Report on the Tasmanian Population Health Survey 2019

Department of Health and Human Services

Tasmanian Government

Acknowledgements

The Epidemiology Unit gratefully acknowledge the permission provided by the Victorian Department of Health to use selected questions from the annual *Victorian Population Health Survey*.

Many thanks to staff members in Public Health Services for their valuable contributions to the draft report. Special thanks to Marina Brkic, Sharon Campbell, Chris Handbury, Dr Fay Johnston, Holley Jones, Elaine Marshall, Monique Reardon, Alison Ward and Diane Webb for their review and constructive comments. Their respective contributions are all gratefully acknowledged.

The data collection for this survey, and the preparation of the associated technical report, was undertaken by the Social Research Centre Pty Ltd, Melbourne. We specifically acknowledge the contributions of Dr Dina Neiger and Andrew Ward in developing a tailored weighting methodology for the 2019 survey.

This report was prepared by the Epidemiology Unit (Michael Long and Rosie Hippel)

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Suggested citation:

Department of Health, Tasmania 2020, *Report on the Tasmanian Population Health Survey 2019*, Hobart.

This publication can be downloaded at: http://www.dhhs.tas.gov.au/publichealth/epidemiology

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Introduction

This report presents the results of the 2019 Tasmanian Population Health Survey (TPHS), a cross-sectional telephone health survey conducted triennially since 2009.

Population health surveys are an important component of the Tasmanian preventive health policy agenda, designed to assist with the implementation of priorities set out by the *Healthy Tasmania Strategy* and the *Premiers Health and Wellbeing Advisory Council*.

As successive years of survey data are collected and analysed, knowledge of Tasmania's health and wellbeing and lifestyle has increased, with flow-on effects for policy and planning.

Specifically, population health surveys aim to support improvements in health and wellbeing by:

- tracking changes in key lifestyle indicators over time
- monitoring the prevalence of chronic conditions in the community
- discovering health gaps and trends linked to socio-demographic characteristics
- identifying emerging public health issues
- monitoring the uptake of preventive health screening
- identifying priority issues for further research
- facilitating better targeting of priority populations through small area data
- meeting information needs of diverse partners

Chapters are organised by health domains, with key indicators analysed for associations with sex, age, region and socio-economic status.

Health outcomes data in this report cover self-reported health, psychological distress, oral health and chronic conditions. Also included are participation rates in preventive health screening for a range of chronic conditions. The prevalence of health care plans provided to those with chronic conditions provides new insights into chronic care, and estimates of Tasmanians able to access and understand information relevant to their health are provided in the health literacy section.

There are separate chapters on lifestyle risk factors. Modifiable lifestyle risk factors contribute to the development of chronic diseases and include tobacco smoking, overweight and obesity, fruit and vegetable consumption, intake of sugar sweetened drinks, physical activity and alcohol consumption.

Climate change affects environmental determinants of health, with higher temperatures and more air pollution exacerbating respiratory and cardiovascular conditions. This report includes findings on the prevalence of wood heating and the effects of bushfires and burn-offs on asthma. Also included is the use of active transport to help reduce vehicle emissions in urban areas.

The last two chapters deal with the use and satisfaction of Tasmanians public hospitals, followed by comparative assessments of selected health outcomes and lifestyle risk factors across local government areas.

The survey methodology, including, design, data collection, weighting, and participant profiles, as well as a glossary and summary of the questionnaire are included in several Appendices.

Interpretation

The Tasmanian Population Health Survey (TPHS) uses Computer Assisted Telephone Interviewing (CATI), with the target population defined as all non-institutionalised Tasmanian residents aged 18 years and over.

The 2019 sample included 6 300 Tasmanian adults, stratified into sub-samples of 2 100 for each of the three regions. These sub-samples are large enough for reliable regional estimates, as well as estimates of some key indicators for many local government areas.

Interviewing was conducted between 23 September and 13 November 2019 and the average interview length was 22.7 minutes. As seasonality impacts on self-reported physical and mental health[1], the months selected for interviewing in 2019 matched the timeframes used previously.

Sole mobile phone use continues to increase, estimated at 46.8 per cent[2], and is more common amongst younger persons. The survey therefore employed a dual frame approach by including a mobile phone sample (~30 per cent) to boost the sample of 18-44-year olds. (see Appendix A)

The response rate in 2019 with 52 per cent was significantly lower than in 2016 (64.4 per cent).

The key demographic characteristics of survey participants were generally similar to 2016, apart from a lower participation of persons aged less than 65 years. As before, survey participation was greater for females, persons aged 45 years and over, and those with higher levels of education.

To make the survey results representative of the Tasmanian population, and address imbalances in age and gender when compared to the *Tasmanian Estimated Resident Population June 2018*, a tailored weighting methodology was used. Refer to Appendix A for details.

As chronic diseases, high body mass index (BMI) and poor self-assessed health are more common with older age, estimates for these indicators were age-standardised to assess changes between estimates independently of population ageing.

All estimates are presented with confidence intervals (95%CI) to allow for statistical significance testing. Confidence intervals reflect the size of the sample, with large intervals reflecting small numbers, which is an indication of the uncertainty present in the estimates.

Confidence intervals are a means of assessing differences between data estimates. When the confidence intervals of two estimates do not overlap, the estimates are statistically significantly different. This represents a guide only and a formal test is required to arrive at a statistically credible conclusion.

The term 'significance' is used in this report to denote statistical significance (95% CI), based on non-overlapping 95% confidence intervals of the data estimates being compared. It is not used to describe clinical significance, which involves a different appraisal.

The *Index of Relative Socio-economic Disadvantage* (IRSD) used in this report summarises a range of information about the economic and social conditions of residents within geographic areas to provide a broad measure of socio-economic disadvantage.

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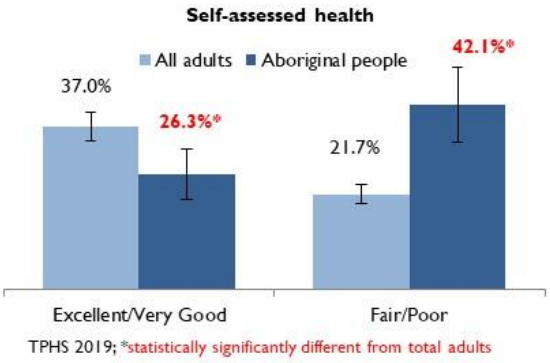
[1] Haomiao J and Lubetkin E.I., Time Trends and Seasonal Patterns of Health-related Quality of Life among U.S. Adults, Public Health Reports. 124 (5), 2009

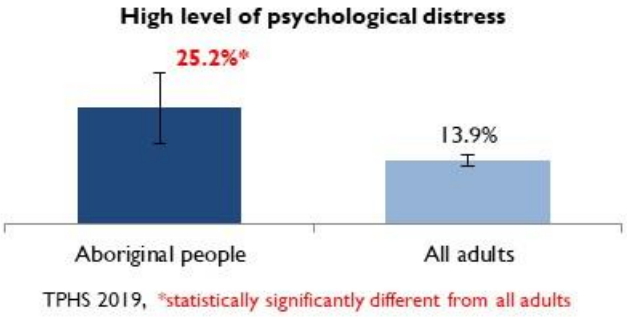
[2] Social Research Centre, TPHS 2019 – Technical Report

Key Findings

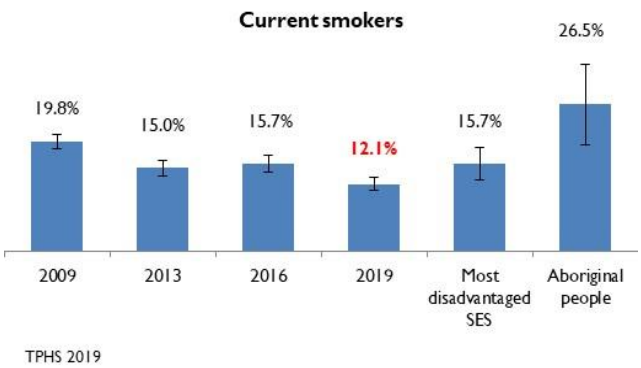


Self-assessed health has remained comparable with previous years for most Tasmanians**.**

However, the self-assessed health status and psychological distress of Aboriginal adults was significantly worse when compared with all adult Tasmanians in 2019.



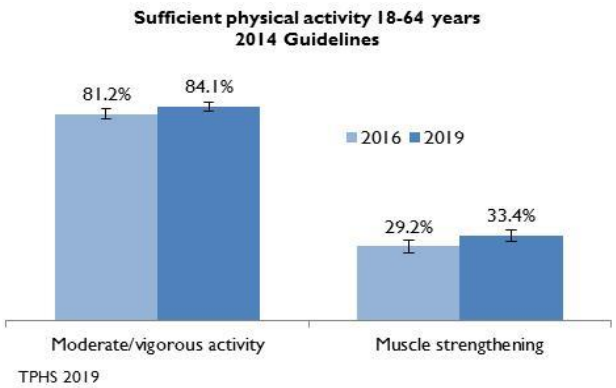
Smoking has declined over the last decade, with further significant improvements noted since 2016. The proportion of ex-smokers has increased and most quit smoking without assistance.



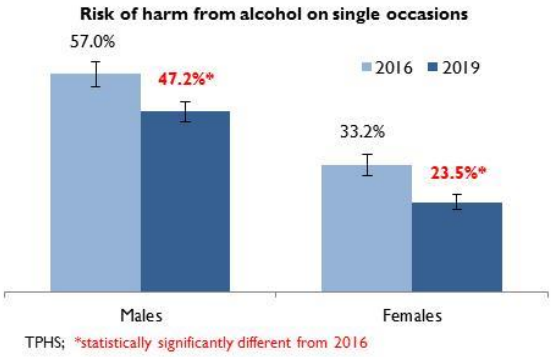
The decline in smoking can be linked to a reduction of smokers in the most disadvantaged socio-economic areas, which experienced a smoking decline of 8.8 per cent since 2016.

Nevertheless, high proportions of current smokers remain among the Aboriginal population and within the most socio-economic disadvantaged communities.

Physical activity data show more than four in five Tasmanians engaged in moderate and vigorous physical activity at a level sufficient to support good health.



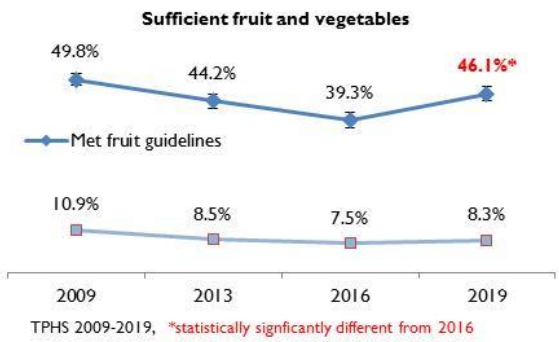
Alcohol consumption at levels (>4 standard drinks) risking harm from injuries on single occasions significantly declined for both males and females in 2019.

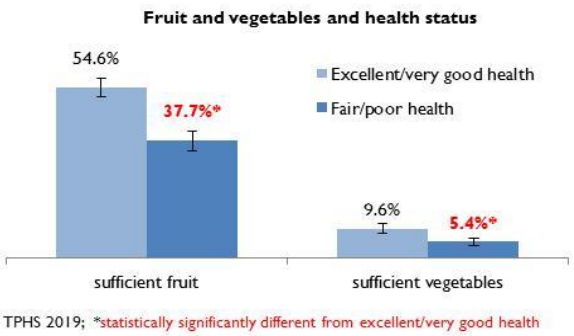


Healthy eating has improved since 2016 with less sugar consumption but poor vegetable and fruit intake has continued.

The use of sugar sweetened drinks has declined, demonstrating increased levels of awareness of the health implications of sugar sweetened beverages.

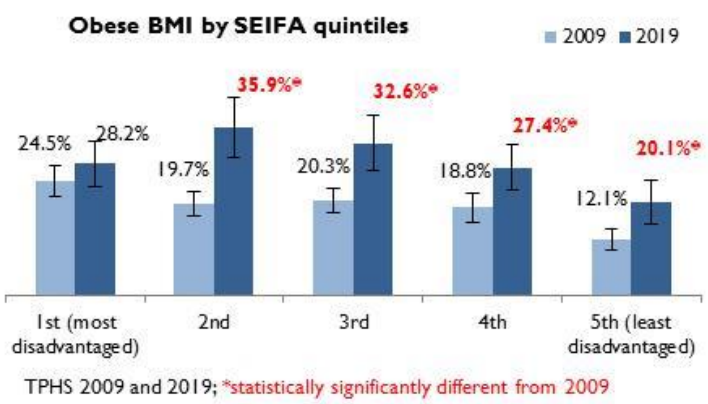
Fruit consumption increased in 2019 after a sharp decline in 2016. Tasmanians with fair/poor health were significantly less likely to meet fruit (37.7 per cent) and vegetable (5.4 per cent) guidelines.



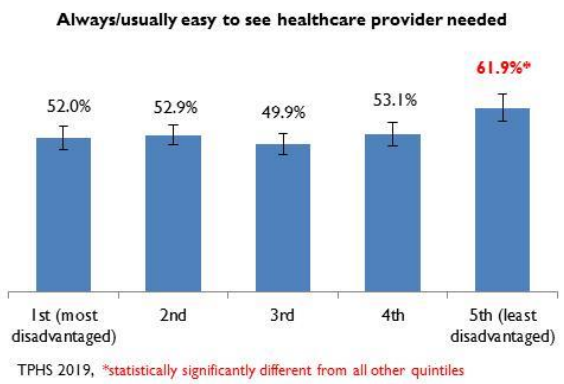


Overweight and obese BMI has remained relatively stable since 2016, with slightly lower proportions of overweight and slightly higher proportions of obese Tasmanians in 2019.

There is some evidence of a shift in the distribution of obese BMI away from the most disadvantaged quintile towards the middle socio-economic quintiles.



Selected indicators relating to ***health literacy*** suggest generally good understanding of health information and good communication with health care providers.

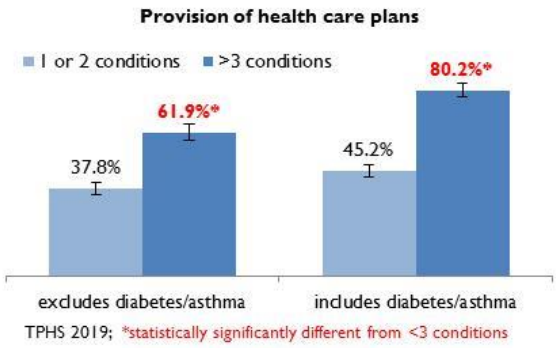


However, only about one in two Tasmanians reported easy access to health care providers, with those residing in the least disadvantaged quintile reporting significantly easier access.

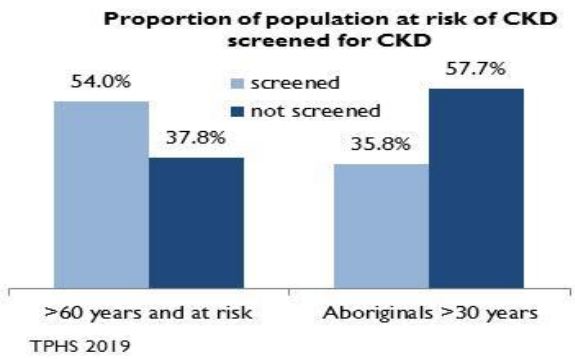
Chronic conditions continued with similar prevalence rates for all 'ever diagnosed' conditions.

Tasmanians with three or more current chronic conditions were significantly more likely to have a health care plan than those with less than three conditions.

There were no associations between age or gender and health care plans irrespective of the number of current chronic conditions reported.



Chronic disease prevention has improved with significant increases in health screening for blood pressure, cholesterol and diabetes.



Of those population groups recommended for regular chronic kidney disease (CKD) screening, about one in three Aboriginal persons aged 30 years and over and one in two non-Aboriginal Tasmanians aged 60 years and over with CKD risk factors confirmed recent CKD screening.

Environmental health risk factors showed improvements with a significant increase in the proportion of Tasmanians with cooling appliances. Nevertheless, some 30 000 Tasmanians aged 65 years and over remain without any cooling appliances in 2019.

Environmental smoke pollution caused by wood heating continues unchanged from 2016, with three in ten Tasmanians using wood as their main source of energy for heating.

Smoke pollution originating from bushfires and burn-offs caused a worsening of asthma symptoms in more than half of all Tasmanians with current asthma.

Chapter 1: Physical and mental health

The key physical and mental health and wellbeing indicators include self-assessed health and psychological distress.

Self-assessed health

Self-reported health status (see Glossary) is a reliable predictor of disease and health service use, and is usually included in national and state surveys as a key indicator of general health status.

Survey participants summarise their perceptions about their health by assessing their health as excellent, very good, good, fair or poor. Estimates have been age standardised to remove the impact of different age distributions for populations being compared (see Glossary).

Self-assessed health status has remained similar compared with 2016. Since 2009, fair/poor health has increased, and excellent/very good health has declined.

Table 1: Self-assessed health, age standardised, 18 years and over, Tasmania 2009 to 2019

	2009		2013		2016		2019	
Assessment	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Excellent/Very Good	43.0%	[41.2%,44.9%]	41.2%	[38.9%,43.6%]	37.1%	[34.6%,39.7%]	37.0%	[33.8%,40.2%]
Good	37.9%	[36.1%,39.7%]	40.9%	[38.5%,43.2%]	38.9%	[36.4%,41.6%]	41.1%	[37.9%,44.4%]
Fair/Poor	18.9%	[17.6%,20.2%]	17.6%	[16.2%,19.1%]	23.7%	[21.6%,25.9%]	21.7%	[19.6%,24.0%]

Tasmanian Population Health Surveys 2009- 2019

Compared with 2016, Aboriginal persons reported more *fair and poor* health (42.1 per cent), less *excellent* or *very good* health (26.3 per cent) and less *good* health (31.5 per cent) in 2019, but this was not statistically significant.

Differences in self-assessed health between Aboriginal adults and all Tasmanian adults were statistically significant for *fair/poor* health and for *excellent/very good* health.

Table 2: Self-assessed health, Aboriginal and Torres Strait Islanders, age standardised, 18 years and over, Tasmania 2009-2019

	2009		2013		2016		2019	
Assessment	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Excellent/Very Good	37.8%	[30.3%,45.9%]	37.1%	[30.0%,44.9%]	28.9%	[21.7%,37.3%]	26.3%	[20.6%,32.8%]
Good	36.2%	[28.4%,44.8%]	39.9%	[32.6%,47.6%]	41.6%	[34.1%,49.5%]	31.5%	[23.7%,40.5%]
Fair/Poor	21.2%	[15.5%,28.3%]	23.0%	[17.5%,29.6%]	29.5%	[23.1%,36.9%]	42.1%	[33.6%,51.1%]

Tasmanian Population Health Surveys 2009-2019

Self-assessed health was similar across the three regions, with over one third of adults in all regions assessing their health as excellent or very good, and less than one quarter of adults describing their health as fair or poor.

Table 3: Self-assessed health status by region, age standardised, 18 years and over, Tasmania 2019

	North		North-West		South	
Assessment	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Excellent/Very Good	35.7%	[30.6%,41.2%]	36.2%	[31.2%,41.5%]	38.3%	[33.8%,43.0%]
Good	42.0%	[36.4%,47.9%]	40.8%	[35.6%,46.3%]	40.4%	[35.9%,45.1%]
Fair/Poor	22.2%	[17.8%,27.2%]	22.9%	[19.6%,26.6%]	21.1%	[18.2%,24.3%]

Tasmanian Population Health Survey 2019

Although health is affected by age, with chronic conditions and hospitalisations more common in older age groups, the proportion of Tasmanians assessing their health as either *excellent/very good*, *good*, or *fair/poor* was similar for all age groups in 2019.

Almost two fifths of (37 per cent) of Tasmanians aged 65 years and over reported *excellent/very good* health compared with 39.1 per cent of those aged 18 to 24 years. Fair/poor health was reported by 27.7 per cent of those aged 65 years and over, compared with 17.8 per cent of the youngest age category, but this difference was not statistically significant.

Table 4: Self-assessed health by age, Tasmania 2019

	Excellent/Very Good		Good		Fair/Poor	
Age	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
18-24	39.1%	[27.5%,52.1%]	43.1%	[31.1%,56.1%]	17.8%^	[10.2%,29.1%]
25-34	36.6%	[28.8%,45.3%]	44.4%	[36.2%,53.0%]	18.5%	[12.8%,25.9%]
35-44	34.5%	[28.6%,40.9%]	45.7%	[39.4%,52.2%]	19.7%	[15.3%,25.1%]
45-54	34.8%	[30.5%,39.4%]	37.9%	[33.6%,42.5%]	27.2%	[23.3%,31.5%]
55-64	39.5%	[35.9%,43.1%]	34.9%	[31.5%,38.6%]	25.4%	[22.6%,28.5%]
65+	37.0%	[34.8%,39.4%]	34.8%	[32.7%,37.0%]	27.7%	[25.7%,29.8%]
Total	37.0%	[35.3%,38.8%]	37.4%	[35.7%,39.2%]	25.3%	[23.9%,26.8%]

Tasmanian Population Health Survey 2019; ^Estimate to be used with caution as RSE≥25%

Of all the Socio-economic Indexes for Areas (SEIFA), he *Index of Relative Socio-economic Disadvantage* (IRSD) is the most commonly used index to measure differences in health status across socio-economic areas (see Glossary).

Tasmanians in the most disadvantaged first quintile reported less *excellent/very good* health and more *fair/poor* health, with more than one in five (21.6 per cent) adults in the most disadvantaged quintile assessing their health as fair or poor compared with 17.3 per cent of Tasmanians in the least disadvantaged fifth quintile.

However, in contrast to previous survey findings, the differences in the proportions of excellent/very good and poor/fair health between the most disadvantaged and least disadvantaged quintiles were not statistically significant.

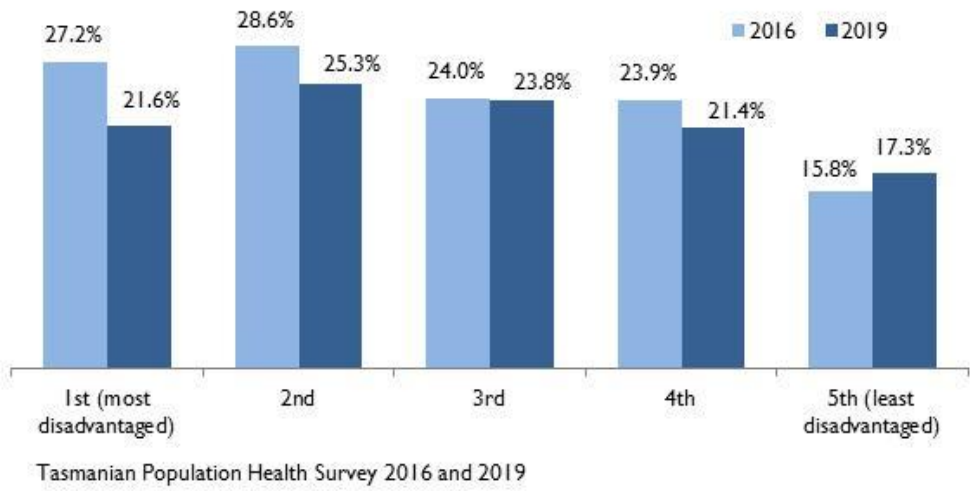
Compared with 2016, the gap between the most disadvantaged and the least disadvantaged quintiles for fair and poor health has narrowed (Figure 1).

Table 5: Self-assessed health by SEIFA quintiles, age standardised, 18 years and over, Tasmania 2019

	Excellent/Very Good		Fair/Poor	
SEIFA IRSD^ 2016	**%**	**95% CI**	**%**	**95% CI**
1st (most disadvantaged)	34.3%	[26.4%,43.1%]	21.6%	[18.1%,25.6%]
2nd	31.0%	[25.9%,36.6%]	25.3%	[20.5%,30.8%]
3rd	32.2%	[27.3%,37.5%]	23.8%	[18.8%,29.7%]
4th	38.9%	[32.5%,45.8%]	21.4%	[17.2%,26.3%]
5th (least disadvantaged)	46.3%	[39.4%,53.4%]	17.3%	[13.1%,22.5%]

Tasmanian Population Health Survey 2019, ^ Index of Relative Socio-economic Disadvantage

Figure 1: Fair/poor self-assessed health by SEIFA quintiles, Tasmania, 18 years and over, 2016 and 2019



Tasmanian Population Health Survey 2016 and 2019

Psychological distress

The *Kessler 10 Psychological Distress Scale* (K10) was used for psychological distress. The K10 has been validated as a diagnostic screening tool for the presence of anxiety and depression (see Glossary). Based on aggregated response scores, psychological distress is grouped into low, moderate, high and very high psychological distress.

For clarity, high/very high psychological distress levels will be subsequently referred to as high psychological distress.

The last decade has seen an upward trend in the proportion of Tasmanians reporting high psychological distress, with a three per cent increase noted since 2009.

Females more commonly experience high psychological distress than males, with about one in six females (15.7 per cent) and one in eight males (12.1 per cent) reporting high levels of psychological distress in 2019.

Table 6: High/very high level of psychological distress by sex, 18 years and over, Tasmania 2009 to 2019

	2009		2013		2016		2019	
Gender	%	**95% CI**	%	**95% CI**	%	**95% CI**	%	**95% CI**
Males	8.7%	[7.4%,10.2%]	10.3%	[8.5%,12.5%]	11.4%	[9.4%,13.7%]	12.1%	[10.4%,14.0%]
Females	13.0%	[11.7%,14.4%]	12.4%	[10.8%,14.1%]	16.0%	[13.9%,18.4%]	15.7%	[14.0%,17.5%]
Persons	10.9%	[9.9%,11.9%]	11.4%	[10.1%,12.7%]	13.7%	[12.3%,15.4%]	13.9%	[12.7%,15.2%]

Tasmanian Population Health Surveys 2009-2019

Since 2009, the proportion of adults with high psychological distress has increased in both the North and South but remained stable in the North West.

The prevalence of high psychological distress varied across regions in 2019, with the lowest proportion noted for the North West at 10.4 per cent (statistically significant).

Table 7: High/very high level of psychological distress by region, 18 years and over, Tasmania 2009 to 2019

	2009		2013		2016		2019	
Region	%	**95% CI**	%	**95% CI**	%	**95% CI**	%	**95% CI**
North	11.4%	[9.9%,13.0%]	10.9%	[9.1%,13.2%]	13.5%	[11.2%,16.2%]	15.1%	[13.1%,17.4%]
North-West	10.7%	[9.2%,12.5%]	11.9%	[9.9%,14.4%]	11.7%	[9.6%,14.1%]	**10.4%***	[8.9%,12.2%]
South	10.7%	[9.2%,12.4%]	11.3%	[9.4%,13.6%]	14.7%	[12.3%,17.5%]	14.7%	[12.8%,16.9%]

Tasmanian Population Health Surveys 2009-2019; *statistically significantly different from other regions in 2019

Over the period 2009 to 2019, the prevalence of high psychological distress for Aboriginal and Torres Strait Islanders has remained relatively stable.

In 2019, one-quarter of Aboriginal persons (25.2 per cent) reported high psychological distress, statistically significantly higher than for Tasmanian adults overall (13.9 per cent).

Table 8: High/very high levels of psychological distress, Aboriginal and Torres Strait Islanders, 18 years and over, Tasmania 2009 to 2019

	2009		2013		2016		2019	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Aboriginal persons	23.1%	[16.3%,31.7%]	18.0%	[10.5%,29.0%]	22.8%	[15.5%,32.2%]	**25.2%***	[17.5%,34.7%]
Total population	10.9%	[9.9%,11.9%]	11.4%	[10.1%,12.7%]	13.7%	[12.3%,15.4%]	13.9%	[12.7%,15.2%]

Tasmanian Population Health Surveys 2009-2019; ; *statistically significantly different from the total population

An upward trend was noted in the proportion of younger people (18-34 years) reporting high psychological distress, with a three-fold increase in the 18-24 age group and more than a two-fold increase for those aged 25-34 years.

More stable patterns of high psychological distress were noted for adults 55 years and over.

Table 9: High/very high level of psychological distress by age, Tasmania 2009 to 2019

	2009		2013		2016		2019	
Age	%	95% CI	%	95% CI	%	95% CI	%	95% CI
18-24	11.3%	[7.8%,15.9%]	16.6%	[11.4%,23.7%]	22.4%	[15.8%,30.9%]	33.8%	[22.7%,47.1%]
25-34	11.6%	[8.9%,15.0%]	10.8%	[6.5%,17.2%]	15.4%	[11.0%,21.0%]	26.4%	[19.4%,34.8%]
35-44	12.1%	[10.0%,14.6%]	12.4%	[10.0%,15.1%]	13.7%	[10.2%,18.2%]	17.1%	[12.9%,22.4%]
45-54	11.0%	[9.2%,13.2%]	12.9%	[10.7%,15.5%]	15.4%	[12.3%,19.2%]	17.6%	[14.4%,21.4%]
55-64	10.6%	[8.8%,12.8%]	10.9%	[9.2%,12.8%]	12.1%	[9.9%,14.7%]	11.9%	[9.8%,14.4%]
65+	8.8%	[7.4%,10.6%]	7.2%	[6.1%,8.4%]	8.4%	[6.6%,10.7%]	8.8%	[7.6%,10.2%]
Total	10.9%	[9.9%,11.9%]	11.4%	[10.1%,12.7%]	13.7%	[12.3%,15.4%]	13.9%	[12.7%,15.2%]

Tasmanian Population Health Surveys 2009-2019

The distribution of high psychological distress across the five socio-economic quintiles in 2019 remained similar to previous years.

No significant changes were noted in the proportion of Tasmanians reporting high psychological distress in the most disadvantaged and the least disadvantaged quintiles in 2019.

Table 10: High/very high levels of psychological distress by SEIFA quintiles, 18 years and over, Tasmania 2009 to 2019

	2009		2013		2016		2019	
SEIFA ISRD^2016	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
1st (most disadvantaged	11.8%	[9.7%,14.4%]	16.0%	[12.5%,20.2%]	15.8%	[12.2%,20.1%]	15.5%	[12.8%,18.7%]
2nd	12.3%	[10.4%,14.4%]	11.3%	[9.1%,13.9%]	15.1%	[12.2%,18.5%]	15.0%	[12.5%,17.8%]
3rd	11.5%	[9.6%,13.7%]	11.7%	[9.4%,14.5%]	11.2%	[8.8%,14.1%]	13.3%	[10.9%,16.1%]
4th	9.8%	[7.9%,12.2%]	10.2%	[7.8%,13.2%]	12.2%	[9.3%,16.0%]	15.0%	[12.2%,18.3%]
5th (least disadvantaged	9.0%	[6.9%,11.7%]	7.7%	[5.4%,10.9%]	14.5%	[10.7%,19.3%]	10.8%	[8.1%,14.2%]

Tasmanian Population Health Surveys 2009-2019 , ^SEIFA 2016 – Index of Relative Socio-economic Disadvantage

Financial stress and food insecurity

The inability to raise $2000 in an emergency within a couple of days is an indicator of financial stress.

Food security refers to the ability of individuals, households and communities to acquire food that is healthy, sustainable, affordable, appropriate and accessible. Food insecurity refers to the experience of not having enough food. A reason for food insecurity is the inability to be able to afford food which is the indicator used in report.

The significant increase in financial stress observed in 2016 has been reversed in 2019 (statistically significant) to match financial stress levels reported in previous years.

The proportion of Tasmanians reporting food insecurity in 2019 is similar across regions and comparable with survey results from 2016 and earlier years.

Of those who reported food insecurity, more than a third (37.3 per cent) experienced this less than once a month, about three in ten (28.7 per cent) once a month, a fifth (20.4 per cent) every couple of weeks and around one in ten (13.4 per cent) at least once a week.

Table 11: Financial stress and food insecurity, 18 years and over, Tasmania 2009 to 2019

	Financial stress		Food insecurity	
2009	**%**	**95%CI**	**%**	**95%CI**
North	11.6%	[10.0%,13.3%]	6.3%	[5.0%,7.8%]
North-West	11.7%	[10.2%,13.4%]	4.7%	[3.8%,5.9%]
South	10.6%	[9.1%,12.4%]	4.3%	[3.3%,5.6%]
Tasmania	11.1%	[10.2%,12.2%]	5.0%	[4.3%,5.7%]
2013				
North	10.8%	[9.1%,12.9%]	5.7%	[4.3%,7.3%]
North-West	13.9%	[11.7%,16.4%]	4.8%	[3.6%,6.4%]
South	12.1%	[10.1%,14.4%]	4.7%	[3.4%,6.3%]
Tasmania	12.2%	[10.9%,13.5%]	5.0%	[4.2%,5.9%]
2016				
North	18.9%	[16.2%,21.9%]	7.4%	[5.7%,9.6%]
North-West	17.6%	[15.0%,20.6%]	6.4%	[4.7%,8.8%]
South	17.6%	[14.9%,20.6%]	7.7%	[5.8%,10.2%]
Tasmania	17.9%	[16.2%,19.8%]	7.3%	[6.1%,8.8%]
2019				
North	**12.7%***	[11.0%,14.6%]	6.9%	[5.5%,8.6%]
North-West	14.9%	[12.9%,17.1%]	5.8%	[4.6%,7.3%]
South	**10.5%***	[9.0%,12.3%]	6.1%	[4.8%,7.6%]
Tasmania	**12.0%***	[11.0%,13.2%]	6.2%	[5.4%,7.2%]

Tasmanian Population Health Surveys 2009-2019; *statistically significantly different from 2016

A decline was noted in the socio-economic gradient for food insecurity in 2019.

In 2019, the proportion of Tasmanians with food insecurity was similar across all quintiles, including the most disadvantaged (7.7 per cent) and the least disadvantaged quintile (4.8 per cent). This shows that food insecurity can exist in pockets in all areas.

Unlike in previous years, the differential between the lowest and highest quintiles was not statistically significant.

Table 12: Ran out of food and could not afford to buy any more within last 12 months, 18 years and over, Tasmania 2009 to 2019

	2009		2013		2016		2019	
SEIFA IRSD^2016	%	**95% CI**	%	**95% CI**	%	**95% CI**	%	**95% CI**
1st (most disadvantaged	10.0%	[8.3%,12.1%]	12.0%	[9.4%,15.1%]	12.3%	[8.7%,17.2%]	7.7%	[5.9%,10.0%]
2nd	6.2%	[4.7%,8.1%]	6.7%	[4.9%,9.2%]	6.8%	[4.8%,9.4%]	8.1%	[6.3%,10.2%]
3rd	5.0%	[3.5%,7.1%]	3.0%	[1.8%,5.1%]	6.5%	[4.6%,9.1%]	5.0%	[3.6%,7.0%]
4th	2.6%	[1.5%,4.5%]	2.0%	[0.9%,4.6%]	6.2%	[4.0%,9.4%]	5.6%	[3.9%,7.9%]
5th (least disadvantaged	0.6%	[0.2%,1.9%]	5.0%	[4.1%,6.0%]	5.0%	[2.8%,8.7%]	4.8%	[3.0%,7.6%]

Tasmanian Population Health Surveys 2009-2019 ^ Index of Relative Socio-economic Disadvantage

Chapter 2: Lifestyle risk factors

Many chronic diseases are associated with modifiable lifestyle risk factors, such as tobacco smoking, a high body mass index, insufficient physical activity, an unhealthy diet, or risky alcohol consumption.

Smoking

Tobacco smoking is a major risk factor for coronary heart disease, stroke, peripheral vascular disease, respiratory illnesses, and some types of cancers.

Current smokers include Tasmanians who smoke either daily or occasionally. *Ex-smokers* are those who have smoked *at least 100 cigarettes* in their life time and currently do not smoke.

There has been a statistically significant decline in the proportion of *current* and *daily* smokers over the last decade, including a signficant reduction in *current* and *daily* smokers in 2019 compared with 2016.

Table 13: Smoking status, 18 years and over, Tasmania 2009 to 2019

	2009		2013		2016		2019	
Smoking status	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Current smoker#	19.8%	[18.5%,21.1%]	15.0%	[13.6%,16.5%]	15.7%	[14.2%,17.4%]	**12.1%***	[10.9%,13.3%]
Daily smoker	16.1%	[15.0%,17.4%]	11.9%	[10.7%,13.2%]	12.1%	[10.7%,13.6%]	**9.3%***	[8.3%,10.4%]
Ex-smoker	27.6%	[26.1%,29.0%]	27.5%	[26.3%,28.9%]	28.0%	[26.2%,29.8%]	31.2%	[29.6%,32.8%]
Never-smoked	52.2%	[50.6%,53.7%]	56.9%	[55.1%,58.7%]	56.2%	[54.1%,58.3%]	56.5%	[54.8%,58.2%]

Tasmanian Population Health Surveys 2009-2019; #daily and occasional smokers combined; *statistically significantly different from 2016

There were no significant differences in smoking status across the three regions.

Table 14: Smoking status by region, 18 years and over, Tasmania 2019

	North		North-West		South	
Smoking status	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Current smoker#	13.0%	[11.2%,15.1%]	12.3%	[10.4%,14.4%]	11.5%	[9.7%,13.5%]
Daily smoker	10.2%	[8.6%,12.1%]	9.9%	[8.2%,11.9%]	8.5%	[7.0%,10.4%]
Ex-smoker	32.1%	[29.5%,34.7%]	29.0%	[26.6%,31.5%]	31.7%	[29.1%,34.3%]
Never smoked	54.7%	[51.9%,57.4%]	58.4%	[55.6%,61.2%]	56.7%	[53.8%,59.5%]

Tasmanian Population Health Survey 2019; #daily and occasional smokers combined

The proportion of smokers has declined across all age groups since 2009, but the reductions were only significant for the 35-44 and 65 years and over age groups.

Table 15: *Current* smokers by age, Tasmania 2009 to 2019

	2009		2013		2016		2019	
Age	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
18-24	23.0%	[18.1%,28.8%]	19.7%	[13.6%,27.8%]	18.3%	[11.8%,27.3%]	18.2%^	[10.2%,30.5%]
25-34	27.1%	[22.6%,32.0%]	22.5%	[17.0%,29.0%]	20.8%	[15.8%,26.9%]	19.3%	[13.5%,26.9%]
35-44	25.7%	[22.8%,28.9%]	16.9%	[14.2%,20.1%]	20.4%	[16.2%,25.4%]	15.1%	[11.0%,20.2%]
45-54	22.9%	[20.2%,25.8%]	16.2%	[13.8%,18.9%]	20.0%	[16.8%,23.7%]	18.4%	[15.1%,22.2%]
55-64	13.6%	[11.6%,15.9%]	12.2%	[10.4%,14.2%]	12.1%	[9.9%,14.6%]	13.3%	[11.1%,15.9%]
65+	8.8%	[7.4%,10.4%]	7.0%	[6.0%,8.2%]	7.8%	[6.0%,10.0%]	5.8%	[4.8%,7.1%]
Total	19.8%	[18.5%,21.1%]	15.0%	[13.6%,16.5%]	15.7%	[14.2%,17.4%]	12.1%	[10.9%,13.3%]

Tasmanian Population Health Surveys 2009-2019; ^estimate to be used with caution as RSE≥25%

The proportions of *current* male and female smokers were similar in 2019, with 12.3 per cent of male smokers and 11.8 per cent of female smokers. This was also the case when comparing male and females across age-groups.

Compared with 2016, there were no significant differences in the prevalence of male and female current smokers in any age group, including those aged 18-24-years.

Table 16: *Current* smokers by sex and age, Tasmania 2016 and 2019

	Males				Females			
	2016		2019		2016		2019	
Age	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
18-24	17.1%^	[8.8%,30.7%]	21.3%^	[9.1%,42.4%]	19.6%^	[10.9%,32.8%]	15.1%^	[7.0%,29.6%]
25-34	21.4%	[14.1%,31.1%]	19.2%^	[11.3%,30.8%]	20.3%	[14.1%,28.3%]	19.5%	[11.9%,30.2%]
35-44	22.2%	[15.8%,30.3%]	17.7%	[11.2%,26.7%]	18.7%	[13.6%,25.1%]	12.7%	[8.4%,18.9%]
45-54	22.7%	[17.9%,28.3%]	18.7%	[13.8%,24.8%]	17.5%	[13.3%,22.6%]	18.2%	[14.0%,23.2%]
55-64	13.1%	[9.7%,17.5%]	13.5%	[10.3%,17.5%]	11.0%	[8.6%,14.0%]	13.2%	[10.3%,16.7%]
65+	7.1%	[5.0%,10.0%]	5.7%	[4.1%,7.8%]	8.4%	[5.8%,12.0%]	6.0%	[4.7%,7.5%]
Total	16.5%	[14.2%,19.1%]	12.3%	[10.6%,14.3%]	15.0%	[12.9%,17.2%]	11.8%	[10.4%,13.4%]

Tasmanian Population Health Surveys 2016 and 2019; ^estimate to be used with caution as RSE≥25%

There were no significant differences in smoking prevalence for age groups across regions.

Table 17: *Current* smokers by age and region, Tasmania 2019

	North		North West		South	
Age	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
18-24	n/a	--	14.4%^	[5.1%,34.3%]	19.7%^	[8.8%,38.4%]
25-34	23.3%	[14.0%,36.2%]	29%^	[16.9%,45.1%]	14.9%^	[7.6%,27.3%]
35-44	19.1%	[12.0%,29.2%]	9.7%^	[5.2%,17.4%]	15.1%	[9.5%,23.2%]
45-54	20.2%	[14.4%,27.5%]	18.5%	[13.3%,25.2%]	17.4%	[12.5%,23.6%]
55-64	13.9%	[10.7%,18.0%]	15.8%	[11.7%,20.9%]	11.9%	[8.6%,16.2%]
65+	6.0%	[4.7%,7.8%]	5.6%	[4.2%,7.5%]	5.8%	[4.0%,8.3%]
Total	13.0%	[11.2%,15.1%]	12.3%	[10.4%,14.4%]	11.5%	[9.7%,13.5%]

Tasmanian Population Health Survey 2019; ^ use with caution RSE ≥25%; n/a = unreliable estimate -RSE≥50%

The proportion of Aboriginal persons who smoked in 2019 (26.5 per cent) remained unchanged from 2016 and continued to be statistically significantly higher than the total proportion of Tasmanians aged 18 years and over who smoked (12.1 per cent).

Although smoking among Aboriginal and Torres Strait Islanders has declined from 32.9 per cent in 2009 to 26.5 per cent in 2019, this difference is not statistically significant.

Table 18: *Current* smokers, Aboriginal and Torres Strait Islanders, 18 years and over, Tasmania 2009 to 2019

	2009		2013		2016		2019	
	%	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Aboriginal persons	32.9%	[25.1%,41.9%]	30.0%	[19.9%,42.6%]	26.3%	[18.5%,35.9%]	26.5%*	[19.2%,35.3%]
Total persons	19.8%	[18.5%,21.1%]	15.0%	[13.6%,16.5%]	15.7%	[14.2%,17.4%]	12.1%	[10.9%,13.3%]

Tasmanian Population Health Survey 2009-2019; *statistically significantly different from total persons

Smoking continues to be more common in lower socio-economic areas, with a statistically significantly higher proportion of current smokers in the first quintile (15.7 per cent) than in the least disadvantaged fifth quintile (8.9 per cent). However, the gap between the proportion of smokers in the lowest and highest quintiles in 2019, at 6.8 per cent, was the lowest recorded since 2009.

Also noted was a statistically significant decline in the proportion of current smokers in the most disadvantaged quintile (15.7 per cent) compared with 2016 (24.5 per cent).

Table 19: *Current* smokers by SEIFA quintiles, 18 years and over, Tasmania 2009 to 2019

	2009		2013		2016		2019	
SEIFA IRSD^2016	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
1st (most disadvantaged	24.0%	[20.8%,27.4%]	18.7%	[15.4%,22.6%]	24.5%	[20.0%,29.6%]	**15.7%***	[12.8%,19.1%]
2nd	21.8%	[19.4%,24.5%]	17.5%	[14.8%,20.5%]	15.3%	[12.5%,18.5%]	13.5%	[11.3%,16.0%]
3rd	20.3%	[17.8%,23.1%]	16.9%	[13.7%,20.5%]	15.1%	[12.4%,18.3%]	12.7%	[10.3%,15.5%]
4th	17.4%	[14.7%,20.4%]	12.7%	[10.0%,16.1%]	13.9%	[10.8%,17.6%]	9.5%	[7.4%,12.1%]
5th (least disadvantaged	15.7%	[12.6%,19.4%]	9.1%	[6.4%,12.8%]	9.8%	[6.8%,13.9%]	8.9%	[6.5%,12.3%]

Tasmanian Population Health Survey 2009-2019; ^ Index of Relative Socio-economic Disadvantage; *statistically significantly different from 2016 and also from quintile 5 (least disadvantaged)

Current smokers reported significantly worse mental health than non-smokers. Of all current smokers, 29.8 per cent reported high psychological distress, 43.4 per cent had anxiety/depression and 8 per cent reported a mental health disorder in 2019.

Table 20: Smoking status by mental health status, 18 years and over, Tasmania 2019

	Non smoker		Current smoker^	
Mental health	**%**	**95% CI**	**%**	**95% CI**
High psychological distress	11.8%	[10.6%,13.0%]	**29.8%**	[24.9%,35.2%]
Anxiety/depression	28.2%	[26.5%,29.9%]	**43.4%**	[38.2%,48.7%]
Mental health disorder (current)	4.0%	[3.2%,4.8%]	**8.0%**	[5.8%,11.0%]

Tasmanian Population Health Survey 2019; ^daily or occasional smokers; *statistically significantly different from non-smokers

The proportion of Tasmanians who live in households where residents never smoke inside has remained stable at 95.6 per cent, with small proportions reporting occasional (2.1 per cent) or frequent (2 per cent) smoking inside.

Table 21: Frequency of smoking inside a home, 18 years and over, Tasmania 2009 to 2019

	2009		2013		2016		2019	
Frequency	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Never	90.8%	[89.7%,91.7%]	94.6%	[93.8%,95.4%]	95.1%	[94.0%,96.0%]	95.6%	[94.9%,96.2%]
Occasionally	5.0%	[4.4%, 5.8%]	2.9%	[2.4%, 3.6%]	2.0%	[1.5%,2.6%]	2.1%	[1.7%,2.7%]
Frequently	4.2%	[3.5%, 5.0%]	2.4%	[1.9%, 2.9%)	2.8%	[2.1%,3.8%]	2.0%	[1.6%,2.5%]

Tasmanian Population Health Surveys 2009-2019

There are several ways to quit smoking. Smokers may stop smoking without any assistance through abrupt cessation (cold turkey) or by gradually cutting back with or without the help of quitting medication. They may also use assistance to quit smoking by enlisting the support of health professionals, phone counselling or phone apps, or quitting aids such as nicotine replacement therapies or non-nicotine medications.

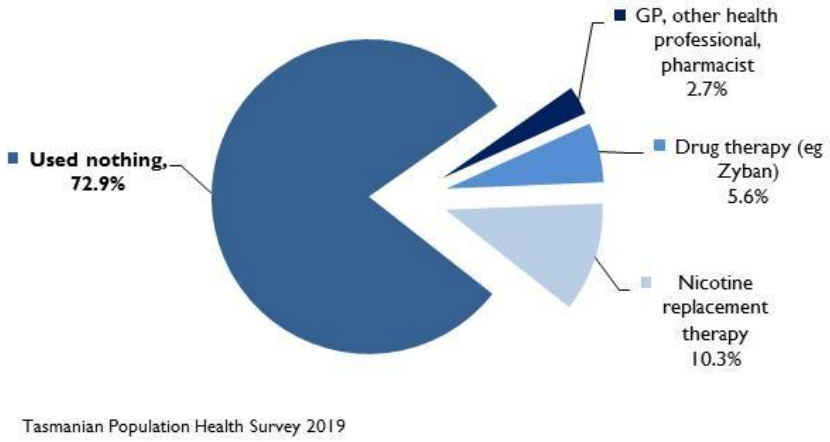
Most ex-smokers (72.9 per cent) quit smoking without assistance. Nicotine replacement therapy was cited as the most useful method by 10.3 per cent of ex-smokers, with drug therapy cited by 5.6 per cent, and assistance from health professionals cited by 2.7 per cent of ex-smokers. Less than one percent of smokers cited Quitline or MyQuitBuddy as the most useful smoking cessation method.

Table 22: Most useful smoking cessation method or support used by ex-smokers by sex, 2019

	Males		Females		Persons	
Method	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
GP, other health professional, pharmacist	2.4%^	[1.4%,4.1%]	3.0%	[1.9%,4.8%]	2.7%	[1.9%,3.8%]
Drug therapy (eg Zyban)	5.8%	[3.8%,8.7%]	5.4%	[3.7%,8.0%]	5.6%	[4.2%,7.5%]
Nicotine replacement therapy	10.0%	[7.5%,13.3%]	10.7%	[8.3%,13.7%]	10.3%	[8.5%,12.5%]
Phone counselling (Quitline)	n/a	--	n/a	--	n/a	--
Phone app (eg MyQuitBuddy)	n/a	--	n/a	--	0.3%^	--
Used nothing	74.5%	[70.3%,78.3%]	70.9%	[66.7%,74.7%]	72.9%	[70.0%,75.7%]

Tasmanian Population Health Survey 2019; ^ use with caution RSE ≥25%; n/a = not available -RSE≥50%

Figure 2: Most useful smoking cessation method or support used, Tasmania 2019



Tasmanian Population Health Survey 2019

The use of unassisted vs assisted smoking cessation was similar across most age groups, with those aged 65 years and over the most likely to stop smoking without assistance (80.1 per cent).

Table 23: Assisted and unassisted smoking cessation by age, Tasmania 2019

	Assisted		Unassisted	
Age	**%**	**95% CI**	**%**	**95% CI**
18-24	n/a	--	n/a	--
25-34	37.0%^	[19.6%,58.6%]	63.0%	[41.4%,80.4%]
35-44	34.1%	[23.2%,47.1%]	65.9%	[52.9%,76.8%]
45-54	33.4%	[25.3%,42.6%]	66.6%	[57.4%,74.7%]
55-64	31.3%	[25.9%,37.2%]	68.7%	[62.8%,74.1%]
65+	19.0%	[16.2%,22.2%]	80.1%	[76.9%,83.0%]
Total	26.7%	[24.0%,29.7%]	72.9%	[70.0%,75.7%]

Tasmanian Population Health Survey 2019; ^ use with caution RSE ≥25%; n/a = unreliable estimate -RSE≥50%

Alcohol consumption

Harmful levels of alcohol consumption are associated with a variety of adverse health consequences. Road injuries, suicide, and violence are linked to excessive consumption on single occasions, while liver cirrhosis, pancreatitis and some types of cancers are examples of potential lifetime harm.

For the purpose of determining the risk of alcohol-related harm, the 2009 guidelines categorise risk into lifetime risk of harm and single occasion risk of harm (short-term harm).

According to the guidelines, adults are at a reduced risk of lifetime harm by consuming no more than two standard drinks on any one day, and no more than four standard drinks on any single occasion.

NHMRC Alcohol Guidelines, 2009

	Males	Females
Reduced lifetime risk of harm	≤2 standard drinks	≤2 standard drinks
Reduced single occasion risk of harm	≤4 standard drinks	≤4 standard drinks

NHMRC, Australian guidelines to reduce health risks from drinking alcohol, 2009

Single occasion harm

There has been a statistically significant reduction in single occasion alcohol harm since 2016.

A total of 35.1 per cent of adults exceeded the 2009 Guidelines in 2019 with more than four standard alcoholic drinks on a single occasion, compared with 45 per cent in 2016.

Significant reductions in harmful consumption were noted for both males and females since 2016, but males continued to be at significantly greater risk of harm (47.2 per cent) than females (23.5 per cent).

Table 24: Alcohol causing risk of harm on a single occasion^, 18 years and over, Tasmania 2016 and 2019

		At least yearly		At least monthly		Total at risk	
Year		**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
2016	Males	24.8%	[21.9%,28.0%]	32.1%	[29.1%,35.3%]	57.0%	[53.8%,60.1%]
	Females	19.5%	[17.2%,22.1%]	13.7%	[11.6%,16.0%]	33.2%	[30.5%,36.0%]
	Persons	22.2%	[20.3%,24.2%]	22.8%	[21.0%,24.8%]	45.0%	[42.9%,47.1%]
2019	Males	20.9%	[18.6%,23.3%]	**26.3%***	[23.9%,28.9%]	**47.2%***	[44.5%,49.8%]
	Females	**14.7%***	[13.0%,16.5%]	**8.9%***	[7.5%,10.5%]	**23.5%***	[21.5%,25.7%]
	Persons	**17.7%***	[16.3%,19.2%]	**17.4%***	[16.0%,18.9%]	**35.1%***	[33.4%,36.8%]

Tasmanian Population Health Surveys 2016, 2019, ^> 4 standard drinks on a single occasion; *statistically significantly different from 2016

Harmful use of alcohol on a single occasion is associated with younger age, with higher proportions of younger and middle-aged Tasmanians at risk of harm.

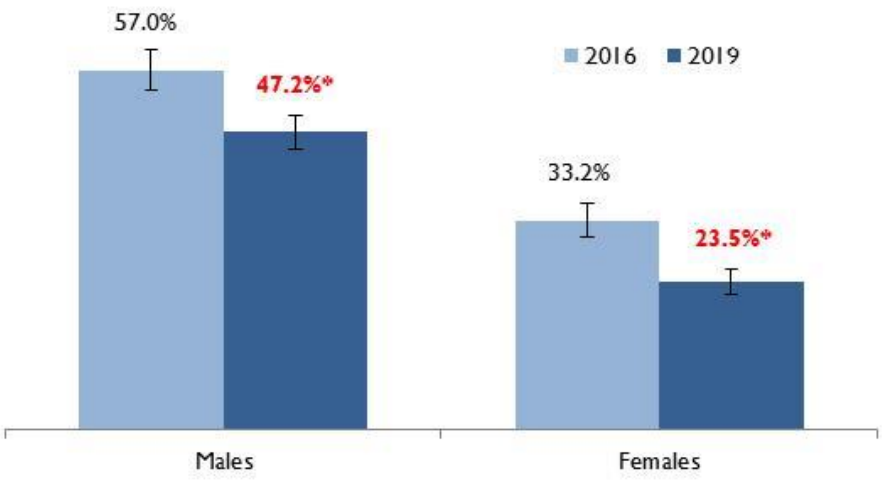
Males in all age groups, except age 18-24 years, continued to be exposed to significantly higher risk of harm than females.

Table 25: Alcohol use causing risk of harm on a single occasion ^ by sex and age, Tasmania 2019

	Males		Females		Persons	
Age	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
18-24	66.5%	[47.9%,81.1%]	53.5%	[36.5%,69.8%]	60.0%	[47.4%,71.4%]
25-34	72.6%	[60.8%,82.0%]	44.2%	[33.3%,55.7%]	59.0%	[50.8%,66.7%]
35-44	61.7%	[51.4%,71.0%]	40.8%	[32.9%,49.2%]	50.7%	[44.4%,57.0%]
45-54	54.7%	[47.5%,61.6%]	30.7%	[25.3%,36.6%]	42.0%	[37.5%,46.6%]
55-64	49.2%	[43.6%,54.8%]	24.2%	[20.3%,28.7%]	36.0%	[32.6%,39.6%]
65+	33.0%	[29.6%,36.6%]	8.7%	[7.2%,10.6%]	21.0%	[19.1%,23.1%]
Total	47.2%	[44.5%,49.8%]	23.5%	[21.5%,25.7%]	35.1%	[33.4%,36.8%]

Tasmanian Population Health Survey 2019; ^> 4 standard drinks on a single occasion, either daily, weekly, monthly or yearly

Figure 3: Alcohol causing harm on single occasions by sex, Tasmania 2016 and 2019



Tasmanian Population Health Survey 2016 and 2019, >4 drinks on a single occasion;
*statistically significantly different from 2016

Since 2016, all regions had a significant decline in the proportion of adults at risk of harm from alcohol on single occasions. The proportion of those at risk of harm in the South (37.3 per cent) was significantly higher than the proportion at risk in the North West region (31.1 per cent).

As in 2016, the proportions at risk of harm were similar for Aboriginal persons (37.9 per cent) and all Tasmanian adults (35.1 per cent) in 2019. This applies to all regions.

Although the proportion of Aboriginal persons at risk of harm on single occasions in 2019 was lower than in 2016, this was not statistically significant for any region or state-wide.

Table 26: Alcohol use causing risk of harm on a single occasion^ by Aboriginal and Torres Strait Islanders and region, 18 years and over, Tasmania 2016 and 2019

	North		North West		South		Tasmania	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
2016								
Aboriginal persons	62.1%	[41.7%,79.0%]	47.9%	[33.5%,62.7%]	52.7%	[37.5%,67.4%]	53.1%	[43.1%,62.9%]
All Persons	44.3%	[41.0%,47.7%]	39.7%	[36.3%,43.3%]	47.7%	[44.3%,51.1%]	45.0%	[42.9%,47.1%]
2019								
Aboriginal persons	38.0%	[22.6%,56.3%]	32.7%	[22.7%,44.7%]	43.9%	[26.6%,62.8%]	37.9%	[29.1%,47.5%]
All Persons	**34.0%***	[31.3%,36.8%]	**31.1%***	[28.5%,33.9%]	**37.3%***	[34.6%,40.1%]	**35.1%***	[33.4%,36.8%]

Tasmanian Population Health Survey 2019; ^>4 standard drinks on a single occasion, either daily, weekly, monthly or yearly; *statistically significantly different from 2016

Significant reductions in the risk of harm from alcohol on single occasions since 2016 were noted for the two most disadvantaged quintiles and the least disadvantaged quintile.

There was no association with socio-economic disadvantage. The proportions of Tasmanians at risk of harm were similar for the most disadvantaged (32.3 per cent) and least disadvantaged quintiles (38.9 per cent).

Table 27: Alcohol use causing risk of harm on a single occasion^ by SEIFA quintiles, 18 years and over, Tasmania 2016 and 2019

	2016		2019	
SEIFA IRSD 2016^^	%	95% CI	%	95% CI
1st (most disadvantaged)	49.9%	[44.8%,55.0%]	**32.3%***	[28.5%,36.2%]
2nd	43.2%	[39.2%,47.4%]	**34.5%***	[31.2%,38.1%]
3rd	39.7%	[35.7%,43.9%]	33.6%	[30.1%,37.2%]
4th	42.1%	[37.3%,47.0%]	36.2%	[32.2%,40.3%]
5th (least disadvantaged)	50.1%	[44.4%,55.8%]	**38.9%***	[34.4%,43.6%]

Tasmanian Population Health Surveys 2016-2019; ^> 4 standard drinks on a single occasion, either daily, weekly, monthly or yearly; ^^Index of Relative Socio-economic Disadvantage 2016; *statistically significantly different from 2016

Parents have an important function as role models in shaping their children's attitude to alcohol and drinking behaviour. drinkwise.org.au/parents/is-your-drinking-influencing-your-kids/#

Approximately one in five Tasmanians with dependent children consumed more than four standard drinks on a single occasion at least monthly in 2019.

Table 28: Alcohol use causing risk of harm on a single occasion at least monthly, adults with dependent children, Tasmania 2019

	Parent/Caregiver at risk of harm^	
Age of children in household	**%**	**95% CI**
0-5 years	17.6%	[12.6%,24.0%]
6-9 years	20.4%	[15.3%,26.8%]
10-15 years	20.4%	[16.2%,25.4%]

Tasmanian Population Health Survey 2019; ^> 4 standard drinks on a single occasion at least monthly

Lifetime harm

Adults are at a risk of lifetime harm by consuming more than two standard drinks on any day. This applies to males and females.

A total of 19.1 per cent of Tasmanians were at risk of lifetime harm by exceeding two standard alcoholic drinks at least weekly.

As in 2016, the proportion of males consuming more than two standard alcoholic drinks at least weekly (28.5 per cent) in 2019 was significantly higher than for females (10 per cent).

Table 29: Alcohol use risking life-time harm^, 18 years and over, Tasmania 2016 and 2019

	2016		2019	
	%	95% CI	%	95% CI
Males	28.5%	[25.7%,31.4%]	28.5%	[26.1%,31.1%]
Females	13.3%	[11.4%,15.5%]	10.0%	[8.7%,11.6%]
Persons	20.8%	[19.1%,22.6%]	19.1%	[17.7%,20.5%]

Tasmanian Population Health Surveys 2016, 2019; >2 drinks at least weekly

Males were at significantly greater risk of lifetime harm than females across all age groups.

Table 30: Alcohol use risking life-time harm ^ by sex and age, Tasmania 2019

	Males		Females		Persons	
Age	%	95% CI	%	95% CI	%	95% CI
18-24	39.7%	[22.8%,59.6%]	n/a	--	22.9%	[13.8%,35.5%]
25-34	29.2%	[18.9%,42.1%]	10%^	[5.7%,17.0%]	20.0%	[14.0%,27.6%]
35-44	42.4%	[32.7%,52.6%]	12.8%	[7.9%,20.1%]	26.8%	[21.5%,33.0%]
45-54	27.8%	[21.9%,34.7%]	11.3%	[7.9%,15.9%]	19.1%	[15.6%,23.1%]
55-64	31.8%	[26.7%,37.4%]	14.3%	[11.2%,18.1%]	22.5%	[19.5%,25.8%]
65+	22.3%	[19.5%,25.5%]	6.1%	[5.0%,7.4%]	14.3%	[12.7%,16.0%]
Total	28.5%	[26.1%,31.1%]	10.0%	[8.7%,11.6%]	19.1%	[17.7%,20.5%]

Tasmanian Population Health Survey 2019; ^>2 standard drinks at least weekly; ^ use with caution RSE ≥25%; n/a = unreliable estimate - RSE≥50%

The proportion of adults at risk of life-time harm from alcohol was similar across all regions in 2019.

The risk of life-time harm was similar for Aboriginal persons (15.2 per cent) and all Tasmanians (19.1 per cent). The Northern region had a higher proportion of Aboriginal persons at risk of life-time harm, but this was not statistically significant.

Table 31: Alcohol use risking life-time harm ^ Aboriginal and Torres Strait Islanders by region, Tasmania 2016 and 2019

	North		North West		South		Tasmania	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
2016								
Aboriginal persons	18.3%^	[7.1%,39.3%]	21.4%^	[11.2%,36.9%]	20.9%^	[10.1%,38.3%]	20.5%	[13.1%,30.8%]
All Persons	21.0%	[18.4%,23.8%]	18.4%	[15.8%,21.3%]	21.7%	[18.9%,24.8%]	20.8%	[19.1%,22.6%]
2019								
Aboriginal persons	27.8%^	[14.3%,47.1%]	18.6%^	[10.7%,30.4%]	n/a	--	15.2%	[10.0%,22.5%]
All Persons	18.7%	[16.5%,21.2%]	17.2%	[15.1%,19.6%]	20.0%	[17.8%,22.5%]	19.1%	[17.7%,20.5%]

Tasmanian Population Health Surveys 2016, 2019; ^> 2 standard drinks at least weekly; ^ use with caution RSE ≥25%; n/a = unreliable estimate -RSE≥50%

Alcohol consumption causing a risk of lifetime harm is not associated with socio-economic disadvantage, with similar proportions in the first (18.1 per cent) and fifth quintile (22.2 per cent).

Table 32: Alcohol use risking lifetime harm ^ by SEIFA quintiles, 18 years and over, Tasmania 2019

	Life time harm^	
SEIFA IRSD 2016	%	95% CI
1st (most disadvantaged)	18.1%	[15.1%,21.7%]
2nd	19.6%	[16.9%,22.7%]
3rd	16.8%	[14.1%,19.8%]
4th	18.6%	[15.6%,22.1%]
5th (least disadvantaged)	22.2%	[18.4%,26.4%]

Tasmanian Population Health Survey 2019; ^>2 standard drinks at least weekly

^^ Index of Socio-economic Relative Disadvantage 2016

Parents have an important function as role models in shaping their children's attitude to alcohol and drinking behaviour. drinkwise.org.au/parents/is-your-drinking-influencing-your-kids/#

The proportion of Tasmanians drinking more than two standards alcoholic drinks at least weekly ranged from 22.6 per cent for households with children aged 0-5 years to 19 per cent for households with 10 to 15 year old dependent children.

Table 33: Alcohol use causing risk of lifetime harm^, adults with dependent children, Tasmania 2019

Lifetime risk of harm^		
Age of children	**%**	**95% CI**
0-5 years	22.6%	[16.7%,29.7%]
6-9 years	20.6%	[15.3%,27.2%]
10-15 years	19.0%	[15.1%,23.7%]

Tasmanian Population Health Survey 2019; ^> 2 standard drinks at least weekly

Body Mass Index

A high Body Mass Index (BMI) increases the risk of a wide range of health problems, including cardiovascular disease, type 2 diabetes, some cancers, and other chronic conditions.

The BMI estimates in this report are based on *self-reported* height and weight, which has been shown to result in lower estimates of overweight/obese BMI than *measured* height and weight. Self-reported BMI estimates of overweight/obese were lower than the respective **measured** BMI estimates in the 2017/18 National Health Survey by about 8 per cent. (ABS, NHS 2017/18).

BMI score	Weight category
<18.5	Underweight
18.5-24.9	Normal
25.0-29.9	Overweight
≥30.0	Obese

As BMI generally increases with age, estimates have been age standardised to remove the impact of population ageing over time (see Glossary).

It should be noted that BMI categories do not differentiate between muscle and body fat, and an overweight BMI may reflect significant muscle mass in some cases.

The proportion of Tasmanians who are overweight/obese has remained relatively stable over the last decade with more than half the adult population either overweight or obese. The data suggests a decline in overweight adults but an increase in obese adults, but these differences are not statistically significant.

Table 34: Self-reported BMI, age standardised, 18 years and over, Tasmania 2009 to 2019

	2009		2013		2016		2019	
BMI category	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Underweight	2.3%	[1.7%,3.1%]	2.0%	[1.3%, 3.0%]	1.1%	[0.8%,1.6%]	1.0%	[0.6%,1.5%]
Normal weight	43.4%	[41.4%,45.4%]	39.1%	[36.7%,41.5%]	38.9%	[36.3%,41.6%]	40.5%	[37.3%,43.8%]
Overweight	35.3%	[33.4%,37.2%]	36.9%	[34.5%,39.3%]	35.6%	[33.2%,38.2%]	30.4%	[27.6%,33.3%]
Obese	19.0%	[17.7%,20.4%]	22.0%	[20.3%,23.9%]	24.3%	[22.2%,26.6%]	28.2%	[25.6%,30.9%]
Overweight/Obese	54.3%	[52.4%,56.3%]	58.9%	[56.5%,61.3%]	60.0%	[57.3%,62.6%]	58.5%	[55.3%,61.7%]

Tasmanian Population Health Surveys 2009-2019

There has been a decline in overweight and an increase in obesity for both males and females in 2019 compared with 2016.

Males reported an overweight BMI (34.1 per cent) more frequently than females (26.3 per cent), while an obese BMI was slightly more common for females (29.3 per cent) than males (27.3 per cent).

Table 35: Self-reported BMI by sex, age standardised, 18 years and over, Tasmania 2009 to 2019

	2009		2013		2016		2019	
BMI category	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Males								
Underweight	1.0%^	[0.6%,1.8%]	2.0%^	[0.9%,4.1%]	0.2%^	[0.1%,0.5%]	0.9%^	[0.4%,2.3%]
Normal weight	39.1%	[36.3%,41.9%]	32.3%	[28.8%,36.0%]	36.9%	[33.4%,40.5%]	37.6%	[32.7%,42.8%]
Overweight	40.4%	[37.6%,43.2%]	43.9%	[40.3%,47.6%]	39.8%	[36.5%,43.2%]	34.1%	[30%,38.6%]
Obese	19.5%	[17.5%,21.7%]	21.8%	[19.2%,24.7%]	23.0%	[20.1%,26.3%]	27.3%	[23.2%,31.8%]
Overweight/Obese	59.9%	[57.1%,62.6%]	65.8%	[62.1%,69.2%]	62.8%	[59.2%,66.3%]	61.4%	[56.4%,66.3%]
Females								
Underweight	3.6%	[2.5%,5.2%]	2.0%	[1.4%,3.0%]	2.0%	[1.3%,3.0%]	1.2%	[0.7%,1.9%]
Normal weight	47.7%	[44.9%,50.4%]	46.1%	[42.9%,49.3%]	40.7%	[37.0%,44.5%]	43.2%	[39%,47.6%]
Overweight	30.3%	[27.9%,32.9%]	29.5%	[26.7%,32.5%]	31.4%	[28.0%,35.0%]	26.3%	[22.8%,30.2%]
Obese	18.4%	[16.9%,20.0%]	22.4%	[20.2%,24.7%]	25.9%	[22.9%,29.1%]	29.3%	[25.9%,32.9%]
Overweight/Obese	48.7%	[46%,51.4%]	51.9%	[48.7%,55%]	57.2%	[53.5%,61.0%]	55.6%	[51.2%,59.8%]

Tasmanian Population Health Surveys 2009-2019; ^RSE ≥25% - use with caution

There were no significant differences between the regions in the distribution of overweight and obesity in 2019, with obese and overweight/obese BMI slightly less prevalent in the South.

Table 36: Self-reported BMI by region, age-standardised, 18 years and over, Tasmania 2019

	North		North West		South	
BMI category	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Underweight	1.1%^	[0.6%,2.3%]	1.2%^	[0.6%,2.5%]	0.7%^	[0.4%,1.4%]
Normal weight	36.4%	[31%,42.2%]	35.9%	[30.1%,42.2%]	44.3%	[39.7%,49%]
Overweight	30.0%	[25.5%,34.9%]	33.4%	[27.7%,39.6%]	29.4%	[25.4%,33.8%]
Obese	32.5%	[27.5%,38%]	29.5%	[25.8%,33.5%]	25.6%	[22.1%,29.4%]
Overweight/Obese	62.5%	[56.7%,67.9%]	62.9%	[56.6%,68.7%]	55.0%	[50.3%,59.5%]

Tasmanian Population Health Survey 2016; ^RSE ≥25% - use with caution

Overweight BMI was relatively evenly distributed across age groups in 2019, with the sole exception of those aged 18-24 years.

The proportions of Tasmanians with an overweight BMI within each age group in 2019 are smaller compared with 2016, but the differences are not statistically significant.

Table 37: Self-reported overweight BMI by age, Tasmania, 2009 to 2019

	2009		2013		2016		2019	
Age	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
18-24	22.4%	[16.8%,29.1%]	32.5%	[24.6%,41.5%]	20.3%	[13.1%,30.0%]	18.6%^	[10.4%,31.2%]
25-34	36.7%	[31.9%,41.9%]	35.2%	[28.3%,42.9%]	41.3%	[34.4%,48.5%]	30.8%	[23.3%,39.5%]
35-44	38.4%	[34.9%,42.0%]	38.4%	[34.3%,42.7%]	38.4%	[32.7%,44.5%]	29.3%	[23.5%,35.9%]
45-54	36.6%	[33.4%,40.0%]	38.6%	[34.9%,42.3%]	35.1%	[30.9%,39.7%]	34.3%	[29.7%,39.1%]
55-64	39.8%	[36.6%,43.2%]	38.4%	[35.4%,41.5%]	40.9%	[36.9%,44.9%]	33.6%	[30.2%,37.3%]
65+	38.7%	[36.1%,41.5%]	40.2%	[37.9%,42.5%]	40.9%	[37.5%,44.4%]	37.8%	[35.5%,40.2%]

Tasmanian Population Health Surveys 2009-2019; ^RSE ≥25% - use with caution

Obese BMI was relatively evenly distributed across age groups, except for those aged 18-24 years.

Obese BMI has increased for all age groups since 2016, but, as with overweight BMI, the differences are not statistically significant.

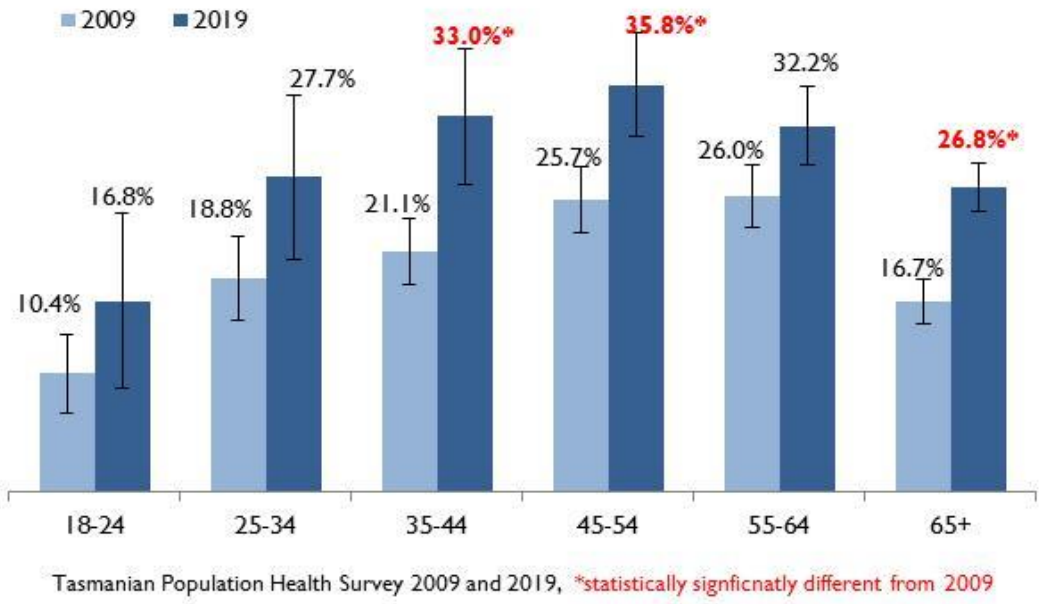
However, compared with 2009, statistically significant increases in obese BMI were noted for age groups 35-44 years, 45-54 years and 65+ years. (see graph next page)

Table 38: Self-reported obese BMI by age, Tasmania, 2009 to 2019

	2009		2013		2016		2019	
Age	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
18-24	10.4%	[7.0%,15.3%]	9.7%^	[5.6%,16.3%]	17.2%	[11.1%,25.6%]	16.8%^	[9.1%,28.9%]
25-34	18.8%	[15.1%,23.1%]	24.1%	[18.2%,31.1%]	21.5%	[16.3%,27.8%]	27.7%	[20.5%,36.3%]
35-44	21.1%	[18.2%,24.3%]	24.2%	[20.8%,27.9%]	26.5%	[21.7%,31.9%]	33.0%	[27.0%,39.5%]
45-54	25.7%	[22.8%,28.8%]	30.1%	[26.7%,33.8%]	31.5%	[27.3%,36.1%]	35.8%	[31.2%,40.6%]
55-64	26.0%	[23.2%,29.1%]	28.8%	[26.0%,31.7%]	29.3%	[25.7%,33.2%]	32.2%	[28.8%,35.9%]
65+	16.7%	[14.7%,18.8%]	20.4%	[18.6%,22.2%]	24.5%	[21.5%,27.7%]	26.8%	[24.7%,29.0%]

Tasmanian Population Health Surveys 2009-2019; ^RSE ≥25% - use with caution

Figure 4: Self-reported obese BMI by age, Tasmania 2009 and 2019



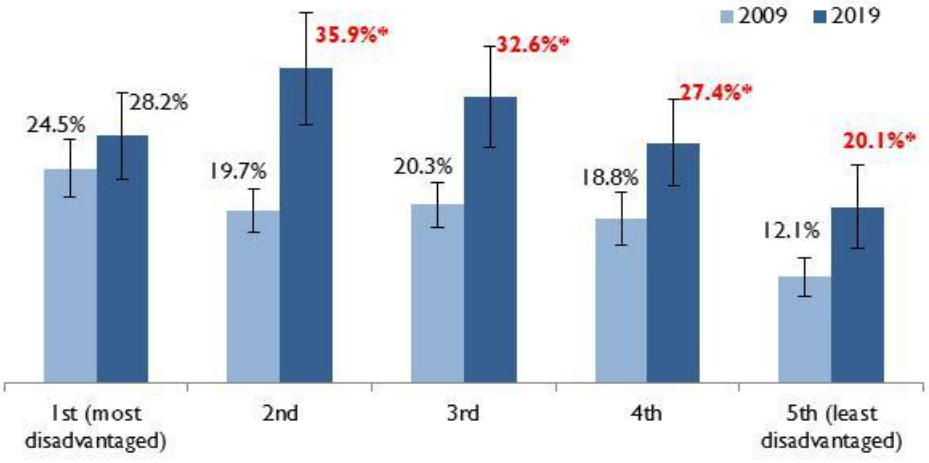
The proportion of obese BMI was the greatest in the second (35.9 per cent) and third quintile (32.6 per cent), with each being significantly higher than the least disadvantaged fifth quintile (20.1 per cent). This is potentially indicative of a shift in the distribution of obese BMI towards the middle socio-economic quintiles.

Table 39: Obese BMI by SEIFA quintiles, age-standardised, 18 years and over, Tasmania 2009 to 2019

	2009		2013		2016		2019	
SEIFA IRSD^2016	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
1st(most disadvantaged	24.5%	[21.3%,28.0%]	29.7%	[25.5%,34.3%]	25.0%	[20.5%,30.2%]	28.2%	[23.3%,33.7%]
2nd	19.7%	[17.2%,22.3%]	22.4%	[18.8%,26.4%]	28.4%	[24.5%,32.7%]	35.9%	[29.5%,42.8%]
3rd	20.3%	[17.8%,23.1%]	21.4%	[18.0%,25.3%]	25.1%	[20.7%,30%]	32.6%	[26.8%,39%]
4th	18.8%	[15.8%,22.2%]	18.5%	[15.3%,22.1%]	27.1%	[21.6%,33.4%]	27.4%	[22.5%,33%]
5th (least disadvantaged	12.1%	[9.9%,14.8%]	17.0%	[13.8%,20.7%]	18.0%	[13.9%,23.1%]	20.1%	[15.4%,25.7%]

Tasmanian Population Health Surveys 2009-2019; ^ Index of Relative Socio-economic Disadvantage

Figure 5: Obese BMI by SEIFA quintiles, age-standardised, 18 years and over, Tasmania 2009 and 2019



Tasmanian Population Health Survey 2009 and 2019; *statistically significantly different from 2009

Fruit and vegetable consumption

Eating the recommended serves of fruit and vegetables offers protection from some cancers, diabetes, heart disease, as well as strokes.

In 2013, the National Health and Medical Research Council (NHMRC) updated the dietary guidelines for fruit and vegetable consumption by increasing the recommended number of serves of vegetables for males aged 18 to 70, and for females aged 18 years.

The tables below show both guidelines with the number of serves of vegetables and fruit recommended for a healthy lifestyle.

Recommended number of serves of vegetables and fruit per day, 2013 Guidelines

Age	Vegetable serves^ per day Males	Vegetable serves^ per day Females	Fruit serves^ per day Males	Fruit serves^ per day Females
14-18	5.5	5	2	2
19-50	6	5	2	2
51-70	5.5	5	2	2
71+	5	5	2	2

Recommended number of serves of vegetables and fruit per day, 2003 Guidelines

Age	Vegetable serves per day Males	Vegetable serves per day Females	Fruit serves per day Males	Fruit serves per day Females
12-18	4	4	3	3
19-60	5	5	2	2
60+	5	5	2	2

^vegetables = 75g/serve; fruit = 150g/serve

In this report, the 2003 Guidelines continue to apply to 2009 data. The 2013 Dietary Guidelines apply to all subsequent data collections.

As the 2013 Guidelines have increased the recommended number of serves of vegetables for males, survey data collected after 2009 are not comparable with 2009 data.

The change in the 2013 Guidelines regarding fruit consumption applies to 18-year olds only.

The proportion of Tasmanians eating enough fruit and vegetables remains low.

Whilst fruit intake has increased from 39.3 per cent in 2016 to 46.1 per cent in 2019 (statistically significant) the 2019 results are similar to previous surveys (2013, 2009).

Vegetable intake has remained consistently low over the last decade with only seven per cent of Tasmanians meeting the guidelines for vegetables in 2019.

Table 40: Met NHMRC guidelines for fruit and vegetables, 18 years and over, Tasmania 2009 to 2019

	2009^		2013		2016		2019	
Guidelines	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Met fruit guidelines	49.8%	[48.2%,51.4%]	44.2%	[42.4%,46.1%]	39.3%	[37.3%,41.4%]	**46.1%***	[44.3%,47.8%]
Mean serves of fruit daily	1.70	[1.66,1.74]	1.59	[1.55,1.64]	1.46	[1.41,1.50]	**1.62***	[1.57,1.68]
Met vegetable guidelines	10.9%^	[10.1%,11.9%]	8.5%	[7.6%, 9.4%]	7.5%	[6.5%,8.6%]	7.0%	[6.2%,7.9%]
Mean serves of vegetables	2.54	[2.49,2.59]	2.51	[2.46,2.56]	2.34	[2.27,2.40]	2.29	[2.23,2.34]

Tasmanian Population Health Surveys 2009-2019; ^2003 Guidelines; *statistically significantly different from 2016

The proportion of adults meeting the fruit or vegetable guidelines was similar across regions in 2019, with slightly higher proportions meeting fruit and vegetable guidelines in the North, but these differences were not statistically significant.

Table 41: Met NHMRC guidelines for fruit and vegetables by region, 18 years and over, Tasmania 2019

	North		North-West		South	
2013 Guidelines	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Met fruit guidelines	47.6%	[44.8%,50.4%]	45.2%	[42.3%,48.1%]	45.6%	[42.8%,48.5%]
Mean serves of fruit daily	1.63	[1.54,1.71]	1.66	[1.56,1.76]	1.61	[1.53,1.69]
Met vegetable guidelines	8.0%	[6.7%,9.5%]	6.9%	[5.7%,8.5%]	6.5%	[5.3%,8.1%]
Mean serves of vegetables daily	2.29	[2.20,2.38]	2.3	[2.21,2.38]	2.28	[2.19,2.37]

Tasmanian Population Health Survey 2019

Compared with 2016, a significantly higher proportion of both males and females met the fruit guidelines in 2019. For females, this was largely the result of a significant drop in proportions between 2013 and 2016.

As in previous years, significantly more females (50 per cent) than males (41.9 per cent) met the fruit and vegetable guidelines in 2019.

One in two females (50 per cent) met the fruit guidelines compared with two in five males (41.9 per cent). Females were in excess of three times more likely (10.7 per cent) to meet the vegetable guidelines than males (3.2 per cent), noting however that over 90 per cent of males and females do not meet the vegetable guidelines.

Table 42: Met NHMRC guidelines for fruit and vegetables by sex, 18 years and over, Tasmania 2009 to 2019

		Met vegetable guidelines		Met fruit guidelines	
	Year	**%**	**95%CI**	**%**	**95%CI**
Males	2009^	7.0%	[5.9%,8.2%]	42.9%	[40.4%,45.3%]
	2013	3.3%	[2.5%,4.2%]	36.8%	[33.9%,39.7%]
	2016	3.1%	[2.1%,4.5%]	35.0%	[32.0%,38.2%]
	2019	3.2%	[2.4%,4.2%]	**41.9%***	[39.2%,44.6%]
Females	2009^	14.7%	[13.4%,16.1%]	56.4%	[54.4%,58.4%]
	2013	13.5%	[12.1%,15.1%]	51.5%	[49.2%,53.8%]
	2016	11.7%	[10.1%,13.6%]	43.5%	[40.8%,46.4%]
	2019	10.7%	[9.3%,12.2%]	**50.0%***	[47.7%,52.3%]

Tasmanian Population Health Surveys 2009-2019; ^2003 guidelines; *statistically significantly different from 2016

Compared with 2016, greater proportions of Tasmanians of all ages met the fruit guidelines in 2019, but this increase was statistically significant only for those aged 65 years and over.

Table 43: Met NHMRC guidelines for fruit consumption by age, Tasmania 2009 to 2019

	2009		2013		2016		2019	
Age	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
18-24	46.0%	[39.4%,52.8%]	47.0%	[38.6%,55.6%]	38.8%	[30.1%,48.2%]	56.3%	[43.5%,68.3%]
25-34	45.3%	[40.6%,50.2%]	40.4%	[33.5%,47.8%]	41.1%	[34.5%,48.0%]	43.2%	[35.0%,51.9%]
35-44	49.3%	[45.9%,52.8%]	42.9%	[39.0%,46.9%]	35.8%	[30.5%,41.5%]	40.7%	[34.5%,47.3%]
45-54	47.3%	[44.0%,50.6%]	42.8%	[39.3%,46.3%]	36.3%	[32.0%,40.7%]	39.3%	[34.9%,44.0%]
55-64	53.9%	[50.7%,57.1%]	44.2%	[41.3%,47.2%]	38.2%	[34.5%,42.1%]	43.6%	[39.9%,47.3%]
65+	55.1%	[52.4%,57.7%]	47.7%	[45.6%,49.9%]	43.9%	[40.7%,47.2%]	**51.8%***	[49.5%,54.1%]

Tasmanian Population Health Surveys 2009-2019; *statistically significantly different from 2016

Vegetable consumption has declined slightly for all age groups in 2019, but no significant changes were observed compared with 2016.

Table 44: Met NHMRC guidelines for vegetables by age, Tasmania 2009 to 2019

	2009^		2013		2016		2019	
Age	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
18-24	6.5%	[4.0%,10.4%]	6.5%*	[3.3%,12.4%]	4.9%^	[2.2%,10.7%]	n/a	--
25-34	8.2%	[6.0%,11.0%]	5.0%*	[2.9%,8.6%]	6.2%^	[3.7%,10.3%]	4.6%^	[1.7%,11.5%]
35-44	9.4%	[7.7%,11.6%]	6.7%	[5.1%,8.8%]	8.0%	[5.5%,11.7%]	5.2%^	[3.0%,8.6%]
45-54	10.4%	[8.6%,12.5%]	8.9%	[7.1%,11.0%]	7.7%	[5.8%,10.3%]	6.6%	[4.6%,9.4%]
55-64	15.3%	[13.2%,17.6%]	10.8%	[9.3%,12.6%]	7.4%	[5.6%,9.8%]	7.1%	[5.6%,9.0%]
65+	14.2%	[12.4%,16.2%]	11.1%	[9.8%,12.4%]	8.9%	[7.1%,11.2%]	8.4%	[7.2%,9.9%]

Tasmanian Population Health Survey 2009-2019; ^2003 Guidelines; ^RSE ≥25% - use with caution%; n/a = unreliable estimate - RSE≥50%

Healthy eating starts with positive parental role modelling. If eating vegetables and fruit is offered as part of what a family eats, children will eat them as well. https://www.dhhs.tas.gov.au/healthykids

Fruit and vegetable consumption was slightly higher for adults with dependent children under the age of five years than for Tasmanians with older children, but the differences were not statistically significant.

Table 45: Met NHMRC guidelines for fruit and vegetables, adults with dependent children, Tasmania 2019

	0-5 years		6-9 years		10-15 years	
2013 Guidelines	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Adults met fruit guidelines	46.3%	[39.1%,53.7%]	45.4%	[38.4%,52.5%]	43.8%	[38.2%,49.6%]
Mean number of serves of fruit daily for adults	1.66	[1.46,1.86]	1.57	[1.38,1.76]	1.58	[1.42,1.75]
Adults met vegetable guidelines	6.7%^	[3.6%,12.1%]	3.9%^	[1.7%,8.7%]	5.5%	[3.5%,8.4%]
Mean number of serves of vegetables daily for adults	2.46	[2.20,2.73]	2.22	[2.02,2.42]	2.27	[2.12,2.43]

Tasmanian Population Health Survey 2019; RSE ≥25% - use with caution

A significantly smaller proportion of Tasmanians with fair/poor health status met the fruit and vegetable guidelines in 2019 than Tasmanians reporting excellent/very good health.

Table 46: Met fruit/vegetable guidelines by self-assessed health, 18 years and over, Tasmania 2019

	Met fruit guidelines		Met vegetable guidelines	
Self-assessed health	**%**	**95% CI**	**%**	**95% CI**
Excellent/very good	54.6%	[51.6%,57.5%]	9.6%	[8.0%,11.4%]
Good	43.3%	[40.4%,46.3%]	5.7%	[4.5%,7.1%]
Fair/poor	**37.7%***	[34.6%,41.0%]	**5.4%***	[4.2%,6.9%]

Tasmanian Population Health Survey 2019; *statistically significantly different from excellent/very good health

Figure 6: Met fruit and vegetable guidelines by self-assessed health, Tasmania 2019

Tasmanian Population Health Survey 2019; *statistically significantly different from excellent/very good health

Similar proportions of Tasmanians across all SEIFA quintiles met fruit and vegetable guidelines.

Table 47: Met fruit and vegetable guidelines by SEIFA quintiles, 18 years and over, Tasmania 2019

	Met fruit guidelines		Met vegetable guidelines	
SEIFA IRSD^ 2016	**%**	**95% CI**	**%**	**95% CI**
1st (most disadvantaged)	44.5%	[40.7%,48.5%]	6.7%	[5.1%,8.9%]
2nd	43.9%	[40.5%,47.4%]	6.8%	[5.5%,8.4%]
3rd	46.3%	[42.7%,49.9%]	6.9%	[5.3%,8.9%]
4th	46.8%	[42.8%,50.8%]	8.0%	[6.1%,10.5%]
5th (least disadvantaged)	48.8%	[44.1%,53.5%]	6.7%	[4.6%,9.5%]

Tasmanian Population Health Survey 2019; ^ Index of Relative Socio-economic Disadvantage

Folate/folic acid

Folate is a B group vitamin needed for healthy growth and development. It is found naturally in food such as green leafy vegetables and as folic acid when added to foods such as bread, breakfast cereals or as a supplement.

In September 2009 it became mandatory that all wheat flour for bread-making (except organic) contains folic acid. This means that 100 grams of bread, which is around two to three slices, will provide 120 micrograms (mcg) of folic acid. This was implemented to increase the intake of dietary folic acid among women of childbearing age and thereby reduce the incidence of neural tube defects.

Recommended daily folate requirements for people aged 18 years and over are 400 mcg for males and females, increasing to 600 mcg during pregnancy.

Bread is also used as the vehicle for mandatory iodine fortification via the use of iodised salt by bakers, which is particularly relevant to women of childbearing age, pregnant and breastfeeding women.

Overall, bread consumption has declined, with more Tasmanians eating less bread in 2019.

The proportion of women eating less than two slices of bread per day has increased significantly, from 55.8 per cent in 2016 to 61.5 per cent in 2019, whilst the proportion of women eating two to four slices of bread per day fell significantly from 42.9 per cent in 2016 to 37.2 per cent in 2019.

Gender comparisons show more females (61.5 per cent) than males (42.9 per cent) failing to benefit from folate (and iodine) supplementation by eating less than two slices of bread per day (statistically significant difference).

Table 48: Bread consumption by sex, 18 years and over, Tasmania 2016 and 2019

	Males		Females		Persons	
Slices per day^^	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
2016						
< 2 slices	40.6%	[37.5%,43.9%]	55.8%	[53.0%,58.6%]	48.3%	[46.2%,50.4%]
2-4 slices	52.5%	[49.3%,55.8%]	42.9%	[40.1%,45.7%]	47.6%	[45.5%,49.8%]
>4 slices	6.8%	[5.3%,8.8%]	1.3%	[0.8%,2.1%]	4.0%	[3.2%,5.1%]
2019						
< 2 slices	42.9%	[40.2%,45.6%]	**61.5%***	[59.2%,63.6%]	**52.4%***	[50.7%,54.1%]
2-4 slices	51.4%	[48.7%,54.1%]	**37.2%***	[35.1%,39.4%]	44.2%	[42.5%,45.9%]
>4 slices	5.0%	[3.9%,6.2%]	**0.6%^**	[0.4%,1.0%]	2.7%	[2.2%,3.4%]

Tasmanian Population Health Surveys 2016 and 2019; ^^a bread roll counts as two slices; ; ^RSE ≥25% - use with caution; *statistically significantly different from 2016

Folate can be taken as a (folic acid) supplement and is recommended when planning a pregnancy and during the first three months of a pregnancy.

Survey data collected on folic acid supplementation from 2009 to 2016 (not collected in 2019) show a statistically significant fall in supplementation rates since 2009.

Of all women aged 18 to 50 years in 2016, 76.8 per cent reported not to take folic acid supplementation at all, and only 15.8 per cent of women reported daily use. This compares to 68.8 per cent and 22.5 per cent respectively in the 2009 survey.
www.dhhs.tas.gov.au/publichealth/epidemiology/tasmanian_population_health_survey_2016

In 2019, one in three women (33 per cent) aged 18 to 50 years could not think of any reason to supplement with folic acid, a statistically significant reduction compared with all previous years.

Pregnancy issues and the prevention of birth defects were correctly identified as main reasons for folic acid supplementation by 36.8 per cent and 12.1 per cent of females respectively in 2019.

Table 49: Knowledge of the main reason for folic acid supplementation, females 18-50 years, Tasmania 2009-2019

	2009		2013		2016		2019	
Reason	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Do not know reason	42.5%	[39.6%,45.6%]	44.1%	[40.8%,47.5%]	42.1%	[37.7%,46.6%]	**33.0%***	[28.7%,37.7%]
Pregnancy related issue	31.6%	[28.9%,34.5%]	32.6%	[29.3%,36.1%]	32.3%	[28.2%,36.7%]	36.8%	[32.1%,41.7%]
To prevent birth defects	6.3%	[5.0%,7.9%]	5.5%	[3.9%,7.9%]	7.7%	[5.5%,10.6%]	12.1%	[9.2%,15.8%]
To improve general health	5.7%	[4.5%,7.2%]	4.8%	[3.6%,6.4%]	3.7%	[2.4%,5.6%]	**3.5%^**	[2.0%,6.0%]
To balance the diet	2.7%	[1.9%,3.7%]	2.6%	[1.7%,4.0%]	0.9%	[0.5%,1.8%]	**n/a**	--

Tasmanian Population Health Surveys 2009-2019; RSE ≥25% - use with caution; n/a = RSE ≥50%; * statistically significantly different from all previous surveys (2009 – 2016)

Type of drinks consumed

Tasmanians most frequently quench their thirst with water (74 per cent) or tea/coffee (16.5 per cent). In 2019, a significant decline in those choosing water, when compared with 2016, was noted, as well as a significant increase in the choice of tea or coffee.

Table 50: Type of drink usually consumed when thirsty, 18 years and over, Tasmania 2009 to 2019

	2009		2013		2016		2019	
Type	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Water	69.8%	[68.4%,71.3%]	73.0%	[71.4%,74.6%]	77.4%	[75.6%,79.1%]	**74.0%***	[72.5%,75.5%]
Soft drinks	10.5%	[9.5%,11.6%]	7.4%	[6.4%,8.6%]	5.1%	[4.2%,6.2%]	4.9%	[4.2%,5.7%]
Tea/coffee	13.5%	[12.5%,14.4%]	13.9%	[12.9%,14.9%]	12.5%	[11.3%,13.9%]	**16.5%***	[15.3%,17.8%]
Fruit/veg juice	3.4%	[2.8%,4.0%]	2.0%	[1.5%,2.6%]	1.5%	[1.1%,2.1%]	1.8%	[1.4%,2.4%]
Milk	0.9%	[0.7%,1.3%]	1.9%	[1.4%,2.6%]	1.4%	[0.9%,2.1%]	1.0%	[0.7%,1.4%]
Alcohol	1.4%	[1.1%,1.8%]	1.1%	[0.8%,1.5%]	0.9%	[0.6%,1.3%]	0.7%	[0.5%,1.1%]
Other & Sports drinks	**0.3%^**	[0.2%,0.5%]	**0.3%^**	[0.1%,0.6%]	0.9%	[0.5%,1.5%]	**0.6%^**	[0.4%,1.0%]

Tasmanian Population Health Surveys 2009-2019; RSE ≥25% - use with caution; *statistically significantly different from 2016

Australia's current dietary guidelines do not recommend a specific amount of water but do recommend opting for water over other types of drinks.

In 2019, most Tasmanians usually had between two and six cups of water per day, with about one in seven females (13.5 per cent) and about one in ten males (9.5 per cent) drinking eight or nine cups of water per day.

Table 51: Number of cups of water usually consumed daily, 18 years and over, Tasmania 2019

	Males		Females		Persons	
Number of cups	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
None	4.9%	[3.9%,6.1%]	2.6%	[2.0%,3.3%]	3.7%	[3.2%,4.4%]
<2	10.5%	[9.0%,12.2%]	6.7%	[5.7%,7.8%]	8.5%	[7.7%,9.5%]
2 to <4	30.9%	[28.6%,33.4%]	26.7%	[24.8%,28.6%]	28.7%	[27.3%,30.3%]
4 to <6	25.5%	[23.1%,28.0%]	29.4%	[27.3%,31.6%]	27.5%	[25.9%,29.1%]
6 to <8	12.1%	[10.4%,14.1%]	15.3%	[13.7%,17.1%]	13.8%	[12.6%,15.1%]
8 to <10	9.5%	[8.0%,11.2%]	13.5%	[11.9%,15.3%]	11.6%	[10.4%,12.8%]
≥10	5.6%	[4.4%,7.2%]	5.2%	[4.1%,6.4%]	5.4%	[4.6%,6.4%]

Tasmanian Population Health Survey 2019

Sweetened drinks are available as sugar sweetened or diet drinks containing intense sweeteners. They include soft drinks, cordial, sports drinks and caffeinated drinks, but do not include fruit juice or flavoured milks. A high intake of sugar sweetened beverages is associated with weight gain as well as dental caries and type 2 diabetes.

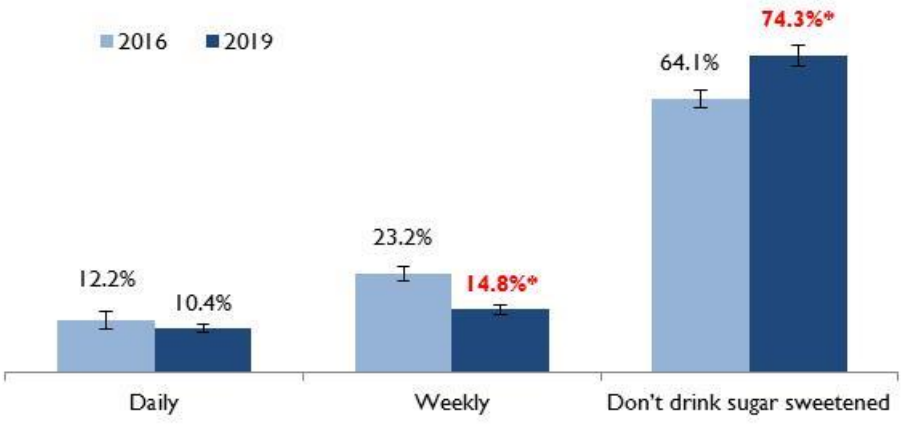
There was a statistically significant decline in the use of sugar sweetened drinks in 2019 compared with 2016, and a significant fall in the *weekly* consumption of sugar sweetened drinks in 2019.

Table 52: Sweetened drink consumption, 18 years and over, Tasmania 2016 and 2019

	Sugar sweetened drinks^		Diet drinks^	
2016	**%**	**95% CI**	**%**	**95% CI**
Daily	12.2%	[10.8%,13.8%]	7.6%	[6.4%,8.9%]
Weekly	23.2%	[21.4%,25.2%]	10.9%	[9.5%,12.4%]
Don't drink this	64.1%	[62.0%,66.1%]	81.2%	[79.4%,83.0%]
2019	**%**	**95% CI**	**%**	**95% CI**
Daily	10.4%	[9.4%,11.6%]	7.2%	[6.3%,8.2%]
Weekly	**14.8%***	[13.6%,16.2%]	9.8%	[8.7%,10.9%]
Don't drink this	**74.3%***	[72.8%,75.8%]	82.8%	[81.3%,84.1%]

Tasmanian Population Health Surveys 2016, 2019 ^includes cordials, sports and caffeinated drinks – 1 cup = 250ml; *statistically significantly different compared with 2016

Figure 7: Consumption of sugar sweetened drinks, 18 years and over, Tasmania 2016 and 2019



Tasmanian Population Health Survey 2016 and 2019; *statistically signficantly different from 2016

Compared to 2016, there was a significant reduction in the proportion of Tasmanians who drank between 2 to 4 cups, or 6 cups or more, of sugar sweetened drinks weekly.

Table 53: Quantity of sweetened drinks usually consumed by type, Tasmania 2016 and 2019

	Sugar sweetened drinks^		Diet drinks^	
2016	**%**	**95% CI**	**%**	**95% CI**
<2 cups weekly	9.9%	[8.6%,11.3%]	4.9%	[4.0%,6.0%]
2 to <4 cups weekly	10.4%	[9.0%,12.0%]	4.4%	[3.5%,5.4%]
4 to <6 cups weekly	2.0%	[1.4%,2.9%]	1.1%	[0.7%,1.7%]
6 or more cups weekly	13.1%	[11.6%,14.7%]	8.1%	[6.9%,9.5%]
Don't drink this	64.1%	[62.0%,66.1%]	81.2%	[79.4%,83.0%]
2019	**%**	**95% CI**	**%**	**95% CI**
<2 cups weekly	**7.4%***	[6.6%,8.4%]	4.3%	[3.6%,5.1%]
2 to <4 cups weekly	**6.1%***	[5.3%,7.0%]	4.3%	[3.6%,5.2%]
4 to <6 cups weekly	1.4%	[1.0%,2.0%]	1.1%	[0.8%,1.6%]
6 or more cups weekly	**10.3%***	[9.3%,11.5%]	7.3%	[6.4%,8.3%]
Don't drink this	74.3%	[72.8%,75.8%]	82.8%	[81.3%,84.1%]

Tasmanian Population Health Surveys 2016, 2019 ^includes cordials, sports and caffeinated drinks – 1 cup = 250ml; *statistically significantly different compared with 2016

Compared to 2016, the greatest declines in the proportion of those consuming sugar sweetened drinks were noted for the normal and obese BMI categories, with reductions of 11.8 per cent and 11.1 per cent respectively. However, Tasmanians with an obese BMI remain the most likely to consume sugar sweetened drinks.

Table 54: Consumption of sweetened drinks by BMI status, 18 years and over, Tasmania 2016 and 2019

	Sugar sweetened drinks^^		Diet drinks^^	
2016	**%**	**95% CI**	**%**	**95% CI**
Underweight	19.7%^	[10.9%,32.8%]	5.3%^	[2.0%,13.1%]
Normal weight	33.6%	[29.9%,37.5%]	12.2%	[9.7%,15.1%]
Overweight	32.1%	[28.7%,35.8%]	22.0%	[18.9%,25.4%]
Obese	41.1%	[36.9%,45.4%]	23.5%	[20.1%,27.2%]
2019	**%**	**95% CI**	**%**	**95% CI**
Underweight	23.5%^	[11.7%,41.6%]	**n/a**	--
Normal weight	**21.8%***	[19.1%,24.7%]	12.3%	[10.1%,14.9%]
Overweight	**24.9%***	[22.2%,27.8%]	17.6%	[15.3%,20.3%]
Obese	**30.0%***	[27.0%,33.2%]	22.9%	[20.1%,25.9%]

Tasmanian Population Health Surveys 2016, 2019 ^^ includes cordials, sports and caffeinated drinks – 1 cup = 250ml; ^RSE ≥25% -use with caution; n/a = RSE ≥50%; *statistically significant compared with 2016

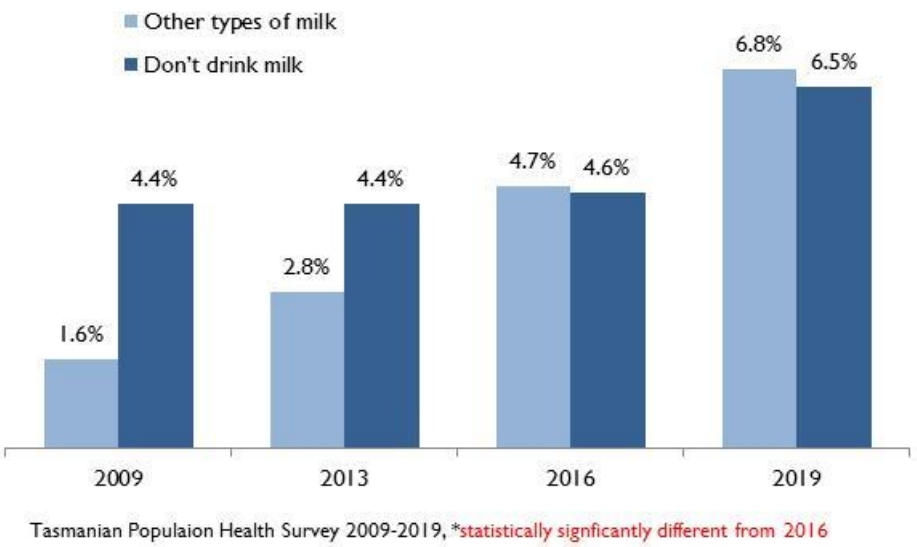
The consumption of dairy milk has not changed since 2016, but statistically significant increases were noted in the consumption of *other types of milk (6.8 per cent)* as well as for those who did not drink any type of milk (6.5 per cent) in 2019.

Table 55: Type of milk used, 18 years and over, Tasmania 2009 to 2019

	2009		2013		2016		2019	
Type of milk	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Whole dairy milk	42.3%	[40.8%,43.9%]	42.6%	[40.8%,44.4%]	55.9%	[53.9%,58.0%]	55.2%	[53.4%,56.9%]
Low/reduced fat dairy milk	36.9%	[35.4%,38.4%]	35.8%	[34.1%,37.5%]	23.4%	[21.7%,25.2%]	21.2%	[19.8%,22.6%]
Skim dairy milk	11.0%	[10.1%,12.0%]	10.7%	[9.6%,11.9%]	7.5%	[6.6%,8.6%]	6.9%	[6.1%,7.8%]
Soy milk	3.3%	[2.7%,3.9%]	3.3%	[2.7%,4.0%]	3.4%	[2.7%,4.3%]	3.3%	[2.7%,4.0%]
Other types of milk	1.6%	[1.2%,2.1%]	2.8%	[2.2%,3.5%]	4.7%	[3.9%,5.8%]	**6.8%***	[5.9%,7.8%]
Don't drink milk	4.4%	[3.8%,5.1%]	4.4%	[3.8%,5.2%]	4.6%	[3.9%,5.5%]	**6.5%***	[5.7%,7.4%]

Tasmanian Population Health Surveys 2009-2019; *statistically significant compared with 2016

Figure 8: Drink other types of milk and don't drink milk, 18 years and over, Tasmania 2009-2019



Tasmanian Populaion Health Survey 2009-2019, *statistically signficantly different from 2016

Dieting and food satisfaction

In 2019, four in five Tasmanians (80.8 per cent) were not currently on a diet, with significantly more males (83.1 per cent) than females (78.6 per cent).

For females, dieting for health reasons alone was significantly more likely than either dieting just to lose weight, or to lose weight combined with health concerns.

Table 56: Whether currently on diet and reason by sex, 18 years and over, Tasmania 2019

	Males		Females		Persons	
Diet reason	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
To lose weight	4.2%	[3.2%,5.5%]	5.4%	[4.4%,6.7%]	4.8%	[4.1%,5.7%]
For health reasons	6.5%	[5.3%,7.9%]	**9.4%***	[8.2%,10.8%]	8.0%	[7.1%,8.9%]
Lose weight and health reasons	5.9%	[4.6%,7.4%]	6.4%	[5.4%,7.5%]	6.1%	[5.3%,7.0%]
Not on a diet	83.1%	[81.0%,85.1%]	78.6%	[76.7%,80.4%]	80.8%	[79.4%,82.2%]

Tasmanian Population Health Survey 2019; *statistically significant compared with other reasons for dieting

The most common diets for Tasmanians who were on a current diet (18.9 per cent), included a sugar free diet (41.1 per cent), a low carb diet (36.8 per cent) and a weight loss/low calorie diet (36.2 per cent). Males and females reported a similar choice of diets.

Table 57: Type of current diet by sex, 18 years and over, Tasmania 2019

	Males		Females		Persons	
Type of diet	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Weight loss/low calorie	33.8%	[27.5%,40.6%]	38.0%	[33.3%,43.0%]	36.2%	[32.4%,40.3%]
Low fat/cholesterol	23.2%	[17.6%,29.8%]	17.4%	[14.1%,21.4%]	19.9%	[16.8%,23.4%]
Low salt/sodium	13.4%	[9.9%,18.0%]	14.1%	[11.1%,17.7%]	13.8%	[11.4%,16.6%]
Sugar free/low sugar	40.9%	[34.2%,47.8%]	41.3%	[36.3%,46.4%]	41.1%	[37.1%,45.3%]
Low fibre	**8.1%^**	[4.8%,13.4%]	4.1%	[2.7%,6.1%]	5.8%	[4.0%,8.2%]
Diabetic diet	16.1%	[12.2%,21.0%]	13.4%	[10.4%,17.0%]	14.6%	[12.1%,17.4%]
Low carb diet	35.5%	[29.1%,42.3%]	37.8%	[32.9%,42.9%]	36.8%	[32.8%,40.9%]
High protein	15.4%	[11.0%,21.1%]	14.9%	[11.7%,18.7%]	15.1%	[12.4%,18.3%]
Weight gain diet	**1.4%^**	[0.6%,2.9%]	**1.5%^**	[0.7%,3.2%]	**1.5%^**	[0.9%,2.5%]
Other type of diet	5.4%	[3.3%,8.7%]	8.6%	[6.2%,11.8%]	7.2%	[5.5%,9.4%]

Tasmanian Population Health Survey 2019; ^RSE ≥25% -use with caution

The cost of food, food quality and variety continued to be the most common concerns expressed by Tasmanians in 2019 when asked about their dissatisfaction with available food.

Compared with 2016, a significantly smaller proportion of Tasmanians expressed dissatisfaction with either the cost of food (20.5 per cent), quality (17 per cent), or variety (8.4 per cent) in 2019.

Table 58: Reasons for dissatisfaction with available food, 18 years and over, Tasmania 2009 to 2019

	2009		2013		2016		2019	
Reason	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Some foods too expensive	28.9%	[27.5%,30.4%]	22.4%	[20.8%,24.0%]	26.8%	[24.9%,28.7%]	**20.5%***	[19.1%,22.0%]
Lack of quality	29.2%	[27.8%,30.6%]	22.0%	[20.5%,23.5%]	22.2%	[20.4%,24.0%]	**17.0%***	[15.7%,18.3%]
Lack of variety	12.2%	[11.2%,13.3%]	9.3%	[8.3%,10.4%]	11.0%	[9.7%,12.5%]	**8.4%***	[7.4%,9.4%]
No culturally appropriate foods	7.9%	[7.0%,8.8%]	3.7%	[3.1%,4.3%]	3.7%	[3.0%,4.6%]	3.2%	[2.7%,3.9%]
Inadequate/unreliable public transport	7.8%	[6.9%,8.7%]	5.6%	[4.8%,6.6%]	5.9%	[4.9%,7.1%]	4.5%	[3.9%,5.3%]

Tasmanian Population Health Surveys 2009-2019; *statistically significant compared with 2016

Physical activity

Physical activity is a major modifiable risk factor for a range of chronic conditions including cardiovascular disease, type 2 diabetes, mental health disorders, and some cancers, and insufficient physical activity contributes to the Australian burden of disease.

The health benefits of physical activity are determined by the frequency, duration, and intensity of the activity. The updated 2014 Guidelines introduced a range of minutes per week in the duration of moderate/vigorous physical activity and twice weekly muscle strengthening activity.

Moderate intensity activities are those that take some effort, but you are still able to talk while doing them. Vigorous intensity activities refer to those activities that require more effort and make you breather harder and faster.

Physical Activity Guidelines, 1999 and 2014

Recommendations	**National Physical Activity Guidelines 1999 Age 18 + years**	**Physical Activity and Sedentary Behaviour Guidelines 2014 Age 18-64 years**
Moderate intensity activity	30min/day (5 days) or 150 min/week	150-300 min/week OR
Vigorous intensity activity	Not quantified	75-150 min/week OR equivalent combination of both
Muscle strengthening activity	n/a	Twice weekly

The types of physical activity included in meeting the 2014 guidelines comprise walking (at least 10 minutes at a time), vigorous household chores and vigorous gardening activities, moderate and vigorous physical activity (sport/exercise) and muscle strengthening activities.

Physical activity is reported as sufficient or insufficient in meeting the guidelines for moderate to vigorous physical activity (MVPA). Insufficient physical activity includes the absence of activity as well as activity levels which fall below the 2014 recommendations.

Since the 2009 and 2013 physical activity estimates used the 1999 guidelines, these guidelines have also been applied to the 2016 and 2019 survey data to enable trend analyses for the table below.

The proportion of Tasmanians with sufficient levels of physical activity has slightly decreased since 2016, from 66 per cent to 63.2 per cent.

Table 59: Level of physical activity using the 1999 Guidelines, 18 years and over Tasmania 2009 to 2019

1999	2009		2013		2016		2019	
Activity level (MVPA)	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Insufficient	27.5%	[26.1%,28.9%]	31.0%	[29.3%,32.7%]	27.9%	[26.1%,29.7%]	29.3%	[27.8%,30.9%]
Sufficient	68.2%	[66.7%,69.6%]	63.9%	[62.1%,65.6%]	66.0%	[64.1%,67.9%]	63.2%	[61.5%,64.8%]

Tasmanian Population Health Surveys 2009-2019; MVPA refers to moderate and vigorous physical activity

Older people should accumulate at least 30 minutes of moderate intensity physical activity on most, preferably all, days. More than one in two Tasmanians aged 65 years and over (53.3 per cent) reported sufficient physical activity in 2019, with similar proportions of sufficient activity reported since 2009.

Table 60a: Level of physical activity, 1999 Guidelines, 65 years and over Tasmania 2009 to 2019

1999 Guidelines	2009		2013		2016		2019	
Activity level (MVPA)	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Insufficient	42.1%	[39.5%,44.8%]	43.4%	[41.3%,45.6%]	39.0%	[35.8%,42.4%]	37.3%	[35.2%,39.6%]
Sufficient	49.3%	[46.7%,52.0%]	48.1%	[45.9%,50.2%]	52.2%	[48.8%,55.5%]	53.3%	[51.0%,55.6%]

Tasmanian Population Health Surveys 2009-2019; MVPA refers to moderate and vigorous physical activity

With the application of the 2014 Guidelines, sufficient moderate and vigorous physical activity was reported by 84.1 per cent of Tasmanians between 18 and 64 years of age, with 33.4 per cent of Tasmanians in this age group engaged in sufficient muscle strengthening activity.

It must be noted that prevalence rates are higher compared o those reported against the 1999 guidelines. Contributing factors to this are:

Age group - The 2014 guidelines use the 18-64 year age group whereas the report as per the 1999 guidelines is for those aged 18+, therefore also includes those aged over 65 years.

Weekly recommendation - The 2014 guidelines recommended a weekly amount of activity. While the guidelines still state 'to be active on most, preferably all, days every week' the figures are calculated on the total weekly duration alone, without the number of days of activity,

The combination of sufficient moderate and vigorous physical activity *and* sufficient muscle strengthening activity, as recommended by the 2014 Guidelines, was achieved by 31.1 per cent of Tasmanians aged 18-64 years.

Table 61: Level of physical activity, 2014 Guidelines, 18-64 years, Tasmania 2016 and 2019

2014 Guidelines	2016		2019	
Activity levels (MVPA)^	**%**	**95% CI**	**%**	**95% CI**
Insufficient	14.9%	[13.2%,16.8%]	11.1%	[9.7%,12.6%]
Sufficient	81.2%	[79.2%,83.1%]	84.1%	[82.3%,85.8%]
Muscle strengthening activity				
Insufficient	70.2%	[67.7%,72.5%]	65.7%	[63.3%,68.1%]
Sufficient	29.2%	[26.8%,31.7%]	33.4%	[31.0%,35.8%]
Combined measure				
Insufficient	67.1%	[64.6%,69.5%]	63.6%	[61.1%,66.0%]
Sufficient	29.0%	[26.6%,31.5%]	31.1%	[28.8%,33.6%]

Tasmanian Population Health Survey 2016-2019; ^MVPA refers to moderate and vigorous physical activity

Tasmanians in the North West region recorded the lowest proportion of sufficient physical activity (81.1 per cent) and muscle strengthening activity (25.3 per cent), but only the latter was statistically significant, and then only when compared with the South.

Table 62: Level of physical activity by region, 2014 Guidelines, 18-64 years, Tasmania 2019

2014 Guidelines	North		North-West		South	
Activity levels (MVPA)^	%	95% CI	%	95% CI	%	95% CI
Insufficient	12.2%	[9.8%,15.2%]	13.7%	[11.2%,16.6%]	9.4%	[7.4%,11.9%]
Sufficient	84.1%	[80.9%,86.8%]	81.1%	[77.8%,84.0%]	85.4%	[82.4%,87.9%]
Muscle strengthening						
Insufficient	67.4%	[63.3%,71.2%]	74.1%	[70.4%,77.5%]	61.6%	[57.7%,65.4%]
Sufficient	31.5%	[27.8%,35.6%]	25.3%	[21.9%,29.0%]	37.5%	[33.8%,41.5%]
Combined measure						
Insufficient	66.4%	[62.3%,70.2%]	71.6%	[67.9%,75.2%]	59.0%	[55.0%,62.8%]
Sufficient	29.5%	[25.8%,33.5%]	22.6%	[19.4%,26.2%]	35.4%	[31.6%,39.3%]

Tasmanian Population Health Survey 2019; ^MVPA refers to moderate and vigorous physical activity

Insufficient physical activity has declined for all age groups since 2016, with a statistically significant reduction for the 55-64-year age group, from 18.4 per cent to 11.3 per cent in 2019.

Table 63: Insufficient physical activity (MVPA^) by age, 2014 Guidelines, 18-64 years, Tasmania 2016-2019

2014 Guidelines	2016		2019	
Age	%	95% CI	%	95% CI
18-24	10.2%^	[5.7%,17.4%]	**9.3%^**	[4.6%,17.9%]
25-34	13.0%	[9.2%,18.2%]	**8.3%^**	[4.7%,14.3%]
35-44	15.7%	[12.1%,20.2%]	11.2%	[7.8%,16.0%]
45-54	15.3%	[12.4%,18.6%]	12.0%	[9.3%,15.3%]
55-64	18.4%	[15.5%,21.7%]	**11.3%***	[9.3%,13.6%]

Tasmanian Population Health Surveys 2016, 2019; ^MVPA only, excludes muscle strengthening activity; ^RSE ≥25% - use with caution; *statistically significantly different from 2016

Tasmanians in the least disadvantaged quintile were slightly more inclined to be physically active (87.4 per cent) than those in the most disadvantaged quintile (79.7 per cent).

Table 64: Physical activity levels by SEIFA quintiles, 2014 Guidelines, 18-64 years, Tasmania 2019

2014 Guidelines	Insufficient MVPA activity		Sufficient MVPA	
SEIFA IRSD 2016^	**%**	**95% CI**	**%**	**95% CI**
1st (most disadvantaged)	12.7%	[9.6%,16.8%]	79.7%	[74.9%,83.8%]
2nd	13.0%	[10.1%,16.6%]	82.5%	[78.7%,85.8%]
3rd	10.2%	[7.8%,13.2%]	85.8%	[82.4%,88.7%]
4th	10.3%	[7.4%,14.1%]	85.0%	[80.5%,88.5%]
5th (least disadvantaged)	9.2%	[6.2%,13.5%]	87.4%	[82.6%,91.0%]

Tasmanian Population Health Survey 2019; ^Index of Relative Socio-economic Disadvantage; *MVPA only, excludes muscle strengthening activity

Sedentary behaviour (sitting)

Sedentary behaviour refers to sitting time, such as time spent sitting at work, on transport, or while reading or watching television.

Research has suggested that prolonged sitting has harmful effects on health, and that sitting times should be minimised or interspersed with activity. Australia's Physical Activity and Sedentary Behaviour Guidelines 2014 recommend that adults minimise the amount of time spent in prolonged sitting and break up long periods of sitting as often as possible

Although there are no official guidelines quantifying how much sitting time is harmful, there is some agreement on using eight hours or more of daily sitting time as a proxy indicator of a high level of sedentariness; refer to www.ncbi.nlm.nih.gov/pubmed/26809451

The number of hours Tasmanians spent sitting on weekdays has remained relatively unchanged since 2016, with almost one in five (17.4 per cent) sitting for eight hours or more on weekdays.

Table 65: Hours per day spent sitting on weekdays^, 18 years and over, Tasmania 2016 and 2019

	2016		2019	
Hours per day^	**%**	**95% CI**	**%**	**95% CI**
<2 hours	6.9%	[5.8%,8.1%]	5.2%	[4.5%,6.0%]
2-<4 hours	29.5%	[27.6%,31.5%]	29.0%	[27.4%,30.6%]
4-<6 hours	28.3%	[26.5%,30.3%]	28.7%	[27.1%,30.3%]
6-<8 hours	13.5%	[12.0%,15.1%]	13.9%	[12.7%,15.2%]
≥8 hours	17.4%	[15.8%,19.2%]	17.4%	[16.0%,18.8%]

Tasmanian Population Health Surveys 2016 and 2019; ^during the last 7 days

The proportion of Tasmanians reporting sedentariness for eight hours or more on weekdays was significantly higher for residents in the Southern region (19 per cent) than for those in the North, but similar to the North-West.

Table 66: Eight hours or more of sitting on weekdays^ by region, 18 years and over, Tasmania 2019

	North		North-West		South	
Weekdays	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
≥8 hours per day	14.4%	[12.5%,16.6%]	17.2%	[15.0%,19.6%]	**19.0%***	[16.8%,21.5%]

Tasmanian Population Health Survey 2019; ^during the last 7 days; *statistically significantly different from the Northern region

The proportion of Tasmanians sitting for eight hours or more on weekdays in 2019 has remained similar to 2016.

Tasmanians aged 45-54 years had the greatest weekday sedentariness level of 25.8 per cent, while those aged 65 years and older had the lowest level of 10.6 per cent, significantly less than for most other age groups.

Table 67: Eight hours or more of sitting on weekdays^ by age, Tasmania 2016 and 2019

	2016		2019	
≥8 hours per day	**%**	**95% CI**	**%**	**95% CI**
18-24	18.2%	[11.8%,27.0%]	19%^	[10.9%,31.1%]
25-34	25.2%	[19.8%,31.5%]	26.1%	[19.3%,34.3%]
35-44	24.0%	[19.4%,29.3%]	20.4%	[15.6%,26.3%]
45-54	19.8%	[16.5%,23.7%]	25.8%	[21.9%,30.2%]
55-64	15.3%	[12.7%,18.3%]	18.0%	[15.4%,21.1%]
65+	7.8%	[6.3%,9.7%]	10.6%	[9.2%,12.2%]

Tasmanian Population Health Surveys 2016 and 2019; ^during the last 7 days; ^RSE ≥25% - use with caution

There were no significant differences in sedentariness across the socio-economic quintiles.

Table 68: Eight hours or more of sitting on weekdays^ by SEIFA quintiles, Tasmania 2019

	Weekdays	
SEIFA IRSD 2016^^	**%**	**95% CI**
1st (most disadvantaged)	17.9%	[14.9%,21.5%]
2nd	15.0%	[12.7%,17.6%]
3rd	17.2%	[14.4%,20.4%]
4th	16.5%	[13.6%,19.8%]
5th (least disadvantaged)	20.3%	[16.7%,24.5%]

Tasmanian Population Health Survey 2019; ^during the last 7 days; ^^Index of Relative Socio-economic Disadvantage

More than two in five Tasmanians (42.9 per cent) were *mostly sitting* at work in 2019.

Table 69: Activity levels at work, employed or self-employed, 18 years and over, Tasmania 2019

Mostly sitting		Mostly standing		Mostly walking		Mostly heavy labour	
%	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
42.9%*	[40.2%,45.6%]	17.6%	[15.6%,19.8%]	20.2%	[18.1%,22.5%]	16.2%	[14.3%,18.3%]

Tasmanian Population Health Survey 2019; *statistically significantly different from other work activity levels

Active transport

Active transport is about travelling to and from work, shopping, or public transport by walking, running or cycling for at least 10 minutes continuously. The benefits of active transport include an increase in daily physical activity and a reduction of greenhouse gas emissions.

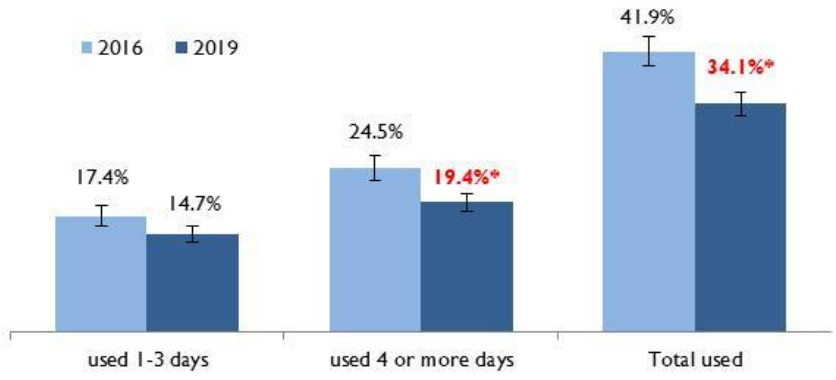
The proportion of Tasmanians using active transport has declined significantly since 2016, from 41.9 per cent to 34.1 per cent in 2019.

Table 70: Frequency of using active transport^ 18 years and over, Tasmania 2016 and 2019

	2016		2019	
Frequency	**%**	**95% CI**	**%**	**95% CI**
Not used	56.9%	[54.7%,58.9%]	**64.5%***	[62.8%,66.2%]
Used 1-3 days	17.4%	[15.8%,19.0%]	14.7%	[13.5%,16.0%]
Used 4 or more days	24.5%	[22.6%,26.4%]	**19.4%***	[18.0%,20.9%]
Total used	41.9%	[39.7%,43.9%]	**34.1%***	[32.4%,35.8%]

Tasmanian Population Health Survey 2016 and 2019; ^includes cycling, walking or running for at least 10 minutes continuously during the last 7 days; *statistically significantly different from 2016

Figure 9: Used active transport, 18 years and over, Tasmania 2016 and 2019



Tasmanian Population Health Survey 2016 and 2019, *statistically signficantly different from 2016

Although the proportion of adults using active transport declined across all the age groups since 2016, these changes were not significant.

Table 71: *Used* active transport during the last seven days^ by age, Tasmania 2016 and 2019

	2016		2019	
Age	**%**	**95% CI**	**%**	**95% CI**
18-24	64.5%	[55.1%,72.9%]	58.9%	[45.7%,70.9%]
25-34	45.3%	[38.6%,52.1%]	43.6%	[35.4%,52.2%]
35-44	42.0%	[36.5%,47.8%]	37.6%	[31.5%,44.0%]
45-54	40.0%	[35.6%,44.5%]	39.7%	[35.3%,44.4%]
55-64	36.6%	[33.0%,40.4%]	31.2%	[27.9%,34.6%]
65+	34.1%	[30.9%,37.4%]	28.9%	[26.8%,31.0%]

Tasmanian Population Health Surveys 2016 and 2019; ^includes cycling, walking or running for at least 10 minutes continuously

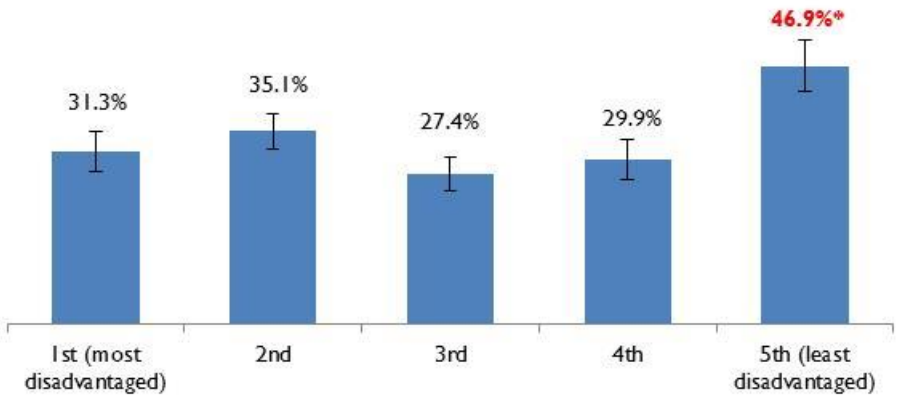
Using active transport has an inverse relationship with socio-economic status, with a significantly higher proportion of Tasmanians in the least disadvantaged areas *using* active transport (46.9 per cent) compared with those in all other SEIFA quintiles.

Table 72: Used active transport by SEIFA quintile, 18 years and over, Tasmania 2016 and 2019

Used active transport	2016		2019	
SEIFA IRSD 2016^	**%**	**95% CI**	**%**	**95% CI**
1st (most disadvantaged)	36.4%	[31.5%,41.6%]	31.3%	[27.7%,35.0%]
2nd	40.3%	[36.3%,44.4%]	35.1%	[31.9%,38.5%]
3rd	38.6%	[34.7%,42.6%]	27.4%	[24.4%,30.7%]
4th	39.7%	[35.0%,44.6%]	29.9%	[26.3%,33.7%]
5th (least disadvantaged)	54.2%	[48.5%,59.7%]	**46.9%***	[42.2%,51.6%]

Tasmanian Population Health Survey 2016 and 2019; ^Index of Relative Disadvantage; *statistically significantly different from all other quintiles

Figure 10: Used active transport by SEIFA quintiles, 18 years and over, Tasmania 2019



Tasmanian Population Health Survey 2019; *statistically signficantly different from other quintiles

Chapter 3: Indicators of health literacy

Health Literacy is the skills, knowledge and resources a person has that enable them to access, understand, remember/retrieve and use information to make decisions and take action about their health and health care. This includes all areas of health and wellbeing and the health literacy environment, which is the way services are provided and the things that make it easier or harder for people to access, understand, remember/retrieve and use information and services. Health literacy is affected by many factors, such as education and general literacy, employment, early life and social support.

Understanding information well enough to know what to do, navigating the health system, and engaging with health providers are components of health literacy, and have been assessed with questions taken from the *Health Literacy Questionnaire (HLQ)*. Proportions are calculated using the ABS 2017/18 health literacy methodology.

Understanding health information

The HLQ scale of *Understand health information well enough to know what to do* is concerned with peoples' ability to understand information or instructions about their health and their ability to fill in forms appropriately. The scale consists of five questions, all of which are included for an overall rating.

Similar to 2016, most Tasmanians in 2019 (89.4 per cent) usually or always easily understood health information well enough to know what to do.

Across regions, there were no significant differences in the level of difficulty experienced in understanding health information.

Table 73: *Understand health information well enough to know what to do*, 18 years and over, Tasmania 2019

	Difficult [a]		Easy [b]	
Regions	**%**	**95% CI**	**%**	**95% CI**
North	10.7%	[9.1%,12.6%]	89.3%	[87.4%,90.9%]
North-West	12.0%	[10.3%,13.9%]	88.0%	[86.1%,89.7%]
South	9.9%	[8.3%,11.7%]	90.1%	[88.3%,91.7%]
Tasmania 2019	10.6%	[9.5%,11.7%]	89.4%	[88.3%,90.5%]
Tasmania 2016	9.0%	[7.9%,10.3%]	91.0%	[89.7%,92.1%]

Tasmanian Population Health Survey 2019; ^proportions are calculated using ABS 2017/18 health literacy methodology (a) *cannot do/always difficult* combined with *usually difficult and sometimes difficult* (b) *usually easy* and *always easy* combined

Overall, age did not affect how easily health information is understood. This applied to both males and females.

Gender, however, was a significant influence in understanding health information. More females (91.7 per cent) than males (87 per cent) usually/always easily understood health information well enough to know what to do.

In addition, females aged 55-64, or 65 years and over, had significantly better understanding of health information than males in the same age groups.

Table 74: Always/usually easy to '*understand health information*' by sex and age, Tasmania 2019

	Males		Females		Persons	
Age	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
18-24	87.3%	[66.5%,96.0%]	94.1%	[77.1%,98.7%]	90.7%	[78.9%,96.2%]
25-34	88.0%	[78.8%,93.6%]	95.4%	[89.9%,97.9%]	91.6%	[86.4%,94.9%]
35-44	89.2%	[81.3%,94.0%]	95.4%	[89.6%,98.0%]	92.4%	[88.0%,95.3%]
45-54	91.0%	[86.6%,94.1%]	89.3%	[84.9%,92.6%]	90.1%	[87.1%,92.5%]
55-64	85.3%	[80.5%,89.1%]	**92.7%***	[90.2%,94.6%]	89.3%	[86.7%,91.4%]
65+	85.5%	[82.9%,87.8%]	**90.2%***	[88.5%,91.7%]	87.9%	[86.3%,89.3%]
Total	87.0%	[85.1%,88.7%]	**91.7%***	[90.4%,92.8%]	89.4%	[88.3%,90.5%]

Tasmanian Population Health Survey 2019; ^proportions are calculated using ABS 2017/18 health literacy methodology; *statistically significantly different from males

There was no socio-economic gradient in understanding health information. Similar proportions of Tasmanians in the most disadvantaged quintile usually/always easily understood health information (87.9 per cent) compared with those in the least disadvantaged quintile (91.4 per cent).

Table 75: Always/usually easy to *understand health information*' by SEIFA quintiles, Tasmania 2016 and 2019

Always/usually easy	2016		2019	
SEIFA IRSD2016^	**%**	**95% CI**	**%**	**95% CI**
1st (most disadvantaged)	89.1%	[85.9%,91.7%]	87.9%	[85.2%,90.2%]
2nd	89.6%	[86.7%,92.0%]	87.4%	[85.0%,89.4%]
3rd	90.8%	[88.6%,92.7%]	90.3%	[87.9%,92.3%]
4th	90.7%	[87.2%,93.3%]	90.1%	[87.6%,92.2%]
5th (least disadvantaged)	94.5%	[91.4%,96.6%]	91.4%	[88.4%,93.7%]

Tasmanian Population Health Surveys 2016, 2019; ^ Index of Relative Socio-economic Disadvantage; ^^proportions are calculated using ABS 2017/18 health literacy methodology;

Tasmanians with three or more chronic conditions were significantly less likely to easily understand health information (86.9 per cent) compared with persons reporting two or less chronic conditions (90.6 per cent). This remained the case, even after adjusting for age, as older persons are more likely to have multiple chronic conditions.

Table 76: Always/usually easy to '*understand health information*' by number of current chronic conditions, Tasmania 2019

	Always/usually easy	
Number of conditions	**%**	**95% CI**
≤2 chronic conditions	90.6%	[89.3%,91.9%]
≥3 chronic conditions	**86.9%***	[84.9%,88.6%]

Tasmanian Population Health Survey 2019; ^proportions are calculated using ABS 2017/18 health literacy methodology;
*statistically significantly different from ≤2 conditions

Healthcare system navigation

The HQL Scale of *Navigating the Healthcare System* is about peoples' ability to find out about the services and supports required to meet their healthcare needs and to advocate on their own behalf or through someone else.

The scale reflects competence in getting healthcare needs met, and has not been included in previous surveys. The scale consists of six questions, of which only one question, '*get to see the healthcare providers you need*' was included in this survey.

About one in two (54 per cent) Tasmanians found it usually/always easy to get to see the healthcare providers they require for their healthcare needs.

North-West residents reported significantly more difficulties in accessing the healthcare providers they need.

Table 77: '*Get to see the healthcare providers needed*', 18 years and over, Tasmania and regions 2019

	Difficult [(a)]		Easy [(b)]	
Regions	**%**	**95% CI**	**%**	**95% CI**
North	45.5%	[42.7%,48.3%]	53.2%	[50.4%,56.0%]
North-West	**51.3%***	[48.5%,54.1%]	**46.9%***	[44.1%,49.7%]
South	41.8%	[39.0%,44.6%]	57.4%	[54.6%,60.2%]
Tasmania	44.9%	[43.1%,46.6%]	54.0%	[52.2%,55.7%]

Tasmanian Population Health Survey 2019; ^proportions are calculated using ABS 2017/18 health literacy methodology;
(a) *cannot do/always difficult* combined with *usually difficult and sometimes difficult*· (b) *usually easy* and *always easy* combined
*statistically significantly different from other regions and state-wide

A statistically significantly greater proportion of males (58.6 per cent) than females (49.5 per cent) reported easy access to the healthcare providers they required.

Easy access to health care providers was also more common amongst Tasmanians aged 65 years and over compared with most other age groups. This was statistically significant.

Table 78: Always/usually easy to *'Get to see the healthcare providers needed'* by age and sex, Tasmania 2019

Always/usually easy[b]	Males		Females		Persons	
Age	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
18-24	76.3%	[57.6%,88.4%]	45.1%	[29.0%,62.3%]	60.7%	[48.3%,71.8%]
25-34	43.5%	[31.7%,56.1%]	47.4%	[36.0%,59.0%]	45.4%	[37.0%,54.0%]
35-44	41.3%	[31.6%,51.7%]	36.2%	[28.8%,44.2%]	38.6%	[32.5%,45.1%]
45-54	47.8%	[40.7%,55.0%]	39.4%	[33.6%,45.5%]	43.3%	[38.8%,48.0%]
55-64	57.1%	[51.5%,62.4%]	44.4%	[39.7%,49.3%]	50.4%	[46.7%,54.0%]
65+	69.8%	[66.5%,72.9%]	62.5%	[59.6%,65.3%]	66.2%	[64.0%,68.3%]
Total	**58.6%***	[56.0%,61.2%]	49.5%	[47.3%,51.8%]	54.0%	[52.2%,55.7%]

Tasmanian Population Health Survey 2019; ^proportions are calculated using ABS 2017/18 health literacy methodology; · (b) *usually easy* and *always easy* combined; *statistically significantly different from females

Tasmanian adults in the least disadvantaged socio-economic quintile (61.9 per cent) had significantly better access to health care providers than those in the more disadvantaged quintiles.

Table 77a: Always/usually easy *'get to see the healthcare providers that I need'* by SEIFA quintiles, 18 years and over, Tasmania 2019

Always/usually easy		
SEIFA IRSD 2016^	**%**	**95% CI**
1st (most disadvantaged)	52.0%	[48.1%,55.9%]
2nd	52.9%	[49.5%,56.4%]
3rd	49.9%	[46.3%,53.4%]
4th	53.1%	[49.1%,57.1%]
5th (least disadvantaged)	**61.9%***	[57.3%,66.4%]

Tasmanian Population Health Survey 2019; ^ Index of Relative Socio-economic Disadvantage; ^proportions are calculated using ABS 2017/18 health literacy methodology; *statistically significantly different from all other quintiles

Engagement with healthcare providers

The HLQ scale of *Ability to Actively Engage with Health Care Providers* is about being proactive, advice-seeking, and in control of relationships with healthcare providers. It also means to be able to ask questions and seek second opinions where necessary. The scale reflects empowerment.

The question *'Feel able to discuss your health concerns with a healthcare provider'* is one question out of six questions included in this scale.

A significantly smaller proportion of Tasmanians felt able to easily discuss health concerns with health care providers in 2019 (82.5 per cent) than in 2016 (85.8 per cent).

Table 78: Able to discuss health concerns with providers by region, 18 years and over, Tasmania 2019

	Difficult [a]		Easy [b]	
Regions	**%**	**95% CI**	**%**	**95% CI**
North	17.6%	[15.5%,20.0%]	81.7%	[79.3%,83.9%]
North-West	17.7%	[15.6%,20.0%]	81.0%	[78.6%,83.2%]
South	16.0%	[13.9%,18.2%]	83.6%	[81.3%,85.6%]
Tasmania 2019	**16.8%***	[15.5%,18.2%]	**82.5%***	[81.1%,83.8%]
Tasmania 2016	13.4%	[11.9%,15.0%]	85.8%	[84.2%,87.3%]

Tasmanian Population Health Survey 2019; ^proportions are calculated using ABS 2017/18 health literacy methodology;
(a) *cannot do/always difficult* combined with *usually difficult and sometimes difficult*; (b) *usually easy* and *always easy* combined
*statistically significantly different from 2016

Tasmanians significantly more likely to easily discuss health concerns with health providers included males (84.8 per cent) and persons aged 65 years and over (88 per cent).

Table 79a: Always/usually easy to discuss health concerns with providers by age and sex, Tasmania 2019

Always/usually easy[b]	Males		Females		Persons	
Age	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
18-24	80.4%	[61.9%,91.2%]	70.5%	[52.1%,84.1%]	75.5%	[62.8%,84.9%]
25-34	75.2%	[63.2%,84.2%]	66.4%	[54.7%,76.3%]	71.0%	[62.9%,77.9%]
35-44	78.7%	[69.8%,85.6%]	80.0%	[73.1%,85.5%]	79.4%	[74.0%,83.9%]
45-54	81.7%	[75.4%,86.6%]	77.1%	[71.6%,81.8%]	79.3%	[75.2%,82.8%]
55-64	83.7%	[79.1%,87.5%]	79.6%	[75.3%,83.4%]	81.5%	[78.5%,84.3%]
65+	90.3%	[88.4%,92.0%]	85.6%	[83.3%,87.6%]	**88.0%****	[86.5%,89.3%]
Total	**84.8%***	[82.8%,86.6%]	80.3%	[78.3%,82.2%]	82.5%	[81.1%,83.8%]

Tasmanian Population Health Survey 2019; ^proportions are calculated using ABS 2017/18 health literacy methodology;
(b) *usually easy* and *always easy*; *statistically significantly different from females; **statistically significantly different from other age groups

Chapter 4: Chronic Diseases

Chronic diseases are diseases of usually long duration and generally slow progression. The chronic conditions included in this section cover some key chronic diseases such as cardiovascular diseases, cancers, chronic respiratory diseases, diabetes, arthritis and mental health conditions.

Estimates have been age-standardised to remove differences that occur over time as a consequence of population ageing.

Chronic disease prevalence

Ever diagnosed chronic conditions refer to the lifetime experience of chronic conditions which may or may not be currently experienced.

The prevalence for all '*ever diagnosed*' chronic conditions in 2019 has remained similar to the proportions reported in 2016.

Compared with 2009, significant increases were noted for cancers, depression/anxiety and diabetes, though with no further significant increases observed since 2016. In contrast, hypertension has progressively declined since 2009, from 25.8% to 22.5%, representing a statistically significant fall.

Table 80: '*Ever diagnosed*' chronic conditions, age standardised, 18 years and over, Tasmania 2009 to 2019

	2009		2013		2016		2019	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Heart disease[(a)]	5.6%	[5.1%,6.1%]	6.8%	[6,7%.7.0%]	7.0%	[6.2%,7.9%]	6.5%	[5.7%,7.3%]
Stroke[(b)]	2.8%	[2.4%,3.3%]	2.3%	[2.0%,2.7%]	2.8%	[2.3%,3.4%]	2.3%	[1.9%,2.6%]
Cancer	6.5%	[5.9%,7.1%]	7.6%	[6.8%,8.5%]	8.5%	[7.5%,9.6%]	8.4%	[7.5%,9.4%]
Osteoporosis	5.2%	[4.7%,5.7%]	5.2%	[4.8%,5.7%]	6.1%	[5.5%,6.8%]	5.6%	[5.1%,6.2%]
Depression/anxiety	21.4%	[20.0%,22.8%]	25.5%	[23.5%,27.7%]	30.0%	[27.7%,32.4%]	33.6%	[30.5%,36.7%]
Other mental health condition	n/a	--	n/a	--	n/a	--	6.6%	[5.2%,8.3%]
Arthritis	21.0%	[20.1%,22.0%]	22.5%	[21.3%,23.6%]	23.3%	[21.9%,24.6%]	22.9%	[21.4%,24.5%]
Hypertension	25.8%	[24.6%,27.0%]	24.9%	[23.5%,26.3%]	23.9%	[22.4%,25.4%]	22.5%	[21%,24.1%]
COPD*	n/a	--	n/a	--	n/a	--	1.9%	[1.5%,2.4%]
Kidney disease	n/a	--	n/a	--	n/a	--	2.0%	[1.6%,2.5%]
Asthma	21.7%	[20.1%,23.4%]	24.3%	[22.2%,26.5%]	25.4%	[23.2%,27.9%]	25.1%	[22.6%,27.8%]
Diabetes	5.5%	[5.0%,6.1%]	6.2%	[5.5%,6.9%]	8.1%	[7.1%,9.2%]	8.3%	[7.3%,9.5%]
High blood sugar	3.8%	[3.1%,4.5%]	3.5%	[2.9%,4.3%]	4.9%	[4.0%,6.0%]	5.2%	[4.1%,6.5%]

Tasmanian Population Health Surveys 2009-2019; * chronic obstructive pulmonary disease

Includes (a) cardiomyopathy, coronary and ischaemic heart disease, heart failure, hypertensive and inflammatory heart disease, disease of heart valves, heart murmur, having pacemaker (b) mini strokes, aneurisms and trans-ischaemic attacks

The most common chronic conditions *currently experienced* included depression/anxiety, asthma, arthritis and hypertension. The least common reported conditions were chronic obstructive pulmonary disease (COPD) at 1.3 per cent and kidney disease at 1.4 per cent. Estimates of those at risk of chronic kidney disease are included in the *Preventive Chronic Disease Screening* section of this report.

The proportion of Tasmanians reporting current chronic conditions was similar for all regions.

Table 81: *'Current'* chronic conditions by region, age standardised, 18 years and over, Tasmania 2019

	North		North West		South		Tasmania	
Condition	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Heart disease[a]	4.3%	[3.6%,5.1%]	6.8%	[4.0%,11.4%]	4.8%	[4.0%,5.8%]	4.9%	[4.2%,5.6%]
Stroke[b]	0.7%	[0.5%,1%]	0.8%	[0.5%,1.3%]	0.5%	[0.3%,0.7%]	0.6%	[0.5%,0.8%]
Cancer	2.1%	[1.5%,2.8%]	1.5%	[1.1%,2%]	2.6%	[1.9%,3.5%]	2.2%	[1.8%,2.7%]
Osteoporosis	5.5%	[4.7%,6.5%]	5.2%	[4.2%,6.4%]	4.7%	[4.0%,5.6%]	5.0%	[4.5%,5.6%]
Depression/anxiety	24.6%	[19.5%,30.6%]	18.8%	[15.6%,22.5%]	22.6%	[18.8%,26.9%]	22.5%	[19.8%,25.5%]
Other mental health condition	6.8%	[4.6%,10%]	4.9%	[3.3%,7.2%]	5.7%	[3.8%,8.4%]	5.8%	[4.4%,7.5%]
Arthritis	20.7%	[18.7%,22.9%]	22.3%	[19.9%,24.9%]	20.7%	[18.6%,23.1%]	21.1%	[19.6%,22.6%]
Hypertension	14.2%	[12.5%,16.1%]	15.7%	[13.7%,17.9%]	12.5%	[11.1%,14%]	13.7%	[12.7%,14.7%]
COPD*	1.3%	[1.0%,1.8%]	1.5%	[1.2%,2%]	1.2%	[0.9%,1.5%]	1.3%	[1.1%,1.5%]
Kidney disease*	1.3%	[0.7%,2.2%]	1.1%	[0.8%,1.5%]	1.7%	[1.1%,2.6%]	1.4%	[1.1%,1.9%]
Asthma [c]	16.2%	[12.4%,20.9%]	13.5%	[10.9%,16.7%]	13.2%	[10.6%,16.3%]	13.7%	[11.8%,15.8%]
Diabetes	7.9%	[6.0%,10.3%]	7.0%	[5.5%,8.7%]	6.1%	[5.0%,7.4%]	6.7%	[5.8%,7.7%]
High blood sugar	6.0%	[3.3%,10.5%]	3.6%	[2.7%,4.8%]	4.1%	[3.1%,5.5%]	4.5%	[3.5%,5.8%]

Tasmanian Population Health Survey 2019; * chronic obstructive pulmonary disease and chronic kidney disease (excl infections, stones)
Includes (a) cardiomyopathy, coronary and ischaemic heart disease, heart failure, hypertensive and inflammatory heart disease, disease of heart valves, heart murmur, having pacemaker (b) includes mini strokes, aneurisms and trans-ischaemic attacks (c) active symptoms during last 12 months or symptoms prevented/managed

Three or more *current* chronic conditions were reported by 11.2 per cent of Tasmanians.

Table 82: Number of *current* chronic conditions*, age standardised, 18 years and over, Tasmania 2019

1 condition		2 conditions		≥3 conditions	
%	**95% CI**	%	**95% CI**	%	**95% CI**
28.1%	[25.3%,31%]	14.9%	[13.1%,17%]	11.2%	[10.2%,12.4%]

Tasmanian Population Health Survey 2019; *excludes high blood sugar

Chronic disease management

Chronic disease management refers to actions taken by individuals with chronic conditions to help them manage their condition.

Health care/management plans

A General Practitioner management or care plan identifies care needs and actions that can be taken to help patients manage their chronic conditions.

The table below shows the proportion of Tasmanians with *current chronic conditions*, excluding high blood sugar, who were provided with a health care or management plan by their doctor.

Significantly more Tasmanians with three or more chronic conditions received a care plan compared with those reporting one or two conditions.

The inclusion of asthma and diabetes management plans significantly increased the proportion of all adults with current health care/management plans.

Table 83: Current health care/management plans provided by General Practitioner, 18 years and over, Tasmania 2019

	Excluding asthma/diabetes care plans		Including asthma/diabetes care plans	
Current conditions*	**%**	**95% CI**	**%**	**95% CI**
1 or 2 chronic conditions	37.8%	[35.3%,40.4%]	45.2%	[42.7%,47.7%]
≥3 chronic conditions	**61.9%***	[58.4%,65.3%]	**80.2%***	[77.2%,82.9%]

Tasmanian Population Health Survey 2019; *excludes high blood sugar conditions and high blood sugar care plans; *statistically significantly different from <3 conditions

The distribution of health care plans for chronic conditions, including asthma and diabetes, showed no association with age or gender irrespective of the number of current chronic conditions.

Table 84: Current health care/management plans* by age and sex, Tasmania 2019

	1 or 2 conditions*		≥3 conditions*	
Age	**%**	**95% CI**	**%**	**95% CI**
18-44	50.9%	[43.2%,58.5%]	76.3%	[57.3%,88.5%]
45-64	45.5%	[41.5%,49.7%]	84.7%	[78.9%,89.1%]
65+	42.6%	[39.6%,45.8%]	77.9%	[74.4%,81.1%]
Males	48.1%	[44.2%,51.9%]	82.5%	[77.1%,86.9%]
Females	42.5%	[39.3%,45.7%]	78.7%	[75.0%,82.0%]
Total persons	45.2%	[42.7%,47.7%]	80.2%	[77.2%,82.9%]

Tasmanian Population Health Survey 2019; *includes asthma and diabetes management plans, but excludes high blood sugar care plans

Diabetes

The proportion of Tasmanians with *current* diabetes in 2019 (6.7 per cent) remained similar to 2016 (6.2 per cent), with an additional 4.5 per cent reporting a diagnosis of high blood sugar. The proportion of those with current diabetes or high blood sugar was similar for males and females.

Table 85: *Current* diabetes or high blood sugar level by sex, age-standardised, 18 years and over, Tasmania 2019

	Diabetes		High blood sugar	
	%	95% CI	%	95% CI
Males	6.6%	[5.5%,7.7%]	4.5%	[3.4%,6.1%]
Females	6.9%	[5.6%,8.6%]	4.2%	[3.0%,6.0%]
Persons 2019	6.7%	[5.8%,7.7%]	4.5%	[3.5%,5.8%]
Persons 2016	6.2%	[5.4%,7.1%]	n/a	--

Tasmanian Population Health Survey 2019

The majority of those with current diabetes had a management plan (63.3 per cent) and about one in seven (14.5 per cent) had a plan for their current high blood sugar.

Table 86: Health care/management plan for *current* diabetes or high blood sugar level provided by General Practitioner, 18 years and over, Tasmania 2019

	Care plan provided	
Current condition	%	95% CI
Diabetes	63.3%	[58.5%,67.9%]
High blood sugar	14.5%	[10.7%,19.5%]

Tasmanian Population Health Survey 2019

Except for medications taken for diabetes, actions taken to manage diabetes or high blood sugar were very similar, with diet modifications, exercise and weight loss cited most frequently.

Table 87: Actions to manage *current* diabetes or high blood sugar, 18 years and over, Tasmania 2019

	Diabetes		High blood sugar	
Actions*	%	95% CI	%	95% CI
Modify diet	77.8%	[73.3%,81.7%]	75.0%	[67.9%,80.9%]
Try to lose weight	47.8%	[43.0%,52.6%]	48.5%	[41.3%,55.8%]
Exercise most days	59.7%	[54.8%,64.4%]	55.2%	[47.9%,62.3%]
Take medications	77.1%	[72.4%,81.2%]	28.1%	[22.3%,34.8%]
Other action	7.2%	[5.0%,10.3%]	5%^	[2.6%,9.4%]
No actions	1.6%^	[0.8%,3.3%]	6.2%^	[3.5%,10.8%]

Tasmanian Population Health Survey 2019; *actions undertaken with or without a GP health care plan; ^RSE ≥25% - use with caution

Asthma

There is a significant difference in the proportion of Tasmanians who were *ever diagnosed* with asthma (25.1 per cent) and those who *currently* have asthma (13.7 per cent).

Table 88: *Current* and *ever diagnosed* asthma, age-standardised, 18 years and over, Tasmania 2009 to 2019

	2009		2013		2016		2019	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Current asthma	10.5%	[9.3%,11.7%]	11.3%	[9.9%,12.8%]	13.3%	[11.6%,15.2%]	13.7%	[11.8%,15.8%]
Ever-diagnosed	21.7%	[20.1%,23.4%]	24.3%	[22.2%,26.5%]	25.4%	[23.2%,27.9%]	25.1%	[22.6%,27.8%]

Tasmanian Population Health Surveys 2009-2019

A written asthma action plan is a set of instructions provided by a GP that helps people with asthma to recognise worsening asthma symptoms and know how to respond. Two-thirds of Tasmanians were provided with an asthma action plan in 2019, which was similar to 2016.

Table 89: Provided with an asthma action plan by region, 18 years and over, Tasmania 2009 to 2019

	2009		2013		2016		2019	
Region	%	95% CI	%	95% CI	%	95% CI	%	95% CI
North	65.1%	[57.5%,72.1%]	58.4%	[49.0%,67.2%]	69.5%	[60.0%,77.6%]	70.8%	[63.4%,77.3%]
North-West	64.7%	[55.9%,72.7%]	61.2%	[52.4%,69.3%]	81.4%	[74.6%,86.7%]	66.9%	[59.3%,73.7%]
South	59.3%	[51.6%,66.6%]	55.6%	[46.3%,64.5%]	69.1%	[59.7%,77.1%]	64.1%	[56.3%,71.2%]
Tasmania	62.2%	[57.4%,66.7%]	57.6%	[52.0%,63.1%]	71.9%	[66.4%,76.8%]	66.5%	[61.7%,70.9%]

Tasmanian Population Health Surveys 2009-2019

Smoke and fine particles from bushfires or burn-offs can trigger symptoms in people with respiratory conditions like asthma. Symptoms may occur for several days after smoke exposure.

Almost all Tasmanians (94.4 per cent) with current asthma were exposed to bushfire smoke at some point in time, with a similar proportion for each of the regions.

Table 90: Adults with *current* asthma ever exposed to smoke from bushfires/burn-offs by region, Tasmania 2019

	North		North West		South		Tasmania	
Smoke	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Exposed	93.3%	[89.4%,95.8%]	93.7%	[89.8%,96.1%]	95.2%	[90.5%,97.6%]	94.4%	[92.0%,96.1%]
Never exposed	5.9%^	[3.6%,9.7%]	5.4%	[3.2%,8.9%]	3.1%	[1.3%,7.4%]	4.3%	[2.9%,6.4%]

Tasmanian Population Health Survey 2019; ^RSE ≥25% - use with caution

Over half of all Tasmanians (55.4 per cent) with current asthma reported a worsening of asthma symptoms when exposed to environmental smoke. There were no significant differences across regions.

Table 91: Effect of smoke exposure from bushfires/burn-offs on asthma symptoms by region, 18 years and over, Tasmania 2019

	Worsened symptoms		No effect on symptoms	
Region	**%**	**95% CI**	**%**	**95% CI**
North	51.6%	[43.6%,59.6%]	48.4%	[40.4%,56.4%]
North-West	48.7%	[41.3%,56.2%]	51.3%	[43.8%,58.7%]
South	60.0%	[52.3%,67.3%]	40.0%	[32.7%,47.7%]
Tasmania	55.4%	[50.5%,60.1%]	44.6%	[39.9%,49.5%]

Tasmanian Population Health Survey 2019

Of those Tasmanians who experienced worsened symptoms due to environmental smoke exposure, significantly more reported to have an asthma action plan (72.6 per cent) than those reporting no effect on symptoms (58 per cent), perhaps reflecting a more severe underlying asthma condition.

Table 92: Asthma Action Plan by symptom effect on smoke exposure, 18 years and over, Tasmania 2019

	Worsened symptoms		No effect on symptoms	
	%	**95% CI**	**%**	**95% CI**
Asthma Action Plan Provided	**72.6%***	[66.1%,78.2%]	58.0%	[50.8%,64.8%]

Tasmanian Population Health Survey 2019; *statistically significantly different from *'no effect on symptoms'*

Preventive chronic disease screening

The aim of preventive screening is to reduce the burden of chronic diseases, such as cardiovascular diseases, diabetes, and kidney disease with an early diagnosis and treatment.

Screening rates for blood pressure, cholesterol and diabetes have increased significantly since 2016, and also when compared with 2009.

Table 93: Participation in preventive health screening during last two years, 18 years and over, Tasmania 2009 to 2019

	2009		2013		2016		2019	
Screen type	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Blood pressure	81.5%	[80.2%,82.8%]	83.3%	[81.6%,84.9%]	82.4%	[80.5%,84.1%]	**88.3%***	[87.1%,89.5%]
Cholesterol	53.2%	[51.8%,54.6%]	57.2%	[55.6%,58.8%]	54.9%	[53.0%,56.9%]	**66.8%***	[65.3%,68.4%]
Diabetes/high blood sugar	50.7%	[49.3%,52.2%]	52.7%	[51.0%,54.3%]	50.3%	[48.3%,52.2%]	**58.5%***	[56.7%,60.1%]
Kidney disease^	n/a	--	n/a	--	n/a	--	35.3%	[33.8%,36.9%]

Tasmanian Population Health Surveys 2009-2019; ^excludes kidney stones, infections *statistically significantly different from 2016

A similar proportion of males and females participated in in health screening during the previous two years, regardless of the type of screening.

Table 94: Participation in preventive health screening during last two years by gender, 18 years and over, Tasmania 2019

	Males		Females		Persons	
Screening type	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Blood pressure	88.2%	[86.3%,89.9%]	88.4%	[86.7%,90.0%]	88.3%	[87.1%,89.5%]
Cholesterol	68.9%	[66.6%,71.1%]	64.9%	[62.7%,67.0%]	66.8%	[65.3%,68.4%]
Diabetes/high blood sugar	59.6%	[57.0%,62.2%]	57.3%	[55.0%,59.6%]	58.5%	[56.7%,60.1%]
Kidney disease*	36.8%	[34.3%,39.3%]	34.0%	[32.0%,36.0%]	35.3%	[33.8%,36.9%]

Tasmanian Population Health Survey 2019; *excludes kidney stones, infections

Participation in preventive health screening was broadly similar across regions, with screening for cholesterol, diabetes and kidney disease most frequently reported in the North West region.

Table 95: Participation in preventive health screening in last two years by region, 18 years and over, Tasmania 2009 to 2019

	2009		2013		2016		2019	
Region	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Blood pressure								
North	80.8%	[78.7%,82.8%]	83.5%	[80.8%,85.9%]	84.4%	[81.5%,86.8%]	88.8%	[86.7%,90.7%]
North-West	82.5%	[80.3%,84.6%]	83.8%	[81.0%,86.4%]	83.9%	[80.7%,86.7%]	88.5%	[86.5%,90.3%]
South	81.5%	[79.2%,83.6%]	83.0%	[80.1%,85.6%]	80.6%	[77.5%,83.4%]	88.0%	[85.9%,89.8%]
Cholesterol								
North	52.6%	[50.4%,54.8%]	57.9%	[55.2%,60.6%]	53.4%	[50.3%,56.5%]	65.6%	[62.9%,68.2%]
North-West	56.5%	[54.2%,58.8%]	59.8%	[57.2%,62.3%]	59.5%	[56.1%,62.8%]	**71.8%***	[69.2%,74.3%]
South	52.0%	[49.7%,54.3%]	55.7%	[53.1%,58.2%]	53.8%	[50.6%,56.9%]	65.4%	[62.8%,67.9%]
Diabetes/high blood sugar								
North	51.8%	[49.4%,54.1%]	54.8%	[52.0%,57.6%]	52.3%	[49.1%,55.5%]	58.7%	[55.9%,61.4%]
North-West	51.4%	[49.0%,53.7%]	55.6%	[52.8%,58.3%]	53.4%	[50.1%,56.8%]	**63.9%***	[61.2%,66.6%]
South	49.8%	[47.5%,52.2%]	50.2%	[47.6%,52.8%]	47.7%	[44.6%,50.9%]	56.0%	[53.2%,58.7%]
Kidney disease^								
North	n/a	--	n/a	--	n/a	--	34.7%	[32.3%,37.3%]
North-West	n/a	--	n/a	--	n/a	--	**41.6%***	[38.9%,44.4%]
South	n/a	--	n/a	--	n/a	--	33.0%	[30.5%,35.6%]

Tasmanian Population Health Surveys 2009-2019; ^excludes kidney stones/infections; *statistically significantly different from other regions

There was a considerable increase in screening for cholesterol from age 35 years and over, with significant increases in blood pressure and diabetes screening from age 45 years onwards.

Table 96: Preventive health screening in last two years by age, Tasmania 2019

	Blood pressure		Cholesterol		Diabetes/ high blood sugar	
Age	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
18-24	69.4%	[57.6%,79.1%]	11.1%^	[5.9%,19.9%]	27.2%	[17.7%,39.5%]
25-34	75.2%	[67.0%,82.0%]	21.7%	[15.8%,29.0%]	33.1%	[25.8%,41.2%]
35-44	73.9%	[67.7%,79.3%]	43.1%	[36.9%,49.6%]	38.5%	[32.5%,44.8%]
45-54	85.2%	[81.7%,88.2%]	61.8%	[57.3%,66.1%]	49.8%	[45.2%,54.3%]
55-64	91.1%	[88.7%,93.0%]	75.4%	[72.2%,78.4%]	63.8%	[60.1%,67.3%]
65+	95.7%	[94.6%,96.5%]	82.4%	[80.6%,84.1%]	71.3%	[69.1%,73.4%]
Total	88.3%	[87.1%,89.5%]	66.8%	[65.3%,68.4%]	58.5%	[56.7%,60.1%]

Tasmanian Population Health Survey 2019; ^RSE ≥25% - use with caution

The population considered for ***routine screening*** of chronic kidney disease (CKD) is different for Aboriginal persons and non-Aboriginal persons. For Aboriginal persons, routine screening is recommended for those aged 30 years and over, and for non-Aboriginal persons routine screening applies to persons aged 60 years and over with the addition of selected risk factors.

The total proportion of all Tasmanians aged 60 years and over reporting risk factors for CKD and hence recommended for routine screening was 62.8 per cent.

Of all Aboriginal persons aged 18 years and over, 77.3 per cent are recommended for routine screening.

Table 97: Population recommended for routine screening for CKD by risk factors, Tasmania 2019

	At risk of CKD	
Risk factors for non-Aboriginal persons age ≥60^*	**%**	**95% CI**
Chronic condition (diabetes, heart disease, hypertension)	50.0%	[47.8%,52.1%]
Lifestyle risk factor (obesity, current smoker)	31.1%	[29.1%,33.1%]
Total at risk: chronic condition and lifestyle risk factor combined	62.8%	[60.6%,64.9%]
Risk factors for Aboriginal persons		
age ≥30 years	77.3%	[64.0%,86.7%]

Tasmanian Population Health Survey 2019; ^age 60 years and over *not including Aboriginal persons*

*Kidney Health Australia advises that 'whilst being aged 60 years and over is considered to be a risk factor for CKD, in the absence of additional risk factors (chronic conditions/lifestyle risk factors), it is not necessary to routinely screen persons aged 60 years and over.

Kidney Health Australia advises that routine screening for CKD should apply to persons aged 60 years and over with chronic disease or selected lifestyle risk factors.

In total, more than half of all non-Aboriginal Tasmanians aged 60 years and over with risk factors reported being screened for CKD during the previous two years (54 per cent). Of all Aboriginal persons at risk of CKD, just over one-third reported recent screening for CKD (35.8 per cent).

Table 98: Screened for CKD during ≤2 years by risk factors, Tasmania 2019

	Screened		Not screened	
Risk factors for non-Aboriginal persons age ≥60^*	**%**	**95% CI**	**%**	**95% CI**
Chronic condition (diabetes, heart disease, hypertension)	57.2%	[54.3%,60.1%]	34.6%	[31.8%,37.4%]
Lifestyle risk factor (obesity, current smoker)	52.2%	[48.2%,56.0%]	41.3%	[37.4%,45.2%]
Chronic condition and/or lifestyle risk factor combined	54.0%	[51.3%,56.7%]	37.8%	[35.2%,40.5%]
Risk factors for Aboriginal persons				
age ≥30 years	35.8%	[27.6%,45.0%]	57.7%	[48.5%,66.4%]

Tasmanian Population Health Survey 2019; ^age 60 years and over *not including Aboriginal persons*

*Kidney Health Australia advises that 'whilst being aged 60 years and over is considered to be a risk factor for CKD, in the absence of additional risk factors (chronic conditions/lifestyle risk factors), it is not necessary to routinely screen persons aged 60 years and over. Note that an additional risk factor not included here is a family history of kidney disease.

Chapter 5: Oral Health

Oral health refers to the health of the mouth including teeth and gums. Poor oral health, including decay and gum disease, can lead to tooth loss, and poor dental health is linked to several chronic conditions. Regular dental visits are important to maintain oral health and prevent painful dental and gum conditions from developing. http://www.dhhs.tas.gov.au/oralhealth

Self-assessed oral health status

Self-assessed oral health has generally not changed since 2016, with about a quarter of all Tasmanians (26.5 per cent) assessing their oral health as fair or poor in 2019.

The proportion of Tasmanians reporting complete tooth loss has increased significantly, from 6.4 per cent in 2016 to 7.9 per cent in 2019.

Table 99: Self-assessed oral health, 18 years and over, Tasmania 2016 and 2019

	2016		2019	
Oral health status	**%**	**95% CI**	**%**	**95% CI**
Excellent/Very Good	38.8%	[36.6%,41.0%]	40.6%	[38.8%,42.5%]
Good	35.5%	[33.4%,37.7%]	32.5%	[30.8%,34.3%]
Fair/Poor	25.5%	[23.6%,27.4%]	26.5%	[24.9%,28.1%]
Complete tooth loss	6.4%	[5.7%,7.2%]	**7.9%***	[7.2%,8.7%]

Tasmanian Population Health Surveys 2016, 2019; *statistically significant different from 2016

Similar to 2016, Tasmanians in the North West region had the highest proportion of self-assessed fair or poor oral health in 2019 at 31.2 per cent.

The prevalence of complete tooth loss was statistically significantly higher in the North West region than in the other two regions.

Table 100: Self-assessed oral health by region, 18 years and over, Tasmania 2019

	North		North West		South	
Oral health status	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Excellent/Very Good	37.7%	[34.9%,40.6%]	32.2%	[29.4%,35.2%]	45.6%	[42.7%,48.6%]
Good	33.1%	[30.3%,35.9%]	36.3%	[33.4%,39.4%]	30.7%	[28.0%,33.5%]
Fair/Poor	28.9%	[26.3%,31.7%]	31.2%	[28.5%,34.2%]	23.3%	[20.9%,25.9%]
Complete tooth loss	7.2%	[6.2%,8.4%]	**10.6%**	[9.2%,12.1%]	7.2%	[6.0%,8.5%]

Tasmanian Population Health Survey 2019; *statistically significantly different from other regions

Females reported significantly more excellent/very good oral health (44.4 per cent) than males (36.8 per cent).

Table 101: Self-assessed oral health by sex, 18 years and over, Tasmania 2019

	Males		Females	
Oral health status	%	**95% CI**	%	**95% CI**
Excellent/Very Good	36.8%	[34.1%,39.6%]	**44.4%***	[41.9%,46.8%]
Good	34.2%	[31.5%,36.9%]	30.9%	[28.8%,33.2%]
Fair/Poor	28.7%	[26.3%,31.3%]	24.3%	[22.4%,26.4%]
Complete tooth loss	7.0%	[6.0%,8.2%]	8.8%	[7.8%,9.9%]

Tasmanian Population Health Survey 2019; *statistically significantly different from males

Tasmanians aged 18 to 44 years reported better oral health than older age groups.

Table 102: Self-assessed oral health by age, Tasmania 2019

	excellent/very good		good		fair/poor	
Age	%	**95% CI**	%	**95% CI**	%	**95% CI**
18-24	48.2%	[35.9%,60.7%]	39.2%	[28.0%,51.8%]	**12.6%^**	[6.9%,21.8%]
25-34	46.1%	[37.8%,54.7%]	33.3%	[26.0%,41.6%]	20.6%	[14.5%,28.3%]
35-44	49.3%	[43.0%,55.7%]	31.2%	[25.6%,37.4%]	19.5%	[15.0%,25.0%]
45-54	40.8%	[36.3%,45.5%]	28.5%	[24.4%,33.0%]	30.1%	[26.1%,34.5%]
55-64	38.8%	[35.1%,42.6%]	30.8%	[27.4%,34.4%]	30.0%	[26.7%,33.5%]
65+	37.3%	[34.8%,39.8%]	35.5%	[33.1%,38.0%]	26.8%	[24.6%,29.2%]
Total	40.6%	[38.8%,42.5%]	32.5%	[30.8%,34.3%]	26.5%	[24.9%,28.1%]

Tasmanian Population Health Survey 2019; ^RSE ≥25% - use with caution

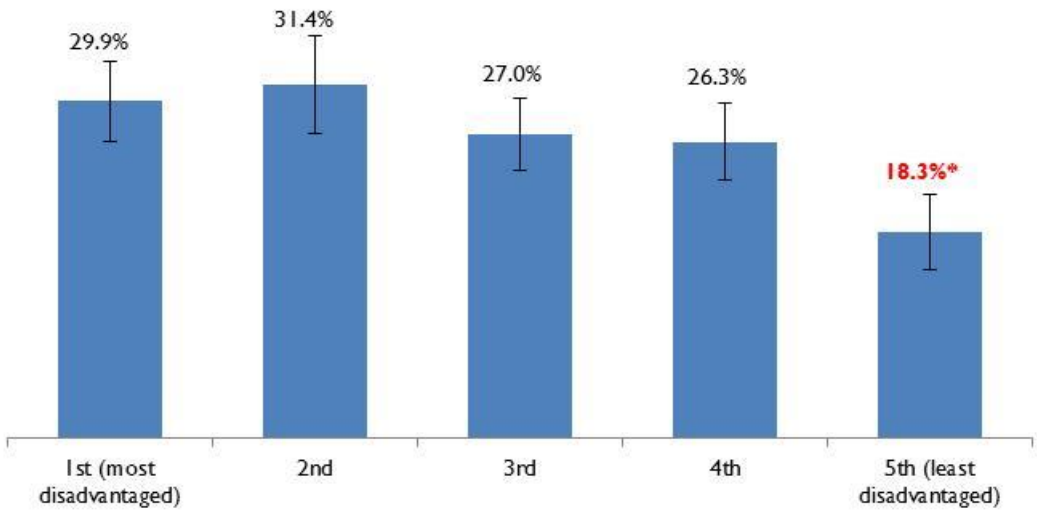
Similar to 2016, Tasmanians in the least disadvantaged socio-economic quintile reported significantly less fair and poor oral health (18.3 per cent) and significantly more excellent/very good oral health (53.3 per cent) than Tasmanians in all other quintiles.

Table 103: Self-assessed oral health by SEIFA quintiles, 18 years and over, Tasmania 2019

	excellent/	very good	good		fair/poor	
SEIFA IRSD^ 2016	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
1st (most disadvantaged)	33.4%	[29.6%,37.4%]	36.5%	[32.5%,40.7%]	29.9%	[26.3%,33.9%]
2nd	36.7%	[33.2%,40.4%]	31.6%	[28.4%,35.0%]	31.4%	[28.1%,35.0%]
3rd	37.8%	[34.1%,41.5%]	34.5%	[30.9%,38.2%]	27.0%	[23.8%,30.4%]
4th	41.2%	[37.1%,45.5%]	32.1%	[28.4%,36.1%]	26.3%	[22.9%,30.1%]
5th (least disadvantaged)	**53.3%**	[48.5%,58.1%]	28.2%	[24.1%,32.8%]	**18.3%**	[14.9%,22.3%]

Tasmanian Population Health Survey 2019; ^ Index of Relative Socio-economic Disadvantage; *statistically significantly different from other quintiles

Figure 11: Self-assessed oral health by SEIFA quintiles, 18 years and over, Tasmania 2019



Tasmanian Population Health Survey 2019, *statistically signficantly different from all other quintiles

Oral health problems

Almost nine in ten Tasmanians (89.5 per cent) never or hardly ever experienced toothache, with one in ten (10.3 per cent) experiencing toothache either very often/often or sometimes.

Table 104: Frequency of toothaches during last 12 months, 18 years and over, Tasmania 2016 and 2019

	2016		2019	
Frequency	**%**	**95% CI**	**%**	**95% CI**
Very often/often	4.0%	[3.2%,5.1%]	2.9%	[2.3%,3.7%]
Sometimes	7.4%	[6.3%,8.7%]	7.4%	[6.5%,8.5%]
Hardly ever/never	88.2%	[86.7%,89.7%]	89.5%	[88.2%,90.6%]

Tasmanian Population Health Surveys 2016, 2019

There were no significant regional differences in the frequency of toothaches reported in 2019.

Table 105: Frequency of toothaches during last 12 months by region, 18 years and over, Tasmania 2019

	North		North West		South	
Frequency	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Very often/often	2.5%	[1.7%,3.7%]	2.6%	[1.8%,3.9%]	3.2%	[2.3%,4.7%]
Sometimes	9.5%	[7.7%,11.5%]	7.7%	[6.3%,9.4%]	6.3%	[5.0%,7.9%]
Hardly ever/never	87.8%	[85.5%,89.7%]	89.3%	[87.4%,91.0%]	90.4%	[88.4%,92.1%]

Tasmanian Population Health Survey 2019

Adults in the least disadvantaged socio-economic quintile were significantly less likely to sometimes have toothaches than those in the second most disadvantaged quintile, but there were no other significant differences noted in the frequency of toothaches reported across the five quintiles.

Table 106: Frequency of toothaches during last 12 months by SEIFA quintiles, Tasmania 2019

	Very often/often		Sometimes		Hardly ever/never	
SEIFA IRSD 2016*	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
1st(most disadvantaged)	3.7%	[2.3%,5.7%]	8.1%	[6.0%,10.8%]	87.9%	[84.8%,90.5%]
2nd	2.5%	[1.5%,3.9%]	8.7%	[6.8%,11.2%]	88.6%	[85.9%,90.8%]
3rd	2.2%^	[1.2%,3.8%]	8.7%	[6.6%,11.3%]	89.0%	[86.2%,91.4%]
4th	2.9%^	[1.6%,5.1%]	7.6%	[5.7%,10.1%]	89.3%	[86.4%,91.7%]
5th(least disadvantaged)	3.4%^	[1.9%,6.0%]	4.3%	[2.8%,6.7%]	92.2%	[89.1%,94.5%]

Tasmanian Population Health Survey 2019; * Index of Relative Socio-economic Disadvantage; ^RSE ≥25% - use with caution

Oral hygiene - adults

Most Tasmanians brushed their teeth at least twice a day in 2019 (74 per cent).

Table 107: Usual frequency of brushing teeth, 18 years and over, Tasmania 2016 and 2019

	2016		2019	
Frequency	**%**	**95% CI**	**%**	**95% CI**
>twice/twice a day	72.0%	[69.9%,74.0%]	74.0%	[72.3%,75.6%]
Once a day	24.6%	[22.7%,26.6%]	23.5%	[21.9%,25.2%]
< once a day/never	3.1%	[2.3%,4.2%]	2.3%	[1.9%,3.0%]

Tasmanian Population Health Surveys 2016, 2019

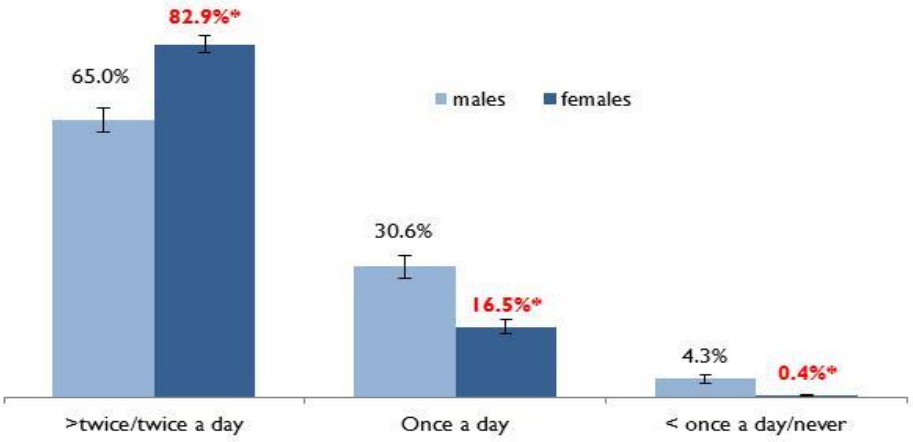
There are statistically significant gender differences in oral hygiene across all brushing frequencies, with more females brushing at least twice daily, and more males brushing only once a day or less than once a day.

Table 108: Usual frequency of brushing teeth by sex, 18 years and over, Tasmania 2019

	Males		Females	
Frequency	**%**	**95% CI**	**%**	**95% CI**
>twice/twice a day	65.0%	[62.2%,67.6%]	**82.9%***	[81.0%,84.7%]
Once a day	30.6%	[28.0%,33.3%]	**16.5%***	[14.8%,18.5%]
< once a day/never	4.3%	[3.3%,5.5%]	**0.4%***	[0.2%,0.8%]

Tasmanian Population Health Survey 2019; *statistically significantly different from males

Figure 12: Usual frequency of brushing teeth by sex, Tasmania 2019



Tasmanian Population Health Survey 2019, *statistically significantly different from males

The North West region had the lowest proportion of residents of all regions brushing their teeth at least twice daily (68.9 per cent).

Table 109: Usual frequency of brushing teeth by region, 18 years and over, Tasmania 2019

	North		North-West		South	
Frequency	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
>twice/twice a day	75.5%	[72.9%,78.0%]	**68.9%***	[65.9%,71.8%]	75.3%	[72.6%,77.8%]
once a day	22.2%	[19.9%,24.8%]	27.4%	[24.6%,30.4%]	22.6%	[20.2%,25.3%]
< once a day/never	2.2%	[1.5%,3.2%]	3.5%	[2.5%,5.0%]	1.9%	[1.3%,2.9%]

Tasmanian Population Health Survey 2019; *statistically significantly different from other regions

Oral hygiene was overall similar across age groups, with the 18-24 year age group the least likely to brush their teeth at least twice daily (63.9 per cent), but this was not statistically significant when compared with other age groups.

Table 110: Usual frequency of brushing teeth by age, Tasmania 2019

	>twice/twice a day		once a day		< once daily/never	
Age	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
18-24	63.9%	[51.1%,75.0%]	27.0%	[17.1%,39.7%]	**9.1%^**	[4.5%,17.6%]
25-34	73.6%	[65.5%,80.4%]	22.7%	[16.4%,30.6%]	**3.6%^**	[1.5%,8.6%]
35-44	75.8%	[69.9%,80.9%]	23.0%	[18.0%,29.0%]	**1.1%^**	[0.5%,2.5%]
45-54	71.9%	[67.6%,75.9%]	25.7%	[21.8%,30.0%]	**2.4%^**	[1.3%,4.3%]
55-64	75.1%	[71.8%,78.2%]	22.1%	[19.2%,25.4%]	2.5%	[1.6%,3.9%]
65+	74.8%	[72.5%,77.0%]	23.3%	[21.2%,25.6%]	1.7%	[1.2%,2.4%]
Total	74.0%	[72.3%,75.6%]	23.5%	[21.9%,25.2%]	2.3%	[1.9%,3.0%]

Tasmanian Population Health Survey 2019; ^RSE ≥25% - use with caution

Unlike 2016, differences in oral hygiene by socio-economic quintiles were not significant in 2019, with broadly similar proportions noted across all quintiles.

Table 111: Usual frequency of brushing teeth by SEIFA quintiles, 18 years and over, Tasmania 2019

Frequency	>twice/twice a day		once a day	
SEIFA IRSD^ 2016	**%**	**95% CI**	**%**	**95% CI**
1st (most disadvantaged)	71.9%	[67.8%,75.6%]	24.9%	[21.3%,28.9%]
2nd	73.9%	[70.5%,77.0%]	23.8%	[20.8%,27.1%]
3rd	70.0%	[66.3%,73.5%]	26.3%	[23.0%,29.9%]
4th	74.6%	[70.8%,78.1%]	23.2%	[19.8%,26.9%]
5th (least disadvantaged)	79.3%	[75.0%,83.0%]	19.6%	[16.0%,23.9%]

Tasmanian Population Health Survey 2019; ^ Index of Relative Socio-economic Disadvantage

Oral hygiene – children ≤5 years

Young children lack the dexterity to brush their teeth effectively on their own and require assistance to protect their teeth from cavities.

In 2019, 71 per cent of adults *always* brushed their young children's teeth.

Table 112: Adults brushing teeth of children aged 5 years and under, Tasmania 2016 and 2019

	2016		2019	
Frequency	**%**	**95% CI**	**%**	**95% CI**
Always	77.9%	[71.9%,82.9%]	71.0%	[63.6%,77.4%]
Sometimes	9.0%	[6.1%,13.2%]	13.9%	[9.1%,20.6%]
Never	11.1%	[7.6%,16.0%]	11.8%	[7.8%,17.3%]

Tasmanian Population Health Surveys 2016, 2019

Adults in the Northern region were the most likely to *always* brush their young children's teeth (79.7 per cent), and this was statistically significant when compared with the North West region.

Table 113: Adults brushing teeth of young children (≤5 years) by region, Tasmania 2019

	North		North West		South	
Frequency	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Always	79.7%	[68.9%,87.5%]	53.1%	[38.4%,67.3%]	72.7%	[61.3%,81.7%]
Sometimes	**6.3%^**	[2.5%,15.1%]	**14.6%^**	[6.8%,28.5%]	**16.9%^**	[9.7%,27.9%]
Never	**9.2%^**	[4.0%,19.6%]	30.6%	[18.1%,46.9%]	**7.1%^**	[3.2%,14.9%]

Tasmanian Population Health Survey 2019; ^RSE ≥25% - use with caution

Parents have a key role in helping their children to develop an oral hygiene routine. As role models, parents need to set a daily routine for brushing teeth and show the importance of oral hygiene.

Most adults with children in the household brushed their own teeth at least twice a day in 2019.

Table 114: Brushing teeth twice a day or more by adults with children in household, Tasmania 2019

	≥twice a day	
Children's age	**%**	**95% CI**
0-5 years	74.1%	[67.0%,80.1%]
6-9 years	73.0%	[66.0%,79.1%]
10-15 years	75.7%	[70.7%,80.0%]
Total persons 18+	74.7%	[71.1%,78.1%]

Tasmanian Population Health Survey 2019

Use of oral health services and barriers

Regular dental visits are important in maintaining good oral health and are recommended to take place within a six to twelve month period.

In 2019, more Tasmanians saw a dentist less than 12 months ago (56.3 per cent) than in 2016 (52.5 per cent), with proportions for most other dental visit frequencies slightly below those of 2016.

Table 115: Most recent dental visit, 18 years and over, Tasmania 2016 and 2019

	2016		2019	
Last visit	**%**	**95% CI**	**%**	**95% CI**
Less than 12 months	52.5%	[50.4%,54.7%]	56.3%	[54.6%,58.1%]
1 to less than 2 years	19.1%	[17.5%,20.9%]	16.4%	[15.1%,17.8%]
2 to less than 5 years	14.2%	[12.8%,15.8%]	13.6%	[12.4%,14.8%]
5 to less than 10 years	7.2%	[6.1%,8.5%]	6.5%	[5.7%,7.4%]
10 years or more	6.1%	[5.2%,7.1%]	6.8%	[6.0%,7.7%]

Tasmanian Population Health Surveys 2016 and 2019

There were statistically significant differences in the frequency of dental visits reported by males and females.

Significantly more females reported recent dental visits (59.5 per cent) than males (53 per cent). In addition, the proportion of females reporting 10 years or more as their last dental visit was significantly smaller for females (5.5 per cent) than males (8.1 per cent).

Table 116: Most recent dental visit by sex, 18 years and over, Tasmania 2019

	Males		Females	
Last visit	**%**	**95% CI**	**%**	**95% CI**
Less than 12 months	53.0%	[50.3%,55.6%]	**59.5%***	[57.3%,61.8%]
1 to less than 2 years	16.3%	[14.4%,18.5%]	16.4%	[14.7%,18.3%]
2 to less than 5 years	15.2%	[13.4%,17.1%]	12.0%	[10.7%,13.5%]
5 to less than 10 years	7.2%	[5.9%,8.7%]	5.8%	[4.9%,6.8%]
10 years or more	8.1%	[6.8%,9.6%]	**5.5%***	[4.7%,6.5%]

Tasmanian Population Health Survey 2019; *statistically significantly different from males

A significantly higher proportion of residents in the South reported dental visits within the last twelve months (61.8 per cent) compared with the North (52.4 per cent) and North West (48.3 per cent).

Table 117: Most recent dental visit by region, 18 years and over, Tasmania 2019

	North		North West		South	
Last visit	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Less than 12 months	52.4%	[49.6%,55.3%]	48.3%	[45.5%,51.2%]	**61.8%***	[59.0%,64.5%]
1 to less than 2 years	16.5%	[14.5%,18.8%]	19.0%	[16.8%,21.4%]	15.2%	[13.2%,17.5%]
2 to less than 5 years	14.2%	[12.4%,16.4%]	16.3%	[14.3%,18.5%]	12.0%	[10.4%,13.9%]
5 to less than 10 years	8.2%	[6.8%,9.8%]	8.1%	[6.6%,9.9%]	**4.9%***	[3.8%,6.3%]
10 years or more	8.0%	[6.6%,9.8%]	7.8%	[6.5%,9.3%]	5.7%	[4.6%,7.1%]

Tasmanian Population Health Survey 2019; *statistically significantly different from all other regions

Age differences in the frequency of dental visits were minimal across most age groups. A significantly smaller proportion of persons aged 65 years and over (12.5 per cent) reported the most recent dental visit as between one and two years ago.

Table 118: Most recent dental visit by age, Tasmania 2019

	<12 months		1-<2 years		≥2 years	
Age	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
18-24	62.8%	[50.2%,73.8%]	17.6%	[10.7%,27.7%]	**19.6%^**	[11.3%,31.9%]
25-34	48.7%	[40.4%,57.2%]	22.2%	[15.8%,30.3%]	29.1%	[21.8%,37.5%]
35-44	54.3%	[47.9%,60.6%]	20.4%	[15.6%,26.1%]	24.7%	[19.9%,30.2%]
45-54	56.2%	[51.6%,60.6%]	17.8%	[14.7%,21.5%]	25.8%	[22.1%,29.9%]
55-64	58.3%	[54.6%,61.8%]	17.8%	[15.1%,20.9%]	23.6%	[20.7%,26.7%]
65+	56.1%	[53.9%,58.4%]	**12.5%***	[11.0%,14.1%]	30.6%	[28.6%,32.7%]
Total	56.2%	[54.4%,57.9%]	16.3%	[15.0%,17.7%]	27.0%	[25.6%,28.6%]

Tasmanian Population Health Survey 2019; ^RSE ≥25% - use with caution; *statistically significantly different compared with other age groups except 18-24 years

There is a significant inverse relationship between the frequency of dental visits and socio-economic status.

Tasmanians in the most disadvantaged quintile are significantly more likely to defer dental visits for two or more years (33.2 per cent) than Tasmanians in the least disadvantaged quintile (15.7 per cent). The latter proportion is also statistically significantly lower than for the remaining quintiles.

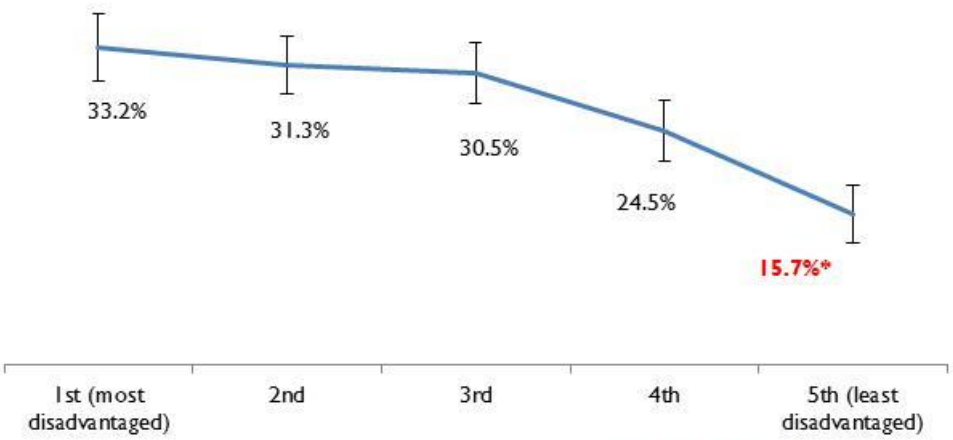
The distribution of Tasmanians with irregular dental visits (≥ 2 years ago) in 2019 across socio-economic quintiles has not changed since 2016.

Table 119: Last dental visit ≥ 2 years ago by SEIFA quintiles, Tasmania 2016 and 2019

	2016		2019	
SEIFA IRSD^ 2016	**%**	**95% CI**	**%**	**95% CI**
1st (most disadvantaged)	32.4%	[27.6%,37.5%]	**33.2%***	[29.7%,36.9%]
2nd	30.7%	[26.9%,34.6%]	31.3%	[28.3%,34.5%]
3rd	30.8%	[27.2%,34.6%]	30.5%	[27.3%,33.9%]
4th	24.5%	[20.7%,28.7%]	24.5%	[21.3%,27.9%]
5th (least disadvantaged)	20.1%	[15.7%,25.3%]	**15.7%*#**	[12.7%,19.2%]

Tasmanian Population Health Surveys 2016, 2019; ^Index of Relative Socio-economic Disadvantage *statistically significant difference between the first and fifth quintiles; #statistically significantly different from all other quintiles

Figure 13: Last dental visit > 2 years ago by SEIFA quintiles, Tasmania 2019



Tasmanian Population Health Survey 2019. ^SEIFA IRSD 2016; *statistically signficantly different from other quintiles

Over a quarter of all Tasmanians (26.1 per cent) in 2019 delayed a visit to the dentist due to the cost of dental care, which was similar to 2016.

There were no regional variations in citing costs as a reason to defer dental visits.

Table 120: Cost as reason for avoiding/delaying dental visit during the last 12 months by region, 18 years and over, 2016 and 2019

	2016		2019	
Cost as reason for delay	**%**	**95% CI**	**%**	**95% CI**
North	27.5%	[24.5%,30.7%]	24.5%	[22.2%,27.1%]
North-West	28.7%	[25.7%,32.0%]	26.5%	[24.0%,29.2%]
South	27.3%	[24.2%,30.5%]	26.8%	[24.3%,29.5%]
Tasmania	27.6%	[25.8%,29.6%]	26.1%	[24.6%,27.7%]

Tasmanian Population Health Surveys 2016, 2019

The highest proportion of Tasmanians with delayed dental visits due to cost in 2019 were aged between 18 and 54 years. Age-group proportions ranged from 35.2 per cent to 44.4 per cent, significantly exceeding the total state proportion of 26.1 per cent.

Cost as a reason for delays diminished for persons aged 55-64 years, and fell significantly for those aged 65 years and over at only 13.2 per cent.

Table 121: Cost as reason for avoiding/delaying dental visit during the last 12 months by age, Tasmania 2016 and 2019

	2016		2019	
Age	**%**	**95% CI**	**%**	**95% CI**
18-24	21.1%	[14.5%,29.6%]	39.1%	[27.2%,52.4%]
25-34	37.4%	[31.0%,44.3%]	44.4%	[36.1%,53.0%]
35-44	39.7%	[34.2%,45.4%]	41.2%	[35.0%,47.7%]
45-54	34.0%	[29.9%,38.3%]	35.2%	[30.9%,39.8%]
55-64	22.5%	[19.4%,25.8%]	27.0%	[23.8%,30.4%]
65+	16.0%	[13.7%,18.6%]	**13.2%***	[11.7%,14.8%]
Total	27.6%	[25.8%,29.6%]	26.1%	[24.6%,27.7%]

Tasmanian Population Health Surveys 2016, 2019; *statistically significantly different from all other age groups

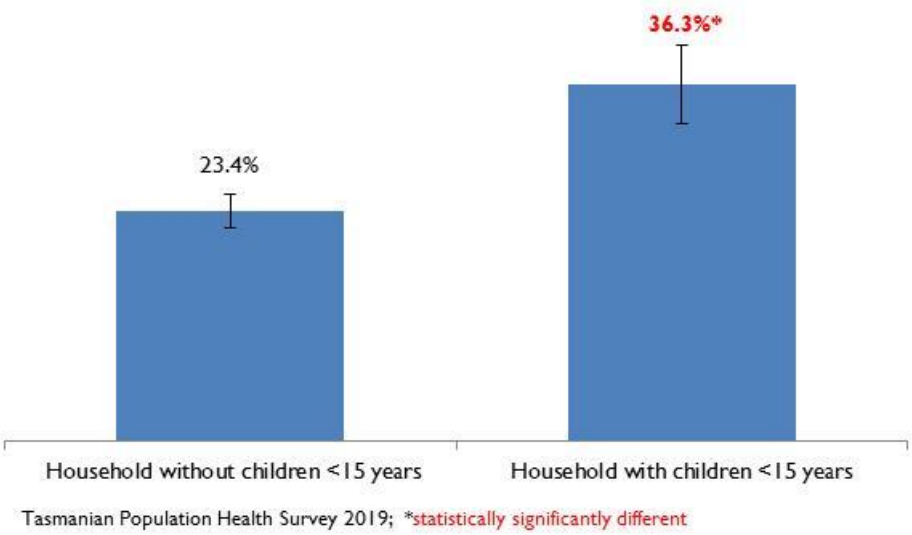
As in 2016, Tasmanians with children aged 15 years and under were significantly more likely to defer a dental visit because of costs (36.3 per cent) compared with Tasmanians who do not have children in this age group at home (23.4 per cent). This refers to adults delaying their own dental visits and not their children. Children under the age of 17 years can access Oral Health Services at no cost.

Table 122: Cost cited as reason for avoiding/delaying dental visit during the last 12 months by family status, Tasmania 2016 and 2019

	2016		2019	
Family status	**%**	**95% CI**	**%**	**95% CI**
No children aged ≤15 in household	24.9%	[22.8%,27.1%]	23.4%	[21.7%,25.1%]
Children aged ≤15 in household	34.8%	[30.9%,39.1%]	**36.3%***	[32.3%,40.6%]
Total	27.6%	[25.8%,29.6%]	26.1%	[24.6%,27.7%]

Tasmanian Population Health Surveys 2016, 2019; *statistically significantly different from households without children aged ≤15

Figure 14: Cost as reason for avoided/delayed dental visit by family status, Tasmania 2019



Chapter 6: Environmental health and wellbeing

Home heating

The quality of air we breathe is important to our health and wellbeing. Smoke from indoor wood heaters is a major source of air pollution during winter. Wood smoke particles are associated with aggravating a number of conditions, such as asthma, chronic lung disease, heart problems, premature births and deaths. Some of the toxic chemicals in wood smoke are also known to cause cancer. www.environment.gov.au/resource/woodheaters-and-woodsmoke

There were no changes in the main source of energy used to heat homes, with electricity (62.2 per cent) and wood (29.8 per cent) continuing as the two main sources of heating in 2019.

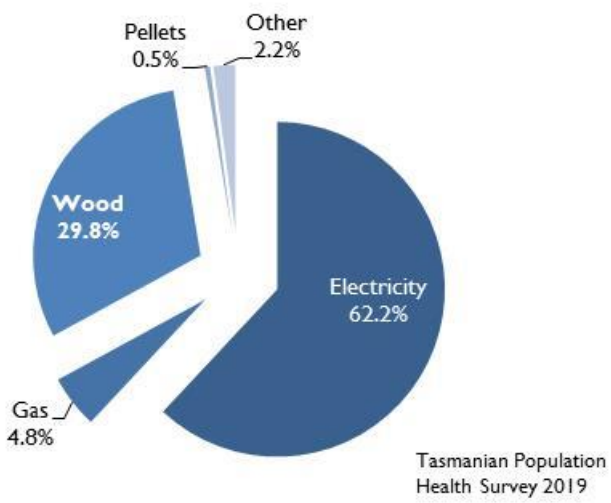
Gas and pellets, with the latter derived from plantation timber waste, and 'other sources' were used for heating by 7.5 per cent of Tasmanians in 2019.

Table 123: Main source of energy used to heat home, Tasmania 2016 and 2019

	2016		2019	
Heating source	**%**	**95% CI**	**%**	**95% CI**
Electricity	61.7%	[59.7%,63.7%]	62.2%	[60.4%,63.9%]
Wood	30.2%	[28.3%,32.1%]	29.8%	[28.2%,31.4%]
Gas	5.1%	[4.2%,6.1%]	4.8%	[4.0%,5.7%]
Pellets	0.5%	[0.2%,0.9%]	0.5%	[0.3%,0.8%]
Other source	2.1%	[1.6%,2.8%]	2.2%	[1.8%,2.8%]

Tasmanian Population Health Surveys 2016, 2019

Figure 15: Main source of energy used to heat home, Tasmania 2019



Electricity was the most likely source of energy used for heating in all regions. A statistically significant difference was noted in the use of electricity in the South (64.3 per cent) compared with the North West (58.4 per cent).

Tasmanians in the Southern region were also significantly less likely than residents in other regions to use wood as their main source of heating (26.8 per cent).

Table 124: Main source of energy used to heat home by region, Tasmania 2019

	North		North-West		South	
Heating source	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Electricity	61.1%	[58.3%,63.8%]	58.4%	[55.5%,61.2%]	64.3%	[61.5%,67.0%]
Wood	32.8%	[30.2%,35.6%]	32.9%	[30.2%,35.7%]	**26.8%***	[24.3%,29.4%]
Gas	3.5%	[2.6%,4.8%]	4.7%	[3.5%,6.3%]	5.4%	[4.2%,7.0%]
Pellets	**0.6%^**	[0.3%,1.3%]	**0.6%^**	[0.3%,1.2%]	**n/a**	--
Other source	1.8%	[1.2%,2.5%]	2.6%	[1.8%,3.7%]	2.3%	[1.6%,3.3%]

Tasmanian Population Health Surveys 2016, 2019; ^RSE ≥25% - use with caution; n/a = not available - RSE ≥50%; *statistically significantly different from other regions

The use of wood for heating has decreased slightly since 2016 in both the Northern and North West regions, but not enough to be statistically significant.

Table 125: Wood used as the main source of energy to heat home by region, Tasmania 2016 and 2019

	2016		2019	
Region	**%**	**95% CI**	**%**	**95% CI**
North	35.3%	[32.2%,38.5%]	32.8%	[30.2%,35.6%]
North West	34.2%	[30.9%,37.7%]	32.9%	[30.2%,35.7%]
South	25.6%	[22.8%,28.6%]	26.8%	[24.3%,29.4%]
Tasmania	30.2%	[28.3%,32.1%]	29.8%	[28.2%,31.4%]

Tasmanian Population Health Surveys 2016, 2019

Wood is more commonly used as the main source of heating in households with residents aged 35 to 64 years, with less wood heating reported for households occupied by persons aged 65 years and over.

Table 126: Wood used as the main source of energy to heat home by age, Tasmania 2016 and 2019

	2016		2019	
Age	**%**	**95% CI**	**%**	**95% CI**
18-24	20.8%	[14.5%,29.0%]	27.8%	[17.8%,40.8%]
25-34	26.2%	[20.9%,32.2%]	20.4%	[15.1%,26.9%]
35-44	39.0%	[33.5%,44.7%]	28.1%	[22.8%,34.1%]
45-54	34.0%	[30.0%,38.3%]	33.9%	[29.6%,38.4%]
55-64	31.1%	[27.8%,34.6%]	36.7%	[33.2%,40.3%]
65+	27.8%	[24.9%,30.9%]	25.8%	[23.8%,27.9%]
Total	30.2%	[28.3%,32.1%]	29.8%	[28.2%,31.4%]

Tasmanian Population Health Surveys 2016, 2019

The socio-economic distribution in the use of wood as the main source of heating has not changed since 2016.

Across quintiles, Tasmanians in the least disadvantaged quintile were significantly less likely to use wood as a main source for heating (18.1 per cent) in 2019, with those in the third quintile noted as significantly more likely to use wood as a main heating source (40.2 per cent).

Table 127: Wood as the main source of heating by SEIFA, Tasmania 2016 and 2019

	2016		2019	
SEIFA IRSD^ 2016	**%**	**95% CI**	**%**	**95% CI**
1st (most disadvantaged)	27.9%	[23.6%,32.6%]	28.7%	[25.2%,32.5%]
2nd	30.7%	[27.2%,34.4%]	30.3%	[27.2%,33.6%]
3rd	38.3%	[34.5%,42.3%]	**40.2%***	[36.6%,43.8%]
4th	31.8%	[27.7%,36.2%]	31.6%	[28.0%,35.3%]
5th (least disadvantaged)	22.2%	[18.0%,27.1%]	**18.1%***	[14.7%,22.0%]

Tasmanian Population Health Surveys 2016, 2019; ^Index of Relative Socio-economic Disadvantage; *statistically significantly different from other quintiles

Home cooling

Climate change projections show an increase in the frequency and intensity of heatwaves in Tasmania in the future.www.dpac.tas.gov.au/divisions/climatechange/climate_change_in_tasmania/impacts_of_climate_change

Heatwaves can pose a serious risk to health. Those at higher risk include older people, infants and young children, pregnant women and those with a serious chronic health condition. journals.sagepub.com/doi/10.1177/10105395103916 44
Without access to a cool environment, these people are highly vulnerable to heat related illness.

Significant increases since 2016 were noted in the proportion of Tasmanians cooling their homes with air conditioners (51.5 per cent) or fans (17.2 per cent). As a result, the proportion of those without any cooling devices has declined from 37.6 per cent in 2016 to 29.7 per cent in 2019.

Table 128: Main method of cooling home, Tasmania 2016 and 2019

	2016		2019	
Cooling type	**%**	**95% CI**	**%**	**95% CI**
Air conditioner	46.7%	[44.6%,48.9%]	**51.5%***	[49.7%,53.3%]
Portable air conditioner/air cooler	0.8%^	[0.5%,1.2%]	1.5%	[1.1%,1.9%]
Fans	14.5%	[13.1%,16.0%]	**17.2%***	[16.0%,18.5%]
None of the above	37.6%	[35.6%,39.7%]	**29.7%***	[28.1%,31.3%]

Tasmanian Population Health Surveys 2016, 2019; ^RSE ≥25% -<use with caution; *statistically significantly different from 2016

The North-West region had the highest proportion of residents (36.1 per cent) without cooling devices, whilst air conditioners were more common in the South (55.7 per cent).

Table 129: Main method of cooling home by region, Tasmania 2019

	North		North-West		South	
Type	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Air conditioner	51.2%	[48.3%,54.0%]	**42.0%***	[39.2%,44.9%]	55.7%	[52.8%,58.5%]
Portable air conditioner/air cooler	1.7%	[1.1%,2.7%]	1.7%	[1.0%,2.8%]	**1.2%^**	[0.8%,2.0%]
Fans	19.2%	[17.1%,21.5%]	19.8%	[17.6%,22.3%]	15.0%	[13.1%,17.2%]
None of the above	27.8%	[25.3%,30.5%]	**36.1%***	[33.4%,38.9%]	27.9%	[25.4%,30.6%]

Tasmanian Population Health Survey 2019 ^RSE ≥25% - use with caution; *statistically significantly different from other regions

The decline in the proportion of Tasmanians without cooling appliances has been highly significant in all regions since 2016, decreasing by as much as 11.6 per cent in the North West region.

Table 130: *Without* cooling appliances by region, Tasmania 2016 and 2019

	2016			
Region	**%**	**95% CI**	**%**	**95% CI**
North	33.7%	[30.6%,37.0%]	**27.8%***	[25.3%,30.5%]
North West	47.7%	[44.2%,51.3%]	**36.1%***	[33.4%,38.9%]
South	35.4%	[32.1%,38.8%]	**27.9%***	[25.4%,30.6%]

Tasmanian Population Health Surveys 2016, 2019; *statistically significantly different from 2016

Since 2016, statistically significant declines in the proportions of those without cooling appliances were noted for several age groups, with the greatest reduction noted in the youngest age group.

Table 131: *Without* cooling appliances by age, Tasmania 2016 and 2019

	2016		2019	
Age	**%**	**95% CI**	**%**	**95% CI**
18-24	43.5%	[34.6%,52.8%]	**21.3%***	[12.7%,33.4%]
25-34	28.5%	[22.9%,34.9%]	16.9%	[11.5%,24.2%]
35-44	42.6%	[36.9%,48.5%]	**26.4%***	[21.1%,32.6%]
45-54	41.0%	[36.7%,45.4%]	**30.8%***	[26.7%,35.2%]
55-64	36.3%	[32.6%,40.1%]	35.5%	[32.0%,39.1%]
65+	35.7%	[32.6%,38.9%]	**29.3%***	[27.2%,31.4%]

Tasmanian Population Health Surveys 2016, 2019; *statistically significantly different from 2016

Older age presents an increased risk of heat-related illnesses and mortality. This risk increases for people with chronic conditions, particularly heart/circulatory and respiratory conditions, diabetes and kidney disease. journals.sagepub.com/doi/abs/10.1177/1010539512466428

Although the proportion of Tasmanians aged 65-74 years without cooling appliances in 2019 was significantly less than in 2016, proportions of other older persons without cooling appliances remained similar to 2016. In total, about 30 000 Tasmanians aged 65 years and over were without cooling appliances in 2019.

Table 132: Population 65 years and over without cooling appliances, Tasmania 2016 and 2019

	2016		2019		Estimated population count
Age	**%**	**95% CI**	**%**	**95% CI**	**2019**
65-74	39.3%	[35.3%,43.5%]	**31.5%***	[28.6%,34.6%]	19,155
75-84	27.9%	[23.1%,33.3%]	26.6%	[23.5%,29.8%]	9,331
85+	26.4%	[19.7%,34.5%]	21.9%	[17.3%,27.4%]	1,782

Tasmanian Population Health Surveys 2016, 2019; *statistically significantly different from 2016

Chapter 7: Public Hospital Use and Satisfaction

Tasmanians were asked whether they or a member of their close family had used a Tasmanian public hospital during the last 12 months, and how satisfied they were with the services provided.

More than one in two Tasmanians (52.4 per cent) used a public hospital during the preceding 12 months. Public hospitals were significantly more frequently used in the North West (58 per cent) compared with the South (49.1 per cent).

Table 133: Used a Tasmanian public hospital^ during preceding 12 months by region, 18 years and over, Tasmania 2009-2019

	2009		2013		2016		2019	
Region	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
North	50.1%	[47.6%,52.6%]	54.6%	[51.7%,57.5%]	56.5%	[53.2%,59.9%]	54.3%	[51.5%,57.0%]
North West	57.1%	[54.5%,59.6%]	55.9%	[52.9%,58.9%]	59.7%	[56.3%,63.1%]	58.0%	[55.2%,60.8%]
South	45.8%	[43.2%,48.4%]	44.1%	[41.0%,47.2%]	52.4%	[49.0%,55.8%]	49.1%	[46.2%,51.9%]
Tasmania	49.5%	[47.9%,51.1%]	49.7%	[47.8%,51.5%]	55.2%	[53.1%,57.2%]	52.4%	[50.7%,54.2%]

Tasmanian Population Health Surveys 2009-2019; ^outpatient or inpatient, used by self or close family member;

There was a significant increase in the proportion of Tasmanians reporting dissatisfaction (12.1 per cent) with public hospitals services in 2019 compared with 2016 (8.5 per cent).

The proportion of those satisfied with public hospital services in 2019 (77.8 per cent) remained similar to 2016, but was significantly lower compared with earlier years.

Table 134: Level of satisfaction with Tasmanian public hospital services^, 18 years and over, Tasmania 2009-2019

	2009		2013		2016		2019	
Level of satisfaction	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Very satisfied or satisfied	82.4%	[80.5%,84.1%]	84.7%	[82.6%,86.6%]	80.5%	[78.0%,82.9%]	77.8%	[75.7%,79.8%]
Neither satisfied nor dissatisfied	5.5%	[4.5%,6.6%]	7.1%	[5.7%,8.8%]	9.0%	[7.3%,11.0%]	8.0%	[6.7%,9.6%]
Very dissatisfied or dissatisfied	10.5%	[9.2%,12.0%]	7.7%	[6.4%,9.1%]	8.5%	[7.0%,10.3%]	**12.1%***	[10.6%,13.8%]

Tasmanian Population Health Surveys 2009-2019; ^outpatient or inpatient, used by self or close family member; #statistically significantly different from 2016

Satisfaction levels with public hospital services were similar across the regions.

Table 135: Level of satisfaction with Tasmanian public hospital services^ by region, 18 years and over, Tasmania 2019

	North		North West		South	
Satisfaction with service	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Very satisfied/satisfied	76.0%	[72.4%,79.3%]	78.2%	[74.8%,81.3%]	78.6%	[75.0%,81.9%]
Neither satisfied nor dissatisfied	7.9%	[5.9%,10.5%]	7.3%	[5.5%,9.6%]	8.5%	[6.4%,11.3%]
Very dissatisfied/dissatisfied	14.2%	[11.6%,17.3%]	12.3%	[9.9%,15.2%]	10.9%	[8.6%,13.7%]

Tasmanian Population Health Survey 2019; ^outpatient or inpatient, used by self or close family member

Residents in all regions reported similar high levels of satisfaction with public hospitals in 2019. Statistically significant declines in satisfaction were noted between 2019 and 2013 for the North and South.

Table 136: Very satisfied/satisfied with Tasmanian public hospital services^ by region, Tasmania 2013-2019

	2013		2016		2019	
	%	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
North	86.3%	[82.9%,89.2%]	80.2%	[76.0%,83.9%]	76.0%	[72.4%,79.3%]
North West	81.0%	[77.1%,84.4%]	77.0%	[72.1%,81.3%]	78.2%	[74.8%,81.3%]
South	85.6%	[82.0%,88.6%]	82.5%	[78.2%,86.0%]	78.6%	[75.0%,81.9%]

Tasmanian Population Health Surveys 2013-2019; ^outpatient or inpatient, used by self or close family member

Tasmanians aged 65 years and over were significantly more satisfied (86.7 per cent) with public hospital services than younger persons, and also when compared with Tasmanian adults overall.

Table 136: Very satisfied/satisfied with Tasmanian public hospital services^ by age, Tasmania 2019

	Very satisfied/satisfied	
Age	**%**	**95% CI**
18-44	69.8%	[64.3%,74.8%]
45-64	75.7%	[72.2%,78.8%]
65+	**86.7%***	[84.4%,88.8%]
Total 18 years and over	77.8%	[75.7%,79.8%]

Tasmanian Population Health Survey 2019; ^outpatient or inpatient, used by self or close family member; *statistically significantly different from other age groups

Chapter 8: Risk factor prevalence in Local Government Areas

The tables below include estimates for the most common lifestyle risk factors. Estimates are not available for local government areas (LGAs) with very small populations, as the reliability of the estimates may be too low to be usable. In these cases, it has been indicated with n/a. Useable estimates with higher unreliability are annotated as 'RSE ≥25% -<50% - use with caution'.

Smoking

In the Southern region, the Southern Midlands LGA had the highest daily and current smoking rates at 21.8 per cent and 30.5 per cent respectively, both significantly higher than for the Southern region and Tasmania, but not significantly different from Brighton which had the second highest rates for the region. Conversely, the daily smoking rate in the Clarence LGA was significantly lower than for both the Southern region and Tasmania at only 6.5 per cent.

For the North West region, the West Coast LGA had the highest daily and current smoking rates at 33.7 per cent and 38.8 per cent, respectively, both significantly higher than for the North West region and Tasmania.

There were no LGAs in the Northern region which stood out as having smoking rates significantly different to Tasmania.

Alcohol

The Glamorgan/Spring Bay LGA had a significantly higher proportion of adult residents at single occasion risk (60.7 per cent) of harm than both the Southern region and Tasmania, overall and also the highest proportion at risk of lifetime harm (30 per cent), although the latter was not statistically significant.

Within the North West region, West Coast LGA adult residents were significantly more likely to be at single occasion risk of harm (59.8 per cent) due to alcohol consumption than either the North West region or Tasmania overall, but not significantly more likely to be at lifetime risk (26.4 per cent). Conversely, Central Coast residents were significantly less likely than Tasmanian adults overall to be at single occasion risk (23.8 per cent) or lifetime risk (12.4 per cent) of harm due to alcohol consumption.

There were no LGAs within the Northern region which stood out as having lifetime or single occasion alcohol risk levels significantly different to the Northern region or Tasmania.

Fruit and vegetable consumption

A significantly higher proportion of Flinders LGA residents had inadequate fruit consumption (86 per cent) compared to both the Northern region and Tasmania, whilst in the South, Brighton LGA residents were significantly more likely to have inadequate fruit consumption (69.9 per cent) than either the Southern region or Tasmania.

There were no LGAs in the North West region which stood out as having significantly different levels of inadequate fruit consumption compared with either the North West region or Tasmania.

Across each of the regions, there weren't any LGAs which stood out as being significantly different from their respective region or Tasmania as a whole with regards to vegetable consumption.

Physical Activity

In the North West, residents of Circular Head were significantly more likely (26.4 per cent) to be insufficiently physically active than either the North West region or Tasmania as a whole, whilst Devonport LGA residents were significantly more physically inactive (18 per cent) than Tasmanians overall. There weren't any LGAs in either the Northern or Southern regions which stood out as having significantly different levels of physical activity to the respective region or Tasmania overall.

In the Southern region, residents of the Hobart LGA were significantly less likely to undertake *insufficient* muscle strengthening (55.5 per cent) compared to Tasmania as a whole, whilst in the North West region there were several LGAs which stood out. Specifically, compared to Tasmania as whole, residents of West Coast (85.5 per cent), Burnie (76.9 per cent), Devonport (75.1 per cent) and Central Coast (74.9 per cent) LGAs were significantly more likely to undertake insufficient muscle strengthening for health benefits.

BMI

There were a number of significant LGA variations in the prevalence of overweight or obesity within regions.

For the Northern region, Flinders residents were significantly more likely to be overweight/obese (94.3 per cent), or obese (64.1 per cent) compared to either the Northern region or Tasmania, whilst Northern Midlands residents were significantly more likely than Tasmanians overall to be overweight or obese (74.4 per cent). Conversely, Meander Valley residents were significantly less likely to be overweight or obese (47 per cent) than for the Northern region overall. Residents of the George Town LGA were significantly more likely to be obese (41.7 per cent) than Tasmanians overall, whilst conversely, Break O'Day residents were significantly less likely to be obese (15.6 per cent) than either Northern region residents or Tasmanians overall.

In the South, residents of both the Derwent Valley and Southern Midlands LGAs were significantly more likely to be overweight/obese (77.4 per cent and 76.2 per cent, respectively) or obese (49 per cent and 46.8 per cent, respectively) than Southern region residents overall, with all bar the Derwent Valley overweight/obese prevalence also being significantly higher than for Tasmanians overall. Conversely, Tasman LGA residents were significantly less likely to be overweight or obese (29.1 per cent) than either Southern region residents or Tasmanians overall.

For the North West, several LGAs stood out as having significantly higher overweight/obese prevalences than Tasmania overall. These were Kentish (76.7 per cent), Burnie (76.2 per cent), Central Coast (70.3 per cent) and Circular Head (70.3 per cent). Both Burnie and Circular Head also had obesity prevalences significantly higher than for the North West region and Tasmania overall, at 44.3 per cent and 47 per cent, respectively. Conversely, King Island residents were significantly less likely to be overweight or obese (43.7 per cent) than both North West region residents and Tasmanians overall.

Self-Assessed Health

Compared to both the Northern region and Tasmania overall, Flinders LGA residents are significantly more likely to rate their health as excellent/very good (72.1 per cent), and conversely significantly less likely to rate their health as fair/poor (8 per cent), whilst residents of the Dorset LGA are significantly less likely to rate their health as excellent/very good (12.3 per cent).

Compared to both the Southern region and Tasmania overall, residents of the Southern Midlands and Brighton LGAs were significantly less likely to rate their health as excellent/very good at 20.7 per cent and 19.6 per cent, respectively. Conversely, Derwent Valley LGA residents were significantly more likely to rate their health as fair/poor (38.2 per cent), when compared with either the Southern region or Tasmania as a whole.

Compared to both the North West region and Tasmania overall, Circular Head LGA residents were significantly less likely to rate their health as excellent/very good at 16.8 per cent, whilst residents of the Devonport and Latrobe LGAs are significantly more likely to rate their health as excellent/very good (48.1 per cent and 24.9 per cent, respectively) than Tasmanians overall. Conversely, West Coast LGA residents were significantly more likely to rate their health as fair/poor (44.4 per cent) when compared with either the North West or Tasmania as a whole.

Wood heating and asthma

Wood heating

Three LGAs in the Northern region had a significantly higher proportion of residents living in homes that were predominantly wood-heated, compared both to the Northern region and Tasmania overall; specifically, Dorset (71 per cent), Break O'Day (65.2 per cent) and Meander Valley (47.4 per cent). Conversely, residents in the Launceston LGA were, compared to both the Northern region and Tasmania, significantly less likely to reside in wood-heated homes (18.7 per cent).

There were four LGAs in the Southern region which, when compared with the Southern region and Tasmania, had a significantly higher proportion of adults living in wood-heated homes; specifically, these were Southern Midlands (88.3 per cent), Central Highlands (84.5 per cent), Tasman (82.2 per cent) and Huon Valley (63.8 per cent). Conversely, both the Glenorchy and Hobart LGAs had, compared to the Southern region and Tasmania, significantly lower proportions of adults residing in wood-heated homes at 12.5 per cent and 9.9 per cent, respectively.

In the North West region, both the King Island and Kentish LGAs had a significantly higher proportion of adults residing in wood-heated homes, compared to the North West region and Tasmania as a whole, at 72 per cent and 60.3 per cent, respectively, whilst the Devonport LGA had a significantly lower proportion at only 21.7 per cent.

Asthma

Compared to both the Northern region and Tasmania, the Break O'Day LGA had a significantly higher asthma prevalence (43.7 per cent), whilst it was significantly lower in the Dorset LGA at 3.7 per cent.

In the Southern region, only the Tasman LGA stood out as having a significantly higher asthma prevalence than for the region and Tasmania overall at 33.8 per cent.

Both the West Coast and Kentish LGA asthma prevalences were significantly higher than for the North West region and Tasmania at 25.8 per cent and 24.6 per cent, respectively, whilst the asthma prevalence in the Burnie LGA was significantly lower than for the region or Tasmania at only 6.3 per cent.

Table 137: Daily and current smokers by LGA, 18 years and over, Tasmania 2019

Smoking	Daily		Current^	
LGA	**%**	**95% CI**	**%**	**95% CI**
North				
Break O'Day	13.6%^	[7.7%,22.8%]	20.9%^	[12.2%,33.4%]
Dorset	7.4%^	[3.7%,14.4%]	9.2%^	[4.9%,16.7%]
Flinders	n/a	--	n/a	--
George Town	n/a	--	17.3%^	[6.7%,38.1%]
Launceston	11.4%	[8.9%,14.5%]	14.5%	[11.6%,18.0%]
Meander Valley	10.6%	[6.7%,16.4%]	13.7%	[9.3%,19.9%]
Northern Midlands	9.3%^	[5.4%,15.6%]	10.8%	[6.6%,17.0%]
West Tamar	7.0%	[4.2%,11.2%]	8.4%	[5.4%,12.8%]
South				
Brighton	17.8%^	[9.6%,30.6%]	23.6%	[14.1%,36.7%]
Central Highlands	n/a	--	n/a	--
Clarence	4.9%^	[2.8%,8.6%]	6.5%^	[3.9%,10.6%]
Derwent Valley	12.8%^	[7.1%,22.1%]	15.1%^	[8.6%,25.0%]
Glamorgan/Spring Bay	16.2%^	[6.1%,36.7%]	20.1%^	[8.5%,40.4%]
Glenorchy	8.1%^	[4.8%,13.5%]	10.9%	[7.0%,16.6%]
Hobart	5.2^	[2.7%,9.7%]	8.2%	[5.0%,13.1%]
Huon Valley	13.9%^	[8.4%,22.2%]	14.8%	[9.2%,23.1%]
Kingborough	7.4%^	[4.0%,13.4%]	12%^	[7.2%,19.2%]
Sorell	n/a	--	10.4%^	[5.0%,20.4%]
Southern Midlands	21.8%^	[10.8%,39.0%]	30.5%^	[16.4%,49.5%]
Tasman	n/a	--	n/a	--
North West				
Burnie	8.1%	[5.0%,13.0%]	9.2%	[5.9%,14.0%]
Central Coast	7.5%	[4.8%,11.6%]	9.3%	[6.3%,13.4%]
Circular Head	17.7%	[9.1%,31.6%]	19.3%^	[10.4%,33.0%]
Devonport	9.7%	[6.9%,13.6%]	12.6%	[9.2%,16.9%]
Kentish	13.3%^	[6.8%,24.6%]	15.2%^	[8.3%,26.3%]
King Island	n/a	--	n/a	--
Latrobe	10.5%^	[5.0%,20.8%]	13.9%^	[7.1%,25.5%]
Waratah/Wynyard	6.1%^	[3.6%,10.2%]	9.4%	[6.1%,14.2%]
West Coast	33.7%^	[15.9%,57.8%]	38.8%^	[20.0%,61.6%]
TASMANIA	9.3%	[8.3%,10.4%]	12.1%	[10.9%,13.3%]

Tasmanian Population Health Survey 2019; ^^ daily and occasional smoking combined; ^RSE ≥25% -<50%- use with caution; n/a = estimate unable to be published to very high data unreliability (RSE≥50%)

Table 138: Alcohol consumption causing single occasions and lifetime harm by LGA, 18 years and over, Tasmania 2019

NHMRC Alcohol Guidelines 2009	Single occasion harm >4 drinks		Lifetime harm >2 drinks daily	
LGA	**%**	**95% CI**	**%**	**95% CI**
North				
Break O'Day	31.4%	[21.2%,43.8%]	20.3%	[12.3%,31.5%]
Dorset	32.6%	[20.7%,47.2%]	21.3%^	[11.2%,36.6%]
Flinders	n/a	--	n/a	--
George Town	29.6%^	[16.6%,47.0%]	17.8%^	[7.1%,38.0%]
Launceston	37.0%	[32.9%,41.2%]	20.3%	[16.9%,24.1%]
Meander Valley	30.7%	[23.7%,38.7%]	20.8%	[14.9%,28.3%]
Northern Midlands	38.1%	[29.5%,47.6%]	13.2%	[8.3%,20.5%]
West Tamar	28.1%	[22.1%,34.9%]	15.7%	[11.2%,21.5%]
South				
Brighton	34.2%	[23.1%,47.3%]	26.9%	[16.8%,40.2%]
Central Highlands	n/a	--	n/a	--
Clarence	39.8%	[33.8%,46.1%]	18.8%	[14.2%,24.4%]
Derwent Valley	25.5%	[16.9%,36.5%]	15.3%^	[8.7%,25.5%]
Glamorgan/Spring Bay	60.7%	[42.8%,76.2%]	30%^	[15.2%,50.5%]
Glenorchy	31.7%	[25.2%,39.0%]	12.7%	[8.5%,18.7%]
Hobart	38.9%	[32.3%,45.8%]	24.5%	[19.0%,31.0%]
Huon Valley	32.5%	[24.4%,41.8%]	19.1%	[13.1%,27.0%]
Kingborough	42.9%	[34.6%,51.7%]	19.6%	[13.7%,27.3%]
Sorell	36.9%	[25.4%,50.1%]	22.4%	[13.6%,34.6%]
Southern Midlands	44.7%	[26.3%,64.6%]	26.1%^	[11.0%,50.1%]
Tasman	46.4%^	[18.9%,76.3%]	n/a	--
North West				
Burnie	32.2%	[25.5%,39.7%]	16.5%	[11.6%,23.0%]
Central Coast	23.8%	[19.3%,29.1%]	12.4%	[9.3%,16.4%]
Circular Head	34.8%	[23.3%,48.3%]	19.2%^	[10.3%,32.9%]
Devonport	35.2%	[29.6%,41.2%]	17.1%	[12.9%,22.4%]
Kentish	27.5%	[18.4%,38.9%]	17.2%^	[10.0%,27.9%]
King Island	54.7%	[31.6%,75.9%]	n/a	--
Latrobe	31.4%	[22.4%,42.1%]	24.1%	[16.3%,34.0%]
Waratah/Wynyard	27.3%	[20.8%,34.9%]	20.9%	[15.1%,28.2%]
West Coast	59.8%	[39.9%,77.0%]	26.4%^	[10.7%,51.6%]
TASMANIA	35.1%	[33.4%,36.8%]	19.1%	[17.7%,20.5%]

Tasmanian Population Health Survey 2019; ^RSE ≥25% -<50%- use with caution; n/a = estimates are too unreliable to be published (RSE≥50)

Table 139: Did not meet guidelines for fruit and vegetable consumption by LGA, 18 years and over, Tasmania 2019

NHMRC Dietary Guidelines 2013^^	Insufficient fruit		Insufficient vegetables	
LGA	**%**	**95% CI**	**%**	**95% CI**
North				
Break O'Day	37.7%	[27.2%,49.4%]	80.8%	[68.1%,89.3%]
Dorset	55.7%	[42.6%,68.1%]	90.1%	[82.3%,94.7%]
Flinders	86.0%	[57.5%,96.5%]	89.9%	[61.3%,98.0%]
George Town	48.9%	[34.5%,63.4%]	90.3%	[79.2%,95.8%]
Launceston	53.4%	[49.2%,57.6%]	92.2%	[90.1%,94.0%]
Meander Valley	53.5%	[45.6%,61.2%]	88.3%	[82.8%,92.2%]
Northern Midlands	49.8%	[40.6%,59.0%]	90.1%	[82.6%,94.5%]
West Tamar	49.2%	[42.5%,55.9%]	90.9%	[87.1%,93.7%]
South				
Brighton	69.9%	[57.2%,80.1%]	92.2%	[84.0%,96.4%]
Central Highlands	44.9%^	[16.3%,77.3%]	80.8%	[33.9%,97.2%]
Clarence	53.5%	[47.4%,59.6%]	90.2%	[85.8%,93.4%]
Derwent Valley	56.2%	[45.7%,66.1%]	91.5%	[84.0%,95.7%]
Glamorgan/Spring Bay	59.4%	[40.9%,75.6%]	85.3%	[66.0%,94.6%]
Glenorchy	56.7%	[49.6%,63.6%]	93.7%	[90.3%,96.0%]
Hobart	49.2%	[42.5%,56.0%]	91.1%	[86.3%,94.3%]
Huon Valley	51.3%	[42.1%,60.3%]	91.8%	[86.0%,95.3%]
Kingborough	46.5%	[38.2%,55.0%]	92.8%	[86.8%,96.2%]
Sorell	56.7%	[43.8%,68.8%]	90.8%	[79.6%,96.2%]
Southern Midlands	73.4%	[53.4%,86.9%]	98.7%	[91.1%,99.8%]
Tasman	34.4%^	[12.0%,66.8%]	95.4%	[81.6%,99.0%]
North West				
Burnie	58.6%	[51.3%,65.6%]	87.2%	[81.7%,91.3%]
Central Coast	50.3%	[44.5%,56.1%]	91.0%	[87.5%,93.7%]
Circular Head	54.4%	[41.6%,66.6%]	95.0%	[87.2%,98.2%]
Devonport	51.6%	[45.8%,57.4%]	92.9%	[89.7%,95.2%]
Kentish	68.2%	[57.7%,77.0%]	91.8%	[83.1%,96.2%]
King Island	69.6%	[43.7%,87.1%]	94.8%	[70.9%,99.3%]
Latrobe	57.0%	[45.9%,67.4%]	90.6%	[81.4%,95.5%]
Waratah/Wynyard	46.8%	[39.2%,54.6%]	87.6%	[82.1%,91.6%]
West Coast	49.1%	[28.5%,69.9%]	97.6%	[84.2%,99.7%]
TASMANIA	53.1%	[51.3%,54.8%]	91.2%	[90.1%,92.1%]

Tasmanian Population Health Survey 2019; ^RSE ≥25% -<50%- use with caution; n/a = estimates are too unreliable to be published (RSE≥50%)

Table 140: Did not meet physical activity guidelines for adults 18-64 years by LGA, Tasmania 2019

Physical Activity Guidelines 2014	Insufficient moderate/vigorous activity		Insufficient muscle strengthening	
LGA	**%**	**95% CI**	**%**	**95% CI**
North				
Break O'Day	5.9%^	[2.9%,11.4%]	74.2%	[61.5%,83.8%]
Dorset	14.8%^	[8.9%,23.5%]	75.6%	[63.3%,84.7%]
Flinders	n/a	--	41.2%^	[12.3%,77.7%]
George Town	18.3%^	[10.1%,30.8%]	76.0%	[58.0%,87.9%]
Launceston	14.3%	[11.6%,17.5%]	73.1%	[69.1%,76.6%]
Meander Valley	19.6%	[13.8%,27.1%]	72.0%	[63.8%,79.0%]
Northern Midlands	12.9%	[8.2%,19.8%]	62.0%	[52.1%,71.0%]
West Tamar	13.2%	[9.6%,17.9%]	69.6%	[62.8%,75.7%]
South				
Brighton	21.0%	[12.7%,32.8%]	73.7%	[60.4%,83.7%]
Central Highlands	n/a	--	56.5%^	[23.0%,84.9%]
Clarence	13.0%	[9.8%,17.0%]	64.1%	[57.9%,69.9%]
Derwent Valley	12.7%	[7.9%,19.9%]	72.6%	[62.5%,80.8%]
Glamorgan/Spring Bay	n/a	--	78.1%	[60.4%,89.3%]
Glenorchy	15.1%	[11.0%,20.4%]	72.3%	[65.6%,78.1%]
Hobart	8.4%	[5.8%,12.2%]	55.5%	[48.5%,62.2%]
Huon Valley	12.3%	[7.5%,19.6%]	61.1%	[51.5%,69.9%]
Kingborough	12.5%	[7.8%,19.4%]	66.7%	[58.0%,74.4%]
Sorell	12.4%^	[6.1%,23.8%]	58.2%	[45.0%,70.4%]
Southern Midlands	18.8%^	[7.8%,38.6%]	74.0%	[52.0%,88.2%]
Tasman	n/a	--	72.3%	[40.3%,91.0%]
North West				
Burnie	15.9%	[11.5%,21.7%]	76.9%	[70.2%,82.5%]
Central Coast	13.4%	[10.1%,17.6%]	74.9%	[69.8%,79.3%]
Circular Head	26.4%	[16.8%,38.9%]	77.5%	[65.4%,86.2%]
Devonport	18.0%	[14.2%,22.5%]	75.1%	[69.8%,79.8%]
Kentish	19.2%	[12.0%,29.3%]	72.8%	[62.2%,81.3%]
King Island	n/a	--	84.2%	[63.1%,94.3%]
Latrobe	14.7%	[9.4%,22.3%]	76.5%	[66.9%,84.0%]
Waratah/Wynyard	14.1%	[10.2%,19.2%]	74.1%	[66.1%,80.8%]
West Coast	n/a	--	85.5%	[70.1%,93.7%]
TASMANIA	11.1%	[9.7%,12.6%]	65.7%	[63.3%,68.1%]

Tasmanian Population Health Survey 2019; ^^less than 150 min moderate/75min vigorous/week or combination, less than twice weekly muscle strengthening activity; ^RSE ≥25% -<50%- use with caution; n/a = estimates are too unreliable to be published (RSE≥50%)

Table 141: Overweight and obese BMI, age standardised by LGA, 18 years and over, Tasmania 2019

BMI	Overweight/obese		Obese	
LGA	**%**	**95% CI**	**%**	**95% CI**
North				
Break O'Day	60.4%	[56.4%,64.2%]	15.6%	[10%,23.6%]
Dorset	62.8%	[55.6%,69.5%]	46.8%	[37.1%,56.8%]
Flinders	94.3%	[80.7%,98.5%]	64.1%	[51.6%,74.9%]
George Town	64.0%	[58.4%,69.2%]	41.7%	[31.6%,52.6%]
Launceston	58.7%	[51.5%,65.6%]	28.2%	[22.2%,35%]
Meander Valley	47.0%	[38.3%,55.8%]	23.1%	[16.4%,31.6%]
Northern Midlands	74.4%	[63.2%,83.1%]	39.3%	[30%,49.5%]
West Tamar	66.2%	[55.8%,75.2%]	30.7%	[23.1%,39.6%]
South				
Brighton	68.2%	[58.2%,76.7%]	33.8%	[29.1%,38.9%]
Central Highlands	77.5%	[43.5%,93.9%]	49.4%^	[25.1%,73.9%]
Clarence	52.4%	[46%,58.7%]	26.3%	[19.9%,33.9%]
Derwent Valley	77.4%	[66.1%,85.8%]	49.0%	[38.7%,59.5%]
Glamorgan/Spring Bay	45.3%	[38.9%,51.8%]	22.6%^	[13%,36.5%]
Glenorchy	58.0%	[49.4%,66.2%]	27.7%	[20.2%,36.7%]
Hobart	47.4%	[38.3%,56.6%]	18.8%	[13%,26.3%]
Huon Valley	71.4%	[58.6%,81.5%]	33.0%	[22.5%,45.6%]
Kingborough	57.4%	[47.9%,66.4%]	20.7%	[13.5%,30.3%]
Sorell	67.1%	[55.6%,76.8%]	34.4%	[25.6%,44.4%]
Southern Midlands	76.2%	[70.1%,81.3%]	46.8%	[38.9%,55%]
Tasman	29.1%^	[16.2%,46.5%]	n/a	--
North West				
Burnie	76.2%	[67.5%,83.2%]	44.3%	[33.6%,55.6%]
Central Coast	70.3%	[62.1%,77.3%]	32.0%	[26.9%,37.6%]
Circular Head	70.3%	[62.7%,76.8%]	47.0%	[39.5%,54.8%]
Devonport	58.5%	[49.9%,66.5%]	23.1%	[18%,29.2%]
Kentish	76.7%	[67.4%,83.9%]	37.9%	[27.9%,49.1%]
King Island	43.7%	[33%,55%]	29.8%	[23.3%,37.3%]
Latrobe	56.1%	[43.8%,67.7%]	29.4%	[20.7%,39.9%]
Waratah/Wynyard	68.2%	[59%,76.1%]	33.5%	[24.9%,43.3%]
West Coast	66.6%	[55.3%,76.3%]	39.6%	[27.4%,53.2%]
TASMANIA	58.5%	[55.3%,61.7%]	28.2%	[25.6%,30.9%]

Tasmanian Population Health Survey 2019; ^RSE ≥25% -<50%- use with caution; n/a = estimates are too unreliable to be published (RSE≥50%)

Table 142: Self-assessed health, age standardised by LGA, 18 years and over, Tasmania 2019

Health status	Excellent/very good		Fair/poor	
LGA	**%**	**95% CI**	**%**	**95% CI**
North				
Break O'Day	30.6%	[25.4%,36.3%]	22.6%	[17.5%,28.8%]
Dorset	12.3%^	[5.4%,25.6%]	25.4%	[20.1%,31.4%]
Flinders	72.1%	[60.7%,81.2%]	8%^	[4.8%,13.2%]
George Town	47.5%	[36.1%,59.1%]	31.0%	[21.4%,42.7%]
Launceston	33.7%	[27.7%,40.2%]	24.6%	[18.8%,31.5%]
Meander Valley	42.6%	[34.6%,50.9%]	17.9%	[13.1%,24%]
Northern Midlands	43.1%	[32.6%,54.3%]	21.1%	[16.2%,27%]
West Tamar	41.2%	[31%,52.2%]	17.3%	[12%,24.3%]
South				
Brighton	19.9%	[13.9%,27.7%]	28.0%	[22.7%,33.9%]
Central Highlands	43.1%^	[23.8%,64.8%]	n/a	--
Clarence	40.7%	[32%,50.1%]	20.9%	[15.9%,27%]
Derwent Valley	22.6%	[13.8%,34.7%]	38.2%	[31.5%,45.3%]
Glamorgan/Spring Bay	35.8%	[25.2%,48%]	32.0%	[22.8%,42.7%]
Glenorchy	28.7%	[20.3%,38.9%]	23.0%	[16.7%,30.8%]
Hobart	48.3%	[39%,57.8%]	15.8%	[10.9%,22.2%]
Huon Valley	27.5%	[19.6%,37.2%]	26.3%	[17.9%,36.8%]
Kingborough	46.4%	[37.5%,55.5%]	15.1%	[9.3%,23.5%]
Sorell	33.1%	[22.7%,45.4%]	30.5%	[22.5%,39.8%]
Southern Midlands	20.7%	[13.4%,30.7%]	17.3%^	[10.2%,28%]
Tasman	36.1%	[20.9%,54.7%]	n/a	--
North West				
Burnie	34.4%	[25.3%,44.7%]	26.0%	[17.8%,36.4%]
Central Coast	33.7%	[25.5%,43.1%]	24.6%	[17.4%,33.5%]
Circular Head	16.8%	[10.8%,25.3%]	28.6%	[18.1%,42%]
Devonport	48.1%	[41.1%,55.2%]	21.8%	[16.4%,28.5%]
Kentish	25.1%	[17.2%,35.1%]	26.6%	[17.4%,38.3%]
King Island	37.2%	[29.7%,45.3%]	27.9%	[17.7%,41.1%]
Latrobe	24.9%	[18%,33.4%]	28.7%	[20.7%,38.3%]
Waratah/Wynyard	29.2%	[20%,40.6%]	21.4%	[15.5%,28.9%]
West Coast	n/a	--	44.4%	[34.5%,54.9%]
TASMANIA	37.0%	[33.8%,40.2%]	21.7%	[19.6%,24%]

Tasmanian Population Health Survey 2019; ^RSE ≥25% -<50%- use with caution; n/a = estimates are too unreliable to be published (RSE≥50%)

Table 143: Wood used as main source of heating and current asthma by LGA, 18+, Tasmania 2019

	Wood used as main heating source		Asthma (current)	
LGA	**%**	**95% CI**	**%**	**95% CI**
North				
Break O'Day	65.2%	[52.5%,76.0%]	43.7%	[39.3%,48.1%]
Dorset	71.0%	[60.3%,79.7%]	3.7%^	[2%,6.8%]
Flinders	69.9%^	[27.7%,93.4%]	n/a	--
George Town	42.9%	[28.4%,58.7%]	10.8%^	[5.4%,20.4%]
Launceston	18.7%	[15.7%,22.1%]	13.8%	[9.4%,19.8%]
Meander Valley	47.4%	[39.7%,55.3%]	9.5%	[6%,14.8%]
Northern Midlands	35.2%	[27.0%,44.3%]	10.2%^	[5.8%,17.4%]
West Tamar	33.7%	[27.7%,40.4%]	20.9%	[14.4%,29.5%]
South				
Brighton	34.3%	[23.2%,47.3%]	18.3%	[12.9%,25.3%]
Central Highlands	84.5%	[59.0%,95.4%]	12.4%^	[5.7%,24.9%]
Clarence	19.9%	[15.2%,25.7%]	9.8%	[6.5%,14.5%]
Derwent Valley	34.0%	[25.0%,44.3%]	11.8%^	[6.5%,20.5%]
Glamorgan/Spring Bay	42.2%	[25.5%,60.8%]	7.1%^	[3%,15.8%]
Glenorchy	12.5%	[8.5%,17.9%]	17.7%	[11.2%,26.8%]
Hobart	9.9%	[6.5%,14.9%]	11.4%	[7.4%,17%]
Huon Valley	63.8%	[54.9%,71.8%]	11.3%^	[6.7%,18.4%]
Kingborough	27.9%	[21.0%,36.0%]	20.6%	[13.2%,30.8%]
Sorell	31.7%	[21.2%,44.5%]	15.6%^	[8.8%,26.2%]
Southern Midlands	88.3%	[74.9%,95.0%]	23.4%	[15.9%,33.1%]
Tasman	82.2%	[49.8%,95.6%]	33.8%	[28.5%,39.4%]
North West				
Burnie	30.0%	[23.7%,37.1%]	6.3%	[4.1%,9.4%]
Central Coast	33.6%	[28.2%,39.6%]	17.2%	[11.5%,24.8%]
Circular Head	42.2%	[30.6%,54.7%]	9.3%^	[4.5%,18.2%]
Devonport	21.7%	[17.0%,27.2%]	18.9%	[14.3%,24.6%]
Kentish	60.3%	[49.6%,70.0%]	24.6%	[18.3%,32.2%]
King Island	72.0%	[49.8%,86.9%]	n/a	--
Latrobe	32.9%	[24.1%,43.2%]	7%^	[2.9%,15.9%]
Waratah/Wynyard	35.1%	[27.8%,43.2%]	18.3%	[11.5%,27.7%]
West Coast	42.3%^	[22.9%,64.3%]	25.8%	[17.5%,36.2%]
TASMANIA	29.8%	[28.2%,31.4%]	13.7%	[11.8%,15.8%]

Tasmanian Population Health Survey 2019; ^RSE ≥25% -<50%- use with caution; n/a = estimates are too unreliable to be published (RSE≥50%)

Appendix A: Survey methodology

The 2019 Tasmanian Population Health Survey (TPHS) was undertaken using Computer Assisted Telephone Interviewing (CATI). CATIs are frequently used in population health surveys because they offer the advantages of timely and cost-effective collection of data. All responses were self-reported and stored directly in the CATI system.

As with the two previous Tasmanian Population Health Surveys, the target population was defined as all non-institutionalised Tasmanian residents aged 18 years and over.

The fieldwork data collection, dataset collation and population weighting, as well as the production of the technical report were undertaken by the *Social Research Centre Pty Ltd* in Melbourne.

A total of 6 300 TPHS interviews (4 500 via landline and 1 800 via mobile phone) were completed, including 345 converted refusals. Interviewing was conducted between late September and mid November 2019, with an average interview length of 22.7 minutes.

The overall response rate for the 2019 TPHS was 52 per cent.

Survey design and sampling

Stratification

The survey sample of 6 300 was stratified by region, age and gender, with 2 100 allocated to each of the three regions: North, North West and South. This sample allocation allowed for an oversampling of the North West region to ensure sufficient accuracy of data estimates produced for this region. Whilst the target regional totals were treated as a quota, the focus was on completing the call cycle for all sample records initiated. However, the achieved regional response sample numbers were identical to the target sample of 2 100 per region.

Dual frame methodology

The survey used a dual frame methodology, which combines a landline and mobile phone sampling frame, with the respondent selection being dependent on the type of sampling frame used. Because an estimated 46.8 per cent of the Tasmanian population are mobile phone users only[3], including Tasmanian sole mobile phone users results in a more representative sample of the Tasmanian population.

1 Landline sampling

The survey used the 'list assisted' form of Random Digit Dialling (RDD) as the sample frame for the landline sample component. The sample frame was supplied by *SamplePages*, an external vendor. All residential households with land-line telephone connections were considered in-scope for the survey.

The sample generation process involved:

[3] Social Research Centre, TPHS 2019 – Technical Report

- The use of the "Register of Numbers" published and regularly updated by the Australian Communications and Media Authority as the initial basis for seed number (prefix) generation.
- The generation of ten random telephone numbers per landline prefix number range on an 'as required' basis. The resultant ten-digit numbers were tested via a SS7 signal link (sometimes referred to as "pinging") to assign a 'working' or 'disconnected' status to each number and thereby generate a geographically targeted sample frame.
- All selected telephone numbers were allocated to the three Tasmanian regions using a "postcode of best fit" based on the Exchange Service Area (ESA) to which the number belongs. The initial approximate allocation was updated post-interview on the basis of locality information provided by the respondent, and then mapped to the appropriate Department of Health region.
- To prepare the landline telephone numbers for primary approach letter mailing, addresses were appended, where possible, by SamplePages to the randomly generated numbers that were generated using the above process. These addresses were sourced via a commercial arrangement with many organisations, including charities, telemarketing companies and businesses. This address database is used under licence and validated and updated monthly. Only landline numbers which could be matched to a full surname and address were included in the approach letter mail-out sample.

2 Mobile phone sampling

Random digit dialing (RDD) is a time consuming and expensive process, particularly for small jurisdictions, as thousands of unscreened phone numbers have to be dialled to find local residents. For Tasmania's small population, it is estimated that only about one in fifty (2.3%) of all numbers dialled would be in scope.

In recognition of this, the mobile phone sample component comprised pre-screened RDD mobile numbers as well as a supplementary top-up of list-based mobile numbers.

Pre-screened RDD mobile numbers refers to random selection of mobile numbers that have previously been screened as a Tasmanian number, belonging to a persons aged 18 years and over, as part of dual-frame CATI surveys run by the Social Research Centre which targeted locations other than Tasmania. This technique gives the mobile sample randomised characteristics, while reducing the need to call thousands of numbers.

The list-based mobile sample was randomly selected from a commercially available list compiled by *SamplePages*. Unlike the RDD mobile sample, the list-based mobile numbers had a last known postcode which enabled apriori assignment to a Department of Health region. The pre-screened RDD mobile numbers were not able to be assigned to a region apriory.

Data collection

Pre interviewing contact (DHHS pre-approach letters and SMS invitations)

The Department mailed a letter of invitation to all households where the randomly selected telephone number matched a listing in an electronic directory of Tasmanian household telephone numbers. A total of 11 625 letters were mailed out this way.

Mobile phone users were invited to participate via an SMS message sent prior to the first interview, as well as follow-up SMS messages in response to non-contact.

Survey hotline

The Department operated a survey Hotline 1800 number to address non-appointment related queries and concerns regarding the survey, including requests from Tasmanians who had received a primary approach letter to be excluded from the survey. The *Social Research Centre* also operated a survey Hotline 1800 number during the data collection period for the purposes of managing interview appointments.

Interviewing procedures

The Social Research Centre conducted the survey. After contacting a household via a landline, an interviewer would select for interview the adult resident with the most recent birthday. For mobiles, the phone answerer was treated as the target respondent for screening, other than in circumstances when it was clear that a child had answered.

The call regimes differed between the landline and mobile samples.

For the landline sample, a previously established call regime was used to make contact with households. This regime spread call attempts over different times of day and days of the week, with up to six calls to establish contact with the household and a further nine calls to achieve an interview with the selected person in the household (maximum fifteen calls in total).

For the mobile sample, a standard dual-frame call algorithm was applied. As with the landline sample, calls were made across various times of the day and week, but with a maximum of one call per day. Up to four calls were made to establish contact, with a further two calls to complete an interview where a qualifying respondent had been identified (maximum six calls in total).

Interviewing across all three Department of Health regions was progressed equitably over the entire fieldwork period, with a view to spreading any bias resulting from seasonal or environmental factors. All interviewing was undertaken using English only.

Survey sample weighting

The weighting method consisted of two stages, the first of which was to calculate the *design weight* for each respondent, which is the inverse of the probability of a respondent being a participant in the survey, whilst the second was to adjust the design weights to match population distributions across a range of respondent characteristics. The latter involved a tailored weighting methodology.

Design weights (1st stage)

The design weights were calculated to reflect whether or not the household had a landline and/or mobile, the number of adult household residents, the number of landline/mobile telephones within the region, and the number of respondents per region contacted by landline or mobile. Some of this information was known prior to the survey, whilst the rest was obtained during the survey interviews.

Each respondent's weight is the inverse of their probability (chance) of selection. For the RDD sample components, the chance of a respondent being selected to participate in the survey is calculated via the following formula:

$p_k = (S_{LL}*LL_k)/(U_{LL}*AD_k) + (S_{MP}*MP_k/U_{MP})$

where S_{LL} and S_{MP} are the numbers of survey respondents per region contacted by a landline or mobile, respectively, U_{LL} and U_{MP} are the estimated number of landline and mobile numbers per region, respectively, AD_k is the number of adults within the household who could potentially participate in the survey, whilst LL_k and MP_k are dichotomous indicators as to the presence or otherwise of a landline or mobile phone, respectively, in the household (0 for no, 1 for yes). The final design weight (d_k) for the kth respondent is then the inverse of their selection probability (p_k); that is, $d_k=1/p_k$

Weight adjustment (2nd stage)

The second stage was to adjust the design weights so that the estimates produced are representative of the target population. This adjustment was a multi-stage process. As the survey had a number of demographic and behavioural data items in common with the ABS 2016 Population Census and the 2017-18 National Health Survey (NHS), it is possible to adjust the design weights to ensure that estimates of selected survey data items closely match the benchmarks values from these ABS data sources, with the assumption that increasing the accuracy of estimation of these benchmark data items will then improve the accuracy of estimation of related data items. This involved an iterative simulation process which can be summarised as follows:

1. Construct a list of data items data items common to both the survey and the 2016 Census or 2017-18 NHS. Seventeen data items were used for this purpose.
2. Randomly select a number of these data items.
3. Adjust the design weights so that survey estimates for these items match the ABS benchmark values.
4. Use these design weights to produce estimates for other survey data items for which there are official ABS figures.
5. Compare these estimates to the ABS benchmark values to ascertain the difference (bias).
6. Repeat steps 2-5 until a combination of data items is identified where the overall difference between the survey estimates and the official ABS figures is small (low average bias).

Profile of survey respondents

The age and gender profile of survey respondents was compared with that of the Tasmanian population[4] to provide an indication of how representative the survey participants were of the target population. Some key findings were:

- The Tasmanian Population Health Survey continues to under-represents males, with reduced male participation compared to 2016. This is mostly attributable to the landline component, which selects respondents using 'most recent birthday' selection, where some self-selection takes place by the phone answerer, based on their interest in the subject matter, which for females tends to be higher for health surveys generally.
- The achieved sample also under-represents younger people aged 18 to 44 years. This is consistent with projects that do not have a strategy, such as disproportionate chance of selection, for specifically targeting younger persons.
- Compared to 2016, there has been reduced participation of persons aged less than 65 years, and a significantly greater participation by persons aged 65 years and over. It is likely that this reflects the continued diminishment of use of landlines by younger people, and it would be recommended that future surveys employ a higher proportion of mobiles in the survey sample.
- There was little variation in the gender balance of survey respondents across regions, which is consistent with the regional population gender balances.

The weighting strategy for the TPHS was designed to address these imbalances in age and gender.

The table below shows the age and gender distributions of the survey respondents within each region, as well as the respective Tasmanian population distributions[5].

The proportion of respondents who were Aboriginal and Torres Strait Islanders aged 18 years and over in the 2019 survey (3.5 per cent) was similar to 2016 (3.6 per cent).

[4] Regional Population by Age and Sex, Australia, Australian Bureau of Statistics, cat. no. 3235.0, Tables 1 & 2: Estimated Resident Population by Age, by Statistical Area Level 2 – 30 June 2018. Released at 11.30am (Canberra time) 29 August 2019. The 18-24 year age-group population was estimated from the 15-19 and 20-24 year age-group information (40% of 15-19 population plus 20-24 population).

[5] Ibid

Table 144: Profile of respondents in the Tasmanian Population Health Survey 2019

Region	North West		North		South		Tasmania	
Sex/Age	Population %	Sample %	Population %	Sample %	Population %	Sample %	Population %	Sample %
Male	48.5	39.9	48.3	40.1	49.4	39	48.9	39.7
Female	51.5	60	51.7	59.9	50.6	60.9	51.1	60.2
18-24 years	11.1	1.5	9.4	0.9	11	1.8	10.7	1.4
25-34 years	14.8	2.9	13.6	3.2	16.4	3.5	15.3	3.2
35-44 years	14	5.7	13.3	5.8	15.3	6.8	14.5	6.1
45-54 years	17	12.1	17	11.9	16.5	11.2	16.7	11.7
55-64 years	17.7	21.3	18.9	20.4	17.2	20.3	17.7	20.7
65+ years	25.5	56.6	27.8	57.7	23.6	56.4	25	56.9

Statistical analysis and interpretation of results

Statistical software

The survey data were analysed using the Stata statistical software package (Version 15, StatCorp LP, College Station Texas).

Weighting

The survey data have been weighted to the Tasmanian population, based on the stratified sampling design of the survey. Each respondent represents multiple persons based on their age, sex geographical area of residence and mode of selection (landline sample, RDD mobile sample, non-probability mobile sample). Consequently, data item estimates (mostly percentages) provided in the report refer to the Tasmanian population rather than just the selected respondents.

Statistical significance

Trends and patterns in the data that are discussed are not necessarily statistically significant, unless specifically indicated. Confidence intervals are provided to assist the reader in interpreting statistically significant results. As per the usual convention, 95 per cent confidence intervals (95%CI) are used. Significant differences between data item estimates exist where confidence intervals do not overlap. When the confidence intervals of the estimates do overlap, the estimates are deemed not to be significantly different; however, this should be considered a guide only and a formal test of statistical significance would be required to arrive at a statistically credible conclusion.

Crude rates

Except where specifically noted, all population data item estimates provided in the report are crude rates. That is, adjustments for associated factors, such as age, have not been carried out. Crude rates, expressed as percentages, are calculated by dividing the estimated number of persons in the population of interest with a certain characteristic (e.g. current smoker) by the number of total persons in the respective population (e.g. males aged 18-24 years).

Age-standardisation

In making comparisons over time for data items which are strongly age-dependent, crude rates can sometimes be difficult to interpret because of changes to the population age distribution over time. Consequently, if changes to the population age distribution are not taken into account, any observed changes may be at least partially attributable to a change in the age distribution. This is particularly relevant for data items which increase in prevalence with increasing age, such as chronic diseases and obesity. In light of Tasmania's ageing population, the population data item estimates provided in this report relating to chronic diseases, obesity and self-assessed health status have been adjusted for age using the 2001 Australian standard population, which is the standard population recommended by both the Australian Bureau of Statistics (ABS) and the Australian Institute of Health and Welfare (AIHW). This process is termed age-standardisation, and the resulting estimates are termed age-adjusted, or age-standardised, rates.

Imputation

Explicit missing data imputation has not been undertaken for any data items. However, for variables which have been derived from component data items, such as BMI (based on self-reported height and weight) and the Kessler 10 (a composite score based on 10 separate data items), data estimates have been based solely on non-missing data values. Consequently, for the remaining data items in the survey, summation of percentages over the categories of a variable (such as self-assessed health) will not necessarily add up to 100 per cent due to a proportion of missing values (typically coded as don't know/refused).

Appendix B – Glossary

Age Standardisation

This is a statistical method to account for differences in age composition when comparing data estimates for different populations. The aim of age standardisation is to identify whether the compared estimates are statistically significantly different after adjusting for age differences. The resultant rates are termed age-standardised rates or age-adjusted rates.

The most common method, and the one used in this report, is direct standardisation, which produces an aggregated weighted sum of age-specific (5 year age groups) rates applied to a standard population.

As per Australian Bureau of Statistics and Australian Institute of Health and Welfare recommendations, the standard population used in this report is the 2001 Australian resident population.

Confidence Interval

The confidence interval is the range within which the "true" population value is likely to lie. The most common interval, and the one used in this report, is termed the 95 per cent confidence interval (95%CI).

The usual way to interpret this is that if we were to draw several random samples of the same size from the same population, on average 19 out of 20 such confidence intervals would contain the true population estimate, and one out of every 20 (5 per cent) would not.

The width of the confidence interval indicates the precision of the estimate. Wider confidence intervals imply less precision. The formula is: 95%CI= estimate +/- (1.96*SE), where SE refers to the standard error of the estimate.

Kessler 10

Kessler 10 Psychological Distress Scale (K10). The K10 has been validated as a diagnostic screening tool for the presence of anxiety and depression.

The K10 consists of ten questions that explore the level of psychological distress over the preceding four week period, covering feelings and experiences such as nervousness, hopelessness, restlessness, sadness and worthlessness.

Prevalence	A measure of the level of the disease or characteristic in a population at a specific point in time. (AIHW, 2012)
Relative Standard Error (RSE)	This is a measure of the reliability of the data item estimate, and is defined as the ratio of the estimate's standard error to the estimate, expressed as a percentage. The convention employed by the Australian Bureau of Statistics, and the one used in this report, is to regard estimates with an RSE lower than 25 per cent as reliable, whilst those with RSEs at least 25 per cent but lower than 50 per cent should be used with caution. Estimates with RSEs of 50 per cent or higher are deemed too unreliable to be published, and are cited in this report as n/a.
Self-Assessed Health Status	Refers to a respondent's perception of his or her general health status against a five point scale from excellent through to poor.
SEIFA - IRSD	The socio-economic status measure used in this report is one of the suite of Socio Economic Indexes for Areas (SEIFA) developed by the ABS. The specific index used in the report is the Index of Relative Socio-Economic Disadvantage. This index represents a single measure of socio-economic status derived from Census data, and includes variables such as education, income, occupation and housing in calculating the index score which applies to geographic areas. Areas with a low index score have high proportions of low income families, high unemployment and low educational qualifications, while the least disadvantaged areas have high proportions of high income earners and high index scores. This means areas with a low index score are more disadvantaged than areas with a high index score.
Standard Error (SE)	The standard error is a measure of the variation in the data item estimate as a result of sampling a population. The standard error can be used to produce confidence intervals and relative standard errors, the first providing an indication of the likely range within which the "true" value lies, whilst the second provides an indication of the reliability, or precision, of the estimate.
Equivalised household income	Equivalised household income is household income which has been adjusted to account for the number of household members. The equivalised household income quintiles are: …… 1st (<$23000), 2nd ($23000 to <$35000), 3rd ($35000 to <$47000), 4th ($47000 to <$75000), and 5th ($75000+)

Statistical Significance

In this report, 95 per cent confidence intervals (95%CI) have been used to determine if a statistically significant difference exists between compared values. A statistically significant difference exists where the confidence intervals do not overlap, in which case the difference between the estimates being compared is greater than that which could be explained by chance. Overlapping confidence intervals do not imply that the difference between two values is definitely merely due to chance, but rather that no statistically significant difference was found. Judgment should always be exercised in deciding whether or not the difference is of practical or clinical value.

Appendix C – TPHS 2019 questionnaire data items

Demographics

Age
Sex
Number of people ≥18 in household
Household composition
Number of people <18 in household
Ages of children
Indigenous status
Country of birth

Socio-Economics

Highest level of education
Employment status
Type of work activity
Household income

Health Screening

Blood pressure
Cholesterol
Diabetes/high blood sugar
Kidney disease

Health Service Use

Use of and satisfaction with:
- public hospital

Health Literacy

Ability to understand health information
Able to discuss health care with provider
Get to see health providers needed

Nutrition & BMI

Vegetable consumption
Fruit consumption
Bread/rolls amount
Type of milk consumed
Type of drink when thirsty
Water quantity
Soft drinks
Diet soft drinks
Currently dieting
Type of diet
Reason for taking folate
*females aged 18-50 only
Reasons for inadequate nutrition
Food security
Self-reported height/weight

Alcohol & Smoking

Whether had alcohol during past 12 months
Frequency of consumption
Quantity consumed
Frequency of high risk consumption
Current smoking status
Ex-smokers >100
Most useful cessation method
Smoke free home

Asthma

Asthma diagnosis
Asthma current symptoms
Symptoms affected by bushfire
Asthma action plans

Diabetes

Diabetes diagnosis
High sugar level diagnosis
Type of diabetes
Actions to manage

Dental Health

Dental health status
Dental health problems - missing teeth, toothache
Dental hygiene
Dentist cost barrier
Child brush assistance

Physical Activity

Frequency and time spent on walking
Frequency and time spent on vigorous household activity
Frequency and time spent on vigorous gardening
Frequency and time spent on vigorous activities (sport/exercise)
Frequency and time spent on moderate activities (sport/exercise)
Frequency and time spent on muscle strengthening
Sitting time weekdays
Active transport

Physical and Mental Health Status

Self-reported health
Kessler 10 (psychological distress

Ever diagnosed with

- Heart disease
- Stroke
- Cancer
- Osteoporosis
- Depression/anxiety
- Other mental health
- Arthritis
- Hypertension
- Chronic obstructive pulmonary disease
- Kidney disease

Whether condition still current

Have current care/management plan

Financial Security and Environment

Raise $2000 if needed

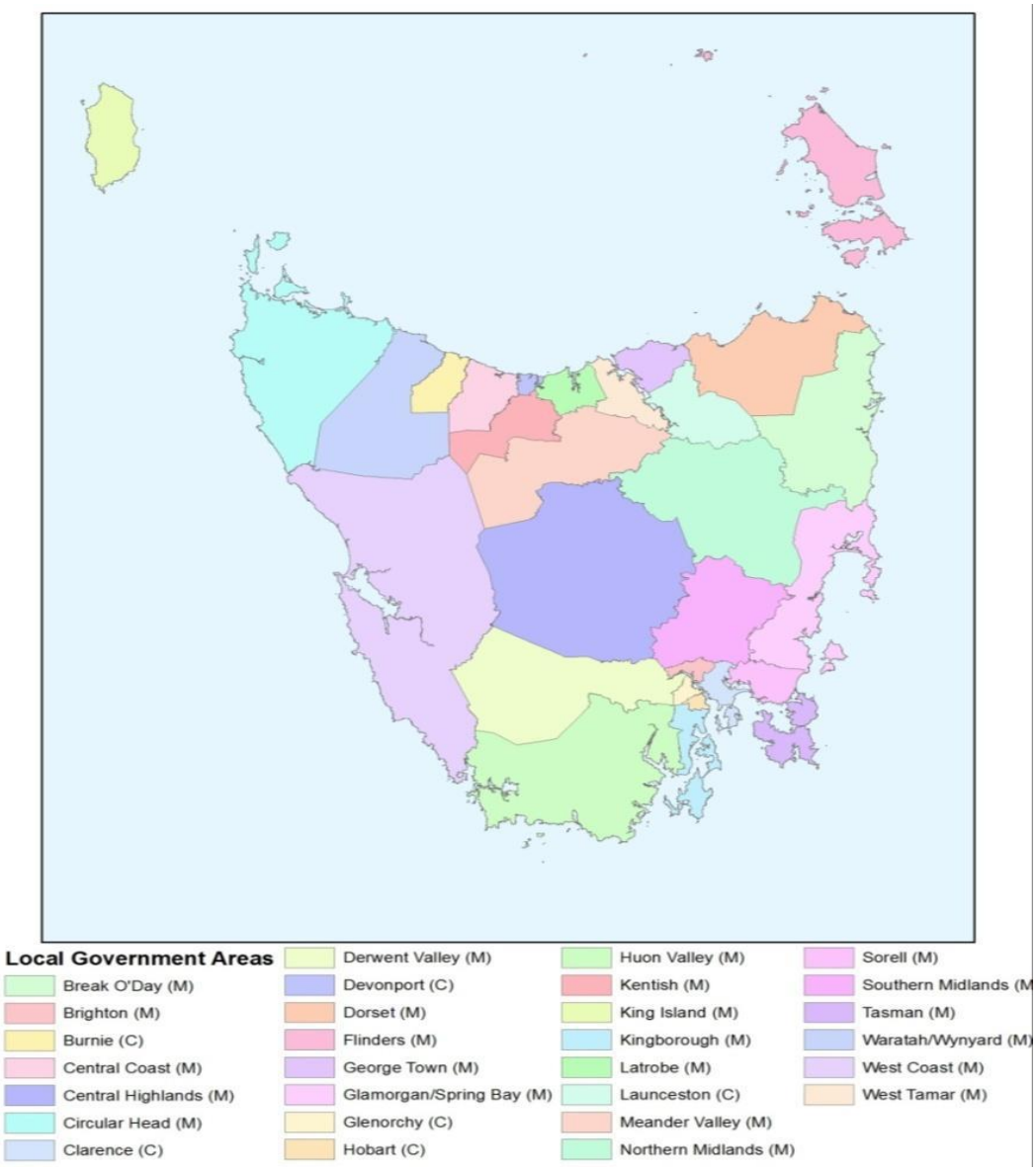
Food security

Main source of heating

Main method of cooling home

Appendix D – Tasmania's regional structure

South	North	North-West
Brighton	Break O'Day	Burnie
Central Highlands	Dorset	Central Coast
Clarence	Flinders	Circular Head
Derwent Valley	George Town	Devonport
Glamorgan/Spring Bay	Launceston	Kentish
Glenorchy	Meander Valley	King Island
Hobart	Northern Midlands	Latrobe
Huon Valley	West Tamar	Waratah/Wynyard
Kingborough		West Coast
Sorell		
Southern Midland		
Tasman		



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