0 - 2.8)	1.8 *	(0.8 - 2.8)
Females	2.3	(1.4 - 3.3)	3.2	(2.0 - 4.4)
Persons	2.1	(1.5 - 2.8)	2.5	(1.8 - 3.3)
Total				
Males	7.8	(5.5 - 10.0)	3.9	(2.2 - 5.7)
Females	8.4	(6.6 - 10.2)	5.6	(4.3 - 7.0)
Persons	8.1	(6.6 - 9.5)	4.8	(3.7 - 5.9)

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

The proportion of respondents who reported that friend(s) had tried to end their own life in the past 12 months decreased significantly with age, with respondents aged 16-44 years five times more likely to report this compared with those aged 65 years and over (11.2% compared with 2.1%).

11.5 Social support

Social support relates to the resources available within communities and is believed to have a positive influence on health status.⁴⁴ As a surrogate measure of social support, respondents were asked how many groups/associations they belong to, including church, social groups, political and professional groups, shown in Table 78.

Table 78: Number of groups/ associations belonging to, 16 years & over, HWSS 2014

	None		One		Two		Three		Four or more	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
16 to 44 yrs										
Males	42.2 (36.4 - 48.1)	26.4 (21.1 - 31.6)	18.7 (14.1 - 23.4)	6.6 (3.9 - 9.3)	6.1 (3.8 - 8.4)					
Females	41.2 (36.4 - 45.9)	23.4 (19.3 - 27.5)	18.2 (14.6 - 21.9)	8.5 (5.6 - 11.4)	8.7 (6.1 - 11.4)					
Persons	41.7 (37.9 - 45.5)	24.9 (21.6 - 28.3)	18.5 (15.5 - 21.5)	7.5 (5.5 - 9.5)	7.4 (5.6 - 9.1)					
45 to 64 yrs										
Males	39.8 (35.8 - 43.8)	30.4 (26.5 - 34.3)	15.3 (12.4 - 18.2)	7.7 (5.6 - 9.8)	6.8 (4.8 - 8.9)					
Females	43.6 (40.4 - 46.7)	25.5 (22.7 - 28.3)	16.0 (13.6 - 18.3)	8.4 (6.7 - 10.1)	6.6 (5.0 - 8.1)					
Persons	41.7 (39.1 - 44.2)	28.0 (25.6 - 30.4)	15.6 (13.7 - 17.5)	8.0 (6.7 - 9.4)	6.7 (5.4 - 8.0)					
65 yrs & over										
Males	34.3 (30.8 - 37.8)	28.1 (24.8 - 31.5)	18.8 (15.9 - 21.6)	9.5 (7.4 - 11.6)	9.3 (7.1 - 11.5)					
Females	35.4 (32.4 - 38.4)	26.8 (24.0 - 29.6)	17.9 (15.4 - 20.3)	11.0 (9.0 - 12.9)	9.0 (7.3 - 10.7)					
Persons	34.9 (32.6 - 37.2)	27.4 (25.3 - 29.6)	18.3 (16.4 - 20.2)	10.3 (8.8 - 11.7)	9.1 (7.8 - 10.5)					
Total										
Males	40.3 (36.8 - 43.8)	27.9 (24.7 - 31.0)	17.7 (14.9 - 20.5)	7.3 (5.7 - 9.0)	6.8 (5.3 - 8.2)					
Females	40.9 (38.2 - 43.7)	24.6 (22.2 - 27.0)	17.5 (15.4 - 19.6)	8.9 (7.2 - 10.5)	8.1 (6.6 - 9.6)					
Persons	40.6 (38.4 - 42.8)	26.2 (24.3 - 28.2)	17.6 (15.9 - 19.3)	8.1 (6.9 - 9.3)	7.4 (6.4 - 8.5)					

Over one third (40.6%) of all respondents reported belonging to no groups or associations of any kind. Respondents aged 16-64 years were significantly more likely than respondents aged 65 years and over to report belonging to no groups or associations (41.7% compared with 34.9%). Consequently, social support may be limited to family or friendship groups for these respondents.

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