



WHITEHORSE
CITY COUNCIL

Interim

City of Whitehorse Health and Wellbeing Profile

2024

23 February 2024

Data sources

Unless referenced otherwise, demographic information is sourced from the 2021 ABS Census of Population and Housing. Other information sources include the Victorian Population Health Survey, VicHealth Indicators Survey, and the Australian Urban Observatory. A full reference list is provided.

Acronyms

LGBTIQA+	An umbrella term to refer to lesbian, gay, bisexual, trans/transgender, intersex, queer, asexual, and other sexuality, gender and bodily diverse people and communities. Other variations of this term are used in this document in line with the source being referenced.
CALD	Culturally and linguistically diverse
MCH	Maternal and Child Health
LGA	Local Government Authority/Area

Further information

Refer to Council's demographic fact sheets and interactive maps at <https://www.whitehorse.vic.gov.au/about-council/about-whitehorse>

Contact Community Engagement & Development Department at CDEnquiries@whitehorse.vic.gov.au

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Introduction

The City of Whitehorse Health and Wellbeing Profile January 2024 presents current and relevant information from various trustworthy sources about the people of Whitehorse and their health and wellbeing status. Throughout the profile aspects of health and wellbeing for the people of Whitehorse may be compared with Metropolitan Melbourne, Eastern Region, Victorian and Australian populations. A full [reference](#) list of data sources is provided at the end of the profile.

The People of Whitehorse First the profile describes the characteristics of the people of Whitehorse, from a whole of population perspective to a closer look at the diversity of people who live in the municipality. Characteristics of these cohorts help us understand how best to respond to the health and wellbeing challenges of individuals and groups in Whitehorse.

Liveability of Whitehorse Next the many environmental aspects of Whitehorse that influence people's health and wellbeing – its liveability – are outlined.

Health Disparity in Whitehorse In recognition that the burden of poor health is not evenly spread across our community, the profile describes groups within Whitehorse that experience greater health disparity.

Health and Wellbeing in Whitehorse Lastly, the profile presents *preventable* key areas of poor health and wellbeing for the people who live in Whitehorse, based on an analysis of the data and observations of local service providers. This information is themed as chronic disease, injury, mental health and wellbeing, use of alcohol, nicotine and illicit drugs, communicable disease, and the impacts of climate change.

Context

The purpose of the profile is to inform the development of the Whitehorse Municipal Public Health and Wellbeing Plan for 2025-2029. It may be used to inform planning by other organisations which serve people in Whitehorse.

The Municipal Public Health and Wellbeing Plan (MPHWP) describes the work Council will undertake in partnership with the community, with other levels of government and with key State and local organisations over the next four years to improve the health and wellbeing of people in Whitehorse.

Requirements for Health and Wellbeing Planning

The Municipal Public Health and Wellbeing Plan sets the broad mission, goals, and priorities to enable people living in a municipality to achieve maximum health and wellbeing.

In preparing a health and wellbeing plan, the Public Health and Wellbeing Act 2008 requires council MPHWP to:

- Be consistent with the corporate plan of the Council and the Municipal Strategic Statement (MSS).
- Specify measures to prevent family violence and respond to the needs of victims of family violence in the local community.

- Have regard to climate change.
- Consider the focus areas and priorities of the Victorian Public Health and Wellbeing Plan 2023–2027.

Partnerships and integration

The Whitehorse Municipal Public Health and Wellbeing Plan is integrated with the Council Plan 2025-2029. Other relevant strategic plans across Council and those of local community partners with an interest in public health are considered in the preparation and implementation of the MPHWP to ensure a coordinated local prevention effort. Council strategic plans that align with the MPHWP include:

- Climate Response Strategy 2023-2030
- Urban Forest Strategy 2021-2031
- Whitehorse Recreation Strategy 2015–2024
- Whitehorse Waste Management Strategy 2018-2028
- Integrated Water Management Strategy 2022 – 2042
- Open Space Strategy 2023 – 2037
- Cycling Strategy 2016
- Whitehorse Integrated Transport Strategy 2011
- Arts & Cultural Strategy 2014-2022
- Investment & Economic Development Extension Strategy 2020-2022
- Affordable Housing Policy 2023
- Community Engagement Policy 2021
- Social Enterprise Policy 2023

Prevention and health promotion funded organisations and councils work together with the Department of Families, Fairness and Housing (DFFH), Department of Health and other local partners to establish a common approach to the preparation of health and wellbeing plans.

Community engagement

In 2024, the Shaping Whitehorse community engagement program will employ comprehensive approaches, encompassing broad, targeted, and deliberative processes. The goal is to actively involve our community in shaping the strategies to address health and wellbeing priorities. The MPHWP and Council Plan are aligned to achieve the Community Vision 2040.

Victorian Health Priorities

The *Victorian public health and wellbeing plan 2023–2027* provides continuity for the priorities of the previous two plans, while considering the places where Victorians spend their time, and the diverse needs, experiences, and identities of population groups across different life stages.

Chronic disease is still the largest cause of avoidable death for Victorians. The plan notes that the number of people living with these conditions will continue to increase with an ageing population, and this is the case in the City of Whitehorse. In addition, we are faced with emerging threats that require a quick, yet informed response, such as the sale and use of e-cigarettes. The COVID-19 pandemic has created social change, with both positive and negative aspects for health, that we will be living with into the future.

The State-wide plan identifies ten priorities which represent areas where sustained action can have the biggest impact on health and wellbeing. These contribute to the modifiable burden of disease and are key drivers for ill-health across the lifespan.

- Improving sexual and reproductive health
- Reducing harm from tobacco and e-cigarette use
- Improving wellbeing (mental health)
- Increasing healthy eating
- Increasing active living
- Reducing harm from alcohol and drug use
- Tackling climate change and its impact on health
- Preventing all forms of violence
- Decreasing antimicrobial resistance across human and animal health
- Reducing injury

The Victorian public health and wellbeing plan 2023-2027 recognises key links between actions taken in a number of these priority areas. For example, by promoting active transport (walking, cycling or use of public transport) and reducing the number of trips by car we in turn reduce emissions. A reduction in emissions and increasing active transport produces health co-benefits through improvements to air quality and increasing opportunities for physical activity.

The COVID-19 Pandemic

The COVID-19 pandemic is a unique emergency event unlike anything most people alive today have experienced before. Since being reported in January 2020, the Whitehorse community has experienced a low rate of infection. However, the impact of the control measures and fear of the virus itself have impacted our community.

Public health controls included restrictions on contact and movement of people in every aspect of their lives with impacts on the economy (constraints on people's ability to work and do business), education (students' ability to attend schools/tertiary institutes), health (constraints on access to health services, manifestations of psychological distress, mental health issues, decreased physical activity etc.) and social (impacts of people being isolated and more vulnerable). The MPHWP will be informed by the most up to date evidence and information about the impacts of the pandemic and will prioritise strategies for continuing community recovery.

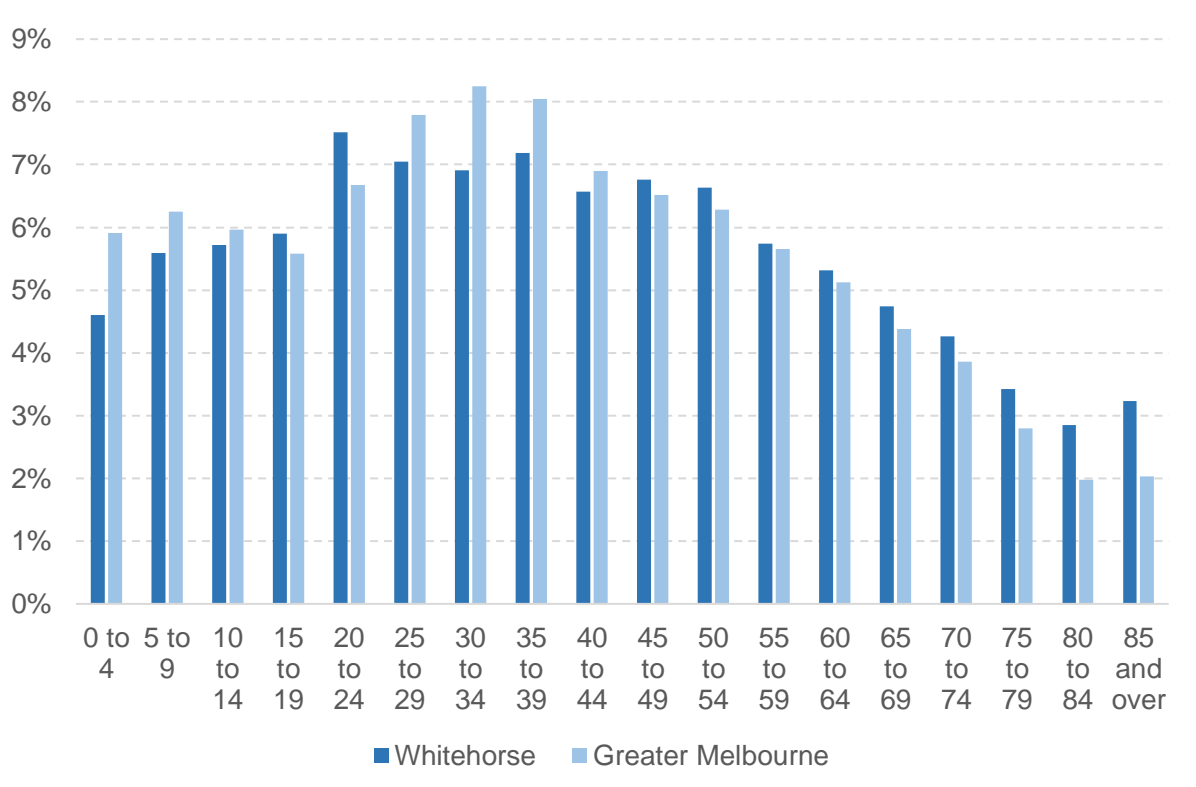
Part A. The people of Whitehorse

The City of Whitehorse hosts a diverse and growing population. This section describes the current population profile, the forecast changes due to ageing and migration and then the diverse groups of people who call Whitehorse their home.

1. The population

On 30 June 2022, it was estimated that 172,466 people lived in Whitehorse. The population age distribution (shown in Figure 1) is generally similar to the state average. Figure 1 highlights that Whitehorse has proportionally more people in the over 70 age groups and 20–24-year-olds, and proportionally fewer people in the 0 to 4 and 25- to 39-year-old age groups than Greater Melbourne. The median age in Whitehorse was 39 years. Nineteen per cent of the population are aged less than 18 years.

Figure 1 – Whitehorse Age Structure compared to Greater Melbourne – 5-year groups, 2021

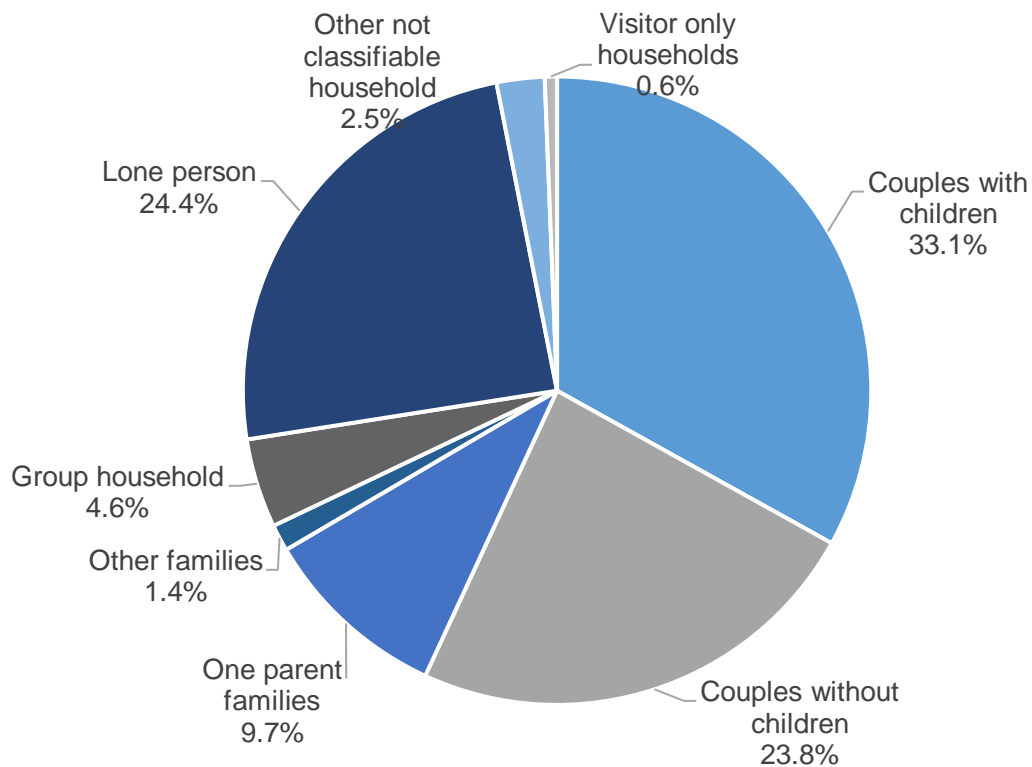


While fifty-two per cent of the population in Whitehorse are female, there are more males than females in all the five-year age increments under 30 years, apart from 10 to 14 years which is evenly split. For every five-year age increment from 30 years, there are more females than males. This is particularly so for the older age groups; there are a third more women than men aged 85 plus. Box Hill has a larger concentration of residents aged 20-29 than the rest of the municipality.

Whitehorse is home to many families. In 2021, there were 65,115 households in Whitehorse and, as illustrated in Figure 2, the most common household type comprised couples with children (33.1 per cent). Lone person households and the heads of lone-parent households are more frequently

women. In 2021, 61.8 per cent of all people living alone were female, and this ratio increases with age. 81 per cent of lone-parent households in Whitehorse have a female head.

Figure 2 – Whitehorse Household type, 2016



In 2021 26.7 per cent of people both live and work in Whitehorse (the same proportion as 2016, pre-COVID-19 pandemic) and many more do so in the surrounding municipalities.

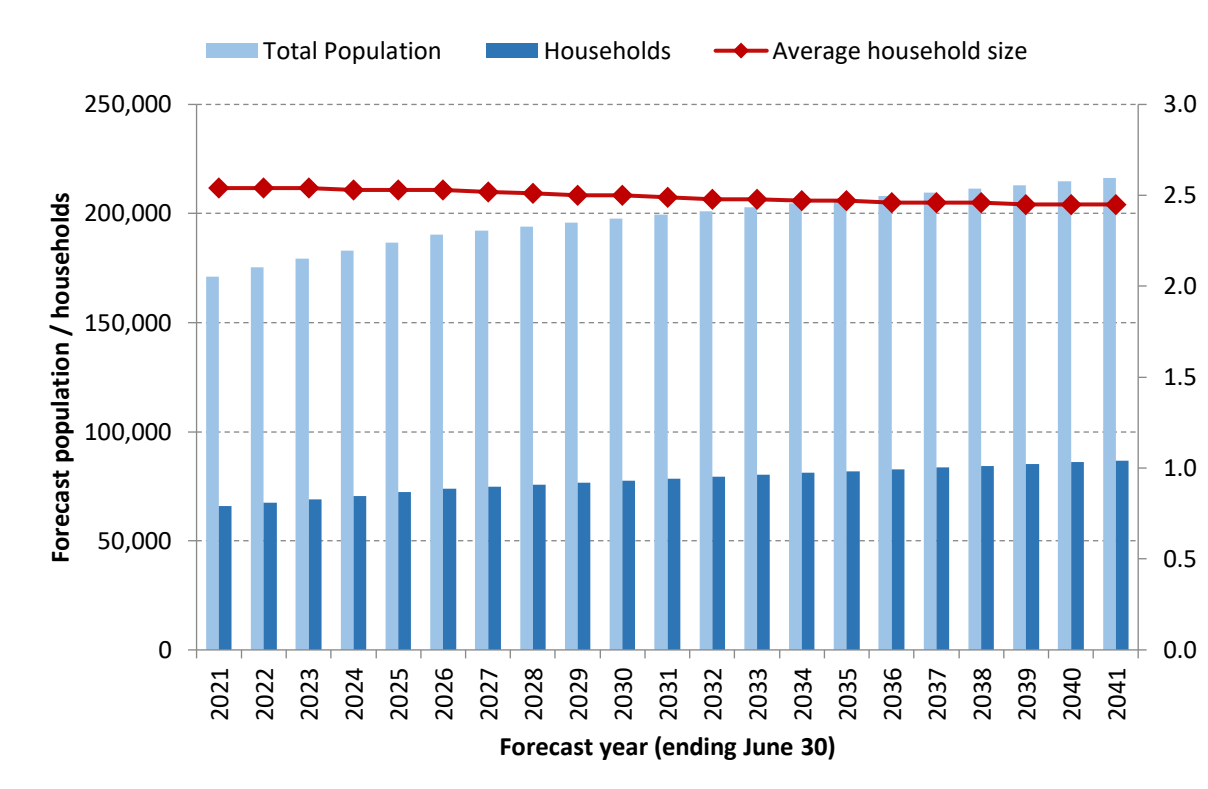
2. Changing population profile

Whitehorse has an increasingly ageing population. Currently more than 18.5 per cent of people are over the age of 65 and 3.2 per cent of the population is aged 85+. Between 2024 and 2041, the number of people aged 65+ will increase by approximately 6,920 people. In Whitehorse 63.4 per cent of people with a disability are aged 65 or over. Also, many people aged over 65 years care for a person with a disability, long term illness or old age. In 2021 there were 4,398 carers in Whitehorse aged over 65. Around 29 per cent of people aged 75+ in Whitehorse live alone, the larger proportion of these being female (76 per cent).

A growing and changing population in Whitehorse is seeing relative increases in the number of 35- to 85-year-olds (7,024 between 2016 and 2021) and people born in non-English speaking countries of origin (8,463 between 2016 and 2021). The age structure forecasts for the period 2021 and 2041, as illustrated in Figure 3, indicate a 3.2 per cent increase in population for under working age, a 21.4 per cent increase in population of working age and a 10.8 per cent increase in population of retirement age. The population is forecast to increase at an average annual rate of 1.2 per cent between 2021 and 2041 (ID Consulting, 2023).

In the years 2020 to 2022 Whitehorse has experienced the largest birth rate decline (-18.4) in metropolitan Melbourne and the second largest birth rate decline for all of Victoria (after Mansfield Shire). While all metropolitan LGAs have experienced a decline in the rate of births, Whitehorse has the most pronounced in this period. ⁱ

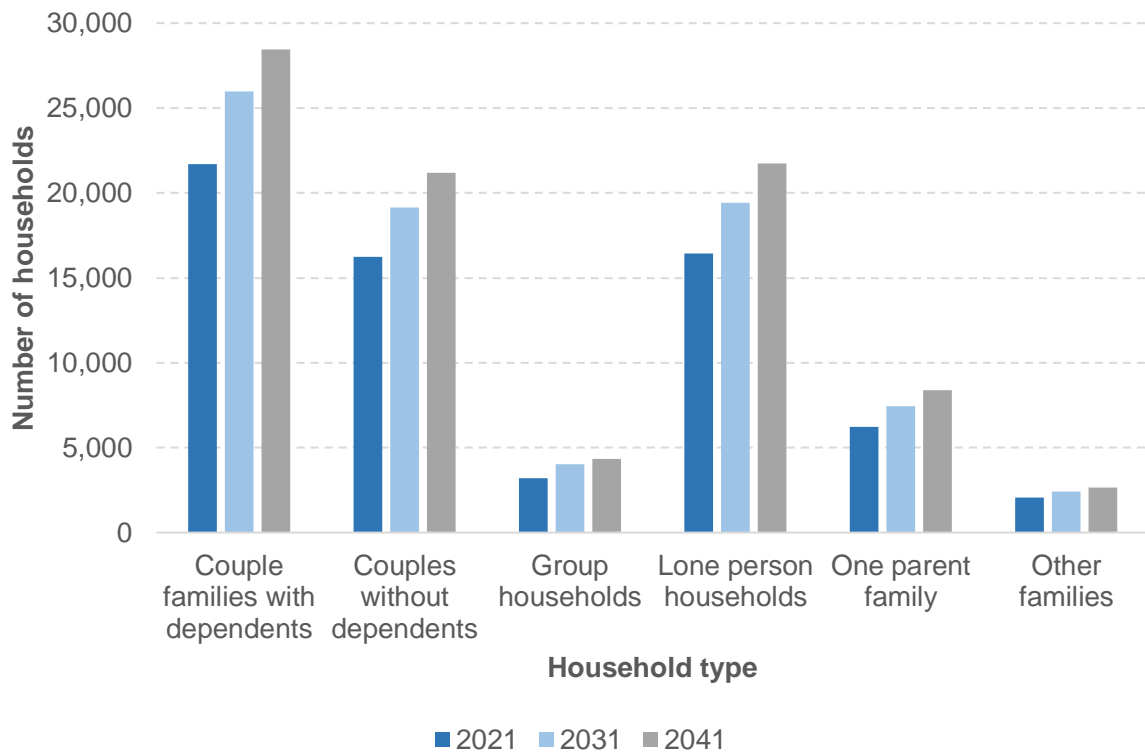
Figure 3 – Whitehorse Population and Household Forecasts, 2021 to 2041



Source: .id Consulting (2023), Census of Population and Housing

The dominant household type in Whitehorse is 'couple families with dependents', and by 2041 the largest forecast increase is also expected in this household type, followed by 'lone person households' as illustrated in Figure 4. It is estimated that at this time lone households will account for a quarter of all households in Whitehorse, with older people and younger residents. The average household size is expected to fall from 2.54 in 2021 to 2.45 by 2041, as illustrated by the red line in Figure 3.

Figure 4 – Whitehorse Household Types Forecast, 2021 to 2041



In Whitehorse, 41.5 per cent of people were born overseas (70,291) and 23 per cent arrived in Australia within 5 years prior to 2021 (compared to 20 per cent for Greater Melbourne). Between 2016 and 2021 the highest number of new settler arrivals was from China at 6,116, followed by India at 2,729 and Malaysia at 1,319.

3. Diversity of people

People of diverse ages, genders, abilities, and religious, cultural and language backgrounds make up the population of Whitehorse.

a. Children and their families

Children aged 0-11 years account for 12.4 per cent of the total Whitehorse population, less than Greater Melbourne at 14.6 per cent. There is a higher proportion of male children aged 0-11 years (13.1 per cent) compared to female (11.7 per cent). Between 2021 and 2041, the 0-11 age cohort is expected to increase by 1,903 residents. Over the same period, the percentage of households comprised of couples with dependent children is expected to decrease slightly from 33 per cent to 32.8 per cent.

The early years (pregnancy to eight years) are a period of rapid cognitive, biological, and social development and the most critical in influencing a person's long-term health and wellbeing. The environment in which a child spends these early years – the family, educational and care settings, and the broader community – strongly shapes whether they have good foundations for their future health, wellbeing, and development.

In 2017 Whitehorse recorded a significantly lower than average rate of 3.5-year-olds attending maternal and child health checks (35 per cent compared to 62.9 per cent for Victoria) and a slightly higher kindergarten participation rate (93.6 per cent compared to 91.8 per cent).ⁱⁱ

For the period 1 July 2022 to 30 June 2023, 96.07 per cent of children in Whitehorse were fully immunised at one year compared with Victoria as a whole, with a rate of 93.8 per cent.ⁱⁱⁱ

Children fully immunised at one, two and five years across Whitehorse in 2023 was higher than Victoria as a whole. 96.8 per cent of 5-year-olds in Whitehorse are fully immunised.^{iv}

In 2019/2020, 57.4 per cent of children in Whitehorse were exclusively breastfeeding to three months of age, compared to 51.1 per cent of children across Victoria. This is an increase in Whitehorse from the proportion in 2018/2019 of 50.6 per cent.^v

The Australian Early Development Census measures how children have developed by the time they start school. It looks at five domains of early childhood development: physical health and wellbeing, social competence, emotional maturity, language and cognitive skills, and communication skills and general knowledge.

In 2021, 15.6 per cent of Whitehorse children were considered vulnerable on one or more domains, in comparison to the Victorian average of 19.9 per cent and Australian average of 22 per cent. A further 7.4 per cent of Whitehorse children were considered vulnerable on two or more domains, in comparison to the Victorian average of 10.2 per cent and Australian average of 11.4 per cent.^{vi}

Across Australia emotional abuse (55%) was the most common primary type of substantiated child abuse in 2020–21. In order, the next most common type of child abuse as neglect (21%), physical abuse (14%), and sexual abuse (10%). More girls (14%) were subject to sexual abuse than boys (5.8%). The rates of Australian children receiving child protection services was 172 per 1,000 of Indigenous children and 21 per 1,000 non-Indigenous children.^{vii} Children's exposure to domestic violence has been increasingly recognised as a form of child abuse.

b. Young people

A person's experience in the formative years between 12 and 25 has a major influence on their long-term health and wellbeing and capacity to enjoy a full, active, and rewarding life to their full capacity. Access to education, employment, healthy food, respectful relationships, and social, sporting, and creative pursuits all play a part.

- Young people aged 12 to 25 years account for 18.4 per cent of the total Whitehorse population, which is comparable to the 17.3 per cent across Greater Melbourne.
- There are 16,119 male and 15,098 females aged 12 to 25 living in Whitehorse.
- A total of 26.6 per cent of young people aged 12 to 25 living in Whitehorse were born in a non-English speaking country, significantly higher than Greater Melbourne (20.6%) and Victoria (17.2%). In addition, 34.1 per cent of all young people speak a language other than English at home.
- In Whitehorse Year 9 students achieving national learning benchmarks is 94.5 per cent for literacy and 96.8 per cent for numeracy compared to Victoria at 92.4 per cent and 96.2 per cent, respectively.

- A total of 49.3 per cent of 18 to 24-year-olds in Whitehorse are attending a university, compared to 38.2 per cent for Greater Melbourne. A slightly lower percentage of students in Whitehorse are attending TAFE compared to Greater Melbourne (7.9 per cent and 9.6 per cent respectively).
- Five per cent of 15 to 24-year-olds in Whitehorse are not in employment or education.

c. Adults

People aged 25-65 years account for 53.1 per cent of the total Whitehorse population, slightly less than Greater Melbourne at 55.5 per cent. There are 48.5 per cent male and 51.5 per cent female in this age group. Between 2021 and 2041, this age cohort is expected to increase by 29,764 residents.

Gender differences in working aged adults reveal distinct differences in employment and income:

- The female median weekly income is \$648 (persons aged 15+)
- The male median weekly income is \$958 (persons aged 15+)
- 11.6 per cent of females undertake 30+ hours of unpaid domestic work each week
- 3.3 per cent of males undertake 30+ hours of unpaid domestic work each week
- 43.6 per cent of females are employed full-time
- 64.4 per cent of males are employed full-time
- 11.4 per cent of employed females are in a managerial position
- 17.2 per cent of employed males are in a managerial position.

d. Parents

In Whitehorse 33.1 per cent of households are couples with children and 9.7 per cent are single parent families. 81 per cent of single parents are female and 19 per cent are male.

Over 50 per cent of families in Whitehorse have one or two children:

- 27 per cent one child
- 27 per cent two children
- 7 per cent three children
- 1 per cent four or more children

Female same-sex couples in Whitehorse were more likely to have children than male same-sex couples (20 per cent compared to 7 per cent).

Similarly in Whitehorse, females are more likely than males to provide care to dependent children over a fortnight period. 27.7 per cent of females gave care over a fortnight, compared with 23.6 per cent of males.

e. Older adults

Older people have a wealth of knowledge, experience and actively contribute to the wellbeing of the community. Many older people care for others – partners, children, and grandchildren. The interconnectedness of physical and mental health plays out strongly for older people.

Good physical health enables older people to socialise, travel and work and to participate actively in society while poor physical health increases the risk of isolation and depression.

- In 2021, 18.5 per cent of Whitehorse residents were aged 65 plus; this compares with 15 per cent for Metropolitan Melbourne.
- The municipality is 43.2 per cent male aged 65 plus; 56.8 per cent female.
- 45.8 per cent of people aged 65 plus years in the City of Whitehorse were born overseas.
- 38 per cent were from a non-English speaking background, consistent with Greater Melbourne.
- The largest non-English speaking country of birth for people aged 65 or more in Whitehorse in 2021 was China, where 9.1 per cent or 2,840 people aged 65 years or more were born. This is followed by Greece (4 per cent) and Italy (3.2 per cent). Just under a third of people over 65 years speak a language other than English at home in Whitehorse (31.5 per cent).
- Approximately 9,374 people in the City of Whitehorse need help with daily living tasks due to disability. Of these, 64.7 per cent of people with a disability are aged 65 or over.
- In 2021 there were 4,398 carers aged 65 plus in the City of Whitehorse providing unpaid assistance to a person with a disability, long term illness, or old age.
- The rate of people using residential aged care in the Eastern Metropolitan Region of Melbourne (including City of Whitehorse) has increased from 49.7 per 1,000 people in the aged care population in 2020 to 65.9 per 1,000 people in 2022. ^{viii}

The population of males and females aged 65 years and over is forecast to increase by a total of 7,656 persons between 2021 and 2041, which is an increase of 4,007 females and 3,649 males (ID Consulting, 2023), resulting in a total of 38,361 or 17.9 per cent of the total population.

More than thirty per cent of people aged 65 plus in the City of Whitehorse were born overseas, with a non-English speaking background. Evidence shows that older people from CALD backgrounds can face a higher risk of social isolation and poorer health outcomes. In addition, those who migrated to Australia at an older age, or who are from refugee background, are at greater risk of encountering mental and physical health issues.

The numbers of people with dementia in Whitehorse will rise significantly (estimated to almost double over the next 37 years^{ix}) and those at risk of elder abuse will also rise. A fall for an older person may precipitate a loss of function and independence.

f. People aged 75 and over

Ten per cent of Whitehorse residents are aged 75 years and over. This compares with seven per cent for Greater Melbourne and eight per cent for Victoria. Of these older Whitehorse residents:

- 33 per cent live in lone person households.
- 58.8 per cent are female; 41.2 are male.

Whitehorse has a higher proportion of people aged 75 plus living alone compared to Greater Melbourne (30.5 per cent) and Victoria (31.5 per cent).

g. People with a disability

Disability can occur at any time, prior to or at birth, as the result of accident, injury, chronic illness, or trauma, during childhood, adulthood or through older age. In addition, a diverse range of social, environmental, biological, and psychological factors can impact on an individual's mental health and wellbeing resulting in the person experiencing mental illness or psychiatric disability. Whilst the experience and impacts of disability and mental illness is unique to the person, disability and mental illness presents in all cultural groups, across gender, and socio-economic groupings.

ABS data indicates the presence of disability increases with age. Disability may be associated with accident illness and injury across the lifespan but may also be related to health risks, lifestyle choices and the ageing process more generally.

In 2021, 9,374 people in Whitehorse identified the need for assistance with core activities of daily living, this is a slightly lower level of need (5.5 percent) when compared to 5.9 per cent of Victorians.

A smaller percentage of people in Whitehorse reported the need for assistance over the age of 65 years than in Greater Melbourne:

- persons aged 85 years and over 47.2 per cent compared to 53.7 per cent
- persons aged 80-84 years 26.7 per cent compared to 32.2 per cent
- persons aged 15-64 years 15.4 per cent compared to 19.3 per cent
- persons aged 65 -69 years 6.8 per cent compared to 8.8 percent

Women were more likely to report requiring assistance with daily living than their male counterparts:

- 4.7 per cent of the male population in Whitehorse report needing help in their daily lives due to disability compared to 5.4 per cent of the population of Victoria.
- 6.3 percent of the female population in Whitehorse and the total Victorian population report needing help in their daily lives due to disability.

The rate of disability in Australia has remained relatively stable over time with approximately 17.7 per cent of people reporting a level of disability. ^x

Disability prevalence was similar for males (17.6 per cent), and females (17.8 per cent).

Of the 4.4 million Australians with disability over three quarters (76.8 per cent) reported a physical disorder. Almost one-quarter (23.2 per cent) of all people with disability report a mental or behavioural disorder as their main condition, up from 21.5 percent in 2015.

Government pension or allowance is the main sources of income for 58.6 per cent of people reporting the presence of disability.

People with disability are less likely to be employed (47.8 per cent) compared with 84.1 per cent of people without disability (80.3 per cent). Men with disability are more likely to be employed (56.1 per cent) compared to women with disability (50.7 per cent). Labour force participation declines with severity of limitation.

h. Aboriginal and Torres Strait Islander people

Council recognises that Aboriginal and Torres Strait Islander people and culture are an integral part of the Australian and Whitehorse community. Many local landmarks are of important historical and cultural significance. According to the 2021 Census, 523 persons or approximately 0.3 per cent of the population in Whitehorse identify as Aboriginal or Torres Strait Islander (52.1 per cent female and 47.9 per cent male). While Whitehorse has among the lowest percentage of residents of Aboriginal and Torres Strait Islander origin in the state, this is often underreported.

In Victoria, 65,646 people identified as Aboriginal and or Torres Strait Islander in the 2021 Census of Population and Housing, representing 1.0% of Victoria's population. Depicted in the following table, the population of Aboriginal and Torres Strait Islanders living in the City of Whitehorse increased by 165 people to 523 people, representing 0.3% of the total Whitehorse population.

Table 1: Percentage of total Aboriginal and Torres Strait Islander Population who identified Aboriginal, Torres Strait Islander, or both Aboriginal and Torres Strait Islander

Identified as	Victoria	City of Whitehorse
Aboriginal	94.2%	93.5%
Torres Strait Islander	3.2%	3.2%
Both Aboriginal and Torres Strait Islander	2.6%	2.9%
Total	66,000	523

There are approximately 208 Aboriginal and Torres Strait Islander families residing in the City of Whitehorse.

Most Aboriginal and Torres Strait Islander people residing in the City of Whitehorse speak English at home (90.4%) however, 1.3% of Aboriginal people speak Yorta Yorta and 0.6% of Aboriginal people speak Wajorri at home.

The median age of Aboriginal and Torres Strait Islander people residing in the City of Whitehorse is 24 years. Half (50.3%) of the Aboriginal and Torres Strait Islander population residing in the City of Whitehorse is aged under 25 years. In comparison, 29.3 percent of the Whitehorse population and 30.5 percent of the population of Greater Melbourne is aged under 25 years.

Most Aboriginal and Torres Strait Islander people (51.6 per cent) do not report experiencing a long-term health condition. Where long term health conditions are reported, 20.3 percent of people report a mental health condition and 15.3 per cent experience asthma.

In the City of Whitehorse 86.1 per cent of the Aboriginal and Torres Strait Islander population is employed compared to 52.0 per cent of the Victorian Aboriginal and Torres Strait Islander population. Aboriginal and Torres Strait Islander people residing in the City of Whitehorse reported a higher level of unemployment (11.7 per cent) than their Victorian counterparts (9.6 per cent).

i. LGBTIQ+ people

It is difficult to obtain a reliable estimate of the number of people who identify as LGBTIQ+ within the City of Whitehorse. The way survey questions are phrased, the fashion in which the survey is conducted, the survey date, and the segment of the community under investigation can yield distinctly different results. There are different ways people feel attraction, how they self-identify and how they behave. ^{xi} The Victorian Agency for Health Information estimate that just over one in 20 (5.7%) of adult Victorians identify as being LGBTIQ+, and of these 1.8 per cent identify as being gay or lesbian (equivalent to 3,104 Whitehorse residents), 2.8 identify as bisexual (equivalent to 4,829 Whitehorse residents) and 1.1 per cent identify as transgender, gender diverse, queer, pansexual, asexual or having an intersex variation (equivalent to 1,897 Whitehorse residents) – a total of 9,830 people who identify as LGBTIQ+ residing in Whitehorse. ^{xii}

In 2017, the proportion of adults identifying as LGBTIQ+ was significantly higher among those aged 18 to 34, at 12.2 per cent of the Victorian population. Compared with the general population, significantly more LGBTIQ+ adult Victorians were born in Australia, are members of community groups, are Aboriginal and have a total household income of less than \$40,000. LGBTIQ+ people are more likely to live in metropolitan Melbourne than rural and regional areas. ^{xiii}

Significantly fewer LGBTIQ+ adult Victorians are married or live with a partner than the general population, owing to social acceptance and other factors. significantly higher proportion of LGBTIQ+ adults in Victoria are Aboriginal or Torres Strait Islander people. ^{xiv}

It is estimated that 38.1 per cent of LGBTIQ+ people in Victoria have a disability or long-term health condition, which equates to 3,745 individuals residing in Whitehorse. ^{xv}

j. People from non-English speaking culturally diverse backgrounds

The City of Whitehorse is a diverse community, with more than a third of the population born in a non-English speaking country (36.7 per cent), and over 40.5 per cent of people speak a language other than English at home.

Of those Whitehorse residents born overseas, 22 per cent arrived in Australia within 5 years prior to 2021 and, as of 30 June 2023, a total of 22 asylum seekers were living in the Whitehorse municipality and have been granted bridging visas.

The unique situations and experiences of people from a non-English speaking background vary, however there are a number of challenges that consistently appear in research. These challenges include:

- socio-economic disadvantage
- social isolation, including digital isolation evident during 2020 lock down
- language barriers
- racism
- cultural translation difficulties
- underexposure to Australian services and systems
- lower rates of service access^{xvi}

The COVID-19 crisis has amplified some of the existing barriers for multicultural communities due to challenges accessing in-language support, disruption in trusted community networks, and the prevailing lack of culturally responsive mental health services. ^{xvii}

k. International students

A sizeable number of international students choose to study in the City of Whitehorse, although the numbers have declined since the COVID-19 pandemic.

In 2022, 19 per cent of course enrolments at Deakin University were by international students compared to 26 per cent in 2019 (pre-pandemic). With up to 300,000 students attending the Burwood campus, this equates to an estimated 5,745 international students who choose to study in the City of Whitehorse. ^{xviii}

In 2020, it was estimated that up to 40 per cent of international students living in the inner east of Melbourne attend a smaller private RTO rather than a large university or TAFE. ^{xix} However, post-pandemic this proportion may also have changed.

The economic impact and benefits of international students for the municipality and surrounding areas is well documented^{xx} however these students are particularly vulnerable to a number of health and wellbeing risk factors.

For international students, the COVID-19 pandemic has intensified their challenges. Emerging and compounding risks for this vulnerable cohort include:

- Heightened risk of depression, anxiety, psychological distress and deteriorating emotional wellbeing, concern for family overseas
- Financial insecurity, loss of employment, limited support from families in home countries due to worldwide economic impacts; growing personal indebtedness and vulnerability to financial scams
- Housing insecurity, risk of homelessness, overcrowding in shared housing
- Vulnerability to housing, employment, and sexual exploitation
- Visa insecurity
- Isolation and loneliness, fracturing of relationships
 - Disconnection from the wider community, peers, and social support networks
 - Disconnection from universities and education providers
 - Disengagement from course of study
 - Barriers to accessing health and wellbeing support
- Developing online gaming addictions^{xxi}

l. People of different religions

In Whitehorse around 49 per cent of residents identify as having a religion, with the largest single religion being Western Catholic (16 per cent), followed by Anglican faith (5.9 per cent) and Buddhism (5.4 per cent). Compared to Metropolitan Melbourne, Whitehorse has a higher proportion of people who stated they had no religion – more than two out of five residents identify as having no religion.

Part B. Liveability of Whitehorse

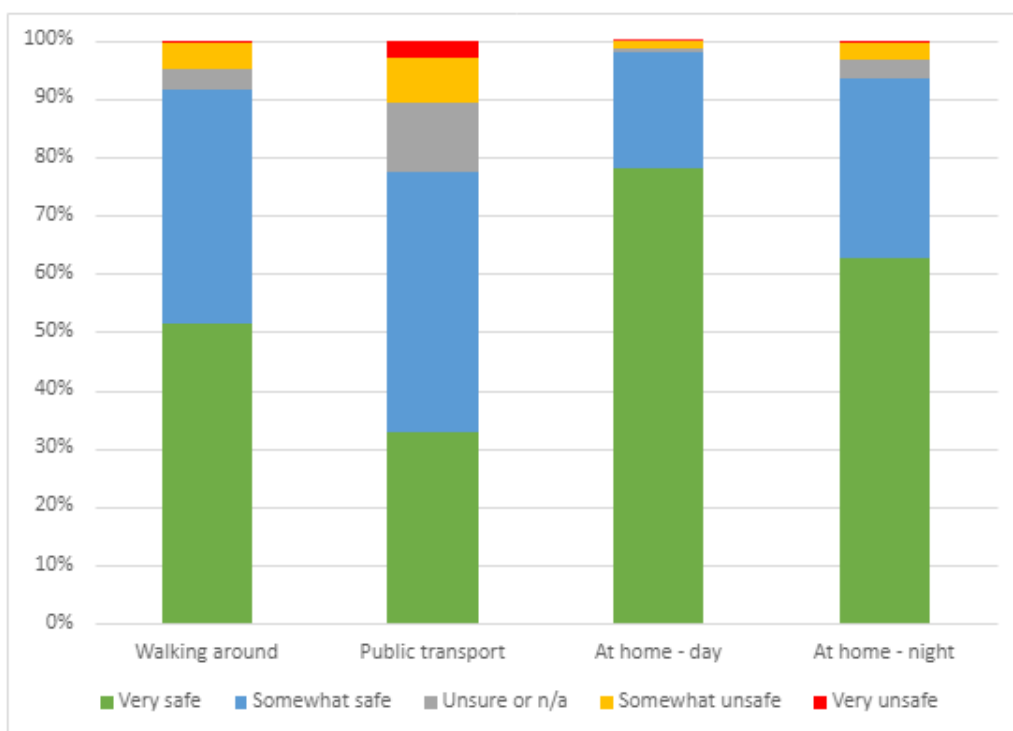
Urban liveability is now universally acknowledged for its economic, social, environmental, and health advantages at both national and global governmental levels, including in Australia. Liveable communities feature characteristics such as safety, social cohesion, inclusivity, and environmental sustainability. These communities have affordable housing connected through public transport, walking, and cycling infrastructure to employment, education, shops, services, public open spaces, and social, cultural, and recreational facilities. ^{xxii} Various aspects of Whitehorse liveability are described below.

1. Safety

Feelings or perceptions of safety affect how people move around and freely access all aspects of the municipality – transport, open spaces, activities, and facilities. Whitehorse is a relatively safe community, and crime rates in Whitehorse are lower than the Eastern Metropolitan and State averages. The criminal incident rate per 100,000 of population in Whitehorse is 3878.2, compared to 5,504.7 for Victoria. ^{xxiii}

A Positive Ageing Survey was conducted by Council with people 45+ years in 2023. Respondents were asked ‘How do you feel in the following situations?’ with four different scenarios offered: ‘Walking around your local community’, ‘Using public transport’, ‘At home during the day’ and ‘At home during the night’. Of the 3733 respondents, 56 per cent indicated they felt very safe in all scenarios. However, a closer look at the differences between scenarios illustrated in Figure 5 shows that people aged 45+ feel least safe using public transport. ^{xxiv}

Figure 5 – Perceptions of safety by people aged 45+ in Whitehorse, 2023



The rate of alleged crimes against the person in Whitehorse in 2023 was 576 per 100,000 people, which is also lower than the Victorian average (983/100,000).^{xxv} 57.7 per cent of people in Inner Eastern Melbourne feel safe while walking down their street at night, higher than the Victorian average of 53.7. However, females feel less safe walking alone, with only 38.6 feeling safe at night.

^{xxvi}

2. Social connection and inclusion

It is observed that people who are connected and actively engaged in their local communities are more likely to feel positive about their neighbourhood, and connecting into clubs, schools, faith, and other community groups have a positive influence on wellbeing and social cohesion.^{xxvii}

In 2020:

- The proportion of Whitehorse residents who feel valued by society is 53.9 per cent compared to 51.7 per cent of the Victorian population.
- 37.5 per cent of Whitehorse residents feel most adults can be trusted, compared to 36.1 per cent of Victorians.
- 71.6 per cent of Whitehorse residents (definitely) agree that multiculturalism makes life in their area better compared to 63.5 per cent of the Victorian population.
- In Whitehorse 15.5 per cent did voluntary work through and organisation group in the previous 12 months compared to 13.3 per cent of Victorians.^{xxviii}

Racial vilification weakens community cohesion and a sense that everyone is welcome in Whitehorse.

Racist incidents in Australia rose during COVID-19. At the start of the pandemic in February 2020, the Australian Human Rights Commission recorded more complaints under the Racial Discrimination Act than at any time during the previous twelve months.^{xxix} Members of the Australian Chinese community were subjected to racist comments due to the origin of the COVID-19 virus in mainland China.

The debate around the Voice to Parliament during the lead up to the October 2023 Referendum saw a well-publicised rise in abuse, threats, and harassment of Indigenous Australians. The eSafety Commission noted a more than 10 per cent increase in the proportion of complaints about cyber abuse directed at Aboriginal people as early as May 2023.^{xxx}

Experiences of racism are associated with poorer mental health^{xxxi}

3. Walkability

Walkable communities are good for our health, traffic management and the environment. A combination of higher residential densities, well-connected street networks and mixed land uses are positively associated with people walking (for transport) to local destinations. Combined, these variables create a transport walkability index. Neighbourhoods with connected streets, higher population density and various local destinations (e.g., jobs, shops, services,) score higher on the

transport walkability index than those in sprawling areas with cul-de-sacs, lower population densities and fewer local destinations. ^{xxxii}

The Victorian Planning Provisions and Precinct Structure Planning Guidelines have guidelines for three urban design features that affect walkability:

Access to destinations – requires 80-90 per cent of residences be within 1 km of an activity centre large enough to support a supermarket.

Street connectivity – sets a standard for the length and width of street blocks, to create walkable blocks with a maximum perimeter of 720 m.

Density – specifies an average net density of 15 dwellings per hectare. This is too low to create walkable neighbourhoods. ^{xxxiii}

26.7 per cent of people who live in Whitehorse also work in Whitehorse and many more do so from surrounding municipalities.

In Whitehorse we have:

- An average number of street intersections within 1600m (this is in the 68th percentile¹; Range from 97.4 to 354/km²)
- An average number of daily living destinations present (0-3) within 1600m of 1.7/3 (this is in the 56th percentile; Range from 0.1 to 3/3)
- An average distance to closest activity centre of 1144.4m (this is in the 56th percentile; Range from 22.3 to 2593.4m)
- A Walkability for Transport Index of 0.9 (this is in the 68th percentile; Range from -3.3 to 4.1)

^{xxxiv}

4. Open space and forest

Whitehorse is approximately 64 square kilometres in area, and almost 10 percent of that area is managed by Council as community open space; including parks and gardens, streetscapes, and community facilities. ^{xxxv}

in 2018 canopy cover across Whitehorse was measured at 18 per cent. ^{xxxvi} Comparing data from 2014, there has been a point change in 2.28 per cent canopy cover over those 4 years across. This translates to a net loss of 10 per cent of the canopy that was present. ^{xxxvii}

In 2022/2023, 1,611 new trees were planted by Council in the municipal area. ^{xxxviii}

An evidence review commissioned by the Royal Botanic Gardens Victoria in 2021 reports on various aspects of the ways in which urban forests and green spaces impact on people's health and wellbeing, including:

¹ **Percentiles** indicate the percentage of scores that fall below a particular value. They tell you where a score stands relative to other scores. For example, if street connectivity average is at the 56th **percentile**, this indicates this street connectivity average is higher than 56 percent of other scores – in this case other municipalities in Metropolitan Melbourne.

- The research identifies four primary and interconnected pathways through which nature or green space can contribute to physical health: improved air quality, enhanced physical activity, stress reduction, and greater social cohesion.
- Empirical evidence establishes a positive association between common types of nature experiences and two key aspects: increased psychological wellbeing and a reduction in risk factors and the burden of certain mental illnesses.
- Significant positive correlations exist between the time spent in green spaces and mental health and vitality. Studies suggest that increased access to green space may be linked to reductions in neighbourhood crime, violence, and aggression.
- Recent research sheds light on the time spent in nature required to yield health and wellbeing benefits. Spending at least two hours in nature per week is associated with self-reports of good health or high wellbeing. Moreover, frequent visits to green spaces correlate with lower levels of perceived stress and cortisol, and even a short dose of 10–20 minutes in these areas can reduce stress, anger, and anxiety.
- Urban green spaces play a crucial role in enhancing community resilience and aiding communities in coping with natural disasters and extreme weather events.
- Moreover, research suggests that women and men experience and respond to urban green space differently, gaining benefits at different life stages. Despite women perceiving themselves as more vulnerable and exhibiting greater fear in urban green spaces than men, appropriately managed green spaces may offer women opportunities for increased physical activity compared to other urban contexts, such as noisy and busy streets.
- There is a growing body of evidence indicating that the health benefits associated with access to green space may be most pronounced among the lowest socioeconomic groups.
- During the COVID-19 pandemic, there has been a significant surge in visits to local parks and gardens in Australia. However, the most notable impact has been the increased engagement in active home gardening. ^{xxxix}

5. Access to public open space

Better access to public open spaces promotes physical activity and has a positive effect on mental health.

The percentage of dwellings in Whitehorse within 400m or less distance of public open space was 81.3 per cent in 2021 (59th percentile; Range from 0.0 to 100.0%). ^{xi}

A total of 41.1 per cent of dwellings in Whitehorse were within 400m of public space larger than 1.5 hectares in 2021 (59th percentile; Range from 0.0 to 100.0%). ^{xii}

6. Waste and recycling

Reducing, re-using, and recycling prevents pollution that can harm human health and the environment.

In July 2022 Council introduced the opt-in Food Organics and Garden Organics (FOGO) service. In Whitehorse in 2022/23:

- Total residual waste collected was 26,699 tonnes
- Total commingled recyclables collected was 13,786 tonnes
- Total food organics and garden organics collected was 18,043 tonnes.

This contributed to an overall waste to landfill diversion rate of 56 per cent, which is above the state average of 51 per cent. ^{xlii}

Since introducing the opt-in FOGO service in July 2022:

- There was an increase of approximately 5 per cent of waste diverted from landfill and 17% increase (2,625 tonnes) of organics in comparison to the previous year
- 76 per cent of eligible households have access to the FOGO service
- The FOGO stream contamination rate remains low at 2.5 per cent
- The recycling contamination rate of 9.6 per cent remains higher than the preferred industry level of 3-5 per cent. Typically, bin contamination rates are higher in apartments compared to separate households.
- Kerbside garbage bins contain 42 per cent by weight of food waste.

7. Housing diversity & affordability

The rate of social housing in Whitehorse is 8.3 per 1,000 estimated residential population. This is the second highest rate in the eastern metropolitan region (EMR), with Maroondah having the highest rate of 9.2 per 1,000 estimated residential population. However, the EMR overall has significantly less public housing than the other metropolitan regions; the north-western metropolitan region has a rate of 10.2 while the EMR has a rate of 6.0 per 1,000 estimated residential population.

In Whitehorse 2.2 per cent of all households in the municipality are social housing.

The proportion of renters in housing stress has increased from 30.9 per cent in 2016, to 32.6 per cent in 2021, above the Victorian average of 30.9 per cent.

Whitehorse also has a higher proportion of mortgage holders in housing stress (19.7 per cent) when compared to Victoria (15.5 per cent).

Rental housing stress is highest in Box Hill, accounting for 44.4 per cent of all renters. This is followed by Burwood and Blackburn South, both accounting for 35.3 per cent of renters. Mortgage stress is greatest in Box Hill and Burwood East, accounting for 28.9 and 25.4 of mortgagees.

In September 2023, the percentage of available affordable lettings in Whitehorse was just 1.1 per cent; significantly lower than Victoria at 8.8 per cent and Metropolitan Melbourne at 4.5 per cent. ^{xliii} In the year previous, Whitehorse only had 2.3 per cent affordable lettings.

8. Fresh food access

Access to fresh food provides residents with the opportunity to purchase nutritional foods which support healthy eating behaviours and lifestyles. Supermarkets are a common source of fresh healthy foods, but additionally, local retail outlets such as fruit and vegetable retailers (greengrocers) also provide important opportunities to purchase these types of foods.

Eating fast food on a regular basis can lead to being overweight and obesity. Being overweight or obese, increases a person's risk of developing chronic diseases such as type-2 diabetes, coronary heart disease and some cancers. Proximity to fast food retailers may influence an individual's diet, particularly if it is within walkable distance. Most people will not regularly walk distances greater than 800m – 1km to destinations such as shops and services.^{xliv}

Similarly, living within easy walking distance of fresh food stores encourages and enables people to each well and to walk or cycle instead of driving and hence further reducing their risk of chronic disease.

In Whitehorse, residents are well serviced by access to fresh food, with less distance to travel than to access fast food:

- The percentage of dwellings within 1km of a supermarket is 42.7 per cent (56th percentile; Range from 0.0 to 100.0%)^{xlv}
- There are no dwellings without any food outlet within 3.2km (100th percentile; Range from 0.0 to 0.0%)^{xlvi}
- The average distance to the closest healthy food outlet (supermarket or greengrocer) is 1046.3m (59th percentile; Range from 22.3 to 2593.4m) which is slightly less than the average distance to the closest fast-food outlet; 1105m (21st percentile; Range from 94.8 to 2661m)^{xlvii}

9. Access to social infrastructure (health, education community, leisure, and recreation)

Well-planned social infrastructure supports the liveability of communities by promoting walking and community social interaction. It is associated with improved physical and mental health and resident's satisfaction with the area in which they live. The Social Infrastructure Index (SII) developed by the Australian Urban Observatory measures 16 individual service types including Community Centres, Culture and Leisure, Early Years, Education, Health and Social Services and Sport and Recreation which were used to calculate the presence of service mix within a threshold distance.

Whitehorse has a SII of 7.9 where a maximum score of 16 represents the highest mix of social infrastructure with all service types present (this score is in the 65th percentile; Range from 2.3 to 13.7/16). (Metropolitan Melbourne has an average score of 7, with wide variation across the city.) The overall SII score for Whitehorse was derived by a score of 2.7 for Health Infrastructure (out of 6), 2.9 for Education Infrastructure (out of 4), 1.1 for Community and Sport Infrastructure (out of 3) and 1.2 for Cultural and Leisure Infrastructure (out of 3).^{xlviii}

The average distance to the closest GP (General Practitioner) clinic in Whitehorse is 809.6m (68th percentile; Range from 51 to 2149.1m).^{xlix}

10. Leisure, recreation, and cultural opportunities

Whitehorse is home to outdoor spaces, leisure centres and sporting grounds providing access to sporting clubs, community activities and recreation. Whitehorse is also home to a vast array of arts and cultural facilities providing service outcomes for the community.

Arts, cultural and recreational activity build social cohesion and improve community health and wellbeing. Whitehorse has 26 sports fields and reserves as well as a golf course, skate parks and indoor sports centres. In 2022/2023 there were 1.355m visitors to aquatic facilities, which equates to 8.01 visits to aquatic facilities per head of population, up from 4.7 in the previous 12 months.

In 2022/2023 there were:

- 37,500 attendances at Council's festivals and events
- 10.59% of people in Whitehorse are active borrowers at the libraries
- 57,062 visitors to Box Hill Community Arts Centre ⁱ

In 2023 Council opened its new performing arts and functions venue, The Round, which features a 600+ seat theatre, a 200+ seat studio theatre or event space, a function centre, creative studios, soundshell for outdoor events, extensive dressing rooms and free car parking. The Round opened for venue hire enquiries from late 2023 and has received a positive market response.

11. Public transport

Transport affects population health through pollution of the environment and emissions, which are one of the major contributors to climate change. Access to public transport helps reduce reliance on motor vehicles and promotes physical activity.

People in Whitehorse have good access to transport relative to other municipalities. In Whitehorse, the average distance to the closest public transport stop is 279.8m (71st percentile; Range from 0.0 to 966.9m). ⁱⁱ

Seventy-six per cent of dwellings have access to a bus stop within 400m (82nd percentile; Range from 0.0 to 100.0%). ⁱⁱⁱ

Almost seventy per cent of dwellings in Whitehorse are within 400m of a public transport stop with a regular service at least every 30 minutes on weekdays between 7am and 7pm (71st percentile; Range from 0.0 to 100.0%). ⁱⁱⁱ

12. Cycling infrastructure

Cycling is an essential mode of transport and an important recreational and sporting activity. As well as having great environmental and health benefits, cycling is also a key solution to reducing congestion. In the City of Whitehorse there are 35km of off-road shared paths, 21km of on-road bike lanes and 10km of on-road bike connections (informal bike routes with some on road line marking, not a continuous bike lane).

13. Employment/labour market participation

Whitehorse supports 77,921 jobs and has an annual economic output of \$24.404 billion. ^{liv}

Twenty-seven per cent of employed people in Whitehorse live and work in the local area. ^{lv}

The Whitehorse economy is driven by a combination of public sector and knowledge-based industries (public administration, health, and education), as well as professional services and population-driven industries (retail, hospitality, construction). ^{lvi}

Owing to the scale of its organisations, health care and social assistance were the top employing industry sector (17,330) followed by Education and Training (10,741) and Retail Trade (7,745).

Professional, scientific, and technical services represent the largest business base in Whitehorse and are important industries to the Whitehorse economy. As such, these industries support high-income professions which generates employment outcomes and local consumption in Whitehorse. This sector has also seen a shift in recent years – driven by COVID-19 pandemic – as many office-based businesses have relocated outside the CBD to suburban office destinations or transitioned to home-based businesses. ^{lvii}

Construction is Whitehorse’s largest output generating sector, supporting an estimated annual output of \$3.370 billion followed by Health Care and Social Assistance (\$2.598 billion) and Rental, Hiring and Real Estate Services (\$2.575 billion).

The impact of COVID-19 is varied across different industries and sectors with multiple trends observed including workforce shortages, rise of remote working, consumer purchasing trends and an increased growth of non-employing businesses since the onset of COVID-19. ^{lviii}

Part C. Health disparity in Whitehorse

The burden of poor health is not evenly spread across our community. Some population groups have significantly worse health outcomes than others. Socioeconomic disadvantage is considered the greatest cause of health inequality in Victoria as in other parts of world.

And while Australians have a world-leading health system, for many it is becoming increasingly unaffordable with out-of-pocket expenses for Medicare services and the cost of private hospital insurance cover increasing.^{lix}

Although Whitehorse is overall a relatively affluent community enjoying good health, the municipality has greater social disparity with more high-income earners and more low-income earners than other local government areas.

Figure 6 – Whitehorse Weekly Income Distribution compared to Victoria, 2021

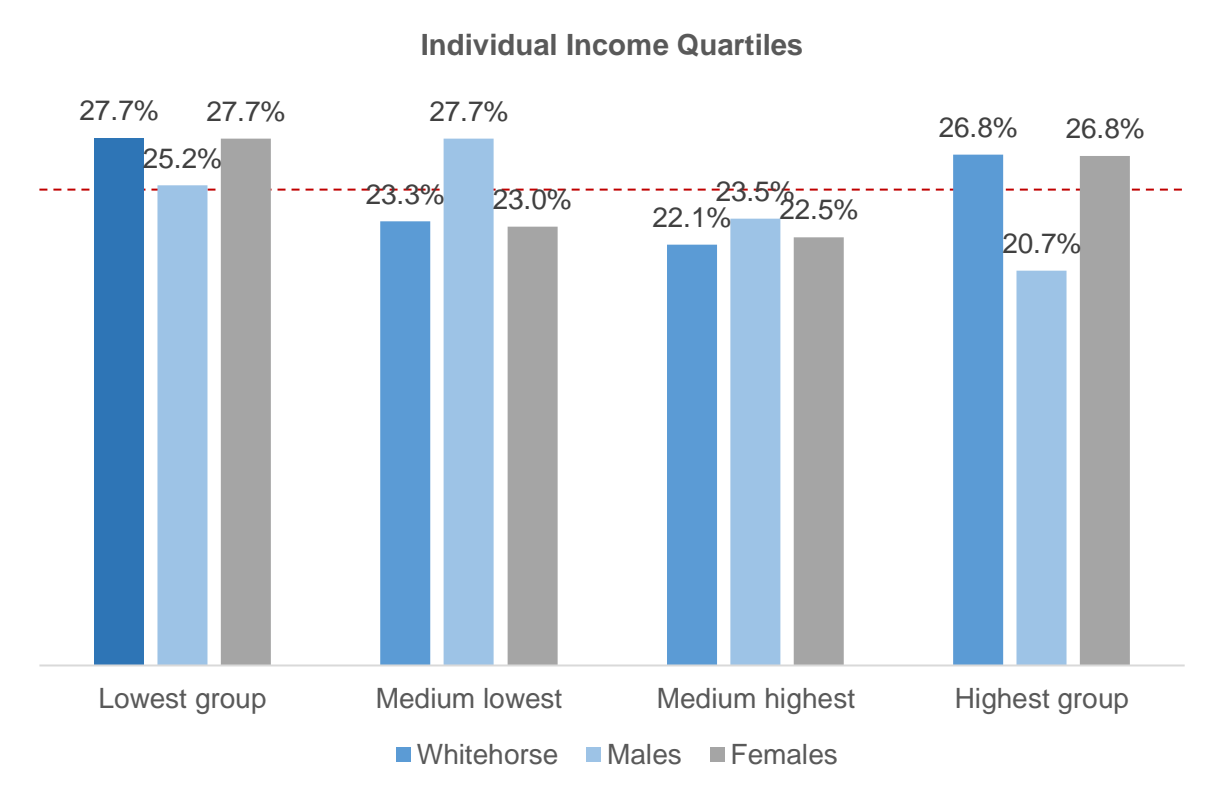


Figure 6 illustrates how Whitehorse fares regarding income distribution compared to Victoria as a whole (the red line).² It shows Whitehorse (blue), males (light blue) and females (grey) for each of the four quintiles of income (lowest to highest). Females are more highly represented in the lowest

² Individual income quartiles look at the distribution of incomes in the area of interest (LGA) relative to Victoria. Income quartiles are created for Victoria by ranking individuals from the lowest incomes to the highest incomes and then dividing the list into four equal groups or quartiles. In Victoria, 25% of persons fall into each category.

quintile (incomes between \$0-375/week), while males are more highly represented in the very top quintile (incomes of \$1,475 or more/week).

There are systematic gender differences in material well-being regardless of an individual's socioeconomic level. Gender inequality is a characteristic of most societies, with males on average faring better in social, economic, and political hierarchies. Gender inequality is perpetuated not just through unequal access to and control over material resources but also through gender norms and stereotypes which reinforce gender roles and constrain the behaviour of both women and men in ways that lead to inequality.^{lx}

Gender inequality intersects with and compounds the health disparity across all population groups and is a driver of gender-based violence.

While foundational, gender is just one part of a person's identity. Intersectionality is an approach to understanding how various parts of a person's characteristics or identity intersect to diminish or magnify the experience of discrimination or disadvantage for the person or the group. These characteristics include age, disability, gender, sexual orientation, sex characteristics, race, ethnicity, language, faith, class, and socioeconomic status.

1. People who are unemployed or underemployed

A thriving economy and access to education and employment are determinants of health and wellbeing. Access to employment is fundamental to people's wellbeing, promotes engagement in community life and provides opportunities for people to plan and manage their future security. Healthier people are more productive in all aspects of their lives including being part of the paid and unpaid workforce.

The smoothed unemployment rate for Whitehorse is 3.8 per cent.^{lxi}

People with disability are twice as likely as those without a disability to be unemployed (10 per cent) and have lower rates of labour force participation. There is a greater reliance on government pensions or benefits as the main source of income for people with disability.^{lxii}

Unemployment is highest among our young people aged 15 to 24 years. Five per cent of 15-24-year-olds in Whitehorse are not in employment or education and are at risk of long-term and profound effects on their lives because of this.

Relative to Greater Melbourne, Whitehorse had a greater proportion of people in part time work (34.8 per cent compared to 31.6 per cent) and a smaller proportion in full time work (54.3 per cent compared to 56.9 per cent).

The percentage of JobSeeker allowance recipients (typically aged 22+) and youth allowance recipients (excluding students, typically aged 21 and under) in Whitehorse is significantly lower overall (2.5%) compared to Greater Melbourne and Victoria (4.0% and 4.4% respectively).

However, during the height of lockdown restrictions due to the COVID-19 pandemic, between March and November 2020 the number of JobSeeker and youth allowance recipients in Whitehorse increased by 159 per cent (4,292 recipients).^{lxiii}

Unemployment and underemployment during the pandemic affected older Australians (aged 65 and over) also. In April 2021, 6.1% of employed older Australians were underemployed and their unemployment rate was 2.9%, compared with 1.1% in 2011. Of the 18,400 older Australians who were unemployed in 2021, roughly half were looking for full-time employment (48%) and half were looking for part-time work (52%). The underutilisation rate was 8.8 per cent compared to 5.7 per cent in 2011. ^{lxiv}

Age discrimination can affect workers' ability to remain in the workforce. One third (33%) of people who had been discriminated against gave up looking for work because of experiencing age discrimination. ^{lxv} People who experience involuntary or unexpected job loss in later life is linked to increased rates of depression compared to other forms of retirement from the workforce. ^{lxvi}

2. People on low income

In 2021 Whitehorse had a slightly higher proportion of low-income households relative to Greater Melbourne, with 24.6 per cent of households earning less than \$602 per week. ³ Low-income earners are typically students, older people and people living with a disability. Between 2016 and 2021, in Whitehorse the number of households in the low-income earner category increased by 16.1 per cent compared to 11.7 per cent in the highest income group (2,037 households compared to 1,740 households).

Whitehorse has a higher proportion of people on low income who are aged over 65 (38.1 per cent) compared with Greater Melbourne (32.9 per cent).

In Whitehorse 30.9 per cent of households in the bottom 40 per cent of incomes spend more than 30 per cent on housing costs. ^{lxvii}

The working lives of women are often different to the working lives of men. Females in Whitehorse earned less than their male counterparts across all age groups. In Whitehorse, females are more represented in lower weekly income brackets and males are more represented in higher weekly income brackets. The individual weekly gross income for males in Whitehorse was \$958 while for females it was \$648.

Women are more likely to take primary responsibility for unpaid care work, are more likely to work part-time and in lower paid roles. This difference in individual incomes has far-reaching consequences for women over their lifetime, particularly given their longer life expectancies. Women often reach their later years in life with far less savings and superannuation than men. In September 2023, the average superannuation balance for males aged 60-64 was \$402,838 (median \$211,996) and for females aged 60-64 it was \$211,996 (median \$158,806). ^{lxviii}

3. People with a disability

Whitehorse City Council recognises that, rather than a diagnostic label defining whether a person has a disability; disability is an evolving concept resulting from the interaction between persons with impairments and the attitudinal and environmental barriers that hinders a person's full and effective

³ Based on "equivalised" household income calculations, where all households are deemed to be the same size.

participation in society on an equal basis with others. This understanding of disability, grounded in the social model of disability, recognises that the way in which a community is structured through its social, built, natural and economic environments can be further disabling. This approach is in accordance with the United Nations Convention on Rights of Persons with Disabilities.

People with disability and people who experience mental illness continue to face barriers to participating in the community. 1 in 10 people with disability aged 15 or more experienced discrimination in the past year and 1 in 3 avoided situations because of their disability.^{lxxix}

People with disability are less likely to be engaged in education, particularly higher education, than people without disability. This can be influenced by experiencing discrimination, being denied the right to attend school or not having reasonable adjustments made to the educational environment such as modifying equipment or assessment procedures to make it possible for the person with disability to participate.^{lxxx}

People with disability are less likely to be employed (47.8 per cent) compared with 84.1 per cent of people without disability (80.3 per cent). Men with disability are more likely to be employed (56.1 per cent) compared to women with disability (50.7 per cent). Labour force participation declines with severity of limitation.^{lxxxi}

People with autism are less likely (40.8 per cent) to participate in the workforce, when compared to people with no reported disability.^{lxxxii}

The ability to form and maintain social connections is integral to people's health and wellbeing. Over one in six people with disability experience social isolation, compared with one in 12 people without disability.^{lxxxiii}

People with disability are less likely to participate in sporting activities or physical recreation, attend cultural events or venues than people without disability. Also, people with disability were less likely to have had daily face-to-face contact with family or friends living outside the household than a person without a disability, more likely to have cared for a person with a disability, long term health condition or old age in the last four weeks, more likely to experience some form of discrimination and more likely to assess their health as poor or fair.^{lxxxiv}

In Australia violence against women and girls with disabilities is far more extensive than amongst women and girls in the general population. Not only do they experience significantly higher levels of all forms of violence, but the violence is more intense and frequent. Women and girls with disabilities are also subjected to violence by a greater number of perpetrators throughout their life.

^{lxxxv}

One in five or 20 per cent of adults with disability experienced abuse before the age of 15. Adults with disability (47 per cent) are more likely to have experienced violence after the age of 15, compared with 36 per cent of people without disability. Two in five adults with disability or 43 per cent experienced physical violence since the age of 15. 21 per cent experienced violence from a partner and 16 per cent experienced sexual violence. More than two in five people with disability have experienced physical violence after the age of 15.^{lxxxvi}

Despite the increased risk of violence and crime, people with disability continue to face multifaceted barriers when it comes to reporting crime and seeking justice. ^{lxxvii}

a. Carers of people with disability

In Whitehorse, females are more likely than males to provide help to a family member and/or other person with a long-term disability/illness over a fortnightly period.

According to the national ABS Survey of Disability Ageing and Carers (2018), the rate of caring usually increases with age, from 1.0 per cent of those aged less than 15 years to 19.7 per cent of those aged 55 to 64 years. Overall, women were 2.5 times more likely than men to be a primary carer (5.0 per cent compared with 2.0 per cent), the average age of a primary carer was 54 years (51 years for carers overall and 50 years for other carers) and over one-third (37.4 per cent) of primary carers had disability, twice the rate of non-carers (15.3 per cent).^{lxxviii}

4. People from a non-English culturally diverse background

People from culturally and linguistically diverse (CALD) backgrounds, particularly new migrants, and refugees, are at greater risk of poorer quality health care, service delivery and poorer health outcomes compared with other Australians due to language barriers, lower health literacy, and experience difficulties navigating an unfamiliar health and welfare system. ^{lxxix}

Older people from non-English speaking backgrounds, especially those who migrated to Australia at an older age or as refugees, can face a higher risk of poorer health outcomes due to socio-economic disadvantage, social isolation, language barriers, cultural translation difficulties, underexposure to Australian services and systems and lower rates of service access. ^{lxxx}

Addressing racism and discrimination, followed closely by health access, and responding to family violence were the most critical issues identified by participants in research for the review of the Victorian Multicultural Commission in 2023. ^{lxxxi}

A sizeable number of international students study in the City of Whitehorse and many also reside in the municipality. These students are particularly vulnerable to a number of health and wellbeing risk factors, including lack of access to health care and social support services, social isolation, increased risk of assault, housing insecurity, exposure to scams, gambling, and unemployment and/or mistreatment whilst in employment.

5. People who are LGBTIQ+

The LGBTIQ+ community experience discrimination, social exclusion, harassment, and violence across many life areas.

Despite increasing acceptance of LGBTIQ+ people in Australian society and more visibility in public life and the media, they are still more likely than the general population to experience discrimination, prejudice, violence, and abuse in everyday life. Research has demonstrated that this discrimination leads to poorer mental health outcomes and a higher risk of suicidal behaviours for people who identify as LGBTIQ+. ^{lxxxii}

The self-reported health status of people who identify as LGBTIQ+ is significantly lower than people who do not identify as LGBTIQ+ (35.7% compared to 42.5% report excellent or very good health).

^{lxxxiii}

Fifty-eight per cent of LGBTQ+ Victorians have faced unfair treatment based on sexual orientation, while 77.7 per cent of trans and gender diverse Victorians have faced unfair treatment based on their gender identity. In addition, 33 per cent of LGBTQ+ people from multicultural backgrounds feel they have faced unfair treatment based on their ethnicity, cultural identity, or heritage. ^{lxxxiv}

The proportion of LGBTIQ+ adults experience discrimination or were treated unfairly by others in the last year (34.2%) is significantly higher compared with the proportion in non-LGBTIQ+ adults (15.6%).

^{lxxxv}

Discrimination and harassment targeted at LGBTQ+ Victorians takes on several forms. 36.4 per cent have faced social exclusion, 32.7 per cent faced verbal abuse and 22.6 per cent faced harassment such as being spat at or offensive gestures. ^{lxxxvi} LGBTQ+ Victorians also experience high rates of intimate and partner violence, with 42.9 per cent reporting being in an intimate relationship where they face abuse and 38.1 per cent reporting abuse from a family member. ^{lxxxvii}

People who are LGBTIQ+ experience homelessness, food insecurity, chronic disease risk factors and substance abuse at higher rates than people who do not identify as LGBTIQ+. ^{lxxxviii}

6. People who are Aboriginal or Torres Strait Islander

While the numbers of Aboriginal or Torres Strait Islander people are comparatively small in the City of Whitehorse, there exist longstanding inequalities in health and life chances between Aboriginal and non-aboriginal Australians due to the continuing intergenerational impacts of colonisation and dispossession. ^{lxxxix xc}

The estimate of the life expectancy gap (2015-17) between Aboriginal and non-Aboriginal Australians is approximately 8.6 years for males and 7.8 years for females. ^{lxxxi}

The rate of hospitalisations for potentially preventable causes has declined by 15.8 percent to 54.8 percent per 1000 people. This is the first significant decline since 2012-2013. ^{lxxxii}

According to the 2021 Census, female Aboriginal and Torres Strait Islander people in Whitehorse were more likely to report one or more long-term medical condition (39.0 per cent) compared to males (32.1 per cent). Mental health conditions are the most commonly reported long-term condition for both sexes (24.1 per cent female and 16.3 per cent male). Females were nearly twice as likely to report two long term condition compared to males (10.2 per cent and 5.2 per cent respectively).

In 2020-2021 the rate of presentation at the emergency department for alcohol or drug related harm increased to 39.3 per 1000 presentations in Victoria. For the same period, the rate of presentations for Aboriginal Victorians aged 15 -24 years has decreased with 5.4 and 5.5 per 1000 presentations respectively in 2020-21.

Aboriginal Victorians (21.2 per 1000) are five times more likely to present at an emergency department for self-harm incidents than non-Aboriginal Victorians (4.2 per 1000).^{xciii}

The Coroner Aboriginal Engagement Unit and Coroners Prevention Unit (2023) found that Aboriginal and Torres Strait Islander people in Victoria experience fatal overdoses at a rate more than three times higher than non-Aboriginal people.^{xciv}

Suicide remains the fifth leading cause of death of Aboriginal and Torres Strait Islander people in 2022. The rate increased by 17.9% percentage points from 2013-2017 to 2018-2022. The median age at death was 33.4 years (34.3 years for males and 28.6 years for females).^{xcv}

In 2022, the age-standardised suicide rate was 12.3 per 100,000 people for the whole Australian population, while for Aboriginal and Torres Strait Islander people the rate in 2021 was 27.1 per 100,000 people (for NSW, QLD, WA, SA and the NT combined - current reporting is only for jurisdictions which have adequate levels of Indigenous identification in line with national reporting guidelines).^{xcvi}

Aboriginal Victorians who said they are daily smokers has dropped from 30.6 per cent in 2019 to 22.0 per cent in 2020.^{xcvii}

In the period 2016 to 2020, Aboriginal Victorians were twice as likely to be diagnosed with cancer than their non-Aboriginal counterparts. Lung, breast, prostate, and bowel cancer were the most common types of cancers diagnosed for Aboriginal Victorians, combined they account for 46.1 per cent of all cancer diagnosis. Lung cancer diagnosis has increased by 66.9 percent amongst Aboriginal Victorians during the 2016 -2020 reporting period, this compared to a 11.4 percent increase for non-Aboriginal Victorians in the same period.^{xcviii}

Aboriginal and Torres Strait Islander people are 1.4 times more likely to experience high to very high levels of psychological distress than non-Indigenous Australians.^{xcix}

When comparing with the non-Aboriginal population; Aboriginal Victorians are 1.4 times more likely to report high, or very high, levels of psychological distress.^c

51.3 per cent of Aboriginal and Torres Strait Islander households in Victoria are renting or living in social housing and therefore have reduced access to clean, affordable, and reliable energy.^{ci}

7. People who are homeless or in insecure housing

Housing plays a critical role in ensuring individuals can fully engage in community life, both economically and socially, and is becoming less affordable across the whole of Melbourne. In September 2023, only 1.1 per cent of rental housing in Whitehorse was considered affordable, in comparison to the Victorian average of 8.8 per cent.^{cii}

Whitehorse has the second highest number of homeless people in the Eastern Metropolitan Region (1,491 people), at 0.9 per cent. Homelessness refers to people living in improvised dwellings, tents or sleeping out, in supported accommodation for the homeless, staying temporarily with other households, in boarding houses, in other temporary lodgings, and living in severely crowded dwellings.

In 2021-22, a total of 1,712 people received specialist homelessness services. Of those receiving assistance, 986 were female (58 per cent) and 726 were male (42 per cent).

8. People who are digitally excluded

The Australian Digital Inclusion Index (ADII) measures three key dimensions of digital inclusion: Access, Affordability, and Digital Ability. Some Australians are particularly digitally excluded.

Sociodemographic groups with ADII scores 10.0 or more points below the national average (73.2) are Australia's most digitally excluded. In 2023, these groups include:

- Aged 75+ (48.5)
- Did not complete secondary school (56.3)
- Mobile-only users (57.0)
- Aged 65-74 (61.1)
- People with a disability (61.4)
- People living in public housing (61.6)
- Low income – under \$33,800 (54.7) ^{ciii}

Overall, 9.4 per cent of the Australian population was highly excluded, registering an Index score of 45 or below. This is down from 10.6 per cent in 2021. Women have a lower level of digital inclusion than men across all age categories ^{civ}.

Substantial numbers of Australians continue to experience affordability stress, meaning they would need to pay more than 5 per cent of household income to maintain quality, reliable connectivity. These include people with disability (55.1 per cent), people living in public housing (64.1 per cent), people over the age of 75 (65.2 per cent), and people who are currently unemployed (69.4 per cent).

The number of mobile-only users has slightly increased, from 9.6 per cent in 2021 to 10.5 per cent in 2023. In general, mobile-only use is associated with lower levels of digital inclusion. Some groups, First Nations people (21.3 per cent), and those on the lowest incomes (20.7 per cent) continue to be overrepresented in their reliance on mobile-only access.

Digital inclusion remains intricately linked to age. Despite gains in overall scores between 2021 and 2023, people aged over 65 maintain lower scores than the national average. Those aged 65-74 record scores 12.1 points below the national average, while those over 75 record scores 24.6 points below. For people over the age of 75, disparities in Digital Ability (41.6 points below the national average) and Access (18.0 points below the national average) are considerable.

People with lower levels of digital access risk missing essential information and access to beneficial services and supports. Senior people report the expectation that everyone has access to information technology as a form of discrimination. ^{cv}

The Commonwealth Government's My Aged Care is available only via digital connection – and this is a barrier for people who may have low digital skills, be of non-English speaking background or have limited financial means for internet or digital device access.

Part D. Health and wellbeing in Whitehorse

Many people in Whitehorse enjoy good health and wellbeing due to the liveability of the municipality and the relative advantage of most people. Whitehorse has experienced higher life expectancy than the State average since the Department of Human Services started collecting data in 1997. Life expectancy has also increased over this time.

An analysis of Whitehorse's health and wellbeing using the available evidence found the most significant **preventable contributors** to poor health and wellbeing relate to social inequity, overweight or obesity, lack of physical activity and poor eating, and poor mental health. Social isolation (related to any number of factors, such as age, disability, and social exclusion) and family violence contribute significantly to poor mental health and wellbeing. Emerging threats to public health include the impacts of social media and use of e-cigarettes on mental wellbeing of young people, as well as broader social change brought about by the COVID-19 pandemic and the impacts of climate change.

In addition, we can anticipate that there will be impacts on people living in the City of Whitehorse due to the commencement of two major transport projects – 'North-East Link' and 'Suburban Rail Loop East' – by the Victorian Government during their lengthy construction periods.

North-East Link will join the M80 Ring Road in Greensborough to the Eastern Freeway in Bulleen, as well as widen the Eastern Freeway along the municipality's northern boundary. The project will see the encroachment of the Freeway into the Koonung Creek Reserve. The North-East Link is expected to be completed in 2028.^{cv} For residents in Whitehorse changes that are likely to impact on health and wellbeing include:

- Reduced amount of open space to exercise and socialise
- Loss of thousands of mature trees that currently provide environmental and amenity benefits
- Noise, air quality and amenity issues during construction and operation

Suburban Rail Loop East (SRLE) is a new underground train line between Cheltenham and Box Hill. Two new stations will be constructed within the City of Whitehorse – one in Box Hill and the other in Burwood. The trains are expected to be operational by 2035.^{cvii} The new train services are anticipated to bring opportunities for more people to live and work around each of the SRLE stations and to influence how people move around metropolitan Melbourne. The Victorian Government is planning for the additional housing, jobs, and facilities that these communities may need.^{cviii} While the final SRLE plans have not been determined, the impacts on health during construction may include:

- The effects of noise and air pollution
- Distress due to relocation
- Mental health issues related to changing social and recreational environment

1. Impacts of COVID-19 pandemic

In March 2020, the outbreak of a novel coronavirus was declared a pandemic and formally named COVID-19. The Australian and Victorian governments responded by introducing a series of pandemic control measures aimed at containing and minimising the transmission of the virus both from outside and within communities.

In a study of Victorians aged over 18 who were in paid employment it was found they recovered from an extended lockdown of 112-days (8 July– 27 October 2020) with no measurably significant long-lasting effects when compared to the rest of Australia. ^{cxix}

However, the impacts of the COVID-19 pandemic and subsequent restrictions were not evenly felt across the community.

A narrative review undertaken in 2022 found that in general people used coping strategies and demonstrated mental health help-seeking behaviours in response to the COVID-19 pandemic restrictions in Victoria in 2020. This review also reported that women, children, young people, carers, people who became unemployed owing to the pandemic, and those with pre-existing psychiatric conditions had a higher risk of adverse mental health consequences during the COVID-19 pandemic in 2020. ^{cx}

The full impacts of the COVID-19 pandemic on the preventable contributors to poor health and wellbeing in diverse groups of people are starting to be realised.

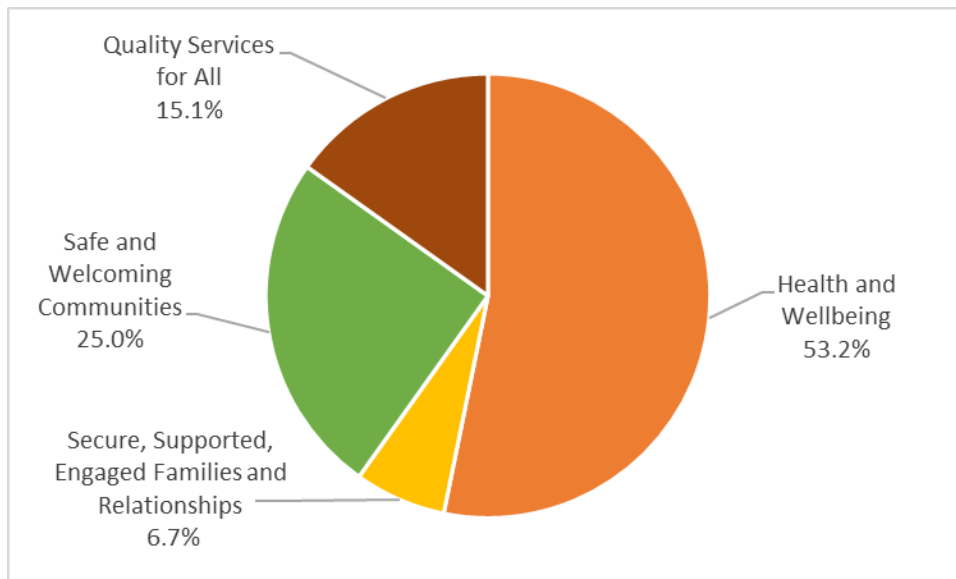
In Victoria, the number of recorded family incidents overall recorded increased by 6 per cent from 82,205 in 2019-20 to 93,440 in 2020-21. Larger increases were seen in the number of incidents recorded between former partners (up 8%) and where the victim was the child of the alleged perpetrator (up 14%). Also, during the period June and October 2020, as lockdowns that year eased, the number of recorded family violence incidents and family violence related criminal offences was statistically higher than would be expected based on historical trends. ^{cxix}

Globally, a meta-review in 2023 found that “probable” depression and anxiety were significantly higher than pre-COVID-19, and there was some evidence that that adolescents, pregnant and postpartum women, and people who had been hospitalised with COVID-19 experienced heightened adverse mental health. ^{cxii}

A VicHealth survey conducted in September 2020 during the second wave of the coronavirus pandemic in Victoria (the second in a series undertaken by VicHealth) found distinct differences between the experiences of communities facing hardship and the wider population, notably young people aged 18–35 years, people on low incomes, people who were unemployed and people with a self-reported disability. ^{cxiii}

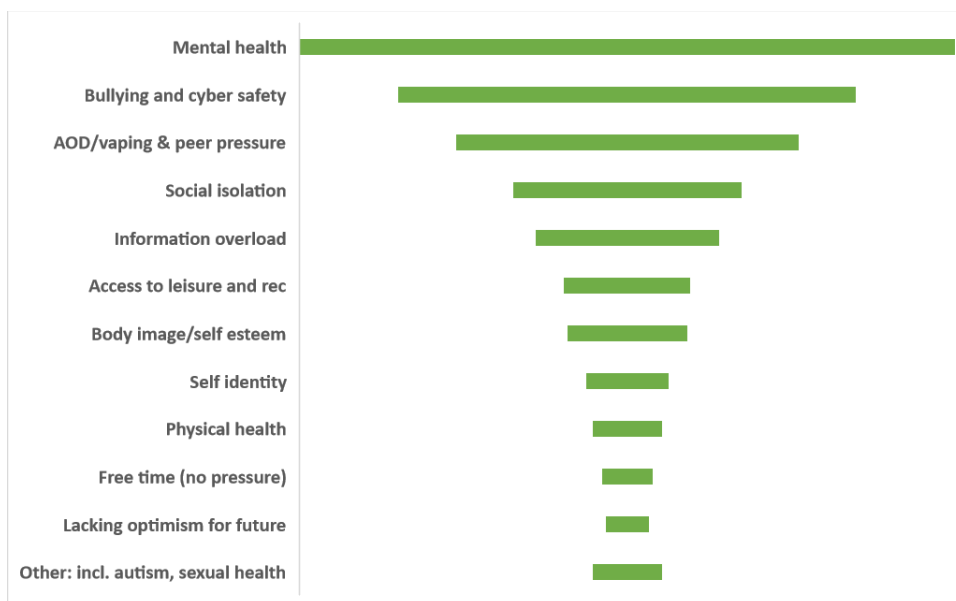
Insights into the impact of the COVID-19 pandemic on the mental wellbeing of young people living in Whitehorse are gleaned from a post-pandemic consultation by Whitehorse City Council in March to May 2023. The engagement involved a survey and focus group discussions with a total of 720 young people aged 12-25 living in Whitehorse. Issues related to their health and wellbeing were the most frequently reported by young people.

Figure 7: Key themes of issues concerning young people in Whitehorse, 2023



The health and wellbeing issues concerning young people in Whitehorse in 2023 echo those discussed in the press and media about the compounding effects of the COVID-19 pandemic response on their mental wellbeing. Young people aged 12-25 are concerned about their mental health in general, the effects of (cyber) bullying, the peer pressure associated with vaping, being socially isolated and feeling overwhelmed by the information generated by social media. A sense of having no free time where there is no pressure and of pessimism for the future give further insight to how young people in Whitehorse are feeling.

Figure 8: Most frequently reported health and wellbeing issues by young people in Whitehorse, 2023



International students are vulnerable to socio-economic shocks because they are often reliant on precarious employment and insecure private income sources. The COVID-19 pandemic meant many in Whitehorse accessed food and material support through their university or local welfare agencies.

A Future of Work Lab report in 2022 describes how international students were one of the hardest-hit groups during COVID-19. International students already experienced precarious conditions pre-pandemic and the COVID-19 pandemic exacerbated these. ^{cxiv} People living in Melbourne, including these students, experienced the most days of lockdowns of anywhere in the world.

Many students were unable to retain their jobs and were effectively stranded in Australia without access to adequate protection provisions and isolated from families. This led to widespread financial difficulties which deteriorated as the pandemic carried on, impacting on their ability to pay for rent, healthcare, and medicines. All this combined with increased racism, placed an increased strain on the mental health of international students. ^{cxv}

For international students, who were already separated from their community overseas and lacking community engagement in Australia due to the restrictions, studying online further eroded their sense of connection and social inclusion during the pandemic. The report highlighted that a key outcome of online learning was an overall decline in student experience and engagement, with lower academic achievement. ^{cxvi}

While a quarter of Australia's population is born overseas, by March 2023, 47 per cent of people who had died from COVID-19 were born outside of Australia indicating inequity in health outcomes for migrant communities. This is likely due to increased risks for migrant communities in contracting COVID-19, less access to clear and consistent information and lack of access to appropriate and timely healthcare. Migrant communities risked decreased income security and psycho-social wellbeing during the pandemic. ^{cxvii}

Some ethnic groups experienced ongoing hurt and distress due to the disproportionate impact of COVID-19, including loss of family members overseas, and targeted media scrutiny. ^{cxviii}

A joint study by the Australian Research Centre in Sex, Health, and Society at La Trobe University and LGBTIQ+ Health Australia, conducted in the period November 2021 to February 2022, highlights the impact of the COVID-19 pandemic on LGBTIQ+ people in Australia and their mental health. Called *Pride and Pandemic*, the study employed a large online survey and focus group discussions with various LGBTIQ+ subgroups, including young people, trans, and gender diverse individuals, those from culturally diverse communities, and rainbow families (LGBTIQ+ parents or caregivers of young children). The report spotlights ongoing challenges for the LGBTIQ community in Australia, revealing issues such as poor mental health outcomes, systemic discrimination, and obstacles to equitable healthcare. The data suggests that the pandemic intensified existing challenges for the LGBTIQ community. ^{cxix}

Research by Respect Victoria (2020) found there to be a high degree of resilience by older people in the face of the threat of COVID-19 and the pandemic response. However, there was an apparent increase in ageism, which is a known contributor to elder abuse. Risk factors for elder abuse that increased during the pandemic response include social isolation, less access to health care and exercise, more reliance on the use of technology, financial stress, and carer stress. ^{cxx}

In Victoria, the proportion of adults who experienced high or very high levels of psychological distress significantly increased from 18.1% pre-pandemic in 2019 to 23.4% in 2020 during the first

year of the pandemic. This was significantly higher in the younger age groups—35.0% of adults aged 18-24 years and 27.8% of adults aged 25-34 years. ^{cxxi}

ABS mortality data and suicide records data covering the period up until the end of 2021 does not indicate an increase in suicide deaths in Australia during the pandemic. ^{cxxii}

In 2020, the reporting of low or medium Life Satisfaction was 22.4% in Whitehorse, similar to the whole of Victoria (22.3%), and the EMR (21.0%). ^{cxxiii}

In 2020 Council undertook two pandemic community needs assessments that involved reviews of national, state, and local data together with direct personal contacts to survey government departments and a substantial number of community organisations. ^{cxxiv} The findings demonstrated that during this time:

- Both businesses and community groups required financial assistance during the pandemic. (Council received the equivalent of roughly five years' worth of applications for Rates Relief and Support in a five-month period and over 500 applications for community and business Recovery Grants in 2020.)
- Women were more significantly affected in the charities and not-for-profits job sector.
- An estimated 500 to 1,000 people, including international students, were provided with relief support by local agencies in Whitehorse.
- There was a decline in patients presenting to health services with time-critical cardiac and stroke conditions
- New online and teleconferencing service delivery models acted as both an inhibitor and a facilitator for access and attendance at health and community services.
- Family violence incidents were more complex and serious.
- Further disengagement with secondary education by young people already at risk was reported. There was an increased demand for welfare/police checks and involvement due to issues at home.
- There was more social isolation and less access to appropriate health services in a timely manner for the elderly living at home.
- Community housing became more difficult to access.

With government pandemic-related supports for housing, rental, and income no longer available, the negative economic impacts of the COVID-19 pandemic coupled with escalating cost-of-living pressures are impacting heavily on the health and wellbeing of certain groups of people in Whitehorse.

2. Chronic disease and avoidable deaths

Chronic diseases cause most of the burden or impact on the Australian population. Burden of disease measures a combination of the years of healthy life lost due to living with ill health and the years of life lost due to dying prematurely. In 2022, the five groups of diseases causing the most burden were cancer, musculoskeletal conditions (e.g., arthritis), cardiovascular diseases, mental health conditions & substance use disorders and neurological conditions. ^{cxxv}

Potentially avoidable deaths are deaths among people younger than 75 from conditions that may be preventable or treatable through existing primary or hospital care.

In 2021, 15.7 per cent of deaths in Australia were potentially preventable. Of these 63 per cent of deaths were male and 37 per cent were female. ^{cxxvi}

Many chronic diseases, such as cardiovascular diseases and cancers, and injuries are preventable. In Whitehorse, more than one in five residents suffered from two or more chronic diseases (22.6%). ^{cxxvii}

Chronic disease is the most significant health challenge for the population overall, due not only to the scale of the problem and the health care costs, but also the personal, social, and economic impacts. Chronic diseases are also the costliest conditions to treat.

a. Chronic disease

The most recent measures of chronic disease in Whitehorse reflect the percentage of people in the population who had a diagnosis of a chronic disease at the time of the 2021 census (Table 1). Earlier data from 2017 showed the percentage of the population who reported a chronic disease, rather than having a diagnosis, and therefore the rates are much higher (Table 2).

Table 2 – Diagnosed Chronic Disease measures for Whitehorse, Melbourne Metropolitan Area, and Victoria, Male and Female (per cent of population) 2021

Diagnosis of chronic disease, 2021	Whitehorse	Victoria	Metro Melbourne	Male	Female
People diagnosed with arthritis	7.0%	8.0%	6.9%	4.6%	9.3%
People diagnosed with cancer	2.8%	2.8%	2.5%	2.6%	3.0%
People diagnosed with heart disease	3.6%	3.7%	3.3%	4.3%	3.0%
People diagnosed with stroke	0.9%	0.9%	0.8%	0.9%	0.8%

Source: 2021 ABS Census of Population and Housing

In 2017 the percentages of people in Whitehorse reporting arthritis, heart disease and type 2 diabetes were lower than the Victorian averages, while reporting of osteoporosis was slightly higher.

Table 3 – Reported Chronic Disease measures for Whitehorse and Victoria (per cent of population) 2017

Report of Chronic Disease Measure, 2017	Whitehorse	Victoria
People reporting asthma	19.9%	20.0%
People reporting arthritis	18.1%	20.5%
People reporting cancer	8.1%	8.1%
People reporting type 2 diabetes	4.1%	5.5%
People reporting heart disease	5.2%	6.7%
People reporting stroke	2.2%	2.4%
People reporting osteoporosis	6.1%	5.7%

Source: Victorian Population Health Survey, 2017

Overall and for most age groups, males experienced more total disease burden than females. In 2022, males experienced 1.1 times the rate of total burden and 1.5 times the rate of fatal burden of females, while females experienced 1.1 times the rate of non-fatal burden of males. For males, the leading causes of total burden were coronary heart disease, suicide & self-inflicted injuries and back pain and problems, while for females, they were dementia, followed by back pain & problems and chronic obstructive pulmonary disease. ^{cxxviii}

Health promotion, prevention and early intervention strategies reduce the burden of chronic disease on the individual and the population.

b. Risk factors for chronic disease

Adequate physical activity, consumption of fresh food, particularly fruit and vegetables, and maintaining a healthy weight, avoidance of smoking and moderate or low use of alcohol all contribute to a healthy lifestyle and reduce the risk of chronic disease.

In 2017, 57.4 per cent of people in Whitehorse did not meet the vegetable consumption guidelines which is similar to all Victorians at 56.8 per cent. In Whitehorse 17.3 per cent of people consumed take-away food more than once a week, more than the 15.3 per cent of Victorians. 6.1 per cent of people consume sweetened drinks daily in Whitehorse, compared to 10.1 per cent of Victorians. Men were less likely to meet the dietary guidelines for healthy eating than women. ^{cxxix}

Food insecurity contributes to inadequate intake of fresh nutritious food and increased consumption of processed high calorific foods. Following on from the COVID-19 pandemic and recent rapid increases in the cost of living, Foodbank reports that in 2023: ^{cxxx}

- Compared to 2022, the first-time food insecure are increasingly metro (up 4%), middle-income (up 7%), employed (up 5%), mortgage-holding (up 6%) and renting households (up 5%) who experience increased food insecurity.
- In the past year, 36 per cent of Australian households experienced moderate to severe food insecurity. The means reducing the quality, variety, or desirability of food and at worst, eating patterns are disrupted. A further 23 per cent of households fall into the category of severely 'food insecure', which means they are actively going hungry because people are reducing their food intake, skipping meals, or going entire days without eating.
- Almost half of the whole of the Australian population (48%) feels anxious or struggles to consistently access adequate food in 2023, up from 45 per cent in 2022.

In 2017, 46.6 per cent of people in Whitehorse did not obtain sufficient exercise for good health, with 29.3 percent spending seven or more hours sitting on an average weekday. ^{cxxxii} Whitehorse percentages are higher than the Victorian percentages on both measures (at 44.1 and 26.5 per cent respectively).

In 2017, 46.9 per cent of adults in Whitehorse reported being pre-obese or obese. ^{cxxxii} A different measure used in 2020 – the proportion of adults who reported being overweight or obese – was 43.2 per cent for Whitehorse compared with the Victorian rate of 51.0 per cent. ^{cxxxiii} While the proportion in Whitehorse is lower than that for the Victorian population, it is evident that a significantly large proportion of the population is faced with a higher risk for many chronic diseases

such as cardiovascular disease and type 2 diabetes. Aboriginal and Torres Strait Islander people have a higher risk, with 54.8 per cent being overweight or obese in Australia. ^{cxxxiv}

Australia-wide in 2021, 72 per cent of people with disability aged two and over are overweight or obese compared to 55 per cent of those without disability. In many instances this is directly related to their disability or medication. 47 per cent of people with disability aged two and over do not eat enough fruit and vegetables. ^{cxxxv}

Close to a quarter of all children in Victoria (23 per cent) in 2017 were overweight or obese. ^{cxxxvi}

The Whitehorse Well-being Profiler Survey (2017) of 3,000 students in Whitehorse highlighted how physical activity participation for young people declines as they progress through secondary school, particularly for girls. ^{cxxxvii} For these students, levels of physical exercise, sleep quality and perception of general health are declining rapidly from Years 6 to 12. In the 2017 survey, 26 per cent of young people were not satisfied with their health, with 7 out of 10 reporting that they often feel sleepy and tired. Young people who reported having 7 hours or less of sleep also tend to report lower satisfaction with quality of sleep. Also, 58 per cent reported spending 4 hours or more each day engaging in sedentary activities at home such as watching television, doing homework, or playing games. ^{cxxxviii}

Results from a 2017 Victorian Agency for Health Information survey show that a significantly higher proportion of LGBTIQ+ adults had been diagnosed with asthma and had four or more adverse lifestyle risk factors, such as hypertension and type 2 diabetes mellitus, than non-LGBTIQ+ adults. ^{cxxxix}

There are significant differences in the proportion of males and females in the Victorian population who are overweight or obese, with 44.0 per cent of women compared to 58.2 per cent of men being overweight or obese.

Also, there is a significant difference between Australians born overseas (46.0 per cent) and those born in Australia (54.0 per cent). ^{cxl}

For information about smoking and alcohol use see Section: [Harms from Alcohol and Other Drugs](#).

3. Injury

Injury may be intentional (e.g., caused by violence from another person) or unintentional (e.g., caused by falls, road accidents). The role of public health may cover prevention, early intervention, and risk mitigation.

a. Falls

Falls are the leading cause of unintentional injury in older Australians. As our population ages and the number of older people grows, the likelihood of more falls and fall-related hospitalisations increases.

Falls were the leading cause of injury among hospital admissions (36.7%) and emergency department presentations (48.4%) for unintentional injury in Victoria in 2021/2022. Falls are related to both gender and age. In Victoria in 2021/2022, males accounted for more hospital admissions and

emergency department presentations for unintentional injury than women in all age groups up to 64 years. However, in the 65 years and older group, females accounted for more hospital admissions and emergency department presentations than males. ^{cxli}

Experiencing a fall can trigger a loss of confidence in an older person and lead to an ongoing fear of falling. This can lead to the person limiting their movements and reducing their activity, which further increases the risk of falling due to declining physical health. Falls can also result in a permanent loss of mobility, or higher reliance on mobility equipment such as walking frames and wheelchairs and carer assistance.

The rate of hospital admissions due to falls by people who live in Whitehorse in 2020/2021 was 856 per 100,000 population compared with 846 per 100,000 for Victoria as a whole. The rate of admissions for females (1056/100,000) was significantly higher than for males (709/100,000). Most falls occur in the home. ^{cxlii}

b. Road related injury

During 2022/2023 there were two road fatalities in the municipality of Whitehorse, one female driver and one male motorcyclist. ^{cxliii}

Within the City of Whitehorse during 2006-2019, 64.5 per cent of crash fatalities were male, while 35.5 per cent were females. ^{cxliv}

In Whitehorse during the period 2014-2018 pedestrian fatalities and injuries were most common in people aged 18-25 years. ^{cxlv}

Hospitalisations due to transport injury for residents of Whitehorse in 2020 occur at a rate of 158 per 100,000 people (compared to the Victorian rate of 220/100,000). 38.4 per cent of hospitalisations are for Whitehorse residents who are car occupants, 35.1 per cent for cyclists, 11.6 per cent for motorcyclists and 8.3 per cent for residents who are pedestrians. The rate for males is higher (at 194/100,000) than for females (122/100,000). ^{cxlvi}

c. Violence

The rate of *recorded* crimes against the person in Whitehorse in 2022/23 was 573.8 per 100,000 people, lower than Victoria as a whole (987.5/100,000). ^{cxlvii}

The rate of *recorded* family violence incidents in Whitehorse in 2022/23 was 839 per 100,000 population, higher than the rate in 2018/19 of 677 per 100,000 population. ^{cxlviii}

The rate of crimes against the person which were family *offences* in Whitehorse in which women were victims is higher for women than for men, for example in 2021/22 it was 421 for women and for men it was 157 per 100,000 population. ^{cxlix}

Violence is a gendered issue. Community and family violence is mostly perpetrated by men. ^{cl}

Violence in the general community is mostly experienced by men perpetrated by someone (usually a man) not known to them while family violence and intimate partner violence (including sexual assault) victims are mostly women in a current or former relationship with the perpetrator (usually a man). ^{cli}

Women and children are far more likely to experience violence in the home than in the general community, and by a male known to them.

- Every week, at least one woman is murdered in Australia by a current or past partner.
- Children are present as victims or witnesses in at least a third of all incidents reported to police.
- Women with a disability experience higher risk of violence.

Australian surveys and studies estimate that children are present in between 36 – 59 per cent of family violence incidents. ^{clii}

The City of Whitehorse has almost half the rate of recorded family violence *incidents* for Victoria. However, there were still 1,470 family violence incidents recorded in 2022/2023: an average of 28 incidents every week. ^{cliii} It is estimated that only 25 per cent of family violence incidents are reported to the police ^{cliv} so the true annual number of family violence incidents in Whitehorse may be closer to greater than 5,880 per year, equating to 113 incidents per week.

Family violence has detrimental and long-lasting effects on children and young people. ^{clv}

Forty-seven per cent of adults with disability *report* having experienced violence after the age of 15, compared with 36 per cent of adults without disability. ^{clvi}

Women and girls with disabilities not only experience significantly higher levels of all forms of violence but the violence is more intense and frequent than amongst the general population. ^{clvii} Women and girls with disabilities are also subjected to violence by a greater number of perpetrators throughout their life. ^{clviii}

People who are LGBTIQ+ experience emotional or psychological abuse as the most usual form of family violence, with 12.7 per cent of LGBTIQ+ people reporting they had experienced this in the previous two years. ^{clix} Intimate and partner violence is experienced by LGBTIQ+ Victorians at high rates: 42.9 per cent report being in an intimate relationship where they face abuse while 38.1 per cent report abuse from a family member. ^{clx}

Local specialist family violence service use during restrictions related to the COVID-19 pandemic (in 2020) show that the first-time engagement of victim survivors increased from an average of 30 per cent pre COVID-19 to 60 per cent. ^{clxi}

4. Mental health

The foundations for good mental health begin before birth and progress into early childhood, older childhood, and adolescence, during family building and the working years, through to older age. ^{clxii}

Anxiety and depression are the most frequent forms of mental illness in Australia. In Whitehorse, 20.6 per cent of people experience anxiety or depression; 23.6 per cent are female and 17.2 per cent are male. ^{clxiii}

Diagnosed long term mental health conditions (which include anxiety and depression) are experienced by 7.4 per cent of people living in Whitehorse, compared to 8.8 per cent of Victorians and 8.1 per cent of people living in Metropolitan Melbourne. 8.9 per cent are female and 5.8 per cent are male.

Most people with mental health-related problems do not access professional help. There is a significant gap between the prevalence of mental illness and the uptake of mental health services in every age group. In Whitehorse, the percentage of females and males who sought professional help for a mental health problem in the last 12 months in 2017 was 11.2 per cent and 12.5 per cent, respectively. ^{clxiv}

In its Executive Summary, the Australian Academy of the Humanities (p.6) outlines the proven impacts of cultural and creative activities on loneliness, social cohesion, and the wellbeing of communities ^{clxv}:

- ‘Almost 50% of Australians report feeling that society is broken. 36% feel like a stranger in their own country. One in four Australians report frequent feelings of loneliness, and the risks of premature death due to loneliness and social isolation have been found to be as big or bigger than obesity, smoking up to 15 cigarettes a day, or air pollution.
- A range of studies have found that deliberately focusing cultural and creative activities on social cohesion helps to build community, belonging, and trust; enhances empathy and inclusion; helps combat the growing issues of loneliness and isolation; assists individuals and communities to recover from disasters and trauma; and makes cities, suburbs, and regions more liveable.
- Engaging with arts and cultural activities has been found to mitigate the risks of dementia. ^{clxvi} In 2016, Australian researchers produced the first dose-response style study of arts and mental health, showing that 2-hour “doses” of creative activities per week could enhance mental wellbeing in a general population.’

a. Self-harm

Intentional self-harm and suicide in Australia manifest complex gender disparities, for example females exhibit higher hospitalization rates for self-harm, while males disproportionately account for a greater number of suicides. In addition, we see nuanced variations among culturally and linguistically diverse groups.

Rates of hospitalisations for intentional self-harm in Australia are higher for females than males (139 compared with 69 per 100,000 population). A trend emerging in females aged 0-14 years saw the rate of hospitalisation increase from 41 per 100,000 population in 2019–20 to 72 per 100,000 population in 2021–22. The highest rates are observed in females aged between 15-29 years. ^{clxvii}

The number of hospital admissions in 2018, where it was determined that the injury or poisoning was purposely self-inflicted, per 1,000 persons in Whitehorse was 1.30 female and 0.86 male, compared to the Metropolitan East rates of 1.2 female and 0.6 male. ^{clxviii}

The higher rate of intentional self-harm by females does not result in higher rates of suicide. Rates of suicide are higher for males than for females which is due to males tending to use more lethal methods than females, as well as females' help-seeking behaviour. ^{clxix}

In Australia, males are 3 to 4 times more likely to take their own life than females. In 2021, there were 2,358 male deaths at a rate of 18.2 per 100,000, compared to 786 female deaths at a rate of 6.1 per 100,000. ^{clxx}

In 2022, suicide accounted for the highest number of years of potential life lost among leading cause groups of conditions for both males and females. Over three-quarters (75.6%) of people who died by suicide were male. The suicide rate for males increased by 2.6% from 2021. The suicide rate for females decreased by 2.3% from 2021. ^{clxxi}

Suicide ideation is commonly experienced by LGBTIQ+ people, with 73.2 per cent having considered suicide compared with 13.2 per cent of the general Australian population. ^{clxxii}

A retrospective analysis of 29,213 hospital admissions for self-harm among people aged 15 years or older in Victoria between 2014/2015 and 2018/2019 found that when grouped together, culturally, and linguistically diverse individuals had lower rates of (hospital-treated) self-harm compared with the non-culturally and linguistically diverse individuals. However, the analysis showed that groups of people originating from Sudan and Iran had higher rates of hospital admissions for self-harm than non-culturally and linguistically diverse groups. ^{clxxiii}

b. Gambling

Whitehorse has 431 electronic gaming machines (EGMs) in six venues across the municipality. In 2022/23, \$56.1 million was spent on gaming machines, equivalent to \$153,738 per day or approximately \$402 per adult. ^{clxxiv} Overall Whitehorse is ranked 25th out of 79 Local Government Areas for gaming machine losses in Victoria.

According to the Victorian Responsible Gambling Foundation gambling harm in Victoria comprises:

- 50.2 per cent harm from low-risk gambling.
- 34.5 per cent harm from moderate risk gambling.
- 15.2 per cent harm from high-risk gambling. ^{clxxv}

While harm from high-risk gambling is more severe at an individual level, harm from low-risk and moderate-risk gambling has a greater impact on the community because the number of people affected is much greater (low-risk gambling can affect up to 1 other). This reinforces findings that harm from gambling is not limited to people who experience high-risk gambling.

People experiencing high-risk gambling are more likely to be diagnosed with depression (41.9 per cent) compared to moderate-risk gamblers (24.1 per cent). They are also twice as likely (39.5 per cent) as moderate-risk gamblers (20 per cent) to be diagnosed with anxiety disorders. Around one in ten low-risk gamblers reports experiencing depression or anxiety disorders.

A study by the Victorian Responsible Gambling Foundation has found that:

- Men are significantly more likely than women to be high-risk gamblers, moderate-risk gamblers, and low-risk gamblers.
- Conversely, women were significantly more likely to not experience gambling harm.
- People experiencing high-risk or moderate-risk gambling were most likely to be aged 18–24 or 55–65 years.
- People aged 75 or above were least likely to experience high-risk gambling. ^{clxxvi}

There is also an established link between high-risk gambling and family violence. In Australia, people with gambling problems are more than twice as likely as non-problem gamblers to perpetrate or experience family violence. As a result, family violence is a commonly co-occurring issue for people seeking treatment for gambling harm. More than one third of problem gamblers report being abused. ^{clxxvii}

c. Young people

In Australia, the onset of mental illness is typically around mid-to-late adolescence young people aged 18-24 years old have the highest prevalence of mental illness than any other age group. ^{clxxviii}

Suicide is the leading cause of death for young people. Over one-third of deaths in Australians aged 15–24 was due to suicide in 2021. Suicide rates are more than twice as high in young Indigenous Australians compared to non-Indigenous Australians. In 2017–2021, the age-specific rate of suicide deaths was 3.1 times higher in Indigenous Australians aged 0–24 and 2.9 times higher in those aged 25–44, than non-Indigenous Australians. ^{clxxix}

In 2017 pre-pandemic, students in Whitehorse had levels of physical exercise, sleep quality and perception of general health decline rapidly from Years 6 to 12. Twenty-six per cent of young people were not satisfied with their health, with seven out of ten reporting that they often feel sleepy and tired. Young people who reported having seven hours or less of sleep also tend to report lower satisfaction with quality of sleep. Also, 58 per cent reported spending four hours or more each day engaging in sedentary activities at home such as watching television, doing homework, or playing games. ^{clxxx}

These students reported that they “worry a lot and get stressed easily” and 50 per cent of those surveyed had symptomatic reports of Anxiety and Stress, increasing from Years 6 to 12. In the same survey one in four reported that they are often unhappy, with experiences of depressive symptoms increasing from Years 7 to 12. Of the students surveyed one in four had experienced bullying and one in five reported being teased because of their culture. ^{clxxxi}

Mental health was the most frequently raised health and wellbeing issue by young people in Whitehorse in a post-pandemic consultation conducted in 2023. See Section [Impacts of the COVID-19 Pandemic](#)

Disordered eating behaviours are commonly experienced by Australian adolescents, with more than a third (31.6 %) engaging in them within any given year. ^{clxxxii}

Eating disorders are serious mental illnesses that have the highest mortality rate of any psychiatric illness, and which most often emerge in childhood and adolescence. Many people experiencing an eating disorder suffer from depression and anxiety, and co-morbid psychiatric issues. ^{clxxxiii}

d. Women

In Australia, 28 per cent of females aged 18-24 years experienced high or very high psychological distress levels, the highest of any age group or sex in 2022. The experience of high or very high psychological distress levels across all age groups were 16.7 per cent of females and 11.8 per cent of males. ^{clxxxiv} In Whitehorse in 2017, 23.6 per cent of females experienced anxiety or depression. ^{clxxxv}

Intimate partner violence is the leading preventable contributor to death, disability and illness in Victorian women aged 15–44 years, with the greatest burden due to the wide-ranging and persistent effects on women’s health and increased risk of anxiety and depression. ^{clxxxvi} Intimate partner violence, which may involve sexual assault, is the most common and pervasive type of family violence perpetrated by men against women.

Family violence occurs when a perpetrator exercises power and control over another person. It involves coercive and abusive behaviours resulting in fear and insecurity. It covers a wide spectrum of conduct that involves an escalating spiral of violence – physical, sexual psychological, emotional, cultural, spiritual, and financial. Family violence affects people across the community regardless of social status, occupation, sexuality, age, or cultural background.

Rates of family violence incidents in Whitehorse have been historically around half that of the State average, however in the second quarter of 2020 rates of family violence incidents in Whitehorse increased by 25.2 per cent compared to the same time in 2019. By contrast, the State average only increased by 12 per cent, indicating that in Whitehorse during the start of the pandemic family violence incidents were increasing at a rate of more than double that of the State. Often family violence is not reported. In fact, of women who have experienced violence by a former partner since the age of 15, 65 per cent have never contacted the police.

During the COVID-19 pandemic in 2020 family violence service providers reported that specific methods of control were being exerted, such as a perpetrator telling their partner that they have the virus and therefore they cannot leave the house, or calling police to allege the victim is breaching COVID-19 restrictions. During lockdowns in Victoria women’s opportunities to call for help were much more limited, with women contacting family services whilst hiding in bathrooms, backyards, aisles of grocery stores, schools, their cars as well as other opportunities they had away from perpetrators.

In addition, service providers noted increasing reports of financial abuse, including with older people, and women accessing their services for the first time.

The City of Whitehorse has almost half the rate of reported family violence *incidents* for Victoria. However, there were still 1,470 family violence incidents reported in 2022/2023: an average of 28 incidents every week. ^{clxxxvii} Many more incidents go unreported.

Coercive control is a strategy employed by perpetrators of intimate partner violence, family violence and gender-based violence. There is increasing use of technology to perpetrate coercive control and abuse against women, for example through:

- harassment on social media
- stalking using GPS data

- Both clandestine and conspicuous audio and visual recording
- threats via SMS
- monitoring email
- accessing accounts without permission
- impersonating a partner
- publishing private information ('doxing') or sexualised content without consent. ^{clxxxviii}

Newly arrived migrant women are at a heightened risk because they may be financially or otherwise dependent on their partners. Women with disability may be especially vulnerable to abuse facilitated by technology where they are reliant on technology to communicate with others or in contacting support services. ^{clxxxix}

e. Men

In Australia, 18.3 per cent of men aged 16 to 85 experiences a mental disorder in the previous 12 months, most often anxiety and/or depression (13.3 per cent). ^{cx} In Whitehorse in 2017, 17.2 per cent of males experienced anxiety or depression. ^{cxci}

Over the last decade, the age-standardised suicide rate for Australian males increased from 16.2 deaths per 100,000 population in 2011 to 18.8 in 2022. Suicide rates vary significantly by age and gender. In Australia, consistently over the past 10 years, the number of suicide deaths was approximately three times higher in males than females. ^{cxcii}

In 2022, the highest deaths by suicide rates in Australia for males are those aged 85 and over (32.7 per 100,000 population) and those aged 45–49 (32.6 deaths per 100,000 population). ^{cxci} In the Australian Longitudinal Study on Male Health loneliness was significantly associated with experiences of depression and suicidality, and this was above and beyond the area-level socio-economic disadvantage and unemployment of men. ^{cxci}

Although suicide rates are lower among young people, suicides account for a larger proportion of deaths of young men. ^{cxci}

Men are more likely than women to engage in risk behaviours including alcohol and other drug use. And while males have a heightened risk of mortality than females, they are more likely to think that their health is fine and that they can independently manage health concerns. ^{cxci}

f. LGBTIQ+ people

LGBTIQ+ people face a disproportionately high rate of depression, anxiety, and suicide. According to the Victorian Government LGBTIQ+ strategy, 54.3 per cent of LGBTIQ+ Victorian adults, compared to 13 per cent of adults who do not identify as LGBTIQ+, experience psychological distress. ^{cxci}

In Victoria, 44.8 per cent of LGBTIQ+ adults are diagnosed with anxiety and depression. ^{cxci}

These mental health issues are exacerbated by a lack of adequate social support, acceptance, and healthcare barriers. ^{cxci}

g. Older people and carers

A 2023 survey of people in Whitehorse aged over 45 asked respondents to select ‘the most important factors for you as you get older’. Of the 5055 responses to this question the top five most important factors were social connections and interactions with friends and/or family (17 per cent), Being able to make decisions independently (14 per cent), personal mobility 13% and having a meaning and purpose in life (11 per cent) were the most important. People were also asked ‘Do you ever feel lonely or isolated?’, with 35 per cent people aged 55+ responding that they feel lonely or isolated sometimes or often. ^{cc}

Age discrimination can have a negative impact on older peoples’ mental health. A result of age discrimination and invisibility is that older Australians feel a sense of shame, anger, or sadness, affecting their self-worth. ^{cci}

Thirty-five per cent of people in Australia aged 55-65 years have experienced some form of age discrimination, and for those aged 65+ the percentage is 43 per cent. ^{ccii} The most common types of age-related discrimination, experienced by over 50 per cent of older Australians, are being turned down from a position, being treated with disrespect and being subjected to jokes about ageing. ^{cciii}

Ageism, whether internalised or experienced from others, predicts a shorter lifespan, reduced quality of life and wellbeing, physical and mental health conditions, and cognitive impairment. ^{cciv}

Older women retire with much lower superannuation balances than men. As women approach retirement age, their gender superannuation gap can be anywhere between 22 per cent and 35 per cent of men’s. The median superannuation balance for men aged 60-64 years is \$204,107 while for women in the same age group it is \$146,900, a gap of 28 percent. ^{ccv}

Psychological and financial abuse contributes to poor mental health of older people. A review of 2,385 calls relating to abuse made to the Seniors Rights Victoria state-wide helpline in the period 2012-2019 found that: ^{ccvi}

- most victims were aged 70-90 years
- the abuse was mostly psychological and financial
- 72 per cent of victims were women
- 54 per cent of perpetrators were men
- 91 per cent of perpetrators were family members; among them, sons (39%), daughters (28%), partners (10%), in-laws and grandchildren
- 36 per cent of victims were residing with their abuser.

Because of the ageing population profile, between 2016 and 2050 the prevalence of dementia in Whitehorse is expected to almost double from 3,767 to 7,444. At present, Whitehorse is ranked the 5th highest local government area in terms of Alzheimer’s prevalence. However, by 2050 Whitehorse will have moved out of the top ten and ranked 14th because of changing population profiles in municipalities across Victoria. ^{ccvii}

Carers have the lowest wellbeing of any large group measured by the Australian Unity Wellbeing index. They are 40 per cent more likely to suffer from a chronic health condition. Back problems, anxiety and depression are directly linked to caring. ^{ccviii}

5. Harm from alcohol and other drugs

Harmful use of alcohol and other drugs affects both the whole community and individuals and their families. Crime and public violence, property damage and decreased workplace productivity affect the community, while for individuals and families, the result can be major health and financial problems, social isolation, and increased risk of family violence. ^{ccix} Alcohol misuse causes more harm in the community than illicit substance use.

a. Hospital admissions due to alcohol and pharmaceutical drugs

Whitehorse alcohol and pharmaceutical drug hospitalisation admission rates in 2021/2022 were 737 and 207 per 100,000 people, respectively. This highlights an increase in alcohol admission rates since 2017/2018 (when alcohol admissions were 620 and pharmaceutical drug admissions were 228 per 100,000 people). These hospital admission rates are higher than Victorian and Melbourne Metropolitan rates. In Victoria, the hospital admission rate for alcohol in 2021/2022 was 574 per 100,000 people and 167 per 100,000 people for pharmaceutical drugs. ^{ccx}

The hospital admission rate in Whitehorse for pharmaceutical drugs was higher for females compared to males (115 and 91 per 100,000 people respectively) in 2020/2021. ^{ccxi} These hospitalisations may be related to prescription drug misuse, polypharmacy, or complications with ageing.

b. Alcohol use

Among the adult population, in 2017 more than three out of five Whitehorse residents exceed two standard drinks one to two days a week, while one in five residents exceed two standard drinks three to four days a week, and just under one in five residents exceed two standard drinks five to seven days a week. ^{ccxii}

The prevalence of binge-drinking (drinking 4+ drinks on a single occasion) in young people has been declining over the years. The rate of lifetime risky drinking has also declined (2+ drinks a day). In Australia in 2019, 9 per cent of 14-17-year-olds had engaged in binge-drinking compared to 30 per cent in 2001. However, the national health guidelines recommend that children and young people under 18 avoid alcohol completely due to the risk of injury and other harms. ^{ccxiii}

In Australia, trends show that alcohol use is declining among 14-17-year-olds in Australia, while use of cannabis appears stable, and a small proportion of these young people are now using e-cigarettes. ^{ccxiv}

In 2020/2021, men were more likely than women to exceed alcohol consumption guidelines (34 per cent compared to 19 per cent). ^{ccxv} Estimates from the 2019 National Drug Strategy Household Survey show that the proportion of people who drink daily increases with age. ^{ccxvi}

Thirty-one per cent of people with disability aged 15+ exceed the recommended guidelines for single occasional alcohol risk, compared to 44 per cent of those without disability. ^{ccxvii}

People with a mental health condition were about 1.2 times as likely to report drinking at risky levels in 2019 as people without these conditions. ^{ccxviii}

People from CALD backgrounds are more likely to abstain from alcohol or be ex-drinkers (53.0 per cent) than people whose primary language spoken at home is English (19.2 per cent).^{ccxix}

c. Alcohol harms

Alcohol harms may be due to long-term use or single-episode intoxication. In 2019, 55.3 per cent of Whitehorse adults had an increased lifetime risk of alcohol-related harm, in comparison to Victoria at 59.5 per cent.^{ccxx}

Between 2015 and 2022, the highest rates of alcohol and other drug-related ambulance attendances in Australia were related to alcohol intoxication.^{ccxxi}

In 2018, alcohol was the fifth highest risk factor contributing to the burden of disease in Australia (4.5 per cent of total burden).^{ccxxii}

In 2016, 20 per cent of the national self-harm burden, 14 per cent of the interpersonal violence burden and 7.5 per cent of the unintentional injury burden (other than road transport) is due to alcohol use.^{ccxxiii}

There is a strong link between gambling and substance use, like alcohol misuse and drug use. Research suggests that just under 60 per cent of people who have an issue with their gambling also misuse alcohol or drugs.

There is growing evidence of links between harmful use of alcohol, family violence and harmful gambling.^{ccxxiv ccxxv}

d. Alcohol availability

Harm from alcohol is related to a number of factors including the availability of packaged liquor outlets.^{ccxxvi} In Whitehorse, the average distance to the closest off-licence alcohol outlet (packaged liquor) is 613.1m, more than 200m closer in comparison to the average of 817.2 across the eastern metropolitan region.^{ccxxvii}

Large alcohol companies use sales of high volumes of alcohol to a small proportion of people who drink most heavily to boost market share. Analysis of 2019 data has found that the heaviest drinking five per cent of people in Australia drank more than a third of all alcohol consumed, and the heaviest drinking 10 per cent of people drank more than half of all alcohol consumed in the country.^{ccxxviii}

During the COVID-19 pandemic, the online alcohol delivery model flourished. Alarmingly, research in 2020, during the COVID-19 restrictions, on the delivery practices of the most popular online alcohol retailers in Australia found 69 per cent advertised a willingness to leave alcohol unattended at an address.^{ccxxix} With a shift to online alcohol markets, alcohol will be increasingly available to intoxicated persons and minors.^{ccxxx}

e. Tobacco use

The Victorian Population Health Survey 2020 found 8.2 per cent of people in Whitehorse identify as daily smokers. This is significantly *lower* than the Victorian average of 16.4 per cent and lower than the Metropolitan Melbourne average of 10.1 per cent.^{ccxxxi} A person who smokes throughout their

life is at heightened risk of potentially fatal diseases including various cancers, lung diseases, heart disease, stroke, and circulatory problems.

In 2019, rates of daily smokers in Victoria were 10.2 percent for the entire population, with 11.8 per cent of males and 8.6 per cent of females smoking daily. ^{ccxxxii}

In 2019 the prevalence of 14-17-year-olds in Australia smoking daily was 1.9 per cent. This is a decline of almost 80 per cent over the previous 20 years (in 2001 11.2 per cent of adolescents smoked daily). Young people are initiating smoking and drinking alcohol at a later age. ^{ccxxxiii}

People in Australia with a mental health condition were twice as likely to smoke daily (20.0 per cent) than people who had no diagnosis or treatment for a mental health condition (9.9 per cent). ^{ccxxxiv}

In 2019, lesbian, gay, or bisexual people in Australia were more likely to report daily smoking (16.7 per cent) than heterosexual people (10.5 per cent). ^{ccxxxv}

While tobacco smoking is declining in Australia, it remains disproportionately high among Indigenous Australians and although smoking prevalence among Aboriginal and Torres Strait Islander peoples has been declining in both non-remote and remote areas, most of the change has occurred in non-remote areas. In 2018–19, 30 per cent of Aboriginal and Torres Strait Islander people aged over 18 years living in metropolitan areas were daily smokers compared with 52 per cent living in remote or very remote areas. ^{ccxxxvi}

f. E-cigarettes

The use of e-cigarettes (vaping) is becoming increasingly popular. Across Australia, lifetime use in 2019 was highest among young adults aged between 18 and 24 years (at 26.1 per cent), with lower use among older age groups. Lifetime use of e-cigarettes significantly increased between 2013 and 2016 both among adult smokers (from about 18 per cent to about 31 per cent) and non-smokers (never + ex-smokers; from about 2 per cent to about 5 per cent), and across all age groups except for the oldest. ^{ccxxxvii}

Australian Research shows a strong association between the use of e-cigarettes by non-smoking youth and future smoking. It is also likely that many e-cigarette users continue to use tobacco products at the same time (dual users). Dual users may be exposing themselves to higher levels of toxicants than using conventional tobacco products alone. ^{ccxxxviii}

In Australia in 2020-2021, 9.3 per cent of people aged 18 years and over had ever-used an e-cigarette, and 2.2 per cent reported vaping currently. Vaping was most common among young adults aged 18–24 years, and people aged 18–44 years were twice as likely as people aged 45 years and over to report current vaping (3.2 per cent vs. 1.5 per cent). Men (11.3 per cent) were more likely than women (7.5 per cent) to have ever used or are currently using e-cigarettes (2.9 and 1.6 per cent respectively). Among tobacco smokers, 8.9 per cent reported current vaping, and notably, 23.8 per cent were former e-cigarette users. ^{ccxxxix}

The Victorian Cancer Council's Smoking and Health Survey indicates a concerning increase within a brief period in the number of people vaping. ^{ccxl}

- Use of e-cigarettes has doubled from 3.0 per cent to 6.1 per cent over three and a half years in Victoria 2018-19 to 2022
- Current use of e-cigarettes in females aged 18-24 has increased more than 5-fold from 2018-19 to 2022
- There was an 80 per cent increase among males aged 18-24
- Current use of e-cigarettes also doubled among those aged 25-29
- Approximately 77,200 Victorians who have never smoked cigarettes, currently vape. More than half of these people were aged under the age of 25.

Many people believe that e-cigarettes are less harmful than cigarettes because e-cigarettes do not contain tobacco which contains a majority of the toxic, cancer causing chemicals in cigarettes.^{ccxli} However, nicotine itself presents known risks with exposure on brain development, therefore pregnant women and adolescents should avoid use of e-cigarettes with nicotine.^{ccxlii}

Nicotine can damage DNA in cells thereby promoting the growth of tumours, and it is now linked to a number of different cancers.^{ccxliii}

Nicotine poisoning via ingestion and skin contact are risks in using the e-liquid solutions.^{ccxliv}

It is difficult to gauge the potential level of nicotine toxicity in each device or liquid as the manufacturer quality of e-cigarettes is highly variable and people use them in diverse ways.^{ccxlv}

E-cigarettes can be modified to deliver higher concentration of nicotine increasing the toxic chemical particles in the inhaled aerosol.^{ccxlvii ccxlviii}

E-cigarettes often contain unknown chemicals. With or without nicotine, all e-liquid solutions used in vaping contain a mixture of unregulated and harmful chemicals and additives.

While the two main ingredients used in all e-liquids – propylene glycol and vegetable glycerine – are considered safe in certain food products, the health effects of repeatedly heating and inhaling them into the lungs are relatively unknown. Some evidence suggests a potential to cause harm.^{ccxlviii ccxlix}

E-cigarettes may also contain toxins which cause adverse health effects, including cancer, such as formaldehyde and heavy metals (e.g., chromium, aluminium, arsenic, copper, lead, nickel, and tin).^{cccl}

Other carcinogenic chemicals that have been found in e-cigarettes include volatile organic compounds (common in paint and cleaning products), 2-chlorophenol (used in disinfectants) and ultrafine particles (which are damaging to lungs).^{cccli ccclii}

Labelling on e-cigarettes can be unreliable with evidence of labels incorrectly denying the presence of nicotine and other potentially toxic chemicals.^{cccliii cccliv}

The use of e-cigarettes damages human health in less direct ways through impacting the environment, for example:

- Leaking e-liquids can harm aquatic life and contaminate water.
- Generation of electronic waste (e-waste) with circuit boards and batteries.
- Improper disposal of e-cigarettes is known to cause fires due to electronic components.
- Littering of packaging and devices contribute to plastic pollution.
- Use of non-biodegradable plastics that are hard to recycle.

- Possible nicotine contamination of e-cigarette plastics means they cannot be recycled.
- E-cigarettes take hundreds of years to degrade. Waste in landfill includes lithium batteries, plastics, poisons, nicotine salts and heavy metals. ^{cclv}

Current regulations relating to e-cigarettes are covered under the Tobacco Act 1987:

- E-cigarettes/vapes, which contain nicotine are currently regulated by the Therapeutic Goods Administration.
- E-cigarettes/vapes can only be bought at a pharmacy with a prescription or through Personal Importation Scheme (someone with prescription to import nicotine vapes from overseas).
- It is illegal to buy and sell e-cigarette or any liquids containing nicotine without a doctor's prescription.
- It is illegal to sell e-cigarettes, whether they contain nicotine or not, to a person under 18 years old.
- Vaping is prohibited on school premises and/or within four metres of any pedestrian access point to school premises.

Despite these regulations, the sale of e-cigarettes to children and young people is commonplace, with packaging designed to entice and normalise their use. ^{cclvi}

Changes in regulations relating to e-cigarettes to be introduced in Australia during 2023/24 and will see:

- Personal importation ending making vapes only available with a prescription at authorised pharmacies in Australia.
- An import permit will be required to bring e-cigarettes into the country and only pharmacies will be given permits.
- Introduction of restrictions on flavours, colours, and other ingredients as well as pharmaceutical-like packaging.
- Reduced allowable nicotine concentrations and volumes in prescriptions.
- Imports of non-prescription vapes will be banned.
- Banning all single use, disposable vapes (from 1 January 2024). ^{cclvii}

These changes will have implications for individuals who are currently addicted to e-cigarettes who will need support to quit. With the introduction of regulations there is likely to be increased trafficking of harmful aerosol products on the black market.

g. Illicit drugs

Illicit drugs are either illegal (for example, cannabis, heroin, cocaine), or drugs that are legally available such as pain killers and sleeping pills, but which are used for non-medical reasons. The harms of use include blood-borne virus infections, injury, chronic disease, mental health problems and death by overdose or suicide. ^{cclviii}

The rate of hospital admissions due to illicit substances in Whitehorse (290 per 100,000) is similar to the Victorian rate (272 per 100,000) and the Metropolitan rate (279 per 100,000). Males account for more admissions (158 per 100,000) than females (113 per 100,000) in Whitehorse. ^{cclix}

People from CALD backgrounds are much less likely to have recently used illicit drugs (6.4 per cent) than primary English speakers (18.7 per cent) in Australia in 2019. ^{cclx}

In 2019, lesbian, gay, or bisexual people in Australia were more likely to report recent use of any illicit drug (36 per cent) than heterosexual people (16.1 per cent). ^{cclxi}

In Australia in 2020, 56 per cent of police detainees tested positive to methamphetamine. ^{cclxii}

6. Communicable disease

Since the beginning of the COVID-19 pandemic there have been 77,864 reported cases of COVID-19 in the City of Whitehorse.

Table 4: Reported COVID-19 cases in Whitehorse LGA (2019-2023) ^{cclxiii}

Year	Number of cases	Notification rate per 100,000 population
2019	0	0
2020	209	123.4
2021	1791	1057.6
2022	71243	42,069.5
2023	4621	2728.7

Source: Victorian Department of Health Notifiable Disease System and 2021 ABS census data

Given reporting practices and the availability of PCR testing centres changed between 2019 and 2023 it is important to interpret this data with caution. Positive COVID-19 tests were no longer required to be reported as of 13th October 2022.

Table 5: Communicable diseases reported in Whitehorse LGA from 2019 to 2023 ^{cclxiv}

Notifiable condition	Total 2023	Total 2022	Total 2021	Total 2020	Total 2019
Chlamydia trachomatis	574	441	337	392	479
Gonococcal	162	142	96	44	123
Tuberculosis	13	14	15	7	14
Syphilis	23	34	18	14	19
Shigellosis	9	6	1	5	15
Pneumococcal (IPD)	10	4	1	5	4
Hepatitis A	1	2			4
Hepatitis B - Newly acquired			1		2
Hepatitis C - Newly acquired		1	1	1	
Hepatitis B - Unspecified	59	73	62	69	81

Hepatitis C - Unspecified	18	21	14	22	22
HIV Infection - Newly acquired	2		1		1
Legionellosis	4	3	3	2	3
Monkeypox	1	1			

Food or water born infections

Notifiable condition	Total 2023	Total 2022	Total 2021	Total 2020	Total 2019
Campylobacter	209	234	212	154	233
Salmonellosis	38	34	32	37	55
Listeriosis		2	1		
Cryptosporidiosis	10	5	7	4	13

Vaccine Preventable

Notifiable condition	Total 2023	Total 2022	Total 2021	Total 2020	Total 2019
Mumps				4	
Measles					1
Meningococcal		1	1		
Pertussis	9	6	5	17	47
Rotavirus	16	6	7	5	5
Varicella zoster (Unspecified)	273	271	266	247	282
Varicella zoster (Shingles)	81	58	79	91	106
Varicella zoster (Chickenpox)	18	14	15	18	36
Haemophilus influenzae B	2	2	3		1
Influenza	1,173	637	2	131	2004

Because of the restrictions imposed during the pandemic, there is an observed reduction in many of the communicable diseases in the period 2020-2022. In 2023 human movement and interactions have increased on previous years, with a parallel rebound in infection numbers in many diseases. An example of which is the rebound in Gonococcal infections in Whitehorse from 44 in 2020 to 162 in 2023.

In Whitehorse, a few notable differences in reported communicable diseases numbers in 2023 compared to 2019 show:

- A reduced number of cases of influenza (1,173 c.f. 2,004). Influenza is the most reported communicable disease.
- The number of chlamydia cases remain significant (574 c.f. 444). Chlamydia is the second most reported communicable disease in Whitehorse. The rate of infection in Whitehorse in

2023 was 339.8 per 100,000 population compared with the Victorian rate of 432.4. Rates for infection in males and females are 50 per cent each in Whitehorse.

- Campylobacter, one of the most common causes of bacterial gastroenteritis, reports remain at significant levels (209 c.f. 233)
- Rotavirus infections, a cause of severe gastroenteritis, increased (16 c.f. 5)
- An increase in the number of invasive pneumococcal disease cases (10 c.f. 4)
- Halving in the number of chickenpox cases (18 c.f. 36)
- Less than a quarter of the number of pertussis cases (whooping cough) (9 c.f. 47)
- Hepatitis B case numbers are lower (51 c.f. 81)

Victoria has recorded a decade-long trend increase in rates of sexually transmissible infections (STI) which is consistent with trends in other parts of Australian, and countries such as USA and the UK.

cclxv

The rate of infection with gonococcal infection in Whitehorse in 2023 in was 95.2 per 100,000 population, compared to 162.0 for Victoria. For the same year, the syphilis infection rate was 13.5 per 100,000 population compared to 26.9 for Victoria. In Whitehorse, males account for 70 per cent of gonococcal infections and 85 per cent of syphilis infections. ^{cclxvi} Most STI can be prevented, are easy to test for and can be treated.

Whitehorse continues to have rates of immunisation coverage higher than the Victorian average.

cclxvii

Table 6: Immunisation coverage rates (per 100,000) in Whitehorse LGA and Victoria, 2021-2023

Year	2023	2022	2021
Whitehorse	94.51	95.25	94.90
Victoria	93.40	93.97	94.55

Source: Australian Immunisation Register

7. Impacts of climate change

Australia's climate is changing. Land, air and sea levels are rising, oceans are becoming more acidic, sea levels are rising; and there is less rainfall in southern Australia. The decade 2011 to 2020 has been the warmest on record. Bushfires and heatwaves (both land and sea) are increasing in frequency and intensity. Other extreme events, such as floods, are changing in their frequency, intensity, and distribution. ^{cclxviii}

Atmospheric CO₂ concentrations have risen from around 280 parts per million at the start of the industrial revolution, to current levels above 400 parts per million. Increasing concentrations of CO₂ and other greenhouse gases are trapping heat in the Earth's atmosphere and warming the planet. Victoria's climate has warmed by just over 1.0°C since official records began in 1910. ^{cclxix}

a. Climate predictions

With continued climate change Victoria's future will include an overall decrease in total rainfall, contributing to longer and more severe droughts; however, it is expected that individual rainfall events and storms will become more intense with a greater risk of flash flooding. ^{cclxx}

The Victorian State of the Environment 2023 Report^{cclxxi} identifies that:

- Each year since 1997 has been warmer in Victoria than the average for the period from 1961 to 1990. Furthermore, seven years during the past decade (2012-2021) have been in the top 10 warmest years on record for Victoria. Metropolitan Melbourne's annual average temperatures are approaching a 1.5°C increase from an indicative pre-industrial era temperature. Indeed, some years are now more than 1.5°C warmer than the indicative pre-industrial era baseline.
- Globally, land is warming faster than oceans, with land warming at 1.6°C, ocean warming at 0.9°C and the combined land– ocean warming at 1.1°C.⁸
- Below-average rainfall conditions have dominated the climate and extended the overall drying pattern affecting Victoria. Above-average rainfall (relative to the reference period 1961–1990) has been recorded for only five of the past 25 years (1997–2021) in Victoria.
- Victoria has experienced a drier climate with more intense rainfall events in recent years. There are several examples of catastrophic natural disaster events associated with climate change since publication of the State of the Environment Report in 2018.
- Physical evidence, past trends and various models all suggest Victoria will continue warming this century; therefore, ongoing warming is projected with high confidence.
- By the 2050s, Victoria is likely to experience more extreme, short-duration rainfall despite an overall decrease in rainfall.

The City of Whitehorse experiences temperatures greater than 35°C, on average, 11 days per year. This is predicted to increase to 16 days per year, on average, by 2050 with Melbourne's 'fire days' projected to increase by 42 per cent per year by 2050. ^{cclxxii}

b. Public health risks

Climate change is likely to amplify existing public health risks directly and indirectly with potentially catastrophic harms to human health. Direct impacts include hypo- and hyperthermia, heat stress, injury, trauma, and death caused by exposure to more frequent and intense extreme weather events such as bushfires, droughts, floods, and heatwaves. Indirect impacts include:

- communicable diseases spread from insects and animals to humans
- water and food-borne diseases and contaminants
- reduced nutritional quality of food
- exacerbation of existing chronic diseases such as cardiovascular and respiratory diseases because of higher temperatures, poorer air quality and airborne pollen
- adverse effects on mental health including fear of the future

The broad social determinants of health, such as income, employment, or food security, are also affected by climate change. Extreme weather events and climate change have negative impacts on the economy (for example, through reduction in primary production or tourism), in turn leading to unemployment, stress, social exclusion and increases in food insecurity.

c. Higher temperatures and heat waves

On average between 1981 and 2010 Melbourne has experienced 8.3 days per year when the temperature exceeds 35°C. The projected number of extreme heat days in Melbourne in the 2050s under a high emissions scenario is between 13 and 21 days on average, or between 10 to 16 days with medium emissions. ^{cclxxiii}

Tree cover canopy can help to reduce the urban heat island effect and the health impacts of heat waves, as well as reducing UV exposure. In Whitehorse, the canopy cover across Whitehorse was measured at 18 per cent in 2018. ^{cclxxiv}

In Whitehorse urban heat temperatures are higher in denser residential and industrial areas of the municipality and lower in areas such as Blackburn Lake Sanctuary, Morack Public Golf Course, Mullum Mullum Creek, and surrounds, and along Gardiners Creek. Increasing greenery and reducing hard surface areas help to reduce urban heat. ^{cclxxv}

d. Air pollution

Air pollution reduces the quality of the air. Some people are more sensitive to air pollution than others.

Aside from short-term pollution events, such as that caused by the 2019/20 bushfires, Melbourne air quality has relatively low, but persistent levels of a range of pollutants all year. Among these, particulate matter below 2.5 microns (PM2.5) and ozone are the main pollutants of concern for their impact on human health. ^{cclxxvi}

PM2.5 is continuously present in the air (at relatively low levels) from numerous sources. The health impacts of exposure to PM2.5 include increasing people's risk of developing cardiovascular disease, respiratory infections, chronic obstructive pulmonary disease (COPD) and lung cancer, while short-term effects can also include aggravation of asthma, and eye, nose, and throat irritation. ^{cclxxvii}

Exposure to ozone increases risk of asthma-related morbidity and mortality. ^{cclxxviii} Ozone air pollution is likely to increase over time with growing populations and rising temperatures. ^{cclxxix}

Those most sensitive to air pollution include children younger than 14 years of age, people older than 65 years of age, pregnant women and people with heart and lung conditions, including asthma. ^{cclxxx}

e. Greenhouse gas emissions

The Climate Snapshot produced by Beyond Zero Emissions and Ironbark Sustainability estimates that Whitehorse municipality produced 1,746,000 tonnes of carbon emissions (tCO₂e) in 2021/22 as we emerged from pandemic restrictions, compared to 1,933,000 tCO₂e prior to the pandemic in 2018/19. Residential use of electricity and gas is the largest contributor. Transport accounts for 17 per cent, with most of that due to use of motor vehicles. ^{cclxxxi}

Commuting to work contributes to greenhouse gas emissions, especially if workers are not using public transport (trains, buses) or active transport (walking and cycling). Increasing the number and diversity of job opportunities within a municipality increases workforce containment and therefore reduces commuting distances – in turn reduce contributions to climate change. In 2021 26.7 per cent of people both live and work in Whitehorse and many more do so in the surrounding municipalities.

f. Household solar power

A solar photovoltaic (PV) and battery system offers the potential of off-grid energy self-sufficiency. It is also a major step in the transition away from fossil fuels.

Australia has the highest uptake of solar globally, with more than 21 per cent of homes with rooftop solar PV. The process of converting sunlight into electricity using PV systems produces zero greenhouse gas emissions. ^{cclxxxii} As of 30 June 2023, 3.66 million small-scale solar power systems have been installed across Australia. In Victoria there were 719,287 household solar installations between 2001 and 2023. ^{cclxxxiii} 19.4 per cent of dwellings in Whitehorse have solar PV installed (13,760 household installations of a system below 10kW). ^{cclxxxiv}

g. Waste reduction

Reducing waste and recycling and composting materials helps to reduce the generation of greenhouse gases, such as carbon dioxide and methane. This is achieved by saving energy in the processing of materials for industrial and consumer use, and by reducing the flow of materials – especially food and other organic wastes – into landfills where anaerobic decomposition produces methane.

In 2022/23 the overall waste to landfill diversion rate for Whitehorse was 56 per cent. This is above the state average of 51 per cent and well above previous years. ^{cclxxxv} Since introducing the opt-in Food Organics and Garden Organics (FOGO) service in July 2022:

- There was an increase of approximately 5 per cent of waste diverted from landfill and 17 per cent increase (2,298 tonnes) of organics collected in comparison to the previous year.
- 76 per cent of eligible households have access to the FOGO service.
- The total organic waste adds up to 52 per cent of overall waste generated.
- The FOGO stream contamination rate remains low at 2.5 per cent with the recycling contamination rate at 9.6 per cent. The recycling contamination rate in Whitehorse remains above the preferred industry level of 3-5 per cent. Bin contamination rates are typically higher in apartments. ^{cclxxxvi}

In 2022/23 the Whitehorse hard waste service serviced approx. 46,000 bookings across the municipality with a recovery rate of 19 per cent. ^{cclxxxvii}

h. Heat stress

A Victorian study exploring data from 2010 to 2022 explored whether changes to morbidity occurred during or directly after these heat health alerts, and how this differed for certain population groups. The study found an increase in heat-related ED presentations (Odds Ratio of 1.73, 95% CI: 1.53-1.96) and heat-related hospital admissions (Odds Ratio of 1.23, 95% CI: 1.16-1.30) on days on or after heat health alerts. People aged 65 years and older, Aboriginal and Torres Strait Islander people, and those living in the most disadvantaged areas were groups more likely to record heat-related presentations and admissions. ^{cclxxxviii}

Poor thermal capability of housing stock creates a serious health risk. State-wide research by Sustainability Victoria in 2019 found that more than half of all Victorians in public housing were too hot last summer or too cold last winter and that as a result, 45 per cent of residents had to leave their home. People living in public housing are at increased risk. The thermal capability of housing will become more important as extreme temperatures increase as will the need for safe public

spaces for vulnerable groups. ^{cc1xxxix} 1,410 households in Whitehorse comprise people renting public housing.

Vulnerable people, including older people and parents with young children, seek relief in air-conditioned leisure centres, libraries, shopping centres and community centres.

i. Psychological distress

In 2019 a survey by Sustainability Victoria found that most Victorians feel some level of frustration and other negative emotions when they think about climate change – feelings of sadness, outrage, and despair. Young people may be more prone to anxiety about the future than the rest of the population. In the survey young people reported feeling these negative emotions more strongly than older people and feel they will cope ‘poorly’ in terms of mental health as climate change impacts increase. ^{ccxc}

Anxiety, depression, post-traumatic stress disorder (PTSD), complicated grief, survivor guilt, vicarious trauma, recovery fatigue, substance abuse and suicidal ideation can be caused or activated by extreme weather events such as bushfires, floods, and heatwaves. ^{ccxci} Extreme weather events are occurring more frequently due to climate change.

Increased frequency and severity of events such as bushfires, floods and droughts are associated with an increase in family violence and abuse. ^{ccxcii ccxciii}

The indirect consequences of climate change on the mental health of populations occur through social, economic, and environmental disruptions. ^{ccxciv}

j. Deaths related to climate change

Death from heatwave

Heatwaves have been called ‘silent’ killers because the death toll from them in Australia has exceeded that for any other environmental disaster, including floods, bushfires, and cyclones. ^{ccxcv}

The 2014 heatwave in Melbourne resulted in 167 excess deaths, and this corresponds to a 24 per cent increase in mortality. Elderly people, those with existing health conditions and people using medications or abusing alcohol or drugs are at heightened risk. ^{ccxcvi}

In addition, photochemical smog (including ozone) is a respiratory irritant which is intensified during heatwaves due to ultraviolet radiation acting on pollutants such as nitrogen oxides and volatile organic compounds produced by motor vehicles and industry. ^{ccxcvii}

Heatwaves are predicted to become more frequent, more intense, and longer in duration. ^{ccxcviii}

Death from asthma

In Whitehorse, 19.9 per cent of the adult population report having had asthma at some time in their life.

Climate change is increasing dangerous fire weather, which in turn increases the frequency and severity of bushfires. Of all the states and territories in Australia, Victoria is most affected by bushfires. Bushfire smoke can seriously affect people’s health due to respiratory irritants and

inflammatory and cancer-causing chemicals. Elderly, infants and those with chronic heart or lung diseases are at higher risk. ^{cccxcix}

Nationally, hospitalisation rates increased for asthma and chronic obstructive pulmonary disorder (COPD) coinciding with increased bushfire activity and associated air pollution during the 2019–20 bushfire season. ^{ccc} Asthma was the underlying cause of death for 351 deaths or 1.4 deaths per 100,000 population in Australia in 2021. This represents 0.2% of all deaths. However, asthma was more likely to be recorded as an associated cause of death, meaning an additional 1,641 deaths with a total of 1,992 deaths in Australian due to, or associated with, asthma – equivalent to 1.2 per cent of all deaths. ^{ccci}

Climate change is likely to be a factor in thunderstorm asthma events by increasing atmospheric carbon dioxide concentrations, temperatures affecting aeroallergen concentrations and extended pollen seasons. ^{cccii cccliii cccliv ccclv ccclvi}

An unprecedented thunderstorm event in Melbourne in November 2016 was a convergence of environmental factors - a line of thunderstorms, the resulting gust front, and extreme airborne grass pollen concentrations. ^{cccvii}

Across Melbourne there were 3365 (672 per cent) excess respiratory-related presentations to emergency departments, and 476 (992 per cent) excess asthma-related admissions to hospital, especially individuals of Indian or Sri Lankan birth (10 per cent vs 1 per cent, $p < 0.0001$) and south-east Asian birth (8 per cent vs 1 per cent, $p < 0.0001$) compared with previous 3 years. ^{cccviii} Of all presentations to emergency departments:

- The mean age was 32 years
- 56 per cent were male
- Only 28 per cent had current doctor-diagnosed asthma. ^{cccix}

Of the 35 individuals who were admitted to an intensive care unit, all had asthma, 12 took inhaled preventers, and five died. ^{cccx}

Ten individuals died; of these six were of Asian or Indian ethnicity. ^{cccxi} Whitehorse has a significant population of people of Asian or Indian background, who may be at higher risk of future thunderstorm asthma hospital admissions.

Appendix

Indicators and Measures by Theme

Theme	Indicator	Measure/s	Reference	
Mental Health and Wellbeing	Self-rated health	Fair or poor self-reported health	2020 Victorian Population Health Survey	
	Self-rated health	Excellent, very good or good	2020 Victorian Population Health Survey	
	Life satisfaction	Life satisfaction - Low or medium	2020 Victorian Population Health Survey	
	Psychological distress	High, or very high, levels of psychological distress	2020 Victorian Population Health Survey	
	Mental health conditions	Anxiety or depression		2017 Victorian Population Health Survey
		Long term mental health conditions (including anxiety and depression)		2021 ABS Census of Population and Housing
	Social supports	Percentage of people who have close friends or family whom they talk to regularly		2020 Victorian Population Health Survey
		Percentage of people who talk to their friends every day		2020 Victorian Population Health Survey
		Percentage of people who talk to their family every day		2020 Victorian Population Health Survey
	Suicide	Intentional self-harm standardised death rate per 100,000 people		2023 Australian Institute of Health and Welfare - Suicide and intentional self-harm.
Social Cohesion	Social cohesion	Perceptions of neighbourhood – people can be trusted	2020 Victorian Population Health Survey	
	Sense of belonging	Feelings of being valued by society (answered 'yes, definitely')	2020 Victorian Population Health Survey	
	Discrimination or unfair treatment	Various measures related to age, disability, race, gender, and sexuality.	Various sources	
	Acceptance of other cultures	Number of people who definitely agree that multiculturalism/diversity makes life better	2020 Victorian Population Health Survey	
	Volunteer participation	Did voluntary work through an organisation or group (last 12 months)	2021 ABS Census of Population and Housing	

Personal Safety	Crime against the person	Rate of alleged crimes against a person (violent crimes) per 100,000	2023 Crime Statistics Agency Portal, Recorded Offences by LGA 2023
	Unintentional injuries	Unintentional injuries treated in hospital per 1,000 population	2023 Unintentional Hospital-Treated Injury in Victoria 2021/22 E-Bulletin Edition
		Unintentional injuries due to falls	2021/2022 Injury Atlas (vicinjryatlas.org.au)
Healthy Relationships	Family violence/intimate partner violence	Family violence incidents per 100,000 population	2023 Crime Statistics Agency Portal, Crime by Area - Family Violence Dashboard
	Elder abuse	Victim reports for persons aged 55+ (violence against the person)	2023 Crime Statistics Agency Portal, Crime by Area - Family Violence Dashboard
Neighbourhood Liveability	Safety	Criminal incident rate per 100,000 population	2023 Crime Statistics Agency, Crime by Area
		Death rate due to road traffic crashes	2023 Road Trauma Statistics. Transport Accident Commission
		Pedestrian fatalities 2014-2018	2023 Road Trauma Statistics. Transport Accident Commission
	Walkability	Rate of recorded crimes against a person per 100,000	2023 Crime Statistics Agency Portal, Recorded Offences by LGA
		Family violence incidents per 100,000 population	2023 Crime Statistics Agency Portal, Crime by Area - Family Violence Dashboard
		Average number of daily living destinations present (0-3) within 1600m	2021 Australian Urban Observatory
		Walkability for Transport Index	2021 Australian Urban Observatory
		Average distance to closest activity centre	2021 Australian Urban Observatory
		Both live and work in Whitehorse	2021 ABS Census of Population and Housing
		Green and open space	Number of new trees planted
Urban tree canopy coverage	2019 Melbourne's vegetation, heat, and land use data. Department of Transport and Planning.		
Ratio of community open space managed by Council	2022/23 Whitehorse City Council Annual Report		

Access to public open space	Percentage of dwellings within 400m or less distance of public open space	2021 Australian Urban Observatory
	Percentage of dwellings within 400m of public space larger than 1.5 hectares	2021 Australian Urban Observatory
	Average distance to closest public open space larger than 1.5 hectares	2021 Australian Urban Observatory
Environmental sustainability	Total residual waste collected (annual tonnes collected)	2021/22 Victorian Local Government Waste Data Dashboard
	Total commingled recyclables collected (annual tonnes collected)	2021/22 Victorian Local Government Waste Data Dashboard
	Total food and garden organics collected (annual tonnes collected)	2021/22 Victorian Local Government Waste Data Dashboard
Housing diversity & affordability	Percentage of households in housing stress	2021 ABS Census of Population and Housing
	Percentage of available affordable lettings	2023 Homes Victoria Rental Report June Quarter
	Percentage of households in the bottom 40% of incomes spending more than 30% on housing costs	2021 Australian Urban Observatory
Food security (access)	Percentage of dwellings within 1km of a supermarket	2021 Australian Urban Observatory
	Percentage of dwellings without any food outlet within 3.2km	2021 Australian Urban Observatory
	Average distance to closest healthy food outlet (supermarket or greengrocer)	2021 Australian Urban Observatory
	Average distance to closest fast-food outlet	2021 Australian Urban Observatory
Health and community services	Social Infrastructure Index	2021 Australian Urban Observatory
Leisure and cultural opportunities	Attendance at Council's festivals and events	2022/23 Whitehorse City Council Annual Report
	Visitors to aquatic facilities	2022/23 Whitehorse City Council Annual Report

	Visitors to libraries	2022/23 Whitehorse City Council Annual Report
	Visitors to Box Hill Community Arts Centre	2022/23 Whitehorse City Council Annual Report
	Visitors to Whitehorse ArtSpace	2022/23 Whitehorse City Council Annual Report
Public transport	Average distance to closest public transport stop (metres)	2021 Australian Urban Observatory
	Percentage of dwellings within 400m of a public transport stop with a regular service at least every 30 minutes on weekdays between 7am and 7pm	2021 Australian Urban Observatory
	Percentage of dwellings with access to bus stop <400m	2021 Australian Urban Observatory
Alcohol availability	Average number of off-licences within 800m	2021 Australian Urban Observatory
	Average number of on-licences within 400m	2021 Australian Urban Observatory
	Average distance to closest off-licence alcohol outlet (metres)	2021 Australian Urban Observatory
	Average distance to closest on-licence alcohol outlet (metres)	2021 Australian Urban Observatory
Cycling infrastructure	km of off-road shared paths	2023 Whitehorse City Council
	km of on-road bike lanes	2023 Whitehorse City Council
	km of on-road bike connections	2023 Whitehorse City Council
Fair and Equal Society	Employment/labour market participation	Percentage of employed persons who live and work in the local area (SA1 in SA3)
		2021 Australian Urban Observatory
		Number of people aged 15 and over who worked from home
		2021 ABS Census of Population and Housing
		Smoothed unemployment rate
		Small Area Labour Markets June Quarter 2023
Education	Percentage who completed a higher education qualification	2021 ABS Census of Population and Housing

	Percentage of Year 9 students achieving national benchmark in literacy	2019 Victorian Child and Adolescent Monitoring System (VCAMS)
	Percentage of Year 9 students achieving national benchmark in numeracy	2019 Victorian Child and Adolescent Monitoring System (VCAMS)
Social cohesion/inclusion	Perceptions of neighbourhood – people can be trusted	2020 Victorian Population Health Survey
	Feelings of being valued by society (answered 'yes, definitely')	2020 Victorian Population Health Survey
Access to social support	Social Infrastructure Index	2021 Australian Urban Observatory
Financial security	Percentage of households in the lowest equivalised household income quartile	2021 ABS Census of Population and Housing
	Percentage of households in housing stress	2021 ABS Census of Population and Housing
Food security (affordability)	Moderate to severe food insecurity = reduced quality, variety, or desirability of food; eating patterns are disrupted. Severe food insecurity = reduced food intake, skipping meals, or going entire days without eating.	2024 Foodbank Hunger Report
	Ran out of money to buy food in the last 12 months	2020 Victorian Population Health Survey
Gender equity	Female median weekly income	2021 ABS Census of Population and Housing
	Male median weekly income	2021 ABS Census of Population and Housing
	Females undertaking 30+ hours of unpaid domestic work each week	2021 ABS Census of Population and Housing
	Males undertaking 30+ hours of unpaid domestic work each week	2021 ABS Census of Population and Housing
	Females employed full-time	2021 ABS Census of Population and Housing
	Males employed full-time	2021 ABS Census of Population and Housing
	Percentage of females in a managerial position	2021 ABS Census of Population and Housing

		Percentage of males in a managerial position	2021 ABS Census of Population and Housing
	Digital access	Percentage of households with no internet connection	2016 ABS Census of Population and Housing
	Independent living	Need for assistance with core activities	2021 ABS Census of Population and Housing
Healthy start in life	Developmental vulnerability	Children developmentally vulnerable in one or more domains	2021 Australian Early Development Census
		Children developmentally vulnerable in two or more domains	2021 Australian Early Development Census
	Birth weight	Babies with low birth weight	2023 Whitehorse City Council
	Participation in MCH	Children attending 3.5-year-old maternal and child health checks	2023 Whitehorse City Council
	Participation in Kindergarten	Kindergarten participation	2023 Whitehorse City Council
	Participation in Primary School	Number of full-time equivalent students enrolled in schools	2023 Department of Education and Training Summary Statistics on Victorian Schools
Healthful behaviours	Healthy eating	Complied with vegetable consumption guidelines	2017 Victorian Population Health Survey
		Complied with fruit consumption guidelines	2017 Victorian Population Health Survey
		Daily consumer of sugar sweetened soft drinks	2017 Victorian Population Health Survey
		Take-away food consumed > 1 day/week	2017 Victorian Population Health Survey
		Pre-obese or obese	2017 Victorian Population Health Survey
		Overweight or obese	2020 Victorian Population Health Survey
		Active living	Insufficiently physically active
	Sedentary (inactive)	2017 Victorian Population Health Survey	
	Smoking	Current (i.e. daily or occasional) smoker	2020 Victorian Population Health Survey

Health protection	Alcohol misuse	Increased lifetime risk of alcohol-related harm	2017 Victorian Population Health Survey
		Increased risk of injury from a single occasion of drinking	2017 Victorian Population Health Survey
		Alcohol hospitalisation admission rate	2020-21 AODstats Victoria
	Prescription medications misuse	Pharmaceutical Drugs (any) hospital admission rate	2020-21 AODstats Victoria
	Illicit drug harms	Illicit drugs (any) hospital admission rate	2020-21 AODstats Victoria
	Oral health care	Proportion of adult population with excellent or very good self-reported dental health status	2017 Victorian Population Health Survey
	Presence of chronic disease	People reporting arthritis	2021 ABS Census of Population and Housing
		People reporting cancer	2021 ABS Census of Population and Housing
		People reporting type 2 diabetes	2017 Victorian Population Health Survey
		People reporting heart disease	2021 ABS Census of Population and Housing
People reporting stroke		2021 ABS Census of Population and Housing	
People reporting osteoporosis		2017 Victorian Population Health Survey	
More than one in five residents suffered from two or more chronic diseases		2017 Victorian Population Health Survey	
Immunisation	Children who were fully immunised at 12-15 months (Average of Whitehorse East and Whitehorse West SA2s)	2023 Vaccination Coverage Rates for Victoria and Australian Immunisation Register - Coverage Report	
	Number of vaccinations delivered to children in public immunisation program	2022/23 Whitehorse City Council Annual Report	
Communicable diseases	Notifications of chlamydia per 100,000 population	2023 Victoria Local Public Health Areas and Local Government Areas Surveillance Summary Report	

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	Number of Hepatitis B Unspecified Notifications	2023 Victoria Local Public Health Areas and Local Government Areas Surveillance Summary Report
Food safety	Number of Salmonellosis cases	2023 Victoria Local Public Health Areas and Local Government Areas Surveillance Summary Report
Health impacts	Excess deaths during extreme heat and heatwaves	2014 The Health Impacts of the January - Heatwave in Victoria
	People diagnosed with asthma	2021 ABS Census of Population and Housing
	Proportion of adult population ever diagnosed with asthma	2017 Victorian Population Health Survey
	High, or very high, levels of psychological distress	2020 Victorian Population Health Survey
	Long term mental health conditions (including anxiety and depression)	2021 ABS Census of Population and Housing
Urban greening	Tree canopy/ shade	2019 Melbourne's vegetation, heat, and land use data. Department of Transport and Planning.
Renewable energy use	Ratio open space	2022/23 Whitehorse City Council Annual Report
	Solar panel installation	2024 Australian Photovoltaic Institute data

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