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HEALTH & WELLBEING IN YARRA RANGES

Social Infrastructure Planning / Yarra Ranges Council /
2024/25



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PART 1: EXECUTIVE SUMMARY

What health issues are we seeing in Yarra Ranges?

Yarra Ranges is a large municipality with numerous different communities, set in extensive green space in outer eastern Melbourne. It has a high level of community involvement in volunteering and carer roles. Incomes are above average, and housing is more affordable than in inner Melbourne. Many residents work locally. Yarra Ranges is very safe, with low crime rates and a high level of civic trust. Most residents feel that multiculturalism makes life in the area better, and there is a low level of reported racism. Yarra Ranges has good maternal and infant health, and also has good health status amongst its older residents. During the COVID-19 pandemic, Yarra Ranges had the lowest level of COVID-19 deaths in metropolitan Melbourne, and a low level of serious illness from COVID-19.

However, the lockdowns in 2020 and 2021 exacerbated a range of health and social issues, particularly for young people; and may have contributed to poorer mental health status and educational outcomes. Emergencies such as the June 2021 storms and the cost-of-living crisis have since placed further stresses on the community. Key health and social issues include:

1. **Very high and rising levels of mental health problems.**
2. **Poor health and wellbeing amongst children and young people.** Issues include poor mental health, rising disability and developmental delay amongst children, falling levels of participation in school and tertiary education, rising youth unemployment, ill-health amongst Year 12 students, increased social disconnection, rising child crime, rising sexually transmitted diseases (STDs), transport injuries, lack of access to housing, and lack of access to further education and employment opportunities.
3. **The health and wellbeing impacts of climate change,** natural disasters and environmental degradation. Potential direct impacts include ill-health, injuries and deaths due to: heat stress, respiratory disease, cardiovascular disease, infectious diseases, hypothermia, food poisoning, allergies, mental health issues, injuries, drownings and malnutrition. Indirect impacts include reduced water quality, food security and safety, and air quality; and increases in infectious diseases. The socio-economic impacts include effects on employment, personal and business finances, housing, transport, and social connections; and access to open space, services, infrastructure, information and communications, and power and water. Yarra Ranges

has the highest bushfire risk in the country, the second-highest level in Melbourne of properties at high or medium risk from climate change, the third-highest ranking in Victoria for storm hotspots, and the second-highest national ranking for seeking assistance for recovering from disasters.

4. **Chronic and infectious diseases, and health risk factors.** Some physical health issues and risks have worsened since the pandemic. Factors such as diet and exercise are longstanding national public health challenges, although locally, sports participation appears to be recovering. Screening for chronic diseases has fallen. Dementia is a growing health issue for older residents - it is the number two cause of death in Yarra Ranges, and hospital admissions have tripled over the past few years. Yarra Ranges has a high rate of deaths from heart failure, respiratory and lung disease, accidental falls, and some forms of cancer. The level of some antibiotic-resistant infections is rising, with diseases appearing which were unseen locally before 2020.
5. **Lack of access to human services** - including accessibility, availability, affordability and use of health screening. Yarra Ranges has a major shortage of nearly every type of health worker, ranking 3rd-highest in Melbourne for its workforce shortfall. It also has a very low level of childcare access, with implications for early childhood development and education.
6. **Community safety**, including family violence, falls amongst older residents, and a high level of road deaths and injuries. Drownings are also increasing, although local-level data are limited.




Health status varies by suburb and township within Yarra Ranges, with some areas having much worse health and less access to services. These variations tend to be linked to socio-economic characteristics, such as income, housing affordability, insurance and utility costs, food security, transport access, health service access, and education and employment levels.

Community strengths include:

- Yarra Ranges has a low and falling total level of crime, and a very low level of hospital admissions for assault. It has a below average rate of family violence.
- During the height of the pandemic, Yarra Ranges had the lowest level of deaths in Melbourne from COVID-19, with a low level of cases and hospital admissions.

- Yarra Ranges tends to have a low level of infectious diseases. It avoided the upwards spike in respiratory infections such as influenza and pneumonia, which occurred across Australia during 2022. It has also avoided the national trend for significant growth in sexually transmitted diseases (STDs).
- After years of rapid growth in the level of residents with diabetes, the rate has stabilised and remains below the national average.
- Maternal and infant health is good. Children in Yarra Ranges have high levels of childhood immunisation. Over the past few years, the level of pre-term births, low birthweight babies and small-for-age babies has fallen considerably. Vaccine-preventable infectious childhood diseases have been declining over the past few years.
- Older residents also have very good health, with low or average levels of hospital admissions for most diseases. Their main health risks are dementia, falls and pneumonia.
- Indigenous residents in Yarra Ranges have below average hospital admissions, compared both to non-Indigenous residents, and to Indigenous residents across Victoria.
- High-level health indicators are good, with total hospital admissions falling over the past four years, and a below average level of deaths. Total deaths amongst under-75s have fallen.
- Smoking rates amongst adults in Yarra Ranges have remained stable over the past few years, and are below the Victorian average.
- Yarra Ranges has a very high level of tree canopy cover, protecting against the health impacts of urban heat.

Snapshot of health status in Yarra Ranges

| Indicator | Yarra Ranges | Victoria | Time period |
|---|---|------------------|--------------------|
| Mental health | | | |
| % of adults with high/very high psychological distress | 26% (3 rd highest in state) | 19% | 2023 |
| % of residents with diagnosed mental health conditions | 10.3% (7 th highest in Melbourne) 13% of females, 8% of males | 8.8% | 2021 |
| % of adults experiencing loneliness | 22.1% | 23.3% | 2023 |
| % of adults seeking professional help for a mental health problem in past 12 months | 24% (9 th highest in state) | 20% | 2023 |
| Growth in mental health admissions amongst 15-24 year olds | 40%  | | 2019/20 to 2022/23 |
| Children and young people | | | |
| Increase in number of 5-14 year olds with a disability | 47%  | | 2016-2021 |
| Change in number of sexually transmitted disease notifications, 15-24 year olds | 9.1%  | | 2019-2023 |
| Climate impacts | | | |
| Number of hospital admissions for heat stroke | >450 | | 2022/23 |
| Chronic diseases & health risk factors | | | |
| % of residents with at least one long-term health condition | 35% (38% of females, 32% of males) | 31% | 2021 |
| % of residents with diabetes | 4.7% | 6.1% (Australia) | March 2023 |
| % of adults overweight or obese | 57% | 54% | 2023 |
| % of adults who experienced food insecurity in past 12 months | 8.9 | 8% | 2023 |
| % of adults with fair/poor dental health | 23% | 27% | 2023 |
| % of adults with insufficient weekly exercise | 61% | 64% | 2023 |
| % of adults who smoke daily | 8% | 10% | 2023 |
| % of adults who vape daily | 7% (3 rd highest) | 4.5% | 2023 |
| Risk of increased harm from alcohol-related disease or injury | 17% | 13% | 2023 |
| % of adults unable to see a GP when needed in the past 12 months | 19% | 19.5% | 2023 |

| Safety and inclusion | | | |
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| Family violence incidents per 100,000 | 1,224 | 1,366 | Year to Sept 2022/23 |
| Crime rate per 100,000 | 3,042 | 5,536 | 2023 |
| Change in crimes amongst 10-17 year olds | 35% increase | | March 2019 to March 2024 |
| Deaths from accidental falls, rate per 100,000 | 11.5 19% above average (28% above average males, 7% females) | 9.7 (Australia) | 2017-2021 combined |
| % of adults who experienced discrimination | 16% | 16% | 2023 |
| % of adults who experienced racism | 3% | 7% | 2023 |

Source: Various, refer to *Yarra Ranges Health and Wellbeing Profile 2025*.

Demographic snapshot for Yarra Ranges

| Census 2021 indicators | Yarra Ranges | Victoria |
|---|---------------------|-----------------|
| Estimated resident population (2023) | 158,694 | |
| Indigenous residents | 1.1% | 1.0% |
| Born in Australia | 79.4% | 65.0% |
| Adults LGBTIQ+ | 11.0% | 11.0% |
| Residents with a disability | 5.4% | 5.9% |
| % aged 65+ | 17.2% | 16.4% |
| % aged 0-24 | 30.6% | 30.2% |
| Providing unpaid assistance to a person with a disability or health condition | 14.7% | 12.9% |
| Doing voluntary work through an organisation or group (2021) | 15.5% | 13.3% |
| Family households | 76.7% | 70.1% |
| Attending tertiary education | 20.6% | 24.5% |
| Level of separate houses | 93.7% | 73.4% |
| Households with a mortgage | 48.2% | 36.1% |
| Level of properties being rented | 14.0% | 28.5% |
| Median weekly household income | \$1,881 | \$1,759 |

Source: Australian Bureau of Statistics (2022). *Yarra Ranges 2021 Census All Persons QuickStats*. Retrieved from: <https://www.abs.gov.au/census/find-census-data/quickstats/2021/LGA27450>

Health of Australians

The lifespan of Australians is increasing, supported by the medical system's growing capacity to detect and treat health issues. However, 60% of Australians have at least one long-term health condition, and Australians are now spending more years living with ill-health. Treatments are continuing to increase in cost, creating economic challenges in responding to public health issues.¹ The primary health care system is also responding to an ageing population, an increase in mental illness, and growing prevalence of complex multiple health conditions.

Australia's main health challenges over the past five years include the impacts of COVID-19, increasing chronic illnesses (including mental health) and climate change. Heart disease, dementia, COVID-19, cancer and other long-term illnesses were the main causes of death during this period. The impact of dementia will continue to grow as the population ages. Indigenous Australians continue to have worse health than other Australians. Vaping is a rapidly growing health issue, especially for young people. The level of people struggling to maintain a healthy weight continues to rise. The impact of climate change is forecast to increase exponentially, particularly extreme heat and storms. Other community health and wellbeing issues include cost of living - including the lack of affordable housing - and lack of access to health services for prevention and treatment.

There is a range of emerging health risks whose future health impacts are unknown. These include rising levels of vaping, changing in the prevalence and transmission of infectious diseases, ultra-processed foods accounting for most foods consumed, micro-plastics throughout the food chain and ecosystem, shifts in how social media and technology are used, growing concern about how social media and internet access impact social attitudes and concentration, and rising impacts of misinformation on civic trust and health literacy.

But despite these challenges, Australians have very high life expectancy, and this is increasing. Health screening has vastly improved cancer survival rates. COVID deaths in Australia were much lower than in most other high-income countries. Australians have

¹ EMPHN (2024). *In conversation with Professor Zoe Wainer: The future of community and public health from the state's perspective*. <https://www.emphn.org.au/news-events/news/in-conversation-with-professor-zoe-wainer-the-future-of-community-and-public-health-from-the-states-perspective>

very good access to health care compared to many areas of the world. Thus communities have the capacity to mitigate many of the health risks facing them.

How has health changed in Australia?

The Australian Institute of Health and Welfare (AIHW) does a two-yearly report on Australia's health and what has changed. This includes an overview of high-level health issues and changes in health status, summarised below.²

Australians' life expectancy has fallen for the first time in 30 years

Australia's Health 2024 shows that Australians have lost a month from their life spans. For the first time since the mid-1990s, the life expectancy has decreased, falling by 0.1 years for both males and females between 2020 and 2022. This change is most likely to be due to the impact of COVID-19. In 2022, there was an increase in the total number of deaths, and nearly half of these were from the virus. COVID-19 became the third leading cause of death in Australia in 2022 – the first time in more than 50 years that an infectious disease has been in the top five causes of death.

However, life expectancy is still trending upwards, with life expectancy in 2020-2022 higher than it was in 2017-19. Other countries such as the United States and the United Kingdom saw much larger drops in life expectancy, of up to two years. Australian's life expectancy at birth is the fourth highest among Organisation for Economic Co-operation and Development (OECD) countries. A boy and a girl born in 2020–2022 can expect to live an average of 81.2 years and 85.3 years respectively.

Chronic conditions: heart disease still the biggest killer

Chronic conditions have contributed to 90% of deaths over the past twenty years. As the population ages, the number of years that Australians spend in ill-health has increased from 8.7 years to 9.7 years in men, and from 10.2 to 11.5 years in women. Around three in five Australians are estimated to live with at least one long-term (chronic) health condition.

Coronary heart disease remains the leading cause of death in Australia; cancer is also a key cause of death. Over the past 20 years, the number of new cancer cases increased by

² Source: Australian Institute of Health and Welfare (2024). *Australia's health*. [Australia's health - Australian Institute of Health and Welfare \(aihw.gov.au\)](https://www.aihw.gov.au); Block, S. (15 July 2024). *Life expectancy falls*. Insight Plus, Issue 27, 25 July 2024. [Life expectancy falls | InSight+ \(mja.com.au\)](https://www.insightplus.gov.au)

88% and deaths increased by 41%. Population growth and ageing is a key factor in rising cancer prevalence, along with dietary and other risk factors. Breast cancer is the most common cancer in women and prostate cancer is the most common cancer in men.

Five-year cancer survival rates have improved, from 53% in 1990-1994 to 71% in 2015–2019. Screening has had an enormous impact on survival rates – for example, cervical cancer death rates have halved since the National Cervical Screening Program was introduced in 1991.

Dementia forecast to double over the next 35 years

Dementia is expected to affect almost every Australian over the course of their lives. A 2023 Australian Institute of Health and Welfare survey found that two in every three people had a family member or friend living with dementia, and that one in four had cared for a family member or friend living with dementia. The Australian Institute of Health and Welfare predicts that the number of Australians with dementia will more than double over the next three decades, affecting 533,800 women and 315,500 men.

Indigenous Australians – some improvements

Death rates amongst Indigenous Australians have fallen for most age groups over the past decade. However, infant and child death rates have not improved.

Cancers are now the most common cause of death for Indigenous residents, taking over from cardiovascular disease. There continue to be large differences in social determinants and health risk factors between Indigenous and non-Indigenous Australians.

Other health indicators

General practitioner (GP) attendances have been increasing steadily. Most Australians (86%) had a GP visit in 2022/23 which was subsidised by Medicare. Tobacco smoking has decreased but vaping has increased. More people are overweight or living with obesity, with this figure increasing by 10% over the past few decades.

Community adaptation to climate-related health risks

Key climate change risk indicators for Yarra Ranges

| Indicator | Yarra Ranges | Time period |
|---|--|--------------|
| Number of hospital admissions for heat stroke | >450 | 2022/23 |
| National ranking for assistance seeking, national disaster recovery funding | 2 nd highest | 2006/07-2024 |
| Victorian ranking for storm hotspots | 3 rd highest | 2023 |
| Number of properties at high risk from bushfire | 10,317 (accounting for 3 of the top 10 areas in Australia) | 2024 |
| Forecast level of properties at high or medium risk from climate change | 65% (2 nd highest in Melbourne) | 2030 |

Source: Various, refer to *Yarra Ranges Health and Wellbeing Profile 2025*.

Climate change has both direct and indirect health impacts, as illustrated in the infographic below. Direct impacts are caused by exposure to more frequent and intense extreme weather events such as bushfires, droughts, floods and heatwaves. They include hypothermia, hyperthermia, heat stress, injury, drownings, trauma and death. For example, extreme heat has a major impact on health via heat stroke, exhaustion, cardiac conditions, respiratory illnesses and falls due to dehydration. Heatwaves are responsible for more deaths each year than any other type of disaster, including bushfires.

Indirect impacts include increases in infectious diseases; food and water insecurity; mental health issues; and impacts of existing chronic diseases, such as cardiovascular and respiratory diseases. The social determinants of health are also affected, including cost of living (particularly due to rising food, insurance and power costs), housing, employment, income, transport, access to services and infrastructure, workplace safety, recreational opportunities, and social support networks.

Many of the health impacts of climate change apply across the state and the country. But they tend to have more impact in areas which are hotter, more prone to fire/flood/storms, and have high levels of vulnerable residents.

Impacts of Climate Change Across the Life Stages

○ Climate Hazards/Risks
 ○ Direct and indirect impacts
 ○ Health Outcomes



Source: Etzel RA, Weimann E, Homer C, Arora NK, Maimela G, Villalobos Prats E, Banerjee A. (2024). *Climate change impacts on health across the life course*. J Glob Health 2024;14:03018. [jogh-14-03018.pdf](https://doi.org/10.2196/14-03018.pdf)

Impacts so far

In 2023, impacts of extreme weather events included flooding or heavy rain, hail, extreme wind, cyclones and bushfires. Most Australians (84%) say they have been directly affected by at least one climate-fueled disaster since 2019. More than 70% are concerned about climate change impacts including food and water security, more bushfires, more extreme events, higher insurance costs, more high heat days, and general health impacts.

- **Disasters.** Yarra Ranges has the second highest level of assistance seeking from national disaster recovery funding – it has sought and received assistance 42 times since 2006/07. Assistance was mostly sought due to storms (27), floods (17) and bushfires (5), with some events involving multiple hazards at the same time (e.g., bushfire and storm). Drownings in Victoria due to storms and disasters have increased by 1900% over the past ten years.
- **Storms.** Yarra Ranges ranks third in Victoria for storm hotspots. The impact of the June 2021 storms included: damage to and destruction of homes, businesses and roads; loss of power and internet for extended periods; fallen trees; blocked access to services and infrastructure; loss of communication, including the ability to contact emergency services; disruptions to schools, health services and transport; and loss of access to public space.
- **Food insecurity.** Food insecurity is gradually increasing (9% of adults in 2023). During the pandemic-related lockdowns in 2020, Yarra Ranges had the fourth-highest level of food insecurity in metropolitan Melbourne. Both cost of living issues and natural disasters are contributing to food insecurity.
- **Bushfires and high heat.** The 2019/20 bushfires saw a spike in respiratory and mental health issues amongst residents, an indication of what can be expected with future increases in high heat and bushfire risk days. There was a large spike in asthma admissions in 2022/23; this group is particularly at risk from smoke and fires. Yarra Ranges has the highest bushfire risk in Australia. Upper Yarra Valley, Mount Dandenong-Olinda and Belgrave-Selby are in the top ten local areas for risk across the entire country, with more than 10,000 properties considered at high risk.
- **Heat and cold.** Already, 39% of Victorians feel too cold in their home during winter and 44% feel too hot in their home during summer. There were more than 450 hospital admissions for heat stroke amongst Yarra Ranges residents in 2022/23. Residents have also experienced frequent impacts from heating or cooling failing due to power

outages, as were seen in the 2019/20 extreme heat and the June 2021 storm impacting the Dandenong Ranges.

Forecast impacts

Over the coming decades, Yarra Ranges can expect two to three times the number of days with temperatures above 35°C, lower annual rainfall with more storm events, and longer fire seasons with 42% more high fire danger days.

By 2030, 65% of properties in Yarra Ranges are forecast to be at high or medium risk from climate change (under a high greenhouse gas emissions scenario). This is the second-highest level in Melbourne - only Nillumbik has a higher risk (68%). The main type of risk is bushfire - 30.5% of properties were considered at medium to high risk for bushfire, rising to 43% by 2050 and 56% by 2100. Most suburbs had 20% to 100% of properties at medium to high risk. The areas with the highest risk are located in the Dandenong Ranges. These areas also have the lowest level of amenities, public transport and pedestrian infrastructure (note that these data were not available for most of the Yarra Valley).

Local human services expect that increased climate-related disasters and extreme weather events will impact service demand (51%), with access to climate resilient housing a challenge for low income households.

Council has a major role in supporting communities to adapt to the health impacts of climate change, and also in preparing for and responding to the impacts of emergencies.

Links to Victorian state health and wellbeing priorities:

- Tackling climate change and its impacts on health.

What changes do we want to see? – Goals and outcomes

Goal 1: Residents have the information and resources needed to protect against climate-related health and wellbeing risks.

- Reduced risk of climate-related ill-health, especially from heat.
- Everyone in the community has the climate risk information that they need.
- A high level of residents view Council as a trusted source for information on how to protect against the health impacts of climate change.

Goal 2: All aspects of Council work are adapted to function in changing conditions and emergency events.

- Council buildings, facilities, services and communications are prepared for the impacts of changing weather and extreme events.
- Open spaces and outdoor infrastructure are designed to reduce heat health risks and be usable in hotter summers.
- Nature-based solutions are used to reduce urban heat
- The people and places at greatest risk from climate-fuelled disasters are protected.

Goal 3: The community is prepared for climate impacts and emergency events.



- Residents and businesses are prepared for various types of disruptions (including loss of power/gas, loss of internet/phone, water contamination and transport disruptions).
- The community has improved understanding of on appropriate home insurance.

Goal 4: The community is protected from emerging public health issues and health hazards.

- Reduced risk of health impacts from emerging public health issues and hazards (including infectious diseases, vector borne diseases, food poisoning and water contamination).
- Work towards these outcomes will be through the lens of age, gender, cultural diversity and place.

Mental wellbeing and social connection

Key mental health indicators for Yarra Ranges

| Indicator | Yarra Ranges | Victoria | Time period |
|---|--|----------|--------------------|
| % of adults with high/very high psychological distress | 26% (3 rd highest in state) | 19% | 2023 |
| % of residents with diagnosed mental health conditions | 10.3% (7 th highest in Melbourne) 13% of females, 8% of males | 8.8% | 2021 |
| % of adults seeking professional help for a mental health problem in past 12 months | 24% (9 th highest in state) | 20% | 2023 |
| Growth in rate of intentional self-harm hospital admissions, 0-24 year olds | 25.5%  | | 2019/20 to 2020/21 |
| Growth in mental health admissions amongst 15-24 year olds | 40%  | | 2019/20 to 2022/23 |

Source: Various, refer to *Yarra Ranges Health and Wellbeing Profile 2025*.

Yarra Ranges has a connected community with a strong sense of place, and relatively high levels of involvement in community activities such as volunteering. But the COVID-19 pandemic has hit some groups in the community much harder than others, both triggering and worsening a range of mental health and other health issues. Young people and females have a much higher level of long-term mental health conditions, along with indigenous residents, persons with a disability and low income residents. Overall, Yarra Ranges has a high level of residents with high psychological distress. Disability related to mental health affects 10% of local NDIS recipients; two-thirds of NDIS recipients are aged less than 25. More than one in five adults are lonely, nearly one in four have low or medium life satisfaction, and one in eight do not feel valued by society. Residents have high and rising usage of mental health medication and services; and high use hospital admissions and emergency department treatment for mental health issues, including self-harm and attempted suicide. These issues affect children, teenagers and young adults the most.

High school students and school leavers have also experienced reduced connection with education and employment since the lockdowns in 2020 and 2021, and worse educational outcomes. Older residents have experienced a large rise in hospital admissions for dementia over the past few years. Yarra Ranges has no local hospitals; and it has a major

shortage of mental health referral and treatment services, such as general practitioners and psychiatrists, despite a very high level of need.

Yarra Ranges has a relatively high level of:

- Residents with long-term mental health conditions (10%) - Yarra Ranges ranks seventh-highest across Melbourne. Mental health is the most prevalent long-term health condition amongst Yarra Ranges residents, particularly amongst women, teenagers and young adults.
- Adults with high psychological distress (26%) – Yarra Ranges is ranked third in Victoria.
- Adults seeking professional help with a mental health problem (24%) – Yarra Ranges is ranked ninth-highest in Victoria.
- Mental health hospital admissions amongst children, teenagers and young adults.
- Young people on prescription medications for mental health issues. Yarra Ranges ranks second-highest in Victoria for 0-17 year olds receiving prescriptions, and sixth-highest for 18-24 year olds.

The past five years³ have also seen large increases in:

- Mental health-related hospital and emergency department use amongst young people.
- Hospital admissions for youth self-harm, and emergency department use for attempted suicide amongst children and young adults.
- Young people being prescribed mental health medications.
- Adults with high psychological distress.
- Families with young children who need emotional counselling.
- Use of psychiatrists, and use of mental health services by existing patients.
- Hospital use for dementia – there was a nearly 300% increase in admissions for Alzheimer's disease.

Lack of access to services is contributing to poor mental health in Yarra Ranges. Being unable to see a GP when needed, or having no private health insurance, is associated with higher levels of psychological distress. Yarra Ranges lacks preventative and referral services such as general practitioners and psychiatrists.

³ Since 2019.

Other factors associated with high psychological distress in Victorian local government areas include food insecurity, poor general health and life satisfaction, and not feeling socially connected (e.g., being lonely, not feeling valued by society, experiencing discrimination). Being in a couple or family with children household was a strong factor in protecting against mental health issues. This is in line with research during the pandemic, which found that three key issues linked to better mental health were: adequate income, social connection, and sufficient access to services.

Council works across these determinants of mental health. It is involved in projects to improve access to appropriate affordable food; advocacy and partnership work to improve service access; and a wide range of projects and grants aiming to improve social connection, and health and wellbeing. Its economic development work supports local employment and educational opportunities; these in turn support household income. Council grants, projects and partnership work all support emergency relief and other projects assisting disadvantaged communities.

Links to Victorian state health and wellbeing priorities:

- Improving wellbeing.

What changes do we want to see? – Goals and outcomes

Goal 1: People have better access to mental health supports and services.

- Increased access to and knowledge of available mental health supports.

Goal 2: People have better access to emergency, social and affordable housing









- Community members in need, are supported to access suitable housing.

Goal 3: People feel a sense of belonging and have strong community connections.

- Council facilities are fit for purpose to support people of all ages and abilities to participate in community activities and build strong connections.
- Council's holistic planning with communities increases amenity, liveability and sustainability of our townships.
- Council's role in strengthening communities is articulated in its Community Strengthening Strategy.
- Increased mental wellbeing through community connection and participation in civic life.

Healthy children and young people

Key health indicators for children and young people in Yarra Ranges

| Indicator | Yarra Ranges | Victoria | Time period |
|---|---|------------------|--------------------------|
| Rate of whooping cough cases | 194.4 per 100,000 (highest in Victoria) | 67.4 per 100,000 | Sept 2024, year to date |
| Growth in number of NDIS participants with developmental delay | 36%  | | Dec 2022 to Sept 2023 |
| Increase in number of 5-14 year olds with a disability | 47%  | | 2016-2021 |
| Change in number of sexually transmitted disease notifications, 15-24 year olds | 9.1%  | | 2019-2023 |
| Growth in rate of intentional self-harm hospital admissions, 0-24 year olds | 25.5%  | | 2019/20 to 2020/21 |
| Growth in mental health admissions amongst 15-24 year olds | 40%  | | 2019/20 to 2022/23 |
| Change in level of students who attended school at least 90% of the time | 15% fall  | | 2019 to 2023 |
| Year 12 completion rates | 6% fall  | | 2018 to 2020 |
| Youth unemployment | 15.1% (Outer East) | 11.9% | March 2024 |
| Change in crimes amongst 10-17 year olds | 35%  | | March 2019 to March 2024 |

Source: Various, refer to *Yarra Ranges Health and Wellbeing Profile 2025*.

Children and young people have tended to be the most vulnerable age group in Yarra Ranges for health and wellbeing. Post-pandemic, they have continued to have a wide range of health issues and risk factors. Mental health is the standout issue, including high and rising hospital use for: stress, depression, anxiety, schizophrenia, psychosis, self-harm and attempted suicide. Young people have high use of prescription medications for mental health issues. There is also a high level of emotional counselling amongst families with young children, family mental health issues for children starting school, and ill-health amongst school leavers.

Health issues go beyond mental health. Children and young people in Yarra Ranges also have a very high level of hospital admissions across many other conditions. Disability is a growing issue amongst children - there was a 47% jump in the number of 5-14 year olds who needed assistance with daily living activities, between 2016 and 2021. Children and teenagers account for most NDIS recipients in Yarra Ranges, particularly due to autism,

intellectual disability, developmental delay, and psychosocial disabilities (i.e. disabling levels of mental illness). The number of NDIS recipients aged grew by 11% over the year to September 2023, and most of this growth has been amongst 0-24 year olds.

Educational attachment also seems to have fallen, on measures including school attendance, Year 12 retention and completion, educational outcomes, and post-school study. Youth unemployment is increasing. Young people are experiencing rising teenage birth rates and number of STDs. Child crime is rising. The level of families with children who need homelessness services is growing, in concert with falling housing affordability, rising living costs increase and rising numbers of family violence incidents. All of these issues vary across Yarra Ranges townships, with children and young people in some areas much more affected by expanding health, education and social challenges.


Yarra Ranges Council has an active role in the health of children and young people, with dedicated teams supporting these age groups. It has roles spanning social connection, maternal and child health, school retention, advocacy for access to services and affordable housing, improving access and inclusion for person with a disability, gender equity, and economic development.

Links to Victorian state health and wellbeing priorities:

- Improving sexual and reproductive health.
- Improving wellbeing.
- Reducing harm from tobacco and e-cigarette use.

Community capacity to lead healthy lives

Key indicators for chronic diseases and health risk in Yarra Ranges

| Indicator | Yarra Ranges | Victoria | Time period |
|---|--|---------------------|-----------------|
| % of residents with at least one long-term health condition | 35% (38% of females, 32% of males) | 31% | 2021 |
| % of residents with diabetes | 4.7% | 6.1% (Australia) | March 2023 |
| % of adults overweight or obese | 57% | 54% | 2023 |
| % of adults consuming sugary drinks daily or a few times per week, during the past week | 37% | 34% | 2023 |
| % of adults who experienced food insecurity in past 12 months | 8.9% | 8% | 2023 |
| % of adults with gum disease | 23.9% (6 th highest) | 20.3% | 2023 |
| % of adults with fair/poor dental health | 23% | 27% | 2023 |
| % of adults with insufficient weekly exercise | 61% | 64% | 2023 |
| % of residents participating in sport | 16% | n/a | 2022 |
| % of adults who smoke daily | 8% | 10% | 2023 |
| % of adults who vape daily | 7% (3 rd highest) | 4.5% | 2023 |
| % of adults at risk of increased harm from alcohol-related disease or injury | 17% | 13% | 2023 |
| Rise in hospital admissions for dementia | 286%  | 17% | 2018/19-2022/23 |

Source: Various, refer to *Yarra Ranges Health and Wellbeing Profile 2025*.

Prevalence of chronic diseases

Chronic (long-term) diseases and lifestyle risk factors are a major cause of ill-health in all areas of Australia. In Yarra Ranges, 35% of residents had at least one long-term health condition, compared to 31% of Victorian residents. Mental health issues, asthma, arthritis, diabetes and heart disease are the most common conditions in Yarra Ranges, and residents were above average for mental health conditions, asthma, arthritis and cancer. Dental health is also an issue – Yarra Ranges has a high level of residents with gum disease. Females and older residents aged 65 plus were much more likely to have chronic health issues.

Chronic diseases are also the main cause of death for most residents. These include coronary heart disease (10.5% of deaths in Yarra Ranges), dementia (8%), lung cancer (6%), cerebrovascular disease (6%), chronic obstructive pulmonary disease (COPD - 4%) and colorectal cancer (3%). Yarra Ranges has experienced a rising level of avoidable deaths amongst men aged less than 75. Yarra Ranges has a high rate of deaths from heart and lung disease, accidental falls, some forms of cancer, and influenza and pneumonia. Hospital admissions for dementia nearly tripled in the four years to 2022/23. There was also growth in emergency department use for conditions including heart issues and pneumonia. Local cancer screening rates dropped during the pandemic.

RISK & PROTECTIVE FACTORS

Eating a healthy diet, exercising regularly, and not smoking/vaping/drinking regularly, all help to reduce the risk of chronic disease. People do not need huge improvements in diet, exercise and sleep to reduce our health risks. The first ever study to examine the minimum improvements across all three behaviours required for measurable improvements in health outcomes, found that slight changes substantially reduce the risk of early death. The risk of premature death was reduced by at least 10% if people slept for 15 minutes more a day, plus did an additional 1.6 minutes of moderate-to-vigorous physical activity a day, and also ate an additional one and a half pieces of fruit or half a serving of vegetables a day. This is if people make slight improvements across all three behaviours. For people whose sleep, physical activity and diet were poor, combined increases of 75 minutes a day of sleep, 12.5 minutes a day of moderate to vigorous physical activity and a 25-point improvement in diet

(five points equating to one less serving of processed meat a week, or an extra half serving of vegetables or a piece and a half of fruit) halved their all-cause mortality risk.⁴

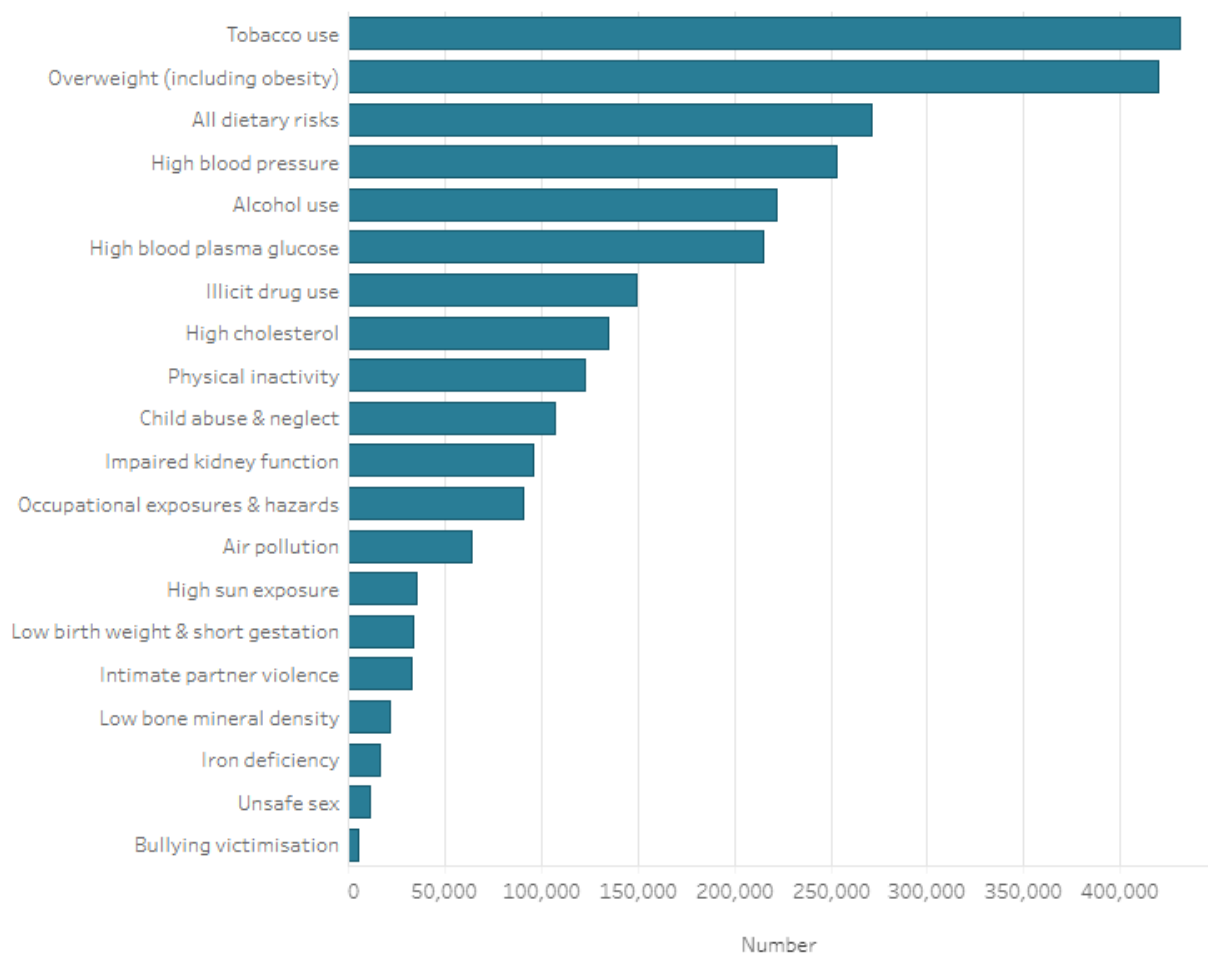
In Yarra Ranges, residents have an average level of physical inactivity and being overweight, and a high level of vaping and alcohol consumption. In 2023:

- 37% of adults drank sugary drinks daily or a few times a week.
- 61% of adults did not exercise enough each week.
- Nearly 60% of adults were overweight or obese.
- Yarra Ranges had a relatively high level of adults who vaped daily (7%) - Yarra Ranges was ranked 3rd highest in Victoria for vaping. A below average level (8%) were daily smokers.
- 8% of adults had been sunburnt several times in the past year.
- 17% of adults were at increased risk of harm from alcohol-related disease or injury, above the 13% Victorian average. Alcohol treatment and hospital admissions rose substantially during the pandemic.
- Nearly 1 in 10 residents were food insecure – i.e., they ran out of food at some point in the past year and could not afford to buy more. The level was 8.9% for adults in Yarra Ranges (up from 8% in 2020), compared to 8% across Victoria. 10.5% had been worried about becoming food insecure.
- More than one-quarter of adults reported having a disability, at 27% compared to 20% for Victoria.

⁴ [Minimum and optimal combined variations in sleep, physical activity, and nutrition in relation to all-cause mortality risk | BMC Medicine | Full Text](#)

Leading risk factors contributing to disease burden in Australia, 2018

DALY= Disability-adjusted life years; YLD= Years lived with disability; YLL= Years of life lost
ASR= Age-standardised rate per 1,000 population



Notes:

Rates were age-standardised to the 2001 Australian Standard Population and expressed as per 1,000 population.

The risk factors high blood plasma glucose, air pollution, and low birth weight & short gestation were not estimated for all reference years.

Source: AIHW Australian Burden of Disease Database. <http://www.aihw.gov.au>

Source: Australian Institute of Health and Welfare (2021). *Australian Burden of Disease Study 2018: Interactive data on risk factor burden*. [Australian Burden of Disease Study 2018: Interactive data on risk factor burden, Summary - Australian Institute of Health and Welfare](#)

Infectious diseases

Yarra Ranges has had a huge jump in local cases of pertussis (whooping cough) in 2024. It now has the highest level of whooping cough cases in Victoria, mostly amongst children and teenagers. Yarra Ranges is also experiencing a rising level of infectious diseases resistant to antibiotics.

Council is involved in a range of project and joint work supporting healthier lifestyles in terms of physical activity, healthy diet, food security, alcohol and drug use, disability access, healthy active ageing, and infectious disease prevention. It also advocates for

better access to preventative services and treatment services. It plays an important part in providing community health warnings for weather-related hazards.

Links to Victorian state health and wellbeing priorities:

- Improving wellbeing.
- Reducing harm from tobacco and e-cigarette use.
- Increasing healthy eating.
- Increasing active living.
- Reducing harm from alcohol and drug use.
- Decreasing antimicrobial resistance across human and animal health.

What changes do we want to see? – Goals and outcomes

Goal 1: The community has increased capacity to access healthy affordable food.

Increased consumption of minimally processed foods and reduced consumption of discretionary foods.

Reduced levels of food insecurity.

Goal 2: Neighbourhoods provide a wider range of accessible options to participate in physical activity.


The community has increased opportunities to participate in physical activity.

Goal 3: The community has access to substance-free spaces and activities.

Reduced risk of harm from alcohol, tobacco and e-cigarettes.

Accessible health services

Key indicators for chronic diseases and health risk in Yarra Ranges

| Indicator | Yarra Ranges | Victoria | Time period |
|---|---|-------------|-----------------|
| % of adults with no private health insurance | 49% | 45% | 2023 |
| % of adults who delayed visit to dentist due to cost, during the past 12 months | 30% | 32% | 2023 |
| % of adults unable to see a GP when needed in the past 12 months | 19% | 19.5% | 2023 |
| % of adults who had cancelled medical appointments | | 3% | 2023 |
| - Cancelled surgery | 6% (2 nd highest in state) | 3% | |
| - Cancelled/postponed cancer screening | 5% (2 nd highest) | 11% | |
| - Cancelled/postponed medical appointment, test or procedure | 14% (3 rd highest) | | |
| % of emergency presentations where no disease was found | 13.5% | 2% | 2022/23 |
| Change in level of emergency department presentations where no diagnosis made | 866%  | 8% increase | 2018/19-2022/23 |

Source: Various, refer to *Yarra Ranges Health and Wellbeing Profile 2025*.

Service access is a long-term issue for residents, partly due to Yarra Ranges being located in the urban fringe area. Issues include a lack of GPs and health professionals, residents having a very high tendency to go to emergency departments when unwell, lack of private health insurance, a high level of adults cancelling medical appointments, struggles with the cost of health services, falling levels of cancer screening, and challenges in getting a GP appointment when needed.

Service needs

The ability to access services where and when they are needed is crucial to community health and wellbeing. However, Yarra Ranges residents experience significant challenges when trying to access local human services. An analysis of service usage data and survey data shows that most services have had rising demand over the past four years and have often been unable to meet community demand.

Human services are currently facing a range of barriers to providing services. The key barriers include lack of staff and volunteers; long waiting lists and waiting times; lack of

sufficient services, combined with a reduction in the number of services and programs; lack of suitable space; lack of transport to services; lack of GPs, who are often the first step in referring patients to a specialist service; rising costs of service provision; and difficulties with referring clients to other services. Problems with referrals include waiting lists, services not accepting new clients, lack of available services or no local services. Service data also showed major shortages for all types of medical specialists, and that workers are not available in the areas that need them the most, contributing to the workforce shortages identified in the survey. Recent data shows that Yarra Ranges has a major shortage of medical workers, ranking third highest in Melbourne for its workforce deficit. It had a shortage of 1,297 nurses/midwives, 488 medical practitioners and 428 allied health workers. Wandin-Seville has the lowest number of childcare places per child in Melbourne and the fifth-lowest number in Victoria, whilst Upper Yarra Valley has no childcare access.

At the same time, most services have experienced rising demand over the past four years. And clients are presenting with more numerous and complex conditions, more advanced health problems (e.g., advanced skin cancer), worse mental and physical health, higher service needs per person, and issues such as family violence and lack of affordable housing.

Service usage

Yarra Ranges has a high proportion of hospital admissions where the person was unwell but no disease was found (13.5% in 2022/23, compared to 2% across Victoria). And over the past few years, there has been a 170% increase in these presentations (compared to 52% across Victoria). There has also been a large increase in emergency department use where no diagnosis was made, at 866% growth in Yarra Ranges, compared to 8% across Victoria. This may be linked to lack of access to GPs in Yarra Ranges, meaning that people have had to attend emergency to have their health concerns investigated. In 2023, Yarra Ranges had a high level of adults who had cancelled medical appointments over the past year:

- 6% cancelled surgery, ranking Yarra Ranges 2nd highest in the state.
- 4.7% cancelled or postponed cancer screening, ranking Yarra Ranges 2nd highest.
- 14% cancelled or postponed a medical appointment, test or procedure, ranking Yarra Ranges 3rd highest.

In 2023, 19% of adults had been unable to see a GP when needed over the past twelve months (the same as the state average). Of this group, 26% were unable to see a GP due to cost and nearly one-third felt that they waited an unacceptably long time to see a GP.

Bowel cancer screening rates in Yarra Ranges dropped 6% in 2020/21, after five years of steady increases. This fall in screening is likely to be linked to lockdown impacts on service access and usage. The level of older women having breast cancer screening fell by 16% in 2019/20, despite only the final quarter of that year being affected by lockdowns. Victoria-wide, there was also a substantial fall in participation in 2020/21.⁵

The level of potentially avoidable deaths (PAD) has risen amongst males. These are deaths amongst people aged under 75, from conditions⁶ which could be prevented through individualised care, or are treatable through primary care and hospital care.

During COVID, there was a drop in usage of antenatal care in the first 14 weeks of pregnancy amongst women in Yarra Ranges. The level who had at least one antenatal visit in the first 14 weeks of pregnancy fell from 94% in 2019 to 90% in 2021, whilst the level increased Victoria-wide. The level of women leaving hospital less than one day after giving birth rose by 50% across Victoria, but nearly doubled in Yarra Ranges, with a 95% increase.

Service cost

In 2023, 49% of adults surveyed in Yarra Ranges had no private health insurance, compared to 45% across Victoria. The average out-of-pocket cost to see a GP has risen from \$35.32 in December 2019 to \$43.28 in June 2024, and the level of services which are bulk billed has dropped from 83.6% to 75%. At the same time, demand for GPs has surged, with appointment numbers increasing by 17%, whilst the population stayed the same. In 2023, nearly one-third of adults had avoided or delayed a dental visit due to the cost.

Council is a direct service provider for services such as immunisation. It also works with service providers, service network, and state and federal government, to advocate for and improve access to services. It provides a crucial role in supporting funding applications by partner organisations.

⁵ 2020/21 data are not yet available at LGA level.

⁶ See table below.

Links to Victorian state health and wellbeing priorities:

- Improving wellbeing.
- Increasing healthy eating.
- Reducing harm from alcohol and drug use.

What changes do we want to see? – Goals and outcomes

Council's key goal in this space is that essential health and human services and infrastructure are accessible to all groups within the community. The desired outcome would be improved access to health screening, prevention and treatment services.

This is a key advocacy action for Council, rather than a stand-alone priority.

Safer and more inclusive communities

Key community safety indicators for Yarra Ranges

| Indicator | Yarra Ranges | Victoria | Time period |
|--|--|--------------------|----------------------|
| Family violence incidents per 100,000 | 1,224 | 1,366 | Year to Sept 2022/23 |
| Hospital admissions for assault, rate per 100,000 | 24 | 36 | 2022/23 |
| Crime rate per 100,000 | 3,042 | 5,536 | 2023 |
| Deaths from accidental falls, rate per 100,000 | 11.5 19% above average (28% above average males, 7% females) | 9.7 (Australia) | 2017-2021 combined |
| Change in number of presentations for tendency to fall | 377.3% ↑ | 70% | 2018/19-2022/23 |
| % of adults who experienced discrimination | 16% | 16% | 2023 |
| % of adults who experienced racism | 3% | 7% | 2023 |

Source: Various, refer to *Yarra Ranges Health and Wellbeing Profile 2025*.

Yarra Ranges is a relatively safe community, with low total crime rates. But there remain community safety issues which particularly affect older residents, young people and people affected by family violence. The main community safety issues in Yarra Ranges include family violence, falls, transport accidents, drowning and youth crime.

Falls

Yarra Ranges has an above average rate of hospital admissions for accidental injuries; falls amongst elderly are likely to be the main contributor. Over the past four years, emergency presentations for tendency to fall have increased nearly fourfold (up 377% between 2018/19 and 2022/23). Frail aged residents by far the most likely to go to hospital for unintentional injury, mostly due to falls. Yarra Ranges also has a very high rate of deaths from accidental falls amongst older males; its total rate of deaths from accidental falls is 19% higher than the national average.

Road safety

Yarra Ranges has a relatively high number of road deaths and hospital admissions for serious road injuries. Across Victoria, Yarra Ranges has the highest number of hospital admissions for serious road injuries of any LGA - children and young people have the

highest rate of admissions. The number of road deaths jumped by 50% in 2023 to 11 lives lost.

Family violence

Yarra Ranges has a below average rate of family violence. Family violence increased by 18% during the pandemic but fell in 2023. Most victims of family violence were female and most offenders were male. However, Yarra Ranges has had high growth in family violence victims aged 55 plus, over the past four years. There was also a large shift in the age profile of perpetrators. The number aged 55 plus more than doubled (a 103% increase), and the number aged 0-17 rose by 72%. Between 2021/22 and 2022/23, the number of maternal and child health mother/family counselling sessions for domestic violence nearly tripled, rising from 36 to 99.

Drowning

Yarra Ranges ranks 12th out of 31 LGAs for its number of drowning deaths in the past ten years. Victoria-wide, the number of people who died from drowning has increased since the pandemic.

Crime

Yarra Ranges has a below average crime rate, and the rate has been trending down over the past four years. However, crime rates amongst 10-17 year olds have been rising.

Council has a role in reducing health issues such as falls, traffic accidents and family violence through work including healthy active ageing, gender equity work, roads maintenance, L2P driver education, community safety information and a range of programs run by Council's Community Safety Team.

Links to Victorian state health and wellbeing priorities:

- Preventing all forms of violence.
- Reducing injury.

What changes do we want to see? – Goals and outcomes

Goal 1: Our community works together to prevent all forms of violence.

- Reduced levels of violence against women and children
- Improved sexual and reproductive health
- Reduced levels of elder abuse

Goal 2: Community members are protected from accidental injury.

- Fewer falls amongst older residents
- Safer roads for all users
- Reduced risk of drowning

Goal 3: Our community has equitable access to spaces where everyone feels welcome and included.

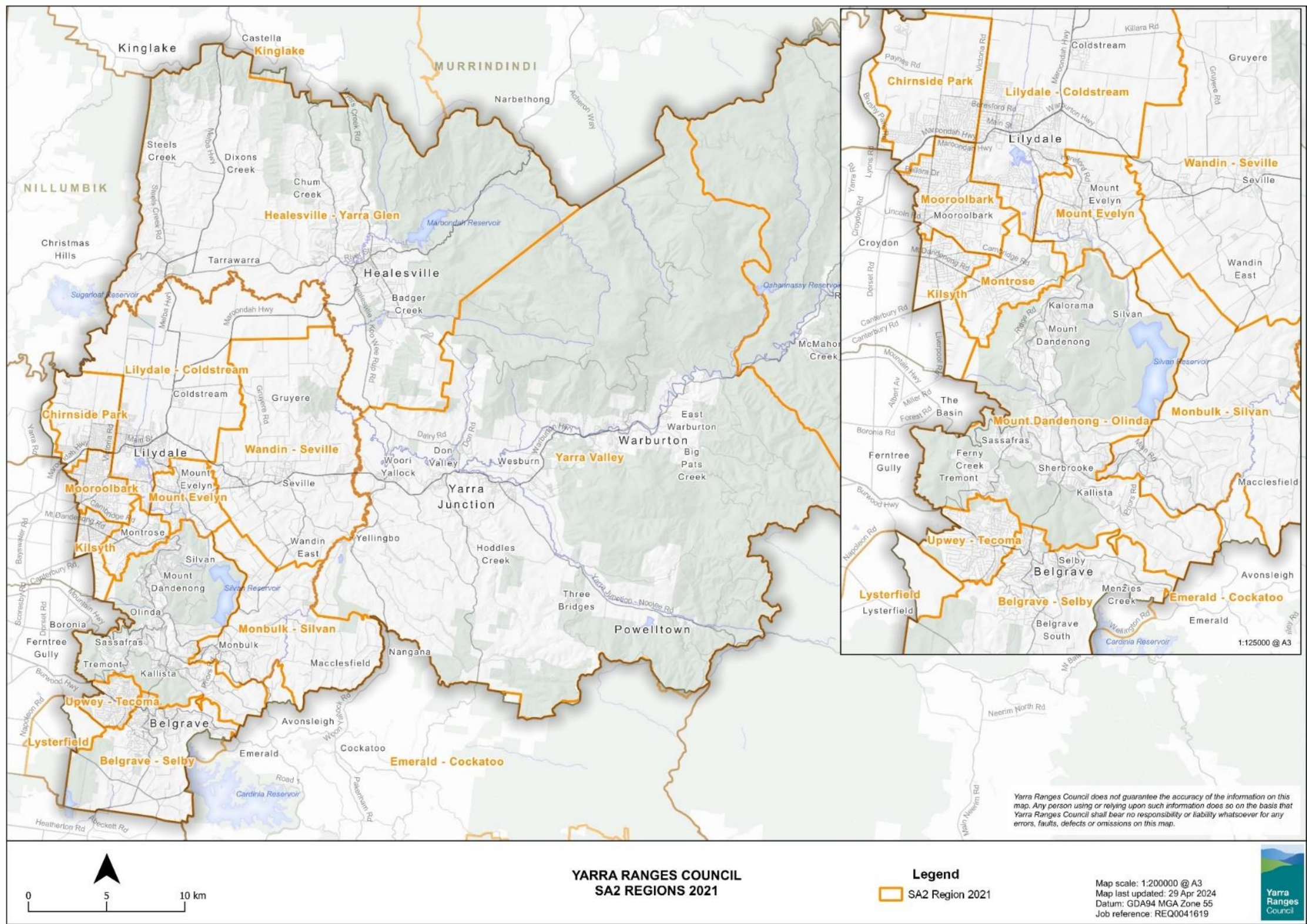
- Increased access to safe, accessible and inclusive Council spaces

Glossary

| | |
|--------------------------|---|
| ABS | Australian Bureau of Statistics |
| ACARA | Australian Curriculum and Assessment Reporting Authority |
| ACSC | Ambulatory care sensitive condition |
| AIHW | Australian Institute of Health and Welfare |
| AMR | Antimicrobial resistance |
| AOD | Alcohol and other drugs |
| ATSI | Aboriginal and/or Torres Strait Islander |
| Census Housing | Australian Bureau of Statistics 2021 Census of Population and |
| Chronic health condition | A long-term health condition (e.g., asthma, cancer) |
| COPD | Chronic obstructive pulmonary disease |
| COVID 2020 | Refers to the COVID-19 pandemic and related lockdowns in and 2021 |
| CSA | Crime Statistics Agency |
| DH | Department of Health (Victoria) |
| EMPHN | Eastern Melbourne Primary Health Network |
| EMR | Eastern Metropolitan Region |
| GP | General Practitioner |
| Hospital data | The statistics on hospital admissions and emergency department presentations are for Yarra Ranges residents, unless otherwise specified |
| HSNA | Human Services Needs Analysis |
| iGAS | Invasive group A streptococcal disease |
| LGA | Local government area |
| LSV | Life Saving Victoria |
| MCH | Maternal and child health |
| NDIS | National Disability Insurance Scheme |
| NDSS | National Diabetes Services Scheme |

| | |
|------------|---|
| NEC | Not elsewhere classified |
| Neoplasms | Cancer |
| NEPHU | North Eastern Public Health Unit |
| OECD | Organisation for Economic Co-operation and Development |
| PAD | Potentially avoidable deaths |
| Rate ratio | A rate ratio compares rates between two groups. The rate ratio for mortality (death) rates compares deaths in Yarra Ranges to deaths across Australia, where 1 means that Yarra Ranges has the same rate as the average. A high rate ratio means that Yarra Ranges is above average – a rate ratio of 1.2 places Yarra Ranges 20% above average. A low rate ratio means that Yarra Ranges is below average – a rate ratio of 0.9 places Yarra Ranges 10% below average. |
| RSV | Respiratory syncytial virus |
| S | Shire |
| SA2, SA3 | Statistical Areas Level 3 (SA3s) are geographic areas built from whole Statistical Areas Level 2 (SA2s). They are designed for the output of regional data including Census data. They tend to align with LGAs. |
| SEHQ | School Entrant Health Questionnaire (SEHQ) |
| STD | Sexually transmitted disease |
| TAC | Transport Accident Commission |
| VAED | Victorian Admitted Episodes Dataset |
| VAHI | Victorian Agency for Health Information |
| VEMD | Victorian Emergency Management Dataset |
| VHISS | Victorian Health Information Surveillance System |
| VPHS | Victorian Population Health Survey |
| VRE | VanA vancomycin resistant enterococcus |

Map of local areas in Yarra Ranges



Source: Yarra Ranges Council (2024). Customised maps, Yarra Ranges Council SA2 Regions 2021.

PART 2: HEALTH INDICATORS & RISK FACTORS

What are the main reasons for going to hospital?

Hospital admissions

Hospital admissions count admissions to hospital for people to receive treatment or care.⁷ This care includes surgical, medical, intensive, newborn, rehabilitation, palliative and mental health care. One patient may have multiple admissions during a year. Hospital admissions data show the amount of care provided, who received care, conditions needing treatment and changes in hospital usage. Customised hospital data obtained for Yarra Ranges include age, gender, locality, Indigenous status and detailed mental health data. The report appendices include a detailed table of the types of diagnosis within each diagnostic group.

Statistics on hospital admissions and emergency department presentations are for Yarra Ranges residents, compared to all Victorian residents, unless otherwise specified. In 2022/23, the main reasons for hospital admission amongst residents were:

- factors influencing health status and contact with health services (23%);
- digestive system diseases (12%); and
- symptoms, signs and abnormal clinical laboratory findings not elsewhere classified (9%).

There were 236 admissions under “codes for special purposes” in 2022/23. This diagnosis group includes COVID-19 admissions; there were zero admissions in previous years.

Note that percentage data have limited uses. If Yarra Ranges is high for one condition compared to Victoria, it will be low for another condition, as percentage data add up to 100%. Thus percentage data for hospital admissions are a basic indicator of what the main population health issues are within a particular group or area (e.g., children in Yarra Ranges),

⁷ The actual count is of separations, which occur when someone leaves hospital, but the term admissions is used as this terminology is more familiar to many data users.

but are not useful for comparisons between groups or areas. However, percentage change can be used comparatively, as it is examining shifts in a given indicator.

CHANGES IN ADMISSIONS DURING THE PANDEMIC

The COVID-19 pandemic saw reduced access to many forms of medical care, including preventative care and screening, alongside community concerns about using face-to-face care due to risk of infection. Thus there was the possibility that hospital admissions would rise in the aftermath of the pandemic. Admissions did rise slightly across Victoria between 2019/20 and 2022/23 (by 3%), but the number fell by 3% in Yarra Ranges.

Compared to Victoria, Yarra Ranges had above average growth in admissions for congenital malformations and in admissions for mental health issues. Conditions with increased admissions in Yarra Ranges included:

- Congenital malformations, deformations and chromosomal abnormalities. These rose by 29%, much higher than the 8% Victoria average. Hospital admissions for these causes primarily affect infants but can occur at any age due to the lifelong impacts. Fifty-five percent of admissions in 2022/23 were amongst 0-4 year olds. This category mostly refers to diseases, conditions and physical abnormalities present from birth.
- Endocrine, nutritional and metabolic diseases (a 29% increase, below the 34% average).
- Diseases of the digestive system (an 11% increase, below the 15% average).
- Diseases of the eye and adnexa (an 10% increase, well below the 31% average);
- Cancer (an 8% increase, below the 11% average).

The number of admissions for mental and behavioural disorders fell by 8% across Victoria but stayed the same in Yarra Ranges. If the extent of local mental health issues were similar to statewide patterns, Yarra Ranges should also have had a drop in admissions.

**Change in the number of hospital admissions by diagnosis group:
Yarra Ranges residents and Victorian residents, 2019/20 to 2022/23**

| Diagnosis group | % change, Yarra Ranges | % change, Victoria |
|--|---------------------------|-----------------------|
| Undefined | n/a | 608.5% |
| Certain infectious and parasitic diseases | -6.2% | -6.9% |
| Neoplasms | 7.6% | 10.6% |
| Diseases of the blood and blood-forming organs, and certain disorders involving the immune mechanism | 0.8% | 4.1% |
| Endocrine, nutritional and metabolic diseases | 28.9% | 34.2% |
| Mental and behavioural disorders | 0.1% | -8.2% |
| Diseases of the nervous system | -5.3% | 4.9% |
| Diseases of the eye and adnexa | 9.7% | 31.1% |
| Diseases of the ear and mastoid process | -9.9% | 5.1% |
| Diseases of the circulatory system | -12.1% | 2.4% |
| Diseases of the respiratory system | -10.6% | 4.7% |
| Diseases of the digestive system | 11.2% | 15.4% |
| Diseases of the skin and subcutaneous tissue | -14.6% | 1.0% |
| Diseases of the musculoskeletal system and connective tissue | -2.6% | 11.5% |
| Diseases of the genitourinary system | -8.4% | 9.7% |
| Pregnancy childbirth and the puerperium | -6.5% | -5.9% |
| Certain conditions originating in the perinatal period | -11.8% | -1.8% |
| Congenital malformations, deformations and chromosomal abnormalities | 29.2% | 8.6% |
| Symptoms, signs and abnormal clinical laboratory findings NEC | -10.8% | 3.5% |
| Injury, poisoning and certain other consequences of external causes | -12.4% | 1.9% |
| Factors influencing health status and contact with health services | -5.6% | 5.8% |
| Codes for special purposes* | n/a | n/a |
| Total | -2.8% | 7.4% |

** This code was not in use in 2019/20, as it includes COVID-19 related hospital admissions.
NEC = not elsewhere classified.*

Source: Victorian Department of Health (2023). *Victorian Admitted Episodes Dataset (VAED) and Victorian Emergency Minimum Dataset (VEMD) - Unpublished hospital usage data for Yarra Ranges and Victoria, 2018/19-2022/23.*

ADMISSIONS BY AGE

MAIN REASONS FOR ADMISSION BY AGE

Yarra Ranges hospital admissions data are available for 0-4 year olds, ten year groupings in the age range 5 to 74, and persons aged 75 plus.

In 2022/23, infants and pre-schoolers aged 0-4 were mostly likely to be hospitalised for:

- factors influencing health status and contact with health services (30%);
- certain conditions originating in the perinatal period (14%);
- respiratory diseases (13%); and
- symptoms, signs and abnormal clinical laboratory findings NEC (12%).

Amongst children aged 5-14, the main reasons for admission were:

- diseases of the digestive system (16%);
- injury, poisoning and certain other consequences of external causes (15%); and
- symptoms, signs and abnormal clinical laboratory findings NEC (12%).

For teenagers and young adults aged 15-24, the main reasons for admission were:

- diseases of the digestive system (20%);
- mental and behavioural disorders (13%);
- injury, poisoning and certain other consequences of external causes (12%); and
- factors influencing health status and contact with health services (11%).

Young adults aged 25-34 include women in their main child-bearing years. Thus pregnancy and childbirth were the main reason for admission for this age group (27%), along with digestive diseases (14%). For adults aged 35-74, the main reasons for admission were factors influencing health status and contact with health services, and diseases of the digestive system. For older residents aged 75 plus, their main reasons for admission were factors influencing health status and contact with health services, and cancer.

Hospital admissions by age and diagnosis chapter: Yarra Ranges residents, 2022/23

| Diagnosis group | % of total admissions | | | | | | | Total |
|--|-----------------------|------|-------|-------|-------|-------|------|-------|
| | 0-4 | 5-14 | 15-24 | 25-34 | 35-64 | 65-74 | 75+ | |
| Certain conditions originating in the perinatal period | 14% | | | | | | | 1% |
| Certain infectious and parasitic diseases | 6% | 4% | 2% | 1% | 1% | 1% | 1% | 2% |
| Codes for special purposes | | | | | | | 1% | |
| Congenital malformations, deformations and chromosomal abnormalities | 4% | 2% | 1% | | | | | |
| Diseases of the blood and blood-forming organs, and certain disorders involving the immune mechanism | | 3% | 1% | 1% | 2% | 3% | 2% | 2% |
| Diseases of the circulatory system | | 1% | 1% | 1% | 3% | 5% | 8% | 4% |
| Diseases of the digestive system | 3% | 16% | 20% | 14% | 15% | 11% | 8% | 12% |
| Diseases of the ear and mastoid process | 4% | 4% | | | | | | 1% |
| Diseases of the eye and adnexa | | 2% | | | 2% | 6% | 7% | 4% |
| Diseases of the genitourinary system | 1% | 3% | 6% | 6% | 6% | 4% | 3% | 5% |
| Diseases of the musculoskeletal system and connective tissue | 1% | 3% | 5% | 3% | 7% | 8% | 6% | 6% |
| Diseases of the nervous system | 4% | 6% | 3% | 5% | 6% | 4% | 3% | 4% |
| Diseases of the respiratory system | 13% | 10% | 4% | 2% | 2% | 3% | 4% | 4% |
| Diseases of the skin and subcutaneous tissue | 1% | 2% | 3% | 1% | 2% | 1% | 1% | 1% |
| Endocrine, nutritional and metabolic diseases | | 2% | 2% | 4% | 3% | 2% | 2% | 2% |
| Factors influencing health status and contact with health services | 30% | 10% | 11% | 10% | 21% | 29% | 28% | 23% |
| Injury, poisoning and certain other consequences of external causes | 4% | 15% | 12% | 6% | 6% | 4% | 7% | 6% |
| Mental and behavioural disorders | | 4% | 13% | 8% | 5% | 1% | 1% | 4% |
| Neoplasms | 1% | 3% | 2% | 2% | 7% | 10% | 10% | 7% |
| Pregnancy, childbirth and the puerperium | | | 5% | 27% | 3% | | | 4% |
| Symptoms, signs and abnormal clinical laboratory findings NEC | 12% | 12% | 8% | 7% | 9% | 9% | 8% | 9% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

NEC = not elsewhere classified. Blank cells = 0%.

Source: Victorian Department of Health (2023). *Victorian Admitted Episodes Dataset (VAED) and Victorian Emergency Minimum Dataset (VEMD) - Unpublished hospital usage data for Yarra Ranges and Victoria, 2018/19-2022/23.*

ADMISSION RATES BY AGE

In 2022/23, the admission rate for the total Yarra Ranges population was similar to the Victorian average. However, hospital admissions vary considerably by age. For data to be comparable, one needs to calculate admission rates by age and then use these rates for comparisons within a specific age group; or to standardise admission rates by age. For this report, the admission rate per 1,000 residents for each age group and diagnosis has been calculated for Yarra Ranges, and then compared to the Victorian average.

Children and young adults had the worst health status, based on the number of diagnosis groups with significantly above average admission rates. Children aged 0-4 had an above average admission rate for ten diagnosis groups, 5-9 year olds were above average for ten diagnoses, and 10-14 year olds were above average for thirteen diagnoses (out of 21 diagnosis groups). Adults aged 25-29 had an above average admission rate for eleven diagnoses, and 30-34 year olds were above average for ten diagnoses.

Across the entire population, diseases of the nervous system had the highest admission rate compared to the Victorian rate. The admission rate in Yarra Ranges was 1.31 times the Victorian average – 31% above average. Other conditions with above average admission rates were:

- diseases of the ear and mastoid process (16% above average);
- diseases of the digestive system (13% above average);
- mental and behavioural disorders (12% above average);
- diseases of the musculoskeletal system and connective tissue (10% above average).

Yarra Ranges had a below-average rate of admissions for “codes for special purposes”, a category which includes COVID admissions. The ratio relative to Victoria was 0.83, placing Yarra Ranges 17% below average. Throughout much of the pandemic, Yarra Ranges residents had a very low rate of COVID cases.

Infants and preschoolers aged 0-4 had a high admission rate for:

- diseases of the musculoskeletal system and connective tissue (60% above average);
- certain infectious and parasitic diseases (40% above);
- diseases of the ear and mastoid process (40% above);

- injury, poisoning and certain other consequences of external causes (20% above);
- congenital malformations, deformations and chromosomal abnormalities (10% above);
- diseases of the digestive system (10% above);
- diseases of the genitourinary system (10% above);
- diseases of the respiratory system (10% above);
- diseases of the skin and subcutaneous tissue (10% above);
- symptoms, signs and abnormal clinical laboratory findings not elsewhere classified (10% above).

Children aged 5-14 had a high admission rate for ten diseases and their total admission rate was 20% above average:

- mental and behavioural disorders (190% above average, or 2.9 times the Victorian average rate);
- diseases of the eye and adnexa (60% above average);
- diseases of the ear and mastoid process (50% above average);
- factors influencing health status and contact with health services (40% above average);
- symptoms, signs and abnormal clinical laboratory findings (40% above average);
- certain infectious and parasitic diseases (30% above);
- diseases of the blood and blood-forming organs, and certain disorders involving the immune mechanism (30% above);
- diseases of the nervous system (20% above);
- injury, poisoning and certain other consequences of external causes (20% above);
- neoplasms (20% above).

Teenagers and young adults aged 15-24 had a high admission rate for:

- factors influencing health status and contact with health services (90% above average);
- mental and behavioural disorders (60% above);
- congenital malformations, deformations and chromosomal abnormalities (30% above);
- diseases of the genitourinary system (20% above);
- diseases of the musculoskeletal system and connective tissue (20% above);
- certain infectious and parasitic diseases (10% above);
- diseases of the circulatory system (10% above).

Young adults aged 25-34 had a high admission rate for nine types of disease, and a total admission rate which was 20% above average:

- mental and behavioural disorders (70% above average);
- endocrine nutritional and metabolic diseases (60% above);
- diseases of the nervous system (50% above);
- diseases of the digestive system (30% above);
- congenital malformations, deformations and chromosomal abnormalities (30% above);
- pregnancy childbirth and the puerperium (30% above);
- diseases of the circulatory system (20% above);
- diseases of the genitourinary system (20% above);
- diseases of the musculoskeletal system and connective tissue (20% above).

Adults aged 35-64 only had an above average admission rate for one condition - diseases of the nervous system (40% above average). Adults aged 65-74 had an above average admission rate for two conditions - diseases of the nervous system (40% above average), and diseases of the skin and subcutaneous tissues (20% above average). Older adults aged 75 years or more had an above average admission rate for codes for special purposes, which would include COVID-19 admissions (20% above average); diseases of the digestive system (20% above average); and diseases of the nervous system (10% above average).

**Rate ratios for hospital admissions by age and diagnosis:
Yarra Ranges residents compared to Victorian residents, 2022/23**

| Diagnosis group | Rate ratio, Yarra Ranges: Victoria | | | | | | |
|---|------------------------------------|------|-------|-------|-------|-------|-----|
| | 00-04 | 5-14 | 15-24 | 25-34 | 35-64 | 65-74 | 75+ |
| Certain conditions originating in the perinatal period | 0.9 | 0.0 | n/a | n/a | n/a | n/a | n/a |
| Certain infectious and parasitic diseases | 1.4 | 1.3 | 1.1 | 1.0 | 1.0 | 0.8 | 0.9 |
| Codes for special purposes | 1.0 | 0.0 | 1.0 | 0.0 | 0.2 | 0.9 | 1.2 |
| Congenital malformations deformations and chromosomal abnormalities | 1.1 | 1.1 | 1.3 | 1.3 | 0.7 | 0.0 | 0.0 |
| Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism | 0.7 | 1.3 | 0.5 | 0.8 | 0.9 | 1.1 | 0.6 |
| Diseases of the circulatory system | 0.5 | 0.9 | 1.1 | 1.2 | 0.8 | 0.8 | 0.9 |
| Diseases of the digestive system | 1.1 | 1.0 | 1.0 | 1.3 | 1.1 | 1.1 | 1.2 |
| Diseases of the ear and mastoid process | 1.4 | 1.5 | 0.0 | 1.1 | 0.9 | 0.7 | 0.9 |
| Diseases of the eye and adnexa | 0.8 | 1.6 | 0.5 | 0.7 | 0.9 | 1.0 | 1.0 |
| Diseases of the genitourinary system | 1.1 | 1.0 | 1.2 | 1.2 | 1.0 | 1.0 | 1.0 |
| Diseases of the musculoskeletal system and connective tissue | 1.6 | 1.1 | 1.2 | 1.2 | 1.0 | 1.1 | 1.1 |
| Diseases of the nervous system | 1.0 | 1.2 | 0.9 | 1.5 | 1.4 | 1.4 | 1.1 |
| Diseases of the respiratory system | 1.1 | 1.0 | 0.9 | 1.0 | 0.8 | 0.9 | 1.0 |
| Diseases of the skin and subcutaneous tissue | 1.1 | 0.9 | 1.0 | 1.1 | 1.0 | 1.2 | 1.0 |
| Endocrine nutritional and metabolic diseases | 0.4 | 0.9 | 0.7 | 1.6 | 0.9 | 0.6 | 0.8 |
| Factors influencing health status and contact with health services | 1.0 | 1.4 | 1.9 | 1.1 | 0.7 | 0.8 | 0.9 |
| Injury poisoning and certain other consequences of external causes | 1.2 | 1.2 | 1.0 | 1.1 | 1.0 | 1.0 | 0.9 |
| Mental and behavioural disorders | 0.0 | 2.9 | 1.6 | 1.7 | 1.1 | 0.6 | 0.7 |
| Neoplasms | 0.9 | 1.2 | 1.0 | 1.0 | 1.0 | 1.0 | 1.1 |
| Pregnancy childbirth and the puerperium | n/a | 0.0 | 0.7 | 1.3 | 0.8 | n/a | n/a |
| Symptoms signs and abnormal clinical laboratory findings NEC | 1.1 | 1.4 | 0.9 | 1.0 | 0.9 | 0.9 | 0.9 |
| Undefined | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.3 | 0.4 |
| Total | 1.1 | 1.2 | 1.1 | 1.2 | 0.9 | 0.9 | 0.9 |

A rate ratio compares rates between two groups. The hospital admissions rate ratio compares admissions for Yarra Ranges to admissions across Victoria, where 1 means that Yarra Ranges has the same rate as the average. **A high rate ratio means that Yarra Ranges is above average** – a rate ratio of 1.2 places Yarra Ranges 20% above average. **A low rate ratio means that Yarra Ranges is below average.**

Source: Victorian Department of Health (2023). *Victorian Admitted Episodes Dataset (VAED) and Victorian Emergency Minimum Dataset (VEMD)* - Unpublished hospital usage data for Yarra Ranges and Victoria, 2018/19-2022/23.

ADMISSIONS BY LOCAL AREA

This section examines the main reasons for admission to hospital by local area (SA2, or statistical area 2). Upper Yarra Valley is excluded for confidentiality reasons, as total admissions are too low to report.

Patterns of hospital use vary between local areas. Health status worsened the most in Belgrave-Selby, Wandin-Seville, Mount Dandenong-Olinda, Kilsyth and Mooroolbark, based on the number of conditions with a large rise in admissions.

COVID-19 ADMISSIONS

In 2022/23, the level of admissions for “codes for special purposes”, which covers COVID admissions, was highest in Mooroolbark (39 admissions), Lilydale-Coldstream (38 admissions) and Healesville-Yarra Glen (34 admissions). These are also highly populated areas. The number was less than 30 in all other small areas in Yarra Ranges.

AREAS WITH HIGH GROWTH IN HOSPITAL ADMISSIONS

There are 21 different diagnostic groupings. In terms of growth in hospital admissions, health status worsened the most in:

- Belgrave-Selby. The area had more than 10% growth in admissions across eleven different diagnoses – more than half of all diagnosis groups.
- Wandin-Seville, with more than 10% growth for nine diagnoses.
- Mount Dandenong-Olinda, with more than 10% growth for seven diagnoses.
- Kilsyth, with more than 10% growth for six diagnoses.
- Mooroolbark, with more than 10% growth for six diagnoses.

The total number of admissions did not change much across most local areas. Belgrave-Selby was the only area with an increase of more than 2% in its total number of admissions. It had a 16% increase, compared to a 3% drop across the whole of Yarra Ranges.

BELGRAVE-SELBY

The main reasons for admission to hospital for residents of Belgrave-Selby were:

- Factors influencing health status and contact with health services (19%).
- Diseases of the digestive system (11%).

- Symptoms signs and abnormal clinical laboratory findings (10%).
- Mental and behavioural disorders (7%).
- Cancer (7%).

The total number of admissions rose by 16% between 2018/19 and 2022/23. Belgrave-Selby also had a high level of increase for the following conditions:

- Congenital malformations deformations and chromosomal abnormalities (up 171%). Note that the total number of admissions was quite low, at less than 20 admissions.
- Mental and behavioural disorders (up 62%).
- Endocrine nutritional and metabolic diseases (up 48%).
- Factors influencing health status and contact with health services (up 39%).
- Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (up 30%).
- Diseases of the ear and mastoid process (up 30%).
- Certain infectious and parasitic diseases (up 27%).
- Diseases of the genitourinary system (up 20%).
- Diseases of the digestive system (up 19%).
- Symptoms signs and abnormal clinical laboratory findings NEC (up 15%).
- Diseases of the musculoskeletal system and connective tissue (up 14%).

CHIRNSIDE PARK

The main reasons for admission to hospital for residents of Chirnside Park were:

- Factors influencing health status and contact with health services (21%).
- Diseases of the digestive system (13%).
- Symptoms signs and abnormal clinical laboratory findings (9%).
- Cancer (8%).
- Diseases of the musculoskeletal system and connective tissue (6%).

The total number of admissions amongst Chirnside Park residents dropped by 2% between 2018/19 and 2022/23.

HEALESVILLE-YARRA GLEN

The main reasons for admission to hospital for residents of Healesville-Yarra Glen were:

- Factors influencing health status and contact with health services (19%).
- Diseases of the digestive system (13%).
- Cancer (10%).
- Symptoms signs and abnormal clinical laboratory findings (9%).
- Diseases of the musculoskeletal system and connective tissue (7%).

The total number of admissions dropped by 11% between 2018/19 and 2022/23.

KILSYTH

The main reasons for admission amongst residents of Kilsyth were:

- Factors influencing health status and contact with health services (24%).
- Diseases of the digestive system (11%).
- Symptoms signs and abnormal clinical laboratory findings (8%).
- Injury poisoning and certain other consequences of external causes (6%).
- Cancer (6%).

The total number of admissions dropped by 2% between 2018/19 and 2022/23.

LILYDALE-COLDSTREAM

The main reasons for admission amongst residents of Lilydale-Coldstream were:

- Factors influencing health status and contact with health services (23%).
- Diseases of the digestive system (12.5%).
- Symptoms signs and abnormal clinical laboratory findings (9%).
- Diseases of the musculoskeletal system and connective tissue (7%).
- Injury poisoning and certain other consequences of external causes (6.5%).

The total number of admissions dropped by 9% between 2018/19 and 2022/23.

MONBULK-SILVAN

The main reasons for admission amongst residents of Monbulk-Silvan were:

- Factors influencing health status and contact with health services (17%).
- Diseases of the digestive system (15%).
- Cancer (8%).
- Diseases of the musculoskeletal system and connective tissue (7.5%).
- Injury poisoning and certain other consequences of external causes (6%).

The total number of admissions dropped by 2.5% between 2018/19 and 2022/23.

MONTROSE

The main reasons for admission amongst residents of Montrose were:

- Factors influencing health status and contact with health services (28%).
- Diseases of the digestive system (12%).
- Symptoms signs and abnormal clinical laboratory findings (7%).
- Injury poisoning and certain other consequences of external causes (6.5%).
- Cancer (6.5%).

The total number of admissions stayed about the same between 2018/19 and 2022/23.

MOOROOLBARK

The main reasons for admission amongst residents of Mooroolbark were:

- Factors influencing health status and contact with health services (24%).
- Diseases of the digestive system (12%).
- Symptoms signs and abnormal clinical laboratory findings NEC (8%).
- Cancer (6%).
- Injury poisoning and certain other consequences of external causes (6%).

The total number of admissions stayed about the same between 2018/19 and 2022/23.

MOUNT DANDENONG-OLINDA

The main reasons for admission amongst residents of Mount Dandenong-Olinda were:

- Factors influencing health status and contact with health services (21%).
- Diseases of the digestive system (13%).
- Symptoms signs and abnormal clinical laboratory findings NEC (9%).
- Cancer (8%).
- Diseases of the musculoskeletal system and connective tissue (7%).
- Injury poisoning and certain other consequences of external causes (6%).

The total number of admissions dropped by 4% between 2018/19 and 2022/23.

UPWEY-TECOMA

The main reasons for admission amongst residents of Upwey-Tecoma were:

- Factors influencing health status and contact with health services (22%).
- Diseases of the digestive system (12%).
- Cancer (7%).
- Diseases of the genitourinary system (5.5%).
- Injury poisoning and certain other consequences of external causes (5%).

The total number of admissions dropped by 2% between 2018/19 and 2022/23.

WANDIN-SEVILLE

The main reasons for admission amongst residents of Wandin-Seville were:

- Factors influencing health status and contact with health services (17%).
- Diseases of the digestive system (14.5%).
- Symptoms signs and abnormal clinical laboratory findings (10%).
- Diseases of the musculoskeletal system and connective tissue (8%).
- Cancer (7%).
- Injury poisoning and certain other consequences of external causes (7%).

The total number of admissions rose by 2% between 2018/19 and 2022/23.

YARRA VALLEY

The main reasons for admission amongst residents of Yarra Valley were:

- Factors influencing health status and contact with health services (27%).
- Diseases of the digestive system (10.5%).
- Symptoms signs and abnormal clinical laboratory findings NEC (8%).
- Cancers (7%).
- Injury poisoning and certain other consequences of external causes (6%).

The total number of admissions fell by 1% between 2018/19 and 2022/23.

Hospital admissions by reason for admission and change between 2018/19 and 2022/23: Residents in Yarra Ranges local areas, part 1

| Diagnosis | Belgrave - Selby | | Chirnside Park | | Healesville - Yarra Glen | | Kilsyth | | Lilydale - Coldstream | | Monbulk - Silvan | | Montrose | |
|---|------------------|----------|----------------|----------|--------------------------|----------|------------|----------|-----------------------|----------|------------------|----------|------------|----------|
| | % of total | % change | % of total | % change | % of total | % change | % of total | % change | % of total | % change | % of total | % change | % of total | % change |
| Certain Conditions Originating in the Perinatal Period | 1% | -32% | 1% | 16% | 1% | -9% | 1% | 31% | 1% | -9% | ** | -16% | ** | -14% |
| Certain Infectious and Parasitic Diseases | 2% | 27% | 1% | -1% | 1% | -17% | 1% | -9% | 1% | -27% | 1% | -10% | 2% | -9% |
| Codes For Special Purposes | ** | n/a | ** | n/a | 1% | n/a | ** | n/a | ** | n/a | ** | n/a | ** | n/a |
| Congenital Malformations Deformations and Chromosomal Abnormalities | ** | 171% | ** | 15% | ** | 71% | ** | 40% | 0% | 8% | ** | 63% | ** | 26% |
| Diseases of the Blood and Blood-Forming Organs and Certain Disorders Involving the Immune Mechanism | 2% | 30% | 2% | 5% | 2% | -12% | 1% | -10% | 2% | -15% | 2% | -18% | 2% | 23% |
| Diseases of the Circulatory System | 3% | -9% | 4% | -7% | 5% | -9% | 5% | -5% | 5% | 0% | 4% | -26% | 4% | -24% |
| Diseases of the Digestive System | 11% | 19% | 13% | 2% | 13% | 11% | 11% | 19% | 13% | 9% | 15% | 5% | 12% | 24% |
| Diseases of the Ear and Mastoid Process | 1% | 30% | 1% | -2% | 0% | -33% | ** | 71% | 1% | 0% | ** | -6% | ** | -26% |
| Diseases of the Eye and Adnexa | 3% | 6% | 4% | 15% | 4% | -2% | 4% | 36% | 4% | 0% | 4% | 35% | 3% | -16% |
| Diseases of the Genitourinary System | 5% | 20% | 6% | -12% | 5% | -5% | 4% | -15% | 4% | -18% | 5% | 14% | 4% | -25% |
| Diseases of the Musculoskeletal System and Connective Tissue | 6% | 14% | 6% | 0% | 7% | -1% | 6% | 7% | 7% | 1% | 7% | -3% | 5% | -13% |
| Diseases of the Nervous System | 5% | 8% | 4% | -3% | 4% | -6% | 3% | -23% | 4% | -16% | 4% | 3% | 5% | 6% |
| Diseases of the Respiratory System | 3% | -2% | 3% | -22% | 3% | -25% | 4% | -3% | 4% | 4% | 4% | 12% | 4% | -10% |
| Diseases of the Skin and Subcutaneous Tissue | 2% | 3% | 1% | -33% | 1% | 11% | 1% | -22% | 2% | -30% | 2% | -5% | 1% | -31% |
| Endocrine Nutritional and Metabolic Diseases | 3% | 48% | 3% | 10% | 2% | 23% | 2% | 13% | 2% | 58% | 2% | -4% | 2% | 22% |
| Factors Influencing Health Status and Contact with Health Services | 19% | 39% | 21% | -2% | 19% | -35% | 24% | -11% | 23% | -14% | 17% | -1% | 28% | 23% |
| Injury Poisoning and Certain Other Consequences of External Causes | 6% | -13% | 6% | 9% | 6% | -11% | 6% | 0% | 6% | -12% | 6% | -22% | 7% | 4% |
| Mental and Behavioural Disorders | 7% | 62% | 2% | -33% | 3% | -37% | 6% | 47% | 3% | -21% | 2% | -54% | 2% | -42% |
| Neoplasms | 7% | 7% | 8% | -1% | 10% | 41% | 6% | -2% | 6% | -18% | 8% | 21% | 7% | -6% |
| Pregnancy Childbirth and the Puerperium | 3% | -22% | 4% | -1% | 3% | -5% | 4% | -8% | 4% | -11% | 3% | -2% | 3% | -4% |
| Symptoms Signs and Abnormal Clinical Laboratory Findings NEC | 10% | 15% | 9% | -3% | 9% | -21% | 8% | -19% | 9% | -14% | 10% | -8% | 7% | -21% |
| Total | 100% | 16% | 100% | -2% | 100% | -11% | 100% | -2% | 100% | -9% | 100% | -2% | 100% | 0% |
| Number of conditions which had 10% or more growth in numbers | | 11 | | 4 | | 5 | | 6 | | 1 | | 5 | | 5 |

Notes:

** Less than thirty admissions.

There were less than 30 admissions in Upper Yarra Valley, so a breakdown by diagnosis has not been published here.

% of total refers to 2022/23 data.

Source: Victorian Department of Health (2023). Victorian Admitted Episodes Dataset (VAED) and Victorian Emergency Minimum Dataset (VEMD) - Unpublished hospital usage data for Yarra Ranges and Victoria, 2018/19-2022/23.

Hospital admissions by reason for admission and change between 2018/19 and 2022/23: Residents in Yarra Ranges local areas, part 2

| Diagnosis | Mooroolbark | | Mount Dandenong - Olinda | | Mount Evelyn | | Upwey - Tecoma | | Wandin - Seville | | Yarra Valley | | Victoria | |
|---|-------------|----------|--------------------------|----------|--------------|----------|----------------|----------|------------------|----------|--------------|----------|------------|----------|
| | % of total | % change | % of total | % change | % of total | % change | % of total | % change | % of total | % change | % of total | % change | % of total | % change |
| Certain Conditions Originating in the Perinatal Period | 1% | -15% | ** | -42% | ** | -32% | ** | -30% | ** | -22% | 1% | 1% | 1% | -7% |
| Certain Infectious and Parasitic Diseases | 2% | 2% | 2% | -6% | 1% | -13% | 2% | -13% | 2% | -16% | 2% | 9% | 1% | -7% |
| Codes For Special Purposes | 0% | n/a | ** | n/a | ** | n/a | ** | n/a | ** | n/a | ** | n/a | 0% | n/a |
| Congenital Malformations Deformations and Chromosomal Abnormalities | 1% | 22% | ** | -29% | 1% | 107% | ** | -18% | ** | 6% | ** | 0% | 0% | 0% |
| Diseases of the Blood and Blood-Forming Organs and Certain Disorders Involving the Immune Mechanism | 2% | 18% | 2% | 27% | 2% | -4% | 2% | 27% | 2% | 48% | 2% | -15% | 2% | 0% |
| Diseases of the Circulatory System | 3% | -23% | 4% | 1% | 3% | -14% | 4% | -6% | 4% | -14% | 4% | -18% | 5% | -2% |
| Diseases of the Digestive System | 12% | 3% | 13% | 16% | 11% | 19% | 12% | 7% | 15% | 55% | 10% | 0% | 11% | 8% |
| Diseases of the Ear and Mastoid Process | 1% | 12% | ** | 32% | 1% | -20% | ** | -18% | ** | 71% | 0% | -35% | 1% | -7% |
| Diseases of the Eye and Adnexa | 3% | -8% | 4% | 22% | 3% | 32% | 3% | 13% | 4% | 23% | 4% | 35% | 3% | 13% |
| Diseases of the Genitourinary System | 5% | -1% | 5% | 11% | 4% | -37% | 5% | 1% | 5% | -2% | 4% | -13% | 4% | 2% |
| Diseases of the Musculoskeletal System and Connective Tissue | 6% | -8% | 7% | 6% | 5% | 0% | 5% | -22% | 8% | 12% | 5% | -14% | 5% | 3% |
| Diseases of the Nervous System | 6% | 12% | 4% | -11% | 5% | -5% | 5% | 14% | 4% | -29% | 4% | -19% | 3% | -1% |
| Diseases of the Respiratory System | 3% | -14% | 3% | 9% | 4% | 6% | 4% | -27% | 4% | -13% | 3% | -19% | 4% | -6% |
| Diseases of the Skin and Subcutaneous Tissue | 1% | -9% | 2% | 18% | 2% | 8% | 2% | -18% | 1% | -39% | 1% | -11% | 1% | -5% |
| Endocrine Nutritional and Metabolic Diseases | 2% | 8% | 2% | 33% | 3% | 74% | 2% | 14% | 2% | 76% | 2% | 48% | 2% | 32% |
| Factors Influencing Health Status and Contact with Health Services | 24% | 6% | 21% | -22% | 28% | -6% | 22% | 8% | 17% | -21% | 27% | 7% | 26% | 6% |
| Injury Poisoning and Certain Other Consequences of External Causes | 6% | -12% | 6% | -19% | 6% | -6% | 5% | -27% | 7% | -24% | 6% | -18% | 6% | -3% |
| Mental and Behavioural Disorders | 4% | 23% | 5% | -3% | 2% | -19% | 5% | -4% | 2% | 20% | 4% | 48% | 3% | -8% |
| Neoplasms | 6% | 19% | 8% | -9% | 7% | 24% | 7% | 15% | 7% | 18% | 7% | 16% | 7% | 8% |
| Pregnancy Childbirth and the Puerperium | 4% | -20% | 3% | -14% | 4% | -2% | 4% | -16% | 5% | 7% | 5% | 25% | 4% | -7% |
| Symptoms Signs and Abnormal Clinical Laboratory Findings NEC | 8% | -18% | 9% | 1% | 8% | -9% | 10% | 0% | 10% | 25% | 8% | -22% | 9% | -2% |
| Total | 100% | -1% | 100% | -4% | 100% | -1% | 100% | -2% | 100% | 2% | 100% | -1% | 100% | 3% |
| Number of conditions which had 10% or more growth in numbers | | | | 7 | | 5 | | 5 | | 9 | | 5 | | 2 |

Notes:

** Less than thirty admissions.

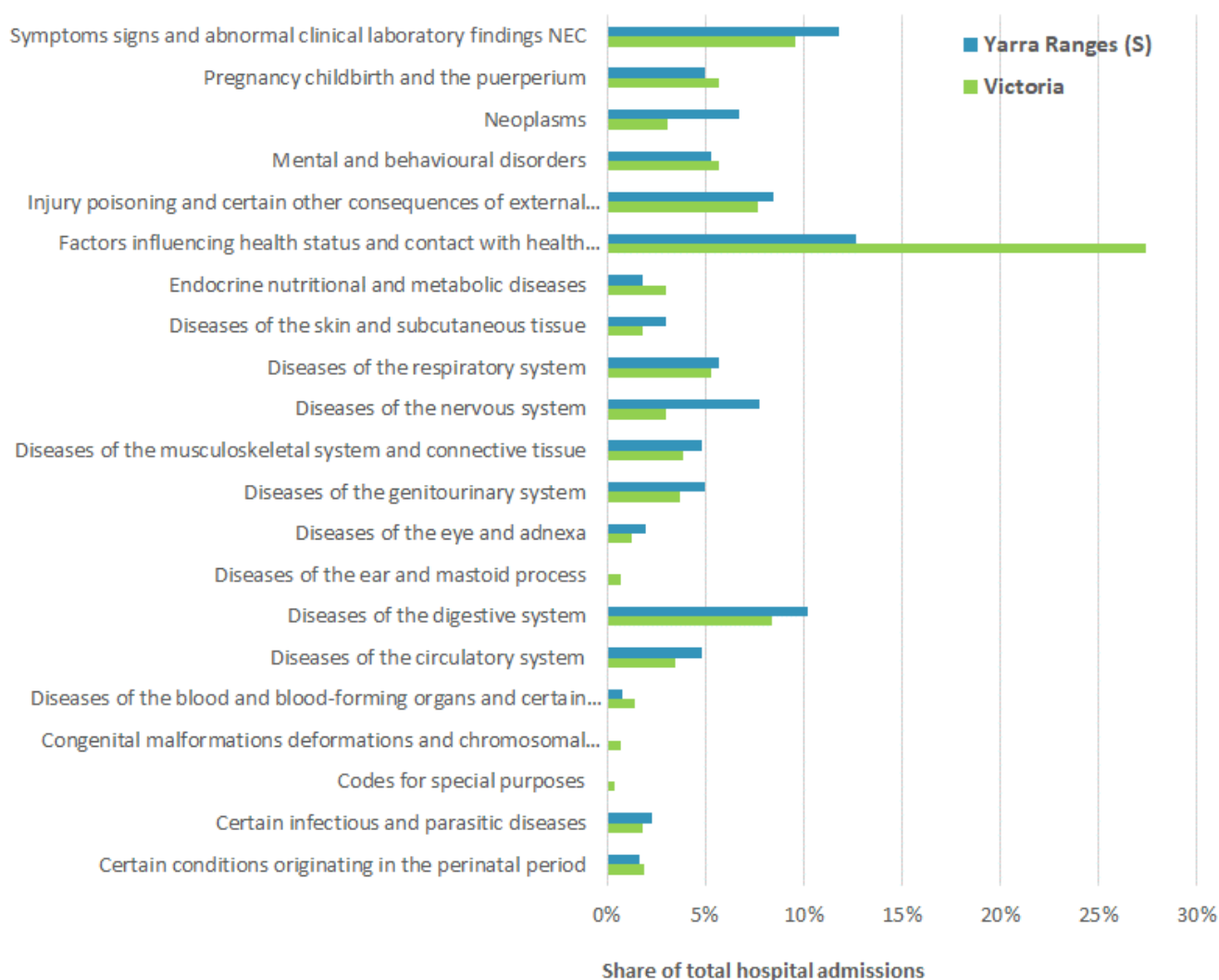
There were less than 30 admissions in Upper Yarra Valley, so a breakdown by diagnosis has not been published here.

% of total refers to 2022/23 data.

Source: Victorian Department of Health (2023). Victorian Admitted Episodes Dataset (VAED) and Victorian Emergency Minimum Dataset (VEMD) - Unpublished hospital usage data for Yarra Ranges and Victoria, 2018/19-2022/23.

INDIGENOUS ADMISSIONS

Indigenous hospital admissions by diagnosis: Yarra Ranges and Victoria, 2022/23



Indigenous residents tend to have worse health status than non-Indigenous residents. In 2022/23, Indigenous Victorians had a much higher admission rate, at 619 per 1,000 compared to 469 per 1,000 for non-Indigenous residents.

In Yarra Ranges, Indigenous residents appear to have lower hospital usage. Their admission rate was 349 per 1,000 residents, compared to 461 per 1,000 for non-Indigenous residents. Their admission rate was also well below the Victorian Indigenous average.

The main reasons for admission were:

- factors influencing health status and contact with health services - 13% of admissions for Indigenous residents in Yarra Ranges, compared to 27% for Indigenous residents across Victoria;
- symptoms, signs and abnormal clinical laboratory findings NEC - 12% compared to 10%;
- diseases of the digestive system - 10% compared to 8%;
- diseases of the nervous system - 8% compared to 3%;
- cancer - 7% compared to 3%; and
- diseases of the respiratory system - 6% compared to 5%.

Compared to non-Indigenous residents, Indigenous residents in Yarra Ranges were more likely to be admitted to hospital for:

- diseases of the nervous system;
- symptoms, signs and abnormal clinical laboratory findings NEC;
- injuries and poisoning; and
- diseases of the respiratory system.

The differences in reasons for admission between Indigenous and non-Indigenous residents in Yarra Ranges were not large. This indicates that differences in the health between Yarra Ranges and Victoria may be having more impact for this group than their Indigenous status.

**Hospital admissions by diagnosis chapter (share of admissions):
Indigenous residents in Yarra Ranges and Victoria, 2022/23**

| Diagnosis group | Yarra Ranges | Victoria |
|--|--------------|----------|
| Certain conditions originating in the perinatal period | 1.7% | 1.9% |
| Certain infectious and parasitic diseases | 2.3% | 1.8% |
| Codes for special purposes | 0.0% | 0.4% |
| Congenital malformations, deformations and chromosomal abnormalities | 0.0% | 0.7% |
| Diseases of the blood and blood-forming organs, and certain disorders involving the immune mechanism | 0.8% | 1.4% |
| Diseases of the circulatory system | 4.8% | 3.5% |
| Diseases of the digestive system | 10.2% | 8.4% |
| Diseases of the ear and mastoid process | 0.0% | 0.7% |
| Diseases of the eye and adnexa | 2.0% | 1.3% |
| Diseases of the genitourinary system | 5.0% | 3.7% |
| Diseases of the musculoskeletal system and connective tissue | 4.8% | 3.9% |
| Diseases of the nervous system | 7.8% | 3.0% |
| Diseases of the respiratory system | 5.7% | 5.3% |
| Diseases of the skin and subcutaneous tissue | 3.0% | 1.8% |
| Endocrine nutritional and metabolic diseases | 1.8% | 3.0% |
| Factors influencing health status and contact with health services | 12.7% | 27.4% |
| Injury, poisoning and certain other consequences of external causes | 8.5% | 7.7% |
| Mental and behavioural disorders | 5.3% | 5.7% |
| Neoplasms | 6.7% | 3.1% |
| Pregnancy, childbirth and the puerperium | 5.0% | 5.7% |
| Symptoms, signs and abnormal clinical laboratory findings NEC | 11.8% | 9.6% |
| Undefined | 0.0% | 0.0% |

NEC = not elsewhere classified.

Source: Victorian Department of Health (2023). *Victorian Admitted Episodes Dataset (VAED) and Victorian Emergency Minimum Dataset (VEMD) - Unpublished hospital usage data for Yarra Ranges and Victoria, 2018/19-2022/23.*

MENTAL HEALTH ADMISSIONS

15-24 YEAR OLDS

In 2022/23, there were 460 mental health admissions amongst 15-24 year olds in Yarra Ranges. Recurrent themes for young people included growing stress, depression and anxiety; also eating disorders and gender identity. Between 2019/20 and 2022/23, the number of mental health hospital admissions jumped by nearly 40% amongst 15-24 year olds. This included a large increase in admissions for:

- reaction severe stress and adjustment disorder - a 179% increase in the number of admissions;
- recurrent depressive disorder - a 145% increase;
- eating disorders - a 72% increase; and
- other anxiety disorders - a 47% increase.

There was a large increase in admissions for gender identity disorders and bipolar affective disorder, but the total number of admissions was very low. There were less than 10 admissions for gender identity disorders and less than 20 for bipolar disorder.

For the total population, the number of mental health admissions did not shift between 2018/19 and 2022/23. Yet despite geographic barriers to accessing hospitals, 15-24 year olds in Yarra Ranges went to hospital at much higher levels than previously. So this data may be an understatement of the increased level of mental health service need amongst young people. The numbers by themselves do not show whether:

- the large increase in admissions means that residents actually were not having issues accessing hospital services mental health;
- residents could not access primary care services (GPs, counselling, etc.), so they had to resort to hospital care instead (EMPHN analysis supports this theory); or
- the increase is due to a combination of these demand drivers.

Compared to 2018/19, the annual data shows a big jump in admissions for 2019/20, 2020/21 and 2021/22. Then the number drops in 2022/23. So comparing 2021/22 to 2018/19 shows a higher 84% increase in mental health hospital admissions for young people.

**Change in number of hospital admissions for mental and behavioural disorders, by diagnosis:
Change in mental health admissions: 15-24 year old residents and total residents in Yarra
Ranges, 2018/19-2022/23**

| Diagnosis group | % change all ages, Yarra Ranges | % change 15- 24 year olds, Yarra Ranges | % change all ages, Victoria | % change 15- 24 year olds, Victoria |
|---|---------------------------------------|---|-----------------------------------|---|
| Dementia in Alzheimers disease | 286% | | 17% | |
| Dementia in oth dis classified elsewhere | 40% | | -25% | |
| Unspecified dementia | -40% | | -14% | |
| Delirium not dt alco & oth psyact subs | -4% | | 14% | -53% |
| Person & beh disrd dt brain dis dam dysf | -100% | | -24% | -33% |
| Mental & behavioural disrd dt alcohol | -15% | -57% | 13% | 12% |
| Mental & behavioural disrd dt opioid use | 25% | | -10% | 22% |
| Ment/beh disrd dt use of cannabinoids | 58% | -63% | -1% | -6% |
| Ment/beh disrd dt stimulant incl caffeine | 74% | 0% | -5% | -25% |
| Ment/beh disrd mult drug & psyact subs | -30% | | -47% | -62% |
| Schizophrenia | -36% | -100% | -8% | -12% |
| Persistent delusional disorders | 0% | n/a | 1% | -5% |
| Schizoaffective disorders | 9% | -100% | -15% | 3% |
| Unspecified nonorganic psychosis | 100% | | 11% | -7% |
| Manic episode | 0% | | 8% | 16% |
| Bipolar affective disorder | -36% | 25% | -21% | -17% |
| Depressive episode | -52% | -64% | -27% | -26% |
| Recurrent depressive disorder | 27% | 145% | -6% | 139% |
| Persistent mood [affective] disorders | 258% | | -66% | -73% |
| Other anxiety disorders | -35% | 47% | -20% | -15% |
| Obsessive-compulsive disorder | -20% | | 14% | 24% |
| Reaction sev stress & adjustment disrd | 63% | 179% | 1% | 32% |
| Dissociative [conversion] disorders | 44% | | 22% | 105% |
| Eating disorders | 74% | 72% | 29% | 23% |
| Specific personality disorders | 66% | 5% | -16% | -10% |
| Gender identity disorders | 50% | 40% | 11% | 29% |
| Pervasive developmental disorders | -17% | n/a | 20% | 36% |
| Conduct disorders | -100% | -100% | -31% | -40% |

Blank = n/a

Source: Victorian Department of Health (2023). *Victorian Admitted Episodes Dataset (VAED) and Victorian Emergency Minimum Dataset (VEMD) - Unpublished hospital usage data for Yarra Ranges and Victoria, 2018/19-2022/23.*

TOTAL POPULATION

Across the total population, mental health admissions increased for dementia, mood disorders, psychosis, eating disorders (which primarily affected young people), and mental and behavioural disorders due to substance use. Between 2019/20 and 2022/23, there was a large increase in admissions for:

- dementia in Alzheimers disease (an increase of 286%);
- persistent mood [affective] disorders (258%);
- unspecified nonorganic psychosis (100%);
- eating disorders (74%);
- mental/behavioural disorders due to stimulant incl caffeine (74%);
- specific personality disorders (66%);
- reaction severe stress and adjustment disorder (63%);
- mental/behavioural disorder due to use of cannabinoids (58%);
- dissociative [conversion] disorders (44%); and
- recurrent depressive disorder (27%).

These indicators highlight what has changed for mental health and what the key mental health issues are. Total mental health admissions are very low, accounting for 1.2% of hospital admissions in Yarra Ranges, or 2,668 admissions.

Whilst there was large percentage growth in the number of admissions for gender identity disorders, dementia in other disorders, and mental and behavioural disorders involving opioid use, the total number of admissions was small. Nearly all gender identity disorder hospital admissions were amongst 15-24 year olds.

LOCAL AREAS

In 2022/23, there were 2,685 mental health admissions in Yarra Ranges, 3.4% of the total (compared to 3% across Victoria). The level of admissions was highest in Belgrave-Selby (7%), Kilsyth (6%), Mount Dandenong-Olinda (5%) and Upwey-Tecoma (4.5%).

Between 2018/19 and 2022/23, the highest increases in mental health admissions were in Belgrave-Selby (up 62%); Yarra Valley (up 48%); Kilsyth (up 47%); Mooroolbark (up 23%); and Wandin-Seville (up 20%). Across Yarra Ranges, admissions stayed about the same (a 0.5% fall), compared to an 8% decline across Victoria.

In most areas of Yarra Ranges, hospital admissions for mental and behavioural disorders peaked in the first half of the pandemic. The exceptions include:

- Belgrave-Selby, Kilsyth and Yarra Valley, where admissions have not declined post-pandemic, and instead reached their highest number in 2022/23 (when looking at the past five years). However, mental health admissions in Yarra Valley accounted for a low level of total admissions, ranging between 2% and 4% of total admissions over the past five years.
- Healesville-Yarra Glen and Upper Yarra Valley, where admissions fell during the pandemic.
- Wandin-Seville, where admissions peaked later, in 2021/22.

Number of hospital admissions for mental and behavioural disorders: Residents of local areas in Yarra Ranges, 2018/19-2022/23

| SA2 | 2018/19 | 2019/20 | 2020/21 | 2021/22 | 2022/23 |
|--------------------------|---------|---------|---------|---------|---------|
| Belgrave - Selby | 198 | 269 | 296 | 272 | 320 |
| Chirnside Park | 186 | 276 | 188 | 94 | 125 |
| Healesville - Yarra Glen | 274 | 202 | 178 | 164 | 172 |
| Kilsyth | 206 | 187 | 254 | 240 | 303 |
| Lilydale - Coldstream | 410 | 561 | 393 | 310 | 322 |
| Monbulk - Silvan | 110 | 86 | 125 | 74 | 51 |
| Montrose | 117 | 180 | 151 | 88 | 68 |
| Mooroolbark | 312 | 442 | 523 | 447 | 385 |
| Mount Dandenong - Olinda | 219 | 227 | 282 | 255 | 212 |
| Mount Evelyn | 130 | 218 | 186 | 135 | 105 |
| Upper Yarra Valley | 32 | 0 | 0 | 0 | 0 |
| Upwey - Tecoma | 185 | 307 | 259 | 272 | 177 |
| Wandin - Seville | 65 | 83 | 121 | 179 | 78 |
| Yarra Valley | 216 | 195 | 211 | 285 | 320 |
| Victoria | 108,851 | 109,389 | 110,287 | 103,799 | 100,004 |

Note: Data for Upper Yarra Valley has not been published as the numbers are too small to release.

Source: Victorian Department of Health (2023). *Victorian Admitted Episodes Dataset (VAED) and Victorian Emergency Minimum Dataset (VEMD) - Unpublished hospital usage data for Yarra Ranges and Victoria, 2018/19-2022/23.*

Emergency department usage

MAIN REASONS FOR ATTENDING

There were more than 28,000 emergency department presentations amongst Yarra Ranges residents in 2022/23. The main reasons for using emergency departments included:

- Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (41%). These included cases where no disease was found and the person was unwell (13.5%), chest pain (7.9%), abdominal pain/cramps (6.9%), collapse/fainting (1.6%), nausea/vomiting (1.4%), respiratory distress (1.2%), suicide attempts without injury (1.1%), tendency to fall (1.1%), and fever (1%).
- Injury, poisoning and certain other consequences of external causes (19%). These included wrist fractures (2.6%), open wounds and bites to wrist/hand (2%), and ankle sprains/strains (1.2%).
- Certain infectious and parasitic diseases (7%), including viral infections (4.5%) and gastroenteritis/diarrhoea (1.4%).
- Diseases of the respiratory system (7%), including pneumonia (1.2%) and acute bronchiolitis (1.1%).
- Diseases of the musculoskeletal system and connective tissue (4%), including limb pain (1.6%) and low back pain (1.2%).
- Diseases of the circulatory system (4%), including atrial fibrillation, stroke, arrhythmia and congestive heart failure.
- Diseases of the genitourinary system (4%).
- Diseases of the digestive system (3%).
- Mental, behavioural and neurodevelopmental disorders, including psychotic episodes, depression, anxiety, delirium, schizophrenia, alcohol intoxication and anorexia nervosa (2%).

Most conditions accounted for less than 1% of presentations each. But together, these minor causes added up to 44% of all emergency department usage. There were 277 presentations for COVID-19, accounting for 1% of total presentations.

The main detailed reason for presentation to emergency was attendances by people who had symptoms or were feeling unwell, but where no disease was found. These presentations

accounted for 13.5% of emergency department usage - 3,795 presentations – compared to only 2.3% of presentations across Victoria. It was by far the main detailed reason for attending an emergency department, ahead of chest pains (7.9%). People where no diagnosis was made accounted for a further 1.1%, and those where no diagnosis was given accounted for 1%.

Emergency department presentations by broad diagnosis: Yarra Ranges residents, 2022/23

| Diagnosis | Share of presentations |
|---|------------------------|
| Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified | 40.7% |
| Injury, poisoning and certain other consequences of external causes | 19.0% |
| Certain infectious and parasitic diseases | 7.3% |
| Diseases of the respiratory system | 7.2% |
| Diseases of the musculoskeletal system and connective tissue | 4.0% |
| Diseases of the circulatory system | 3.8% |
| Diseases of the genitourinary system | 3.6% |
| Diseases of the digestive system | 2.8% |
| Mental, behavioural and neurodevelopmental disorders | 2.0% |
| Diseases of the skin and subcutaneous tissue | 1.6% |
| Factors influencing health status and contact with health services | 1.6% |
| Pregnancy, childbirth and the puerperium | 1.4% |
| Diseases of the nervous system | 1.2% |
| Diseases of the ear and mastoid process | 1.2% |
| Codes for special purposes (COVID-19) | 1.0% |
| No diags given | 1.0% |
| Endocrine, nutritional and metabolic diseases | 0.3% |
| Neoplasms (cancer) | 0.2% |
| Certain conditions originating in the perinatal period | 0.1% |
| Congenital malformations, deformations and chromosomal abnormalities | 0.0% |
| Total | 100.0% |

Source: Victorian Department of Health (2023). *Victorian Admitted Episodes Dataset (VAED) and Victorian Emergency Minimum Dataset (VEMD) - Unpublished hospital usage data for Yarra Ranges and Victoria, 2018/19-2022/23.*

Emergency department presentations by detailed diagnosis: Yarra Ranges residents, 2022/23

| Principal diagnosis description | Yarra Ranges | | |
|---|--------------|-------|----------|
| | Number | Share | Victoria |
| No disease found / Illness NOS / Other symptoms / Unwell generally | 3,795 | 13.5% | 2.3% |
| Chest pain, NEC | 2,214 | 7.9% | 5.6% |
| Abdominal / Flank pain /cramps / Intestinal colic | 1,920 | 6.9% | 4.5% |
| Viral infection | 1,257 | 4.5% | 2.6% |
| Fracture of wrist / hand (includes finger) | 721 | 2.6% | 1.4% |
| Open wound / bite (non-venomous) of wrist / hand (includes finger) | 574 | 2.0% | 1.2% |
| Limb pain | 458 | 1.6% | 0.9% |
| Collapse / Faint / Vasovagal attack / Micturition syncope (excludes syncope caused by heat: T671) | 452 | 1.6% | 1.2% |
| Hyperemesis / Nausea and/or vomiting (excludes Hyperemesis gravidarum: O210) | 396 | 1.4% | 1.0% |
| Diarrhoea NOS / Gastroenteritis, presumed infectious (excl. non-infectious enteritis: K529) | 390 | 1.4% | 0.9% |
| Sprain/strain of ankle | 343 | 1.2% | 0.7% |
| Pneumonia, lobar | 341 | 1.2% | 0.7% |
| Respiratory distress / Dyspnoea / Orthopnoea / Shortness of breath | 337 | 1.2% | 1.2% |
| Low back pain / Loin pain / Low back strain / lumbago | 333 | 1.2% | 0.8% |
| Suicide attempt without injury / ideation | 322 | 1.1% | 0.9% |
| Tendency to fall | 315 | 1.1% | 1.0% |
| Person with feared complaint in whom no diagnosis was made | 309 | 1.1% | 0.8% |
| Bronchiolitis, acute | 296 | 1.1% | 0.6% |
| No diags given | 291 | 1.0% | 6.2% |
| Fever / Pyrexia of unknown origin (PUO) | 291 | 1.0% | 0.9% |
| Bacteriuria / Urinary tract infection (UTI) / Urinary sepsis | 289 | 1.0% | 0.9% |
| Sub-total, main reasons for presentation | 28,013 | 55.8% | |

Source: Victorian Department of Health (2023). *Victorian Admitted Episodes Dataset (VAED) and Victorian Emergency Minimum Dataset (VEMD) - Unpublished hospital usage data for Yarra Ranges and Victoria, 2018/19-2022/23.*

CHANGES IN EMERGENCY DEPARTMENT USE DURING THE PANDEMIC

The past few years have seen a very large increase in emergency department use where no diagnosis was made, at 866% in Yarra Ranges compared to 8% across Victoria. And there was a 170% increase in presentations where no disease was found, compared to 52% across Victoria. This may be linked to lack of access to GPs in Yarra Ranges, meaning that people had to attend emergency to have health concerns investigated.

Other diagnoses with both high growth in numbers, and 20 or more presentations, included:

- Complications with urinary catheters, with a 567% rise; retention of urine was up 97%.
- Tendency to fall (up 377%). Presentations for dizziness/vertigo also rose, by 24%.
- Non STEMI heart issues (up 300%).
- Observation for possible injury (up 150%).
- Mental health issues such as schizophrenia (up 108%), anorexia nervosa (up 56%), psychotic episodes (up 43%).
- Lower back pain (up 102%).
- Respiratory issues such as pneumonia, pharyngitis and asthma.
- Pregnancy complications including miscarriages and reduced foetal movement.
- Various types of injury, bleeding and pain.
- Infections (including viral infections and wound infection) and fever.
- Rashes.

Emergency department presentations by detailed diagnosis: Diagnoses with high growth 2018/19-2022/23, Yarra Ranges residents compared to Victorian residents

| Principal diagnosis descriptions | Number of presentations, 2022/23, Yarra Ranges | Change 2018/19-2022/23, Yarra Ranges | Change 2018/19-2022/23, Victoria |
|---|--|--------------------------------------|----------------------------------|
| Person with feared complaint in whom no diagnosis was made | 309 | 865.6% | 8.1% |
| Indwelling urinary catheter device, mechanical complication (blocked/leaking) | 40 | 566.7% | 38.5% |
| Tendency to fall | 315 | 377.3% | 70.0% |
| Non STEMI (non ST elevation AMI) | 64 | 300.0% | 22.7% |
| No disease found / Illness NOS / Other symptoms / Unwell generally | 3,795 | 170.3% | 51.8% |
| Inguinal hernia, not specified as recurrent | <20 | 166.7% | -1.1% |
| Observation and evaluation for unconfirmed injury following accident | 20 | 150.0% | 78.1% |
| Unspecified nature of injury of wrist / hand (includes finger) | <20 | 116.7% | 55.3% |
| Schizophrenia | 54 | 107.7% | 1.6% |
| Low back pain / Loin pain / Low back strain / lumbago | 333 | 101.8% | 17.7% |
| Iron deficiency anaemia | <20 | 100.0% | 10.7% |
| Testicular dysfunction | <20 | 100.0% | 25.1% |
| Retention of urine | 71 | 97.2% | 7.1% |
| Injuries of more than one nature / other specified nature of injury involving > 1 body region | 129 | 92.5% | 32.2% |
| Abortion, complete and/or spontaneous | 26 | 85.7% | 0.1% |
| Fracture of upper arm | 20 | 81.8% | 4.3% |
| Joint pain / Arthralgia | 37 | 76.2% | -6.7% |
| Anorexia (excludes Anorexia nervosa: F500) | <20 | 71.4% | 31.2% |
| Rib fracture | 69 | 68.3% | 12.2% |
| Pneumonia, lobar | 341 | 63.2% | 3.4% |
| Abortion, incomplete without complications | 37 | 60.9% | -23.7% |
| Poisoning/overdose, Sedative | <20 | 60.0% | 19.8% |
| Unspecified injury to head or face (excludes eye) | 93 | 57.6% | 76.9% |
| Anorexia nervosa (excludes Anorexia: R630) | 50 | 56.3% | 62.8% |
| Per-rectal (PR) bleeding | 76 | 46.2% | 33.3% |
| Post Operative wound infection (excludes obstetric wound O860) | 36 | 44.0% | -4.2% |
| Psychotic episode | 113 | 43.0% | -3.7% |
| Pharyngitis | <20 | 42.9% | 8.3% |
| Asthma, childhood | 146 | 41.7% | -6.2% |
| Other specified injuries of wrist / hand (includes finger) | <20 | 41.7% | -6.0% |
| Maternal care for reduced foetal movement | <20 | 38.5% | 6.3% |

| Principal diagnosis descriptions | Number of presentations, 2022/23, Yarra Ranges | Change 2018/19-2022/23, Yarra Ranges | Change 2018/19-2022/23, Victoria |
|---|--|--------------------------------------|----------------------------------|
| Per vaginal bleeding NOS | 182 | 37.9% | 16.8% |
| Abscess, perianal or anal | 43 | 34.4% | 3.8% |
| Fracture of lower leg | 60 | 33.3% | 14.5% |
| Dislocation of finger | 26 | 30.0% | 2.2% |
| Superficial injury of wrist / hand (includes finger) | 151 | 29.1% | 4.1% |
| Testicular torsion | <20 | 28.6% | 1.5% |
| Epigastric / Right upper quadrant pain | 36 | 28.6% | 0.4% |
| Viral infection | 1,257 | 26.0% | 15.4% |
| Dizziness / Vertigo | 255 | 24.4% | 12.1% |
| Superficial injury of face (excludes eye) | 77 | 24.2% | -4.0% |
| Paroxysmal tachycardia unspecified | 32 | 23.1% | -11.9% |
| Missed abortion | 32 | 23.1% | -12.7% |
| Fever / Pyrexia of unknown origin (PUO) | 291 | 21.8% | 10.5% |
| Dehydration / Volume depletion | 34 | 21.4% | -16.3% |
| Rash, non-vesicular (excludes Nappy rash: L22, Urticarial rash: L509) | 59 | 20.4% | 10.9% |
| Dermatitis / Eczema, NEC (includes allergic reaction to plants) | <20 | 20.0% | 1.2% |
| Total | 28,013 | -9.5% | |

Source: Victorian Department of Health (2023). *Victorian Admitted Episodes Dataset (VAED) and Victorian Emergency Minimum Dataset (VEMD) - Unpublished hospital usage data for Yarra Ranges and Victoria, 2018/19-2022/23.*

Deaths

Causes of death across Australia

Multiple health conditions are responsible for 80% of deaths in Australia. Nearly one-quarter involve five or more causes. So the main causes of death vary, depending on whether one is assessing multiple causes involved in the death, the underlying cause only, the direct causes, or the contributory causes.

- In 2022, the most common conditions involved in deaths were coronary heart disease (involved in 20% of deaths), dementia (18%), hypertension (12%), cerebrovascular diseases (11%) and diabetes (11%).
- Looking at only the underlying cause, the most common causes were coronary heart disease (10% of deaths); dementia (9%); and cerebrovascular diseases, COVID-19 and lung cancer (5% each).
- The most common direct causes of death include lower respiratory infections (8% of deaths), cardiac or respiratory arrest (6%), sepsis (6%), pneumonitis (4%) and hypertension (4%).
- The most common contributory causes reflect chronic diseases and conditions related to health risks. They include hypertension (contributing to 8% of deaths), diabetes (7%), coronary heart disease (6%), dementia (6%) and atrial fibrillation (5%).⁸

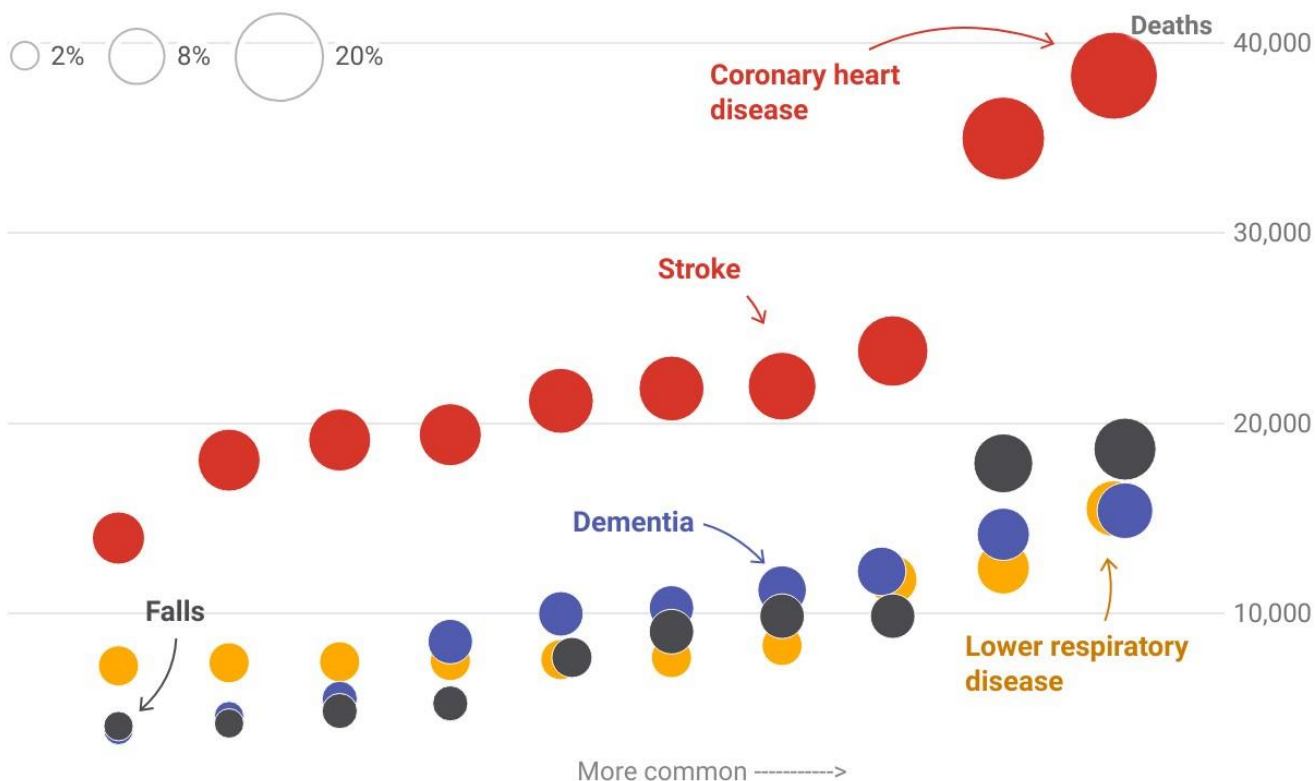
⁸ Australian Institute of Health and Welfare (2024). *What do Australians die from? – Summary*. <https://www.aihw.gov.au/reports/life-expectancy-deaths/what-do-australians-die-from/contents/summary>

10 most common causes of death, by cause type, 2022

The 5 most common conditions involved in death in 2022 were **heart disease (20%)**, **dementia (18%)**, **hypertension (12%)**, **stroke (11.5%)** and **diabetes (11.4%)**

The size of the circles shows the percentage of deaths where the cause was involved

● multiple ● direct ● contributory ● underlying

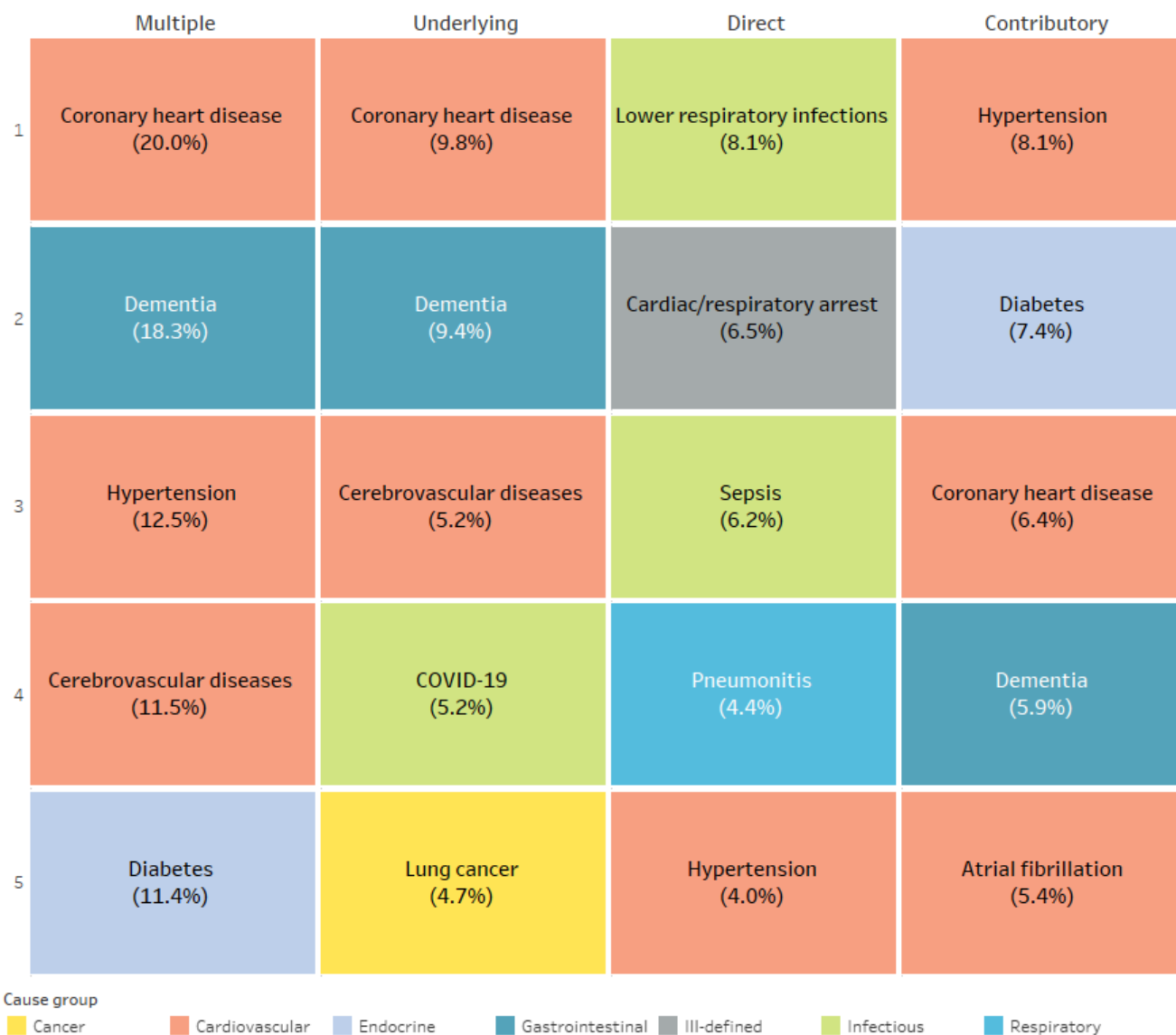


Each death can involve one or more multiple, direct or contributory cause. As a result, the sum of the number and percent deaths over these types of causes can sum to more than the total number of deaths. As there is only one underlying cause per death, the total number of underlying causes represents the total number of deaths

Chart: The Conversation • Source: AIHW 'What do Australians die from?' (2024) • Created with Datawrapper

Source: The Conversation (6 June 2024). *1 in 5 deaths are caused by heart disease, but what else are Australians dying from?* <https://theconversation.com/1-in-5-deaths-are-caused-by-heart-disease-but-what-else-are-australians-dying-from-231598>

Most common causes of death, by type: Percentage of deaths, Australia, 2022



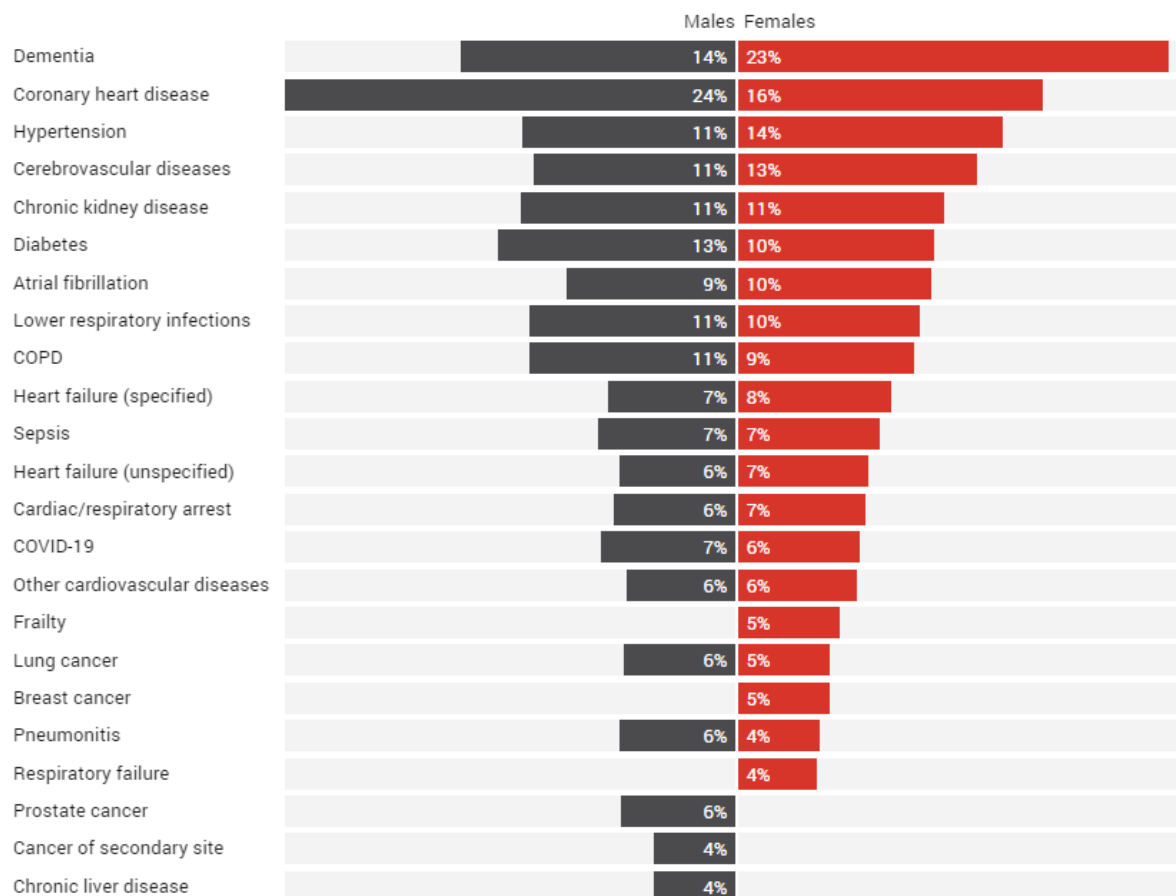
Source: Australian Institute of Health and Welfare (2024). *What do Australians die from? – Summary*.
<https://www.aihw.gov.au/reports/life-expectancy-deaths/what-do-australians-die-from/contents/summary>

CAUSES OF DEATH BY SEX

Nationally, men are more likely than women to die from coronary heart disease, diabetes, chronic obstructive pulmonary disease (COPD), pneumonitis, prostate cancer, cancer of secondary site or chronic liver disease. Women are more likely to die from dementia, hypertension, cerebrovascular diseases, frailty, breast cancer or respiratory failure. The differences in cause of death are partly due to gender-based physical differences (e.g., breast cancer, prostate cancer) and partly due to women having a longer life expectancy than men (e.g., frailty).

Most common causes* of death by sex, 2022

Males and females have the same top two multiple causes of death, **dementia** and **heart disease**, with different ranks



* When looking at the combined direct, underlying and contributory causes

Each death can involve one or more multiple cause. As a result, the sum of the percent deaths over all causes involved, can sum to more than the total.

Chart: The Conversation • Source: AIHW 'What do Australians die from?' (2024) • [Get the data](#) • [Embed](#) • [Download image](#) • Created with [Datavrapper](#)

Source: The Conversation (6 June 2024). *1 in 5 deaths are caused by heart disease, but what else are Australians dying from?* <https://theconversation.com/1-in-5-deaths-are-caused-by-heart-disease-but-what-else-are-australians-dying-from-231598>

In Yarra Ranges, the median age at death was 78.9 years for males and 84.2 years for females.⁹ There were 4,369 deaths amongst Yarra Ranges residents between 2017 and 2022, with a below average rate of 471 deaths per 100,000 residents. The top ten causes of death are:

1. coronary heart disease (10.5%);
2. dementia (8.1%);
3. lung cancer (6%);
4. cerebrovascular disease (5.6%);
5. chronic obstructive pulmonary disease, or COPD (4.4%);
6. colorectal cancer (3.4%);
7. heart failure and complications, and ill-defined heart disease (2.7%);
8. prostate cancer (2.7%);
9. accidental falls (2.4%);
10. influenza/pneumonia, diabetes, breast cancer, suicide, and pancreatic cancer (2% each).

A rate ratio compares rates between groups. The rate ratio for mortality compares deaths in Yarra Ranges to deaths across Australia – a ratio of 1 means that Yarra Ranges has the same rate as the average. A high rate ratio means that Yarra Ranges is above average – e.g., a rate ratio of 1.2 places Yarra Ranges 20% above average. A low rate ratio means that Yarra Ranges is below average – a rate ratio of 0.9 places Yarra Ranges 10% below average.

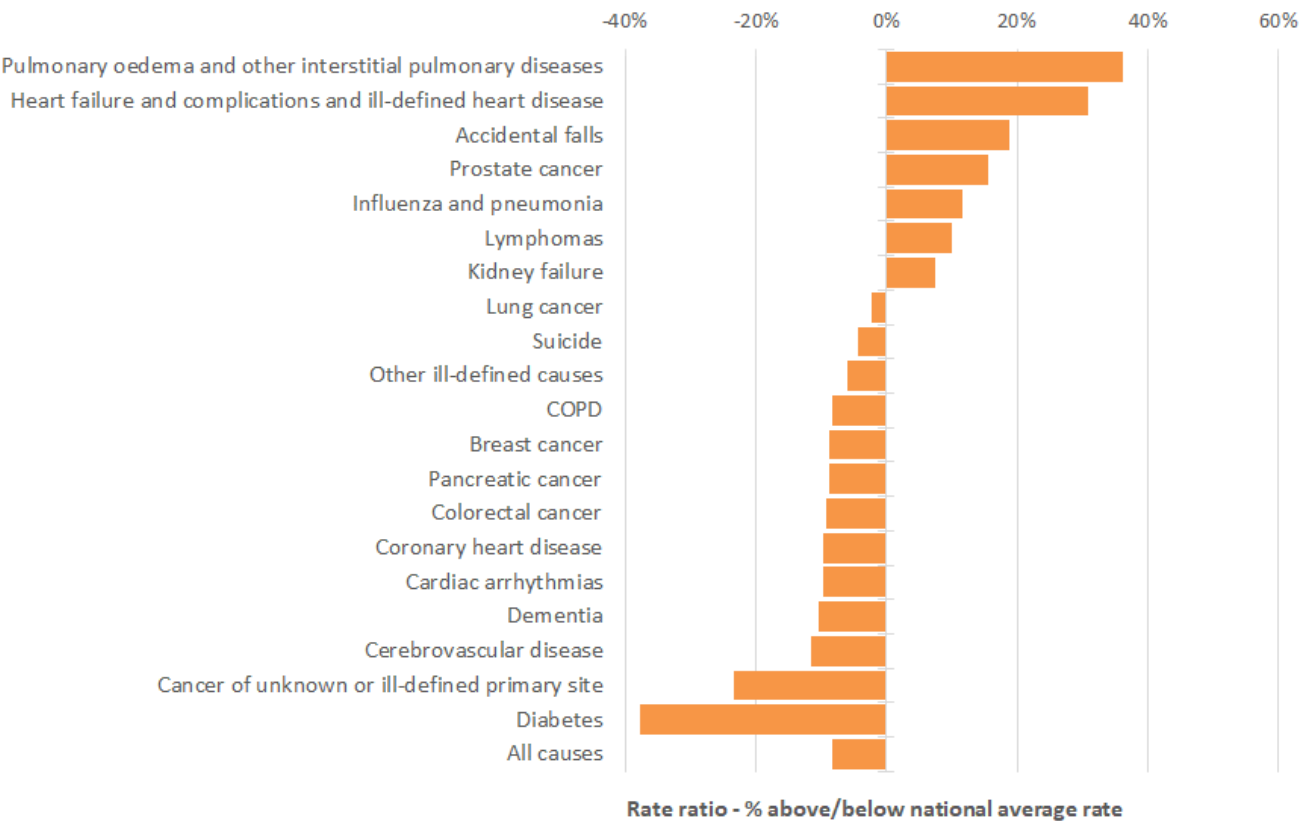
Yarra Ranges residents have a relatively high rate of deaths from:

- pulmonary diseases (with a rate ratio of 1.36 - 36% above average);
- heart failure (36% above average);
- accidental falls (19% above);
- prostate cancer (16% above);
- influenza and pneumonia (12% above);
- lymphomas (10% above).

⁹ Source: National Rural Health Alliance. *Rural Health Workforce Mapping Tool*.
<https://alga.com.au/rural-health-workforce-mapping-tool/>

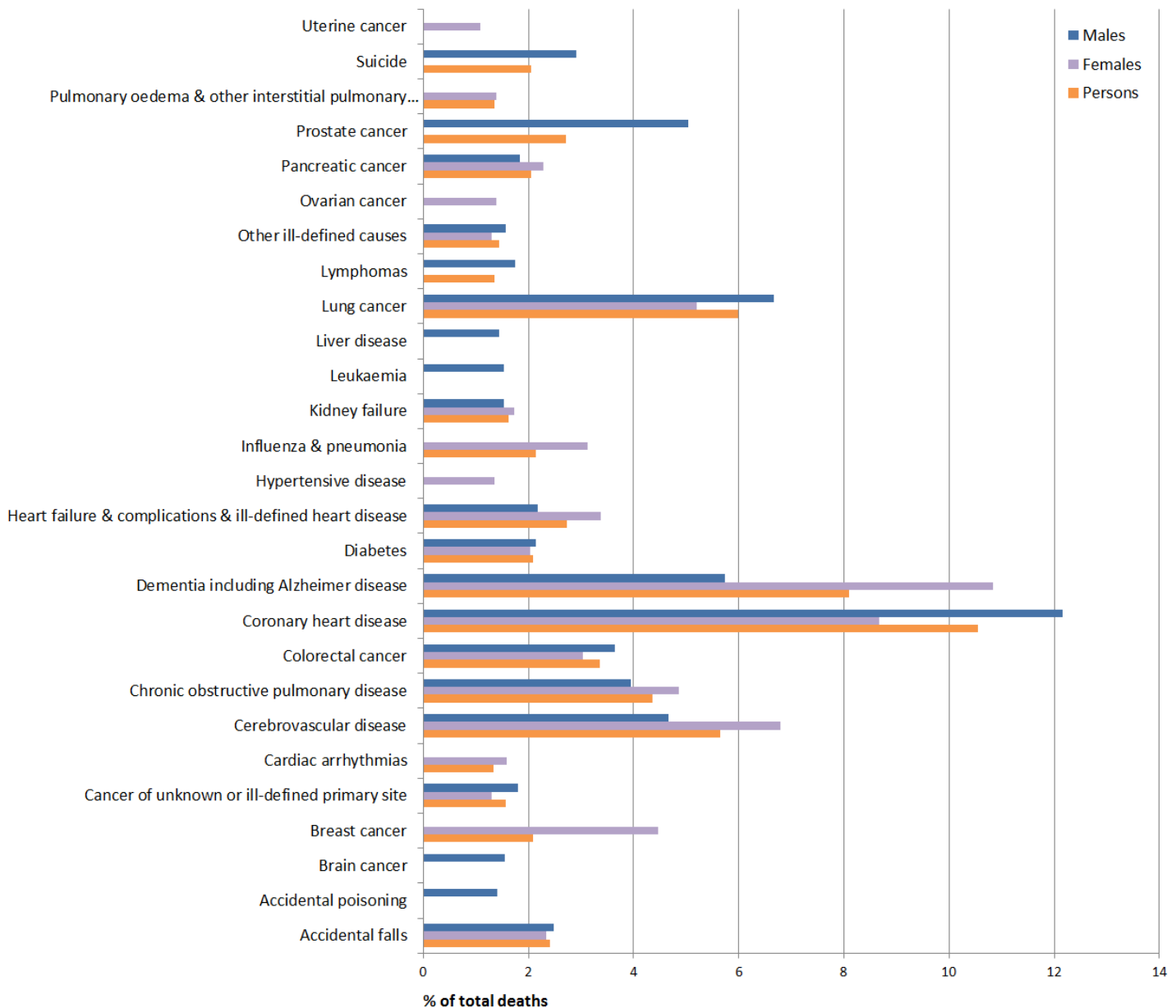
The top twenty causes of death account for nearly two-thirds of all deaths in Yarra Ranges.

Selected causes of death: Yarra Ranges, 2017-2021



Source: Australian Institute of Health and Welfare (2023). *Mortality Over Regions and Time (MORT) books*. [Mortality Over Regions and Time \(MORT\) books](#), [MORT Excel workbooks](#) - Australian Institute of Health and Welfare (aihw.gov.au)

Top 20 causes of death by sex (% of total): Yarra Ranges, 2017-2021 combined



Source: Australian Institute of Health and Welfare (2023). *Mortality Over Regions and Time (MORT) books*. [Mortality Over Regions and Time \(MORT\) books](#), [MORT Excel workbooks](#) - Australian Institute of Health and Welfare (aihw.gov.au)

Leading causes of death: Yarra Ranges residents, 2017-2021

| Cause of death | Deaths | % of all causes | Age-standardised rate (per 100,000) | Rate ratio (relative to all of Australia) |
|---|--------|-----------------|-------------------------------------|---|
| Coronary heart disease | 461 | 10.5 | 49.0 | 0.90 |
| Dementia including Alzheimer disease | 354 | 8.1 | 38.1 | 0.90 |
| Lung cancer | 262 | 6.0 | 26.8 | 0.98 |
| Cerebrovascular disease | 247 | 5.6 | 26.3 | 0.89 |
| Chronic obstructive pulmonary disease (COPD) | 191 | 4.4 | 20.3 | 0.92 |
| Colorectal cancer | 147 | 3.4 | 15.4 | 0.91 |
| Heart failure and complications and ill-defined heart disease | 119 | 2.7 | 13.1 | 1.31 |
| Prostate cancer | 118 | 2.7 | 12.3 | 1.16 |
| Accidental falls | 105 | 2.4 | 11.5 | 1.19 |
| Influenza and pneumonia | 94 | 2.1 | 10.1 | 1.12 |
| Diabetes | 91 | 2.1 | 9.7 | 0.62 |
| Breast cancer | 91 | 2.1 | 9.3 | 0.91 |
| Suicide | 89 | 2.0 | 12.1 | 0.96 |
| Pancreatic cancer | 89 | 2.0 | 9.3 | 0.91 |
| Kidney failure | 71 | 1.6 | 7.7 | 1.07 |
| Cancer of unknown or ill-defined primary site | 68 | 1.6 | 7.2 | 0.77 |
| Other ill-defined causes | 63 | 1.4 | 7.0 | 0.94 |
| Pulmonary oedema and other interstitial pulmonary diseases | 59 | 1.4 | 6.3 | 1.36 |
| Lymphomas | 59 | 1.4 | 6.0 | 1.10 |
| Cardiac arrhythmias | 58 | 1.3 | 6.4 | 0.90 |
| Top 20 leading causes | 2,837 | 64.9 | . | . |
| All causes | 4,369 | 100.0 | 470.7 | 0.92 |

Source: Australian Institute of Health and Welfare (2023). *Mortality Over Regions and Time (MORT) books*. [Mortality Over Regions and Time \(MORT\) books](#), [MORT Excel workbooks - Australian Institute of Health and Welfare \(aihw.gov.au\)](#)

The main causes of death for males in Yarra Ranges were heart disease, lung cancer, dementia, prostate cancer and cerebrovascular disease. There are four diseases in the top twenty for males which are not in the top twenty for women: brain cancer (1.5%), leukaemia (1.5%), liver disease (1.5%) and accidental poisoning (1.4%). Males in Yarra Ranges have a well-above death rate for:

- lymphomas (a rate ratio of 1.31, 31% above average);
- brain cancer (31% above);
- accidental falls (28% above);
- heart failure and complications (19% above); and
- prostate cancer (13% above).

Leading causes of death for males: Yarra Ranges, 2017-2021

| Cause of death | Deaths | % of all causes | Age-standardised rate (per 100,000) | Rate ratio (relative to all of Australia) |
|---|--------|-----------------|-------------------------------------|---|
| Coronary heart disease | 285 | 12.2 | 65.5 | 0.88 |
| Lung cancer | 156 | 6.7 | 34.3 | 1.00 |
| Dementia including Alzheimer disease | 135 | 5.7 | 33.5 | 0.89 |
| Prostate cancer | 118 | 5.0 | 27.6 | 1.13 |
| Cerebrovascular disease | 109 | 4.7 | 26.4 | 0.90 |
| Chronic obstructive pulmonary disease | 93 | 3.9 | 21.9 | 0.82 |
| Colorectal cancer | 85 | 3.6 | 19.3 | 0.96 |
| Suicide | 68 | 2.9 | 18.7 | 0.97 |
| Accidental falls | 58 | 2.5 | 14.7 | 1.28 |
| Heart failure and complications and ill-defined heart disease | 51 | 2.2 | 12.8 | 1.19 |
| Diabetes | 50 | 2.1 | 12.0 | 0.62 |
| Pancreatic cancer | 43 | 1.8 | 9.7 | 0.84 |
| Cancer of unknown/ill-defined primary site | 42 | 1.8 | 9.9 | 0.86 |
| Lymphomas | 41 | 1.8 | 9.2 | 1.31 |
| Other ill-defined causes | 37 | 1.6 | 9.0 | 1.09 |
| Brain cancer | 36 | 1.5 | 8.2 | 1.31 |
| Kidney failure | 36 | 1.5 | 9.0 | 1.08 |
| Leukaemia | 36 | 1.5 | 8.3 | 0.99 |
| Liver disease | 34 | 1.5 | 7.6 | 0.78 |
| Accidental poisoning | 33 | 1.4 | 8.7 | 1.06 |
| Top 20 leading causes | 1,548 | 66.0 | . | . |
| All causes | 2,346 | 100.0 | 554.8 | 0.91 |

Source: Australian Institute of Health and Welfare (2023). *Mortality Over Regions and Time (MORT) books*. [Mortality Over Regions and Time \(MORT\) books](#), [MORT Excel workbooks - Australian Institute of Health and Welfare \(aihw.gov.au\)](#)

The main causes of death for females were dementia, heart disease, cerebrovascular disease, lung cancer and COPD. Breast cancer is the 6th-highest cause of death (4.5% of deaths). There are three diseases in the top twenty for females, which are in the top causes for males: ovarian cancer (1.4%), hypertensive disease (1.3%) and uterine cancer (1.1%). Compared to females across Australia, females in Yarra Ranges have an extremely high death rate for:

- pulmonary diseases (a rate ratio of 1.65, 65% above average);
- influenza and pneumonia (43% above);
- heart failure and complications (41% above).

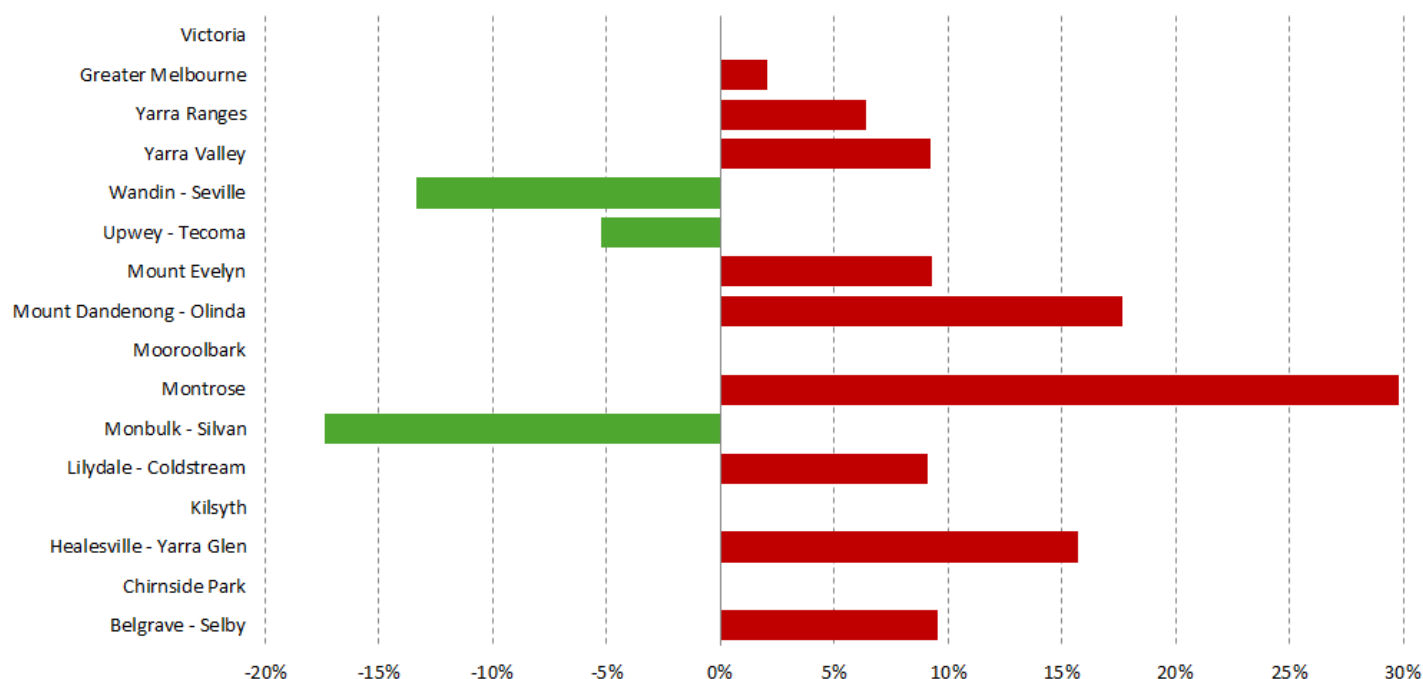
Leading causes of death for females: Yarra Ranges, 2017-2021

| Cause of death | Deaths | % of all causes | Age-standardised rate (per 100,000) | Rate ratio (relative to all of Australia) |
|---|--------|-----------------|-------------------------------------|---|
| Dementia including Alzheimer disease | 219 | 10.8 | 40.7 | 0.89 |
| Coronary heart disease | 175 | 8.7 | 33.2 | 0.89 |
| Cerebrovascular disease | 138 | 6.8 | 26.4 | 0.90 |
| Lung cancer | 105 | 5.2 | 20.4 | 0.94 |
| Chronic obstructive pulmonary disease (COPD) | 98 | 4.9 | 19.2 | 1.02 |
| Breast cancer | 90 | 4.5 | 17.5 | 0.92 |
| Heart failure and complications and ill-defined heart disease | 68 | 3.4 | 13.1 | 1.41 |
| Influenza and pneumonia | 63 | 3.1 | 11.9 | 1.43 |
| Colorectal cancer | 61 | 3.0 | 12.2 | 0.86 |
| Accidental falls | 47 | 2.3 | 8.8 | 1.07 |
| Pancreatic cancer | 46 | 2.3 | 9.1 | 1.01 |
| Diabetes | 41 | 2.0 | 7.7 | 0.62 |
| Kidney failure | 35 | 1.7 | 6.7 | 1.06 |
| Cardiac arrhythmias | 32 | 1.6 | 6.1 | 0.84 |
| Pulmonary oedema and other interstitial pulmonary diseases | 28 | 1.4 | 5.4 | 1.65 |
| Ovarian cancer | 28 | 1.4 | 5.1 | 0.83 |
| Hypertensive disease | 27 | 1.3 | 5.2 | 0.76 |
| Cancer of unknown or ill-defined primary site | 26 | 1.3 | 5.1 | 0.66 |
| Other ill-defined causes | 26 | 1.3 | 5.2 | 0.80 |
| Uterine cancer | 22 | 1.1 | 4.2 | 0.83 |
| Top 20 leading causes | 1,378 | 68.1 | . | . |
| All causes | 2,023 | 100.0 | 394.8 | 0.92 |

Source: Australian Institute of Health and Welfare (2023). *Mortality Over Regions and Time (MORT) books*. [Mortality Over Regions and Time \(MORT\) books](#), [MORT Excel workbooks - Australian Institute of Health and Welfare \(aihw.gov.au\)](#)

DEATH RATES BY LOCAL AREA

Change in rate of deaths, by local area: Yarra Ranges, 2019 to 2022



There were 1,103 deaths amongst Yarra Ranges residents in 2022. Yarra Ranges has an average level of deaths in 2022 - 5 per 1,000 compared to 4.9 across metropolitan Melbourne. Four local areas had a higher level of deaths:

- Montrose (7.4 deaths per 1,000);
- Yarra Valley (5.9 per 1,000);
- Healesville-Yarra Glen (5.9 per 1,000);
- Kilsyth (5.7 per 1,000).

The rate of deaths across metropolitan Melbourne and Victoria barely changed between 2019 and 2022. Yarra Ranges had a 6.4% rise, with seven local areas having substantial jumps in their level of deaths. Most of these areas were in Hills and the Valley:

- Montrose, with a 30% increase;
- Mount Dandenong-Olinda (up 18%);
- Healesville-Yarra Glen (up 16%);
- Belgrave-Selby (up 10%);

- Mount Evelyn, Yarra Valley and Lilydale-Coldstream (up 9% each).

The rate fell by 17% in Monbulk-Silvan, 13% in Wandin-Seville and 5% in Upwey-Tecoma. There was no change in death rates in Chirnside Park, Kilsyth or Mooroolbark.

Death rate per 1,000 residents by area: Yarra Ranges, 2019 to 2022

| Area | Death rate per 1,000 residents | | | | Rank within Yarra Ranges | % change, 2019 to 2022 |
|--------------------------|--------------------------------|------------|------------|------------|--------------------------|------------------------|
| | 2019 | 2020 | 2021 | 2022 | | |
| Belgrave - Selby | 4.2 | 4.5 | 4.4 | 4.6 | 8 | 9.5% |
| Chirnside Park | 3.8 | 4.0 | 3.6 | 3.8 | 11 | 0.0% |
| Healesville - Yarra Glen | 5.1 | 5.1 | 5.4 | 5.9 | 2 | 15.7% |
| Kilsyth | 5.7 | 5.0 | 5.2 | 5.7 | 4 | 0.0% |
| Lilydale - Coldstream | 4.4 | 4.4 | 4.8 | 4.8 | 5 | 9.1% |
| Monbulk - Silvan | 4.6 | 4.1 | 3.9 | 3.8 | 11 | -17.4% |
| Montrose | 5.7 | 6.8 | 7.0 | 7.4 | 1 | 29.8% |
| Mooroolbark | 4.8 | 4.9 | 4.7 | 4.8 | 5 | 0.0% |
| Mount Dandenong - Olinda | 3.4 | 3.5 | 3.5 | 4.0 | 9 | 17.6% |
| Mount Evelyn | 4.3 | 4.1 | 4.6 | 4.7 | 7 | 9.3% |
| Upwey - Tecoma | 3.8 | 3.4 | 3.5 | 3.6 | 13 | -5.3% |
| Wandin - Seville | 4.5 | 4.2 | 4.1 | 3.9 | 10 | -13.3% |
| Yarra Valley | 5.4 | 5.4 | 5.7 | 5.9 | 2 | 9.3% |
| Yarra Ranges | 4.7 | 4.7 | 4.8 | 5.0 | | 6.4% |
| Greater Melbourne | 4.8 | 4.8 | 4.8 | 4.9 | | 2.1% |
| Victoria | 5.1 | 5.0 | 5.1 | 5.1 | | 0.0% |

Note: Data not published for Upper Yarra Valley; the area had zero deaths in 2022.

Source: Australian Bureau of Statistics (2023). 33020D0004_2022 Deaths, Australia, 2022.

<https://www.abs.gov.au/statistics/people/population/deaths-australia/latest-release#data-downloads>

TRENDS IN NUMBER OF DEATHS, 2017 TO 2021

Trends in cause of death are not available by individual year, but trend data are available for the number of deaths. During 2020, the first year of the pandemic, the number and rate of deaths in Yarra Ranges fell. The number and rate of premature deaths (deaths amongst person under 75) also fell, alongside their share of total deaths. This means that in 2020, a lower level of deaths was occurring before age 75, compared to 2019. The number and rate of deaths rose slightly in 2021 compared to 2020, but stayed below 2019 levels.

However, the number and rate of potentially avoidable deaths (PAD) rose, along with their share of all premature deaths. Potentially avoidable deaths are deaths among people aged under 75, from conditions which could be prevented through individualised care, and/or are treatable through primary care or hospital care.

In 2020, the number of avoidable deaths rose by 13.5%, the rate rose by 10.9%, and their share of premature deaths rose from 44.8% to 51.2%. This indicates a higher level of avoidable deaths amongst under-75s. This is mainly due to an increase in PAD amongst males. For males, the number of PAD rose by 20%, the rate rose by 17.5%, and the share of premature deaths rose from 46.6% to 55.6%.

No cause of death data is available for specific years, so there is no way to determine exactly which causes of death have been driving the rise in PAD amongst males. The trend of increased PAD was not replicated across Australia, so national shifts in deaths do not provide any indication of what is happening in Yarra Ranges.

The table below lists the causes of death which are considered potentially avoidable.

Classification of potentially avoidable deaths (PAD)

| Cause of death groups | |
|--|--|
| Infections | Other conditions |
| Selected invasive infections | Complications of pregnancy, labour or the puerperium |
| Viral pneumonia & influenza | Selected external causes of morbidity & mortality |
| HIV/AIDS | Falls |
| Cancer | Fires, burns |
| Cancer of the colon, sigmoid, rectum & anus | Suicide & self-inflicted injuries |
| Skin | Misadventures to patients during surgical & medical care |
| Breast | Medical devices associated with adverse incidents in diagnostic & therapeutic use |
| Cervix | Surgical & other medical procedures as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure |
| Prostate | Other external causes of morbidity & mortality |
| Kidney | Transport accidents |
| Thyroid | Exposure to inanimate mechanical forces |
| Hodgkin's disease | Exposure to animate mechanical forces |
| Acute lymphoid leukaemia/Acute lymphoblastic leukaemia | Accidental drowning & submersion |
| Diabetes | Other accidental threats to breathing |
| Diseases of the circulatory system | Exposure to electric current, radiation & extreme ambient air temperature & pressure |
| Rheumatic & other valvular heart disease | Contact with heat & hot substances |
| Hypertensive heart & renal disease | Contact with venomous animals & plants |
| Ischaemic heart disease | Exposure to forces of nature |
| Cerebrovascular diseases | Accidental poisoning by & exposure to noxious substances |
| Heart failure | Overexertion, travel & privation |
| Pulmonary embolism | Accidental exposure to other & unspecified factors |
| Diseases of the genitourinary system | Assault |
| Renal failure | Event of undetermined intent |
| Diseases of the respiratory system | Legal interventions & operations of war |
| COPD | Drugs, medicaments & biological substances causing adverse effects in therapeutic use |
| Asthma | Sequelae of external causes of morbidity & mortality |
| Diseases of the digestive system | |
| Peptic ulcer disease | |
| Maternal & infant causes | |
| Complications of the perinatal period | |

Source: Australian Institute of Health and Welfare (2023). *Mortality Over Regions and Time (MORT) books*. [Mortality Over Regions and Time \(MORT\) books](#). [MORT Excel workbooks](#) - Australian Institute of Health and Welfare (aihw.gov.au)

All cause deaths by sex and year: Yarra Ranges, 2017-2021

| Year | Total deaths | Age-standardised rate (per 100,000) | Rate ratio (relative to all of Australia) | Premature deaths (aged under 75) | | | Potentially avoidable deaths (PAD) | | |
|-----------------------------|--------------|-------------------------------------|---|----------------------------------|--------------------------------------|--|------------------------------------|-----------------------------|---|
| | | | | Premature deaths | Premature deaths (% of total deaths) | Premature deaths age-standardised rate (per 100,000) | PAD | PAD (% of premature deaths) | PAD age-standardised rate (per 100,000) |
| Males | | | | | | | | | |
| 2017 | 426 | 542.5 | 0.87 | 174 | 40.8 | 197.8 | 99 | 51.0 | 119.6 |
| 2018 | 424 | 509.3 | 0.84 | 203 | 47.7 | 224.6 | 121 | 55.6 | 139.2 |
| 2019 | 510 | 602.3 | 0.96 | 244 | 47.8 | 274.0 | 96 | 46.6 | 110.9 |
| 2020 | 474 | 541.5 | 0.93 | 207 | 43.8 | 226.6 | 115 | 55.6 | 130.3 |
| 2021 | 512 | 576.6 | 0.97 | 213 | 41.6 | 231.1 | 118 | 55.4 | 132.4 |
| % change from previous year | | | | | | | | | |
| 2018 | -0.3% | -6.1% | -2.8% | 16.7% | 17.1% | 13.5% | 22.3% | 8.9% | 16.4% |
| 2019 | 20.1% | 18.3% | 13.3% | 20.3% | 0.1% | 22.0% | -20.7% | -16.1% | -20.4% |
| 2020 | -7.1% | -10.1% | -2.8% | -14.9% | -8.3% | -17.3% | 19.7% | 19.2% | 17.5% |
| 2021 | 8.1% | 6.5% | 4.0% | 2.8% | -4.9% | 2.0% | 2.4% | -0.4% | 1.6% |
| Females | | | | | | | | | |
| 2017 | 378 | 391.9 | 0.88 | 113 | 29.8 | 127.6 | 70 | 57.3 | 82.2 |
| 2018 | 407 | 402.9 | 0.94 | 117 | 28.8 | 122.0 | 61 | 49.6 | 66.3 |
| 2019 | 405 | 394.3 | 0.89 | 138 | 34.2 | 141.2 | 51 | 41.8 | 52.9 |
| 2020 | 412 | 389.2 | 0.95 | 119 | 29.0 | 116.4 | 52 | 43.7 | 52.1 |
| 2021 | 422 | 397.7 | 0.93 | 120 | 28.6 | 123.8 | 50 | 41.7 | 53.6 |
| % change from previous year | | | | | | | | | |
| 2018 | 7.6% | 2.8% | 7.2% | 4.2% | -3.2% | -4.4% | -12.9% | -13.4% | -19.3% |
| 2019 | -0.6% | -2.1% | -5.7% | 18.1% | 18.8% | 15.7% | -16.4% | -15.7% | -20.3% |
| 2020 | 1.7% | -1.3% | 6.8% | -13.8% | -15.3% | -17.6% | 1.8% | 4.4% | -1.6% |
| 2021 | 2.4% | 2.2% | -1.9% | 1.0% | -1.4% | 6.4% | -3.6% | -4.6% | 2.9% |
| Persons | | | | | | | | | |
| 2017 | 804 | 460.8 | 0.87 | 286 | 35.6 | 162.0 | 170 | 53.5 | 100.5 |
| 2018 | 832 | 456.0 | 0.89 | 320 | 38.5 | 172.1 | 183 | 53.4 | 101.9 |
| 2019 | 914 | 492.0 | 0.93 | 382 | 41.8 | 206.1 | 147 | 44.8 | 81.5 |
| 2020 | 885 | 462.7 | 0.94 | 327 | 36.9 | 170.2 | 167 | 51.2 | 90.3 |

| Year | Total deaths | Age-standardised rate (per 100,000) | Rate ratio (relative to all of Australia) | Premature deaths (aged under 75) | | | Potentially avoidable deaths (PAD) | | |
|------------------------------------|--------------|-------------------------------------|---|----------------------------------|--------------------------------------|--|------------------------------------|-----------------------------|---|
| | | | | Premature deaths | Premature deaths (% of total deaths) | Premature deaths age-standardised rate (per 100,000) | PAD | PAD (% of premature deaths) | PAD age-standardised rate (per 100,000) |
| 2021 | 934 | 482.3 | 0.95 | 334 | 35.7 | 175.8 | 168 | 50.4 | 91.8 |
| % change from previous year | | | | | | | | | |
| 2018 | 3.4% | -1.0% | 2.8% | 11.8% | 8.1% | 6.2% | 7.7% | -0.1% | 1.5% |
| 2019 | 10.0% | 7.9% | 3.6% | 19.5% | 8.6% | 19.7% | -19.2% | -16.1% | -20.1% |
| 2020 | -3.2% | -6.0% | 1.7% | -14.5% | -11.7% | -17.4% | 13.5% | 14.3% | 10.9% |
| 2021 | 5.5% | 4.2% | 1.0% | 2.1% | -3.2% | 3.3% | 0.5% | -1.6% | 1.7% |

Note: Potentially avoidable deaths (PAD) are deaths among people aged under 75 that are avoidable in the context of the present health care system. PADs include deaths from conditions that are potentially preventable through individualised care and/or treatable through existing primary or hospital care.

Source: Australian Institute of Health and Welfare (2023). *Mortality Over Regions and Time (MORT) books*. [Mortality Over Regions and Time \(MORT\) books, MORT Excel workbooks - Australian Institute of Health and Welfare \(aihw.gov.au\)](#)

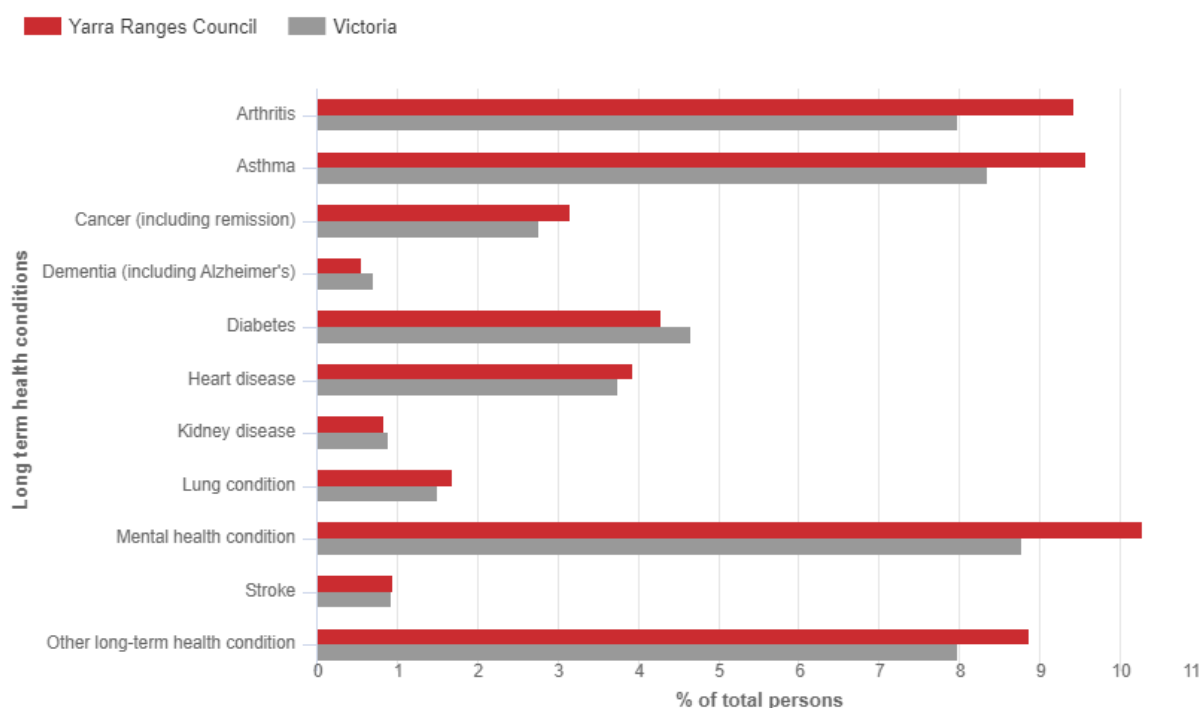
Chronic Diseases

Long-term health conditions

A chronic disease is a long-term or ongoing health condition. In 2021, 35% of Yarra Ranges residents had at least one long-term health condition, compared to 31% of Victorian residents. Mental health issues, asthma, arthritis, diabetes and heart disease are the most common conditions. Yarra Ranges residents were above average for:

- Mental health conditions, including depression or anxiety (10.3% compared to 8.8% across Victoria). Yarra Ranges ranked seventh-highest for the level of residents with mental health conditions, within metropolitan Melbourne.
- Asthma (9.6% compared to 8.4%).
- Arthritis (9.4% compared to 8%).
- Other long-term health conditions (8.9% compared to 8%).
- Cancer (3.2% compared to 2.8%).

Long term health conditions, all persons, 2021



Source: Australian Bureau of Statistics, [Census of Population and Housing, 2021](#) (Usual residence data). Compiled and presented in profile.id by [.id](#) (informed decisions).

The wording of the question was, had the person *“been told by a doctor or nurse that they have any of these long-term health conditions?”* (with the option to choose from a list and/or tick a box for “any other long-term conditions”).

The level of chronic diseases varies by Indigenous status, sex, age and area:

- Indigenous residents in Yarra Ranges are much more likely to have mental health conditions (16.6%), asthma (14.2%), diabetes (5%), kidney disease, and other long term health conditions (11.3%).
- Females are much more likely than males to have a long-term health condition, at 38.1% compared to 32.3% of males. They have a higher prevalence of mental health conditions (12.7% compared to 7.8%), arthritis (11.7% compared to 7.1%), asthma (10.6% compared to 8.6%), and other long-term health conditions (10.1% compared to 7.6%).
- Males have a higher level of heart disease (5% compared to 2.9%) and diabetes (4.8% compared to 3.8%).
- The level of residents with a long-term health condition increases with age, ranging from 10% of 0-14 year olds, to 72% of those aged 85 years or more.
- Healesville-Yarra Glen has the highest level of residents with at least one long-term health condition (37.2%); Wandin-Seville has the lowest level (34%).

For mental health, national data indicate that the estimate of 10.3% is probably a large underestimate. The results rely on doctor/nurse diagnosis and will miss people who did not seek assistance from a health service. The National Study of Mental Health and Wellbeing¹⁰ found that 53% of those experiencing a mental disorder in the past twelve months had not sought help from a service. It also found that more than one in five people (21%) had experienced a mental disorder in the past 12 months. Two in five people (40%) aged 16-24 years had experienced a mental disorder in the past 12 months, roughly double the population average.

¹⁰ [https://www.abs.gov.au/statistics/health/mental-health/national-study-mental-health-and-wellbeing/latest-release#:~:text=The%202020%2D21%20National%20Study,Diagnostic%20Interview%20\(CIDI%203.0\).](https://www.abs.gov.au/statistics/health/mental-health/national-study-mental-health-and-wellbeing/latest-release#:~:text=The%202020%2D21%20National%20Study,Diagnostic%20Interview%20(CIDI%203.0).)

Long-term health conditions: Yarra Ranges, 2021

| Type of long-term health condition | Males | Females |
|---|--------------|--------------|
| Arthritis | 7.1% | 11.7% |
| Asthma | 8.6% | 10.6% |
| Cancer (including remission) | 3.0% | 3.3% |
| Dementia (including Alzheimer's) | 0.5% | 0.6% |
| Diabetes (excluding gestational diabetes) | 4.8% | 3.8% |
| Heart disease (including heart attack or angina) | 5.0% | 2.9% |
| Kidney disease | 0.9% | 0.8% |
| Lung condition (including COPD or emphysema) | 1.7% | 1.7% |
| Mental health condition (including depression or anxiety) | 7.8% | 12.7% |
| Stroke | 1.1% | 0.8% |
| Any other long-term health condition(s) | 7.6% | 10.1% |
| No long-term health condition(s) | 60.4% | 55.4% |
| Not stated | 7.2% | 6.5% |
| Any long-term health condition | 32.3% | 38.1% |

Note that this item measures the number of people who reported that they have been told by a doctor or nurse that they have any of these long-term health conditions.

Source: Australian Bureau of Statistics (2022). *Yarra Ranges 2021 Census All Persons QuickStats*. Retrieved from: <https://www.abs.gov.au/census/find-census-data/quickstats/2021/LGA27450>

Diabetes

In March 2023, 4.7% of Yarra Ranges residents had been diagnosed with diabetes, compared to 6.1% nationally. The prevalence was highest in Kilsyth 3137 (5.7%), Chirnside Park 3116 (5.5%), Yarra Junction 3797 (5.8%), Healesville 3777 (5.3%) and Lilydale 3140 (5.3%). These rates are still below the national average.¹¹

¹¹ National Diabetes Services Scheme (2023). Australian Diabetes Map – NDSS, March 2023. <https://map.ndss.com.au/#/>

Eye health

There was a 5% drop in the rate of people using optometry services during the pandemic, and services were closed for much of the lockdowns in 2020 and 2021. Lack of preventative care is expected to lead to worse eye health and sight difficulties; local data on eye health is due for release early 2025. However, globally eye health has gotten much worse during the pandemic. A range of studies have shown that shortsightedness (myopia) has increased dramatically, partly due to increased screen-time and more time spent indoors.¹²

Optometry service use: Yarra Ranges, 2018/19 to 2021/22

| Optometry service use | Year | Number | % change, 2018-19 to 2021-22 |
|-------------------------|---------|--------|------------------------------|
| No. of patients | 2018-19 | 44,526 | |
| | 2021-22 | 43,774 | -1.7% |
| No. of services | 2018-19 | 60,323 | |
| | 2021-22 | 56,992 | -5.5% |
| Services per 100 people | 2018-19 | 38.34 | |
| | 2021-22 | 36.39 | -5.1% |

Source: Australian Institute of Health and Welfare (2023). *Data tables: Medicare-subsidised GP, allied health and specialist health care across local areas: 2022–23*. <https://www.aihw.gov.au/reports-data/health-welfare-services/primary-health-care/data>

¹² Insight News (2022). *Have lockdowns and screen time escalated Australia's myopia problem?* <https://www.insightnews.com.au/have-lockdowns-and-screen-time-escalated-australias-myopia-problem/>

Health risk and protective factors

Victorian Population Health Survey (VPHS)

The Victorian Population Health Survey (VPHS) has been conducted every year since 2001, using a random sample of adults aged 18 plus. It is done three-yearly at local government level. The analysis estimates the level of adults with a range of health risk factors and chronic diseases; the level of participation in screening tests; and other self-reported indicators of health and wellbeing. The latest local level survey was done in 2023. Preliminary data from the survey shows that key issues for Yarra Ranges residents include mental health issues, disability, cancelling medical appointments, vaping and gum disease.

MENTAL HEALTH

Twenty-six percent of adults had high or very high psychological distress. This is well above the 19% Victorian average, ranking Yarra Ranges third in the state. Twenty-four percent of adults had sought professional help for mental health problems, compared to 20% across Victoria. This ranks Yarra Ranges 9th highest. Also, 23% had low or medium life satisfaction, 22% were lonely, and 12% had low civic trust and did not feel valued by society.

Those most likely to have high psychological distress were residents who:

- had low or medium life satisfaction;
- were experiencing loneliness;
- were food insecure;
- had worried about food insecurity in the last year;
- had low civic trust (don't feel valued by society);
- had avoided or delayed visiting a dental professional in the last 12 months because of the cost;
- had gum disease;
- had experienced discrimination;
- consumed sugary drinks daily or several times per week;
- had fair or poor health self-reported health status.

Other factors linked to poor mental health included:

- seeking professional help for a mental health problem in the last 12 months;
- daily smoking or vaping;
- being unable to see a GP when needed;
- having no private health insurance.

These issues may not directly cause poor mental health, but they appear much more often amongst people with poor mental health. The themes for issues affecting mental health are social isolation, financial insecurity, poor health, having poor health and life satisfaction, and being unable to access or afford health services. Poor mental health was also associated with health risk factors, such as frequently consuming sugary drinks, having gum disease, daily smoking or vaping. The link between all of these factors and mental health are likely to be a combination of:

- causal (e.g., financial issues contributing to mental health issues and to problems affording services);
- things which frequently occur alongside mental health issues (e.g., loneliness, poor health);
- behaviours that people may use self-medicate their mental health issues (e.g., smoking, vaping); and
- health issues with the same underlying drivers as mental health (e.g., financial disadvantage can contribute to both mental health and also issues due to gum disease, if one can't afford to visit a dentist).

HEALTH CARE

Forty-nine percent of adults surveyed had no private health insurance, compared to 45% across Victoria. Yarra Ranges had a high level of adults who had cancelled medical appointments over the past year:

- 6% cancelled surgery, ranking Yarra Ranges 2nd highest in the state.
- 4.7% cancelled or postponed cancer screening, again ranking Yarra Ranges 2nd highest.
- 14% cancelled or postponed a medical appointment, test or procedure, ranking Yarra Ranges 3rd highest.

In 2023, 19% of adults had been unable to see a GP when needed over the past twelve months, the same as the state average. Of this group, 26% were unable to see a GP due to cost (slightly above the 23% average, ranking Yarra Ranges 19 out of 79 LGAs). Nearly one-third felt that they waited an unacceptably long time to see a GP (in line with the average).

The average out-of-pocket cost to see a GP has risen from \$35.32 in December 2019 to \$43.28 in June 2024. The level of services which are bulk billed has dropped from 83.6% to 75%. At the same time, demand for GPs has surged, with appointment numbers increasing by 17% whilst the population stayed the same.

ORAL HEALTH

Oral health issues in Yarra Ranges include many residents having sugary drinks regularly, gum disease, poor dental health, and not being able to afford to see a dentist. Twenty-three percent of adults reported fair or poor dental health (below the 27% Victorian average). Yarra Ranges had a high level of residents with gum disease, at 24% compared to 20% (ranking 6th). Nearly one third had avoided or delayed a dental visit due to the cost; this was also the case across Victoria. Thirty-seven percent of residents drank sugary drinks daily or a few times a week.

Oral health indicators were highly linked to poor mental health, possibly due to the links between financial disadvantage and issues such as worse oral health, junk food consumption and mental health. Data are released at LGA level on the rate of potentially preventable dental hospitalisations of children aged 0-9 years.¹³ However, this is not available for Yarra Ranges, which would be due to low numbers or a high error rate in the data.

¹³ Department of Health (2024). *Victorian public health and wellbeing outcomes*.
<https://app.powerbi.com/view?r=eyJrIjojZWZMNDQ0OGI1NzktOGIwOC00MzA1LTkzZjEtNTBjNTgwNDNhMWM3IiwidCI6ImMwZTA2MDFmLTBmYWMtNDQ5Yy05Yzg4LWExMDRjNGViOWYyO CJ9>

OTHER HEALTH INDICATORS

The VPHS looks at various other health indicators and determinants of health, showing that:

- Most adults (61%) did not exercise enough each week.
- Nearly 60% were overweight or obese.
- Yarra Ranges had a relatively high level of adults who vaped daily, at 7% compared to 4.5% for Victoria. Yarra Ranges was ranked 3rd highest on this indicator. Eight percent of adults were daily smokers.
- 8% had been sunburnt several times in the past year.
- Seventeen percent of adults were at increased risk of harm from alcohol-related disease or injury, well above the 13% Victorian average.
- Most renters were satisfied with their rental accommodation; 5% were dissatisfied.
- More than one-quarter of adults surveyed had a disability, at 27% compared to 20% for Victoria.
- Eleven percent identified as LGBTIQ+. This is the first data with any local estimates in Victoria.
- Few of those surveyed (3%) had experienced racism in the past year, but nearly 16% had experienced discrimination. Most residents were tolerant of diversity – only 8% did not think that multiculturalism made life in their area better.

Proportion (%) of adults aged 18+ (age adjusted) with selected health risk factors, chronic diseases and screening test participation: Yarra Ranges and Victoria, 2023

| Population health indicators (adults aged 18+) | Yarra Ranges results (%) | Victorian results (%) | Yarra Ranges rank (high to low) | Correlation between poor mental health and other population health indicators |
|--|--------------------------|-----------------------|---------------------------------|---|
| Mental health: | | | | |
| % high or very high psychological distress | 25.7 | 19.1 | 3 | 1.0 |
| % who sought professional help for a mental health problem in the last 12 months | 23.9 | 20.1 | 9 | 0.4 |
| % low or medium life satisfaction | 23.4 | 21.9 | 28 | 0.8 |
| % experiencing loneliness | 22.1 | 23.3 | 41 | 0.7 |
| % with low civic trust (don't feel valued by society) | 11.9 | 14.6 | 62 | 0.6 |
| Health care: | | | | |
| % no private health insurance | 48.7 | 45.2 | 51 | 0.4 |
| % of people who had a medical appointment, test, or procedure cancelled or postponed by a medical facility in the last 12 months | 9.3 | 7.1 | 27 | 0.1 |
| % who were unable to see a GP when needed in the past 12 months | 19.3 | 19.5 | 57 | 0.4 |
| <i>% who were unable to see a GP due to cost</i> | 25.7 | 22.9 | 19 | 0.2 |
| % of ALL adults who felt that they waited longer than was acceptable to see a GP in the last 12 months when needed | 31.7 | 33.0 | 55 | 0.1 |
| % where doctor or hospital cancelled surgery | 5.0 | 3.6 | 32 | 0.1 |
| % where the individual cancelled surgery | 6.0 | 3.1 | 2 | 0.0 |
| % of people who cancelled or postponed medical appointment test or procedure | 14.0 | 10.7 | 3 | 0.2 |
| % of people who had a cancer screening appointment cancelled or postponed by a medical facility in the last 12 months | 0.8 | 1.4 | 69 | -0.2 |
| % of people who cancelled or postponed a cancer screening appointment in the last 12 months | 4.7 | 2.6 | 2 | 0.2 |
| Oral health: | | | | |
| % with fair or poor self-reported dental health, or with no teeth | 23.4 | 26.7 | 65 | 0.3 |
| % gum disease | 23.9 | 20.3 | 6 | 0.6 |
| % who avoided or delayed visiting a dental professional in the last 12 months because of the cost | 29.8 | 32.3 | 52 | 0.6 |
| % consume of sugar-sweetened beverages daily or several times per week, during the past week | 37.0 | 34.4 | 30 | 0.5 |

| | | | | |
|---|------|------|----|------|
| Disadvantage: | | | | |
| % dissatisfied or very dissatisfied with rental accommodation | 5.4 | 8.1 | 62 | 0.0 |
| % food insecure | 8.9 | 8.0 | 22 | 0.7 |
| % worried about food insecurity in the last year | 10.5 | 9.7 | 32 | 0.7 |
| % with a disability | 26.7 | 19.9 | 20 | 0.3 |
| Diversity: | | | | |
| % LGBTQA+ | 11.0 | 11.0 | 18 | 0.3 |
| % experienced racism | 2.9 | 6.9 | 53 | 0.3 |
| % experienced discrimination | 16.4 | 15.8 | 18 | 0.5 |
| % low tolerance of diversity (do not feel that multiculturalism makes life in your area better) | 8.0 | 8.1 | 53 | 0.2 |
| Other health risk factors: | | | | |
| % at increased risk of harm from alcohol-related disease or injury | 17.2 | 13.1 | 32 | -0.3 |
| % overweight or obese | 56.7 | 54.4 | 37 | 0.2 |
| % with insufficient physical activity | 61.4 | 63.9 | 56 | 0.3 |
| % daily smoking | 7.8 | 10.0 | 65 | 0.4 |
| % daily vaping | 7.0 | 4.5 | 3 | 0.4 |
| % of people by frequency of those who experienced sunburn 3+ times in the last year | 7.6 | 6.9 | 42 | -0.1 |
| % fair or poor health self-reported health status | 22.3 | 20.9 | 41 | 0.5 |

Source: Department of Health and Human Services (2024). *Victorian Population Health Survey 2023*. Unpublished data.

Food security

The latest food security data are from the 2023 VPHS. The initial release shows that nearly 1 in 10 residents are food insecure – i.e., they ran out of food at some point in the past year and could not afford to buy more. The level was 8.9% for adults in Yarra Ranges, compared to 8% across Victoria. Also, 10.5% had been worried about becoming food insecure.

During the pandemic-related lockdowns in 2020, Yarra Ranges had the fourth-highest level of food insecurity in metropolitan Melbourne.¹⁴ Outer Eastern Melbourne had much higher food insecurity (7.5%) than Inner Eastern Melbourne (4.3%); the metropolitan average was 6.1%.¹⁵ Prior to the pandemic, Yarra Ranges was already experiencing a high level of food insecurity: in 2017, 16% of adults in Yarra Ranges were concerned about food insecurity with hunger, the highest in the Eastern Metropolitan Region (EMR); 11% of parents relied on low-cost food to avert food insecurity with hunger, the second-highest level in the EMR.

VicHealth undertook a specific COVID impact survey in 2020, which identified increased food insecurity as a major wellbeing issue. Statewide, the level of people who ran out of food and could not buy more nearly doubled. And nearly one-quarter (23%) had relied on low-cost unhealthy food because of financial concerns during the lockdown, compared to 13% in the previous comparison survey. It also identified three key cohorts who were most affected by food insecurity during the pandemic: young adults, females and Indigenous residents. These vulnerable cohorts are priority target groups for resilient recovery in Yarra Ranges.

The VicHealth COVID impact survey also found that only 4% of residents in Interface Council areas were eating five or more serves of vegetables each day, compared to 8% across Victoria - this is the worst result of any region.¹⁶ They were more likely to rely on low-cost unhealthy

¹⁴ Department of Health. Victorian Population Health Survey 2020. <https://vahi.vic.gov.au/report/population-health/victorian-population-health-survey-2020-dashboards>

¹⁵ Department of Health. Victorian Population Health Survey 2020. <https://vahi.vic.gov.au/report/population-health/victorian-population-health-survey-2020-dashboards>

¹⁶ The regional groupings are Inner Metropolitan, Middle Metropolitan, Outer Metropolitan and Interface.

food due to financial issues, at 29% compared to 23% for Victoria. Seven percent of residents went without meals (compared to 8% for Victoria), 9% used food relief agencies (compared to 7% for Victoria), 17% worried about having enough money to buy food (the same as the Victorian average), and 11% skipped a meal to feed their households (compared to 10% for Victoria).

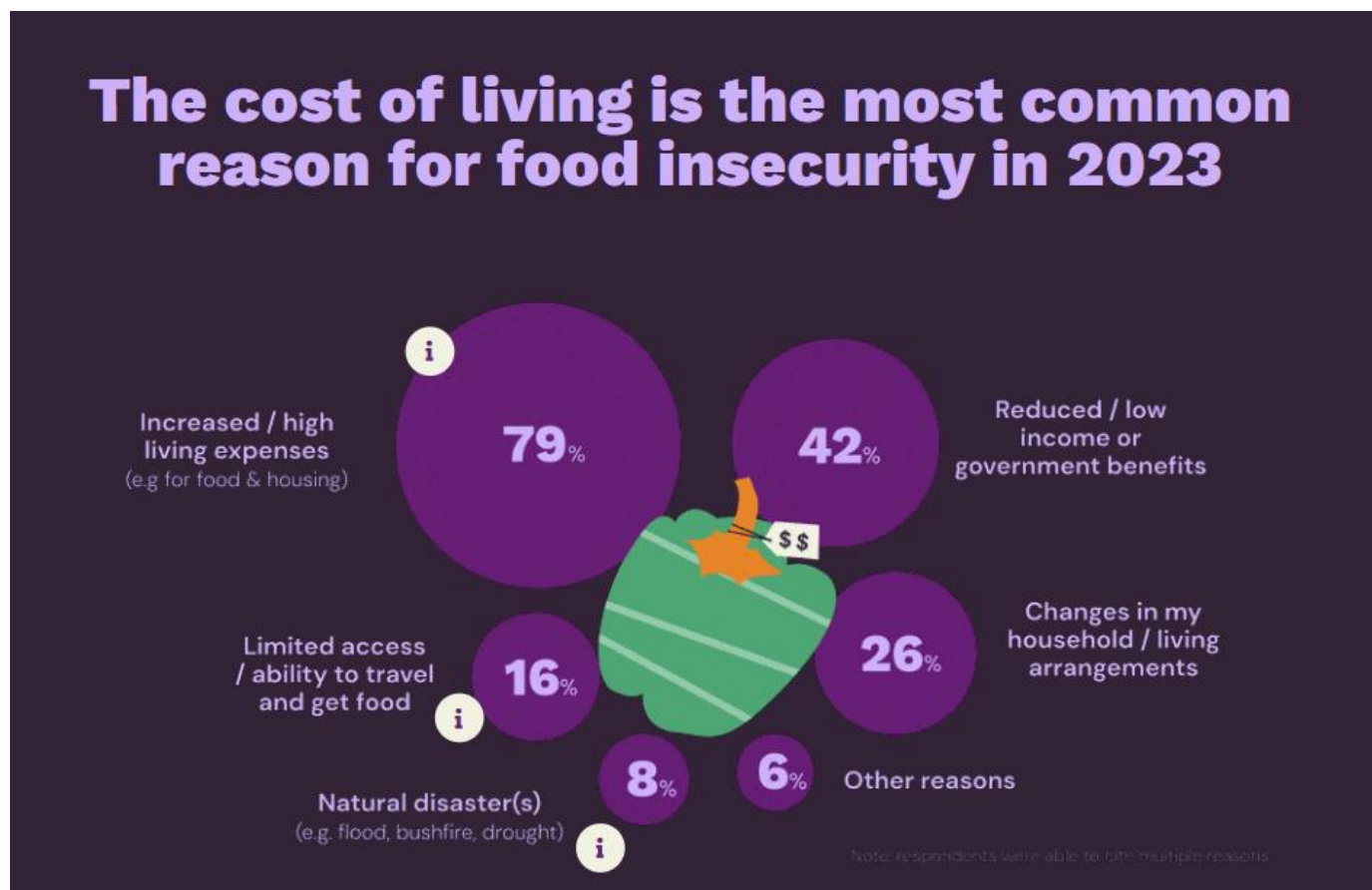
More recently, the 2023 Food Bank Hunger Report¹⁷ found that, in the past year, 3.7 million Australian households (36%) had experienced moderate to severe food insecurity. This means, at the very least, they are reducing the quality, variety or desirability of their food; and, at worst, their eating patterns are disrupted. This figure has increased by more than 10% since 2022. Nearly half (48%) of the population now feels anxious about food, or struggles to consistently access adequate food - up from 45% in 2022. More than 2.3 million households (23%) are severely 'food insecure', meaning that they are actively going hungry. The cost of living - including increased costs - was the main reason for food insecurity in 2023, whilst the impact of disasters and the need to travel to access food had reduced from 2022 levels.

Levels of food insecurity in Australia, 2023



Source: Foodbank (2023). *Foodbank Hunger Report 2023*. <https://reports.foodbank.org.au/foodbank-hunger-report-2023/> https://reports.foodbank.org.au/wp-content/uploads/2023/10/2023_Foodbank_Hunger_Report_IPSOS-Report.pdf

¹⁷ Foodbank (2023). *Foodbank Hunger Report 2023*. <https://reports.foodbank.org.au/foodbank-hunger-report-2023/>



Source: Foodbank (2023). *Foodbank Hunger Report 2023*. <https://reports.foodbank.org.au/foodbank-hunger-report-2023/>

DEMAND FOR FOOD RELIEF SERVICES

During 2023, Yarra Ranges Council conducted an analysis of the need for human services in Yarra Ranges. It found that community needs have shifted substantially over the past four years, with worsening mental and physical health, and rising living costs, the main factors driving changes in service demand. The project identified a range of issues relating to food security:

- Emergency and food relief services were the services with the highest increases in demand between 2019 and 2023. Twelve services had seen increased demand across Yarra Ranges, six in the Hills, four in the Valley, three in the Urban Area and two in Healesville-Yarra Glen.
- Emergency and food relief services were one of the top two service gaps. Most services who identified it as a gap, saw it as a gap affecting the whole of Yarra Ranges.

- Emergency and food relief services were a key service in Yarra Ranges (provided by 32% of services responding to a survey of human services).
- Access to affordable food was identified as an issue across multiple population groups, including access to food relief for women, and difficulties in affording nutritious food for low income residents and households.
- The increased cost of food was also impacting food relief services.¹⁸

Healthy eating

Data on fruit and vegetable consumption and other dietary patterns at local level has typically been collected every three years via the Department of Health's Victorian Population Health Survey. This data was not collected in 2020; data from the 2023 survey is expected to become available in early 2025. The preliminary 2023 VPHS data shows that 37% of adults were drinking sugary drinks daily or a few times per week, compared to 34% across Victoria.

Research by *Healthy Diets ASAP* has found that:

- *"Prices of healthy foods have increased at twice the rate of unhealthy options since 2020.*
- *Our current food system drives Australian families to spend around 58% of their food budget on unhealthy foods and drinks.*
- *Healthy diets are unaffordable for many welfare-dependent families with children, even if the cheapest generic or home-brand foods are purchased."*¹⁹

¹⁸ Yarra Ranges Council (2023). *Access to human services in Yarra Ranges, 2023.*

<https://www.yarraranges.vic.gov.au/Community/Health-and-Wellbeing/Human-Services-Needs-Analysis>

¹⁹ The Australian Prevention Partnership Centre (2024). *Healthy Diets ASAP: A robust method for monitoring the affordability of a healthy diet.*

<https://preventioncentre.org.au/news/healthy-diets-asap-robust-method-for-monitoring-healthy-diet-affordability/>

Sports participation

Yarra Ranges ranked fifth highest in Victoria for sports participation in 2019, with 16.5% of residents participating in sport (across all ages). The participation rate dropped to 11.3% during the 2020 lockdowns (ranking 9th) – indicating that Yarra Ranges experienced more of drop. In 2021, the rate recovered to 15.4% (ranking Yarra Ranges 9th highest). Whilst this was lower than the 2019 rate, 2021 was also impacted by lockdowns.

2022 was the first of the past few years to not be affected by lockdowns. The participation rate was similar to the 2021 level, at 15.8%, ranking Yarra Ranges 11th-highest across metropolitan Melbourne. Thus participation recovered nearly to pre-COVID levels, but other Councils have seen more of a recovery, leading to the drop in Yarra Ranges' ranking.

Preliminary data from the 2023 VPHS shows that 61% of adults were not getting enough exercise, similar to the 64% Victorian average.

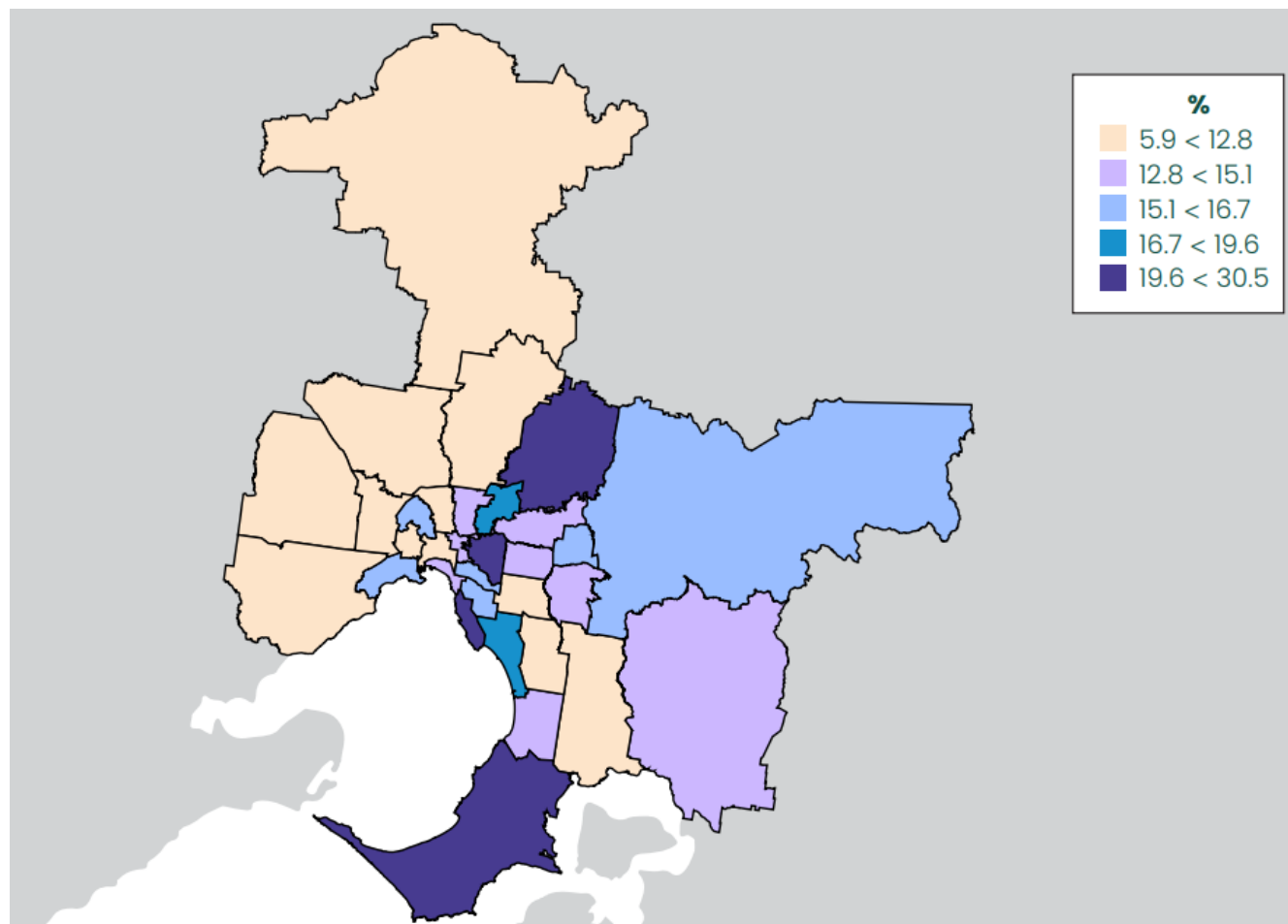
Participation rates, 2022: Metropolitan regions, by LGA

| LGA name | 2019 | | 2020 | | 2021 | | 2022 | |
|----------------------|--------------------|----------|--------------------|----------|--------------------|----------|--------------------|-----------|
| | Participation rate | Rank | Participation rate | Rank | Participation rate | Rank | Participation rate | Rank |
| Banyule | 16.3 | 6 | 12.2 | 5 | 16.0 | 6 | 17.4 | 5 |
| Bayside | 22.1 | 2 | 18.4 | 1 | 24.6 | 1 | 25.4 | 1 |
| Boroondara | 18.1 | 3 | 13.8 | 4 | 20.5 | 3 | 21.0 | 3 |
| Brimbank | 6.5 | 29 | 4.3 | 30 | 6.3 | 30 | 6.7 | 30 |
| Cardinia | 13.6 | 13 | 10.1 | 16 | 13.0 | 16 | 13.9 | 16 |
| Casey | 10.0 | 19 | 7.6 | 22 | 9.4 | 24 | 10.3 | 24 |
| Darebin | 10.2 | 18 | 7.7 | 21 | 12.0 | 20 | 12.9 | 20 |
| Frankston | 14.8 | 9 | 10.8 | 13 | 13.2 | 15 | 13.9 | 16 |
| Glen Eira | 13.9 | 12 | 12.2 | 5 | 15.8 | 7 | 16.4 | 8 |
| Greater Dandenong | 5.4 | 31 | 3.7 | 31 | 5.3 | 31 | 5.9 | 31 |
| Hobsons Bay | 13.3 | 16 | 10.2 | 15 | 14.6 | 12 | 16.4 | 8 |
| Hume | 9.8 | 21 | 5.7 | 27 | 8.1 | 27 | 9.0 | 27 |
| Kingston | 15.9 | 7 | 11.7 | 7 | 16.2 | 5 | 17.0 | 6 |
| Knox | 14.4 | 10 | 11.2 | 10 | 14.0 | 14 | 14.9 | 14 |
| Manningham | 13.4 | 15 | 9.9 | 17 | 12.2 | 19 | 13.2 | 18 |
| Maribyrnong | 8.5 | 27 | 6.8 | 26 | 10.2 | 22 | 11.4 | 23 |
| Maroondah | 15.5 | 8 | 11.7 | 7 | 15.7 | 8 | 16.3 | 10 |
| Melbourne | 5.7 | 30 | 5.1 | 29 | 7.3 | 29 | 8.3 | 29 |
| Melton | 7.9 | 28 | 5.4 | 28 | 7.9 | 28 | 8.7 | 28 |
| Monash | 9.6 | 22 | 8.5 | 19 | 11.1 | 21 | 12.2 | 21 |
| Moonee Valley | 13.5 | 14 | 11.1 | 11 | 14.9 | 11 | 16.6 | 7 |
| Merri-Bek | 9.1 | 26 | 7.5 | 23 | 10.2 | 22 | 11.8 | 22 |
| Mornington Peninsula | 17.8 | 4 | 15.2 | 3 | 19.4 | 4 | 20.1 | 4 |
| Nillumbik | 23.3 | 1 | 16.5 | 2 | 20.8 | 2 | 21.7 | 2 |
| Port Phillip | 9.5 | 23 | 8.9 | 18 | 12.8 | 17 | 13.1 | 19 |
| Stonnington | 14.2 | 11 | 10.7 | 14 | 15.2 | 10 | 15.7 | 12 |
| Whitehorse | 12.5 | 17 | 10.9 | 12 | 14.4 | 13 | 15.1 | 13 |
| Whittlesea | 9.5 | 23 | 7.1 | 24 | 9.4 | 24 | 9.9 | 25 |
| Wyndham | 9.3 | 25 | 7.0 | 25 | 8.6 | 26 | 9.7 | 26 |
| Yarra | 10.0 | 19 | 8.4 | 20 | 12.5 | 18 | 14.0 | 15 |
| Yarra Ranges | 16.5 | 5 | 11.3 | 9 | 15.4 | 9 | 15.8 | 11 |

Source: VicHealth (2024). *Sport participation in Victoria 2015–2022 Research Summary*.

https://www.vichealth.vic.gov.au/sites/default/files/2024-03/VH_Sport-participation-2015-22.pdf

Participation rates, 2022: Metropolitan regions, by LGA



Source: VicHealth (2024). *Sport participation in Victoria 2015–2022 Research Summary*.

https://www.vichealth.vic.gov.au/sites/default/files/2024-03/VH_Sport-participation-2015-22.pdf

Sport participation rates: Victorian Local Government areas, 2019-2021

| LGA name | 2019 Participation rate | Rank | 2020 Participation rate | Rank | 2021 Participation rate | Rank | % change, 2019 to 2021 |
|----------------------|-------------------------------|----------|-------------------------------|----------|-------------------------------|----------|------------------------------|
| Nillumbik | 23.3 | 1 | 16.5 | 2 | 20.3 | 2 | -12.9% |
| Bayside | 22.1 | 2 | 18.4 | 1 | 23.4 | 1 | 5.9% |
| Boroondara | 18.1 | 3 | 13.8 | 4 | 19.1 | 4 | 5.5% |
| Mornington Peninsula | 17.8 | 4 | 15.2 | 3 | 19.6 | 3 | 10.1% |
| Yarra Ranges | 16.5 | 5 | 11.3 | 9 | 15.4 | 8 | -7.9% |
| Banyule | 16.3 | 6 | 12.2 | 5 | 15.4 | 6 | -5.5% |
| Kingston | 15.9 | 7 | 11.7 | 7 | 15.5 | 5 | -2.5% |
| Maroondah | 15.5 | 8 | 11.7 | 7 | 15.3 | 7 | -1.3% |
| Frankston | 14.8 | 9 | 10.8 | 13 | 13.1 | 16 | -11.5% |
| Knox | 14.4 | 10 | 11.2 | 10 | 13.6 | 12 | -5.6% |
| Stonnington | 14.2 | 11 | 10.7 | 14 | 13.5 | 14 | -4.9% |
| Glen Eira | 13.9 | 12 | 12.2 | 5 | 15.1 | 9 | 8.6% |
| Cardinia | 13.6 | 13 | 10.1 | 16 | 13.5 | 14 | -0.7% |
| Moonee Valley | 13.5 | 14 | 11.1 | 11 | 14 | 10 | 3.7% |
| Manningham | 13.4 | 15 | 9.9 | 17 | 11.9 | 17 | -11.2% |
| Hobsons Bay | 13.3 | 16 | 10.2 | 15 | 13.7 | 11 | 3.0% |
| Mitchell | 13 | 17 | 8.8 | 19 | 11.6 | 18 | -10.8% |
| Whitehorse | 12.5 | 18 | 10.9 | 12 | 13.6 | 12 | 8.8% |
| Darebin | 10.2 | 19 | 7.7 | 22 | 10.9 | 21 | 6.9% |
| Casey | 10 | 20 | 7.6 | 23 | 9.4 | 23 | -6.0% |
| Yarra | 10 | 20 | 8.4 | 21 | 11.1 | 20 | 11.0% |
| Hume | 9.8 | 22 | 5.7 | 28 | 8.4 | 28 | -14.3% |
| Monash | 9.6 | 23 | 8.5 | 20 | 10.4 | 22 | 8.3% |
| Whittlesea | 9.5 | 24 | 7.1 | 25 | 9.1 | 26 | -4.2% |
| Port Phillip | 9.5 | 24 | 8.9 | 18 | 11.5 | 19 | 21.1% |
| Wyndham | 9.3 | 26 | 7 | 26 | 9 | 27 | -3.2% |
| Moreland | 9.1 | 27 | 7.5 | 24 | 9.4 | 23 | 3.3% |
| Maribyrnong | 8.5 | 28 | 6.8 | 27 | 9.3 | 25 | 9.4% |
| Melton | 7.9 | 29 | 5.4 | 29 | 8.1 | 29 | 2.5% |
| Brimbank | 6.5 | 30 | 4.3 | 31 | 6 | 31 | -7.7% |
| Melbourne | 5.7 | 31 | 5.1 | 30 | 6.1 | 30 | 7.0% |
| Greater Dandenong | 5.4 | 32 | 3.7 | 32 | 5.1 | 32 | -5.6% |

Source: VicHealth (2024). *Sport participation in Victoria 2015–2022 Research Summary*.

https://www.vichealth.vic.gov.au/sites/default/files/2024-03/VH_Sport-participation-2015-22.pdf

Cancer screening rates

Cancer is one of the main causes of illness and death amongst Australians. Some cancers can be detected through screening, allowing for early detection, intervention and treatment amongst the most at risk age groups. Screening data also help with analysing service utilisation patterns, and identifying which areas and groups have low levels of screening.

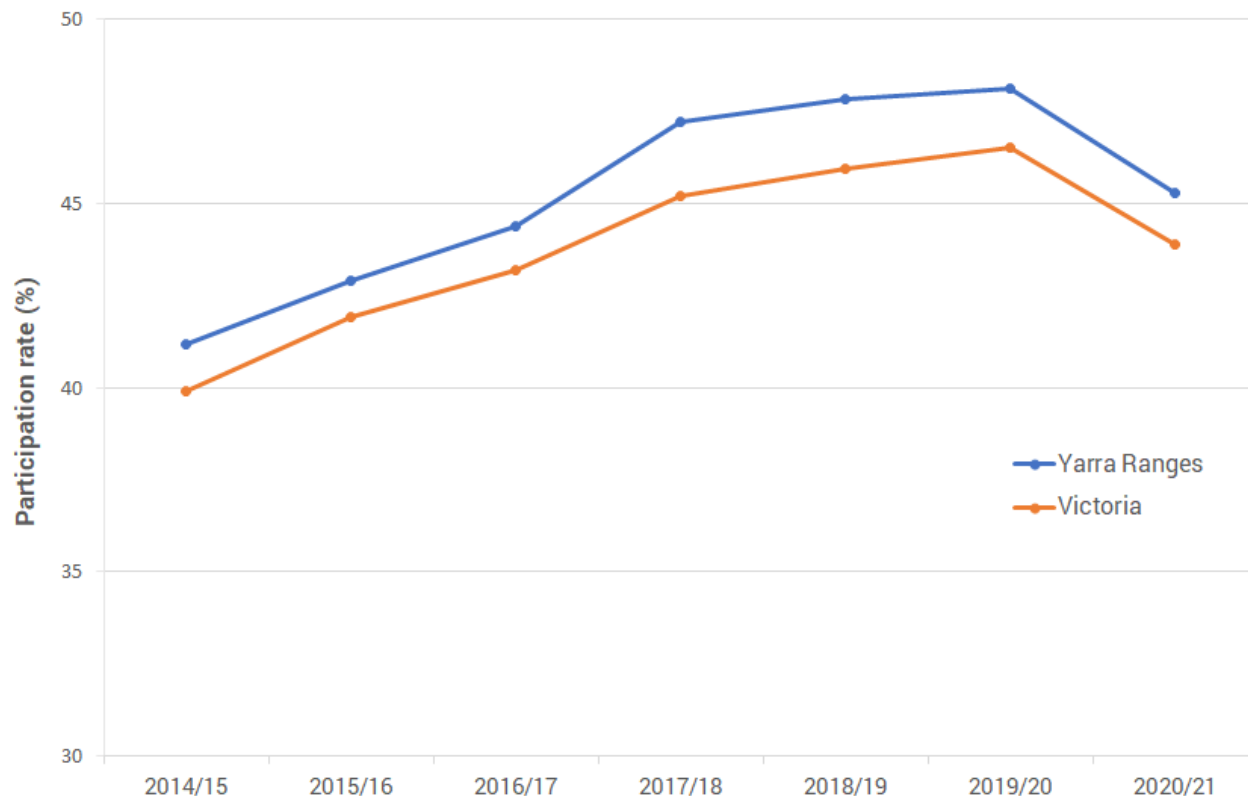
BOWEL CANCER SCREENING

Bowel cancer screening rates in Yarra Ranges dropped 6% in 2020/21, after five years of steady increases. This fall in screening is therefore likely to be due to lockdown impacts on service access and usage.

Bowel cancer screening in Yarra Ranges dropped from 48.1% in 2019/20 to 45.3% in 2020/21, and fell further to 44% in 2021/22. The rate was lowest in Yarra Valley (38.8%) and Belgrave-Selby (42.3%). The rate for Upper Yarra Valley was not published due to small numbers. Decreases were largest in Wandin-Seville (14.3%), Belgrave-Selby (11.5%), Chirnside Park (11.1%) and Montrose (10%).

Bowel cancer screening is crucial to reducing the risk of severe bowel cancer, by catching the disease early, and this drop in screening increases the level of people at risk of developing more advanced bowel cancer. Note that the National Bowel Cancer Screening Program has widened its target group and increased the recommended frequency of testing in recent years, meaning that the drop may understate the change in 2020/21 compared to what could have normally been expected for that year.

National Bowel Cancer Screening Program, participation rate for people aged 50–74: Yarra Ranges and Victoria, 2014/2015 to 2020/21



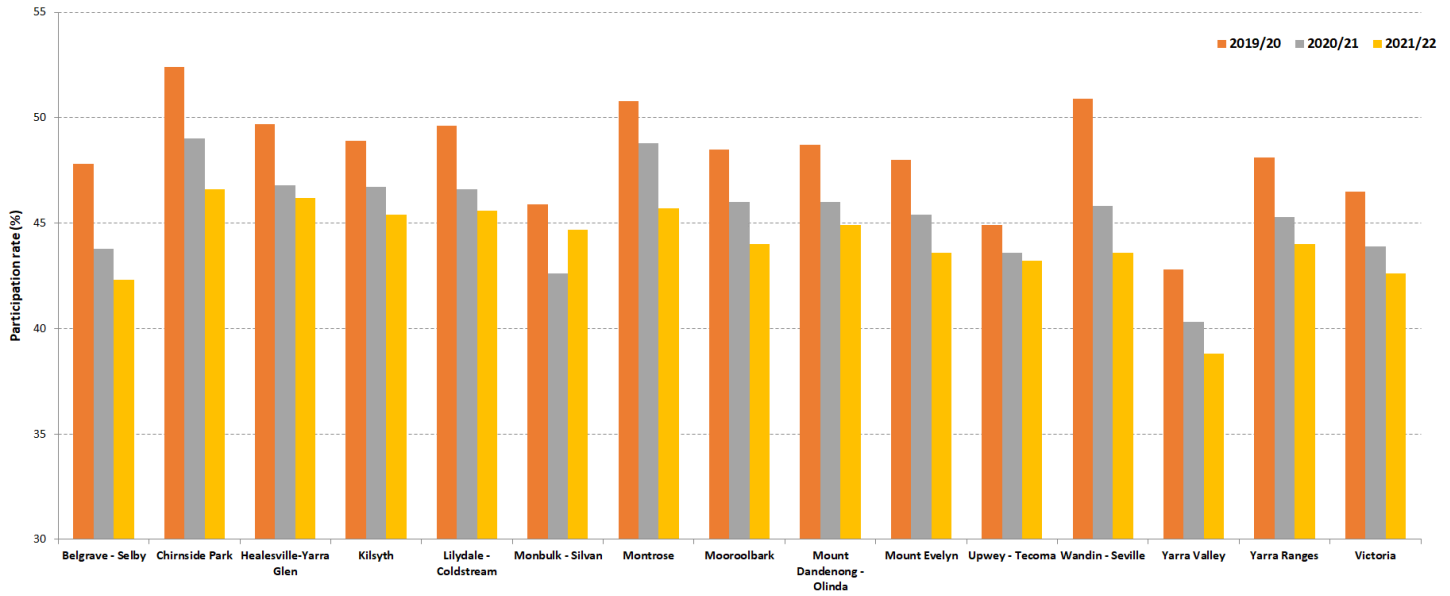
Source: Australian Institute of Health and Welfare (14 July 2023). *Cancer screening programs: quarterly data*. <https://www.aihw.gov.au/reports/cancer-screening/national-cancer-screening-programs-participation>

Participation rate (%) in the National Bowel Cancer Screening Program, people aged 50–74: Yarra Ranges and Victoria, 2014/2015 to 2020/21

| Area | 2014/ 15 | 2015/ 16 | 2016/ 17 | 2017/ 18 | 2018/ 19 | 2019/ 20 | 2020/ 21 | % change, 2019/20- 2020/21 |
|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|
| Yarra Ranges | 41.2 | 42.9 | 44.4 | 47.2 | 47.8 | 48.1 | 45.3 | -5.9% |
| Victoria | 39.9 | 41.9 | 43.2 | 45.2 | 46.0 | 46.5 | 43.9 | -5.6% |

Source: Australian Institute of Health and Welfare (14 July 2023). *Cancer screening programs: quarterly data*. <https://www.aihw.gov.au/reports/cancer-screening/national-cancer-screening-programs-participation>

Participation in the National Bowel Cancer Screening Program, people aged 50–74: Yarra Ranges SA2s, 2019/20 to 2021/22



Source: Australian Institute of Health and Welfare (14 July 2023). *Cancer screening programs: quarterly data*. <https://www.aihw.gov.au/reports/cancer-screening/national-cancer-screening-programs-participation>

Participation in the National Bowel Cancer Screening Program, people aged 50–74: Yarra Ranges SA2s, 2019/20 to 2021/22

| SA2 Name | Participation rate (%), 2019/20 | Participation rate (%), 2020/21 | Participation rate (%), 2021/22 | Change in participation rate |
|-----------------------------|------------------------------------|---------------------------------------|---------------------------------------|------------------------------------|
| Belgrave - Selby | 47.8 | 43.8 | 42.3 | -11.5% |
| Chirnside Park | 52.4 | 49.0 | 46.6 | -11.1% |
| Healesville-Yarra Glen | 49.7 | 46.8 | 46.2 | -7.0% |
| Kilsyth | 48.9 | 46.7 | 45.4 | -7.2% |
| Lilydale - Coldstream | 49.6 | 46.6 | 45.6 | -8.1% |
| Monbulk - Silvan | 45.9 | 42.6 | 44.7 | -2.6% |
| Montrose | 50.8 | 48.8 | 45.7 | -10.0% |
| Mooroolbark | 48.5 | 46.0 | 44.0 | -9.3% |
| Mount Dandenong - Olinda | 48.7 | 46.0 | 44.9 | -7.8% |
| Mount Evelyn | 48.0 | 45.4 | 43.6 | -9.2% |
| Upwey - Tecoma | 44.9 | 43.6 | 43.2 | -3.8% |
| Wandin - Seville | 50.9 | 45.8 | 43.6 | -14.3% |
| Yarra Valley | 42.8 | 40.3 | 38.8 | -9.3% |
| Upper Yarra Valley | n.p. | n.p. | n.p. | n.p. |
| Yarra Ranges | 48.1 | 45.3 | 44.0% | -8.5% |
| Victoria | 46.5 | 43.9 | 42.6% | -8.4% |

Note: *n.p.*: not published

Source: Australian Institute of Health and Welfare (2023). *Cancer screening programs: quarterly data, 14 July 2023; National Bowel Cancer Screening Program: Monitoring report 2024 Supplementary tables*. <https://www.aihw.gov.au/reports/cancer-screening/national-cancer-screening-programs-participation>

CERVICAL CANCER SCREENING

During 2018 to 2021 (combined years), 66.5% of 25-74 year old women in Yarra Ranges participated in the cervical cancer screening program. This is well above the 61.9% Victorian average.

Screening rates were highest amongst 25-29 year olds (73.5%) and 55-59 year olds (73%). They were lowest amongst 70-74 year olds (33.8%). The combining of data for three calendar years means that these data will not be useful in tracking COVID-19 impacts on cervical cancer screening.

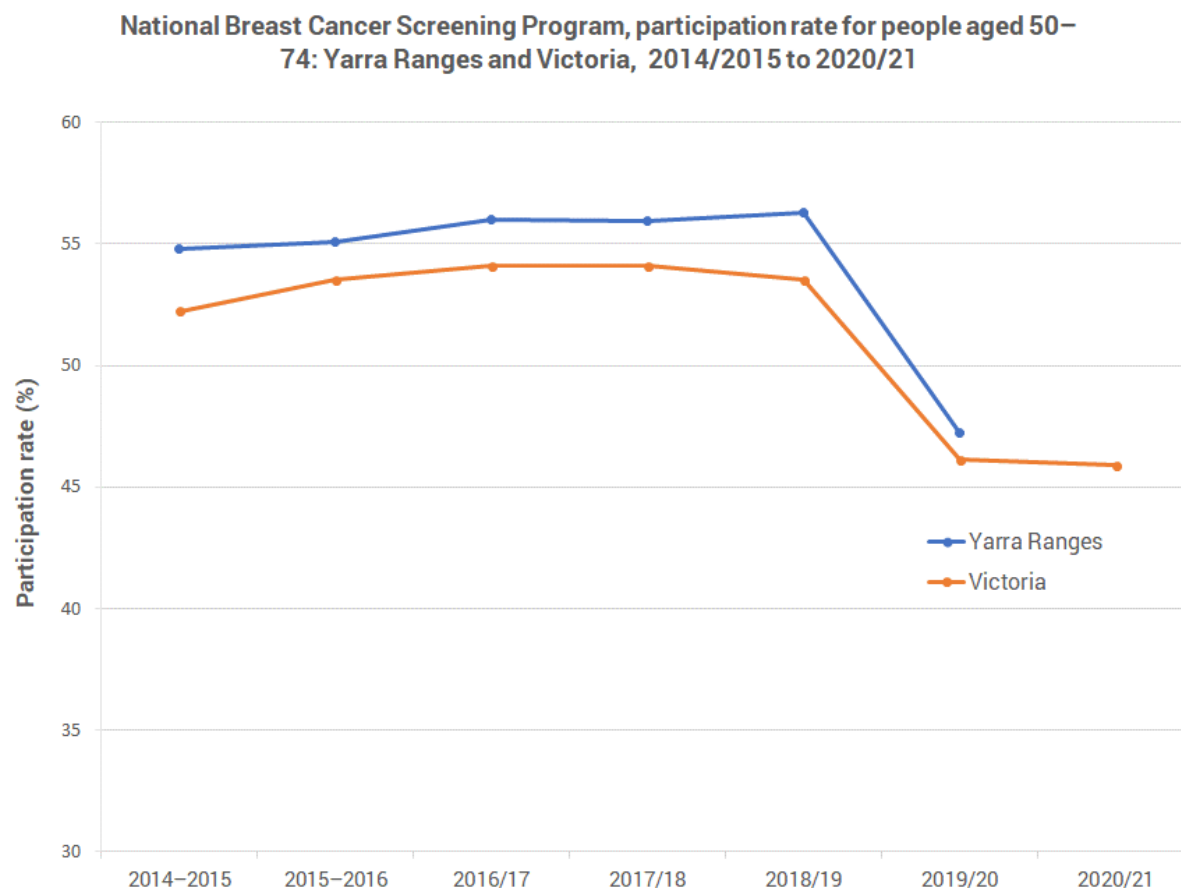
Participation rate (%) by age in the National Cervical Cancer Screening Program, people aged 25–74: Yarra Ranges and Victoria, 2018-2021 (combined)

| Age group (years) | Yarra Ranges participation rate (%) | Victoria participation rate (%) |
|--------------------|-------------------------------------|---------------------------------|
| 25–29 | 73.5 | 63.5 |
| 30–34 | 63.7 | 58.1 |
| 35–39 | 63.2 | 59.9 |
| 40–44 | 68.0 | 65.5 |
| 45–49 | 70.9 | 68.7 |
| 50–54 | 71.4 | 67.1 |
| 55–59 | 73.0 | 66.8 |
| 60–64 | 70.0 | 65.0 |
| 65–69 | 65.7 | 60.9 |
| 70–74 | 33.8 | 32.2 |
| Total 25–74 | 66.5 | 61.9 |

Note: The extent to which the cervical cancer screening participation rate has been impacted by the COVID-19 pandemic is yet to be fully determined; however, the pandemic may have affected 2018–2021 participation.

Source: Australian Institute of Health and Welfare (14 July 2023). *Cancer screening programs: quarterly data.* <https://www.aihw.gov.au/reports/cancer-screening/national-cancer-screening-programs-participation>

BREAST CANCER SCREENING



Source: Australian Institute of Health and Welfare (14 July 2023). *Cancer screening programs: quarterly data*. <https://www.aihw.gov.au/reports/cancer-screening/national-cancer-screening-programs-participation>

In 2019/20, 47.2% of 50-74 year old women in Yarra Ranges participated in the breast cancer screening program. This is a 16% fall from the 2018/19 level (56.3%), despite only the final quarter of that year being affected by lockdowns. Screening rates were consistently around 55-56% in previous years. Victoria-wide, there was also a substantial fall in participation in 2020/21 (2020/21 data are not yet available at SA3 level). Breast Screen Victoria closed from

24 March 2020 until early May 2020 due to lockdowns.²⁰ The Australian Institute of Health and Welfare has not produced equivalent commentary on the 2021 lockdowns, however, as levels in 2020/21 were almost identical to 2019/20 levels, they appear to have had a similar impact on participation.

Participation rate (%) by age in BreastScreen Australia, women aged 50–74: Yarra Ranges and Victoria, 2014/15-2020/21

| Age group | 2014–2015 | 2015–2016 | 2016/17 | 2017/18 | 2018/19 | 2019/20 | 2020/21 |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Yarra Ranges | | | | | | | |
| 50–54 | 54.8 | 52.8 | 54.0 | 53.3 | 52.2 | 42.4 | n/a |
| 55–59 | 52.0 | 52.7 | 53.3 | 53.0 | 55.1 | 46.9 | n/a |
| 60–64 | 58.0 | 59.6 | 58.4 | 57.6 | 57.9 | 48.0 | n/a |
| 65–69 | 59.5 | 60.1 | 60.9 | 61.1 | 60.4 | 52.1 | n/a |
| 70–74 | 47.4 | 48.9 | 53.6 | 55.9 | 57.1 | 48.1 | n/a |
| 50–74 | 54.8 | 55.1 | 56.0 | 55.9 | 56.3 | 47.2 | n/a |
| Victoria | | | | | | | |
| 50–54 | 50.6 | 51.8 | 51.5 | 50.9 | 50.1 | 42.4 | 42.3 |
| 55–59 | 51.4 | 51.1 | 51.5 | 52.0 | 51.5 | 44.4 | 43.9 |
| 60–64 | 56.8 | 57.1 | 57.1 | 56.6 | 55.6 | 47.4 | 47.4 |
| 65–69 | 57.4 | 58.3 | 58.6 | 58.5 | 57.5 | 49.9 | 49.8 |
| 70–74 | 42.7 | 48.8 | 52.5 | 53.5 | 54.2 | 47.9 | 47.6 |
| 50–74 | 52.2 | 53.5 | 54.1 | 54.1 | 53.5 | 46.1 | 45.9 |

Source: Australian Institute of Health and Welfare (14 July 2023). *Cancer screening programs: quarterly data*. <https://www.aihw.gov.au/reports/cancer-screening/national-cancer-screening-programs-participation>

²⁰ <https://www.aihw.gov.au/reports/cancer-screening/cancer-screening-and-covid-19-in-australia/contents/did-fewer-people-screen-for-cancer-during-the-covid-19-pandemic>

Alcohol consumption and service usage

During COVID, trends in alcohol-related service use varied a lot by service type:

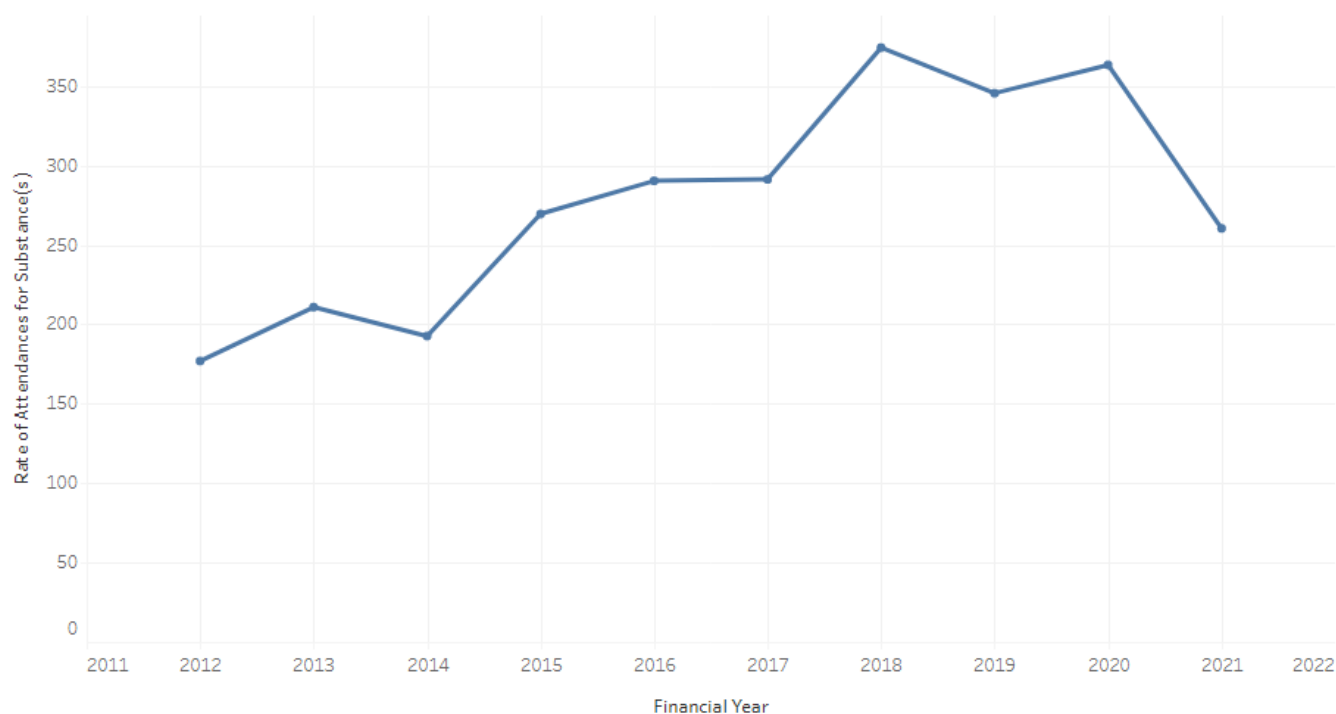
- Ambulance attendance for intoxication rose in the first year of the pandemic and decreased in the second year.
- Online counselling rose in the first year and dropped in the second year.
- Phone counselling dropped in the first year and rose in the second year.

Counselling may be seen partly as a preventative measure which people can choose to use or not use. Therefore, treatment may be more indicative than counselling of the level of alcohol issues in the community. And the treatment data shows that after years of going down, the rate of treatment for alcohol issues more than doubled in 2020/21, then rose by a further 23% in 2021/22. Hospital admissions related to alcohol spiked up in 2020/21, then dropped in 2021/22 - but have not returned to pre-pandemic levels.

AMBULANCE ATTENDANCES

Ambulance attendances for alcohol intoxication steadily increased between 2014/15 and 2018/19, from a rate of 193 per 100,000 to 374 per 100,00. There was a slight drop to 346 per 100,000 in 2019/20 – the June quarter of 2019/20 was affected by lockdowns in Victoria. This was followed by a slight increase in 2020/21 (to 363 per 100,000), then a sharp drop in 2021/22 (to 261 per 100,000). Both 2020/21 and 2021/22 were highly affected by lockdowns. Thus it is difficult to pick a clear pattern, but the overall trend was upwards pre-pandemic, then downwards during lockdowns.

Alcohol only (intoxication) ambulance attendances per 100,000 residents: Yarra Ranges, 2011/12 to 2021/22

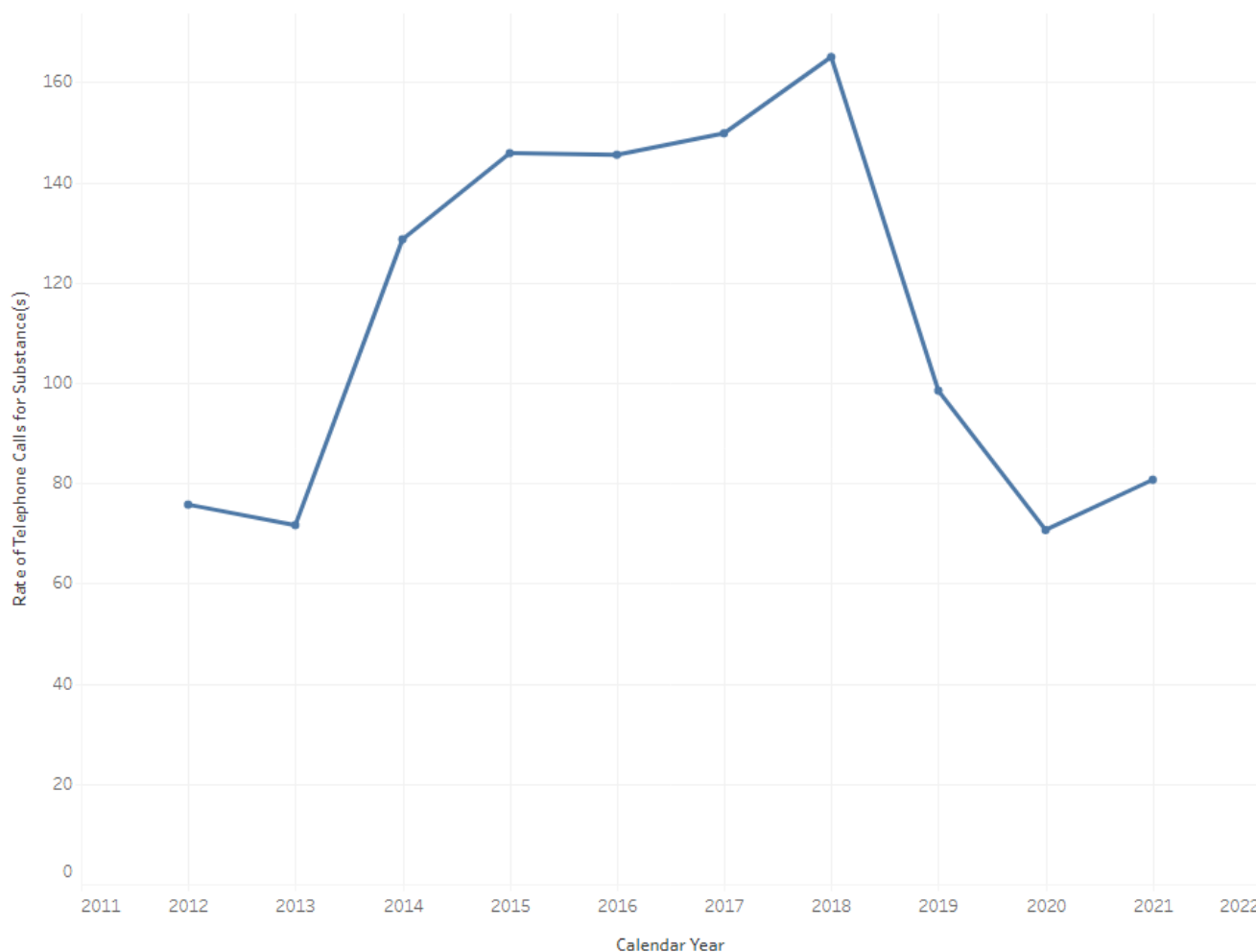


Source: Turning Point (December 2022). *Ambulance attendances*.
<https://aodstats.org.au/explore-data/ambulance-attendances/>

DIRECTLINE PHONE COUNSELLING

The level of alcohol-related telephone counselling sessions and referrals has been dropping in Yarra Ranges since 2018, including a drop in the 2020 calendar year. There was an increase in 2021, with the rate moving from 71 per 100,000 to 81. Whilst more growth in 2020 and 2021 may have been expected during lockdowns, need for counselling maybe have been partly met by increased online counselling from 2020 onwards.

Alcohol-related telephone counselling and referral services per 100,000 residents: Yarra Ranges, 2012 to 2021



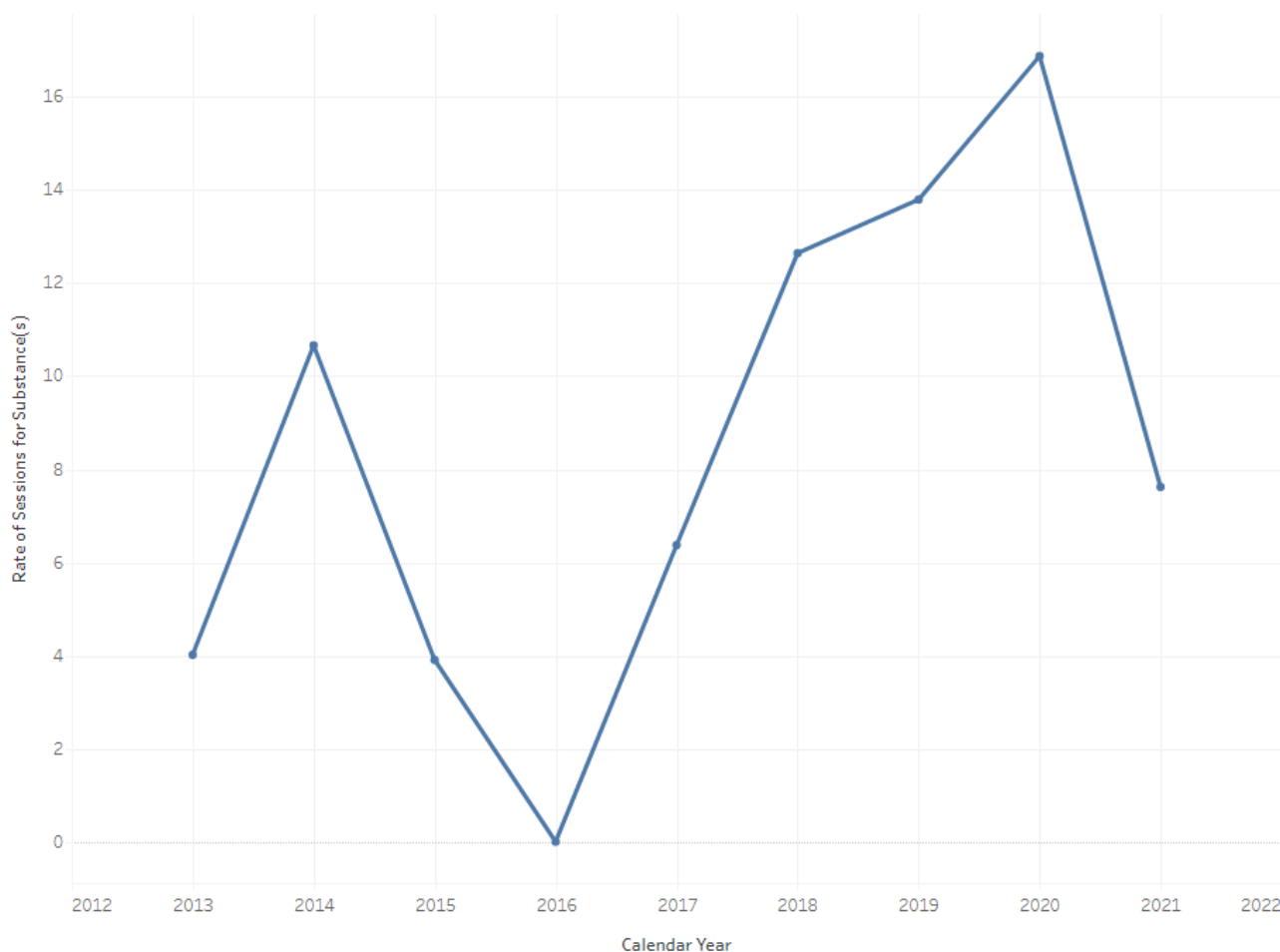
Source: Turning Point (November 2022). *DirectLine*. <https://aodstats.org.au/explore-data/directline/>

COUNSELLING ONLINE

Data on online counselling is available by calendar year rather than financial year. Online counselling was limited pre-pandemic. Between 2019 and 2020, the rate of online alcohol counselling rose by 21% to 17 sessions per 100,000; the rate then more than halved in 2021, to eight sessions per 100,000.

The number of sessions experienced a 23% rise followed by a 56% fall, to 12 sessions. All usage was amongst 20-44 year olds, particularly 25-34 year olds; numbers were split evenly between males and females in 2020 and 2021. Total numbers in 2021 had fallen below the 2019 pre-pandemic levels.

Alcohol-related online treatment sessions per 100,000 residents – Counselling Online: Yarra Ranges, 2013 to 2021



Source: Turning Point (November 2022). *Counselling online*.
<https://aodstats.org.au/explore-data/counselling-online/>

Alcohol-related online treatment sessions per 100,000 residents – Counselling Online: Yarra Ranges, 2013 to 2021

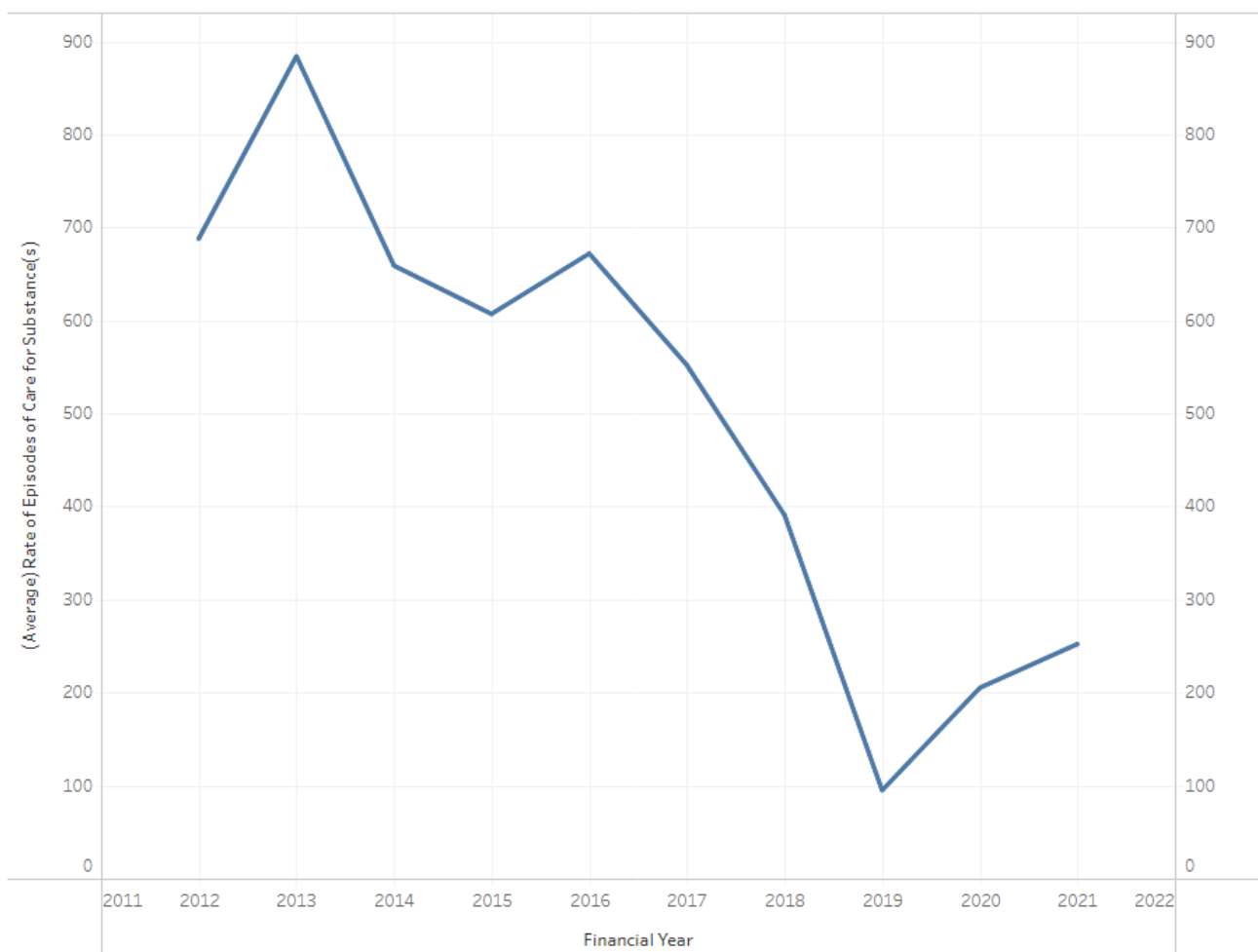
| Characteristics | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|------|------|------|------|------|------|------|------|------|
| Number of counselling online sessions for alcohol: | | | | | | | | | |
| 0-19yrs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20-24yrs | 0 | 6 | 0 | 0 | 0 | 5 | 0 | 5 | 0 |
| 25-34yrs | 0 | 0 | 0 | 0 | 0 | 7 | 11 | 8 | 6 |
| 35-44yrs | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 0 |
| 45-54yrs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55-64yrs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65+yrs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Female | 6 | 8 | 0 | 0 | 0 | 12 | 14 | 14 | 7 |
| Male | 0 | 8 | 0 | 0 | 0 | 8 | 8 | 13 | 5 |
| Total | 6 | 16 | 6 | 0 | 10 | 20 | 22 | 27 | 12 |
| Rate of counselling online sessions for alcohol (per 100,000): | | | | | | | | | |
| 0-19yrs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20-24yrs | 0 | 61 | 0 | 0 | 0 | 50 | 0 | 51 | 0 |
| 25-34yrs | 0 | 0 | 0 | 0 | 0 | 35 | 54 | 39 | 31 |
| 35-44yrs | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 24 | 0 |
| 45-54yrs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55-64yrs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65+yrs | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Female | 8 | 11 | 0 | 0 | 0 | 15 | 17 | 17 | 9 |
| Male | 0 | 11 | 0 | 0 | 0 | 10 | 10 | 16 | 6 |
| Total | 4 | 11 | 4 | 0 | 6 | 13 | 14 | 17 | 8 |

Source: Turning Point (November 2022). *Counselling online*.
<https://aodstats.org.au/explore-data/counselling-online/>

TREATMENT EPISODES

From 2016/17 to 2019/20, the rate of treatment for alcohol issues trended steadily down. The level then more than doubled to 130 per 100,000 in 2020/21. The rate rose by 23% in 2021/22, reaching a rate of 160 per 100,000.

Alcohol-related episodes of care, per 100,000 residents: Yarra Ranges, 2012/13 to 2021/22

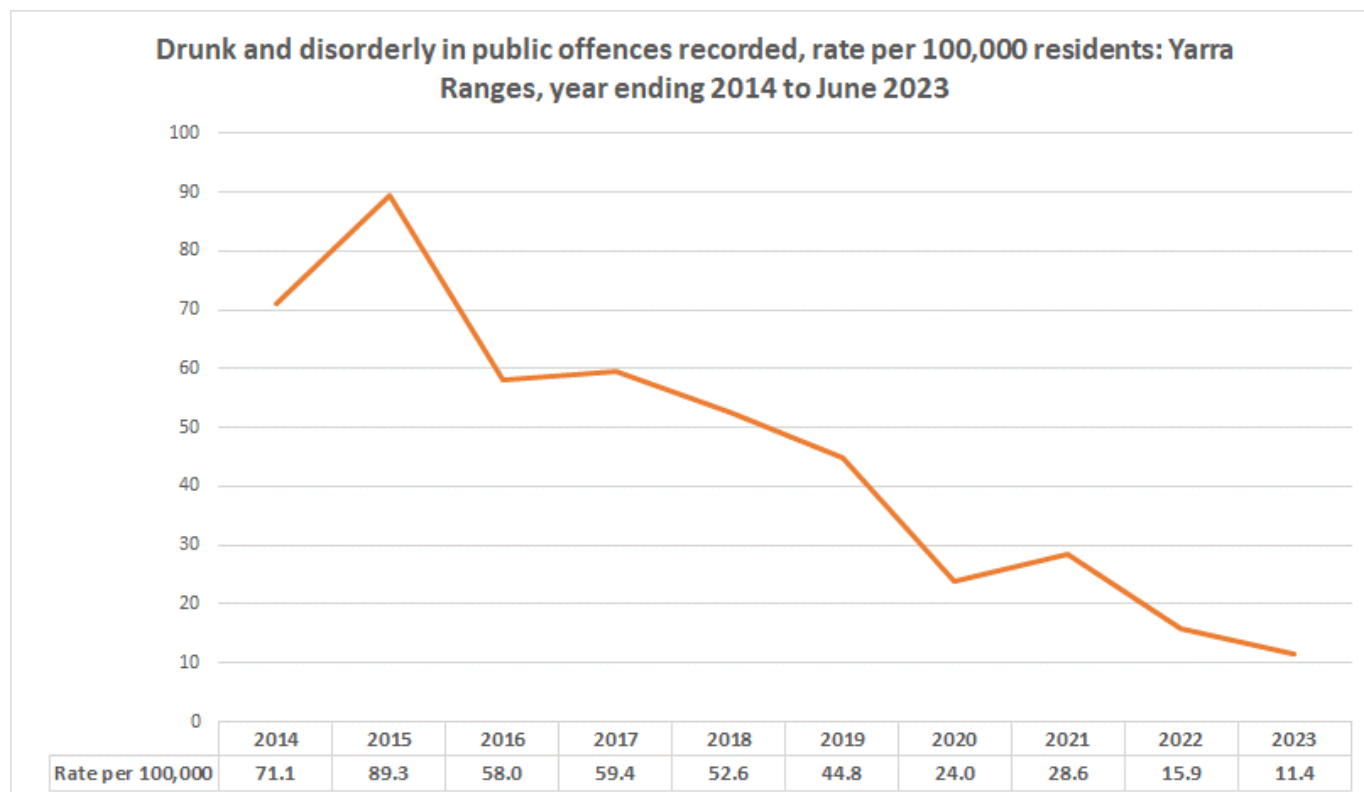


Source: Turning Point (November 2022). *Treatment episodes*.

<https://aodstats.org.au/explore-data/treatment-episodes/>

DRUNK AND DISORDERLY

The level of police offences recorded for being drunk and disorderly in public has been falling since 2015. The rate dropped from 89.3 per 100,000 in 2015 to 11.4 in 2023. This is far below the Victorian average of 42.2 per 100,000.



Source: Crime Statistics Agency (2023). *Offences recorded and rate per 100,000 population by offence type, local government area and police service area - July 2013 to June 2023*
<https://www.crimestatistics.vic.gov.au/crime-statistics/latest-crime-data-by-area>

ALCOHOL CONSUMPTION

In 2023, 17% of adults were considered to be at increased risk of harm from alcohol-related disease or injury, well above the 13% Victorian average.

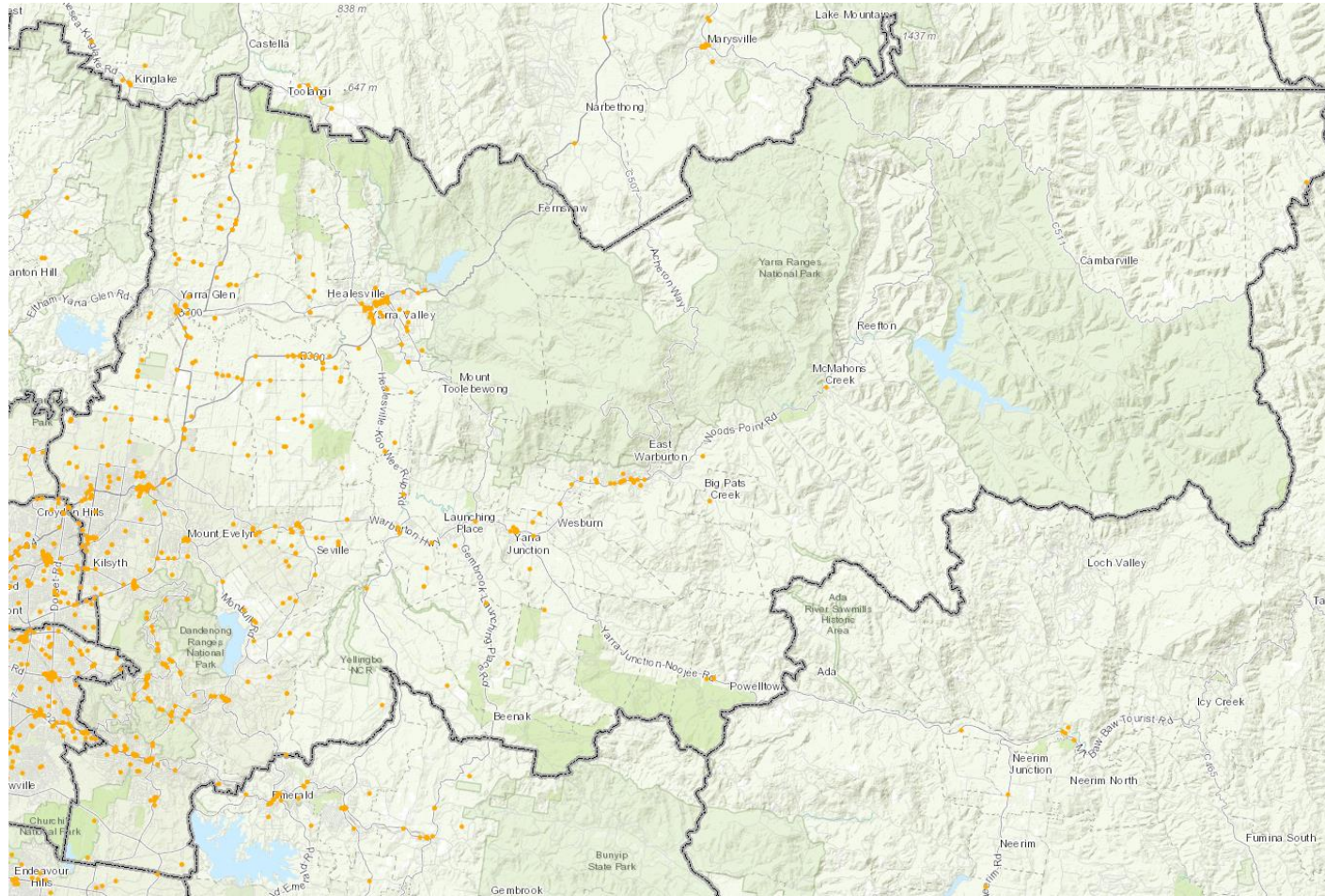
Local data on alcohol consumption was not collected in the 2020 VPHS. VicHealth surveys on the impact of the pandemic found that, in 2020, approximately 1 in five people were drinking more alcohol than they had before the pandemic, and 1 in five were drinking less.²¹

LICENCED VENUES

The map of venues with a liquor license shows that these are concentrated in the Urban Area and the Hills. In the Yarra Valley, numbers are concentrated around townships such as Healesville and Warburton, and along major highways. There are almost no licensed venues beyond East Warburton.

²¹ Source: VicHealth (2020). *VicHealth Coronavirus Victorian Wellbeing Impact Study: Follow-up survey*. https://www.vichealth.vic.gov.au/sites/default/files/20201208_VicHealth-Coronavirus-Wellbeing-Impact-Study_Survey.pdf

Map of venues with a current liquor licence: Yarra Ranges, November 2023



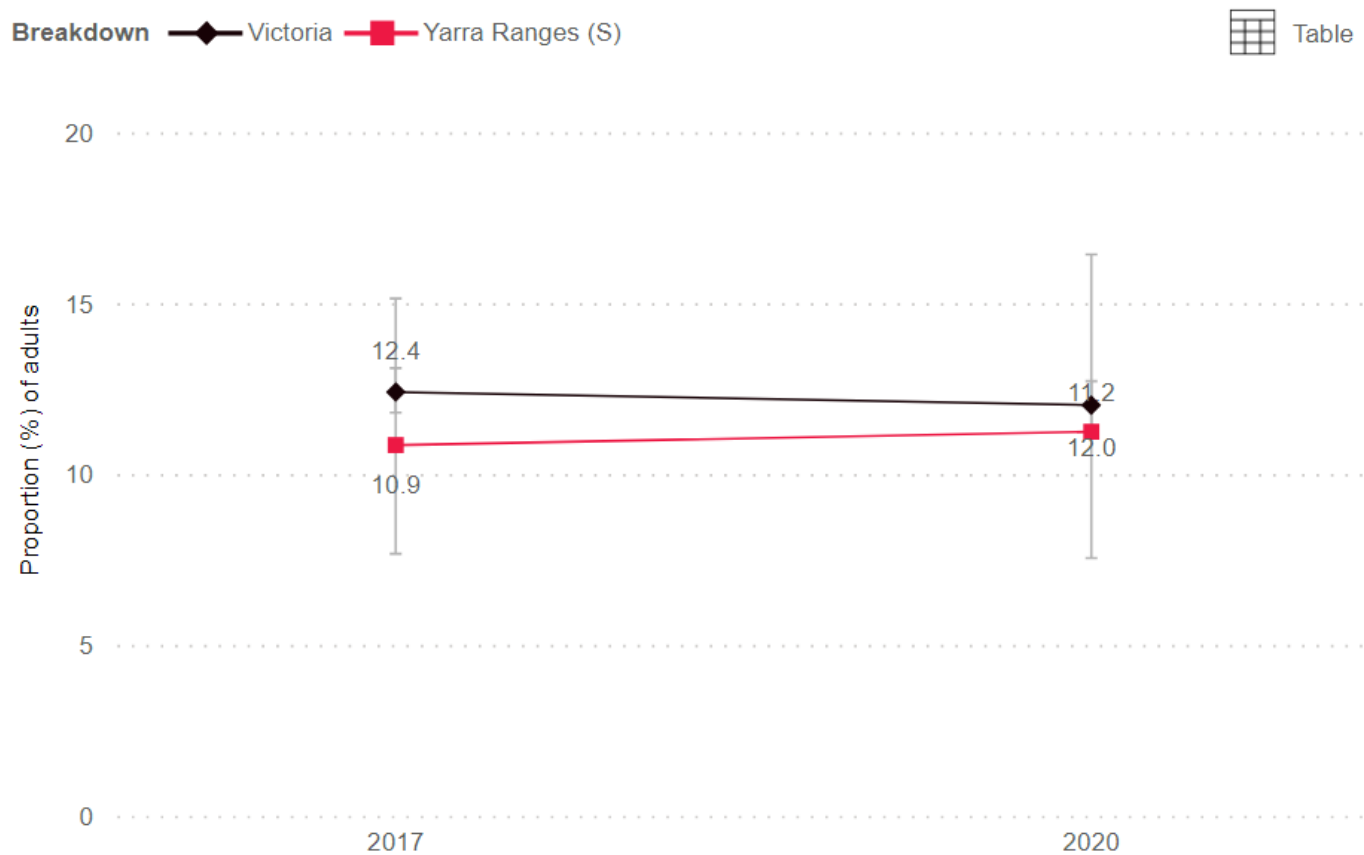
Source: Victorian Gambling and Casino Control Commission (2023). *Licensed venues map*. <https://geomaps.vgccc.vic.gov.au/>

Tobacco usage

SMOKING

The level of smoking in Yarra Ranges is below the Victorian average, at 10.9% in 2017 and 12% in 2020 (compared to 12.4% and 12% for Victoria). In 2023, 7.8% of adults in Yarra Ranges smoked daily, compared to 10% across Victoria.

Proportion of adults who smoke daily, and Victoria, 2017 to 2020



Source: Department of Health (2024). *Victorian public health and wellbeing outcomes dashboard*. <https://www.health.vic.gov.au/victorian-public-health-and-wellbeing-outcomes-dashboard>

VAPING

In 2023, Yarra Ranges had a high level of adults who vaped daily, at 7% compared to 4.5% for Victoria. Yarra Ranges was ranked 3rd highest on this indicator.

The health harms associated with vaping include: nicotine addiction; intentional and unintentional poisoning; acute nicotine toxicity causing seizures; burns and injuries; lung injury. Vaping is also associated with taking up cigarette smoking and can thus be considered a 'gateway' to further risk and health complications.²²

Vaping rates appear to have increased rapidly in Victoria from 2020 onwards, according to estimates from a Cancer Council Victoria survey. This increase has been the most pronounced amongst:

- 18-24 year olds - the level rose from about 7% in the second half of 2020, to 19.8% in the first quarter of 2023.
- 25-34 year olds - the level rose from about 5% to 17.4%.
- 14-17 year olds - the level rose from about 3% to 14.5%.

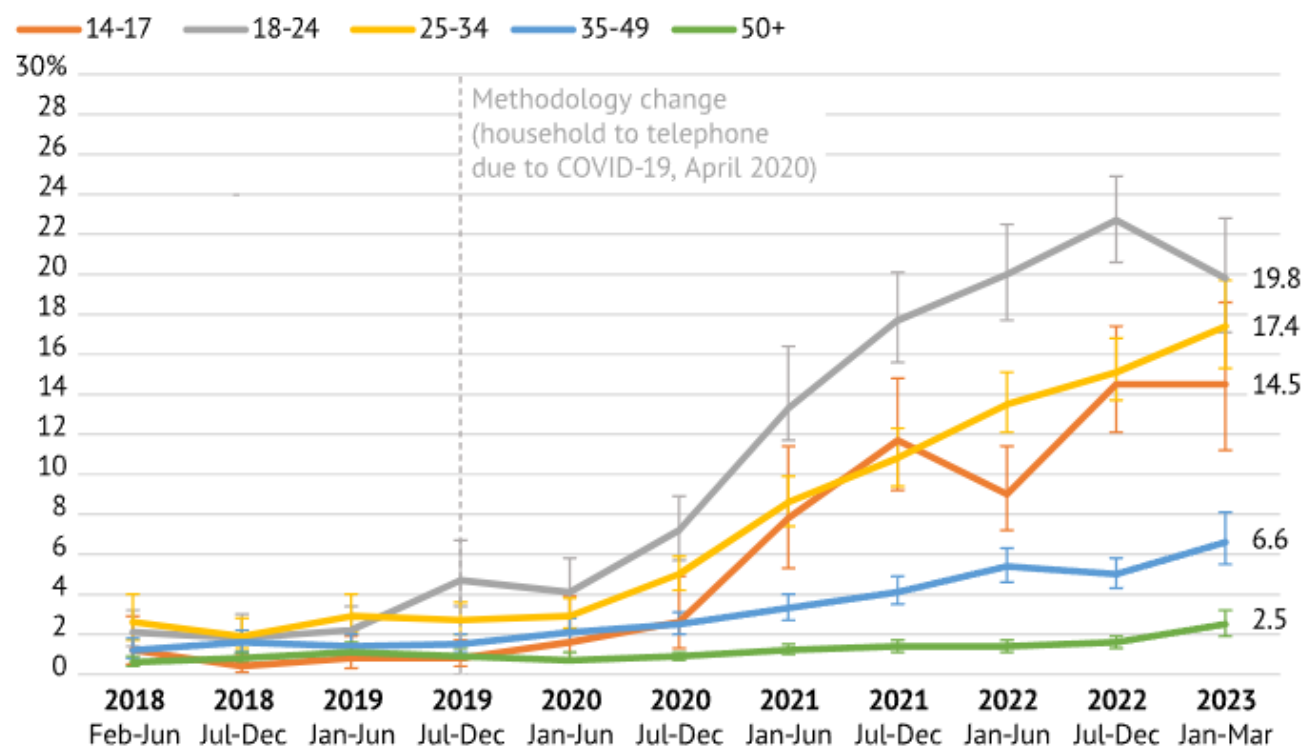
A staggering 77,200 Victorian adults who previously never smoked started vaping between 2018/19 and 2022. Many are unaware of the health risks: one-third of Victorian adults think that the dangers may have been exaggerated, and one-in-five are not aware that e-cigarettes contain dangerous chemicals. The Cancer Council Victoria notes that:

"E-cigarette liquids can contain more than 200 chemicals, and some of these – such as arsenic and benzene – are known to cause cancer. E-cigarette usage has been confirmed to cause seizures, lung, facial and oral injuries, dizziness, loss of concentration, and nicotine poisoning. Exposure to nicotine can exacerbate mood disorders and has been linked to negative impacts on cognitive performance and brain structure."

Source: Cancer Council Victoria (1 June 2023). *Get the facts on vaping - Victorians urged to 'see through the haze'*. <https://www.cancervic.org.au/get-support/stories/get-the-facts-on-vaping-victorians-urged-to-see-through-the-haze.html>

²² [E-cigarettes and vaping - Lung Foundation Australia](#)

Vaping by age group, 2018 to 2023



Error bars represent 95% confidence intervals around survey estimates. ^Data for 2023 covers three months only.
Source: Cancer Council Victoria, prepared for Health Department in May 2023

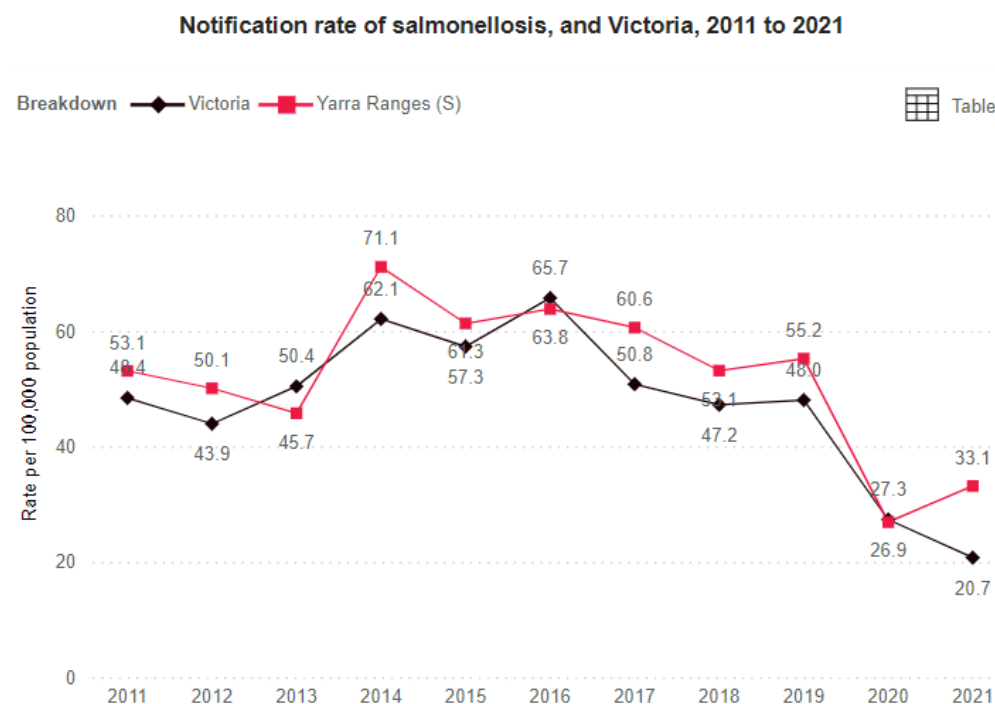
Source: Ireland, O. (2023, December 31). *Medical industry braces for vape addiction as first stage of ban begins.* *The Age*. <https://www.theage.com.au/politics/federal/medical-industry-braces-for-vape-addiction-as-first-stage-of-ban-begins-20231228-p5eu2i.html>

Infectious diseases

Victorian Public Health and Wellbeing Outcomes Dashboard

The Victorian Public Health and Wellbeing Outcomes dashboard of key indicators showed that notifications of the main childhood vaccine-preventable diseases dropped in 2020 and 2021, after trending down pre-COVID. Notifications for slightly less common childhood vaccine-preventable diseases plunged in 2020, then rose slightly in 2021, but have not returned to pre-COVID levels. Notifications for pneumonia in older persons more than halved between 2019 and 2021, but are still higher than the Victorian average. The rate of notifications for gonorrhea was below average and continued a previous downwards trend.

The dashboard also showed that Yarra Ranges had a very high rate of salmonella infection (salmonellosis) in 2021, at 33.1% compared to 20.7% for Victoria. The rate jumped sharply in 2021 when compared to 2020, but is still well below the 2019 rate. Salmonella is a bowel infection which can be caught from infected animal products, or from contact with animals or sick people; it is a common form of food poisoning. Note that one outbreak affecting up to ten people would be enough to cause a spike of this size.



Source: Department of Health (2024). *Victorian Public Health and Wellbeing Outcomes Dashboard*.
<https://www.health.vic.gov.au/victorian-public-health-and-wellbeing-outcomes-dashboard>

Notifiable infectious diseases

In 2022/23, the most common notifiable infectious diseases in Yarra Ranges were:

- respiratory syncytial virus (RSV);
- influenza (a potentially severe respiratory virus);
- chlamydia (a sexually transmitted disease or STD);
- gonococcal infection (an STD);
- campylobacter infection, which causes gastroenteritis; and
- varicella zoster infection (unspecified) – this is a form of varicella zoster virus that is not classified as chickenpox or shingles, and is vaccine preventable.

Many infectious diseases occur infrequently, with only a handful of cases each year. Amongst those conditions with more than four occurrences in 2022/23, the largest increases were for gastroenteritis; food poisoning; and respiratory illness due to rotavirus, campylobacter and RSV. Yarra Ranges has also seen the emergence of two serious bacterial diseases: invasive group A streptococcal disease (iGAS), a severe disease which includes infection of the blood (sepsis), meningitis and pneumonia; and VanA VRE, an antibiotic-resistant bacterial disease.

There has been a large jump in rotavirus cases, which have risen by 667% between 2019 and 2022/23, from 6 to 46. Rotavirus is a highly contagious disease which can cause gastroenteritis. There has also been a large increase in campylobacter infections, with cases rising 56% from 184 to 287. Campylobacter is a form of food poisoning which causes gastroenteritis, but it is not highly contagious between humans; instead, it is generally picked up from foods and other infected substances. RSV became a notifiable infectious disease in 2021, meaning that there is no data for the period prior to 2022; the number of cases rose by 12% between 2022 and 2022/23. RSV is a common respiratory virus which usually causes mild, cold-like symptoms; however, it can be serious, especially for infants and older adults, and is the most common cause of bronchiolitis. A vaccine for RSV was approved in January 2024, and this will become available during 2024 for those aged 60 years or more.

Yarra Ranges has recently seen increases in two serious bacterial diseases, iGAS and VanA VRE. Invasive group A streptococcal disease (iGAS) is a severe disease which includes infection of the blood (sepsis), meningitis and pneumonia. It may also cause other serious diseases including toxic shock syndrome, flesh-eating disease (necrotising fasciitis), and infection of the uterus (womb) in women who have recently given birth (maternal sepsis care

facilities, hospitals, and childcare centres. The number of cases in Yarra Ranges has risen from zero in 2019 to 13 cases in 2022/23. Whilst the total number remains relatively low, it previously was not an issue in Yarra Ranges. VanA vancomycin resistant enterococcus (VRE) are bacteria which are resistant to powerful antibiotics. The number rose from zero pre-COVID to 11 in 2022/23. Antimicrobial resistance (AMR) has been identified by the Victorian Department of Health as a major health priority.

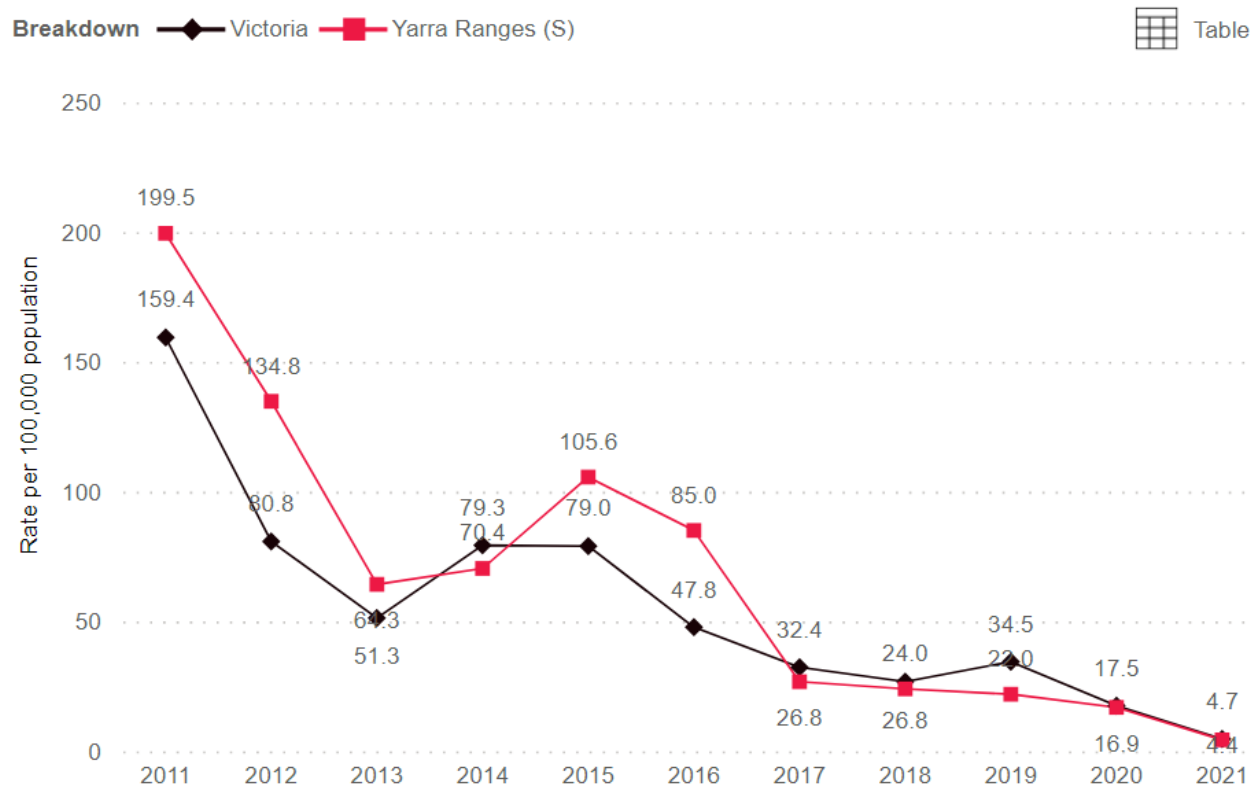
Yarra Ranges has avoided the upwards spike in some common respiratory infections, such as influenza and pneumonia, which occurred across Australia during 2022. It has also avoided the national trend for significant growth in STDs such as chlamydia, gonorrhoea and syphilis. Yarra Ranges has seen a fall in case numbers for:

- Chickenpox (down 79%).
- Influenza (down 64%).
- Pneumococcal infection (down 53%) - pneumococcal infection refers to a range of illnesses that affect various parts of the body; illnesses range from mild infections, such as ear infection, to pneumonia and life-threatening infections of the bloodstream and central nervous system, such as meningitis.
- Shingles, a complication of the chickenpox virus (down 40%).
- Salmonellosis, which is another form of food poisoning (down 35%).
- Hepatitis C (down 32%). This is a blood-borne virus which causes inflammation and damage to the liver. In Australia, it is generally spread through the sharing of injecting equipment.

The number of cases of syphilis, unspecified varicella, chlamydia, anaphylaxis, gonococcal infection and cryptosporidiosis (a form of gastroenteritis) has not changed substantially.

The chart below shows the steady downwards trend for the main childhood diseases. Yarra Ranges has gone from having an above average rate of notifications in 2011, to being in line with the Victorian average in 2021.

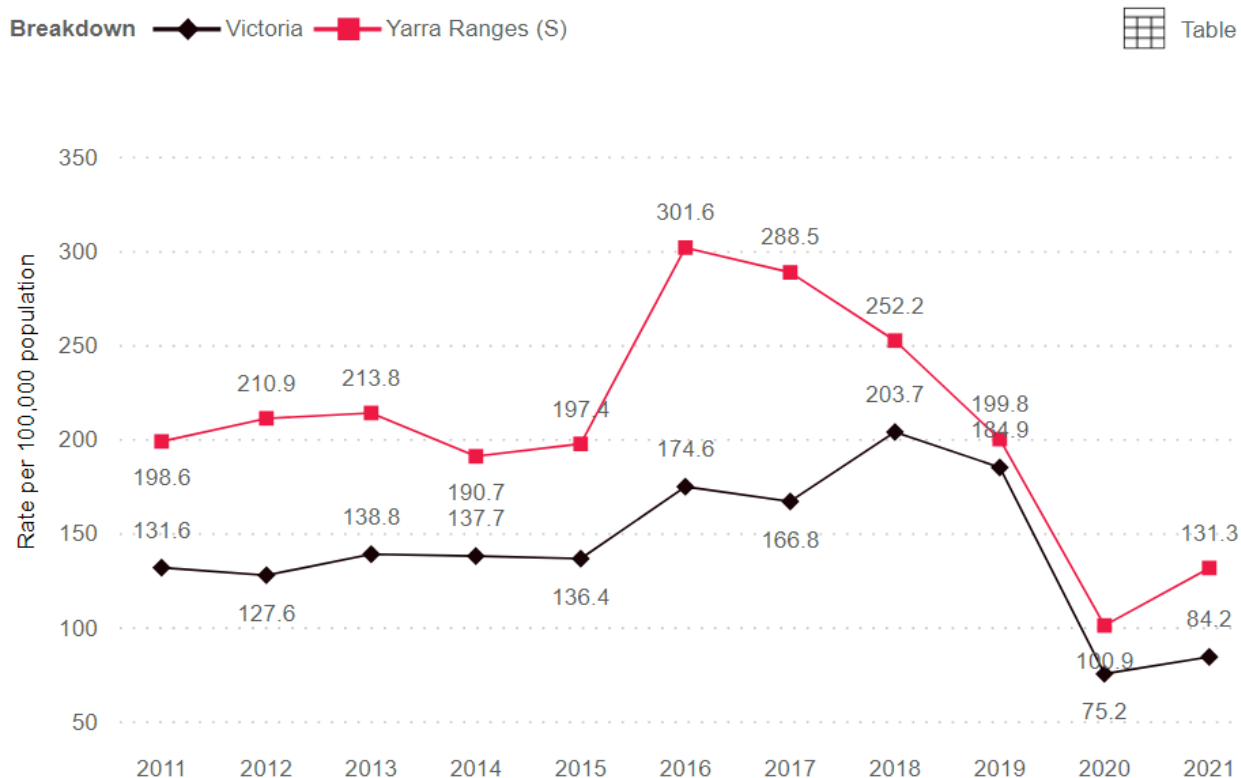
Notification rate for diphtheria, tetanus, pertussis, poliomyelitis, measles, mumps, rubella in all ages, and Victoria, 2011 to 2021



Source: Department of Health (2024). *Victorian public health and wellbeing outcomes dashboard*. <https://www.health.vic.gov.au/victorian-public-health-and-wellbeing-outcomes-dashboard>

For diseases added to the immunisation schedule more recently, notifications were steady from 2011 to 2015, then spiked in 2016, particularly in Yarra Ranges. Cases in Yarra Ranges then declined, with a large drop in 2020, the first year of lockdowns. Local cases then increased sharply in 2021; missed vaccinations during lockdowns may have contributed to this.

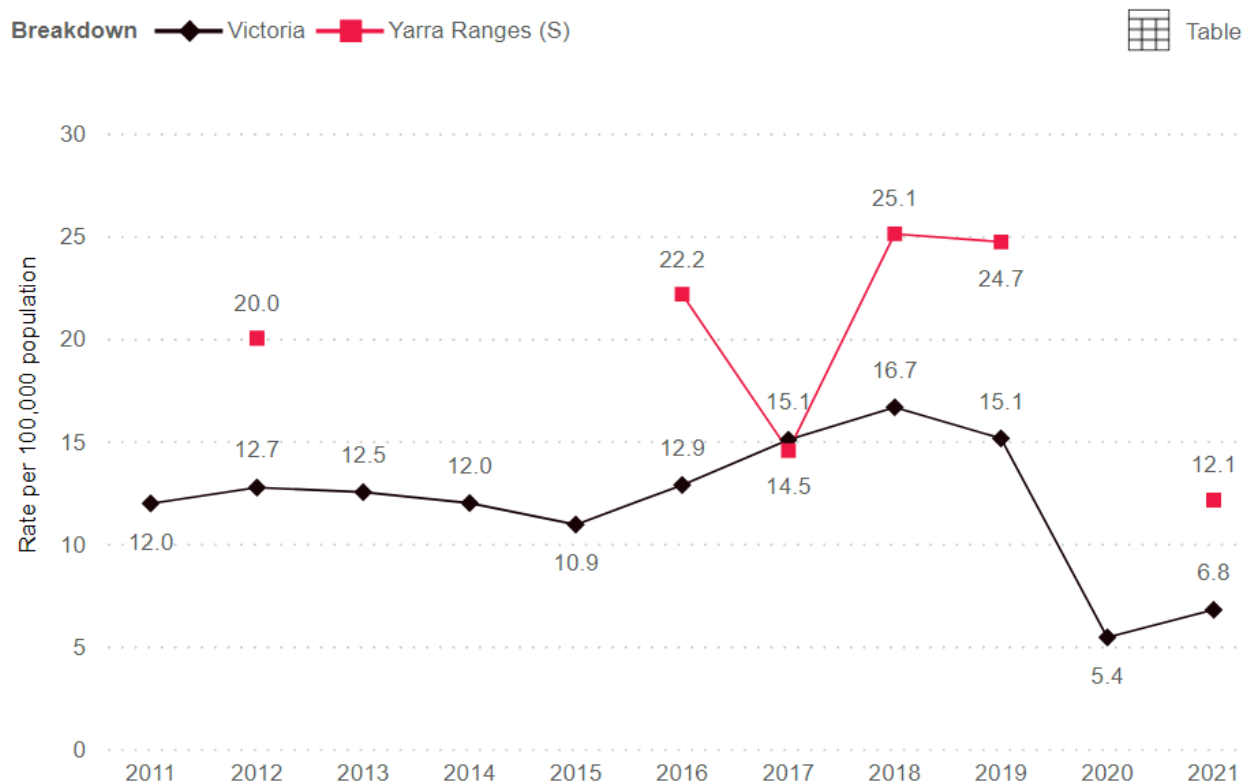
Notification rate for Hib, hep B, meningococcal & pneumococcal disease and varicella-zoster virus in infants and children (aged 0-11), and Victoria, 2011 to 2021



Source: Department of Health (2024). *Victorian public health and wellbeing outcomes dashboard*. <https://www.health.vic.gov.au/victorian-public-health-and-wellbeing-outcomes-dashboard>

Yarra Ranges has tended to have a low level of pneumonia amongst older residents, often recording no notifications. However, in the years when it does have notifications, the rate has always been much higher than the Victorian average. There were no notifications in 2020, the first year of lockdowns. In 2021, Yarra Ranges had a notification rate of 12.1 per 100,000 residents, compared to 6.8 across Victoria.

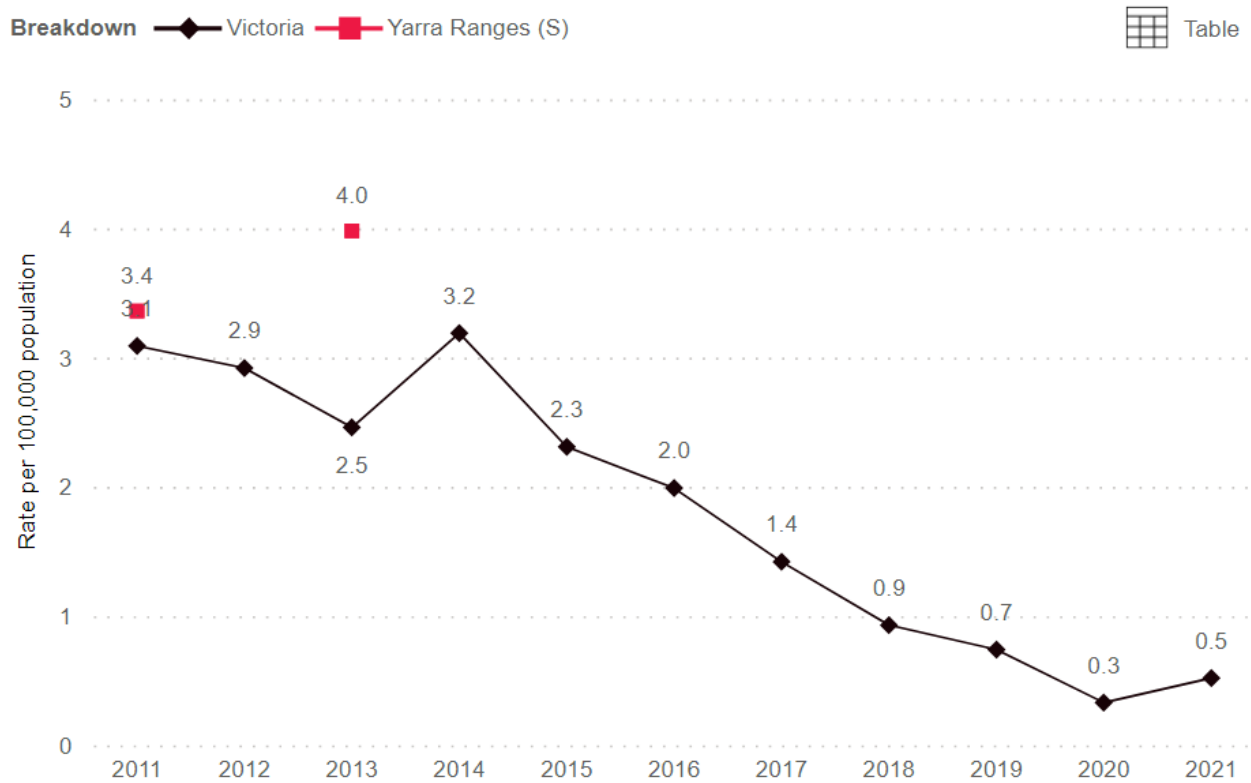
Notification rate of pneumococcal disease in people aged 50 years and older, and Victoria, 2011 to 2021



Source: Department of Health (2024). *Victorian public health and wellbeing outcomes dashboard*. <https://www.health.vic.gov.au/victorian-public-health-and-wellbeing-outcomes-dashboard>

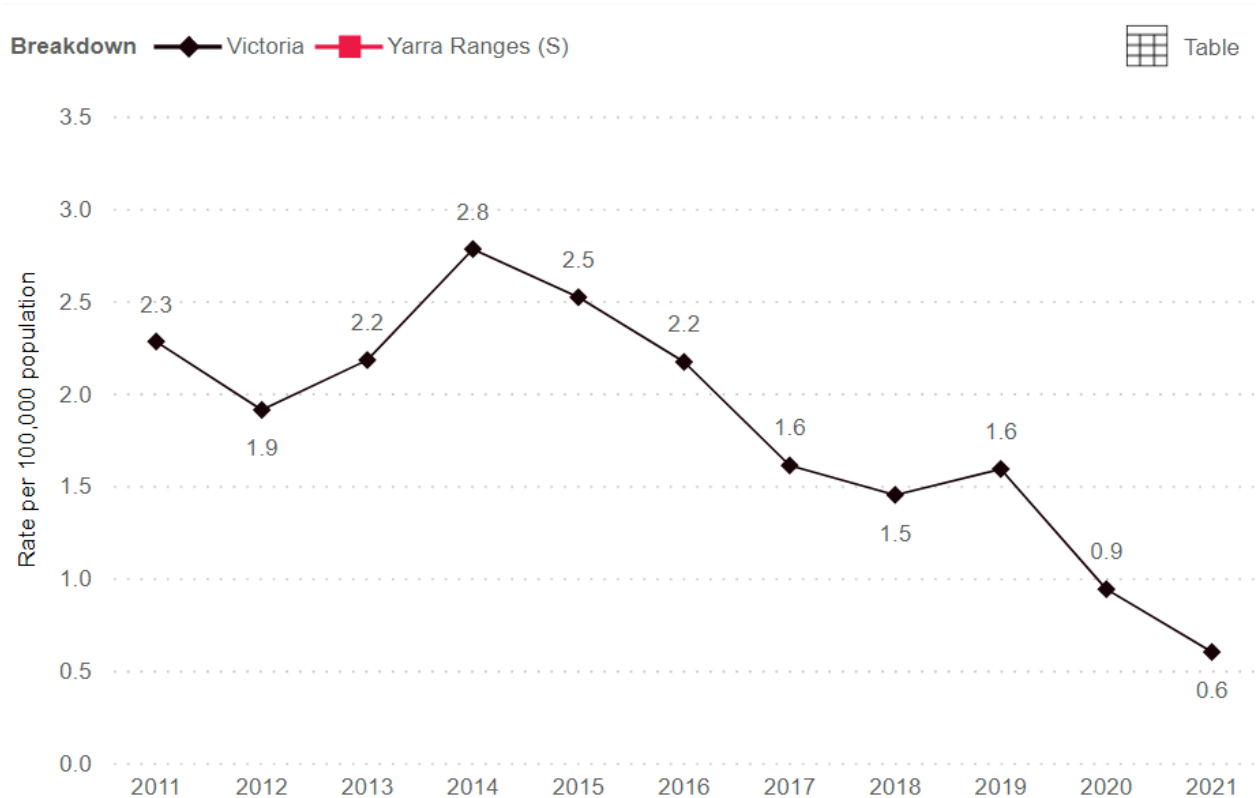
In terms of the STDs tracked in the Victorian public health and wellbeing outcomes dashboard, Yarra Ranges had no newly acquired Hepatitis C or HIV (AIDS) cases in 2021, whilst the rate of cases of gonorrhoea has been steadily decreasing since 2018.

Notification rate of newly acquired hepatitis C, and Victoria, 2011 to 2021



Source: Department of Health (2024). *Victorian public health and wellbeing outcomes dashboard*. <https://www.health.vic.gov.au/victorian-public-health-and-wellbeing-outcomes-dashboard>

Notification rate of newly acquired HIV, and Victoria, 2011 to 2021

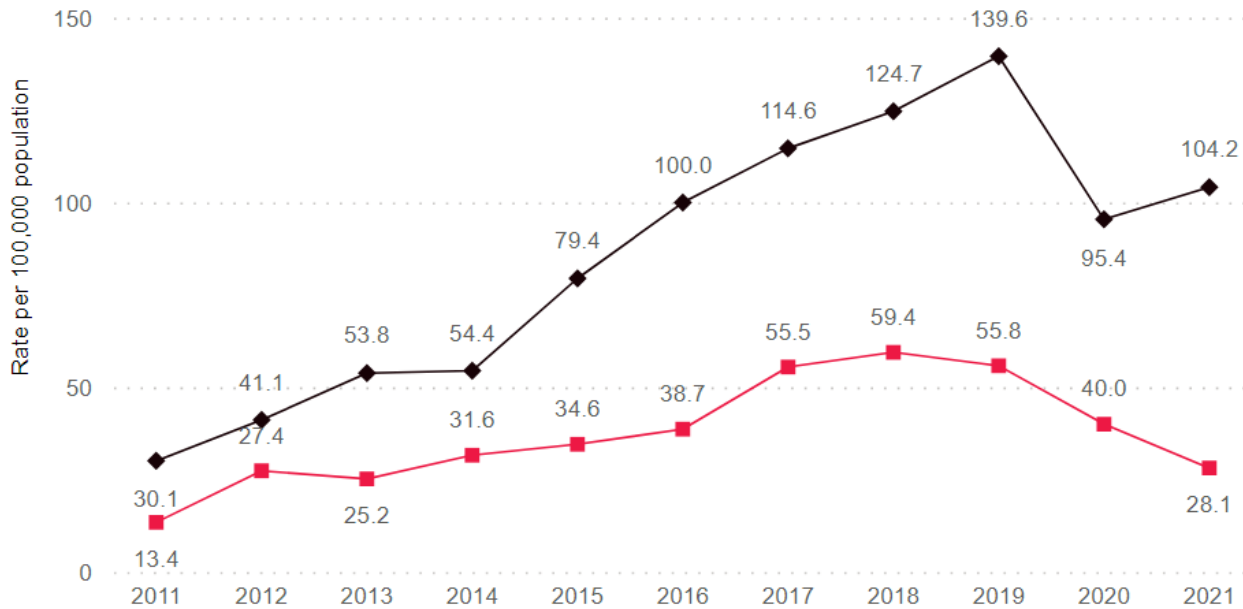


Source: Department of Health (2024). *Victorian public health and wellbeing outcomes dashboard*. <https://www.health.vic.gov.au/victorian-public-health-and-wellbeing-outcomes-dashboard>

Notification rate for gonorrhoea, and Victoria, 2011 to 2021

Breakdown — Victoria — Yarra Ranges (S)

 Table



Source: Department of Health (2024). *Victorian public health and wellbeing outcomes dashboard*.
<https://www.health.vic.gov.au/victorian-public-health-and-wellbeing-outcomes-dashboard>

Child immunisation coverage

Immunisation levels in Yarra Ranges are quite high. In the year to September 2023, the level of children who were fully immunised was:

- 94.12% amongst 1 year olds (down from 95.27% in December 2019);
- 91.94% amongst 2 year olds (down from 93.69% in December 2019);
- 94.68 amongst 5 year olds (down from 95.7% in December 2019).

Thus whilst there have been slight falls compared to pre-COVID, overall immunisation coverage is very high. Immunisation amongst 2 year olds has had the largest fall, of nearly 2%. The national target is 95%.

Childhood immunisation coverage: Yarra Ranges SA3, 2019 and 2023

| Age Group | % DTP | % Polio | % HIB | % HEP | % MMR | % Pneumo | % MenC | % Varicella | % Fully |
|-----------------------|-------|---------|-------|-------|-------|----------|--------|-------------|---------|
| September 2023 | | | | | | | | | |
| 1 Year olds | 94.50 | 94.50 | 94.50 | 94.94 | 0.00 | 95.92 | 0.00 | 0.00 | 94.12 |
| 2 Year olds | 92.66 | 95.37 | 93.65 | 95.32 | 92.82 | 94.54 | 95.06 | 93.13 | 91.94 |
| 5 Year olds | 94.90 | 94.79 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 94.68 |
| December 2019 | | | | | | | | | |
| 12-<15 Months | 95.49 | 95.49 | 95.38 | 95.55 | 0.00 | 96.69 | 0.00 | 0.00 | 95.27 |
| 24-<27 Months | 94.56 | 96.50 | 95.85 | 96.44 | 94.61 | 96.01 | 95.69 | 94.93 | 93.69 |
| 60-<63 Months | 95.85 | 95.85 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 95.70 |

Source: Department of Health and Aged Care (2024). *VIC childhood immunisation coverage data by SA3*.

<https://www.health.gov.au/resources/publications/vic-childhood-immunisation-coverage-data-by-sa3?language=en>

Notifiable infection diseases: number of events in Yarra Ranges, 2019 to 2022/23

| Notifiable condition | % change, 2019 to 2022/23 | Past 12M (2022/23) | Total 2022 | Total 2021 | Total 2020 | Total 2019 |
|--|---|--------------------|------------|------------|------------|------------|
| Respiratory syncytial virus (RSV) | No 2019 data available; rose 12% over past year | 991 | 884 | n/a | n/a | n/a |
| Influenza | -64% | 669 | 888 | 1 | 88 | 1836 |
| Chlamydia trachomatis infection | 2% | 347 | 323 | 251 | 304 | 341 |
| Campylobacter infection | 56% | 287 | 234 | 263 | 189 | 184 |
| Varicella zoster infection (unspecified) | 6% | 217 | 198 | 248 | 220 | 204 |
| Gonococcal infection | 0% | 89 | 70 | 45 | 64 | 89 |
| Varicella zoster infection (shingles) | -40% | 58 | 52 | 61 | 70 | 96 |
| Salmonellosis | -35% | 57 | 53 | 53 | 44 | 88 |
| Rotavirus infection | 667% | 46 | 32 | 2 | 10 | 6 |
| Anaphylaxis | 2% | 44 | 53 | 24 | 21 | 43 |
| Hepatitis C – unspecified | -32% | 19 | 12 | 18 | 19 | 28 |
| Syphilis - Infectious | 8% | 14 | 13 | 17 | 14 | 13 |
| Invasive Group A Streptococcus | Has risen from 0 to 13 | 13 | 5 | | | |
| Cryptosporidiosis | 0% | 11 | 12 | 7 | 15 | 11 |
| VanA Vancomycin resistant enterococcus (VRE) | Has risen from 0 to 11 | 11 | 8 | 3 | 3 | |
| Varicella zoster infection (chickenpox) | -79% | 11 | 18 | 29 | 24 | 53 |
| Pneumococcal infection (IPD) | -53% | 7 | 9 | 8 | 5 | 15 |

Source: Department of Health (2023). *Victoria, local public health areas and local government areas surveillance summary report*. <https://www.health.vic.gov.au/infectious-diseases/local-government-areas-surveillance-report>

Pertussis (whooping cough)

2024 has seen a huge jump in local cases of pertussis – more commonly known as whooping cough. There were 302 cases in Yarra Ranges in 2024 (September year to date) – 51 times the number in 2023. There were only five cases in 2022 and six cases in 2023. Yarra Ranges has the highest rate of whooping cough cases in Victoria, at 194.4 per 100,000 residents, compared to 67.4 across Victoria.

Victoria-wide, there has also been a large jump in cases. The number has nearly doubled compared to 2019, from 2,210 to 4,166. The current rate is the highest since 2015. Generally, cases are highest in females (55% of all cases), and most cases in adults are amongst women. But for children and teenagers, most cases are amongst males.

The age groups most affected also changed in 2024, in both Yarra Ranges and Victoria. Over the past three years (2022-2024), case numbers have been highest amongst 25-49 year old adults. But in 2024, cases were by far the highest amongst 0-19 year olds - particularly 10-14 year olds and 5-9 year olds. 0-19 year olds accounted for 80% of cases in Yarra Ranges and 73% of Victorian cases.

The Commonwealth Department of Health has suggested several possible reasons for the increase in cases, including:

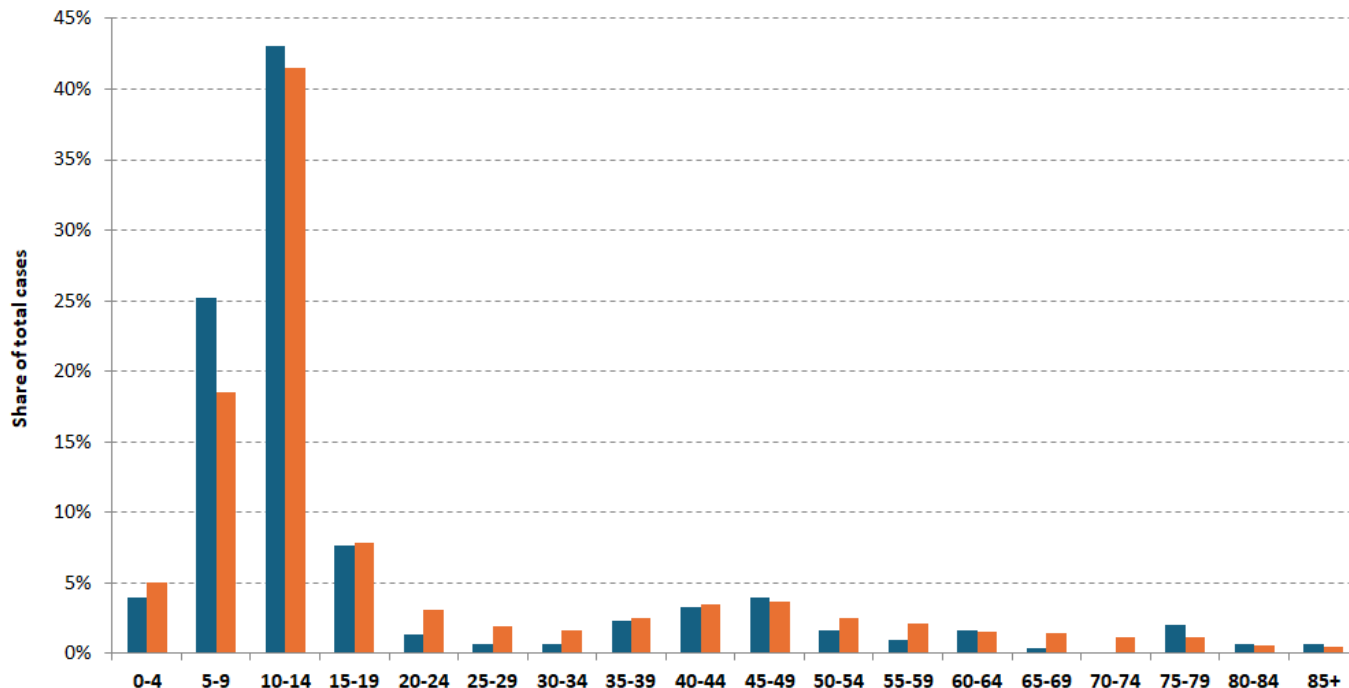
- Expected epidemic peaks.
- Vaccination coverage.
- Waning immunity.
- The overall population having reduced exposure to pertussis during the COVID-19 pandemic.²³

²³ ABC (2024). 'Urgent' public health concerns raised as whooping cough cases reach nine-year high.

<https://www.abc.net.au/news/2024-08-22/whopping-cough-what-is-it-how-cases-rise-dramatic-increase-conce/104228176>

- Note that the current vaccine does not give long-lasting protection against whooping cough. The way that the vaccine is made was changed in the 1990s, to reduce potentially severe reactions associated with the 'whole cell' vaccine. The aim now is to reduce the severity of the disease, and to prevent deaths and/or hospitalisation, by using the Acellular vaccine.
- The current immunisation schedule includes three primary doses with a booster at 18 months and 4 years of age, followed by another pertussis-containing vaccine in year 7 (at 12-13 years of age). The adolescent school-based program was heavily affected by COVID-related lockdowns, increasing the level of adolescents missing out on the year 7 booster.
- The State Government also reduced the new parent vaccination program in 2022. Women can still be vaccinated for free during pregnancy (which provides protection to the baby), but the partner is no longer funded.
- Also, whilst there should be about five years between pertussis boosters, it is combined with the tetanus vaccine, which is recommended to have as a booster every ten years. Thus people are more likely to get a booster after ten years.

Whooping cough cases by age group: Yarra Ranges and Victoria, 2024 YTD



Number of pertussis events by age group: Yarra Ranges and Victoria, 2024 YTD

| Age group | Number | | Share of total | |
|-------------|--------------|--------------|----------------|--------------|
| | Yarra Ranges | Victoria | Yarra Ranges | Victoria |
| 0-4 | 12 | 208 | 4.0% | 5.0% |
| 5-9 | 76 | 772 | 25.2% | 18.5% |
| 10-14 | 130 | 1,728 | 43.0% | 41.5% |
| 15-19 | 23 | 325 | 7.6% | 7.8% |
| 0-19 | 241 | 3,033 | 79.8% | 72.8% |
| 20-24 | 4 | 130 | 1.3% | 3.1% |
| 25-29 | 2 | 79 | 0.7% | 1.9% |
| 30-34 | 2 | 70 | 0.7% | 1.7% |
| 35-39 | 7 | 105 | 2.3% | 2.5% |
| 40-44 | 10 | 144 | 3.3% | 3.5% |
| 45-49 | 12 | 152 | 4.0% | 3.6% |
| 50-54 | 5 | 105 | 1.7% | 2.5% |
| 55-59 | 3 | 88 | 1.0% | 2.1% |
| 60-64 | 5 | 63 | 1.7% | 1.5% |
| 65-69 | 1 | 61 | 0.3% | 1.5% |
| 70-74 | 0 | 49 | 0.0% | 1.2% |
| 75-79 | 6 | 47 | 2.0% | 1.1% |
| 80-84 | 2 | 22 | 0.7% | 0.5% |
| 85+ | 2 | 18 | 0.7% | 0.4% |
| Total | 302 | 4,166 | 100.0% | 100.0% |

Source: Department of Health (16 September 2024). *Victoria, local public health areas and local government areas surveillance summary report*.

<https://www.health.vic.gov.au/infectious-diseases/local-government-areas-surveillance-report>

COVID-19

CASES OF COVID-19

Up to 20 July 2023, Yarra Ranges residents had experienced 69,367 cases of COVID-19. Yarra Ranges had a low number in 2020, with cases totaling 254; the number rose to 1,969 in 2021, and then jumped to 63,995 in 2022 when lockdowns were eased. So far, there have been only 3,149 cases in 2023.

Victorian COVID-19 case numbers: Yarra Ranges, 2020 to 2023

| Notifiable condition | Number of cases |
|-----------------------------|-----------------|
| 2020 | 254 |
| 2021 | 1,969 |
| 2022 | 63,995 |
| 2023 (year to 20 July 2023) | 3,149 |
| Total cases | 69,367 |

Note: the same person can catch COVID-19 multiple times.

Source: Victorian Government. (2023). *Victorian case numbers by location*.

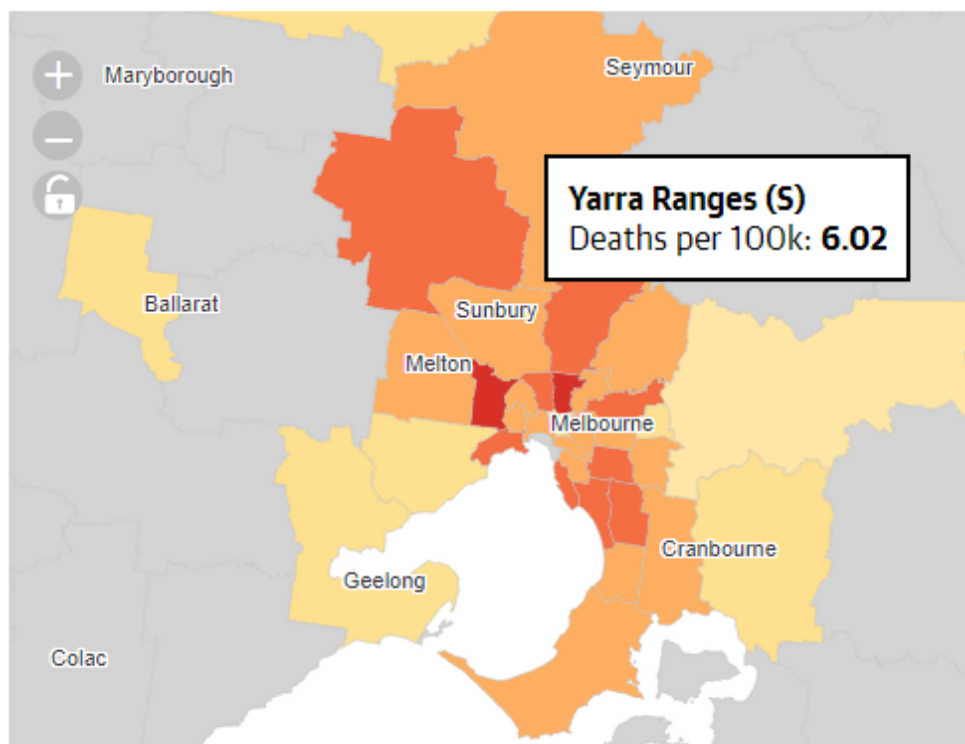
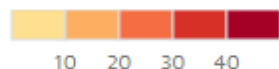
<https://www.coronavirus.vic.gov.au/victorian-coronavirus-covid-19-data> Retrieved 26 July 2023.

DEATHS FROM COVID-19

Australian Bureau of Statistics data on deaths caused by COVID-19 have not yet been released. An analysis of COVID-19 deaths in the period December 2021 to February 2022 shows that Yarra Ranges had 6.02 deaths per 100,000 residents. This was the lowest level of deaths amongst all metropolitan Melbourne LGAs.

COVID-19 deaths by local government area: Deaths per 100,000 residents, metropolitan Melbourne

More deaths per 100k →



Source: Victoria Department of Health and Human Services, Australian Bureau of Statistics

Source: Convery, S., & Nicholas, J. (2022, February 24). 'Disease of disadvantage': Melbourne's lower socioeconomic areas suffer most COVID deaths amid Omicron. The Guardian: Australia Edition. <https://www.theguardian.com/australia-news/2022/feb/25/disease-of-disadvantage-melbournes-lower-socioeconomic-areas-suffer-most-covid-deaths-amid-omicron>

COVID-19 VACCINATION RATES

As of January 2022, 91.8% of adults in Yarra Ranges had been vaccinated six or more months ago and 6.8% had been vaccinated in the past six months.²⁴

PART 3: MENTAL HEALTH

The COVID-19 pandemic and associated lockdowns have had a wide of health impacts on Victorian communities, particularly in the area of mental health. This section aims to assess the changes in mental health status in Yarra Ranges during and following the pandemic, and to provide point-in-time mental health status data for indicators where trend data are not yet available. It provides an overview of mental health status, recent shifts in mental health indicators, and data which can be used to track ongoing changes in mental health.

Yarra Ranges has an above average level of residents with long-term mental health conditions, and an above average level of mental health hospital admissions. It lacks preventative and referral services such as general practitioners and psychiatrists; and has a lower than expected rate of people presenting to general practice for mental health concerns, given its level of emergency department presentations. Young people, Indigenous residents, females, people on low incomes and people with a disability were more likely to experience mental health issues.

The trend data show that mental health status in Yarra Ranges has worsened on a range of indicators, including increases in self-harm amongst young people, young people on prescribed mental health medications, community members with high or very high psychological distress, parents and carers of young children needing emotional counselling, patients seeing psychiatrists, and mental health service usage amongst existing patients. There are gaps in public data on suicide deaths, on how long a wait is involved in accessing specialist mental health services, and on locality-based access to hospital services.

²⁴ Department of Health and Aged Care (2024). *COVID-19 vaccination – Local Government Area (LGA) – 12 January 2022*. <https://www.health.gov.au/resources/publications/covid-19-vaccination-local-government-area-lga-12-january-2022?language=en>

Data notes

Where monthly/quarterly data are not available, annual data for 2019/20 are used as the key pre-COVID benchmark. Whilst this does include four months of COVID data (March to June 2020), using 2018/19 as a benchmark could introduce too much change due to other health service factors and changes. In Melbourne, lockdowns continue throughout the first four months of the 2021/22 financial year, followed by the Omicron wave in summer of 2021/22. Thus the 2022 calendar year would be the first year when health status and health services could be assessed for post-COVID impacts.

How did mental health change during the pandemic?

The mental health of Yarra Ranges became much worse during the COVID-19 pandemic, particularly amongst females, children and young people. Demand increased for some services, and service usage appeared to increase substantially amongst existing clients. Key shifts include:

- The level of adults with high or very high levels of psychological distress rose by 54% between 2017 and 2020, from 14.6% to 23.1% of residents. It then rose to 25.7% in 2023.
- The number of patients with mental health-related prescriptions increased by 7% amongst 0-17 year olds and by 3% amongst 18-24 year olds in 2020/21; the number of prescriptions also rose substantially for 18-24 year olds, possibly indicating an increased need for medication amongst patients in this age group. Yarra Ranges ranked second-highest on 0-17 year old patients with mental-health related prescriptions, across Victoria, and also ranked high for other age groups.
- The rate of intentional self-harm hospitalisations rose by 25.5% amongst 0-24 year olds in 2020/21.
- There was a substantial spike in mother and family counseling after the start of COVID-19, with a 51% rise overall, due to increases in counselling for emotional, physical and social interaction. In terms of mental health, maternal and child health emotional counselling sessions rose by 40% in 2020/21. Referral numbers dropped – the reasons for this are not clear.
- The level of families of students starting primary school, who were experiencing stress, rose in 2020 and then fell in 2021. The data is not gathered at a consistent point in time,

so the impacts of COVID on family stress levels cannot be accurately assessed from these data.

- The number of residents seeing psychiatrists rose by 11% in 2020/21; total mental health service usage by patients across a range of mental health service providers increased by 10%, including a 22% jump in mental health services provided by allied health providers.
- There was a fall in the level of emergency department presentations for mental health issues.

Mental health was the most prevalent long-term health condition amongst Yarra Ranges residents in 2021, affecting more than 10% of residents. This is above average and ranks Yarra Ranges 7th-highest across metropolitan Melbourne. The groups within Yarra Ranges with comparatively high levels of mental health issues include particularly women, teenagers and young adults; but also Indigenous residents, sole parents, people living alone, low income residents and persons with a disability. The mental health data emphasise the importance of strong social connections in reducing mental health issues – being in a couple or family with children household was a strong factor in protecting against mental health issues.

Yarra Ranges also has an above average hospital admission rate for mental health issues, combined with a lack of services such as GPs and psychiatrists. Data on suicide rates are combined for five-year periods, meaning that year-on-year change cannot be assessed.

PREVALENCE

The 2021 Census of Population and Housing showed that Yarra Ranges has a comparatively high level of residents with mental health conditions, and it is the most common long-term health condition amongst residents. The groups with the highest level of mental health conditions include Indigenous residents, females and young people.

Poor mental health as a teenager and young adult tends to follow young people into their adult life. Yarra Ranges has the fourth-highest level of teenagers and young adults with a mental health condition, across all metropolitan LGAs - 13.3% of 15-24 year olds had a mental health condition. Young women have nearly double the prevalence of mental health issues, compared to young men - 17.9% of young women in Yarra Ranges have a mental health

condition, compared to 9.1% of young men. Within Yarra Ranges, the Yarra Valley and Belgrave-Selby have the highest levels of residents with a mental health condition.

Data from the Victorian Population Health Survey (VPHS) tracks changes in population health status at LGA level. It shows that the level of residents with high or very high levels of psychological distress rose by 54% between 2017 and 2020, from 14.6% to 23.1% of residents.

In 2020/21, the level of maternal and child health sessions for counselling for emotional reasons jumped by 40%, whilst the level of referrals for emotional counselling fell by 37%. The data indicate a substantial spike in mother and family counseling after the start of COVID-19, with a 51% rise overall rise in counselling, due to increases in counselling for emotional, physical and social interaction.

The school entrant health questionnaire (SEHQ) indicated little change in the level of families with a history of mental illness of the parent between 2018 and 2020. The questionnaire tends to be done early in the year, so many of the survey responses are likely to have been done pre-COVID-19. There was a slight increase in parental mental illness between 2020 and 2021.

SERVICE USAGE

The total number of patients with mental health-related prescriptions fell by 1.9% between 2019/20 and 2020/21, but the number rose in the 0-17 and 18-24 age groups. The total number of prescriptions also fell, but rose amongst 0-17 year olds and 18-24 year olds. Compared to other Victorian LGAs, Yarra Ranges ranked 6th-highest for the total number of patients and 3rd-highest for patients aged 0-17.

An unpublished fact sheet shows that Yarra Ranges has the third-highest prevalence of mental health issues in general practice, within the Eastern Metropolitan Primary Health Network (EMPHN) catchment. At the same time, Yarra Ranges has a lower than expected rates of people presenting to general practice for mental health concerns than would be expected, given a relatively high level of emergency department presentations for mental health. This is of concern, as it indicates that people are not seeking early or preventative

mental health care. It also means that general practitioners (GP) mental health service data do not accurately reflect the severity of mental health issues in the region.

Lack of access to GPs and local mental health specialists are a major barrier for seeking appropriate mental health preventative care or treatment. Yarra Ranges has both a shortage of psychiatrists and shortage of GPs in the Yarra Valley; GPs are the key referral point for access to mental health specialists. This may be contributing to the lower than expected level of GP usage for mental health care. Despite the gap in service availability, GP usage for mental illness is highest in the Hills and Yarra Valley compared to other areas of Yarra Ranges; hospital admissions and emergency department presentation for mental health were highest in parts of the Urban Area and the Hills. Lack of hospital use by residents of the Yarra Valley may be partly due to the long distances involved in accessing hospital care from the Yarra Valley.

The need for mental health services is known to have increased during lockdowns, with substantial increases in psychological distress. But the service restrictions caused by lockdowns, alongside both fear of infection and difficulties getting into services that were open (e.g., seeing a GP for a referral) due to demand from issues such as COVID, meant that this did not necessarily translate into increased patient numbers. In Yarra Ranges, there was a drop in 2020/21 in the number of patients seeking mental health care from clinical and other psychologists, and from other allied health providers; whilst there was an 11% rise in the number of people seeing psychiatrists.

The service data indicate that for those residents already linked into services, service usage jumped, with the total number of services increasing by 10.2%, including growth in mental health services provided by psychiatrists, psychologists, GPs and other allied health providers. For example, the number of patients of psychiatrists increased by 11% but the number of services provided through psychiatrists rose by 13.5% - meaning that the average number of visits per patient increased.

The level of emergency department presentations for mental health issues also fell, which may be due partly to concerns about service usage during lockdown. This was a Victoria-wide phenomenon. But despite these falls, Yarra Ranges had a mental health hospital admission rate more than 10% above the Victorian average, and ranked twelfth out of forty metropolitan LGAs.

SUICIDE AND SELF-HARM

Suicide rates have increased following the pandemic. Victoria-wide, there was a 7% rise in suicides amongst males between 2019 and 2022, due to an increase amongst men aged 45-54 (45%) and 65 plus (72%). There was an 11.5% rise in suicides amongst females aged 25-34 (45.5%), 35-44 (8%), 45-54 (16%) and 65 years or more (25%). At local level, the data on suicide deaths are combined for five year periods, so annual change cannot be monitored. When comparing 2017-2021 to the two previous five year periods, there was almost zero change amongst Yarra Ranges residents; data covering 2022 are not yet available. Self-harm hospital admissions reduced across the total population, but increased by 25.5% amongst young people aged 0-24.

Source: Coroners Court of Victoria. (2022). Coroners Court Monthly suicide data report November 2022 update. <https://www.coronerscourt.vic.gov.au/sites/default/files/2022-12/CCOV%20Monthly%20Suicide%20Data%20Report%20%E2%80%93%20November%202022%20Update.pdf>

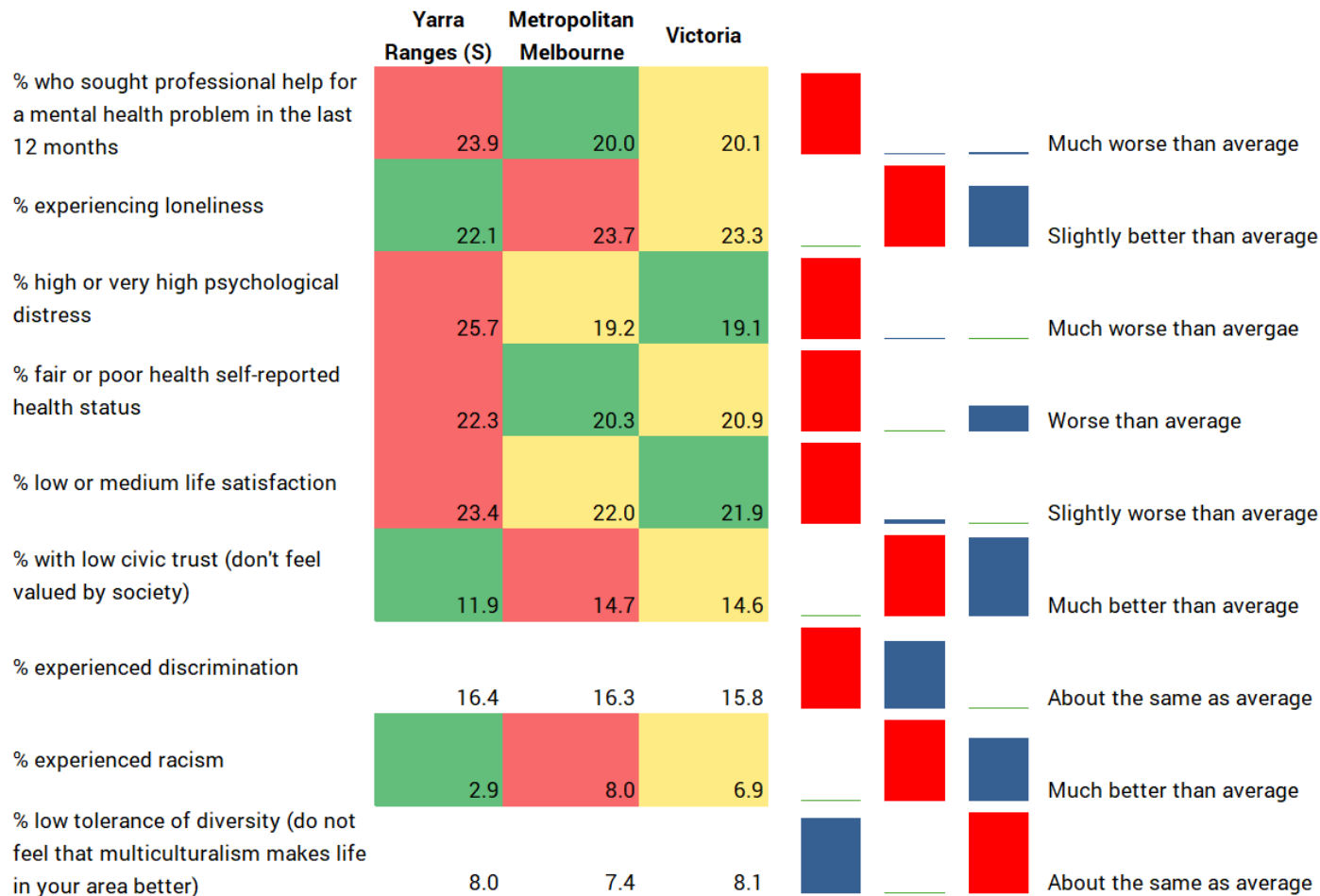
SPOTLIGHT ON MENTAL HEALTH AND SOCIAL CONNECTION

Yarra Ranges has a high level of residents with high or very high psychological distress (26% compared to 19% for metropolitan Melbourne), a high level of residents who have sought professional help for a mental health problem in the past year (24% compared to 20%), an above average level of residents with fair or poor health status (22% compared to 20%), and a slightly above average level with low or medium life satisfaction (23.4% compared to 22%). It has a slightly below average level of residents who are lonely (22% compared to 24%).

It has an average level of residents with low tolerance of multicultural diversity, or who have experienced discrimination.

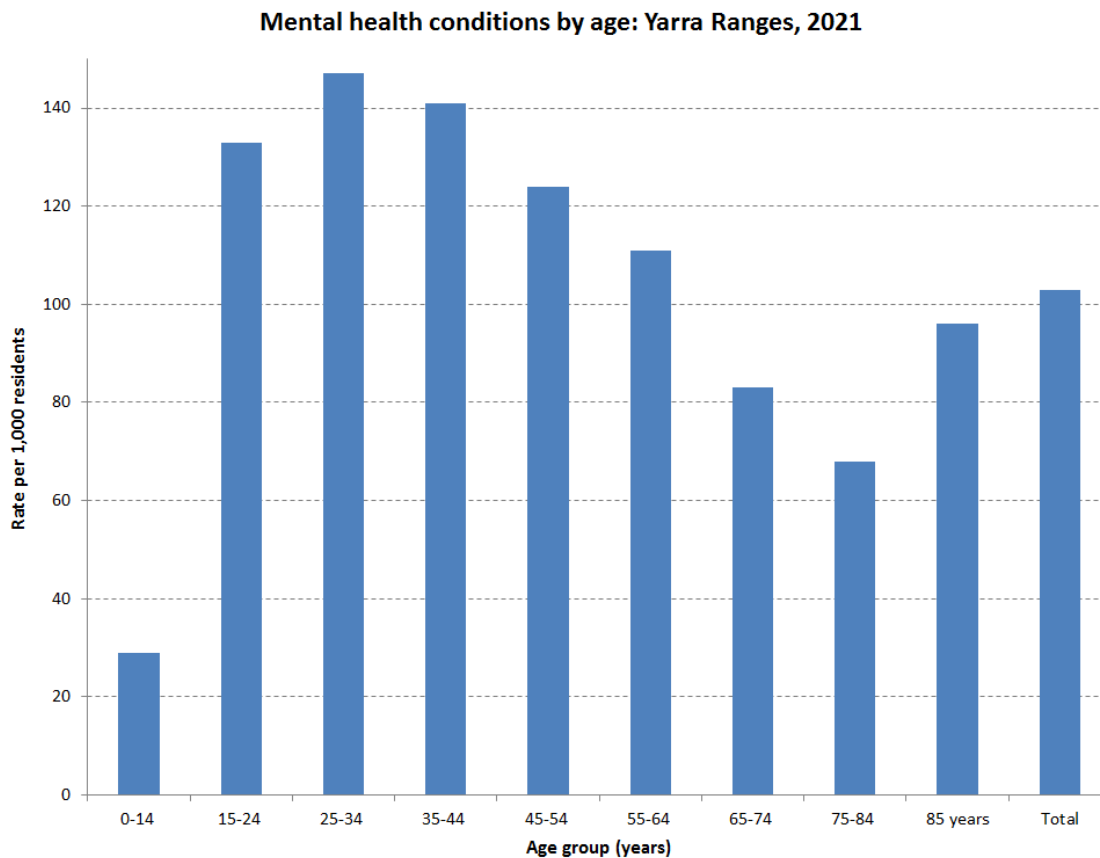
Yarra Ranges has a very low level of residents who have experienced racism, at 2.9% of adults compared to 8% across metropolitan Melbourne. Yarra Ranges has a relatively high level of civic trust. 50.2% of adults feel valued by society, compared to 47.6% across metropolitan Melbourne.

Indicators of mental health and social connection: Yarra Ranges, metropolitan Melbourne and Victoria, 2023



Source: Department of Health and Human Services (2024). *Victorian Population Health Survey 2023*. Unpublished data.

LONG-TERM MENTAL HEALTH CONDITIONS



Mental health was the most prevalent long-term health condition amongst Yarra Ranges residents in 2021, according to the 2021 Census. Residents had an above-average level of mental health conditions (including depression or anxiety), at 10.3%, compared to 8.8% across Victoria and 8.1% across metropolitan Melbourne. Yarra Ranges ranked seventh-highest for mental health conditions across metropolitan Melbourne LGAs.

National data indicate that the figure of 10.3% is probably a substantial under-estimate. This is because the Census data rely on doctor/nurse diagnosis, and would miss people who did not seek assistance from a health service. The National Study of Mental Health and

Wellbeing²⁵ found that 53% of those experiencing a mental disorder in the past twelve months had not sought help from a service. It also found that more than one in five people (21%) had experienced a mental disorder in the past 12 months; and that two in five young people aged 16-24 years had experienced a mental disorder in the past 12 months, roughly double the population average.

Within Yarra Ranges, Indigenous residents and females are much more likely to have long-term mental health conditions. Nearly 17% of Aboriginal and/or Torres Strait Islander (ATSI) residents in Yarra Ranges had a mental health condition; 12.7% of females had a mental health condition, compared to 7.8% of males. The prevalence of mental health conditions was also much higher amongst those on very low incomes, and those with a disability requiring assistance with daily activities. Risk factors included heading a one parent family, or being in a lone person household. Protective factors for mental health included being born in Australia, being married or in a de-facto relationship, or being in a couple with children household.

Teenagers and adults aged less than 45 were the age groups most likely to experience a mental health condition. The level of residents with a mental health condition was highest amongst 25-34 year olds (14.7% of this age group), 35-44 year olds (14.1%) and 15-24 year olds (13.3%). The reported prevalence was lowest amongst under-15 year olds (3%) and persons aged 75-84 (7%). Note that many mental health conditions first appear during the early teenage years, which would be part of the reason for low prevalence amongst under-15 year olds.

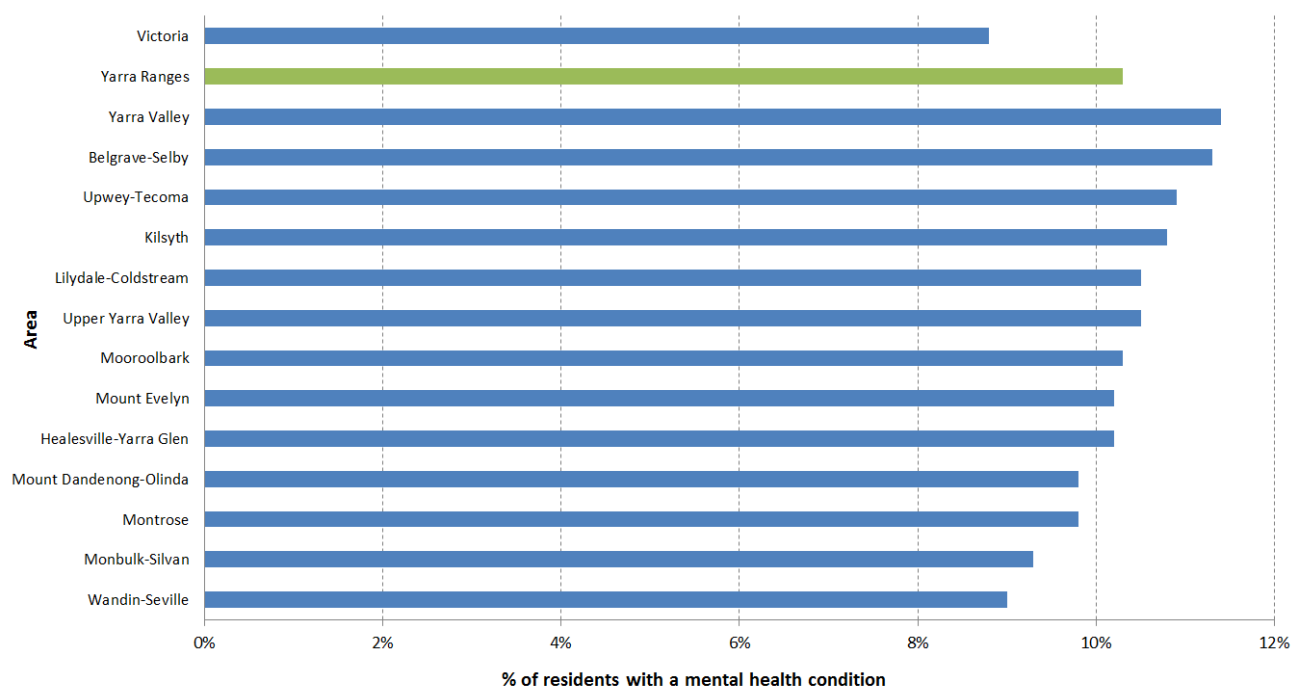
²⁵ Australian Bureau of Statistics. (2020-21). *National Study of Mental Health and Wellbeing*. ABS. <https://www.abs.gov.au/statistics/health/mental-health/national-study-mental-health-and-wellbeing/latest-release>.

Mental health conditions by age: Yarra Ranges, 2021

| Age group (years) | Rate of mental health conditions per 1,000 | % with a mental health condition |
|-------------------|--|----------------------------------|
| 0-14 | 29 | 2.9% |
| 15-24 | 133 | 13.3% |
| 25-34 | 147 | 14.7% |
| 35-44 | 141 | 14.1% |
| 45-54 | 124 | 12.4% |
| 55-64 | 111 | 11.1% |
| 65-74 | 83 | 8.3% |
| 75-84 | 68 | 6.8% |
| 85 years | 96 | 9.6% |
| Total | 103 | 10.3% |

Source: Australian Bureau of Statistics. (2022). Yarra Ranges 2021 Census All Persons QuickStats. <https://www.abs.gov.au/census/find-census-data/quickstats/2021/LGA27450>

Residents with a long-term mental health condition: Yarra Ranges by local area, 2021



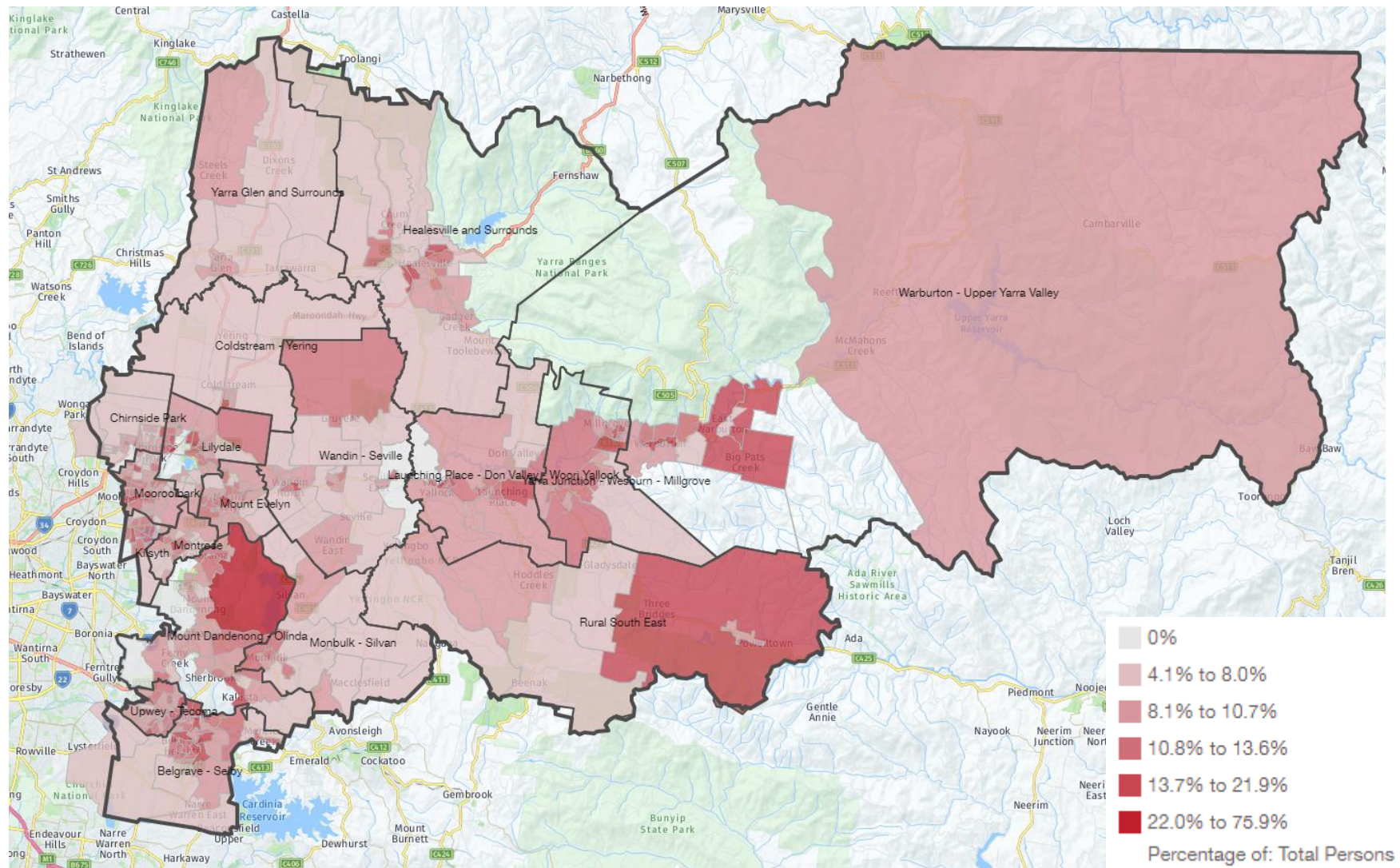
Within Yarra Ranges, Yarra Valley and Belgrave-Selby had the highest levels of residents with a mental health condition (11%), and Wandin-Seville had the lowest level (9%). The map on the following page shows areas with a high level of residents with mental health issues, for smaller areas than SA2s.

Residents with a long-term mental health condition: Yarra Ranges by local area, 2021

| Statistical Areas Level 2 (SA2) | Has a mental health condition (%) |
|---------------------------------|-----------------------------------|
| Yarra Valley | 11.4% |
| Belgrave-Selby | 11.3% |
| Upwey-Tecoma | 10.9% |
| Kilsyth | 10.8% |
| Upper Yarra Valley | 10.5% |
| Lilydale-Coldstream | 10.5% |
| Mooroolbark | 10.3% |
| Healesville-Yarra Glen | 10.2% |
| Mount Evelyn | 10.2% |
| Montrose | 9.8% |
| Mount Dandenong-Olinda | 9.8% |
| Monbulk-Silvan | 9.3% |
| Wandin-Seville | 9.0% |
| Yarra Ranges | 10.3% |
| Victorian average | 8.8% |

Source: Australian Bureau of Statistics. (2022). *Yarra Ranges 2021 Census All Persons QuickStats*. <https://www.abs.gov.au/census/find-census-data/quickstats/2021/LGA27450>

Proportion of residents with a long-term mental health condition: Small areas in Yarra Ranges, 2021



Source: ID Consulting. (2023). *Yarra Ranges Council, mental health condition, 2021, Usual residence, Persons.*

<https://atlas.id.com.au/yarra-ranges>

High psychological distress

The level of residents with high or very high levels of psychological distress rose by 54% between 2017 and 2020, from 14.6% to 23.1% of residents. The same pattern occurred Victoria-wide, with a rise from 15.4% to 23.5%. It then rose to 25.7% in Yarra Ranges in 2023, ranking Yarra Ranges 3rd across Victoria. The Victorian rate fell to 19.1% in 2023.

Proportion (%) of adults aged 18+ (age adjusted), by level of psychological distress: Yarra Ranges and Victoria, 2017-2023

| Level of psychological distress | 2023 | | 2020 | | 2017 | |
|---------------------------------|------------------|--------------|------------------|--------------|------------------|--------------|
| | Yarra Ranges (%) | Victoria (%) | Yarra Ranges (%) | Victoria (%) | Yarra Ranges (%) | Victoria (%) |
| Low (K10 < 16) | 43.5 | 49.7 | 48.5 | 44.9 | 54.0 | 53.9 |
| Moderate (K10 16–21) | 26.7 | 25.7 | 25.2 | 26.4 | 27.4 | 24.7 |
| High/very high (K10 22+) | 25.7 | 19.1 | 23.1 | 23.5 | 14.6 | 15.4 |

Sources: Department of Health and Human Services. (2024). *Victorian Population Health Survey 2024 – unpublished data*. Department of Health and Human Services. Department of Health and Human Services. (2022). *Victorian Population Health Survey 2020*. <https://vahi.vic.gov.au/report/population-health/victorian-population-health-survey-2020-dashboards>; Department of Health and Human Services. (2019). *Victorian Population Health Survey 2017*. <https://www.health.vic.gov.au/population-health-systems/victorian-population-health-survey-2017>

Loneliness

In 2023, 22.1% of adults reported feeling lonely, compared to 23.3% across Victoria. Analysis of the VPHS data on loneliness is in progress. Protective factors against loneliness which have been identified so far are:

- Engaging in and having access to leisure, recreational, and cultural activities.
- Experiencing a strong sense of connection with community members.
- Feeling a sense of affiliation and belonging within the school environment.
- Attaining satisfactory levels of academic/professional success.
- Demonstrating resilience and the capacity to recover from challenges.
- Possessing a defined sense of purpose and meaning in life.
- Maintaining a positive outlook regarding the aging process
- Maintaining a stable social network, including close friendships and familial relationships, along with a sense of community belonging.
- Exhibiting positive sense of self-worth, and an optimistic outlook for the future.²⁶

²⁶ Department of Health and Human Services. (2024). Victorian Population Health Survey 2023 – unpublished data.

Loneliness in Australia has been identified as the next public health epidemic of the 21st century.

Loneliness has been linked to premature death, poor physical and mental health (Holt-Lunstad et al. 2015), greater psychological distress (Manera et al. 2022) and general dissatisfaction with life (Schumaker et al. 1993). Loneliness among Australians was already a concerning issue before the COVID-19 pandemic, to the extent that in 2022 it has been described as one of the most pressing public health priorities in Australia (Ending Loneliness Together 2022).

Social isolation has been linked to mental illness, emotional distress, suicide, the development of dementia, premature death and poor health behaviours (smoking, physical inactivity and poor sleep) – as well as biological effects, including high blood pressure and impaired immune function (Cacioppo et al. 2002; Grant et al. 2009; Holt-Lunstad et al. 2015). Social isolation is also associated with psychological distress (Manera et al. 2022) and sustained decreases in feelings of wellbeing (Shankar et al. 2015). Conversely, more frequent social contact is associated with better overall health (Botha 2022).

The difference between social isolation and loneliness

Social isolation ‘means having objectively few social relationships or roles and infrequent social contact’ (Badcock et al. 2022:7). It differs from loneliness, which is a ‘subjective unpleasant or distressing feeling of a lack of connection to other people, along with a desire for more, or more satisfying, social relationships’ (Badcock et al. 2022:7). The 2 concepts may, but do not necessarily, coexist (Badcock et al. 2022; Relationships Australia 2018) – a person may be socially isolated but not lonely, or socially connected but feel lonely.

Reference: <https://www.aihw.gov.au/mental-health/topic-areas/social-isolation-and-loneliness>

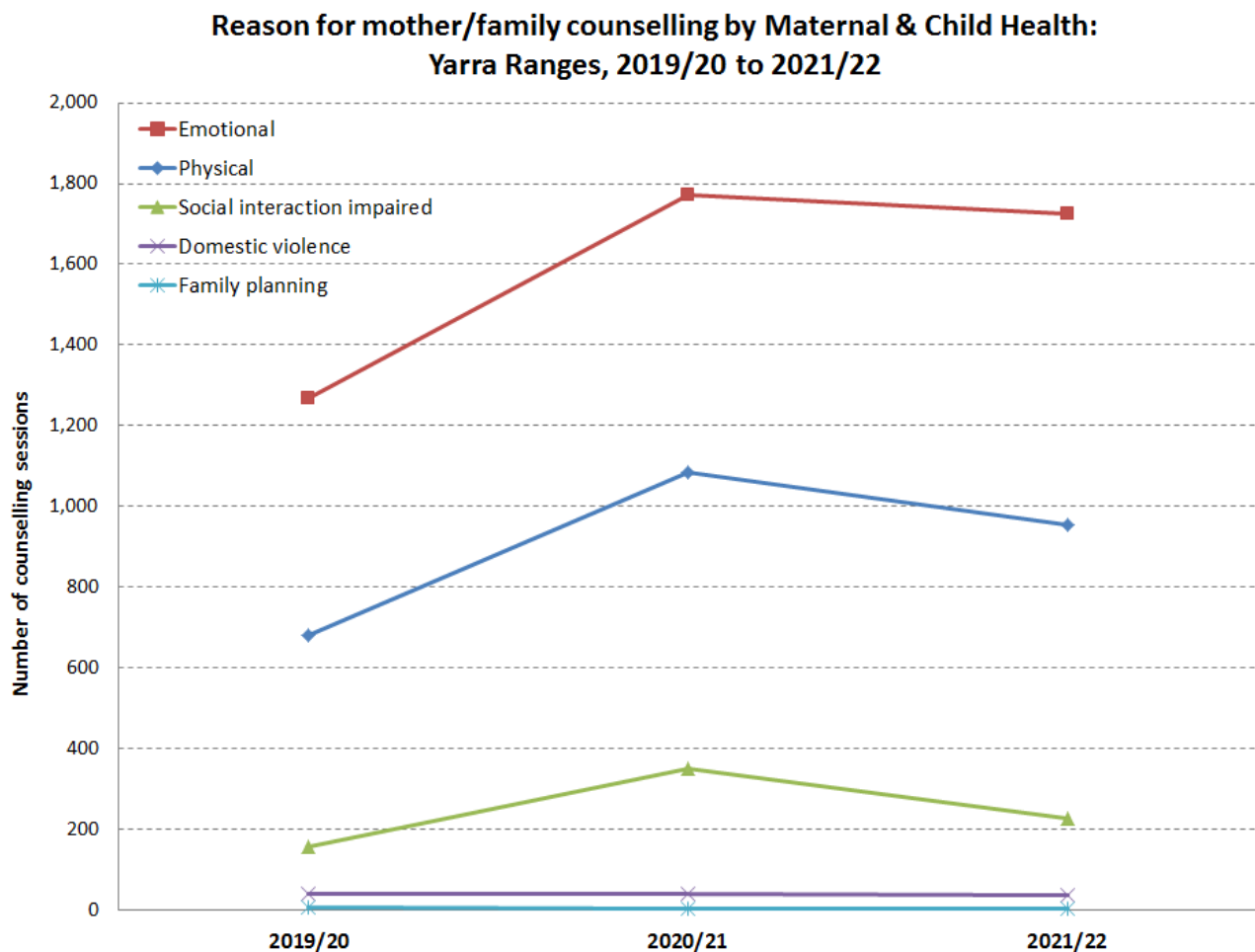
The World Health Organization (WHO) has declared loneliness to be a pressing global health threat, with the US surgeon general saying that its mortality effects are equivalent to smoking 15 cigarettes a day.

Consequently the WHO has launched an international commission on the problem – led by the US surgeon general, Dr Vivek Murthy, and the African Union youth envoy, Chido Mpemba – of 11 advocates and government ministers, including Ralph Regenvanu, the minister of climate change adaptation in Vanuatu, and Ayuko Kato, the minister in charge of measures for loneliness and isolation in Japan.

It comes after the Covid-19 pandemic halted economic and social activity, increasing levels of loneliness, but also amid a new awareness of the importance of the issue. The WHO commission on social connection will run for three years.

Reference: <https://www.who.int/teams/social-determinants-of-health/demographic-change-and-healthy-ageing/social-isolation-and-loneliness>

Maternal and child health counselling & referrals for emotional issues



In 2019/20, there were 1,268 maternal and child health sessions for counselling for emotional reasons, and 92 referrals for emotional reasons. In 2020/21, the level of emotional counselling sessions increased substantially, whilst the level of referrals for emotional counselling fell: counselling sessions jumped 40% to 1,771 sessions in 2020/21; referrals fell 37% to 58 referrals. The numbers then appeared to level out in 2021/22, at 1,725 counselling sessions and 55 referrals.

The data indicate a substantial spike in mother and family counselling after the start of COVID-19, with a 51% rise overall, due to increases in counselling for emotional, physical and social interaction. However, the reasons for the drop in referrals are not apparent from the data. It may be due to a lack of face-to-face services to refer people to, but this can't be known without

further research. Also, the level of referrals was consistently much lower than the level of counselling services, so this indicates that in general, maternal and child health tended to focus on providing counselling rather than referring to secondary providers.

In 2022/23, the number of maternal and child health mother/family counselling sessions dropped for all reasons apart from domestic violence. Counselling for domestic violence nearly tripled between 2021/22 and 2022/23, rising from 36 to 99.

Reason for mother/family counselling: Yarra Ranges, 2019/20 to 2022/23

| Reason | Number | | | | % change 2020/21-2021/22 |
|-----------------------------|---------|---------|---------|---------|-----------------------------|
| | 2019/20 | 2020/21 | 2021/22 | 2022/23 | |
| Emotional | 1,268 | 1,771 | 1,725 | 1,343 | 39.7% |
| Physical | 682 | 1,085 | 953 | 685 | 59.1% |
| Social interaction impaired | 158 | 351 | 227 | 9 | 122.2% |
| Domestic violence | 40 | 39 | 36 | 99 | -2.5% |
| Family planning | 8 | 2 | 2 | 3 | -75.0% |
| Total | 2,156 | 3,248 | 2,943 | 2,139 | 50.6% |

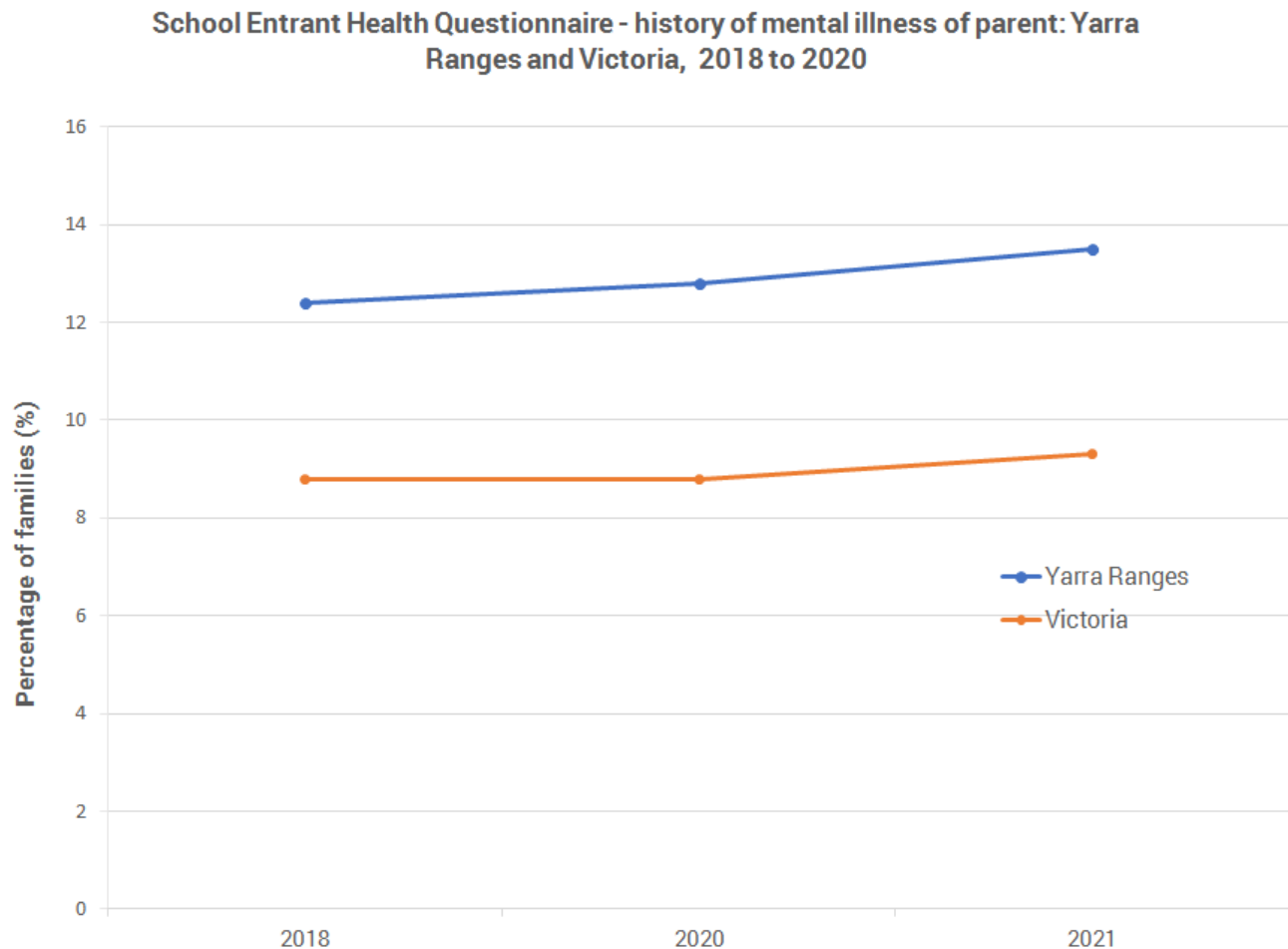
Source: Yarra Ranges Council (2022). *Maternal and child health annual reports*. Unpublished.

Reason for Mother/Family Referrals: Yarra Ranges, 2019/20 to 2021/22

| Reason | Number | | | | % change 2020/21- 2021/22 |
|-----------------------------|---------|---------|---------|---------|------------------------------|
| | 2019/20 | 2020/21 | 2021/22 | 2022/23 | |
| Emotional | 92 | 58 | 55 | 67 | -37.0% |
| Physical | 58 | 32 | 33 | 42 | -44.8% |
| Social interaction impaired | 28 | 27 | 16 | 12 | -3.6% |
| Domestic violence | 23 | 22 | 7 | 13 | -4.3% |
| Family planning | 0 | 0 | 0 | 0 | - |
| Total | 201 | 139 | 111 | 134 | -30.8% |

Source: Yarra Ranges Council. (2022). *Maternal and child health annual reports*.

School Entrant Health Questionnaire



The school entrant health questionnaire (SEHQ) is a parent reporting instrument which records parents' concerns and observations about their child's health and well-being as they begin primary school in Victoria. The survey is conducted annually.

Between 2018 and 2020, there was little change in the level of families with a history of mental illness of the parent; there was a slight increase between 2020 and 2021. In 2021, 13.5% of Yarra Ranges families of foundation (first year) students recorded a history of mental illness of the parent, compared to 12.8% in 2020 and 12.4% in 2019. Victoria-wide, there was no change between 2018 and 2020, followed by a small increase in 2021, from 8.8% to 9.3%.

The indicator of families experiencing stress in the past month rose from 11.5% in 2018 to 12.5% in 2020, then dropped down to 10.3% in 2021. Not all students are surveyed at the

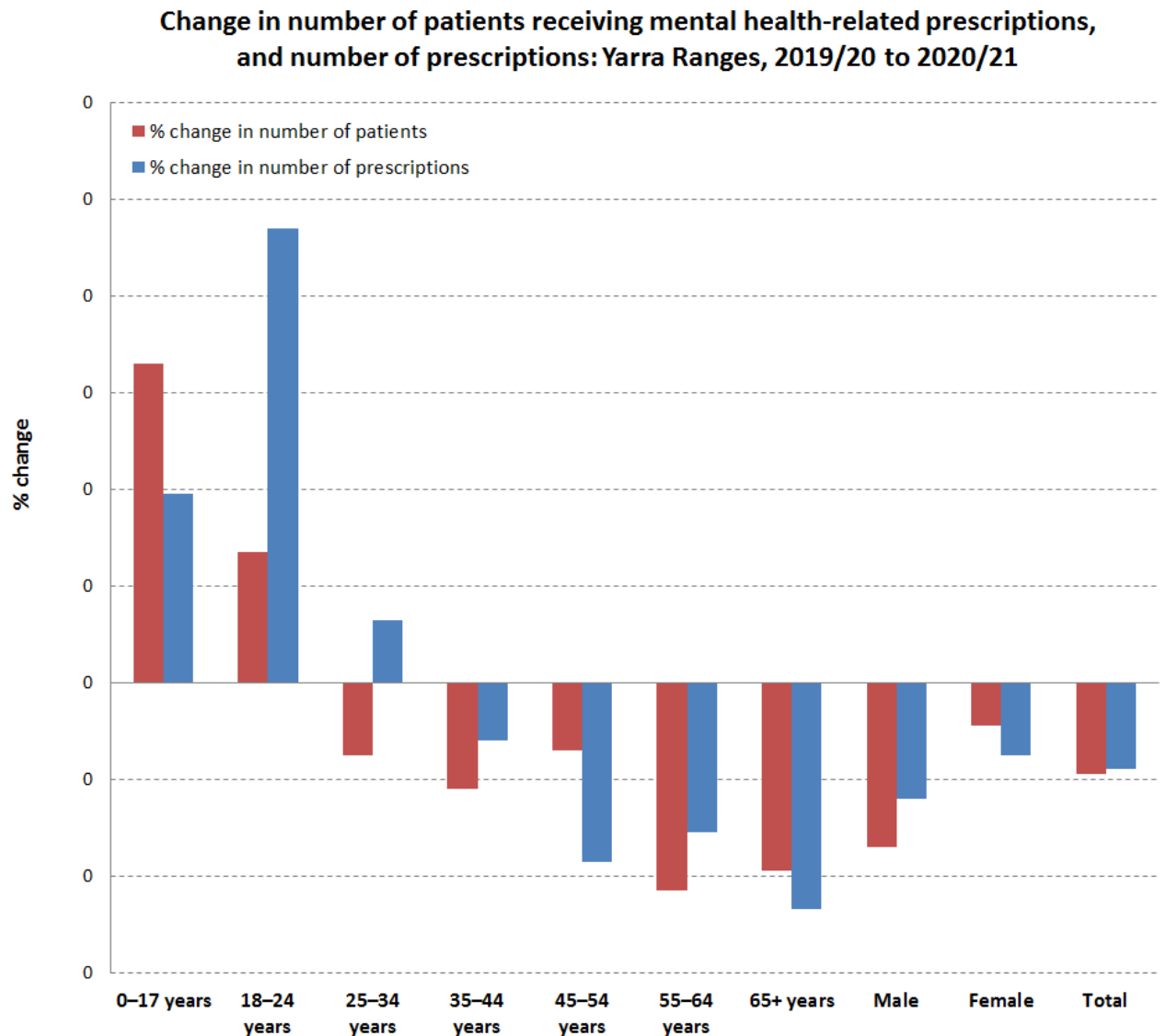
same point in the year, so this is a less useful indicator – depending on the lockdown situation at various points in 2020 and 2021, the level of stress for families in the past month is likely to have varied a lot at different points in the year. There was a similar pattern across Victoria, with the indicator rising from 8.3% to 10% between 2018 and 2020, then dropping to 8.8% in 2021.

Selected indicators of family stress (%): Yarra Ranges and Victoria, 2018 to 2021

| Family stress | 2021 | | 2020 | | 2018 | |
|---|--------------|----------|--------------|----------|--------------|----------|
| | Yarra Ranges | Victoria | Yarra Ranges | Victoria | Yarra Ranges | Victoria |
| Whether children have experienced the stressor: history of mental illness of parent | 13.5 | 9.3 | 12.8 | 8.8 | 12.4 | 8.8 |
| Families experiencing high or very high stress during the month prior to the survey | 10.3 | 8.8 | 12.5 | 10.0 | 11.5 | 8.3 |

Source: Department of Education and Training. (2022). *Outcomes for Victorian children at school entry, findings from the School Entrant Health Questionnaire 2020, Yarra Ranges (S)*. <https://www.vic.gov.au/school-entrant-health-questionnaire#2021-school-entrant-health-questionnaire-summary-sheets-for-victorian-local-government-areas>

MENTAL HEALTH-RELATED PRESCRIPTIONS



During the pandemic, Yarra Ranges experienced substantial growth in the number of under-25 year old patients with mental health prescriptions, and ranked second-highest in Victoria for the number of 0-17 year old patients. The number of prescriptions per patient also increased for 18-24 year olds.

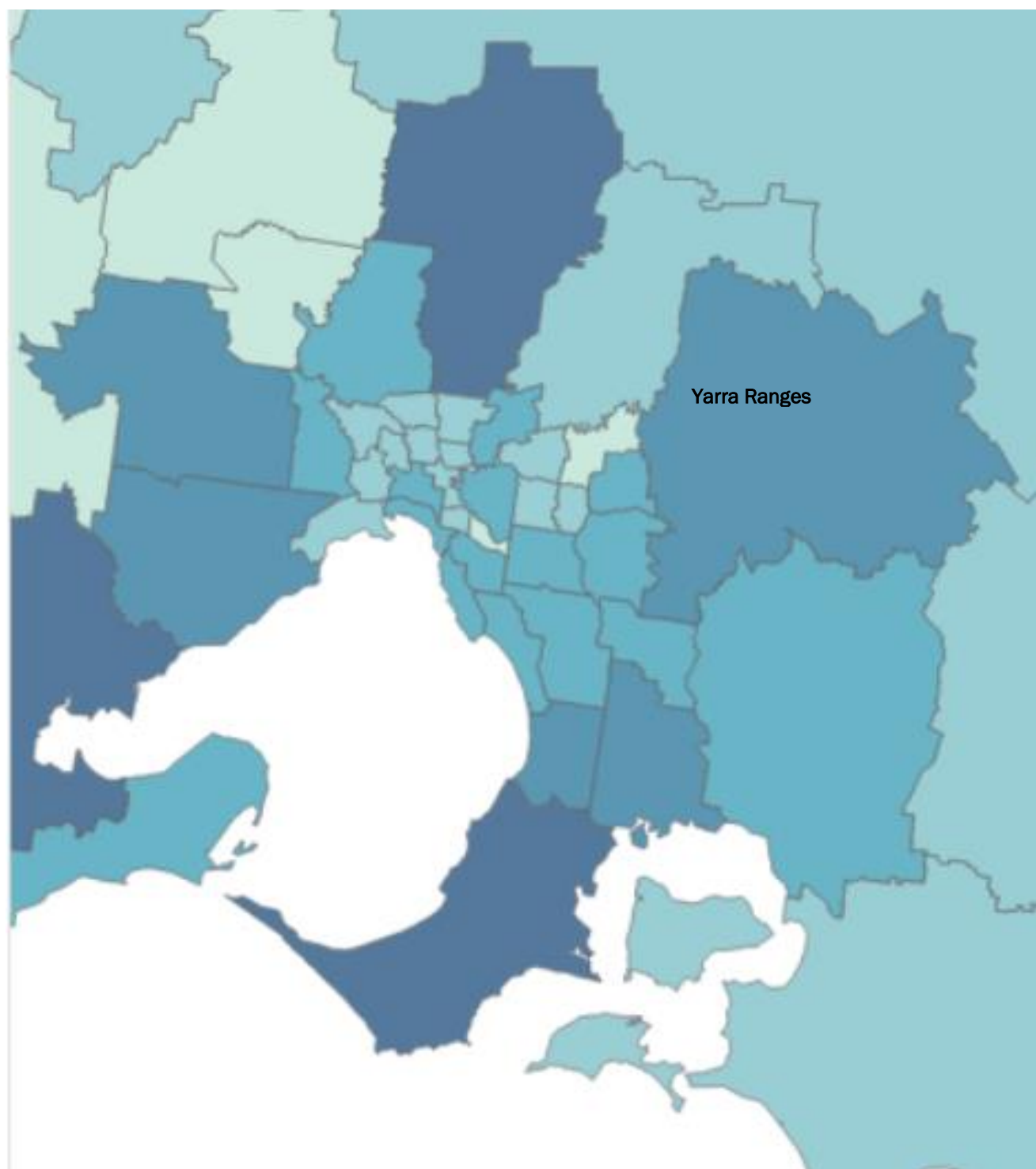
Between 2019/20 and 2020/21, the number of patients with mental health prescriptions fell by 1.9% in Yarra Ranges, compared to growth of 2.8% across Victoria. However, the number of patients rose substantially for young people, growing by 6.6% amongst 0-17 year olds, and 2.7% amongst 18-24 year olds. The total number of prescriptions rose by 3.9% amongst 0-17 year olds and by 9.4% amongst 18-24 year olds, despite a 1.8% fall in prescriptions across the total population. The number of prescriptions also had a slight 1.3% increase amongst 25-34 year olds.

Yarra Ranges ranked very high on this measure compared to other Victorian SA3s, ranking:

- second-highest for the number of patients aged 0-17 - the map below shows the metropolitan areas with high numbers of 0-17 year olds receiving mental health-related prescriptions;
- sixth-highest for 18-24 year olds;
- eighth-highest for 24-34 year olds;
- ninth-highest for 35-44 year olds;
- seventh-highest for 45-54 year olds;
- fifth-highest for 55-64 year olds; and
- ninth-highest for persons aged 65 years or more.

Yarra Ranges ranked sixth-highest for the number of female patients, seventh-highest for the number of male patients and sixth-highest overall. Note that age-standardised rates are not provided for this data set at SA3 level, meaning that rankings are affected by population size in each municipality.

Spotlight data for 0-17 year olds in metropolitan Melbourne SA3s: How many patients received a mental health-related prescription in 2020-21?



Source: Australian Institute of Health and Welfare. (2021). *Spotlight data for 0-17 year olds: How many patients received a mental health-related prescription in 2020-21?* <https://www.aihw.gov.au/mental-health/topic-areas/mental-health-prescriptions>

Patients and mental health-related prescriptions dispensed (subsidised and under co-payment), by demographic variables: Yarra Ranges and Victoria, 2018/19 to 2020/21

| Demographic value | 2018/19 | 2019/20 | 2020/21 | Change, 2019/20-2020/21 |
|---------------------------------|---------|------------|------------|-------------------------|
| Number of patients: | | | | |
| Yarra Ranges | | | | |
| 0–17 years | 1,636 | 1,845 | 1,967 | 6.6% |
| 18–24 years | 2,112 | 2,120 | 2,178 | 2.7% |
| 25–34 years | 3,657 | 3,808 | 3,752 | -1.5% |
| 35–44 years | 4,129 | 4,382 | 4,287 | -2.2% |
| 45–54 years | 4,953 | 5,100 | 5,028 | -1.4% |
| 55–64 years | 4,771 | 4,914 | 4,703 | -4.3% |
| 65+ years | 7,694 | 8,260 | 7,935 | -3.9% |
| Male | 11,226 | 11,971 | 11,566 | -3.4% |
| Female | 17,726 | 18,458 | 18,284 | -0.9% |
| Total | 28,952 | 30,429 | 29,850 | -1.9% |
| Victoria | n/a | 1,086,853 | 1,117,101 | 2.8% |
| Number of prescriptions: | | | | |
| Yarra Ranges | | | | |
| 0–17 years | 12,877 | 14,876 | 15,450 | 3.9% |
| 18–24 years | 15,175 | 16,116 | 17,626 | 9.4% |
| 25–34 years | 30,041 | 32,552 | 32,985 | 1.3% |
| 35–44 years | 39,178 | 41,969 | 41,455 | -1.2% |
| 45–54 years | 49,232 | 52,474 | 50,558 | -3.7% |
| 55–64 years | 45,111 | 48,404 | 46,906 | -3.1% |
| 65+ years | 73,306 | 80,604 | 76,845 | -4.7% |
| Male | 99,781 | 109,744 | 107,163 | -2.4% |
| Female | 165,139 | 177,250 | 174,663 | -1.5% |
| Total | 265,832 | 288,035 | 282,730 | -1.8% |
| Victoria | n/a | 10,251,302 | 10,745,818 | 4.8% |

Note: Data are for the Yarra Ranges SA3.

Source: Australian Institute of Health and Welfare. (2021). *Mental health-related prescriptions 2020-21*. <https://www.aihw.gov.au/mental-health/topic-areas/mental-health-prescriptions>

AVAILABILITY OF PSYCHIATRISTS AND GPS

Lack of access to GPs and local mental health specialists are a major barrier for seeking appropriate mental health care. The federal government's Health Workforce Locator classifies all areas of the Yarra Ranges LGA as a District of Workforce Shortage for psychiatrists (as of July 2022). Pre-COVID-19 data are not available, but this indicator can be

used to track future changes in the availability of psychiatrists.²⁷ The outer eastern area of Yarra Ranges, from Seville outwards, is also classified as a Distribution Priority Area for GPs.

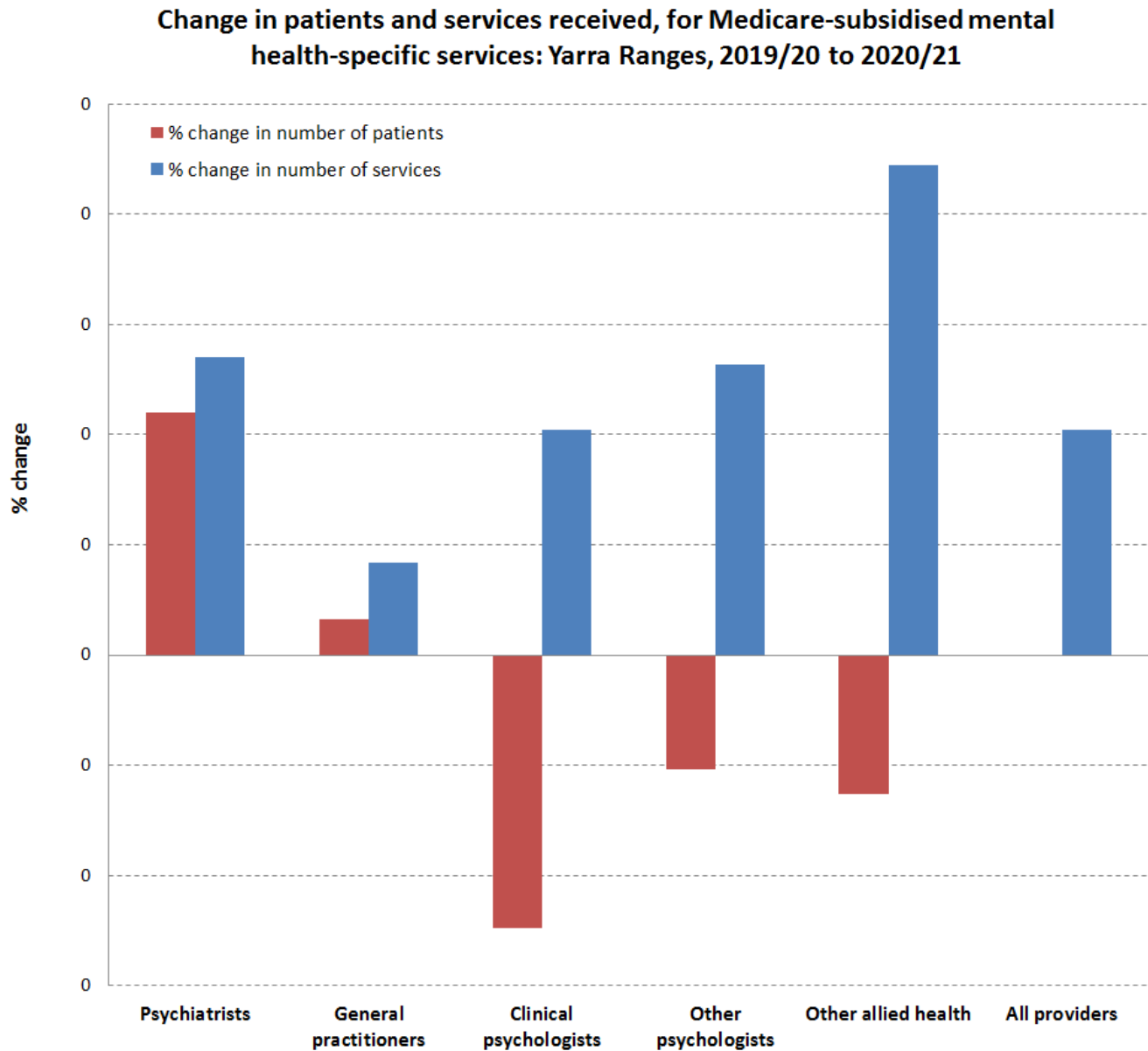
Unpublished GP and hospital data

The Eastern Melbourne Primary Health Network (EMPHN) collects a range of My Health data from general practices, and has access to hospital data. The Yarra Ranges LGA has 46 GPs – 85% are registered with My Health, meaning that 15% are not covered in the EMPHN data analysis. Data in this section are sourced from the November 2021 EMPHN *LGA Profile - Yarra Ranges V1.1*; and are averages of 2019/20 and 2020/21, unless otherwise stated.

Preliminary data from the profile show that the Yarra Ranges LGA has the third-highest prevalence of mental health issues in general practice, within the EMPHN catchment - 5.8% of residents had visited their GP for mental health concerns, compared to 5.12% across the EMPHN. The EMPHN data reveal significant variation in mental health service use across Yarra Ranges:

- The areas with the highest levels of general practitioner (GP) visits for mental health issues include The Patch, Monbulk, Wesburn, Yarra Junction and Seville.
- The areas with high mental health-related emergency department presentations and hospital admissions include Kilsyth, Mooroolbark, Olinda and Sherbrooke.
- Yarra Ranges has a high level of emergency department presentations for mental health (33 per 1,000 residents), but a lower than expected rate of people presenting to general practice for mental health concerns.

²⁷ Department of Health and Aged Care. (2022). *Health workforce locator*.
<https://www.health.gov.au/resources/apps-and-tools/health-workforce-locator/app>



In 2020/21, there was no increase in Yarra Ranges in the total number of mental health care patients. In fact, there were drops in the number of patients attending clinical psychologists (a 12.4% drop), other psychologists (a 5.2% drop), and other allied health providers (a 6.3% drop). There was a minimal rise in GP patients (1.6%) and a substantial rise in the number of people seeing psychiatrists (11%).

The service data imply that for those residents already linked into services, service usage per person jumped, with the number of services increasing by:

- 22.2% for other allied health providers;
- 13.5% for psychiatrists;
- 13.2% for other psychologists;
- 10.2% for clinical psychologists;
- 4.2% for GPs; and
- an average of 10.2% across all provider types.

The year 2021/22 covered roughly five months of lockdown and seven months out of lockdown. Whilst the data for this year cannot be considered 'post-pandemic' data, they show a fall in patient numbers and services provided across all mental health services. However, it cannot be known whether this is due to reducing service demand in the second year of lockdown, or difficulties in accessing services. Once data for 2022/23 are released, it can be confirmed whether the 2021/22 data was the beginning of a return to demand at pre-pandemic levels.

Medicare-subsidised mental health-specific services and people receiving Medicare-subsidised mental health-specific services, by SA3 area and provider: Yarra Ranges, 2017/88 to 2020/21

| Provider type | 2017/ 18 | 2018/ 19 | 2019/ 20 | 2020/ 21 | 2021/22 | % change 2019/20- 2020/21 | % change 2020/21- 2021/22 |
|--|----------|----------|----------|----------|---------------|------------------------------|---------------------------------|
| | | | | | | Yarra Ranges | Victoria Yarra Ranges |
| Number of patients: | | | | | | | |
| Psychiatrists | 2,457 | 2,495 | 2,576 | 2,859 | 2,843 | 11.0% | -0.6% |
| General practitioners | 18,483 | 18,662 | 18,845 | 19,149 | 17,520 | 1.6% | -8.5% |
| Clinical psychologists | 3,793 | 4,053 | 4,020 | 3,523 | 3,337 | -12.4% | -5.3% |
| Other psychologists | 7,357 | 7,137 | 7,117 | 6,744 | 6,229 | -5.2% | -7.6% |
| Other allied mental health | 1,221 | 1,241 | 1,134 | 1,063 | 993 | -6.3% | -6.6% |
| All providers | 33,311 | 33,588 | 33,692 | 33,338 | 30,922 | 0.0% | -7.2% |
| Allied Health subtotal - Mental Health Care | | | | | 10,121 | | |
| Number of services: | | | | | | | |
| Psychiatrists | 15,327 | 15,582 | 16,418 | 18,629 | 12,907 | 13.5% | -30.7% |
| General practitioners | 33,451 | 32,528 | 33,027 | 34,402 | 30,202 | 4.2% | -12.2% |
| Clinical psychologists | 16,437 | 18,067 | 17,837 | 19,658 | 19,558 | 10.2% | -0.5% |
| Other psychologists | 32,615 | 32,383 | 31,458 | 35,601 | 33,499 | 13.2% | -5.9% |
| Other allied mental health | 5,313 | 5,252 | 4,758 | 5,813 | 5,133 | 22.2% | -11.7% |
| All providers | 103,143 | 103,812 | 103,498 | 114,103 | 101,299 | 10.0% | -11.2% |
| Allied Health subtotal - Mental Health Care | | | | | 58,190 | | |

Note: Data are for the Yarra Ranges SA3.

Source: Australian Institute of Health and Welfare. (2022). *Mental health services in Australia: Medicare-subsidised mental health-specific services*. <https://www.aihw.gov.au/mental-health/topic-areas/medicare-subsidised-services>; Australian Institute of Health and Welfare. (2022). Medicare-subsidised GP, allied health and specialist health care across local areas: 2021–22 - Medicare-subsidised services, by Statistical Area Level 3 (SA3): 2021–22 <https://www.aihw.gov.au/reports/primary-health-care/medicare-subsidised-gp-allied-health-and-specialis/data>

HOSPITAL USAGE

In 2020/21, there were 1,766 hospital admissions for mental-health related care amongst residents of Yarra Ranges. The hospital admission rate was 111 per 10,000 residents, more than 10% higher than the Victorian average. Yarra Ranges ranked twelfth out of forty metropolitan LGAs for its rate of mental health hospitalisations. Yarra Ranges residents made 1,334 presentations to emergency departments for mental health issues in 2020/21, a 5.8% drop from the previous year. The presentation rate dropped by 6%, compared to a 1.8% rise across Victoria.

Overnight admitted mental health-related population rates of hospitalisations and bed days, with and without specialised psychiatric care: Yarra Ranges, 2020/21

| Indicator | Yarra Ranges, 2020/21 | Victoria, 2020/21 |
|---------------------------------------|-----------------------|-------------------|
| Hospitalisations | 1,766 | 66,475 |
| Patient days | 19,055 | 897,222 |
| Hospitalisations per 10,000 residents | 111.0 | 99.3 |
| Patient days per 10,000 residents | 1,194.9 | 1,339.8 |

Note that 2019/20 comparative data are not available. Data are for the Yarra Ranges SA3.

Source: Australian Institute of Health and Welfare. (2022). *Mental health services in Australia: Overnight admitted mental health-related care*. <https://www.aihw.gov.au/mental-health/topic-areas/admitted-patients#data>

Mental health emergency department presentations in public hospitals, by SA3 of the patient: Yarra Ranges, 2014–15 to 2020–21

| Statistic | 2014/ 15 | 2015/ 16 | 2016/ 17 | 2017/ 18 | 2018/ 19 | 2019/ 20 | 2020/ 21 | Change 2019/20 to 2020/21 |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------------------------|
| Yarra Ranges | | | | | | | | |
| Number | 1,177 | 1,232 | 1,368 | 1,257 | 1,513 | 1,416 | 1,334 | -5.8% |
| Rate (per 10,000) | 77.9 | 80.8 | 88.6 | 80.6 | 96.2 | 89.3 | 83.9 | -6.0% |
| Victoria | | | | | | | | |
| Number | 48,737 | 53,211 | 54,114 | 57,527 | 63,072 | 64,994 | 66,165 | 1.8% |
| Rate (per 10,000) | 81.8 | 87.3 | 86.7 | 90.1 | 96.6 | 97.6 | 99.4 | 1.8% |

Note: Data are for the Yarra Ranges SA3.

Source: Australian Institute of Health and Welfare (2022). *Mental health services provided in emergency departments*. <https://www.aihw.gov.au/mental-health/topic-areas/emergency-departments#data>

SUICIDE AND SELF-HARM

INTENTIONAL SELF-HARM HOSPITALISATIONS

The number of intentional self-harm hospitalisations went down across the total population, from 95 in 2019/20 to 83 in 2020/21, a 12.6% drop. The rate per 100,000 residents fell by 35.8% amongst 25-44 year olds and by 37.6% amongst those aged 45 years or more. However, the rate jumped by 25.5% amongst 0-24 year olds.

Intentional self-harm hospitalisations by age: Yarra Ranges, 2018/19-2020/21

| Measure | 0-24 | 25-44 | 45+ | Total |
|--|--------------|---------------|---------------|-------|
| 2020/21 | | | | |
| Number | 46 | 20 | 17 | 83 |
| Rate (per 100,000) | 93 | 48.8 | 24.8 | n/a |
| 2019/20 | | | | |
| Number | 37 | 31 | 27 | 95 |
| Rate (per 100,000) | 74.1 | 76.0 | 39.8 | n/a |
| 2018/19 | | | | |
| Number | 43 | 31 | 32 | 106 |
| Rate (per 100,000) | 86.1 | 76.9 | 47.7 | n/a |
| Change in rate, 2019/20-2020/21 | 25.5% | -35.8% | -37.6% | |

Source: Australian Institute of Health and Welfare. (2022). *Suicide and self-harm monitoring: National Hospital Morbidity Database*. <https://www.aihw.gov.au/suicide-self-harm-monitoring/data/data-downloads>

SUICIDE DEATHS

Data on suicide deaths are available as combined data for five year periods. This makes it hard to identify COVID impacts. However, the available data indicates little change. The number and rate of suicides in the five years both to 2020, and to 2021, were barely different to data for the five years to 2019. In Yarra Ranges, there was a 4.4% rise in the period 2016-2020, when compared to 2015-2019, an increase of two deaths. The number of suicide deaths in 2017-2021 was the same as in 2016-2020. Victoria experienced a 2% drop in suicide rates in both 2016-2020 and 2017-2021.

Age-standardised suicide rate, by year of registration of death: Yarra Ranges and Victoria, 2014–2018, 2015–2019, 2016–2020 and 2017–2021

| 5-year period | Deaths | Yarra Ranges SA3 ASR (per 100,000) | Change in rate | Victoria State ASR (per 100,000) | Change in rate |
|---------------|--------|--|----------------|--|----------------|
| 2014–2018 | 78 | 10.2 | | 10.9 | |
| 2015–2019 | 87 | 11.4 | 11.8% | 10.9 | 0.0% |
| 2016–2020 | 89 | 11.9 | 4.4% | 10.7 | -1.8% |
| 2017–2021 | 89 | 12.0 | 0.8% | 10.5 | -1.9% |

ASR = age standardised rate.

Source: Australian Institute of Health and Welfare. (2022). Suicide and self-harm monitoring.
<https://www.aihw.gov.au/suicide-self-harm-monitoring/data/data-downloads>

PART 4: CLIMATE CHANGE & HEALTH

The World Health Organisation (WHO) identifies climate change as the “single biggest health threat facing humanity”.²⁸ Victorian municipal health and wellbeing plans are required to outline their Councils’ efforts to reduce climate change impacts on community health and wellbeing. They are also required to align local health planning work with the Victorian state health plan. The state health plan calls for actions to:

- Create resilient and safe communities that can adapt to the public health impacts of climate change.
- Accelerate action to support communities to adapt to climate change and its impacts on health.²⁹

The draft Health National Adaptation Plan (HNAP) also calls for this involvement, with a desired outcome being that *“People and priority populations are supported by health-promoting local government climate adaptation action.”*

Responding to climate change involves both mitigation and adaptation. Yarra Ranges Council’s *Livable Climate Plan 2020-2030* outlines Council mitigation work. The *Yarra Ranges Health and Wellbeing Plan 2025-2029* will outline Council’s role and actions in helping local communities to adapt to the health and wellbeing impacts of climate change. This profile provides data on how Victoria’s climate is changing, the health and wellbeing impacts of climate change, local impacts for different types of hazards, risk and protective factors, and examples of local-level adaptation actions.

Adaptation: The actions that we should take now to help us cope with the climate impacts that we are already experiencing. An example of adaptation would be planting trees across a city to improve air quality and reduce the health impacts of extreme heat.

Mitigation: Reducing greenhouse gas emissions to help stop climate change and its impacts getting worse. An example of mitigation is transitioning from coal-fired power to renewable energy.³⁰

²⁸ World Health Organisation (2024). *Fast facts on climate and health*.

https://cdn.who.int/media/docs/default-source/climate-change/fast-facts-on-climate-and-health.pdf?sfvrsn=157ecd81_5&download=true

²⁹ Department of Health (2024). *Victorian Public Health and Wellbeing Plan 2023-2027*.

<https://www.health.vic.gov.au/victorian-public-health-and-wellbeing-plan-2023-27>

³⁰ Climate Change and Health Alliance (2024). Communicating the health impacts of climate change. https://www.caha.org.au/comms_guide

Key issues

The world is on track to reach 1.5°C of warming by 2030, bringing increased exposure to bushfires, smoke, droughts, floods, high heat/heatwaves, rising sea levels, vector-borne diseases (e.g., malaria), storms and other extreme weather events. Urgent action is needed to adapt to current and future impacts of climate change, to protect community health and wellbeing.

The direct health impacts of climate change include hypothermia, hyperthermia, heat stress, infectious diseases, respiratory diseases, injury, trauma and death. For example, extreme heat also has a major impact on health, through heat stroke, exhaustion, cardiac conditions, respiratory illnesses and falls due to dehydration. Heatwaves are responsible for more deaths in Australia each year than any other type of disaster, including bushfires.

Indirect impacts include increases in infectious diseases, food and water insecurity, mental health issues, the impacts of existing chronic diseases such as diabetes, and displacement of communities. The social determinants of health are also affected, including cost of living (particularly due to rising food, insurance and power costs), housing, employment, income, transport, access to services and infrastructure, workplace safety, recreational opportunities, and social support networks. Many households are experiencing rising insurance costs, inadequate insurance cover, and the need to switch or reduce their insurance cover in order to cut costs.

Most Australians (84%) have been directly affected by at least one climate-fuelled disaster since 2019. Forty percent of insured homes have been impacted by extreme weather events over the past five years, particularly floods, hail and extreme wind. The main health impacts over the past two years have been allergies, asthma and other respiratory issues, heat stress and heat stroke, respiratory issues, and mental health issues.

Impacts in Yarra Ranges:

- **Storms.** Yarra Ranges ranks third-highest in Victoria for storm hotspots. The June 2021 storms caused extensive damage and disruption. This included damage to and destruction of homes and businesses, loss of power and internet for extended periods, contamination of the water supply, fallen trees, damage to roads, blocked access to communities, loss of communication including ability to contact emergency services, disruptions to schools and health services and transport, and loss of access to public space.

- **Disasters.** As of late 2024, Yarra Ranges has the second-highest level of assistance seeking from national disaster recovery funding – it has sought and received assistance 42 times since 2006/07. Assistance was mostly sought due to storms (27), floods (17) and bushfires (5); some events involved multiple hazards (e.g., bushfire and storm). The June 2021 storm is an example of a ‘cascading’ impact, occurring during COVID-19 pandemic lockdowns and making it harder for people to seek assistance.
- **Heat and cold.** Already, 39% of Victorians feel too cold in their home during winter and 44% feel too hot in their home during summer. There were more than 450 hospital admissions for heat stroke amongst Yarra Ranges residents in 2022/23; and Yarra Ranges has seen increasing emergency department admissions for heart issues, which can be triggered by high heat. Residents have also experienced frequent impacts from heating or cooling failing due to power outages, as were seen during the extreme heat during summer 2019/20 and the June 2021 storm impacting the Dandenong Ranges. Yarra Ranges benefits from high tree canopy, which works to reduce urban heat. In 2020, Yarra Ranges had Australia’s second-highest level of tree canopy cover. The highest heat scores are in the urban area, but heat scores are still low compared to other areas of Melbourne.
- **Food insecurity.** Food insecurity is increasing, affecting an estimated 9% of adult residents in 2023. During the pandemic-related lockdowns in 2020, Yarra Ranges had the fourth-highest level of food insecurity in metropolitan Melbourne.³¹ Both cost of living issues and natural disasters are contributing to food insecurity.
- **Bushfires and smoke.** The 2019/20 bushfires saw a spike in respiratory and mental health issues amongst residents, an indication of what can be expected with future increases in high heat and bushfire risk days. There was also a large spike in asthma admissions in 2022/23; residents with asthma are particularly at risk from smoke and fires, and also from thunderstorm asthma.
- **Risk.** The areas of Yarra Ranges with the highest risk of hazards are in the Dandenong Ranges and Yarra Valley. These areas also have the lowest level of services and facilities, public transport, and pedestrian infrastructure; and Yarra Valley also has a high level of vulnerable community members.

³¹ Department of Health. Victorian Population Health Survey

2020. <https://vahi.vic.gov.au/report/population-health/victorian-population-health-survey-2020-dashboards>

Over the coming decades, Yarra Ranges can expect two to three times the number of days with temperatures above 35°C, lower annual rainfall with more storm events, and longer fire seasons with 42% more high fire danger days. By 2030, 65% of properties in Yarra Ranges are forecast to be at high or medium risk from climate change, the 2nd highest level in Melbourne.³² The main type of identified risk is bushfire - note that many climate reports tend to under-estimate the direct and indirect impacts of severe storms on the community. Local community and human service providers expect increased climate-related disasters and extreme weather events to continue to impact service demand over the next four years, with access to climate resilient housing a challenge for low income households.

The community has said that they would like more information and support about how to prepare for the health impacts of climate change. Council has legislated roles in supporting communities to adapt to the health impacts of climate change, and also in preparing for and responding to the impacts of emergencies. It is the level of government closest to the community, and best suited to supporting local adaptation action.

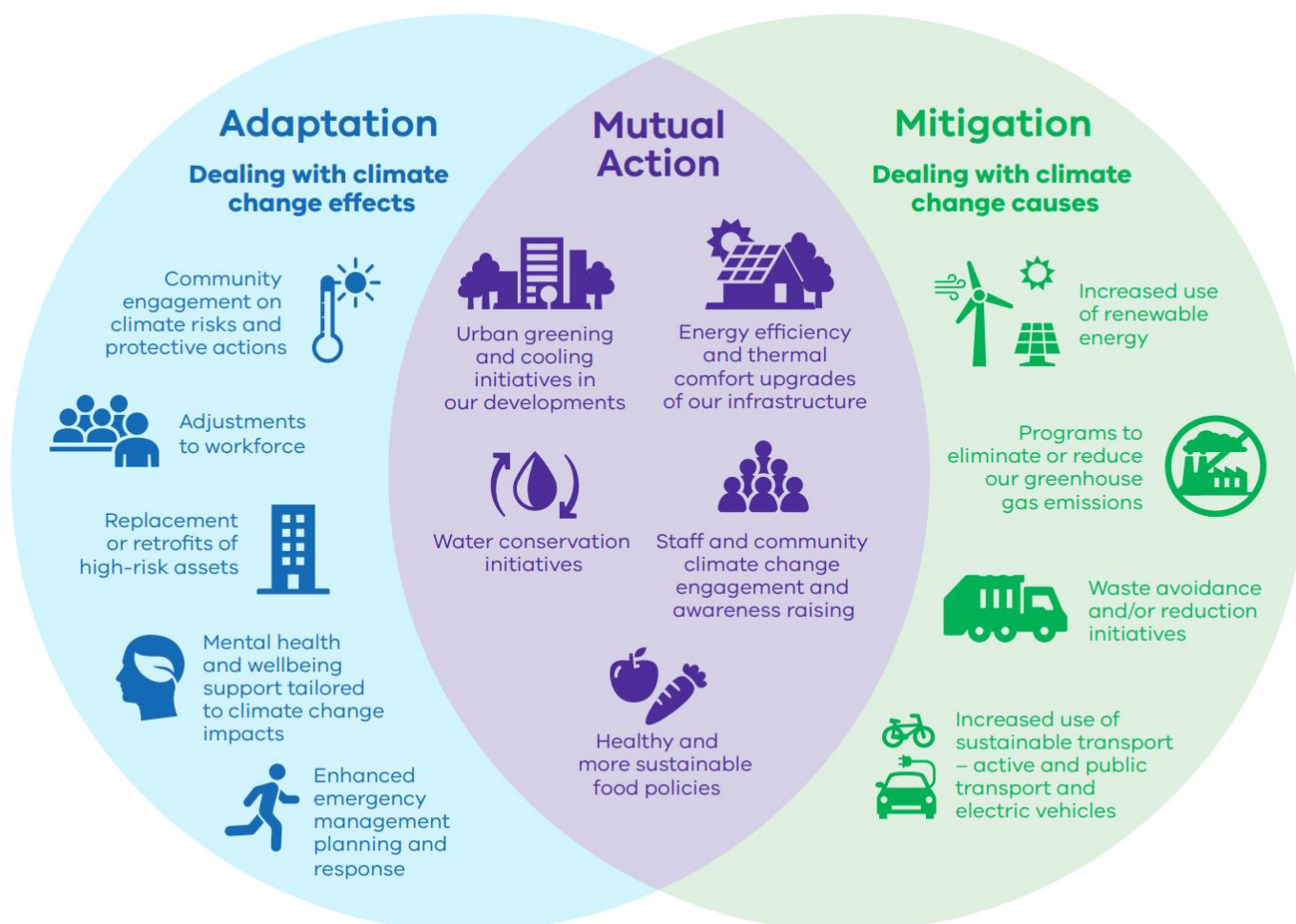
³² Climate Council (2022). *Uninsurable Nation: Australia's most climate-vulnerable places*. [CC_Report-Uninsurable-Nation_V5-FA_Low_Res_Single.pdf \(climatecouncil.org.au\)](https://climatecouncil.org.au/CC_Report-Uninsurable-Nation_V5-FA_Low_Res_Single.pdf)

What is adaptation?

Adaptation is dealing with the effects of climate change. It consists of the actions that we should take now to help us cope with the climate impacts that we are already experiencing.

Mitigation is dealing with the causes of climate change. Some actions are both mitigative and adaptive. For example, installing solar panels – this will both reduce consumption of power from fossil fuels (compared to a standard electric system), and make it more affordable to run cooling during hotter temperatures.

Interconnectedness of climate adaptation and mitigation



Source: Department of Health and Human Services (2024). *Tackling climate change and its impacts on health through municipal public health and wellbeing planning - Guidance for local government, 2024*. <https://www.health.vic.gov.au/publications/tackling-climate-change-impacts-health-municipal-public-health-wellbeing-planning>

How is our climate changing?

A range of human activities - e.g., transport, power generation, agriculture, land clearing, production of goods - release large amounts of carbon dioxide and methane. These 'greenhouse' gases trap heat from the sun and build up in the planet's atmosphere, causing rising temperatures and a wide range of climate changes. Heatwaves³³ are already becoming increasingly hot, lengthy and more frequent across Australia. In Victoria, two of the worst heatwaves on record occurred in January/February 2009 and January 2014. In January 2018, Bendigo experienced a record breaking twelve consecutive days over 35°C. And January 2019 saw Australia's hottest ever month on record. During this period, an extreme heatwave swept across Northern Victoria, and Albury-Wodonga experienced its highest ever recorded temperature of 45.3°C.³⁴ Winter rainfall in Victoria has been decreasing since 1990, already down almost 100mm.

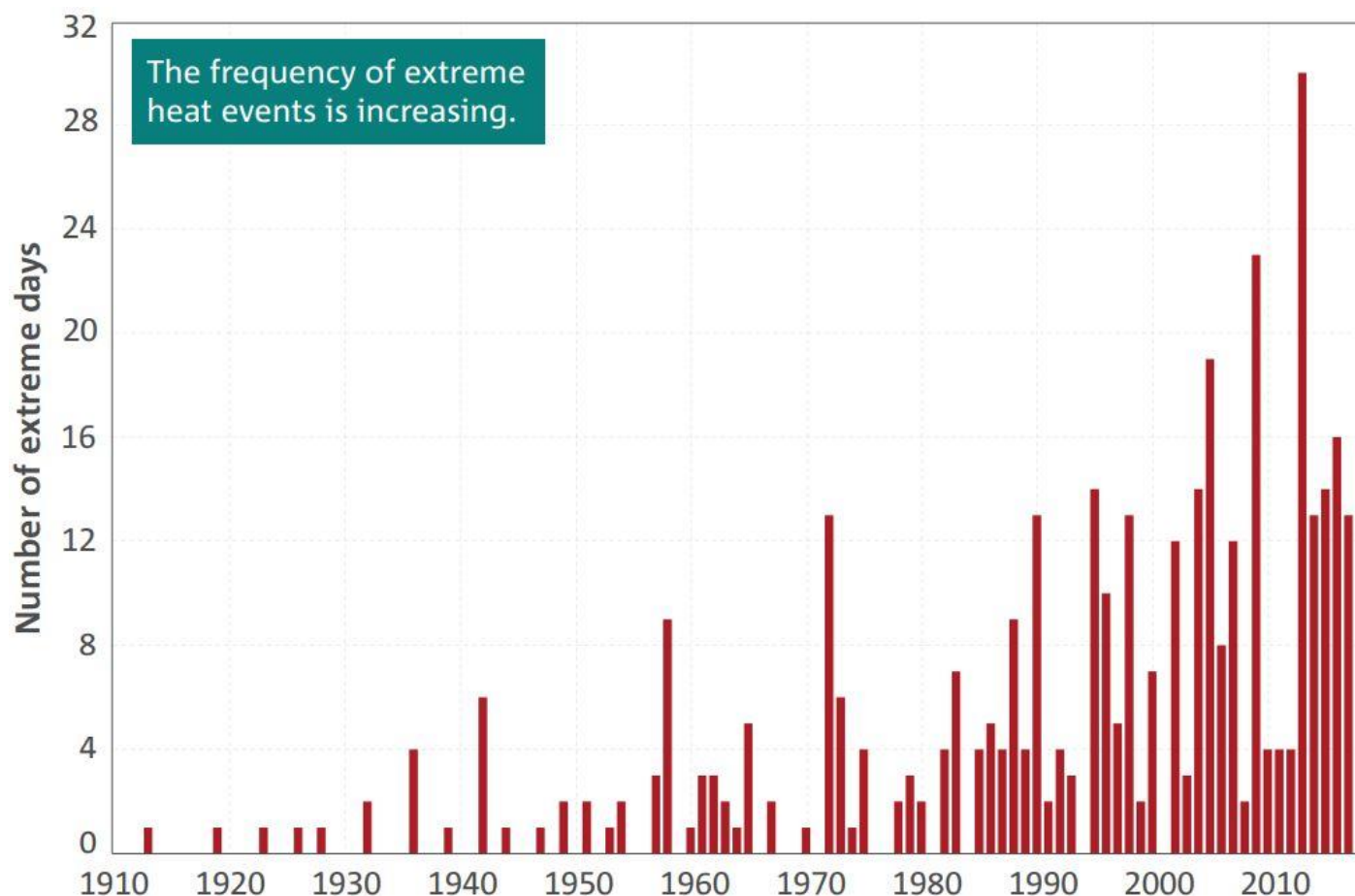
These events are examples of the broader trend of increased temperatures, a wider temperature range (both highs and lows), lower rainfall, extreme rainfall and flood events, more frequent and severe bushfires, and rising sea levels. And these issues are expected to intensify over coming decades, as the climate emergency intensifies.

³³ The Bureau of Meteorology defines a heatwave as three consecutive days and nights of above-average temperatures.

³⁴ Environment Victoria (2024). *Victoria, heatwaves and climate change*.

<https://environmentvictoria.org.au/our-campaigns/safe-climate/victoria-heatwaves-climate-change/>

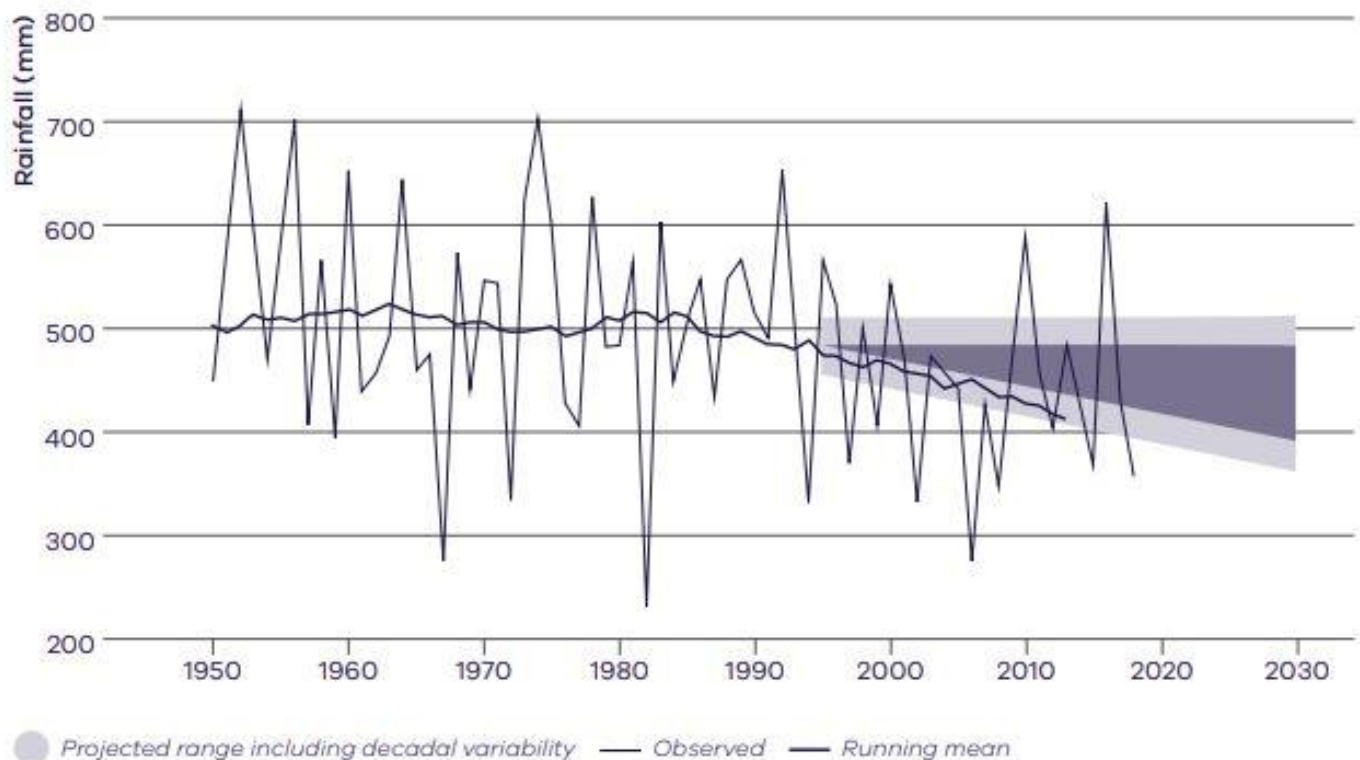
Extreme heat events are increasing across Australia



Number of days each year where the Australian area-averaged daily mean temperature is extreme. Extreme days are those above the 99th percentile of each month from the years 1910–2017. These extreme daily events typically occur over a large area, with generally more than 40 per cent of Australia experiencing temperatures in the warmest 10 per cent for that month.

Source: Bureau of Meteorology and CSIRO (2018). *State of the Climate 2018*. [State of the Climate 2018 - CSIRO](#)

Observed winter rainfall in Victoria is tracking towards the drier end of projections



Source: Department of Environment, Land, Water and Planning (2019). *Victoria's Climate Science Report 2019*. [Victorias-Climate-Science-Report-2019.pdf \(climatechange.vic.gov.au\)](https://climatechange.vic.gov.au/Victorias-Climate-Science-Report-2019.pdf)

Forecast changes in the climate

The world is on track to overshoot 1.5°C of warming by 2050. There may be no going back from the impacts of this warming. Even if all global emissions ceased tomorrow, additional warming is locked in due to existing concentrations of carbon dioxide in the atmosphere. And if the world reached net zero, temperatures may continue to rise owing to feedback mechanisms such as melting permafrost releasing carbon dioxide and methane into the atmosphere. Overshoot scenarios could require the removal of huge quantities of carbon dioxide from the atmosphere, and carbon capture technology does not currently exist at

the scale required. Temperature reduction will take decades, and humankind and ecosystems will have to cope with the increased temperatures in the meantime.³⁵



Carbon emissions have pushed the world to the brink of 1.5°C of warming

Dennis MacDonald/Shutterstock

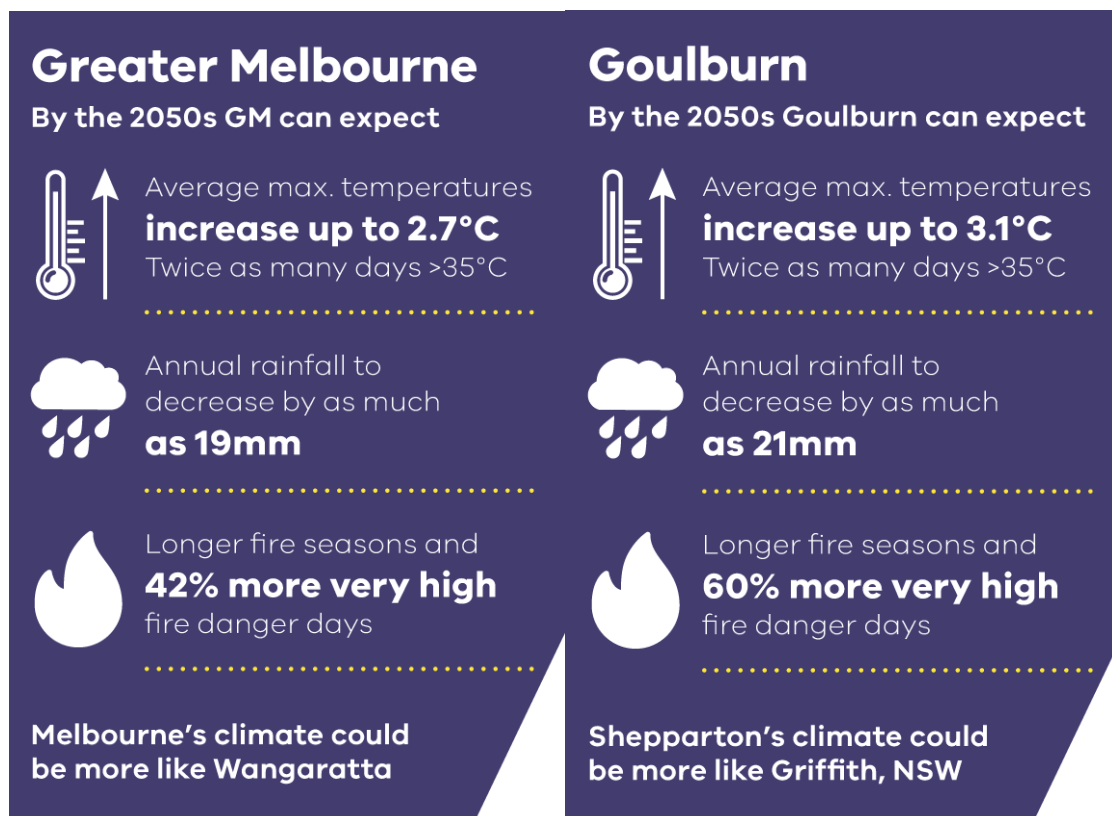
The latest CSIRO projections estimate that (if emissions are not cut rapidly) Melbourne could feel more like north-eastern Victoria by the 2050s, and could see an unprecedented 50°C day within decades. Most of Yarra Ranges is in the Greater Melbourne region; Upper Yarra Valley is in Victoria's Goulburn region. By the 2050s, most parts of Yarra Ranges can expect:

- Two to three times the current number of days above 35 °C.

³⁵ New Scientist (9 October 2024). *Once we pass 1.5°C of global warming, there is no going back*. <https://www.newscientist.com/article/2451285-once-we-pass-1-5c-of-global-warming-there-is-no-going-back/>
DOI: 10.1038/s41586-024-08020-9

- Annual rainfall to fall by around 20mm, but with more very high rainfall events.
- Longer fire seasons and more very high fire danger days - 42% more in Greater Melbourne and 60% more in Goulburn.

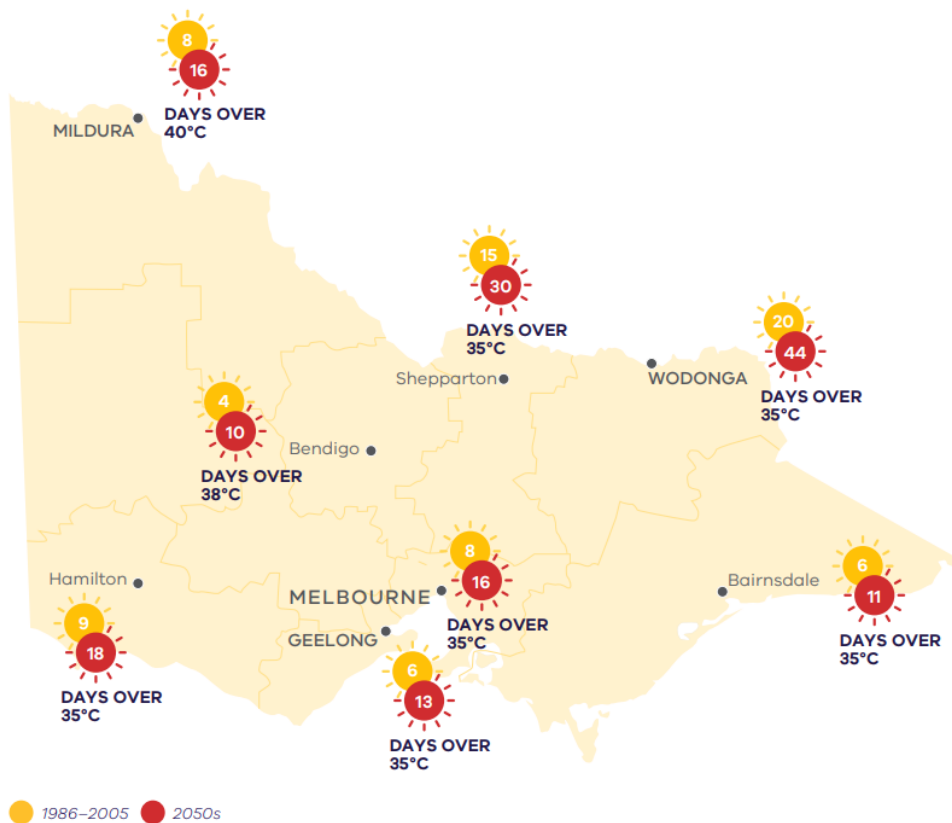
Victoria's changing climate: Greater Melbourne and Goulburn regions in the 2050s



Source: Department of Energy, Environment and Climate Change. *Supporting local action on climate change - Climate change data and information for local government factsheet.*

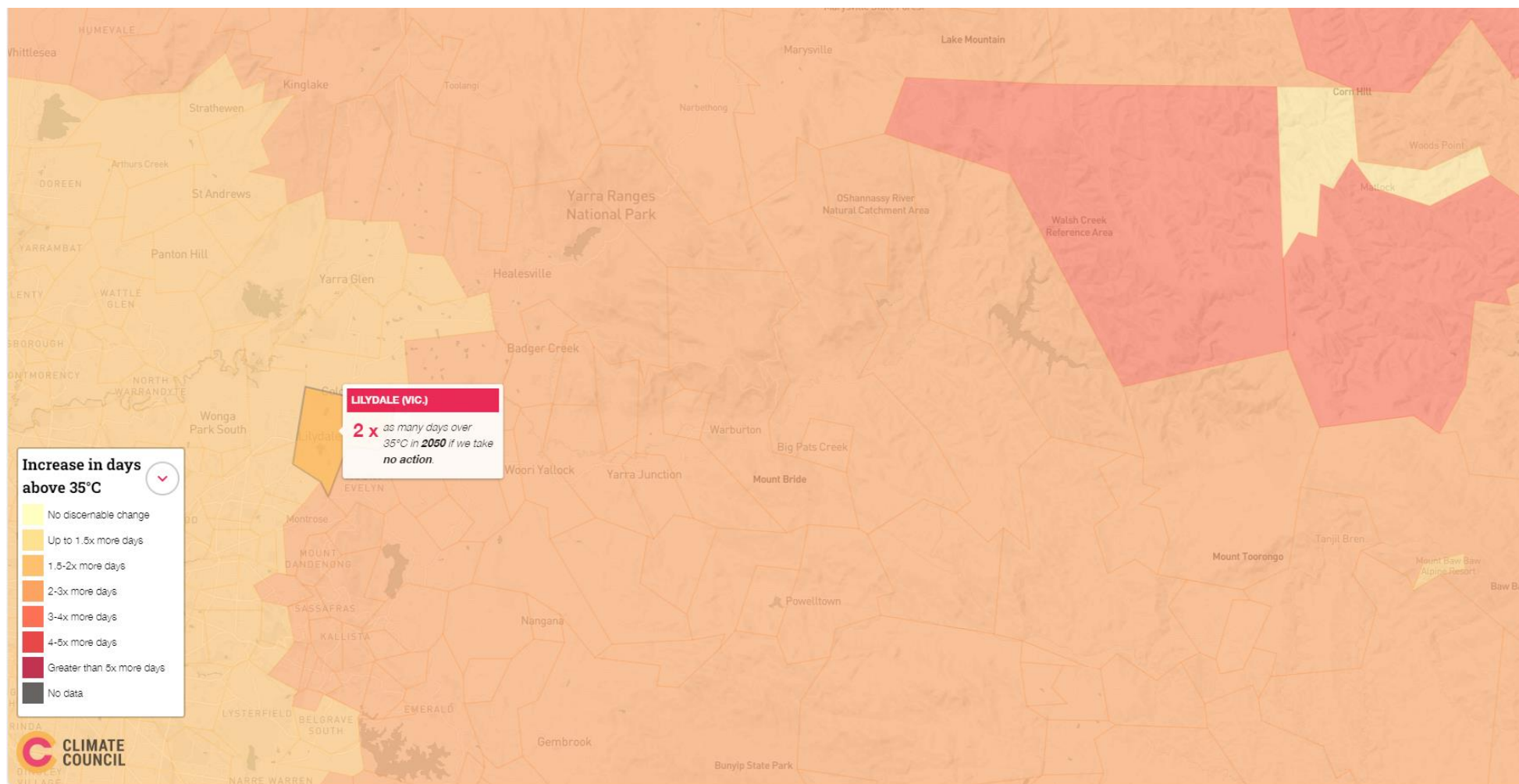
<https://www.climatechange.vic.gov.au/supporting-local-action-on-climate-change>

New CSIRO climate change projections show Melbourne could feel more like north-eastern Victoria, where sustained heat is common, by the 2050s



Source: Department of Environment, Land, Water and Planning (2019). *Victoria's Climate Science Report 2019*. [Victorias-Climate-Science-Report-2019.pdf \(climatechange.vic.gov.au\)](https://climatechange.vic.gov.au/Victorias-Climate-Science-Report-2019.pdf)

Climate heat map of Australia: Yarra Ranges in 2050 (no action scenario)



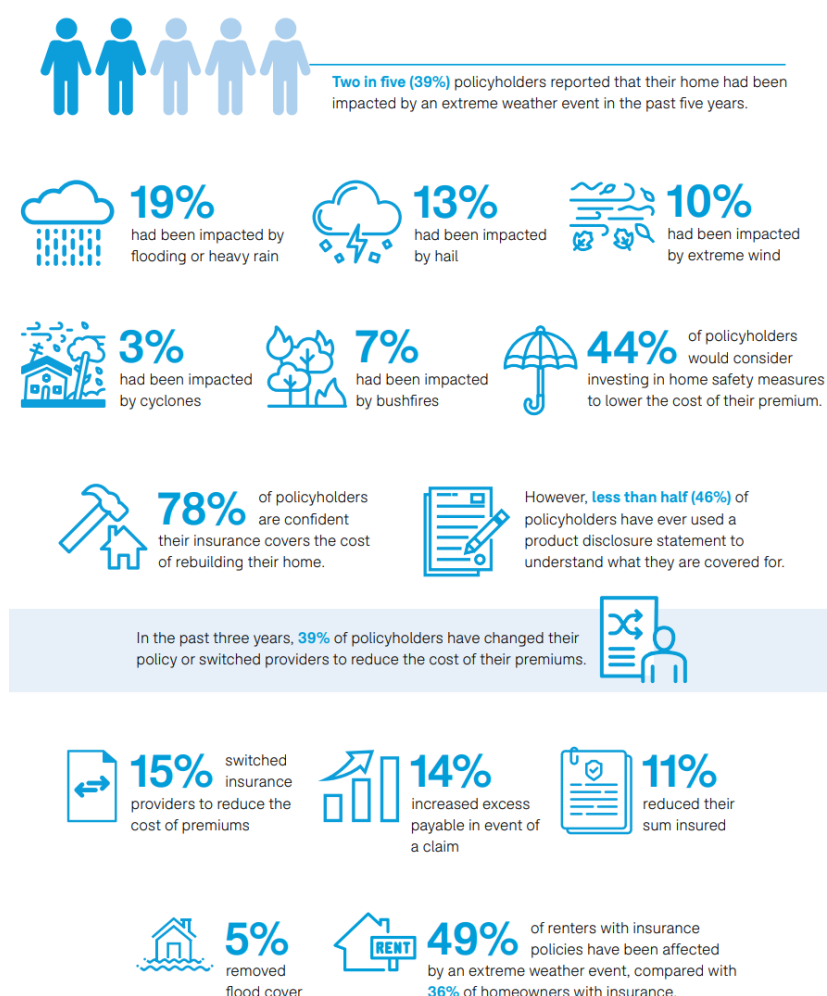
Source: Climate Council of Australia (2024). *Climate map of Australia*.

https://www.climatecouncil.org.au/resources/heatmap/?utm_source=Climate+Council+of+Australia&utm_campaign=96dadd9ed6-FUN-RET-DC-EMO-CAT-2402_Heat_map_%5BALL%5D&utm_medium=email&utm_term=0_03ddbdd2e5-afcf3e94d7-%5BLIST_EMAIL_ID%5D

Impact of disasters and extreme weather events

Most Australians (84%) say they have been directly affected by at least one climate-fuelled disaster since 2019. Around one in three fear that they may one day have to permanently relocate from their home. These concerns are seriously impacting mental health, especially amongst young people.³⁶ In June 2023, CHOICE conducted a nationally representative survey of home and contents insurance policyholders. It found that 40% of insured homes had been impacted by extreme weather events over the past five years. Floods, hail and extreme wind have impacted the most households.

Impact of extreme weather events: Australia, 2023

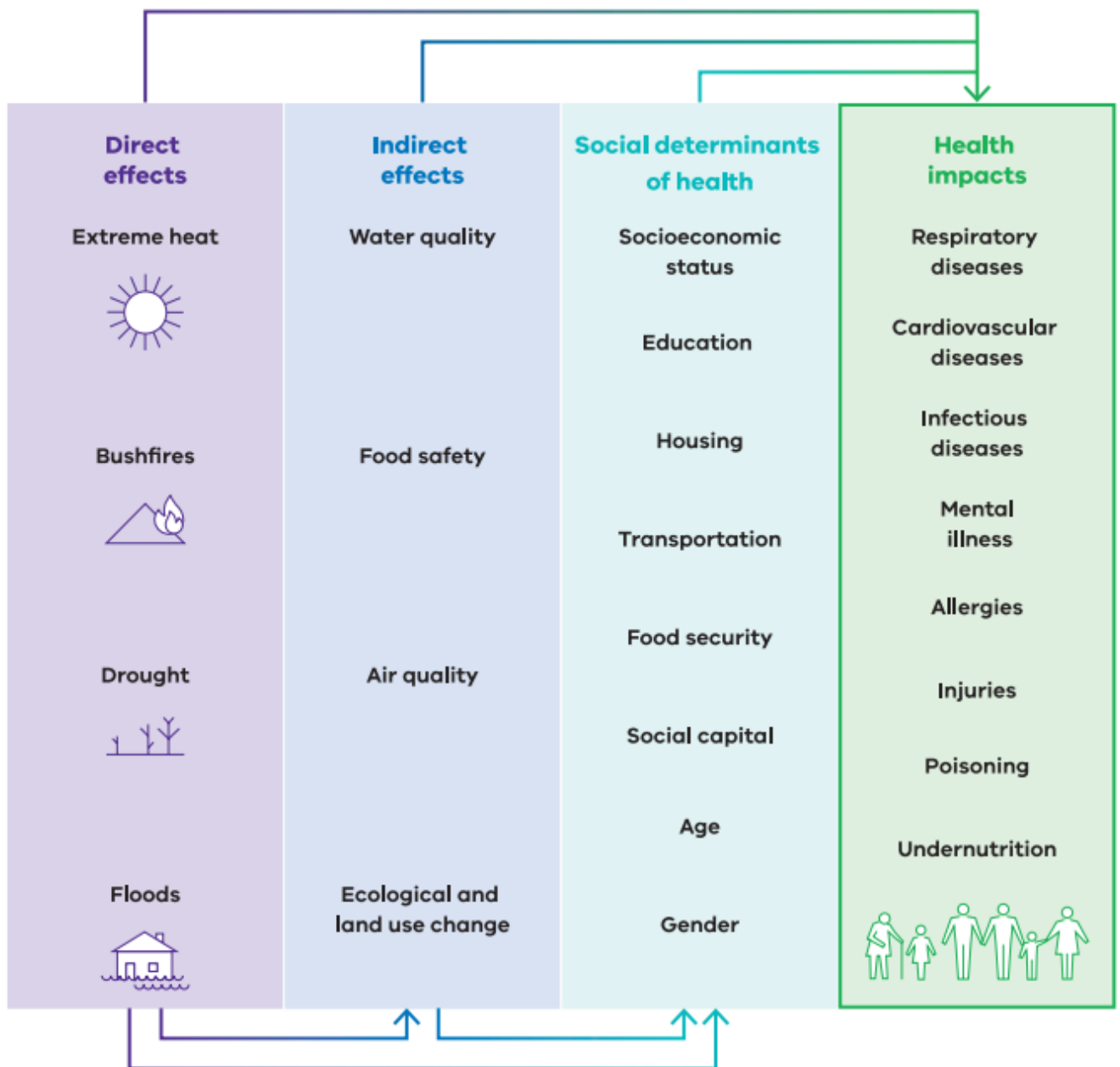


Source: Climate Council of Australia. *Weathering the storm – insurance in a changing climate*. [Weathering-the-Storm-Insurance-in-a-changing-climate-.pdf \(climatecouncil.org.au\)](https://www.climatecouncil.org.au/wp-content/uploads/2024/06/Too-Close-to-Home_ELCA-and-Climate-Council-report.pdf)

³⁶ Emergency Leaders for Climate Action (2024). *Too close to home*. https://www.climatecouncil.org.au/wp-content/uploads/2024/06/Too-Close-to-Home_ELCA-and-Climate-Council-report.pdf

The health impacts of climate change

Direct and indirect effects of climate change on health and wellbeing



Source: Department of Health and Human Services (2021). *Tackling climate change and its impacts on health through municipal public health and wellbeing planning - Guidance for local government, 2020*. https://www.mav.asn.au/_data/assets/pdf_file/0005/35276/Tackling-climate-change-and-its-impacts-on-health-through-MPHWP-Guidance-for-local-government-Sep-2020.pdf

Climate change has both direct and indirect health impacts. The direct impacts are caused by rising exposure to bushfires and smoke, droughts, floods, high heat/heatwaves, rising sea levels, vector-borne diseases (e.g., malaria), storms and extreme weather events. These impacts include hypothermia, hyperthermia, heat stress, infectious diseases, respiratory diseases, injury, trauma and death. For example, extreme heat also has a major impact on health, via heat stroke, exhaustion, cardiac conditions, respiratory illnesses, and falls due to dehydration; smoke causes childhood asthma emergency hospital visits, respiratory illness, health impacts on unborne children and a range of other health issues. Heatwaves are responsible for more deaths each year than any other type of disaster, including bushfires. In the heatwave leading up to Black Saturday in 2009, 374 Victorians were killed by exposure to extreme temperatures. There was also a 46% increase in emergency cases at hospitals across Victoria, with a 280% jump in heart attacks.

Some groups are more vulnerable than others. Women are more negatively affected by droughts and heat waves due to their roles in society and nutritional and physiological requirements during periods of menstruation and pregnancy. Pregnant women are physically more vulnerable because of immune system changes due to hormonal alterations and are also sensitive to changes in temperatures. They are also more susceptible to infectious diseases and poor pregnancy outcomes.³⁷

Indirect impacts include:

- zoonotic diseases (transmitted from animals to humans);
- diseases such as melioidosis, which is a potentially fatal soil and water-borne bacterial disease, which is currently on the rise after floods and wet weather in Queensland;
- water-borne diseases (from harmful algae and pathogenic microorganisms affecting drinking water, recreational water, and water supplied for agricultural and domestic use);
- food-borne diseases (such as salmonellosis);
- exposure to contaminants in food;

³⁷ Interim Australian Centre for Disease Control (2024). *Summary report appendices: Systematic mapping review of Australian research on climate and health Interventions*. <https://www.health.gov.au/resources/publications/systematic-mapping-review-of-australian-research-on-climate-change-and-health-interventions?language=en>

- exposure to contaminants in soil. E.g. the melioidosis bacteria has killed a number of people in Queensland in early 2025. These bacteria live in soil and mud, and can be drawn up to the surface during heavy rain and flooding.
- impacts on the cost, availability and nutritional quality of food;
- supplies of clean water;
- physical displacement;
- worse impacts of existing chronic diseases such as cardiovascular and respiratory diseases, due to higher temperatures, worse air quality and airborne pollen; and
- mental health.³⁸

Extreme weather events can cause psychological distress due to trauma, illness, loss of loved ones, destruction of property, displacement, disruption of communities, and reduced access to goods and services. Climate anxiety also directly affects mental health, especially for young people.






















There are a range of emerging impacts which are not well understood. For example, recent heavy rain and flooding in north Queensland has now cleared, but in its wake stirs a deadly bacteria that has so far killed 12 people (as of February 2024). Melioidosis is a tropical infection caused by the bacteria *Burkholderia pseudomallei*. It is a previously rare bacteria in Australia, but leads to thousands of deaths each year around the world, particularly in South-East Asia and India. The bacterium lives in soil and mud and is drawn up to the surface during the heavy rains. Currently, it is most common in Queensland and the Northern Territory. Flooding exposes the bacteria, and helps to spread contaminated soil and water. This increases the risk that it will find its way into a human body, through breaks in the skin or ingestion.

Examples of pathways between climate hazards and impacts are outlined in the infographic below, showing impacts on different sectors. These impacts all have flow on effects for human health. For example, if the agriculture sector is affected by crop losses,

³⁸ Department of Health and Human Services (2021). *Tackling climate change and its impacts on health through municipal public health and wellbeing planning - Guidance for local government, 2020*. https://www.mav.asn.au/_data/assets/pdf_file/0005/35276/Tackling-climate-change-and-its-impacts-on-health-through-MPHWP-Guidance-for-local-government-Sep-2020.pdf

reduced production and increased diseases, this affects food security, the livelihood of workers and businesses, and the viability of agricultural communities.

Climate change and potential impacts

| Sector | Increased Climate Hazards | Potential impacts |
|--|--|--|
| Communities and built infrastructure  |  <ul style="list-style-type: none"> Sea level rise Extreme fire weather Heatwaves and extreme heat events Tropical cyclone intensity Flooding |  <ul style="list-style-type: none"> Inundation, erosion and infrastructure damage along the coastline Maintenance and recovery costs Disruption to services Energy usage |
| Business and industry  |  <ul style="list-style-type: none"> Sea level rise Fire weather Inundation and flooding Heatwaves Tropical cyclone intensity |  <ul style="list-style-type: none"> Damage from extreme climate events Maintenance costs Disruption to services |
| Indigenous communities and culture  |  <ul style="list-style-type: none"> Heatwaves Flooding Fire weather Sea level rise |  <ul style="list-style-type: none"> Damage to cultural sites Loss of significant ecosystems |
| Biodiversity and ecosystems  |  <ul style="list-style-type: none"> Fire weather Temperatures Sea level rise Tropical cyclone intensity Sea temperatures |  <ul style="list-style-type: none"> Damage to landscapes and natural systems Coral bleaching Threats to flora and fauna Changes in the distributions of flora and fauna |
| Human health  |  <ul style="list-style-type: none"> Heatwaves and heat extremes Fire weather Tropical cyclone intensity Flooding |  <ul style="list-style-type: none"> More demand for health and emergency services Heat-related deaths, particularly among the elderly and vulnerable Mental health effects Changes in disease occurrence |
| Tourism  |  <ul style="list-style-type: none"> Temperatures Sea level rise Fire weather Heatwaves Tropical cyclone intensity |  <ul style="list-style-type: none"> Threats to tourism infrastructure Damage to popular environmental sites Risks to tourists unfamiliar with conditions |
| Agriculture  |  <ul style="list-style-type: none"> Temperatures Heatwaves Evaporation Changing rainfall patterns Extreme fire weather Tropical cyclone intensity Sea temperatures |  <ul style="list-style-type: none"> Changes in pest and diseases Changes in agriculture productivity in shifting climate zones Changes in water availability and security Crops destroyed by cyclones Thermal stress for livestock |

Source: Climate Council and Emergency Leaders for Climate Action (2024). *State of Queensland: Disaster Ground Zero*. https://www.climatecouncil.org.au/wp-content/uploads/2024/11/CC_MVSA0413-CC-ELCA-Report-Queensland-Climate-Impacts_V8-FA-Screen-Single.pdf

The social determinants of health which are affected include:

- early childhood experiences;
- education;
- employment;
- income;
- housing and geography;
- living and working conditions, particularly for outdoor workers and those in homes with poor thermal quality;
- quality of air, soil and water;
- social support networks;
- recreational opportunities;
- access to and use of health and human services, and to infrastructure, including communications and utilities (e.g. roads, public transport, power and water);
- income and living costs (particularly due to rising food, insurance and power costs). Many households are experiencing rising insurance costs, inadequate insurance cover, and the need to switch or reduce their insurance cover to cut costs.

Heatwaves can cause havoc for infrastructure such as roads and railways, which are unable to cope with these increasing temperature extremes. In January 2018, a ten kilometre section of the Hume freeway literally melted. And extreme temperatures can cause train tracks to buckle, overhead power lines to sag and motors to overheat, meaning trains need to either go very slowly or they can't run at all.³⁹

These impacts translate into a nine key forms of climate risk:

1. **Heat and extreme weather:** risks to health and wellbeing from slow onset and extreme climate impacts including increasing temperatures, heat extremes, storms, floods, and bushfires.
2. **Air quality:** Risks to health and wellbeing from aeroallergens and worsening indoor and outdoor air quality.

³⁹ Environment Victoria (2024). *Victoria, heatwaves and climate change*.

<https://environmentvictoria.org.au/our-campaigns/safe-climate/victoria-heatwaves-climate-change/>

3. **Individuals and communities at risk:** risks to health and wellbeing of individuals and communities in exposed and vulnerable situations that increase inequity as a result of impacts on the wider determinants of health, and reduce access to health and social support services.
4. **Service delivery and workforce:** Risks to delivery of health and social support services and the health workforce that are caused by increased demand, cost and disruptions.
5. **Mental health:** Risks to mental health and wellbeing including post-disaster trauma, climate anxiety, and a lost sense of belonging and connection to Country.
6. **Food and water security:** Risks to health and wellbeing from compromised ecosystem services that support food and water security.
7. **First Nations:** Risks to health and wellbeing of First Nations peoples that increase food, water, energy and housing insecurity, and impact connection to Country.
8. **Communicable diseases:** Risks to health and wellbeing from the emergence and increased transmission of communicable diseases.
9. **Infrastructure:** Risks to physical health and care infrastructure that affect the accessibility of healthcare and social support resources.

Other risks include risks to supply chains and risks to the economy.

Source: Department of Climate Change, Energy, the Environment and Water (2024). *Assessing and adapting to Australia's climate risks*. <https://www.dcceew.gov.au/climate-change/policy/adaptation/ncra>

Potential health effects associated with climate change-related hazardous events

| Event category | Examples of potential environmental changes | Examples of potential health impacts |
|--|--|---|
| Higher temperatures and heatwaves | <ul style="list-style-type: none"> • More frequent, severe and longer heatwaves • Overall warmer weather and increases in the number of days of extreme heat • Reduced quality of recreational and drinking water due to microbial and algal growth promoted by higher temperatures • Increased air pollution from higher levels of ground-level ozone • Increased production of pollens and spores, including as a result of longer pollen seasons | <ul style="list-style-type: none"> • Higher incidence of heat-related illnesses such as exhaustion and heatstroke and related effects such as falls • Increases in premature deaths • Exacerbation of existing health conditions including respiratory, cardiovascular and kidney diseases • Increases in food-, water- and vector-borne diseases due to the altered distribution of vectors (including mosquitos), increases in climate-sensitive food and water-borne pathogens and toxin-producing algal species • Higher incidence of allergies caused by pollen • Higher incidence of mental health impacts • Higher incidence of family violence • Health impacts from reduced physical activity due to high outdoor temperatures |
| Bushfires | <ul style="list-style-type: none"> • Increased fire danger weather and an increase in the length of the fire season • Increased intensity and frequency of fires • Increased air pollution due to particulates and other contaminants in bushfire smoke • Reduced drinking and recreational water quality due to contaminants associated with bushfires | <ul style="list-style-type: none"> • Injuries, burns and death • Health impacts associated with the displacement of populations and crowding in emergency relief centres • Exacerbations of heart and lung conditions, including asthma and increased eye, nose and throat irritation, due to exposure to bushfire smoke • Increased food- and water-borne illness due to contamination or disruption to essential services such as electricity, water and sewerage • Higher incidence of mental health impacts, trauma and longer-term disruptions to social systems – for example, due to lost income and property damage or loss • Higher incidence of family violence • Health impacts from reduced physical activity due to bushfire smoke |
| Drought and overall decreased | Increased drought in some areas, affecting water supplies and agricultural production | Higher incidence of mental health impacts and longer term disruptions to social systems – for example, due to lost income |

| | | |
|--|---|---|
| average rainfall | <p>and contributing to increased bushfire risk</p> <ul style="list-style-type: none"> • Increased frequency of dust storms due to a drying landscape • Reduced recreational and drinking water availability and quality | <ul style="list-style-type: none"> • Exacerbations of heart and lung conditions including asthma – for example, due to exposure to dust storms • Health impacts associated with food or water shortages including reduced access to fresh, healthy and affordable food due to reduced food yield • Increase in illnesses related to drinking water and recreational water – for example, due to increases in blue-green algae • Health impacts from reduced physical activity due to degradation of public open space and sporting and recreation grounds |
| Flood and heavy rainfall events | <ul style="list-style-type: none"> • More frequent and intense thunderstorms • Increased heavy rainfall events causing flooding • Increased contamination of drinking and recreational water due to run-off from heavy rainfall and flooding | <ul style="list-style-type: none"> • Injuries, drowning and other accidental deaths • Health impacts associated with the displacement of populations and crowding in emergency relief centres • Increased food- and water-borne illness due to contamination or disruption to essential services such as electricity, water and sewerage • Increases in mosquito-borne diseases due to increased breeding following flooding • Increased respiratory illness due to greater exposure to moulds • Higher incidence of mental health impacts, trauma and longer term disruptions to social systems – for example, due to lost income and property damage or loss • Higher incidence of family violence • Health impacts from reduced physical activity due to heavy rainfall and flooding |

Source: Department of Health and Human Services (2021). *Tackling climate change and its impacts on health through municipal public health and wellbeing planning - Guidance for local government, 2020*. https://www.mav.asn.au/_data/assets/pdf_file/0005/35276/Tackling-climate-change-and-its-impacts-on-health-through-MPHWP-Guidance-for-local-government-Sep-2020.pdf

Health impacts in Victoria

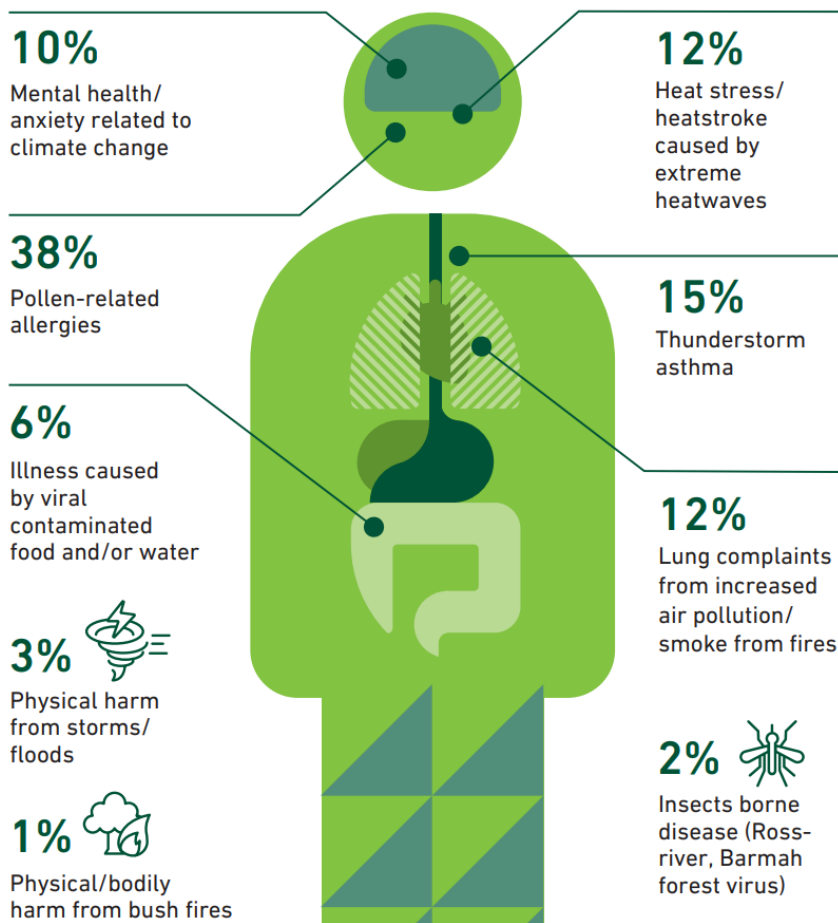
Over the past two years, 51% of Victorians and their family members have experienced health impacts linked to climate change. The main impacts include allergies, thunderstorm asthma, heat stress and heatstroke, respiratory impacts from air pollution and smoke, and mental health issues. So far, respiratory issues and high heat have had the most impact. For example, during the smoke and air pollution from the 2019/20 bushfires, there was a 95% cent increase in Victoria for asthma (January 2020) compared to the five-year average.⁴⁰

There have been fewer direct impacts (such as physical harm) from storms, floods and fires; however, these events have had many indirect impacts on health and wellbeing. But gaps remain in community understanding of the type of health conditions which are expected to become more common, such as heat stress and heatstroke. This may affect community resilience, reducing the level of individuals and families who undertake preparedness and protective measures.

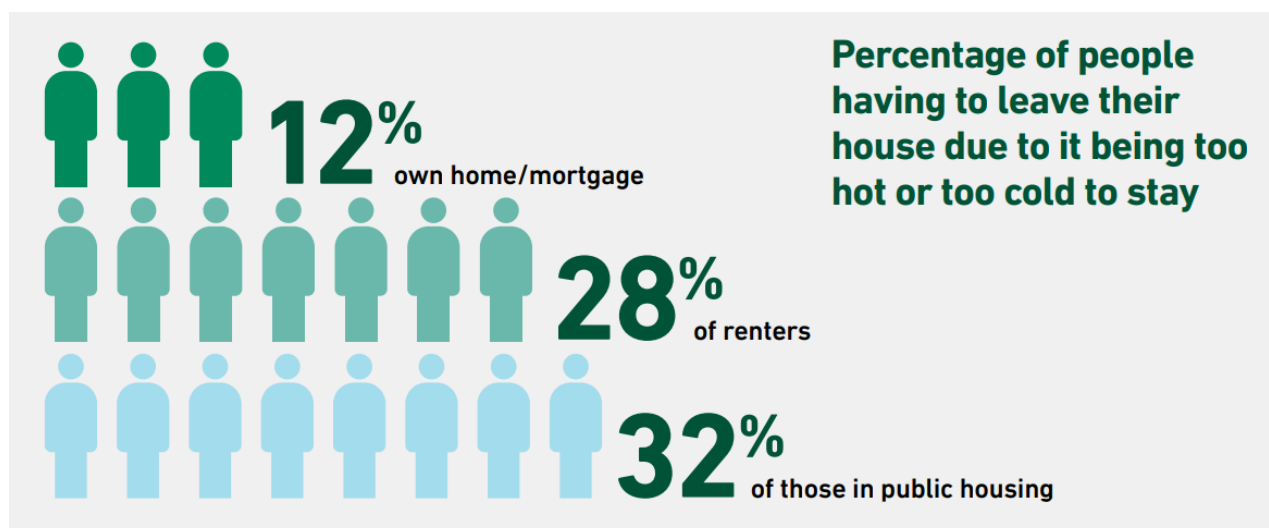
Those in rental or public housing are particularly vulnerable to extreme temperatures. Nearly 30% of renters have had to leave their home at times because it was too hot or too cold to stay there, due to the quality of the housing. There are additional impacts from heating or cooling failing due to power outages, as were seen in the 2019/20 extreme heat and the June 2021 storm impacting the Dandenong Ranges. Already, 39% of Victorians feel too cold in their home during winter and 44% feel too hot in their home during summer.

The diagram below outlines the health impacts that Victorians and their families have experienced over the past couple of years.

⁴⁰ Department of Health (2024). *Victorian Public Health and Wellbeing Plan 2023-2027*.
<https://www.health.vic.gov.au/victorian-public-health-and-wellbeing-plan-2023-27>



Source: Sustainability Victoria (2024). *State of Sustainability Report 2024*.
<https://assets.sustainability.vic.gov.au/asset-download/Document-State-of-Sustainability-Report-2024.pdf>



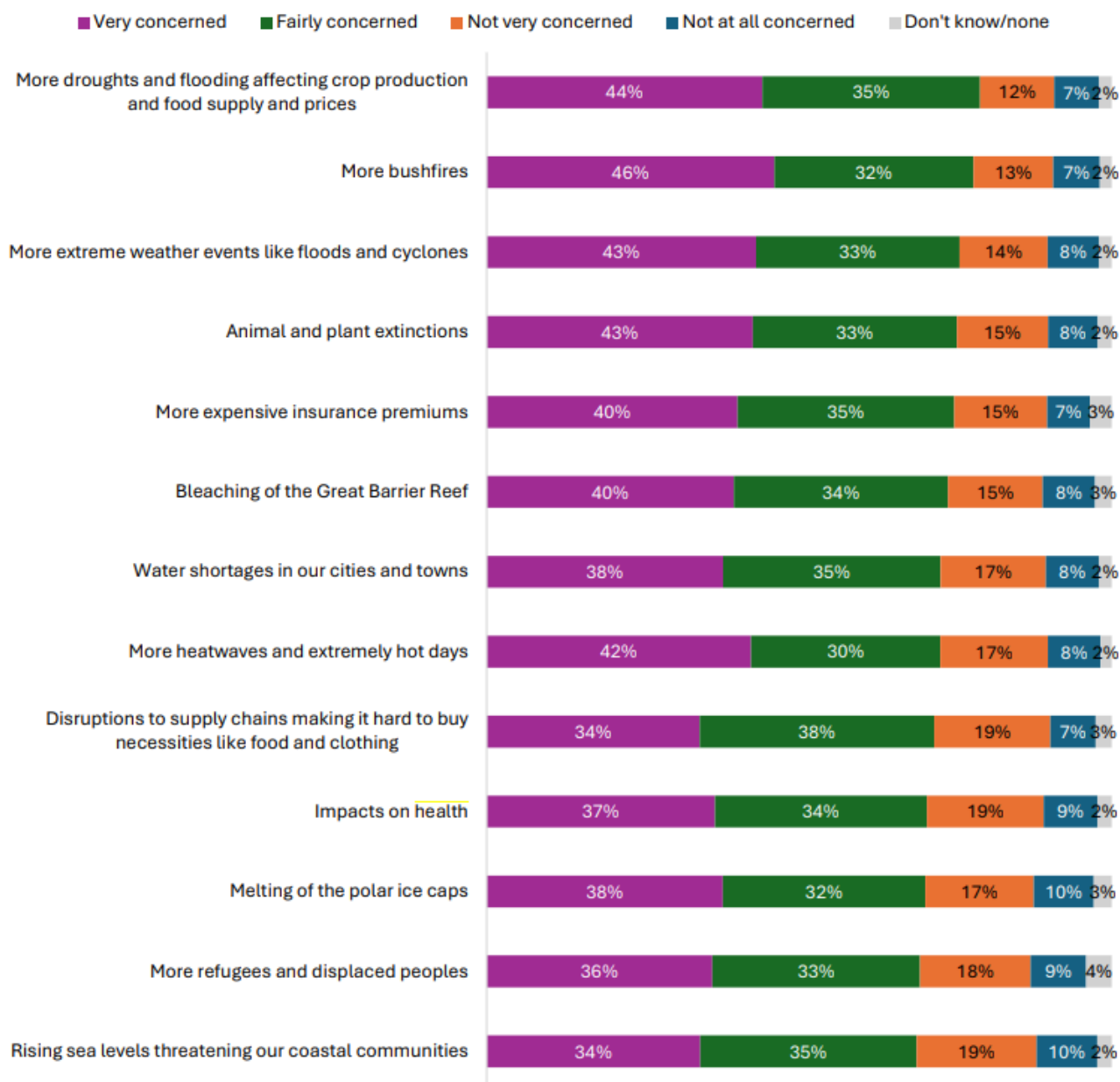
Source: Sustainability Victoria (2024). *State of Sustainability Report 2024*.
<https://assets.sustainability.vic.gov.au/asset-download/Document-State-of-Sustainability-Report-2024.pdf>

Community concerns

A 2024 survey of 2,095 adults found that Australians are very concerned about the wide-ranging impacts of climate change. More than 70% had health-related concerns relating to food and water security, more bushfires, more extreme events, higher insurance costs, more high heat days, and general health impacts (very concerned or fairly concerned):

- 79% are concerned that climate change will result in more droughts and flooding affecting crop production, and food supply and prices (including 44% who are very concerned).
- 78% are concerned that climate change will lead to more bushfires.
- 76% are concerned about more extreme weather events like floods and cyclones.
- 75% are concerned that climate change will result in more expensive insurance premiums (including 40% who are very concerned).
- Water shortages in our cities and towns (73%).
- 72% are worried that climate change will lead to supply chain disruptions, making it harder to buy essential items such as food and clothing; and 72% are concerned about more heatwaves and extremely hot days.
- 71% are concerned about impacts on health.

Concern that climate change will result in the following impacts



Source: The Australia Institute (2024). *Climate of the Nation 2024 Tracking Australia's attitudes towards climate change and energy*. <https://apo.org.au/sites/default/files/resource-files/2024-11/apo-nid329142.pdf>

How climate change is affecting Yarra Ranges

Over the past few years, Yarra Ranges has been impacted by bushfire smoke, storms, flash flooding, high heat, a global pandemic, food security issues and water quality issues. It has also been affected by indirect impacts on housing, services, utilities and infrastructure; and socio-economic impacts such as rising insurance and power costs.

Climate change risk and insurance

By 2030, 65% of properties in Yarra Ranges are forecast to be at high or medium risk from climate change (under a high greenhouse gas emissions scenario). This is the second-highest level in Melbourne - only Nillumbik has a higher risk (68%). Compared to Nillumbik, Yarra Ranges has a much higher level of properties expected to be at high risk – 22,193 properties compared to 1,866. The main types of risk were:

- Bushfire - 30.5% of properties were at medium to high risk for bushfire, rising to 43% by 2050 and 56% by 2100. Most suburbs had 20% to 100% of properties at medium to high risk. Apart from the Urban Area, most of Yarra Ranges is currently classed as a bushfire prone area.⁴¹
- 3% were at risk for riverine flooding.
- Less than 1% were at risk for surface water flooding.
- No properties were at risk from coastal inundation.
- No properties were considered at risk for extreme wind.⁴² Note that many climate reports tend to under-estimate the direct and indirect impacts of severe storms on homes, services, infrastructure, transport and communications.

Properties at high risk from climate change are expected to have annual damage costs of more than 1% of the replacement costs, and are therefore considered uninsurable. If insurance policies remain available in these areas, the premiums would be unaffordable for most people. Across Australia, one in every 25 properties (4%) is expected to become 'high risk' and uninsurable over the next few years. A further 9% of properties are expected

⁴¹ Source: VicPlan (2024). <https://mapshare.vic.gov.au/vicplan/>

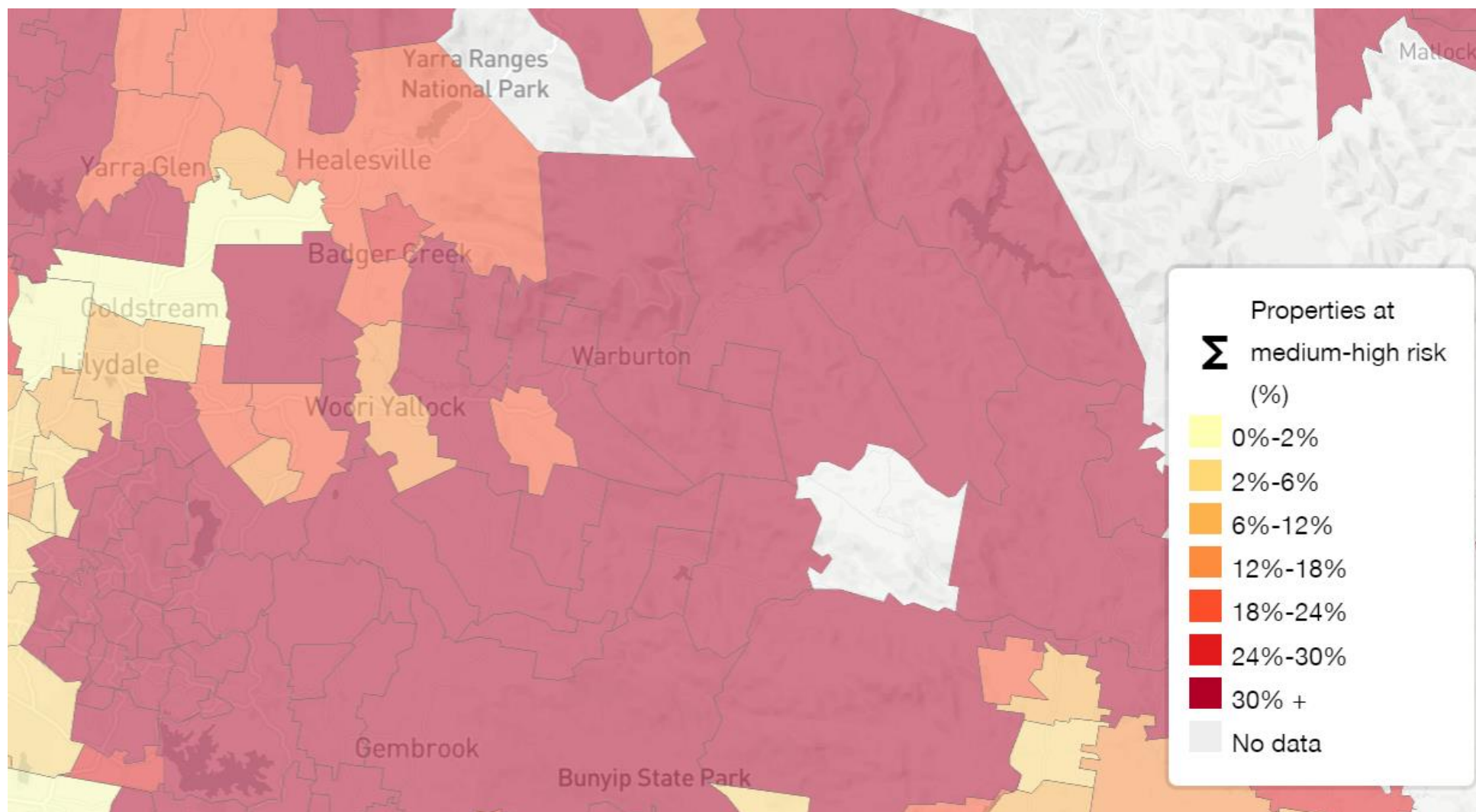
⁴² Climate Council (2022). *Climate risk map of Australia*. [Climate Risk Map of Australia | Climate Council](#)

to reach the 'medium risk' category by 2030, and are at risk of becoming underinsured.⁴³ A national survey found that 1 in 20 people had already cancelled their home insurance coverage due to a rise in insurance premiums, and 1 in 9 had reduced their level of cover. 1 in 20 had been told by their insurer that they could not be insured, one-third were struggling to afford their premiums, and nearly two-thirds of people reported that their premiums had increased in the last two years.⁴⁴

⁴³ Climate Council (2022). *Uninsurable Nation: Australia's most climate-vulnerable places*. [CC_Report-Uninsurable-Nation_V5-FA_Low_Res_Single.pdf \(climatecouncil.org.au\)](https://climatecouncil.org.au/CC_Report-Uninsurable-Nation_V5-FA_Low_Res_Single.pdf)

⁴⁴ Climate Council (2022). *Uninsurable Nation: Australia's most climate-vulnerable places*. [CC_Report-Uninsurable-Nation_V5-FA_Low_Res_Single.pdf \(climatecouncil.org.au\)](https://climatecouncil.org.au/CC_Report-Uninsurable-Nation_V5-FA_Low_Res_Single.pdf)

Climate Risk Map of Australia: Yarra Ranges, 2030

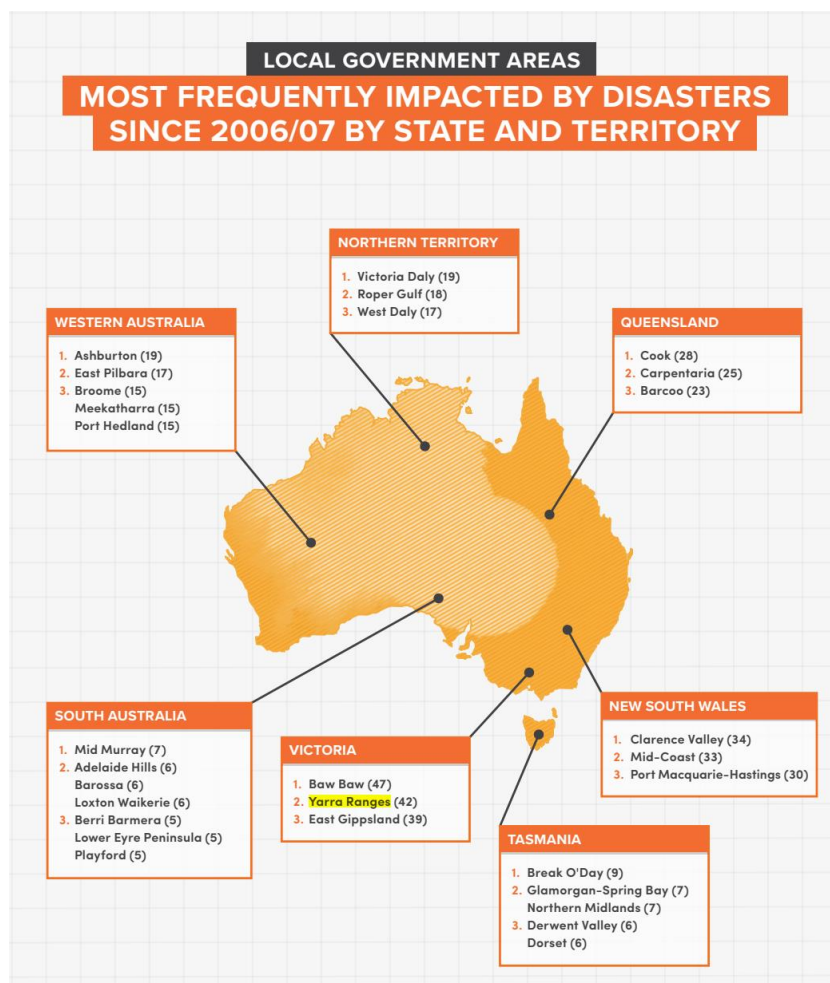


Note: High emissions scenario.

Source: Climate Council (2022). *Climate risk map of Australia*. <https://www.climatecouncil.org.au/resources/climate-risk-map/>

DISASTER RECOVERY FUNDING

Some communities have been repeatedly hit by fires, floods and storms with little time to recover in between. From 2006/07 to 2023/24, 514 local government areas were impacted at least once by disasters significant enough to require activation of Disaster Recovery Funding Arrangements. On average, each of those communities were impacted 10 times. Some communities are much more heavily impacted by climate-fuelled disasters – 15 local government areas have sought and received Australian Government assistance for recovery from disasters at least 25 times since 2006/07. Yarra Ranges had the second highest level of assistance seeking – it sought and received assistance 42 times.



Source: Emergency Leaders for Climate Action (2024). *Too close to home*.

https://www.climatecouncil.org.au/wp-content/uploads/2024/06/Too-Close-to-Home_ELCA-and-Climate-Council-report.pdf

SES STORM HOTSPOTS

The Lilydale State Emergency Services (SES) unit in Yarra Ranges ranks 3rd in Victoria for storm hotspots. According to VICSES data, over the past financial year (2022/23), VICSES volunteers received a total of 32,985 requests for assistance across the state. Benalla was the hardest hit suburb with 207 requests for assistance, followed by Echuca with 206, and Lilydale with 195 – ranking Lilydale the highest in metropolitan Melbourne.

Source: Suncorp (2023). *Vic SES' Top 10 storm hotspots in Victoria*.

<https://www.suncorpgroup.com.au/news/news/Storm-Season-Hotspots-2023>

CASE STUDY 1: EXTREME WEATHER IN YARRA RANGES, JUNE 2021

In mid-June 2021, parts of Victoria were slammed by the most violent storm ever recorded. There were winds of more than 100 kilometres per hour and, in some areas, rainfall of more than 200 millimetres in just 24 hours. The main impacts were in Gippsland and Yarra Ranges. Two people died due to the event, floodwaters left some communities inaccessible for days, a number of homes were destroyed or damaged by falling trees, and many households were without the internet and power for weeks. Insurance claims related largely to property damage from falling trees, food spoilage from power outages, and some water inundation.

The damage in Yarra Ranges led to:

- 79 properties non-habitable.
- 183 properties registered for storm impacts.
- More than 1,000 homes and business extensively impacted by storm debris.
- Almost 5,000 properties impacted by flood.
- More than 3,000 homes without power and internet for more than month.
- A conservative estimate of 25,000 fallen trees across the region.
- 34 communities lost NBN/internet service and were unable to call 000 for assistance.
- Extensive damage to roads.
- 3,157 drainage/tree related requests for assistance from the community.

A review of the June 2021 storm impacts assessed transport, access and infrastructure impacts. It found that there had been significant damage to major road networks, power infrastructure, telecommunications and other infrastructure:

- Six water treatment plants lost mains power and were required to operate on generators.
- Seventeen health services experienced disruptions to power supplies and had to use back-up generators.
- Eight schools in the Dandenong Ranges were closed due to weather impacts.
- A number of national parks, state forests and other public lands were closed after being deemed inaccessible or dangerous.
- More than 2,100 kilometres of state-managed roads throughout Victoria, due to fallen trees, landslips and flooding.
- Multiple metropolitan and regional rail corridors and coach routes experienced disruptions due to flooding, fallen trees and communication outages.

- Several communities were isolated from any telecommunication access, including landline, mobile phone, internet, and Triple Zero (000) access. Most of the loss of telecommunications was due to power outages.
- Due to the significant damage to electricity critical infrastructure, many customers were off supply for an extended period of time, as extensive works were required to rebuild impacted infrastructure.

The storm and associated flooding also impacted the Yallourn mine in the Latrobe Valley, which supplies more than a fifth of Victoria's electricity needs. Cracks were identified along the Morwell River Diversion embankment, which had the potential to cause a collapse of the mine wall.

A mother from Kallista, Victoria, who was impacted by the extreme weather events of June 2021:

"In June 2021 whilst in lockdown we experienced a severe storm that felled 25,000 trees, we were then without phone, internet and power for almost two weeks. During this time I felt extreme fear however I have a tendency to disassociate and remained in shock for the months to follow. I then went on to seek mental health support through my GP and am now seeing a psychologist. Since this time we have had more storms, landslides and floods. We have decided to move, reluctantly, however we are aware this may not keep us safe from events they will just be different."



Photographer: Andrew Quilty

"I am hyper aware now of the changing climate and worry about the future my child will live in...I am also very connected to my local community and we are doing all I can to look out for each other. I feel more connected locally however I am aware that Government is relatively inert when it comes to being prepared for weather events and disasters."

Source: Climate Council (2023). *Climate trauma: The growing toll of climate change on the mental health of Australians*. <https://www.climatecouncil.org.au/wp-content/uploads/2023/02/Report-Climate-Change-and-Mental-Health.pdf>; <https://www.climatecouncil.org.au/resources/climate-trauma/>

CASE STUDY 2: POWER OUTAGES IN YARRA RANGES DUE TO THE FEBRUARY 2024 STORMS

Destructive storms on 13 February 2024 left more than 530,000 electricity customers without power. About 90% of these customers had power restored within three days. But the hardest hit communities experienced prolonged outages. These communities were residents in the Yarra Ranges township of Monbulk, and also in Mirboo North, Emerald, Cockatoo and Gembrook. There has been an independent Network Outage Review into how privately owned power companies responded to the storms. The Network Outage Review Panel attended Monbulk, Emerald, Gembrook, and Cockatoo for engagement with the community in May 2024. More than 85 community members attended. Themes related to community adaptation included:

- Households, businesses and services need preparedness and response plans which include storm events, prolonged power outages and telecommunications outages. Community members wanted more information about how to prepare (particularly in terms of energy resilience) and on safe places to go.
- Concern about vulnerable community members, particularly when communication failed;
- The need for backup power at community facilities.
- Continued operation of essential services and utilities, including places to buy fuel and food (lack of access to gas for generators was one issue).
- Support on deciding what to purchase to prepare for power outages (e.g. generators and power banks), and support for those who cannot purchase batteries or generators.
- More preparedness planning for scenarios where communication is lost.
- A move in sentiment towards household and community preparedness planning, recognising that emergency services may be overwhelmed or unable to assist.

Community preparation is also starting to move from focusing on bushfires to multi-hazard preparation.

- More local hubs and community access points are needed (with backup power and telecommunications).⁴⁵

Those consulted wanted to be prepared for prolonged power outages and seemed to be purchasing generators rather than solar panels. Providing information on how to use solar panels with PV points (which give access to solar power during sunlight without the need for a battery); battery purchase options; how to use battery power from electric vehicles with vehicle-to-load capacity; and making purchases such as power banks, could assist the community to better cope with power outages.

Community comments on preparedness and mitigation included:

- *"Community needs support and 'expertise' to plan our own way forward for energy resilience – community knows the outcomes wanted but doesn't know what technology or how to get there."*
- *"People are being proactive and getting generators".*
- *"I would like to know what type of generator or power bank I should get to mitigate prolonged power outage".*
- *"I'm concerned for people in our community that do not have the means to be resilient".*
- *"We have an aging population. We have people who are frail, infirm, and dependent on external support to go about daily lives. Not tech savvy. Then you take communications away - they are most at risk."*
- *"Individuals should know who they can go to within 500m and where can they drive to for their own safety".*
- *"We need more conversation about how the community can help itself".*
- *"Putting high voltage lines underground would assist in repair speed in treed areas".*

⁴⁵ Source: Network Outage Review (2024). *Summary of feedback from the Hills community engagement 4-5 May 2024.* https://www.energy.vic.gov.au/_data/assets/pdf_file/0026/705914/cockatoo-emerald-gembrook-monbulk-engagement-summary.pdf

- *“Trees coverage in bushfire prone areas - the bushfire commission recommended power lines underground. The sewers, water, utility providers are underground.”⁴⁶*

The review found that:

- The capacity to respond, the impact, and the trauma of the event, were compounded by the loss of other essential services. Continued operability of radio, telecommunications, fuel stations, supermarkets, and water and wastewater services, are critical to the community during prolonged power outages.
- Community and community groups reported they have a good idea of what they want in terms of preparedness to power outages but need support in realising what is the best technology to implement or pathway to success. They are also looking for support to invest in these outcomes.
- Preparedness planning for a multi consequence event like a storm with communication loss had not been sufficiently tested.
- Community sentiment was that they must chart their own survival plans because emergency services can’t guarantee they will be able to help during storm events.
- Many community members identified that they had their own preparedness measures, including battery backups and generators, whilst others felt that they didn’t have the means and weren’t able to do more.
- Each of the four localities identified strong community preparedness. Both formal and informal groups were active to support planning and response. Community reported a broadening of existing groups (e.g., Fireguard groups) to be more community and multihazard oriented rather than just bushfire.
- Back-up systems at community facilities and hubs, and investment across the whole area, is reported to be at different levels. Particularly, more local hubs and community access points (with backup power and telecommunications) were seen as needed across the broader geography and townships.

⁴⁶ Source: Network Outage Review (2024). *Summary of feedback from the Hills community engagement 4-5 May 2024.* https://www.energy.vic.gov.au/_data/assets/pdf_file/0026/705914/cockatoo-emerald-gembrook-monbulk-engagement-summary.pdf

- Individual households (especially newer residents), businesses and public facilities (e.g. schools) would benefit from preparedness and response plans that include storm events, prolonged power outages and telecommunications outages.
- There was a strong desire across the localities to have powerlines undergrounded.⁴⁷

Source: Network Outage Review (2024). *Summary of feedback from the Hills community engagement 4-5 May 2024*. https://www.energy.vic.gov.au/_data/assets/pdf_file/0026/705914/cockatoo-emerald-gembrook-monbulk-engagement-summary.pdf

⁴⁷ Source: Network Outage Review (2024). *Summary of feedback from the Hills community engagement 4-5 May 2024*. https://www.energy.vic.gov.au/_data/assets/pdf_file/0026/705914/cockatoo-emerald-gembrook-monbulk-engagement-summary.pdf

Flooding and water contamination

Flooding is an ongoing issue in parts of Yarra Ranges and is exacerbated by climate change. Flooding includes stormwater or "rainfall runoff", where water runs off hard impermeable surfaces such as roofs, driveways, and roads. Urban and built areas are prone to flooding and rising water levels, as water cannot be absorbed in the ground as easily due to the shape of an area. Storm water will instead move across land, and can build up in areas and cause flooding. This puts pressure onto Council's drainage network, which collects run off and moves it to Yarra Ranges waterways. Waterways can then be contaminated by stormwater.⁴⁸ The June 2021 storms affected the water supply in Yarra Ranges - residents in Kallista, Sherbrook and The Patch were warned not to drink their tapwater due to storm damage.⁴⁹

Bushfires and smoke

HEALTH IMPACTS OF THE 2019/20 BUSHFIRES

The fires in late 2019 and early 2020 which affected Melbourne were along the east coast of Australia, in eastern Victoria, the Australian Capital Territory and New South Wales. An analysis of Victorian general practice data on the effects of bushfire smoke looked at how the first four weeks of 2020 – which saw extensive bushfires and smoke – compared with the first four weeks of 2019. It found that:

- There was a significant increase in respiratory-related presentations to GPs.
- The number of new respiratory diagnoses rose by 66% and new asthma diagnoses rose by 94%.
- There was a decrease in GP visits by people with an existing respiratory diagnosis. This may indicate that this group was more aware of potential risks from smoke exposure or

⁴⁸ Yarra Ranges Council (2024). *Flooding issues within Yarra Ranges*.

<https://www.yarraranges.vic.gov.au/Development/Roads-drains-footpath/Drainage-flooding-and-your-property/Flooding-issues-within-Yarra-Ranges>

⁴⁹ ABC News (16 June 2021). *Melbourne communities urged not to drink tap water potentially contaminated after storms*. <https://www.abc.net.au/news/2021-06-16/melbourne-storm-hit-communities-dandenong-yarra-ranges/100218772>

more likely to have used preventative measures, compared to those who did not have a previous diagnosis.

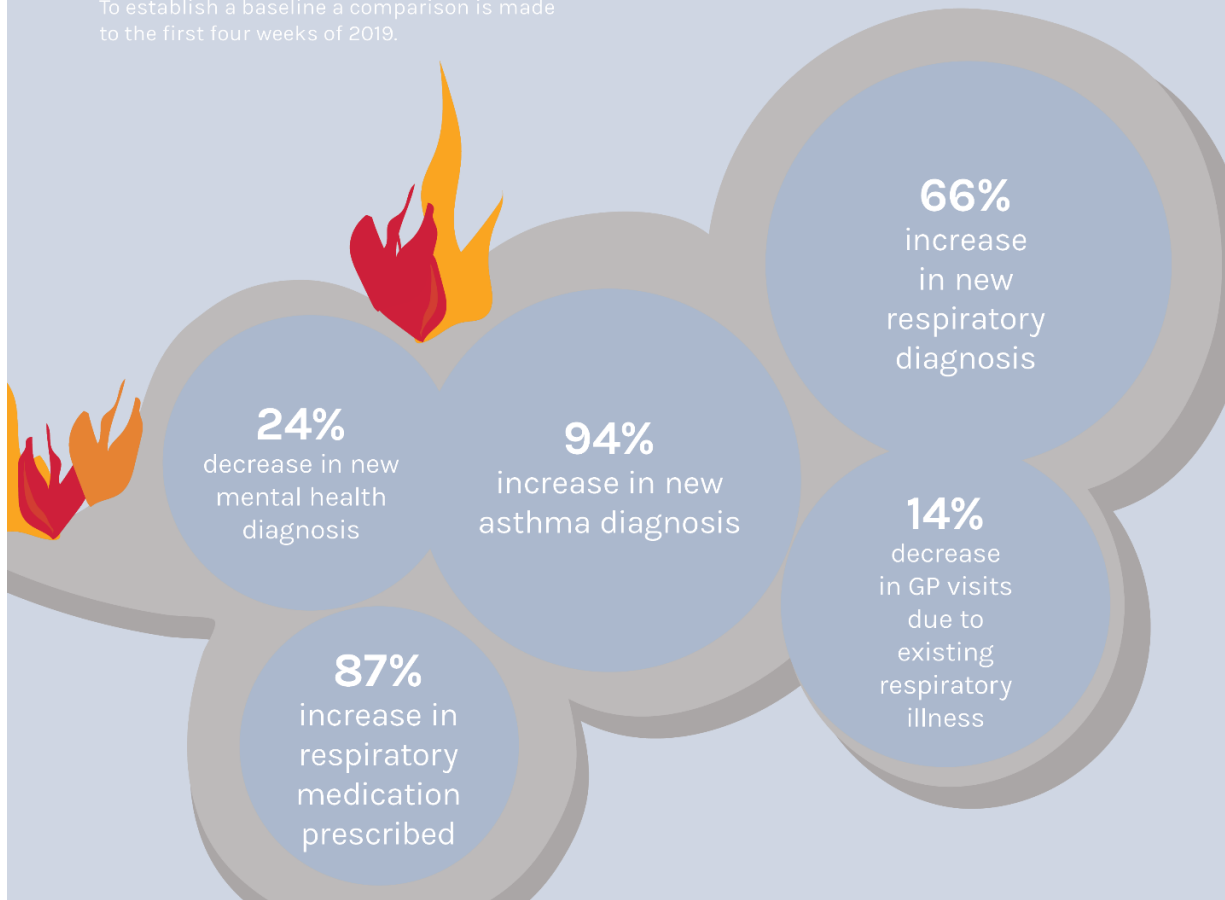
- In the short-term, there was no significant increase in respiratory infection rates, or in mental health presentations and prescriptions.

Some of these impacts are likely only to be visible over the medium to longer term, beyond the initial exposure. The potential ongoing impacts of bushfire could include conditions such as:

- immediate trauma-related mental health conditions;
- immediate and short-term exacerbation of respiratory conditions;
- short to medium term lung infections;
- a longer-term increase in respiratory-related conditions;
- worse health outcomes for newborn babies; and
- a longer-term increase in mental health conditions.

Effects of bushfire smoke

Catchment data from POLAR GP is used to conceptualise effects of recent bushfires. To establish a baseline a comparison is made to the first four weeks of 2019.



Source: Eastern Melbourne PHN (2020). *Effects of bushfire smoke*. Retrieved from: <https://www.emphn.org.au/news-events/news/effects-of-bushfire-smoke>

As bushfires sprang up in Victoria and air quality worsened, the Outer East experienced a large increase in the rate of sales of inhalers to treat shortness of breath. Maps of air quality and inhaler sales show a clear correlation. The worst weeks were:

- 4-10 November (a 10% increase);
- 18-24 November (13.5%);
- 2-8 December (12%);

- the weeks from 23 December to 26 January, with increases of 17%, 17%, 47%, 56% and 11% respectively;
- 24 February to 2 March (12%).

Change in crude rate of sales of inhalers for shortness of breath: Outer East Melbourne, 2018–19 to 2019–20

| Week | Change in rate of sales (per 100,000) of inhalers for shortness of breath, 2019/20 compared to 2018/19 |
|------------------------|--|
| 2–8 September | 5.0% |
| 9–15 September | 1.9% |
| 16–22 September | 1.8% |
| 23–29 September | 4.9% |
| 30 September–6 October | 2.7% |
| 7–13 October | 4.9% |
| 14–20 October | -2.9% |
| 21–27 October | 1.2% |
| 28 October–3 November | 5.1% |
| 4–10 November | 10.4% |
| 11–17 November | -4.0% |
| 18–24 November | 13.5% |
| 25 November–1 December | 9.1% |
| 2–8 December | 12.0% |
| 9–15 December | 2.7% |
| 16–22 December | 3.7% |
| 23–29 December | 17.3% |
| 30 December–5 January | 17.4% |
| 6–12 January | 47.1% |
| 13–19 January | 55.5% |
| 20–26 January | 10.9% |
| 27 January–2 February | -1.0% |
| 3–9 February | 0.6% |
| 10–16 February | -4.4% |
| 17–23 February | -8.5% |
| 24 February–2 March | 12.4% |

Source: Australian Institute of Health and Welfare (2020). *Australian bushfires 2019–20: exploring the short-term health impacts*. Retrieved from: <https://www.aihw.gov.au/reports/environment-and-health/short-term-health-impacts-2019-20-bushfires/data>

INFANT AND CHILD HEALTH IMPACTS

Smoke from the 2019/20 bushfires particularly affected babies whose mothers were pregnant during the bushfires, and children who were very young at that time. Impacts included:

- growth issues;
- asthma and other respiratory issues;
- premature babies and small babies - especially small premature babies with diseased placentas;
- placental dysfunction (e.g., the placenta looking like that of a pack-a-day smoker when the mother did not smoke);
- high blood pressure in pregnant women;
- children not meeting developmental milestones, including speech, mobility and balance.

The smoke exposure in Sydney during the fires was equivalent to smoking 37 cigarettes a day.

Climate change means that the number of severe bushfires is likely to increase. Responses to this issue include educating residents to:

- Reduce exposure by staying inside as much as possible, with windows and doors closed.
- Close the fresh air intake on air conditioning systems and install a filter.
- Consider obtaining a HEPA (high-efficiency particulate air) purifier.
- Wear N95 masks when people have to go outdoors (including for children).
- Put in refrigerated air-conditioning rather than evaporative, so that the house can be cooled whilst sealed.

The risk is highest for pregnant women, young children, older residents and those with respiratory issues.

Source: Bloomberg (2023). *Bushfire babies*, 18 May 2023.

<https://www.bloomberg.com/news/videos/2023-05-18/bushfire-babies-episode-4>

Extreme heat

Heat-related emergency presentations by Yarra Ranges residents dropped by 22.5% between 2018/19 and 2022/23, from 583 to 452.⁵⁰ Presentations related to heat vary according to the weather, spiking during hot summers.

Food security

The link between natural disasters and increased food costs is not easy to quantify. But extreme weather events, changing temperatures and drought will continue to affect both the capacity to grow food and the capacity of animal agriculture to produce meat, dairy products and eggs. This will see prices continuing to increase, exacerbating food insecurity.

During the pandemic-related lockdowns in 2020, Yarra Ranges had the fourth-highest level of food insecurity in metropolitan Melbourne.⁵¹ Prior to the pandemic, Yarra Ranges was already experiencing a high level of food insecurity: in 2017, 16% of adults in Yarra Ranges were concerned about food insecurity with hunger, the highest in the Eastern Metropolitan Region (EMR); 11% of parents relied on low-cost food to avert food insecurity with hunger, the second-highest level in the EMR.

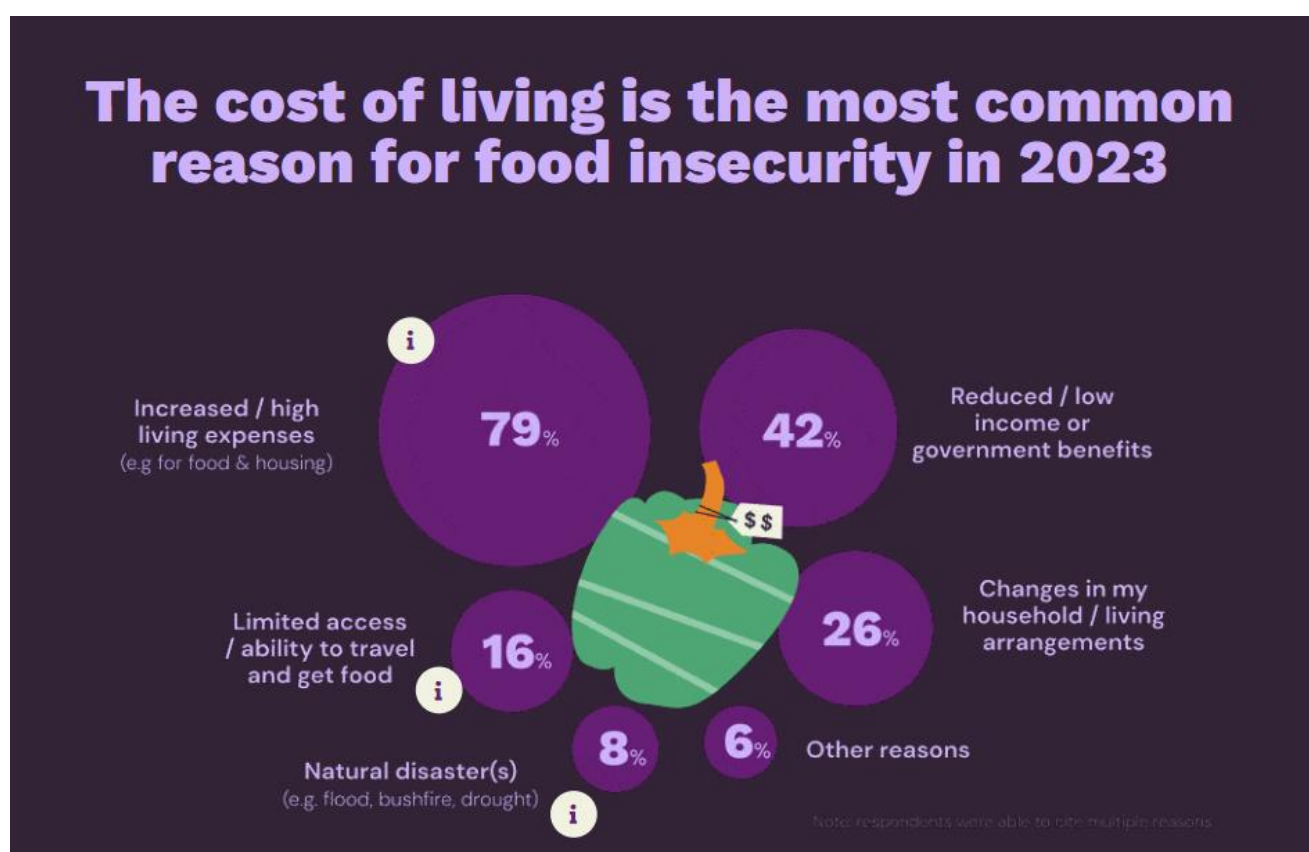
The latest local food security data are from the 2023 Victorian Population Health Survey (VPHS). It shows that 9% of adults had experienced food insecurity in the past twelve months, compared to 8% across Victoria. This measure refers to adults who ran out of food in the past twelve months and could not afford to buy more. This is slightly up from the estimate of 8% in 2020; the level has risen much more across Victoria, from 5.9%.

⁵⁰ Victorian Department of Health (2023). *Victorian Admitted Episodes Dataset (VAED) and Victorian Emergency Minimum Dataset (VEMD) - Unpublished hospital usage data for Yarra Ranges and Victoria, 2018/19-2022/23*.

⁵¹ Department of Health. *Victorian Population Health Survey 2020*. <https://vahi.vic.gov.au/report/population-health/victorian-population-health-survey-2020-dashboards>

Nationally, the 2023 Food Bank Hunger Report⁵² found that, in the past year, 3.7 million Australian households (36%) had experienced moderate to severe food insecurity. This means, at the very least, they are reducing the quality, variety or desirability of their food; and, at worst, their eating patterns are disrupted. This figure has increased by more than 10% since 2022. Nearly half (48%) of the population now feels anxious about food or struggles to consistently access adequate food - up from 45% in 2022. The cost of living - including increased costs - was the main reason for food insecurity in 2023, but natural disasters accounted for 8% of food insecurity.

The most common reasons for food insecurity in Australia, 2023



Source: Foodbank (2023). *Foodbank Hunger Report 2023*. <https://reports.foodbank.org.au/foodbank-hunger-report-2023/>

⁵² Foodbank (2023). *Foodbank Hunger Report 2023*. <https://reports.foodbank.org.au/foodbank-hunger-report-2023/> https://reports.foodbank.org.au/wp-content/uploads/2023/10/2023_Foodbank_Hunger_Report_IPSOS-Report.pdf

Health and human services

A study of human services in Yarra Ranges⁵³ (Yarra Ranges Council, 2023) found that the health and wellbeing impacts of an increasing number of climate-related disasters and extreme weather events are expected to continue to affect services over the next five years. Many services were also expecting climate change to have major impacts on community wellbeing, service access and infrastructure.

Climate change was seen as a major factor in future demand for services, with 51% of services expecting an increasing number of disasters, which would affect community need for services and support; and 51% expecting worsening health impacts from extreme weather events. Access to climate resilient housing was seen as a particular challenge for low-income households.

⁵³ Yarra Ranges Council (2023). Human Services Needs Analysis. [Human Services Needs Analysis Yarra Ranges Council](#)

Risk and protective factors

Which communities are more vulnerable to climate change impacts?

Research has identified a large number of factors which add to vulnerability, but local data is not available for many of these. Six key factors which have strong evidence and good national data about their impact on vulnerability include demographics, socio-economic status, health, occupation and industry, and housing security.

In Yarra Ranges, the most vulnerable areas are Upper Yarra Valley and Yarra Valley. Upper Yarra Valley's largest risk factors are population health, and healthcare services, the economy and education. Yarra Valley's largest risk factors are population health, and livelihood and occupation.

Key factors affecting community vulnerability

Demographics

Communities with larger populations of older people and children face increased risk of climate impacts.

Socioeconomic vulnerability

Areas with low rates of employment and labour participation, lower household income, lower area socioeconomic status and greater income inequality have less capacity to cope and adapt.

Health

Areas are more vulnerable in terms of their care needs when there are larger populations of people with disability and activity limitation.

Livelihood

When considering livelihood vulnerability, sensitive areas are more dependent on primary production and construction.

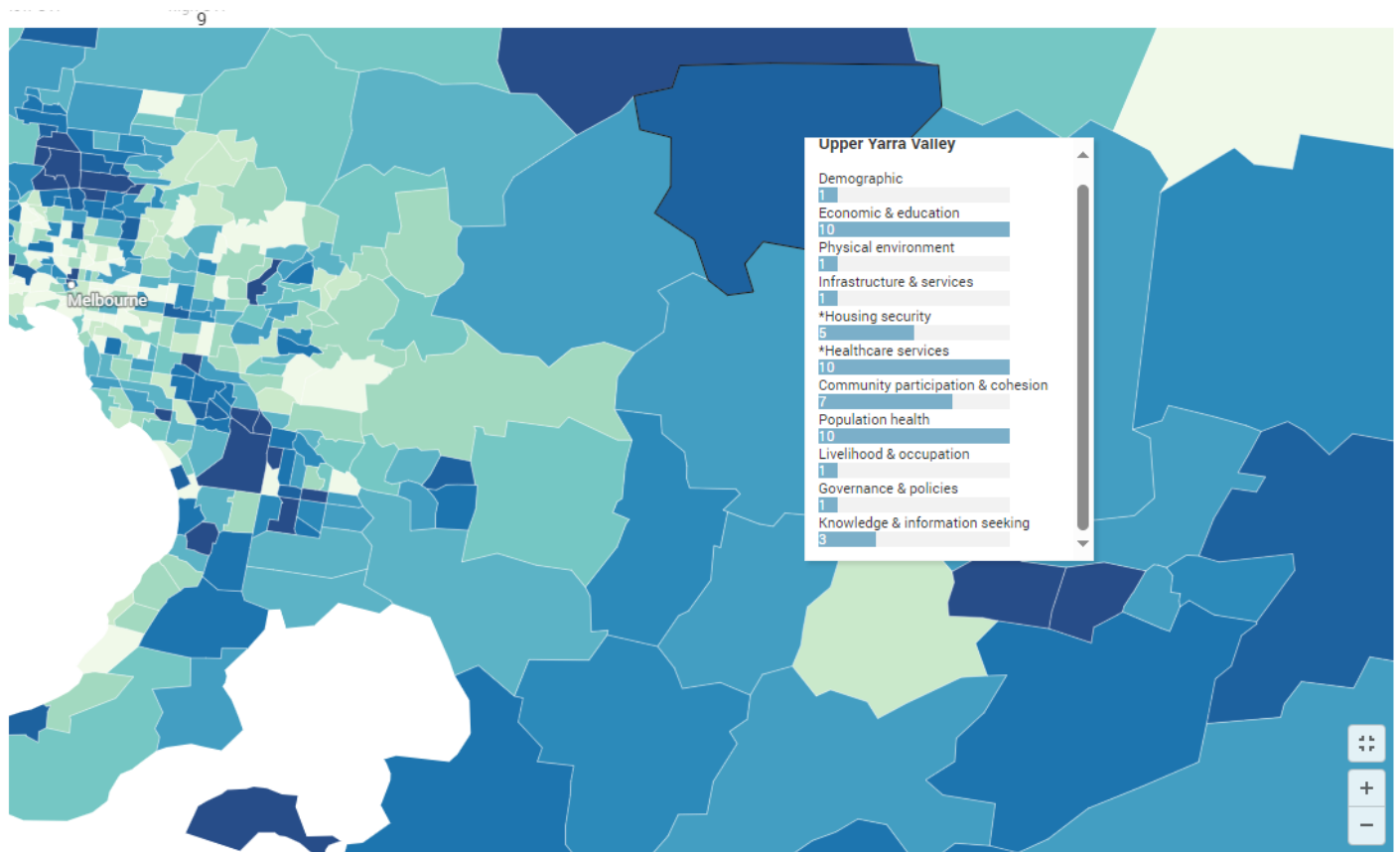
Housing

Housing insecurity contributes to reduced resilience.

Service access

Vulnerabilities are higher in areas with poor access to services and facilities such as State Emergency Service (SES) units, hospital beds, access to vehicles and the distance to main roads.

Social Vulnerability Index, 2021



Source: The Australian Bureau of Statistics, the Australian Institute of Health and Welfare, the National Exposure Information System, and the Household, Income and Labour Dynamics in Australia survey from 2016 to 2021.
Map data: PSMA Australia Limited • Download image • Created with Datawrapper

Source: University of Melbourne (2024). *Social Vulnerability Index*.

<https://pursuit.unimelb.edu.au/articles/we-aren-t-all-equal-when-it-comes-to-climate-vulnerability>

Which areas are the most vulnerable to bushfires?

Australia faces a growing bushfire threat, driven by rising temperatures and prolonged droughts exacerbated by climate change. This risk, even in the absence of an actual fire, affects community wellbeing through anxiety; rising insurance prices; and declining insurability – which affects people’s capacity to buy in the area or sell an existing home.

Bushfires carry a vast range of further impacts, including direct health impacts, displacement of communities and financial impacts.

Australia's highest-risk areas for bushfires are primarily in New South Wales, Victoria and Western Australia. Most of these are in regional areas, but there are also parts of the capital cities at risk of bushfire risk, particularly in outer suburbs on the urban fringe.

Yarra Ranges has the highest bushfire risk in Australia. Three of its localities are in the national top 10 small areas, with 10,317 properties considered at high risk. Upper Yarra Valley and Mount Dandenong-Olinda have "incredibly high" bushfire risk ratings, at 7.70 and 5.39, respectively; Belgrave-Selby has an average risk of 3.79. Also, Mount Dandenong-Olinda has a high volume of properties which contribute to this high risk rating.

Note that whilst the Domain reports on properties at risk considered bushfire, flood and coastal erosion, they did not look at storm risks – which have turned out to have major impacts in Victoria in recent years.

The top 10 areas in Australia with the highest average bushfire risk: Number at risk in Australian SA2s, 2024

| Rank | Area | State | Number | Average risk |
|------|----------------------------|-------|--------|--------------|
| 1 | Upper Yarra Valley | VIC | 235 | 7.70 |
| 2 | Ashendon-Lesley | WA | 68 | 5.45 |
| 3 | Mount Dandenong-Olinda | VIC | 5,420 | 5.39 |
| 4 | Ettrema-Sassafras-Budawang | NSW | 93 | 4.63 |
| 5 | Mount Wellington | TAS | 70 | 4.27 |
| 6 | Glen Forrest-Darlington | WA | 3,172 | 3.96 |
| 7 | Bilpin-Colo-St Albans | NSW | 2,693 | 3.94 |
| 8 | Calga-Kulnura | NSW | 3,381 | 3.88 |
| 9 | Deua-Wadbilliga | NSW | 141 | 3.85 |
| 10 | Belgrave-Selby | VIC | 4,662 | 3.79 |

Geographies are based on ABS SA2. Areas with a minimum number of 50 properties were included.

Source: Domain (2024). *Bushfire. The risk to Australia's property market.*

<https://www.domain.com.au/research/perils-the-risk-to-australias-property-market-1289944/>

Which communities might be more resilient to climate change impacts?

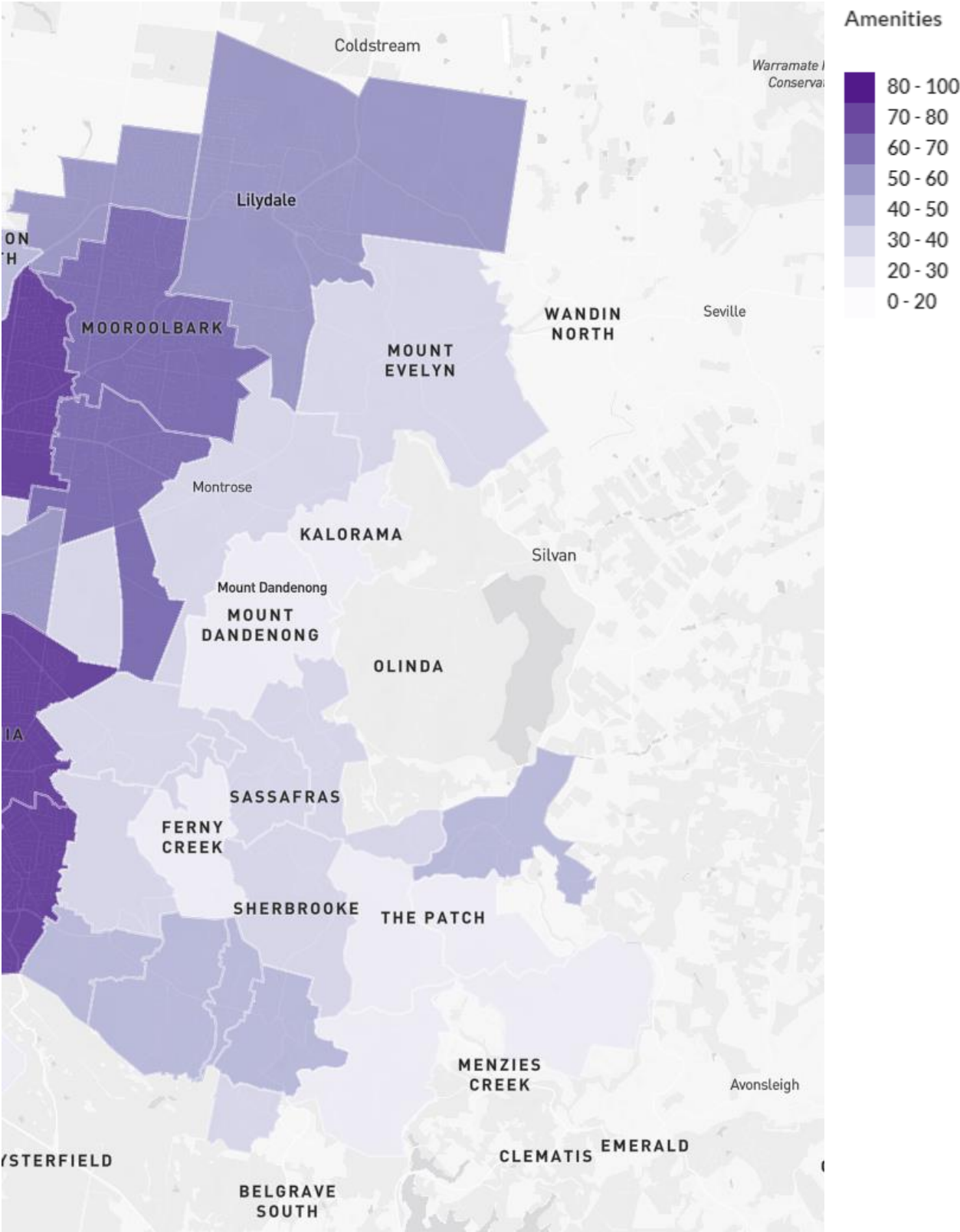
The Climate Resilience Index evaluates aspects of Melbourne's urban environment which affect sustainable living, including built and natural features. The Index aggregates and disseminates data so that users can look at varying scales, ranging from street blocks, through to the broader suburb. Each indicator comprises of a network of sub-indicators, to ensure that the study includes a wide range of relevant considerations and best reflects how we experience our neighbourhoods. Areas with higher scores have a higher level of amenities. Data are not available for part of the Hills and most of the Yarra Valley. This index does not include measures such as community participation and cohesion, which have also been found to reduce vulnerability.

There are four key indicators:

- **Amenities.** This evaluates the efficiency of land use including access to core services, amenities, recreation space, education facilities and employment opportunities. Kilsyth and Mooroolbark had the highest level of amenities. The areas with the lowest level of amenities include Ferny Creek, Mount Dandenong and The Patch.
- **Transport and movement.** Considers proximity to functional and frequent public transport, and a permeable pedestrian network (walkability). Transport access is highest in Lilydale, Mooroolbark and the areas around the Belgrave train line. It is lowest in Mount Evelyn and most townships in the Dandenong Ranges.
- **Environment and biodiversity.** Analyses the proportion of tree canopy coverage, connected land, and blue and green space; and analyses ecological connectivity. Resilience was highest in the Hills, and lowest in Mooroolbark and Kilsyth.
- **Hazard resilience.** Evaluates areas prone to flooding, coastal inundations, bushfire risk and urban heat effects. Hazard resilience is highest in Chirnside Park and Kilsyth. The areas with the highest risk include Mount Evelyn, Monbulk, Upwey, Belgrave, Selby, Tecoma and the Patch.

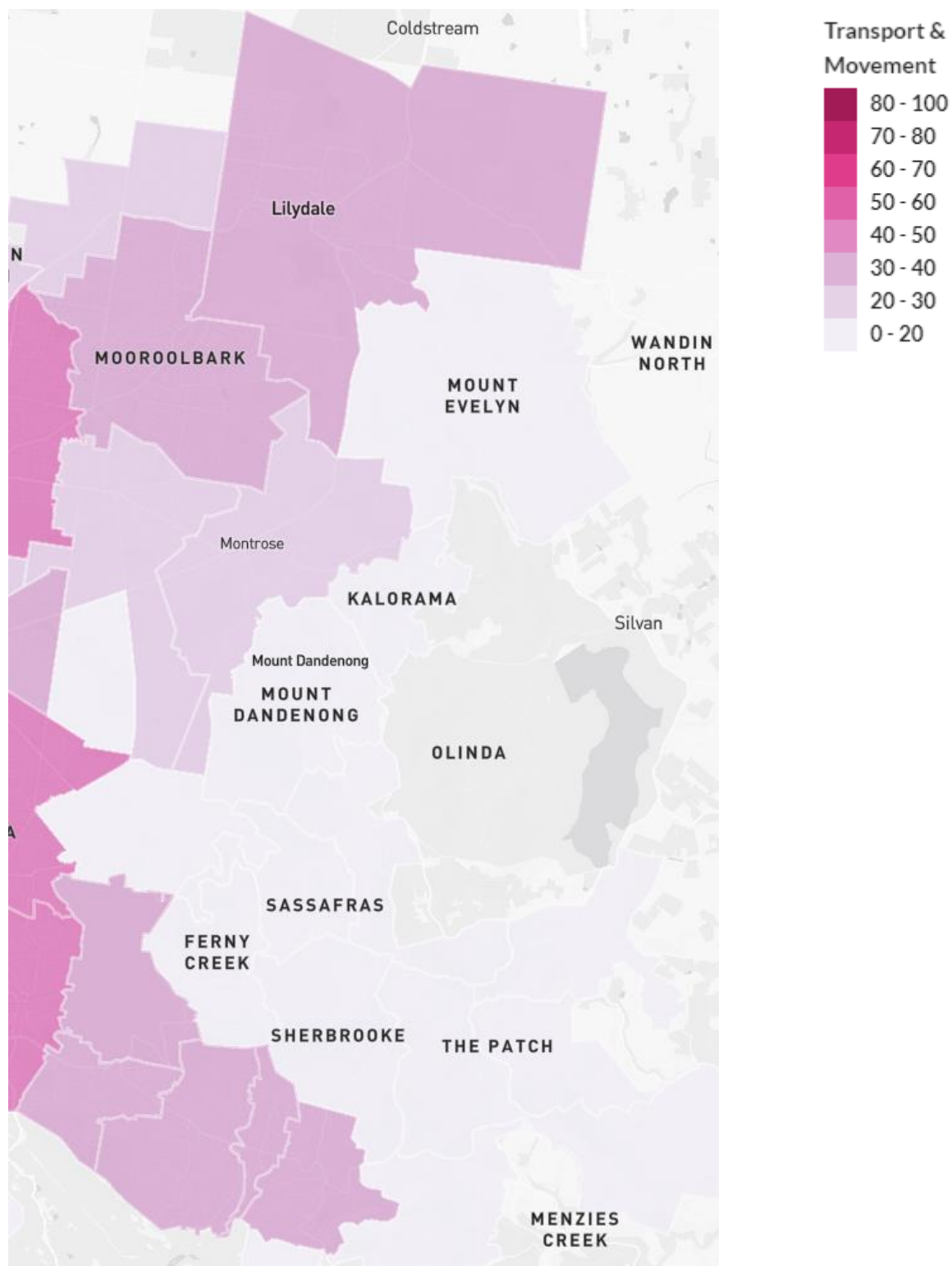
Increasing local amenities, walkability and public transport access, environmental factors such as tree canopy coverage can all assist with climate resilience, as can reducing exposure to specific hazards.

Climate Resilience Index: Amenities in Yarra Ranges, 2024



Source: Tract (August 2024). *The Climate Resilience Index*.
<https://climateresilienceindex.onemap.com.au/>

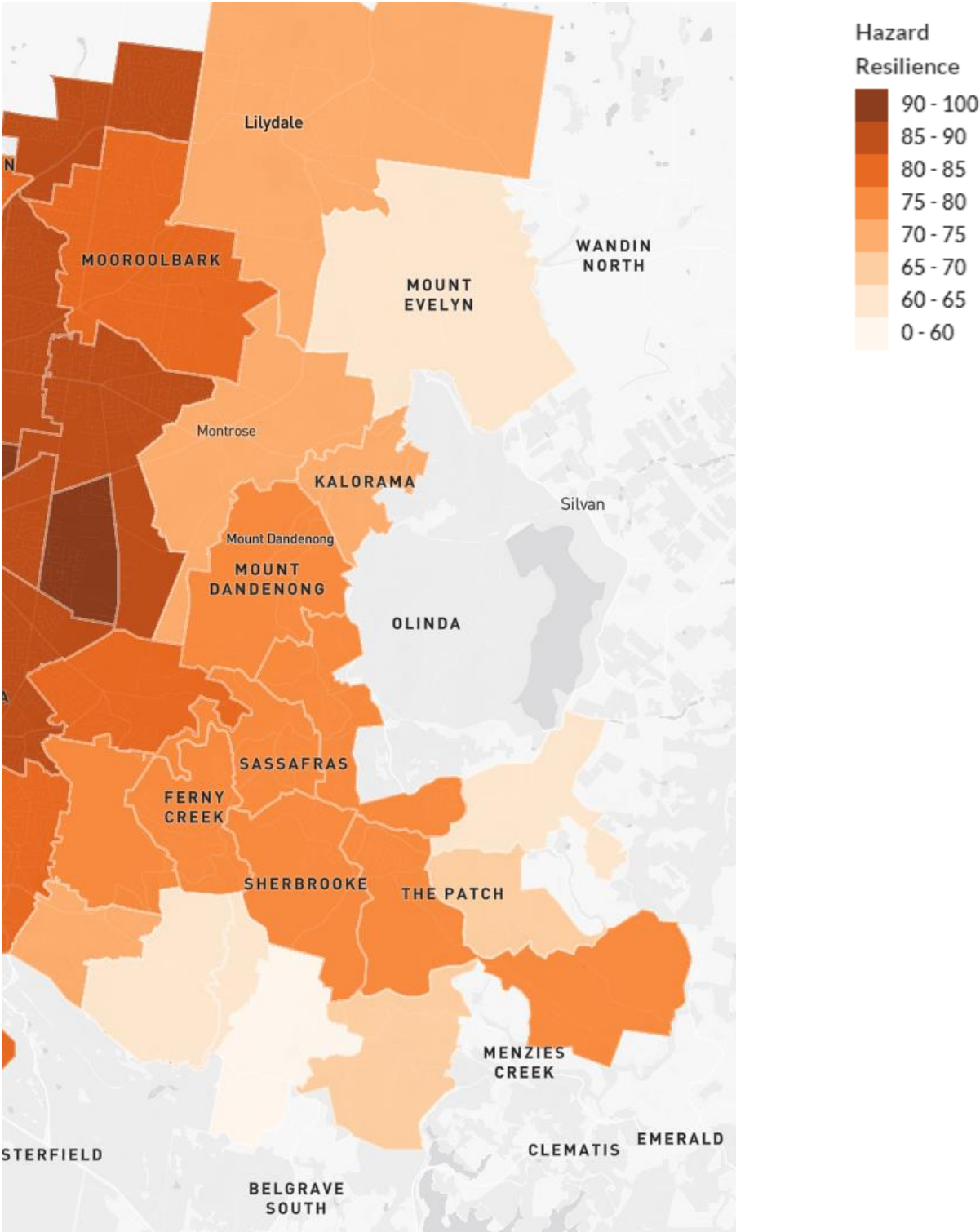
Climate Resilience Index: Transport and movement in Yarra Ranges, 2024



Source: Tract (August 2024). *The Climate Resilience Index*.

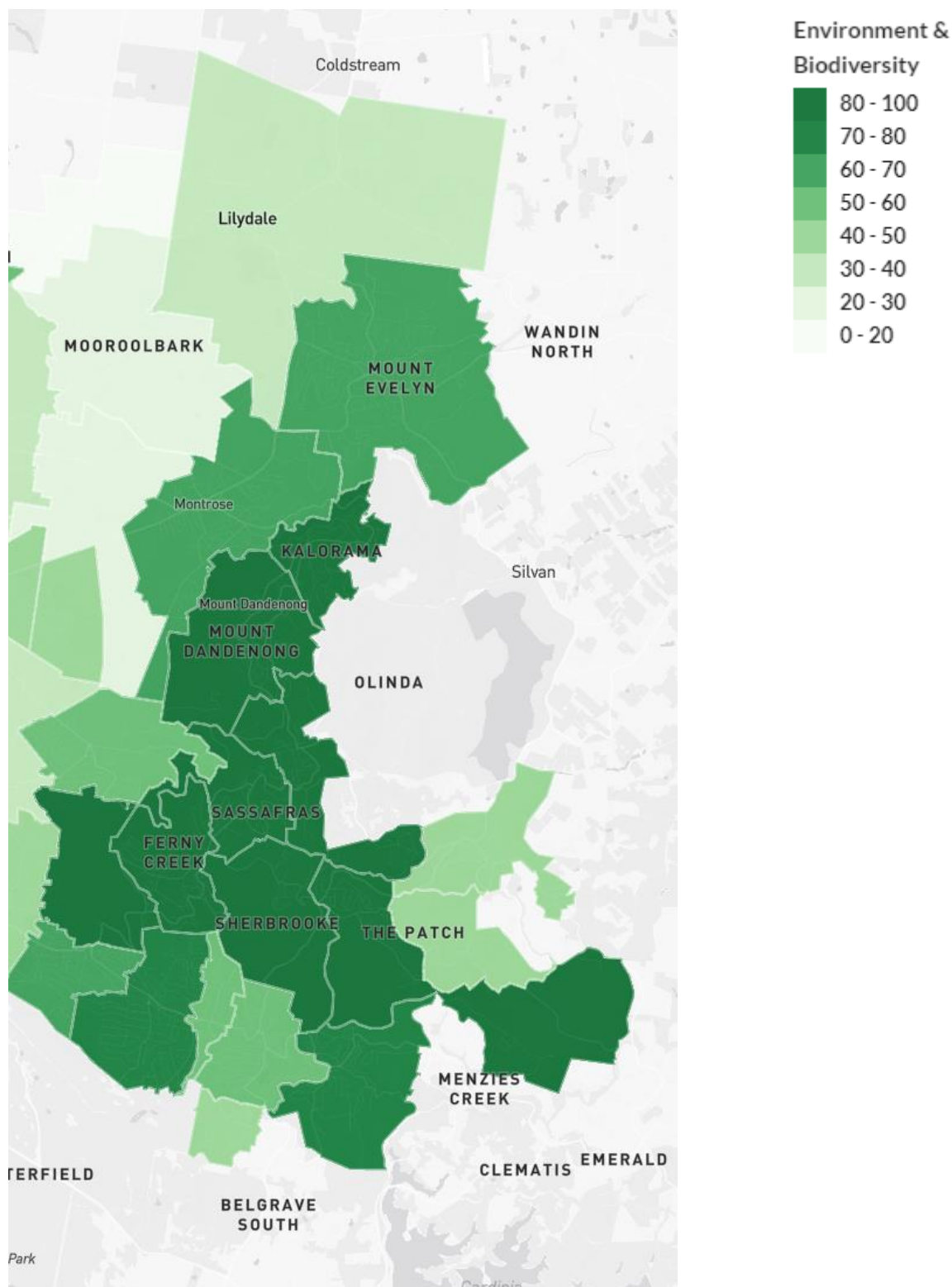
<https://climateresilienceindex.onemap.com.au/>

Climate Resilience Index: Hazard resilience in Yarra Ranges, 2024



Source: Tract (August 2024). *The Climate Resilience Index*.
<https://climateresilienceindex.onemap.com.au/>

Climate Resilience Index: Environment and biodiversity in Yarra Ranges, 2024



Source: Tract (August 2024). *The Climate Resilience Index*.

<https://climateresilienceindex.onemap.com.au/>

Which areas might be more disaster resilient?

Natural Hazards Research Australia has produced the Australian Disaster Resilience Index. This index is a snapshot of the capacities for disaster resilience in Australian communities. It profiles different aspects of disaster resilience, and how they vary between different communities. Its aim is to help communities, governments and industry work together to cope with and adapt to natural hazards such as bushfires, floods, storms and earthquakes.

The disaster resilience index consists of coping capacity and adaptive capacity.

Coping capacity includes:

- Social character.
- Economic capital.
- Emergency services.
- Planning and the build environment.
- Community capital.
- Information access.

Adaptive capacity includes:

- Social and community engagement.
- Governance and leadership.

Areas with lower capacity tend to be those considered vulnerable in terms of low household income and education, low access to transport and services, a high level of vulnerable households such as persons living alone, and so forth. It does not reflect on individuals, but instead gives a picture of various factors contributing to community vulnerability.

DISASTER RESILIENCE FACTORS

The overview of disaster resilience factors shows the strengths and barriers to disaster resilience for SA2s. Each area falls within a group with a characteristic set of strengths and barriers.

Seven areas in Yarra Ranges are in **group 4**: Chirnside Park, Mooroolbark, Kilsyth, Montrose, Mount Evelyn, Mount Dandenong-Olinda and Upwey-Tecoma. These areas have a range of disaster resilience strengths, including high economic capital, high access to information, high governance and leadership. They are considered to have moderate social character,

moderate for planning and the built environment, moderate for emergency services, moderate for community capital, and moderate for social and community engagement. They have no identified barriers to disaster resilience. Most of inner eastern Melbourne, and parts of the outer east, are in this group.

Six areas are in **group 2**: Lilydale-Coldstream, Healesville-Yarra Glen, Wandin-Seville, Yarra Valley, Monbulk-Silvan and Belgrave-Selby. The main barrier to disaster resilience in these areas is **low access to information**. These communities have constrained capacity to engage with natural hazard information and to access knowledge associated with natural hazard preparation, self-reliance and response. The main characteristic contributing to reduced capacity is **limited telecommunications access**. These areas have high social character, high community capital, and high social and community engagement. They are considered moderate for economic capital, planning and the built environment, emergency services, and governance and leadership.

Upper Yarra Valley, Rockbank and Koo Wee Rup are the only areas in Melbourne in **Group 3**. These areas have a range of barriers. They score low on planning and the built environment, economic capital, emergency services, information access, and governance and leadership. They are moderate for social character, community capital, and social and community engagement.

Yarra Ranges has no areas which are in **group 5**. These areas are scattered through inner Melbourne, and the western, northern and southern areas of Melbourne. Their barriers to disaster resilience include low community capital and low social character.

Similarly, Yarra Ranges has no areas which are in **group 1**. These areas are in the inner city. Their barriers to disaster resilience include low community capital, low social and community engagement, low social character. They have high access to emergency services. They are considered moderate for economic capital, planning and the built environment, information access, and governance and leadership.

Source: Natural Hazards Research Australia (2020). *The Australian Disaster Resilience Index*. <https://adri.bnhcrc.com.au/>





















































































































DISASTER RESILIENCE CAPACITY


Most areas in Yarra Ranges are assessed as having **high capacity for disaster resilience**. Communities in areas of high disaster resilience have enhanced capacity to use available resources to cope with adverse events, and enhanced capacity to adjust to change through learning, adaptation and transformation. Factors contributing to high disaster resilience may include employment, education, income, good access to or provision of resources and services, strong community cohesion and ample opportunities for adaptive learning and problem solving.


Yarra Valley is assessed as having moderate capacity for disaster resilience. Communities in areas of moderate disaster resilience have some capacity to use available resources to cope with adverse events, and some capacity to adjust to change through learning, adaptation and transformation. Moderate disaster resilience is generally contributed by moderate levels of coping and adaptive capacity, which in turn are associated with moderate levels of economic capital, moderate provision of and access to services, moderate community cohesion and variable encouragement for adaptive learning and problem solving.


Upper Yarra is assessed as having low capacity for disaster resilience. Communities in areas of low disaster resilience may be limited in their capacity to use available resources to cope with adverse events, and are limited in their capacity to adjust to change through learning, adaptation and transformation. Limitations to disaster resilience may be contributed to by entrenched social and economic disadvantage, less access to or provision of resources and services, lower community cohesion and limited opportunities for adaptive learning and problem solving.


Disaster resilience factors report: SA2s in Yarra Ranges, 2020


| SA2 | State | Remoteness | Group | Disaster Resilience Strengths | Disaster Resilience Barriers |
|--------------------------|-------|----------------|-------|--|---|
| Belgrave - Selby | VIC | Metropolitan | 2 |         |  |
| Chirnside Park | VIC | Metropolitan | 4 |         | |
| Healesville - Yarra Glen | VIC | Inner regional | 2 |         |  |
| Kilsyth | VIC | Metropolitan | 4 |         | |
| Lilydale - Coldstream | VIC | Metropolitan | 2 |         |  |
| Monbulk - Silvan | VIC | Metropolitan | 2 |         |  |
| Montrose | VIC | Metropolitan | 4 |         | |
| Mooroolbark | VIC | Metropolitan | 4 |         | |
| Mount Dandenong - Olinda | VIC | Metropolitan | 4 |         | |
| Mount Evelyn | VIC | Metropolitan | 4 |         | |
| Upper Yarra Valley | VIC | Inner regional | 3 |         |    |
| Upwey - Tecoma | VIC | Metropolitan | 4 |         | |
| Wandin - Seville | VIC | Metropolitan | 2 |         |  |
| Yarra Valley | VIC | Inner regional | 2 |         |  |


 **Social character**


 **Planning and the built environment**


 **Community capital**

 **Governance and leadership**

 **Economic capital**

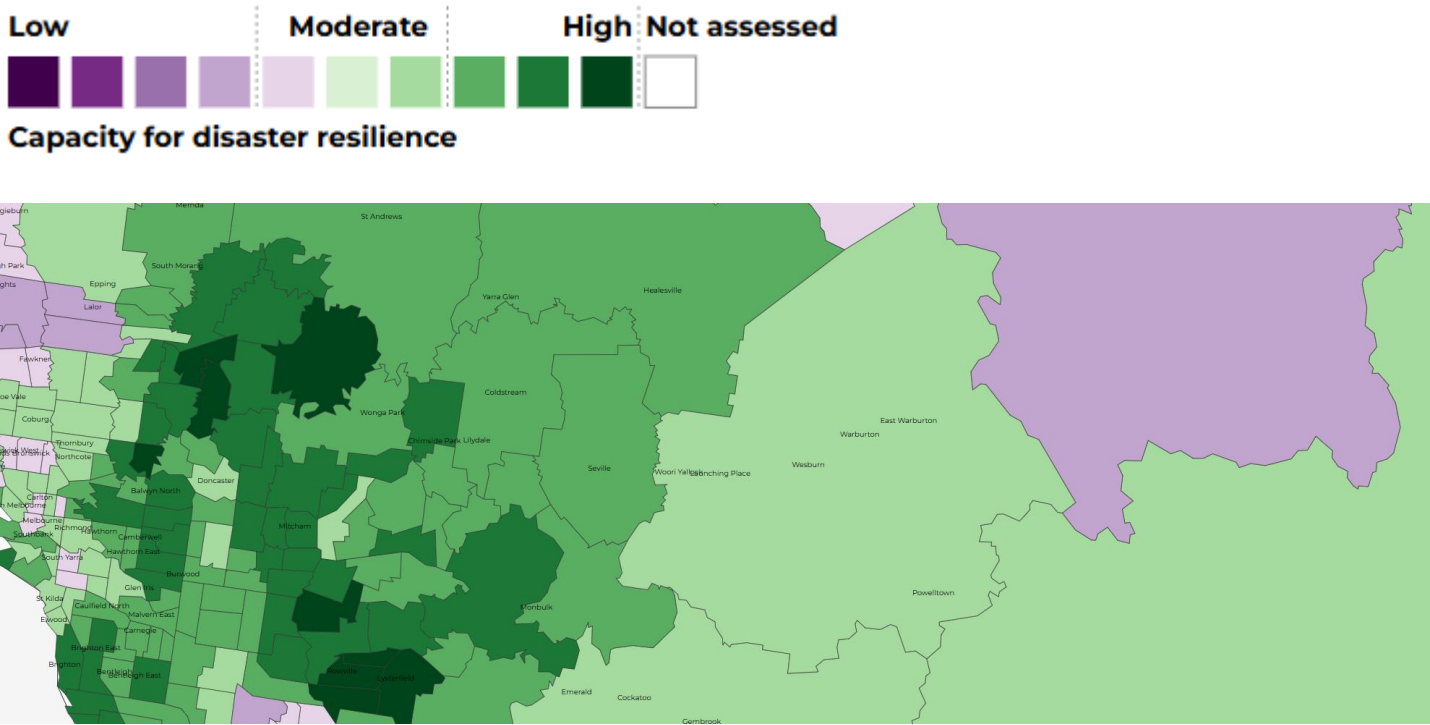
 **Emergency services**

 **Information access**

 **Social and community engagement**

Source: Natural Hazards Research Australia (2020). *The Australian Disaster Resilience Index*.
<https://adri.bnhcrc.com.au/>

Capacity for disaster resilience: Small areas in Yarra Ranges, 2024



Source: Natural Hazards Research Australia (2020). *The Australian Disaster Resilience Index*.
<https://adri.bnhcrc.com.au/>

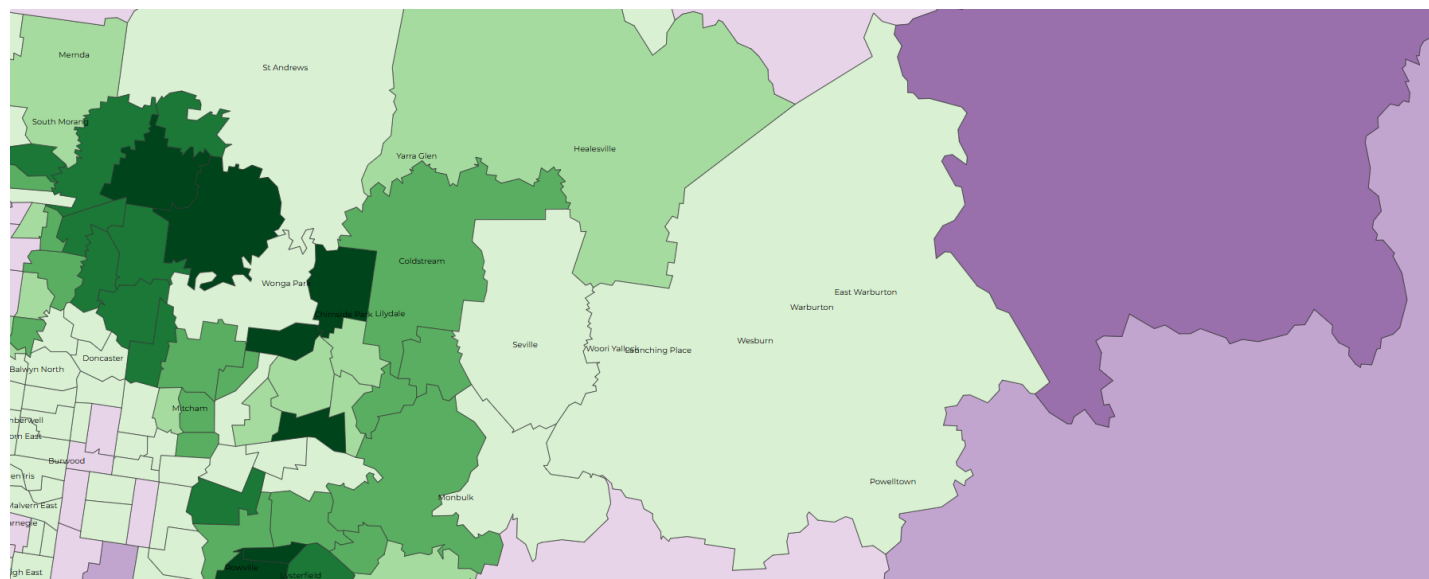
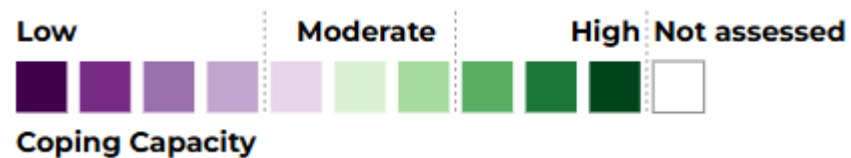
COPING CAPACITY

Communities in areas of high coping capacity have enhanced capacity to use available resources to cope with adverse events and to prepare for, absorb and recover from a natural hazard. Communities in areas of moderate coping capacity have some capacity to use available resources to cope with adverse events and to prepare for, absorb and recover from a natural hazard.

Overall, most areas in Yarra Ranges are assessed as having moderate to high coping capacity. Coping capacity is higher in the Hills and the Urban area – most areas of these regions have high coping capacity. Chirnside Park is extremely high on this measure. Mooroolbark, Kilsyth, Belgrave Selby, Healesville-Yarra Glen, Warburton, Wandin-Seville and Monbulk-Silvan have moderate coping capacity.

Upper Yarra Valley is assessed as having extremely low coping capacity. Communities in areas of low coping capacity may be constrained in their capacity to use available resources to cope with adverse events and to prepare for, absorb and recover from a natural hazard.

Coping capacity: Small areas in Yarra Ranges, 2024

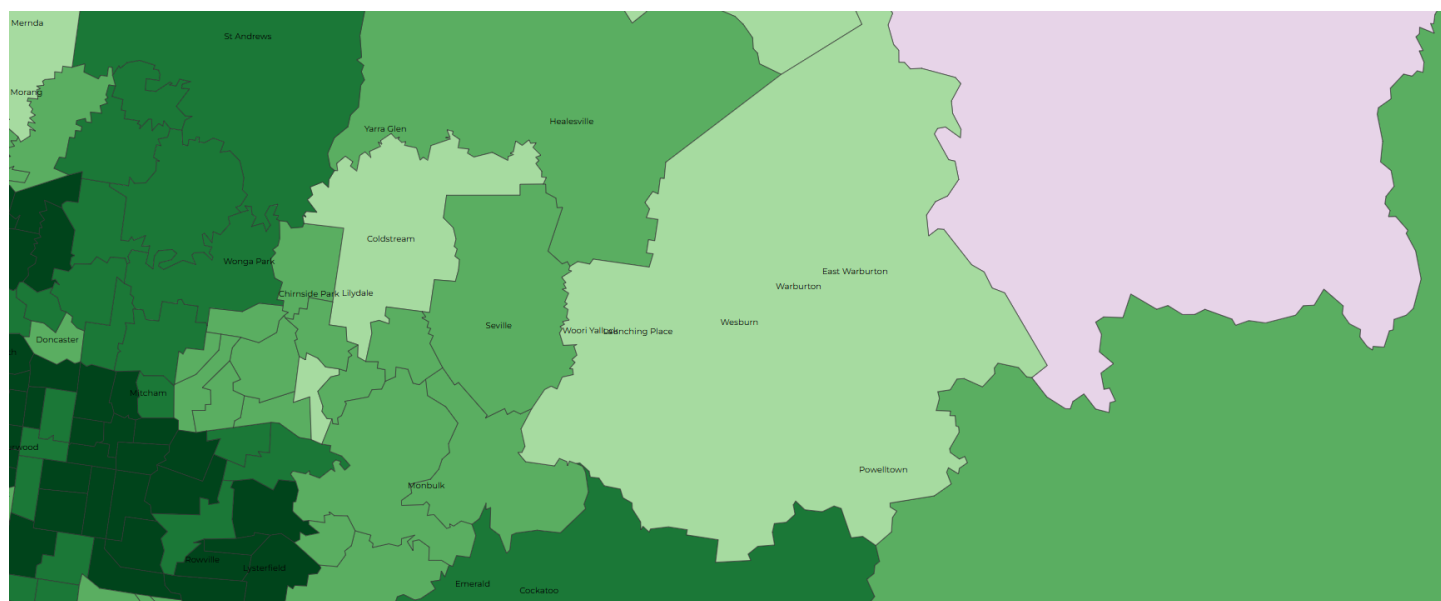
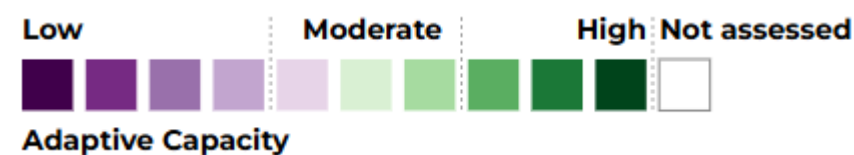


Source: Natural Hazards Research Australia (2020). *The Australian Disaster Resilience Index*. <https://adri.bnhcrc.com.au/>

ADAPTIVE CAPACITY

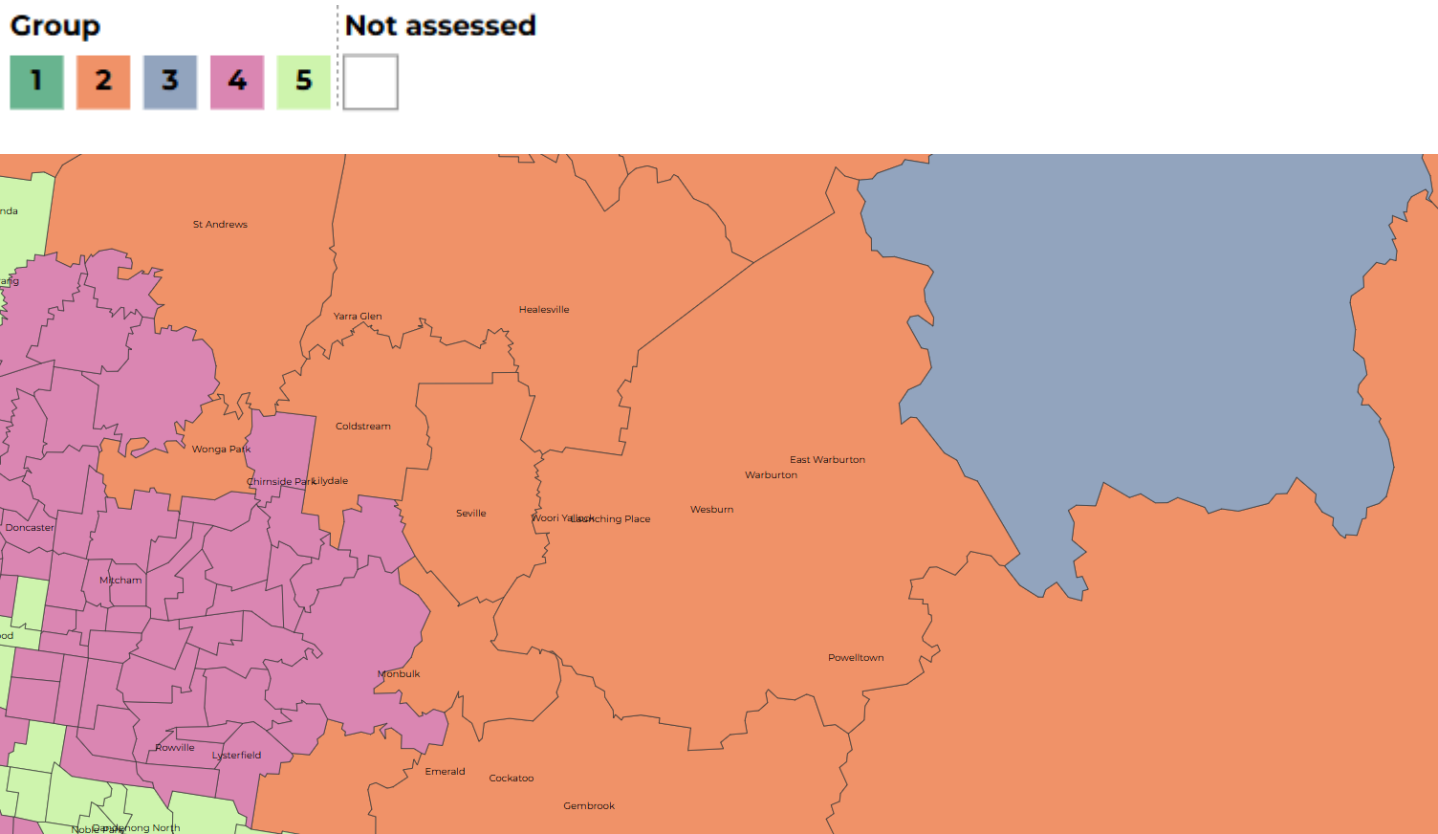
Most of Yarra Ranges as assessed as having high capacity; coping capacity is moderate in the Yarra Valley region. Communities in areas of high adaptive capacity have enhanced capacity to adjust to change through learning, adaptation and transformation. Communities in areas of moderate adaptive capacity have some capacity to adjust to change through learning, adaptation and transformation.

Adaptive capacity: Small areas in Yarra Ranges, 2024



Source: Natural Hazards Research Australia (2020). *The Australian Disaster Resilience Index*.
<https://adri.bnhcrc.com.au/>

Disaster resilience factors: Small areas in Yarra Ranges, 2024



Source: Natural Hazards Research Australia (2020). *The Australian Disaster Resilience Index*.
<https://adri.bnhcrc.com.au/>

Tree canopy

Yarra Ranges has Australia's second-highest level of tree canopy cover, at 78.6%. It is classified as an area with a relatively low level of challenges to maintain or grow green cover; and grouped with areas which are suburban (less than 50% urban area), spacious (low density), and with average to high rainfall.

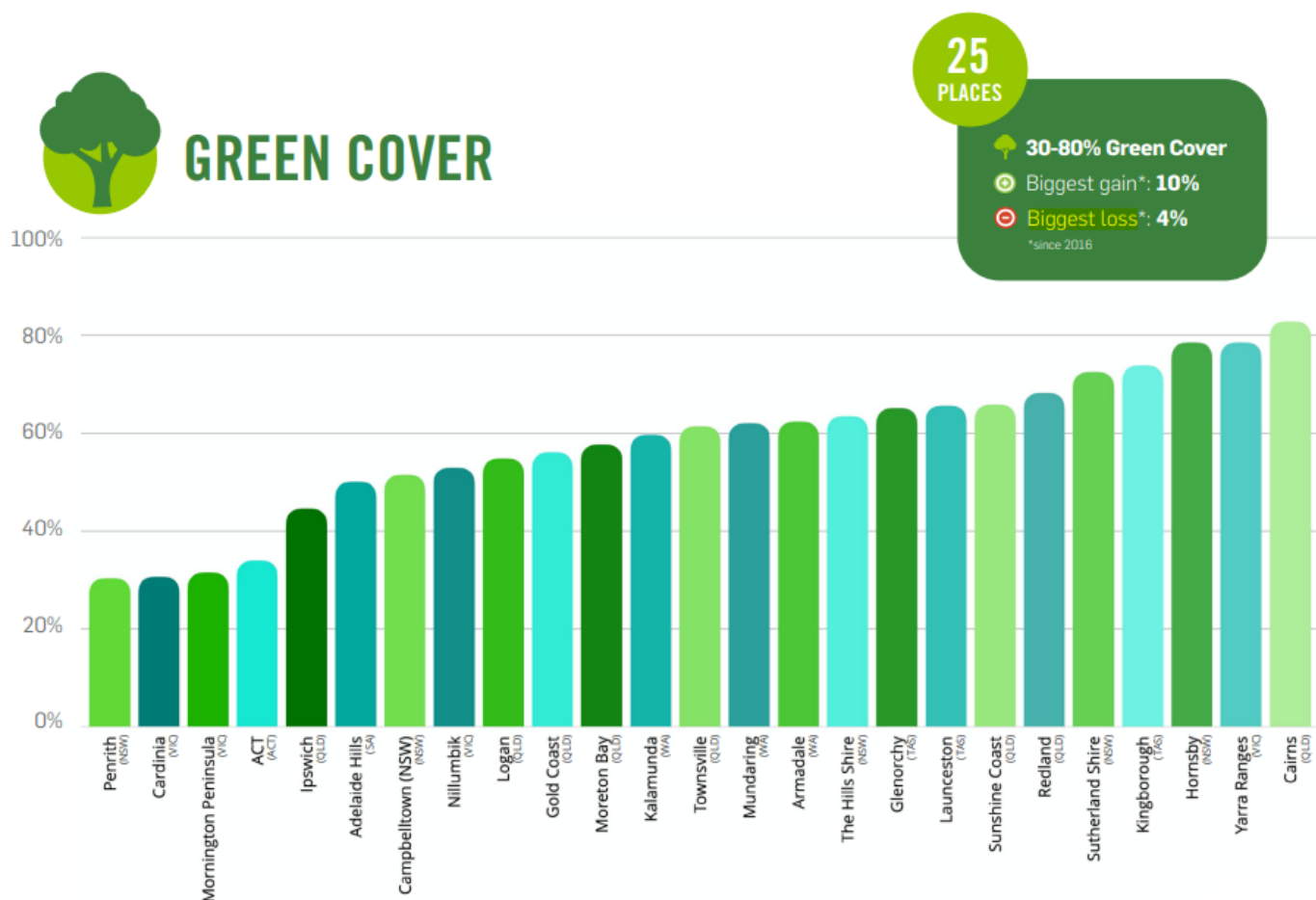
An analysis of tree canopy cover notes that places with high bushfire risk are more challenged to grow and maintain green cover. But between 2016 and 2020, Yarra Ranges lost some of its tree canopy cover (less than 1% lost). Yarra Ranges also reduced its grey cover (hard surfaces) slightly.

Tree canopy is crucial to protecting areas from some of the health impacts of climate change. Footpaths can be more 20 degrees hotter than the air temperature, in the absence of trees. Air temperatures can also vary by up to 20 degrees, between areas with high canopy cover and areas with low canopy cover.

A 10% increase in green space and tree canopy cover is linked to reduced risks of deaths from all causes, deaths from cardiovascular diseases, and fatal or non-fatal heart attacks.⁵⁴ Trees reduce air pollution, and improve psychiatric, respirator and cardiovascular health; support outdoor physical activity; and cool our cities. Light roof colours also help to reduce urban heat.

⁵⁴ Leafier communities, healthier hearts: An Australian cohort study of 104,725 adults tracking cardiovascular events and mortality across 10 years of linked health data. Heart, Lung and Circulation, volume 32, issue 1, January 2023, pages 105-113.

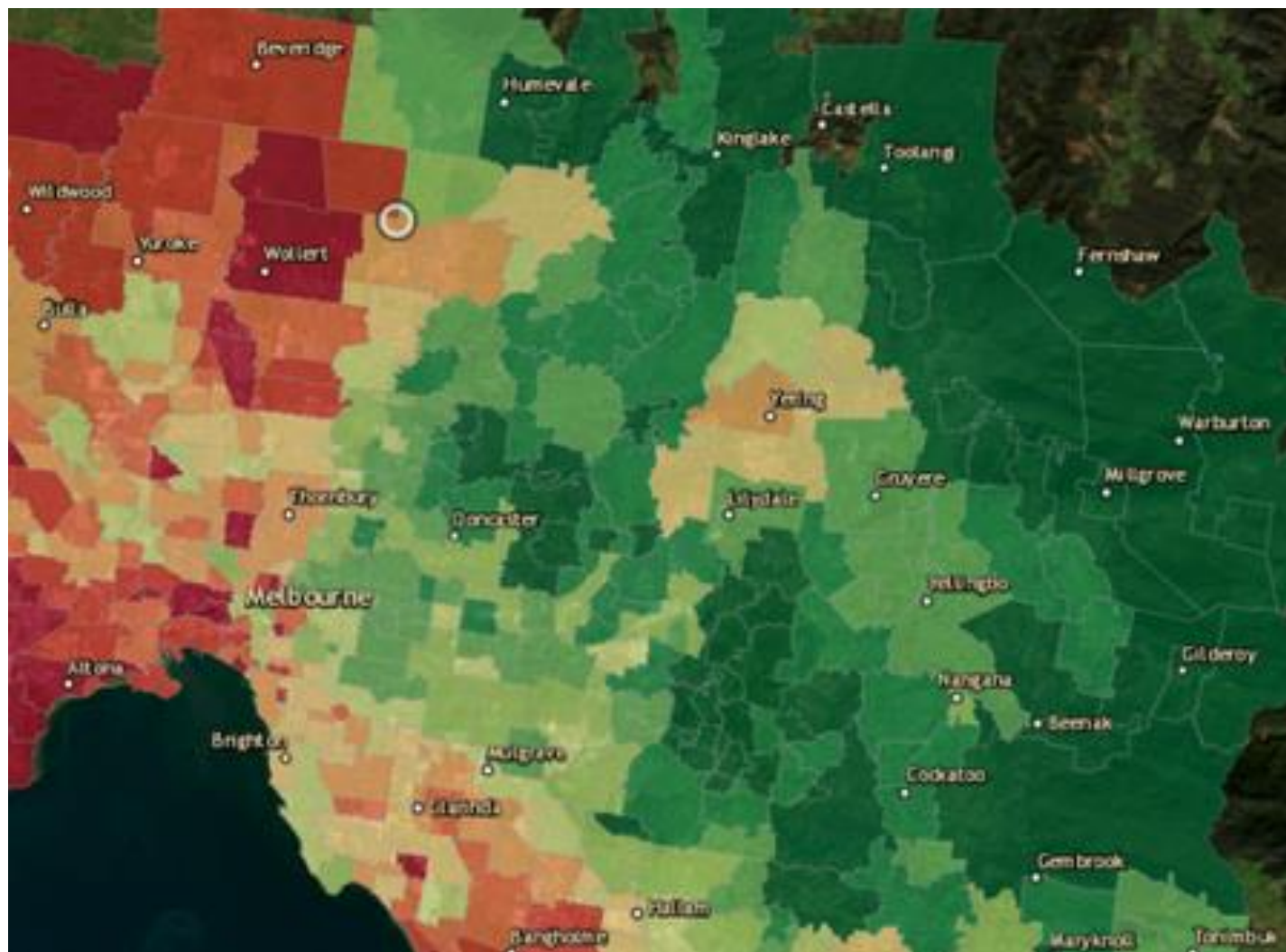
Tree canopy cover – areas with the highest level of cover, 2020



Source: Greener Spaces, Better Places. *Where will all the trees be? The 2020 update of green cover benchmarking in our cities and suburbs.*

https://www.greenerespacesbetterplaces.com.au//media/163303/wwattb_v13.pdf

Melbourne canopy cover percentage by suburb, 2022



Source: The Age (2025). *How your suburbs lack of trees could be affecting your health.*

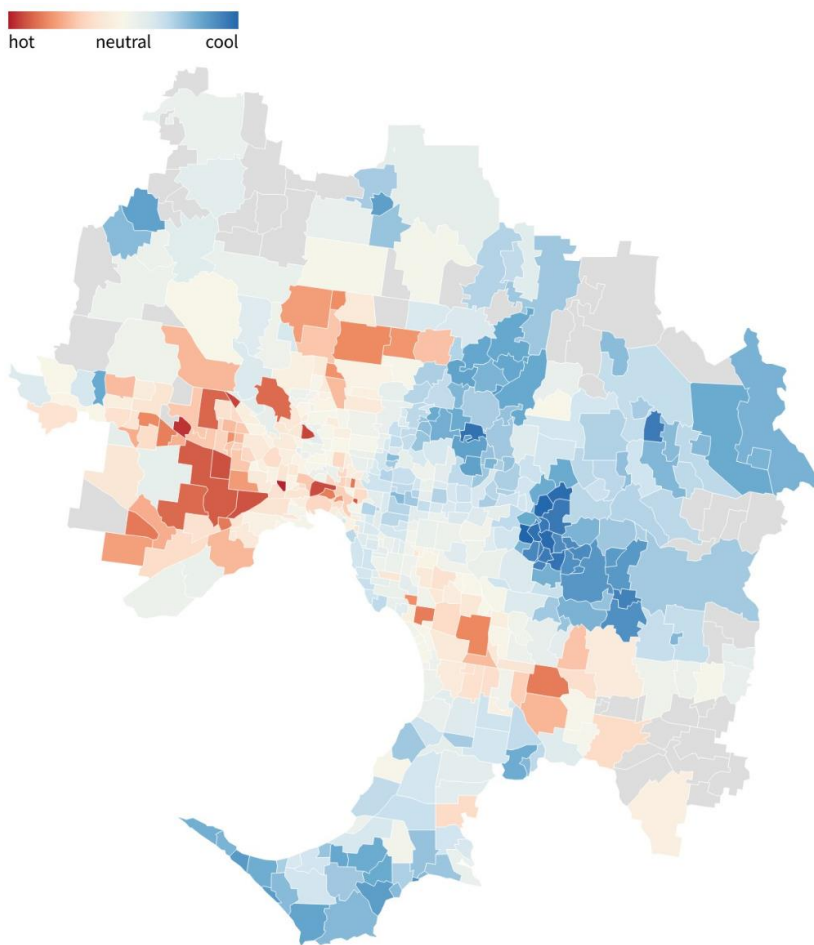
<https://www.theage.com.au/politics/victoria/how-your-suburb-s-lack-of-trees-could-be-affecting-your-health-20250212-p5lbhu.html>

Local heat scores

Melbourne University has looked at buildings in Melbourne to calculate the area around each structure that is made of asphalt and concrete. Buildings which are mostly surrounded by asphalt and concrete show up as dark red in the map. Buildings which are surrounded by trees and vegetation show up as blue.

The high level of tree canopy cover in Yarra Ranges means that most suburbs in the area are relatively cool. Chirnside Park, Yarra Glen, Healesville, Kilsyth, Mooroolbark and Lilydale have the highest levels of hot buildings, but these buildings are still less than 25% of total buildings.

Heat scores by suburb: Melbourne, 2024



Source: University of Melbourne (2024). *These maps tell us we need to cool our sweltering streets.*
[These maps tell us we need to cool our sweltering streets | Pursuit by the University of Melbourne \(unimelb.edu.au\)](https://www.unimelb.edu.au)

Solar panels

Access to solar power helps people to maintain a safe temperature in their homes during a power outage, as well as keep food and medications cool, access the internet and information, and a range of other essential services. When paired with an inverter which can disconnect from the grid during an outage (this will only work whilst solar power is being generated) and/or a home battery, solar power can provide limited back-up power during a grid outage. The power from the battery of an electric vehicle (EV) can also be used to power appliances during an outage, if the EV has vehicle-to-load (V2L) capacity.

Use of solar panels is increasing in Yarra Ranges. The number of annual solar panel systems being installed in Yarra Ranges has risen from 1,320 in 2019 to 1,494 in 2023. There was a spike of much higher installations in 2021 (1,730). The number of solar water heater installations is falling, from 173 in 2019 to 63 in 2023. It is not known how many local households are installing batteries or purchasing EVs.

SOLAR INSTALLATIONS: YARRA RANGES, YEAR ENDED 31 DECEMBER

| Description | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--|-------|-------|-------|-------|-------|-------|
| Small-scale solar panel system installations (no.) | 1,233 | 1,320 | 1,492 | 1,730 | 1,489 | 1,494 |
| Solar water heater installations (no.) | 154 | 173 | 149 | 132 | 80 | 63 |

Source: Australian Bureau of Statistics (2024). *Region summary: Yarra Ranges*. [Yarra Ranges | Region summary | Data by region | Australian Bureau of Statistics \(abs.gov.au\)](#)

What actions will help us to adapt?

Health National Adaptation Plan

The draft Health National Adaptation Plan (HNAP) includes the objective:

Empower healthy, resilient communities. Communities are better educated, engaged, and empowered to prevent and respond to the health impacts of climate change.

The desired outcomes are:

1. Awareness, capacity and capability: People and priority populations have greater awareness of climate risks to their health and wellbeing, and increased capacity and capability to manage these risks effectively and independently.
2. Strengths-based partnerships and participation: People and priority populations can engage and partner with decision-makers in the design and delivery of health adaptation policies and programs.
3. Local government climate and health action: People and priority populations are supported by health-promoting local government climate adaptation action.

Interventions and actions to help to adapt to the health impacts of climate change.

As part of the development of the HNAP, the Interim Australian Centre for Disease Control has done a systematic mapping review to describe, collate and catalogue the research that has been carried out in the broad field of climate change adaptation, mitigation and co-benefits within and outside of the Australian health system. This included both primary research studies, and secondary reviews. The table below summarises the potential interventions and actions which relate to adapting to the health impacts of climate change. It includes the effectiveness of the interventions, where this was known.

The key findings on interventions to reduce the health impacts of climate change included:

- **Smoke:** public health messaging, HEPA filters, face masks and use of public buildings as shelters.
- **Heat health impacts:** air conditioner use (including household/community power which can cope during power outages), application of wet cloth to body and self-dousing (and other personal cooling strategies), provide better more specific information to community (on personal vulnerability as well as heat risks), Heatwave

Warning Systems and other heat health information, use public buildings to provide refuges from extreme heat, encourage household solar to reduce concerns about air conditioning costs, Heat Action Plans for older people, urban ventilation pathways (e.g., open windows, fans, cross-ventilation).

- **Urban heat:** urban greenery, shade provision, cooling materials on pavements and roofs, light pavement colours, irrigation, use of reflective materials.
- **Mental health:** provision of The Skills for Life Adjustment and Resilience (SOLAR) program, and other program interventions.
- **Infectious diseases:** mosquito control; health promotion and education, surveillance, and early warning systems are suggested for reducing respiratory, diarrheal, and vector-borne diseases.
- **Workplace heat:** hot weather policies, heat stress training, control measures to reduce heat exposure risks, high temperature warning systems.
- **Cold:** support households to make their homes warmer and more energy efficient.
- **Other:** indigenous ways of knowing could assist in better understanding low cost and physiological understanding of how to best adapt to heat, however, these are unlikely to be helpful for the frail aged; have remotely accessible records may be helpful in better health care during emergencies; adaptive strategies with more input from women's perspectives may help adaptation at household level, especially in the most vulnerable areas.

There is very little information on practical actions to adapt to the impacts of:

- Storm impacts in general (including impacts on road access, public transport, service access, thunderstorm access).
- Pollution such as dust, pollen/allergens.
- Prolonged power outages, or loss of phone/internet, and the associated health, wellbeing and economic impacts of these.
- Misinformation.
- Contaminated water supplies.
- Under-insurance.
- Rising living costs, food insecurity.

Interventions to reduce the health impacts of climate change, by type of health risk

| Health risk | Potential interventions and their effectiveness |
|----------------------------|---|
| Smoke | <p>Public health messaging through diverse communication channels (including social media, television and radio).</p> <p>HEPA filters to improve residential indoor air pollution.</p> <p>Use of face masks – explored, but effectiveness not assessed.</p> <p>Using public buildings as shelters during smoke events (e.g., a public library), and using HEPA cleaners. Indoor air quality inside the library was significantly cleaner compared to outdoor air. Installing HEPA cleaners in a smaller media room within the library further reduced PM2.5 levels compared to the main library.</p> |
| Heat health impacts | <p>Air conditioner use, application of wet cloth to the body, and confidence in adequacy of information needed to beat the heat was associated with significant reduction in the incidence of heat stress.</p> <p>Heatwave Warning Systems (HWS) associated with significantly lower cardiac-related call-outs, renal, and heat-related emergency presentations (but not associated with a lower rate of deaths).</p> <p>Heat health warning evoke more concern in women than men; older people had lower risk perceptions despite having higher risk. Effectiveness unknown.</p> <p>Combination of heat warnings, health advisories and targeted support was effective in reducing the health impacts of heatwaves and mitigating the associated risks, including reduced healthcare utilisation.</p> <p>Develop a strategy for enabling Council-owned public amenities to provide refuges from extreme heat for vulnerable residents. The effectiveness was not assessed.</p> <p>Susceptibility of older persons to heat is linked to physiological issues, socio-economic issues, psychological issues and adaptive strategies. Socio-economic issues were very influential in shaping behaviours, as were concerns about power costs when using air conditioning. Publicly cooled spaces can provide a cool environment without cost concerns, but can be problematic due to the lack of facilities, and transport to and from the centres in the heat.</p> <p>Heat Action Plans (HAPs) can reduce deaths and improve behaviours amongst older people.</p> <p>More information is needed to ensure that older adults are not only aware of heat risks, but also understand that they are personally vulnerable. More information on specific actions during heatwaves needs to be provided, and more support is needed from healthcare providers and the community.</p> |

| | |
|----------------------------|---|
| | <p>Urban ventilation pathways are especially effective when combined with blue and green infrastructure. Natural cross ventilation can be effective dependent on orientation and window locations. Self-dousing is effective up to at least 47°C.</p> <p>Evidence-based cooling strategies include air conditioning as the most widely adopted heat reduction strategy worldwide, yet it is unaffordable for many of the most vulnerable, financially and environmentally costly, and leaves many defenceless from extreme heat during power outages. Urban and landscape design can greatly increase adaptive capacity to extreme heat and hot weather. For example, blue and green spaces, and changing materials and natural ventilation for buildings. Effective cooling solutions can also be adopted at the individual level, even in low-resource settings, which are more sustainable than air conditioning, and focus on cooling the person to relieve physiological heat strain, as opposed to cooling the surrounding environment. Heat action plans that are robust, evidence-based, well communicated, and informed by real-time surveillance provide optimal health protection.</p> |
| Urban heat | <p>A combination of urban greenery, shading, cooling materials on pavements and roofs, and a water spray system significantly reduced excess hospital admissions.</p> <p>Change of pavement colour from black to white significantly reduced average land surface temperature, heat-related mortality and energy bills.</p> <p>Increased urban vegetation are estimated to reduce heat related mortality (but a small sample of buildings was used).</p> <p>Urban greening of infrastructure improved thermal comfort; and had significant health impacts up to 11.7 fewer heat-related deaths per day during heatwaves with greening interventions.</p> <p>Using combinations of reflective materials, additional greenery (e.g., planting trees) and irrigation to enhance evapotranspiration could improve energy demand, indoor environmental quality, vulnerability, survivability, and heat-related mortality and morbidity in the urban environment.</p> <p>Parks with elevated shading canopies are more effective urban climate moderators than unshaded grass-covered terrain.</p> |
| Mental health | <p>The Skills for Life Adjustment and Resilience (SOLAR) program is a brief, trauma-informed, skills-based psychosocial programme that can be delivered by trained lay community members. It led to significantly lower levels of anxiety and depression, and PTSD symptom severity between pre- and post-intervention (compared to the self-help alternative), and was associated with large improvements in posttraumatic stress symptoms over time. At least two studies found this to be effective.</p> <p>Psychological interventions supporting children's recovery from bushfires can be highly effective, although flaws in the study design may overestimate the effectiveness of these programs.</p> |
| Infectious diseases | <p>Mosquito control is an effective public health intervention to reduce mosquito-borne disease.</p> <p>Health promotion and education, surveillance, and early warning systems are suggested for reducing respiratory, diarrheal, and vector-borne diseases.</p> |

| | |
|-------------------------|---|
| Workplace health | <p>Heat stress training availability is limited, with only 35% of representatives reporting its presence. Specific Work Health and Safety (WHS) legislation addressing hot weather work is lacking nationwide, highlighting the need for comprehensive prevention approaches. Barriers to prevention include worker awareness gaps, insufficient training, and organizational issues. Workplaces employ preventive measures like providing Personal Protective Equipment (PPE), sunscreen, and cool drinking water. The study underscores the importance of hot weather policies, heat stress training, and control measures to reduce heat exposure risks.</p> <p>High temperature warning systems are effective in limiting occupational injuries in Australian cities.</p> |
| Cold | <p>Housing interventions for warmth and energy efficiency, including thermal retrofits, upgrades, and comprehensive refurbishments to create warmer and drier living environments, improve health and wellbeing. Interventions improving warmth and reducing humidity in winter were linked to benefits for cardiovascular and respiratory health. Positive effects on mental and social well-being were noted, often independent of energy cost savings, due to the enriched meaning of a comfortable home. Ensuring warm homes during winter was identified as a critical factor for improving physiological, psychological, and social health outcomes.</p> |
| Other | <p>Community activities including climate action, and resilience and adaptation planning, can help communities to prepare for the impacts of climate change. The effectiveness was not assessed.</p> <p>Indigenous communities' physiological adaptation to heat suggests that social and cultural adaptations to increasing hot weather are potentially powerful mechanisms for protecting human health.</p> <p>Electronic health records can assist in health care during emergencies, but may be under-utilised.</p> <p>To reduce the impacts on women of droughts and heatwaves, it is suggested that strategies to enhance local adaptive capacity to climate change are developed, with more input from women's perspectives regarding management at household levels; and the provision of government assistance to women living in areas prone to extreme climatic effects.</p> <p>Ensure that the health workforce is prepared to respond to climate change impacts – effective strategies include: training/skill development; workforce capacity planning; interdisciplinary collaboration; role flexibility; role incentivisation; and psychological support.</p> |

Source: Interim Australian Centre for Disease Control (2024). *Summary report appendices: Systematic mapping review of Australian research on climate and health Interventions*. <https://www.health.gov.au/resources/publications/systematic-mapping-review-of-australian-research-on-climate-change-and-health-interventions?language=en>

Priority areas to support adaptation

The Emergency Leaders for Climate Change group have recommended five priority areas to support adaptation. These priorities focus on information, protection, supporting adaptation and response, building household resilience, and learning from past disasters. The five priority areas are:

1. Equipping everyone with the **climate risk information** that they need.
2. Prioritising the **protection of people and places** at greatest risk from climate fuelled-disasters.
3. **Supporting community-led climate change adaptation and disaster response.**
4. **Building household resilience** to the impacts of climate change.
5. **Learning lessons** from past disasters.

Five priorities to better protect communities from the climate impacts of today, and tomorrow

|  Equipping everyone with the climate risk information they need |  Prioritising the protection of people and places at greatest risk from climate-fuelled disasters |  Supporting community-led climate change adaptation and disaster response |  Building household resilience to the impacts of climate change |  Learning lessons from past disasters |
|--|--|---|--|--|
| Develop nationally consistent regional assessments and predictions of climate change risks so every decision maker, business and community understands how climate pollution is impacting them and will do so in the future. | Identify the people and places most at risk — due to relative exposure as well as existing social and economic disadvantage — to ensure that support is concentrated where it's needed most. | Help communities be more resilient through greater social connections, access to necessary knowledge and information about local hazards (for example fires, floods, coastal inundation), and leveraging resources, including existing emergency services and new support groups. | Ensure households can access the support they need to prepare for or cope with climate-fuelled disasters — whether that's retrofitting their homes or, in some cases, moving them out of harm's way. | Fully implement all recommendations from the Royal Commission into National Natural Disaster Arrangements, and other relevant inquiries. |

Source: Emergency Leaders for Climate Action (2024). *Too close to home*.

https://www.climatecouncil.org.au/wp-content/uploads/2024/06/Too-Close-to-Home_ELCA-and-Climate-Council-report.pdf

Information

Most Victorians (80%) are interested in more information about the health impacts of climate change, including:

- information on actions that improve health and reduce impact on climate change, e.g., information on active transport (72%);
- information on how to protect against the health conditions likely to become more common due to climate change (68%); and
- information on climate actions more generally (74%). During the past year, one-fifth of Victorians actively searched for information on climate change and health, increasing to more than one-third among those aged 16-34 years.

Source: Sustainability Victoria (2024). *State of Sustainability Report 2024*.

<https://assets.sustainability.vic.gov.au/asset-download/Document-State-of-Sustainability-Report-2024.pdf>

Similarly, the *Too Close to Home* report found that,

“Community connection and social capital strongly influence how well a community can prepare for escalating climate impacts and respond to disasters...Community led approaches to adaptation and resilience – that focus on giving communities access to the knowledge and information they need, building on their existing strengths, and co-developing solutions – are proven to be smart investments in helping communities continue to flourish in the face of escalating climate change and disaster risks.”⁵⁵

The 2021 Yarra Ranges Community Health and Wellbeing Survey found that 81% of respondents thought that Council’s role in ‘promoting ways to adapt to a harsher climate and minimise risks to health’ was extremely important or very important. A strong theme across priority areas was community members wanting:

- more information about how to respond to issues;

⁵⁵ Emergency Leaders for Climate Action (2024). *Too close to home*.

https://www.climatecouncil.org.au/wp-content/uploads/2024/06/Too-Close-to-Home_ELCA-and-Climate-Council-report.pdf

- information about what individuals and businesses can do;
- more work on social connections and better communication within communities.

Adaptation actions

There is a wide range of factors which help to protect against climate change impacts. They include:

- Community resilience to heat and cold, including community/service/business solar systems, cool indoor and outdoor spaces, tree canopies and shade, adequate health services, resilient infrastructure and services, and appropriate human resource policies.
- Household resilience, including preparing for disasters (access to tank water, access to solar power and generators, having insulation and heating/cooling, having adequate supplies during an emergency, knowing safe behaviours for different scenarios).
- Insurance against loss of homes in a fire or other disaster.
- Access to local affordable food.
- Choice of what homes to build and where (e.g. minimizing heat-absorbing materials, providing shade).
- Health service access (vaccinations against disease; public health information campaigns; adequate GP, ambulance and emergency department services).
- Resilient and affordable infrastructure – power, telecommunications, roads, public transport, water supplies.
- Supportive and socially connected communities.
- Community empowerment – knowing how to act to mitigate and respond to climate change can help to reduce climate anxiety.
- Emergency management providing information during an emergency, such as relocating during an emergency.
- Food safety.

Council has a role in all of these areas:

- Community information programs (e.g. public health information during heatwaves, information on the solar savers programs and electrifying the home).
- Tree planting and open space planning.
- Urban planning, including housing and building approvals.

- Building and developing resilient infrastructure and services, including features such as solar panels, batteries, generators.
- Urban planning services for homes and other buildings.
- Public health work which support food safety in businesses and at events.
- Supporting local agriculture and food systems.
- Social support services, including immunisation, maternal and child health, and healthy active ageing.
- Social connection work across a range of Council teams.
- Planning for emergencies, and undertaking emergency response and disaster recovery work.
- Economic development (e.g. advocacy for local internet services).
- Undertaking emergency and community planning for disasters.
- Advocacy for health and other services.

Areas with potential for additional action include providing access to cool spaces during high heat; increased shade at community facilities and other Council buildings; providing information to households on how to improve resilience in a changing climate, particularly in terms of reliable access to power, water and telecommunications; health promotion via Council services on climate-safe behaviours; ongoing information on having appropriate insurance; and empowering the community to know how to respond to climate change impacts, to assist in mental wellbeing as well as preparedness. Council has embarked on a wide range of adaptation actions, with examples included below.

RESILIENT BUILDINGS



Council is enhancing climate change resilience in Yarra Ranges by installing solar panels, batteries, HVAC systems, LED lighting and generator plug-ins across 22 community buildings. This includes upgrading all 22 community buildings with generator plug-in points and purchasing mobile generators, to improve community resilience and emergency preparedness during environmental emergencies. These upgrades, along with solar panels and battery systems at key sites across the municipality, will ensure that these facilities remain operational when power fails, offering safe reliable spaces for the community, during emergencies like bushfires. These changes also improve energy efficiency.

As part of the Resilient Energy Precinct project, Council has upgraded the battery system at the Yarra Centre in Yarra Junction, and installed a solar and battery system at the Olinda Sporting Pavilion. The Olinda Pavilion's system includes more than one hundred REC solar panels on the roof of the Pavilion. The system has a 44kW array that feeds into a 95kW battery. This could provide up to a week of energy backup for the pavilion in an emergency.

Council has also been working with community members in Steels Creek to enhance resilience to power outages and weather-related disasters. The Steels Creek community centre has been upgraded with 7.36kW solar panels, a 22kWh battery system and a generator plug-in point, enabling it to serve as an emergency hub during times of need. This project is part of the Preparing Australian Communities initiative and the Resilient Buildings Project.



Upgrades are also planned for the Monbulk Sporting Pavilion and the Monbulk Living and Learning Centre. These locations will be set up as a combined microgrid, enabling them to share power and operate independently of the power grid during power outages.

Council has a Climate Resilient Buildings Officer whose role includes:

- Completing strategic upgrades to council owned community buildings to ensure that they are energy resilient, thermally functional and climatically appropriate.
- Creating community resilience centres that will support community to withstand, respond and recover from natural disasters and other extreme events, such as heatwaves, fire, flood and wind events, expected to increase due to climate change.
- Managing grant funding aimed community resilience, for Council's climate action team.
- Supporting council in developing and delivering on sustainability and climate related targets, plans and policy.

Source: Yarra Ranges Council (2024). *Resilient buildings*.

<https://www.yarraranges.vic.gov.au/Environment/Emergencies/Resilient-Yarra-Ranges/Resilient-Buildings>

PLANTING

Council has an ongoing program to plant trees and other plants. The benefits of this program include shade, shelter, windbreaks and habitat protection. Health benefits include making the climate more liveable during high heat days and reducing urban heat.

FOOD SECURITY

Council has a Food Systems Officer who oversees the Gardens for Harvest program and community gardens, and works toward food security within the region. Council supports a Community Gardens Network; runs the Gardens for Harvest program which delivers workshops, events and information; works with other groups on food security, has a Food Security Strategic Plan, and has obtained a food security grant delivered in partnership with the Council Health and Wellbeing Team.⁵⁶ Council's Health and Wellbeing Team doing a range of work to improve food security, including advocacy, submissions and grant applications.

ADVOCACY

During 2024, Council has undertaken a range of advocacy relating to climate change impacts, including:

- In response to the Network Outage Review Interim Report on the February 2024 power outage, Council worked with the Municipal Association of Victoria on the local government submissions. This focused on:
 - Energy distributors needed to enhance the resilience of the network;
 - Proposed energy hubs/72hrs boost locations are not a local government responsibility but sit with the energy distributor.
- Council prepared a submission to the State's Food Security Inquiry. Commentary related to the impacts, drivers of, and solutions for, food security in Victoria.

⁵⁶ Yarra Ranges Council (2023). *Yarra Ranges Council Sustainability Report 2022-2023*. <https://www.yarraranges.vic.gov.au/Council/Corporate-documents/Policies-strategies/Sustainability-report>

- Council officers have been involved in interviews and workshops for the *Co-designing Healthier Climate Policies* project. This is a joint program between the University of Melbourne and the Department of Health. The project will pilot an evidence-based decision support tool developed by University of Melbourne researchers, with a cohort of state and local government policymakers. It will co-design tools and resources, with project participants, to support the development of policies/ programs aiming to reduce greenhouse gas emissions or help communities to adapt to climate change.

INFORMATION

Having reliable and sustainable power is crucial to how communities cope during many types of disaster, and communities have expressed a strong desire to have more information on how to manage disasters. In 2024, Council has run several Sustainability Drop-in Sessions. These have provided information on how to electrify the home, solar batteries, rebates for heat pumps and hot water systems, how to hire reputable providers, energy efficiency and sustainability, and using induction cooktops. In particular, it provided information on the Solar Savers program⁵⁷, a local government initiative helping communities to electrify everything. Council also support community groups in this space, with recent work including providing information at the Healesville CoRE Prepare to Switch event encouraging locals to consider switching to renewables.⁵⁸

In February 2023, Council ran a session on “Preparing for Emergencies - Have you got the right insurance?”. This session had presenters from the Eastern Community Legal Centre and The Salvation Army.

⁵⁷ Solar Savers. <https://solarsavers.org.au/>

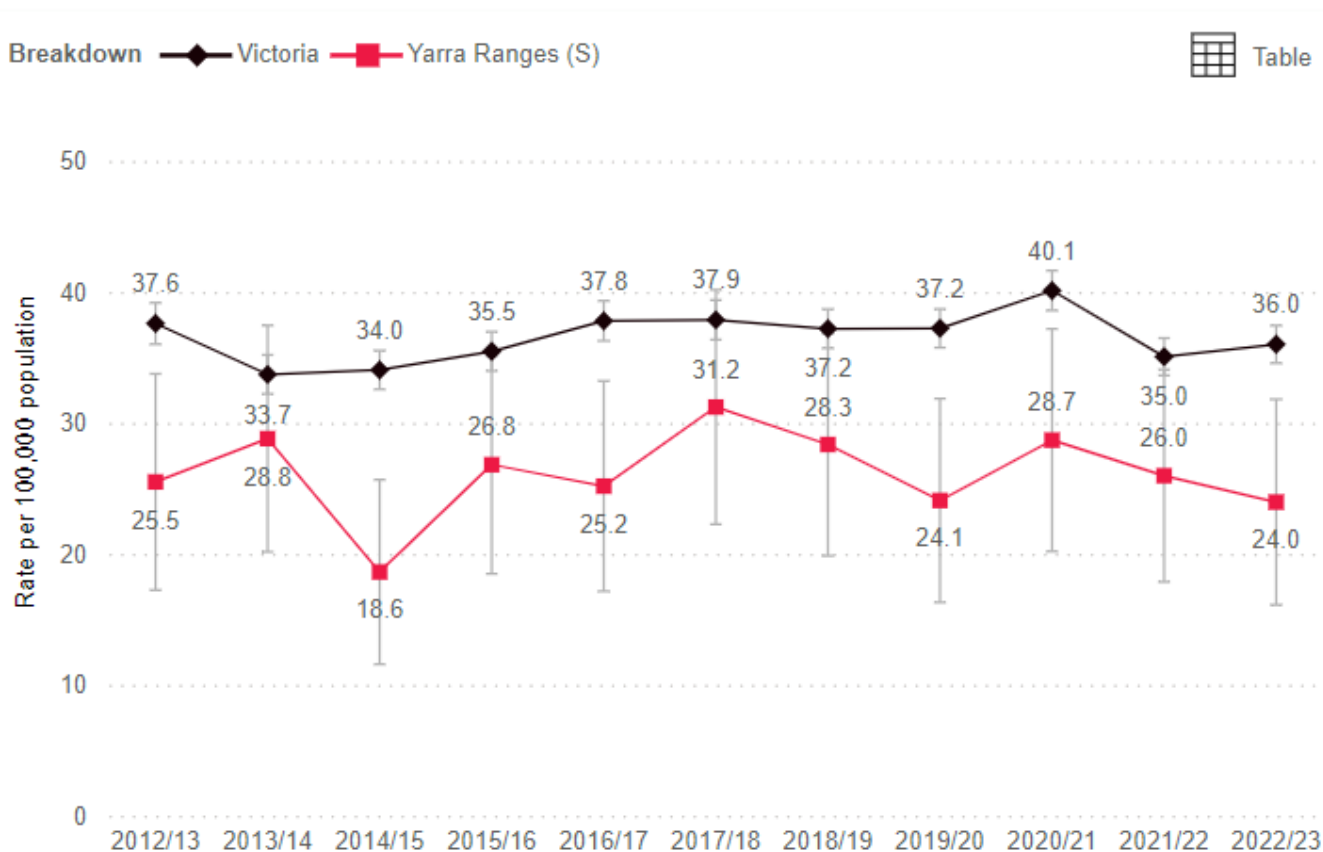
⁵⁸ [Healesville CoRE: Helping the Community Prepare to Switch Yarra Ranges Council](#)

PART 5: COMMUNITY SAFETY

Assault

Yarra Ranges had a well below average hospitalisation rate for assault in 2022/23, at 24 per 100,000 residents, compared to 36 per 100,000 across Victoria. Levels jumped in the first year of the pandemic, but have now returned to pre-pandemic levels.

Hospitalisation rate due to assault - Excluding same-day admissions, and Victoria, 2012/13 to 2022/23



Source: Department of Health (2024). *Victorian Public Health and Wellbeing Outcomes Dashboard*.
<https://www.health.vic.gov.au/victorian-public-health-and-wellbeing-outcomes-dashboard>

Unintentional injuries

Yarra Ranges residents had 2,757 hospitalisations for unintentional injuries in 2020. The rate of hospital admissions was 1,723.6 per 100,000 residents and had declined by 6.3% from the 2019 level. Yarra Ranges had a slightly above average rate of injury hospitalisations in both years. Residents aged 85 plus had the highest hospitalisation rate, at 9,987.9 per 100,000 – more than five times the population average – but were well below the Victorian average. Males had a higher rate of hospitalisations than females, at 1,938 compared to 1,627.5. Falls caused 50% of hospitalisations for unintentional injuries, and fractures were the main type of injury (41.6%).

Yarra Ranges had a below average hospitalisation rate for falls amongst older adults in 2022/23 and the level of admissions has been stable over the past five years.⁵⁹

Note that additional detailed data on falls are available from the Falls Injury Atlas⁶⁰; data on sports injuries are available from the Sports Injury Atlas.⁶¹

Source: Victorian Injury Surveillance Unit (2024). *Injury Atlas Unintentional*.

<https://vicinjuryatlas.org.au/unintentional/#>

⁵⁹ Source: Department of Health (2024). *Victorian Public Health and Wellbeing Outcomes Dashboard*.
<https://www.health.vic.gov.au/victorian-public-health-and-wellbeing-outcomes-dashboard>

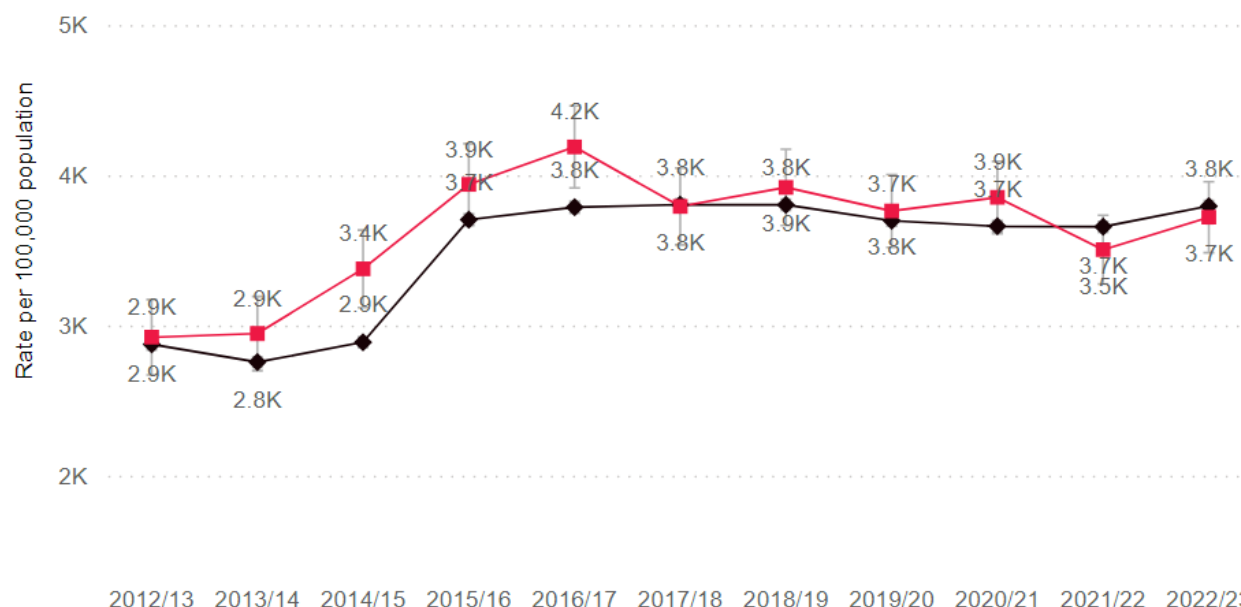
⁶⁰ <https://vicinjuryatlas.org.au/falls/#>

⁶¹ <https://vicinjuryatlas.org.au/sport/>

Hospitalisation rate due to falls in adults 65 years and older - Excluding same-day admissions, and Victoria, 2012/13 to 2022/23

Breakdown — Victoria — Yarra Ranges (S)

Table



Source: Department of Health (2024). *Victorian Public Health and Wellbeing Outcomes Dashboard*. <https://www.health.vic.gov.au/victorian-public-health-and-wellbeing-outcomes-dashboard>

Transport injuries

Yarra Ranges residents had 383 hospitalisations for transport injuries in 2020. The rate dropped by 5.3% between 2019 and 2020, to 239.4 per 100,000. The hospitalisation rate was by far the highest amongst 15-24 year olds, who had a rate of 374.5 per 100,000 and accounted for 18.8% of hospitalisations. Males had a much higher rate than females, at 340.6 compared to 152.9 – more than double the female hospitalisation rate. The rate of admissions for transport injuries in Yarra Ranges was well above average for the total population and slightly above average for 15-24 year olds.

The main groups injured were car occupants (39.1%), pedal cyclists (26%) and motorcycle riders (25.6%). The level of residents injured on motorcycles was well above the Victorian average of 20.3%. Yarra Ranges also had a high level of people who were injured in off-road accidents, with these injuries accounting for 34.1% of hospitalisations, compared to 22.7%

across Victoria. Fractures were the main type of injury, accounting for 47.8% of hospitalisations.

Source: Victorian Injury Surveillance Unit (2024). *Injury Atlas Transport*.

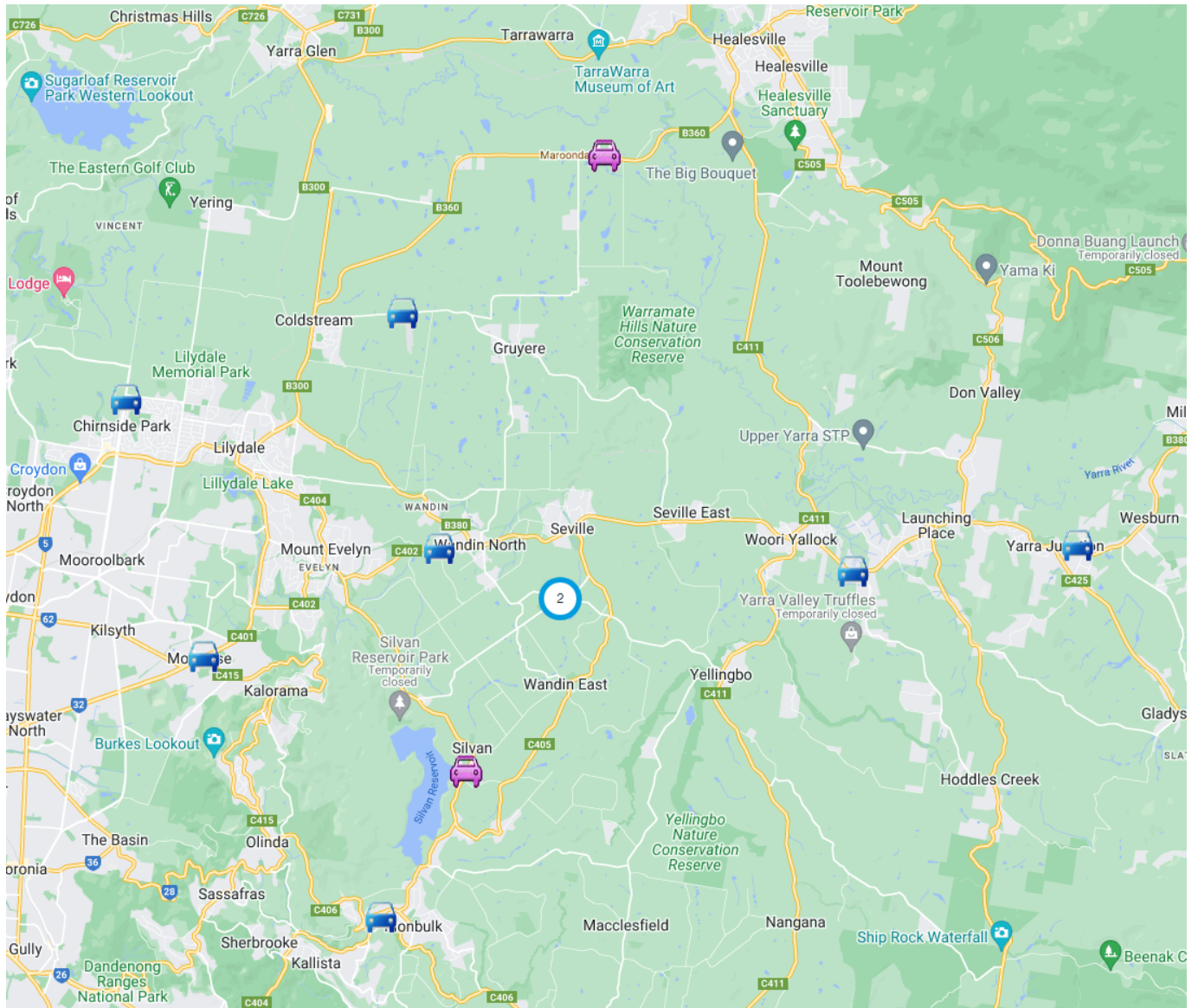
<https://vicinjuryatlas.org.au/transport/#>

ROAD DEATHS AND INJURIES

Yarra Ranges has a relatively high number of road deaths, ranking second-highest amongst metropolitan LGAs and fifth-highest amongst all Victorian LGAs. However, this may be overstated as Yarra Ranges has a relatively large population and this figure is a number, not a population-standardised rate.

The number of road deaths in Yarra Ranges has fluctuated considerably over the past five years. The number was nine in 2019 and eight in 2020; it halved in 2021 to four deaths, before going back up to seven in 2022. In 2023, the number of deaths jumped by more than 50% to 11 lives lost.

Road deaths by location: Yarra Ranges, 2023



Source: TAC (2024). *Online crash database*. https://www.tac.vic.gov.au/road-safety/statistics/online-crash-database/search-crash-data?date-after=1-Jan-2018&date-before=31-Dec-023&meta_J_orsand=&meta_G_orsand=&query=%21padrenull&collection=tac-xml-meta&meta_D_orsand=%22Yarra+Ranges%22&clive=tac-fatalities-xml#mapview

Road injuries have fluctuated more than road deaths. In the year to March 2023, 120 people were admitted to hospital within seven days of a road accident. This is up from 105 in 2022, but lower than the 140 admissions in 2021; the five year average was 124 persons.

Across Victoria, Yarra Ranges has the highest number of hospital admissions for serious road injuries of any LGA. In the year to March 2023, 20 people had a hospital stay of more than 14 days for a road accident, compared to 10 in 2022 and 20 in 2021. The five-year average was 18 persons per year.

Source: TAC (2023). *TAC road safety quarterly statistics report - September 2023*.

<https://www.tac.vic.gov.au/road-safety/statistics/road-safety-statistical-summary>

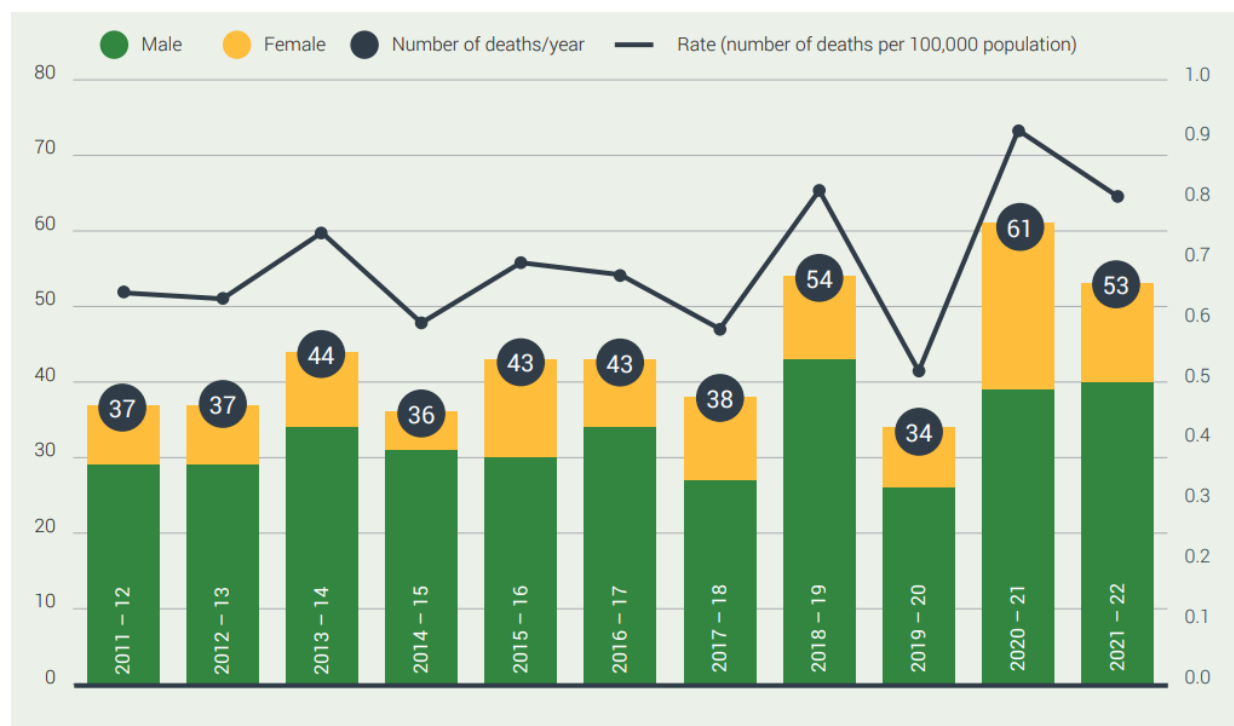
Drownings

Victoria-wide, the number of people who died from drowning has increased since the pandemic. 2020/21 experienced a record breaking toll. Whilst the number of deaths in 2021/22 was slightly lower, 53 people drowned, an 18% increase on the annual average (43 people) for the previous decade. Most drowning deaths were male (75%); more than 40% were aged 65 years or more. The rate of drownings amongst children aged 0-4 increased by 19%, and the rate amongst 15-24 year olds increased by 5%. The most common location for drownings was inland waterways (rivers, creeks, streams and lakes), with a 48% increase in drownings in these locations (compared to 10-year average).

In 2022/23, Yarra Ranges ranked 11th out of 31 LGAs for its number of drowning deaths in the past ten years. The main age group affected was 45-64 year olds and the main location was inland waterways. Everyone who drowned in Yarra Ranges was a local resident.

This data shows an increase in the number of drownings, with Yarra Ranges moving from being ranked 12th to being ranked 11th. It also shows a shift towards older adults drowning, and a shift in location towards inland waterways. In 2021/22, the main age group affected in Yarra Ranges was 25-64 year olds, the main location was private swimming pools, and the main activity was walking or playing near water.

Drowning fatalities and rate since 2011-12, by sex



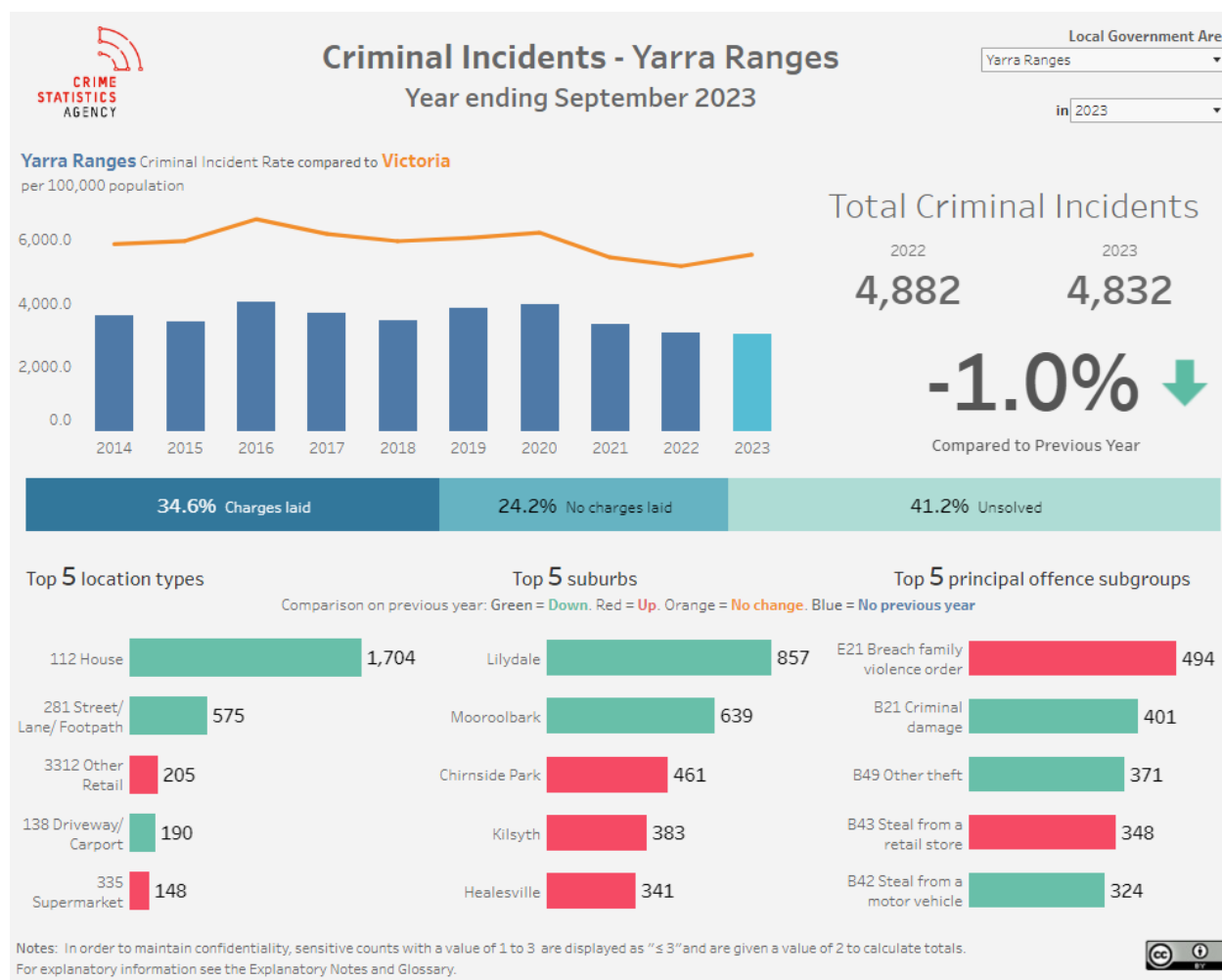
Source: Life Saving Victoria (2022). *Victorian drowning report 2021-22*.

https://lsv.com.au/wp-content/uploads/LSVDrowningreport2122_2022-12-05_05-36-27.pdf

Crime

Yarra Ranges has a below average crime rate, and the rate has been trending down over the past four years. The rate of criminal incidents fell from 3,851.5 per 100,000 residents in 2019 (compared to 6,061.4 for Victoria), to 3,042.2 per 100,000 in 2023 (compared to 5,536 for Victoria).

The main types of offences were breaches of family violence orders, criminal damage and theft. The suburbs with the highest number of criminal incidents were Lilydale, Mooroolbark, Chirnside Park, Kilsyth and Healesville; however, these areas also have the largest populations.



Source: Crime Statistics Agency (2024). *Latest crime data by area.*

<https://www.crimestatistics.vic.gov.au/crime-statistics/latest-crime-data-by-area>

Family violence

In the year to September 2022/23, Yarra Ranges had the second-highest rate of family violence of any LGA in the Eastern Metropolitan Region, at 1,224 per 100,000 residents, but the rate is below the Victorian average.

Overall, the rate of family violence increased by 17.9% during the pandemic. It rose by 8.3% in 2020, fell by 2.6% in 2021, jumped by 18.8% in 2022 (the first year out of lockdown), then fell by 5.9% in 2023. The number of incidents fell by 5.1% between 2022 and 2023. Local government areas in the Eastern Metropolitan Region (EMR) tended to have the highest growth in family violence over the past four years, with the exception of Maroondah and Knox.

Most victims of family violence were female (73%). Most offenders and other parties involved were male (74%).

Source: Crime Statistics Agency (2024). *Latest crime data by area*.

<https://www.crimestatistics.vic.gov.au/crime-statistics/latest-crime-data-by-area>

2022/23 FAMILY VIOLENCE DASHBOARD

A new Family Violence Dashboard was released in 2024, showing slightly different family violence indicators. It shows that the rate of family violence has increased by 23.5% over the past four years. It rose by 12% in 2019/20, which included the first three months of the pandemic; then dropped by 3% in 2020/21, the first full year of the pandemic. It rose again in 2021/22, by 14%, then stabilized in 2022/23.

The country of birth was unknown for 45% of family violence victims, so analysis of birthplace is not accurate. Children were the victim or the perpetrator for 8% of intervention orders. 86 victims on Family Violence Intervention Orders (FVIO) were heard through the Children's Court, meaning that either the perpetrator or the victim was aged less than 18; 1,028 victims were heard through the Magistrates' Court. In 2022/23, there were 136 emergency department presentations relating to family violence, 30 ambulance patients, 566 clients receiving homelessness services through a specialist family violence service, and 289 clients affected by family violence who were receiving homeless services through a general homelessness service.

FAMILY VIOLENCE RELATED OFFENCES

In 2022/23:

- 45.6% of solved family violence related offences resulted in arrest.
- 24.2% of solved offences resulted in a summons.
- 1.4% of solved offences resulted in a caution.
- The most common types of offences at family violence incidents were breaches of family violence orders.
- Family violence incidents accounted for 34% of criminal offences.

FAMILY VIOLENCE INCIDENT DETAILS

In 2022/23:

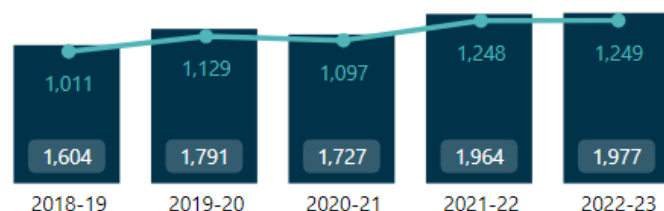
- A child was present as a victim or a witness in 41.4% of incidents.
- In most family violence incidents (1,341, or 68% of the total), both the victim and the perpetrator were adults.
- There were 230 incidents (12%) with a child victim - 185 with an adult perpetrator, 37 with a youth perpetrator and 8 where the perpetrator was elderly.
- There were 219 incidents (11%) where a child was the perpetrator – 170 with an adult victim, 37 with a youth victim and 12 with an elderly victim.
- There were 136 incidents (7%) of elder abuse - 96 where an adult was the perpetrator, 28 where another elderly person was the perpetrator, and 12 where a child was the perpetrator.
- There were 81 incidents (4%) with an elderly perpetrator - 45 where the victim was an adult, 28 where the victim was also elderly and 8 where the victim was a child.

Note that multiple offences can occur at a single incident.

Family Violence Dashboard: LGA Snapshot, Yarra Ranges, 2022/23

Number and Rate of Police Recorded Family Violence Incidents

● Nr of Incidents ● Incident Rate



Percentage Change 2022-23

Number of Incidents

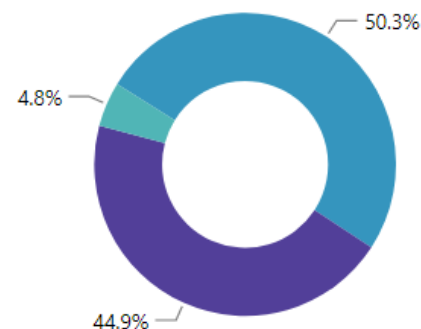
0.7%

Rate of Incidents(per 100,000)

0.1%

Country of Birth, Family Violence Victims

● Born in Australia ● Unknown ● Born Overseas



Number of Victims on FVIO Applications

Magistrates' Court

Children's Court



1028

2022-23

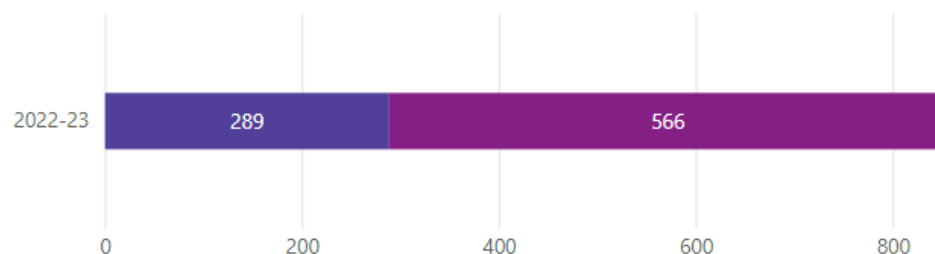


86

2022-23

Number of Clients Receiving Homelessness Services because of Family Violence

● General service where FV is a reason for presenting ● Specialist family violence service



Ambulance Patients

30

Emergency Department Patients

136

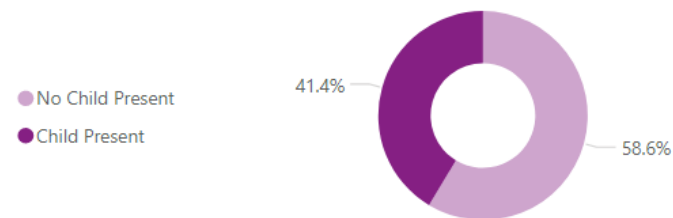


Source: Crime Statistics Agency (2024). *Family Violence Dashboard*. <https://www.crimestatistics.vic.gov.au/family-violence-data/family-violence-dashboard>

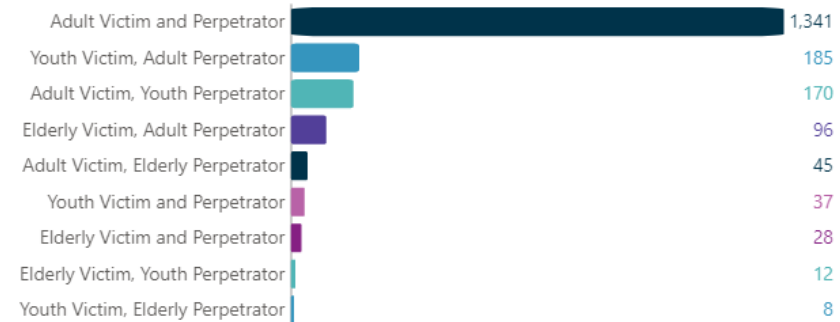
Family Violence Dashboard: Incident details, Yarra Ranges, 2022/23

Incident Details (2022-23)

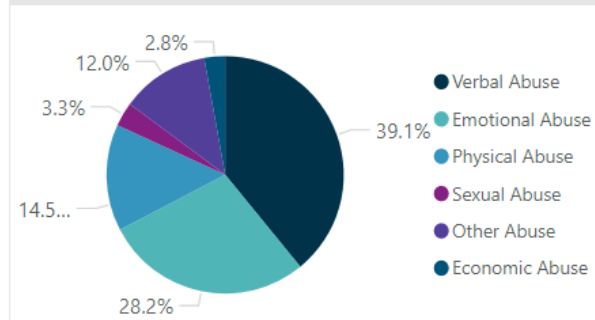
Proportion of Incidents where a Child was Present as Victim or Witness



Age Groups of Perpetrator-Victim Pairs



Recorded Abuse Types at Incidents

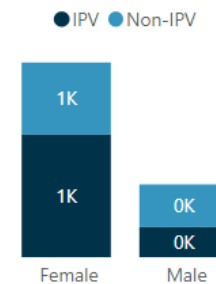


Family Violence Safety Notices (FVSNs) were issued at **231** Family Violence Incidents. FVSNs were not issued at **88.3 %** of incidents.



Most (**91.9 %**) of Family Violence Incidents occurred at a **residential premises (1817)**. Only **160** incidents occurred at a **non-residential location**.

Number of Incidents by Type of Violence and Victim Sex



Source: Crime Statistics Agency (2024). *Family Violence Dashboard*. <https://www.crimestatistics.vic.gov.au/family-violence-data/family-violence-dashboard>

Family incidents and rate per 100,000 population by police region and local government area - October 2018 to September 2023

| LGA | 2019 | 2020 | 2021 | 2022 | 2023 | % change, 2019-2023 |
|------------------------|--------------|--------------|--------------|--------------|--------------|---------------------|
| Banyule | 1,024 | 1,042 | 1,044 | 938 | 922 | -10.0% |
| Bayside | 649 | 714 | 719 | 788 | 756 | 16.6% |
| Boroondara | 484 | 568 | 577 | 620 | 589 | 21.9% |
| Brimbank | 1,381 | 1,444 | 1,496 | 1,452 | 1,427 | 3.3% |
| Cardinia | 1,217 | 1,328 | 1,348 | 1,211 | 1,220 | 0.3% |
| Casey | 1,346 | 1,412 | 1,444 | 1,377 | 1,385 | 2.9% |
| Darebin | 1,147 | 1,175 | 1,201 | 1,077 | 1,108 | -3.4% |
| Frankston | 1,702 | 1,933 | 1,912 | 1,820 | 1,959 | 15.1% |
| Glen Eira | 565 | 716 | 719 | 782 | 707 | 25.3% |
| Greater Dandenong | 1,468 | 1,707 | 1,698 | 1,571 | 1,638 | 11.6% |
| Hobsons Bay | 1,114 | 1,176 | 1,146 | 1,154 | 1,020 | -8.4% |
| Hume | 1,652 | 1,735 | 1,673 | 1,487 | 1,381 | -16.4% |
| Kingston | 987 | 1,049 | 1,087 | 1,166 | 1,122 | 13.7% |
| Knox | 1,100 | 1,177 | 1,218 | 1,206 | 1,257 | 14.3% |
| Manningham | 567 | 641 | 699 | 798 | 782 | 38.0% |
| Maribyrnong | 1,037 | 985 | 1,190 | 1,214 | 1,274 | 22.9% |
| Maroondah | 1,033 | 1,134 | 1,173 | 1,219 | 1,119 | 8.3% |
| Melbourne | 950 | 1,094 | 1,353 | 1,393 | 1,209 | 27.3% |
| Melton | 1,480 | 1,736 | 1,654 | 1,517 | 1,362 | -8.0% |
| Merri-bek | 1,139 | 1,108 | 1,090 | 1,173 | 1,074 | -5.7% |
| Monash | 691 | 777 | 943 | 988 | 966 | 39.8% |
| Moonee Valley | 909 | 937 | 982 | 1,014 | 1,013 | 11.4% |
| Mornington Peninsula | 1,167 | 1,341 | 1,247 | 1,156 | 1,176 | 0.7% |
| Nillumbik | 751 | 791 | 772 | 715 | 632 | -15.8% |
| Port Phillip | 1,143 | 1,268 | 1,334 | 1,367 | 1,240 | 8.5% |
| Stonnington | 780 | 956 | 898 | 876 | 841 | 7.8% |
| Whitehorse | 685 | 763 | 849 | 818 | 848 | 23.8% |
| Whittlesea | 1,401 | 1,430 | 1,401 | 1,229 | 1,070 | -23.6% |
| Wyndham | 1,212 | 1,243 | 1,357 | 1,345 | 1,392 | 14.9% |
| Yarra | 1,154 | 1,232 | 1,238 | 1,169 | 1,064 | -7.8% |
| Yarra Ranges | 1,038 | 1,124 | 1,095 | 1,301 | 1,224 | 17.9% |
| % annual change | | 8.3% | -2.6% | 18.8% | -5.9% | |
| Victoria | | 1,333 | 1,427 | 1,366 | 1,366 | |

Source: Crime Statistics Agency (2024). *Latest crime data by area.*

<https://www.crimestatistics.vic.gov.au/crime-statistics/latest-crime-data-by-area>

CHANGE IN FAMILY VIOLENCE BY AGE

Over the past four years, there has been substantial growth in family violence victims aged 55 plus. The number rose by 50%; it also rose by 26% amongst 45-54 year olds, and by 17% amongst 35-44 year olds. The number rose by 11% amongst children and teenagers; the number dropped amongst 18-34 year olds.

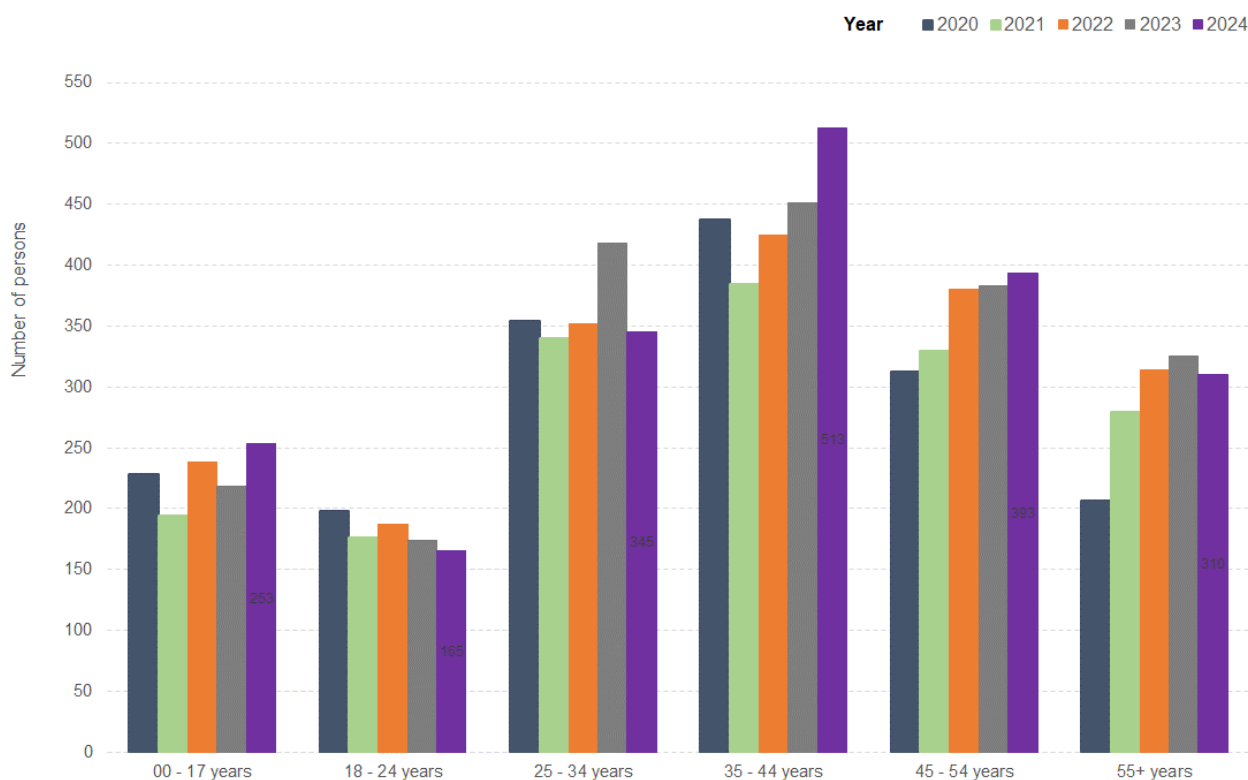
There was a large shift in the age profile of perpetrators. The number aged 55 plus more than doubled (a 103% increase), and the number aged 0-17 rose by 72%.

Affected family members and other parties by age group: Yarra Ranges, 2020 to 2024 (year ending March)

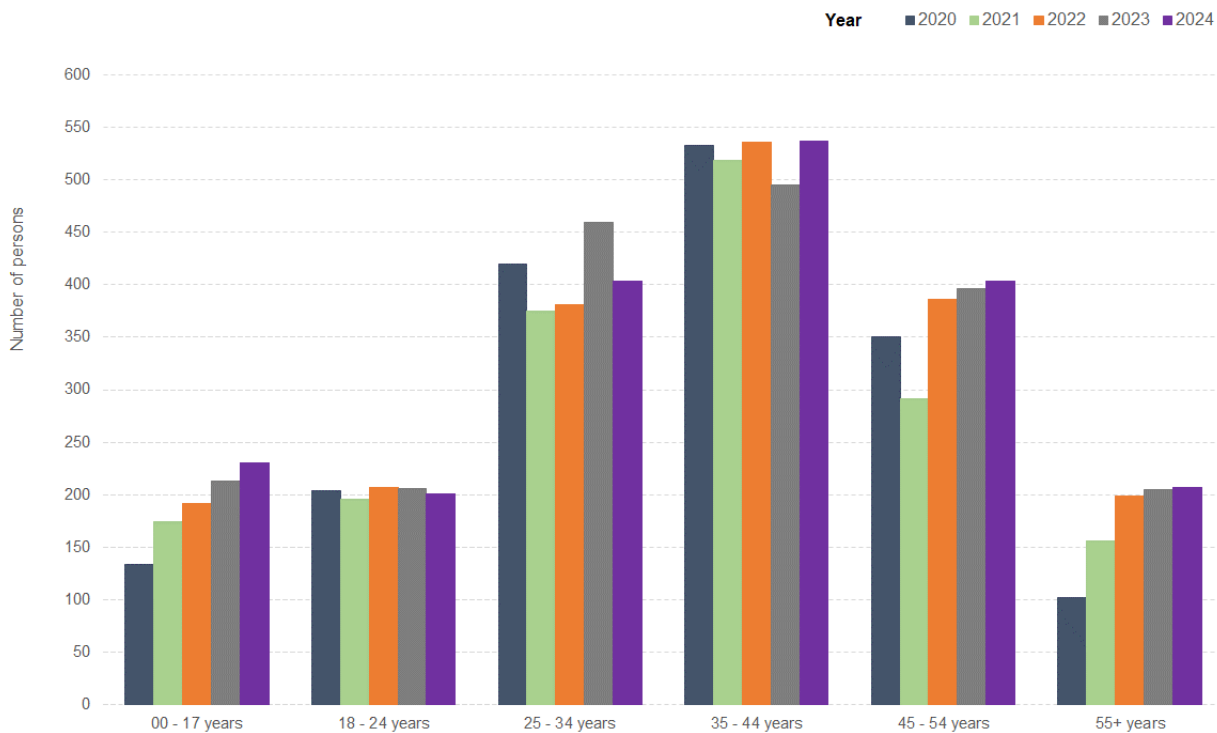
| Age group | 2020 | 2021 | 2022 | 2023 | 2024 | % change, 2020-2024 |
|---|------|------|------|------|------|---------------------|
| Affected family member | | | | | | |
| 00 - 17 years | 228 | 194 | 238 | 218 | 253 | 11.0% |
| 18 - 24 years | 198 | 176 | 187 | 174 | 165 | -16.7% |
| 25 - 34 years | 354 | 340 | 352 | 418 | 345 | -2.5% |
| 35 - 44 years | 437 | 384 | 425 | 451 | 513 | 17.4% |
| 45 - 54 years | 313 | 330 | 380 | 383 | 393 | 25.6% |
| 55+ years | 207 | 279 | 314 | 325 | 310 | 49.8% |
| Other parties (alleged perpetrators) | | | | | | |
| 00 - 17 years | 134 | 174 | 192 | 213 | 230 | 71.6% |
| 18 - 24 years | 204 | 196 | 207 | 206 | 201 | -1.5% |
| 25 - 34 years | 420 | 375 | 381 | 459 | 403 | -4.0% |
| 35 - 44 years | 532 | 518 | 536 | 495 | 537 | 0.9% |
| 45 - 54 years | 350 | 291 | 386 | 396 | 403 | 15.1% |
| 55+ years | 102 | 156 | 199 | 205 | 207 | 102.9% |

Source: Crime Statistics Agency (2024). *Data Tables LGA Family Incidents Year Ending March 2024*. <https://www.crimestatistics.vic.gov.au/crime-statistics/latest-victorian-crime-data/download-data>

Family violence incidents by age of victim: Yarra Ranges, 2020 to 2024, year ending March



Family violence incidents by age of perpetrator: Yarra Ranges, 2020 to 2024, year ending March



FAMILY VIOLENCE BY SUBURB

The areas with the highest rates (per 1,000) of family violence incidents were Three Bridges, Narre Warren East, Yarra Junction, Belgrave, Healesville, Badger Creek, Woori Yallock, Millgrove, Lilydale and Tecoma. They had rates of 7.8 to 42.6 incidents per 1,000 residents (December 2023).

The areas with the highest growth in incidents (2019 to 2023) were Hoddles Creek (300%); Macclesfield (200%); Gruyere (133%); Narre Warren East, Dixons Creek and Ferny Creek (100%) each; Belgrave (95%); Coldstream (71%); Chirnside Park (47%); Wandin North (58%); Badger Creek (36%); Kilsyth (32%); Mount Dandenong (29%); Launching Place (27%); Mooroolbark (25%); Woori Yallock (24%); and Olinda (20%).

**Criminal incidents by principal offence, local government area and suburb/town:
Yarra Ranges, 2019 to 2023**

| Suburb | 2019 | 2020 | 2021 | 2022 | 2023 | % change | Rate per 1,000 residents | Rank |
|-------------------|------|------|------|------|------|----------|--------------------------|------|
| Badger Creek | 11 | 7 | 20 | 13 | 15 | 36% | 9.3 | 6 |
| Beenak | 1 | | | | | -100% | 0.0 | 49 |
| Belgrave | 20 | 14 | 13 | 28 | 39 | 95% | 10.0 | 4 |
| Belgrave Heights | 7 | 4 | | 6 | 2 | -71% | 1.4 | 45 |
| Belgrave South | 1 | | 6 | 10 | | -100% | 0.0 | 49 |
| Chirnside Park | 45 | 67 | 59 | 55 | 66 | 47% | 5.6 | 24 |
| Chum Creek | 4 | 6 | 6 | 3 | 2 | -50% | 2.0 | 43 |
| Coldstream | 7 | 12 | 10 | 7 | 12 | 71% | 5.5 | 25 |
| Dixons Creek | 1 | 4 | 2 | 3 | 2 | 100% | 5.8 | 21 |
| Don Valley | 8 | 5 | | 6 | 1 | -88% | 1.7 | 44 |
| East Warburton | 4 | 5 | 9 | 5 | 4 | 0% | 4.4 | 29 |
| Emerald | | 1 | | 1 | 2 | | 0.3 | 48 |
| Ferny Creek | 2 | 2 | 2 | 1 | 4 | 100% | 2.6 | 41 |
| Gilderoy | 1 | | | | | -100% | 0.0 | 49 |
| Gladysdale | | 3 | | 2 | 3 | | 7.1 | 13 |
| Gruyere | 3 | 1 | 7 | 2 | 7 | 133% | 7.2 | 12 |
| Healesville | 65 | 49 | 59 | 78 | 73 | 12% | 9.6 | 5 |
| Hoddles Creek | 1 | | 5 | | 4 | 300% | 5.9 | 20 |
| Kallista | | 1 | 2 | 8 | 10 | | 7.1 | 15 |
| Kalorama | 8 | | | 5 | 4 | -50% | 3.1 | 38 |
| Kilsyth | 68 | 56 | 74 | 88 | 90 | 32% | 7.7 | 11 |
| Launching Place | 11 | 10 | 7 | 20 | 14 | 27% | 5.6 | 23 |
| Lilydale | 149 | 156 | 157 | 155 | 138 | -7% | 8.0 | 9 |
| Lysterfield | 1 | 1 | | 1 | | -100% | 0.0 | 49 |
| Macclesfield | 1 | 4 | 1 | 1 | 3 | 200% | 3.4 | 35 |
| McMahons Creek | | 1 | 1 | | | | 0.0 | 49 |
| Menzies Creek | 5 | 13 | 8 | | 1 | -80% | 1.0 | 46 |
| Millgrove | 14 | 17 | 19 | 18 | 14 | 0% | 8.4 | 8 |
| Monbulk | 16 | 20 | 17 | 16 | 16 | 0% | 4.4 | 30 |
| Montrose | 40 | 32 | 42 | 31 | 21 | -48% | 3.0 | 40 |
| Mooroolbark | 122 | 170 | 148 | 154 | 152 | 25% | 6.6 | 18 |
| Mount Dandenong | 7 | 6 | 8 | 4 | 9 | 29% | 7.1 | 14 |
| Mount Evelyn | 51 | 38 | 55 | 55 | 47 | -8% | 4.8 | 27 |
| Narre Warren East | 3 | 1 | | 3 | 6 | 100% | 13.8 | 2 |
| Olinda | 5 | 7 | 6 | 9 | 6 | 20% | 3.4 | 37 |
| Powelltown | 2 | 2 | 1 | 3 | | -100% | 0.0 | 49 |
| Reefton | | | | 1 | | | 0.0 | 49 |
| Sassafras | 5 | | 2 | 1 | 3 | -40% | 3.1 | 39 |

| Suburb | 2019 | 2020 | 2021 | 2022 | 2023 | % change | Rate per 1,000 residents | Rank |
|----------------------|------|------|------|------|------|----------|--------------------------|------|
| Selby | 7 | 7 | 4 | 9 | 8 | 14% | 4.9 | 26 |
| Seville | 18 | 27 | 17 | 17 | 11 | -39% | 4.3 | 31 |
| Seville East | 7 | 8 | 9 | 4 | 2 | -71% | 2.4 | 42 |
| Sherbrooke | 1 | 1 | 1 | 3 | 1 | 0% | 3.4 | 36 |
| Silvan | 12 | 9 | 1 | 5 | 9 | -25% | 6.8 | 17 |
| Steels Creek | 1 | | 1 | 3 | | -100% | 0.0 | 49 |
| Tecoma | 16 | 12 | 15 | 12 | 16 | 0% | 7.8 | 10 |
| The Patch | 4 | | 5 | 1 | 4 | 0% | 3.8 | 32 |
| Three Bridges | | | 2 | 2 | 8 | | 42.6 | 1 |
| Upper Ferntree Gully | 17 | 5 | 5 | 5 | 3 | -82% | 0.9 | 47 |
| Upwey | 31 | 29 | 36 | 18 | 26 | -16% | 3.8 | 33 |
| Wandin East | | 1 | 4 | 1 | | | 0.0 | 49 |
| Wandin North | 12 | 19 | 19 | 21 | 19 | 58% | 6.1 | 19 |
| Warburton | 14 | 14 | 14 | 19 | 9 | -36% | 4.5 | 28 |
| Wesburn | 13 | 7 | 5 | 2 | 6 | -54% | 5.7 | 22 |
| Wonga Park | 2 | | | | | -100% | 0.0 | 49 |
| Woori Yallock | 21 | 16 | 40 | 34 | 26 | 24% | 8.8 | 7 |
| Yarra Glen | 29 | 14 | 23 | 11 | 11 | -62% | 3.7 | 34 |
| Yarra Junction | 31 | 30 | 30 | 22 | 37 | 19% | 12.9 | 3 |
| Yellingbo | | 5 | 5 | 5 | 4 | | 6.9 | 16 |
| Yering | | | | 1 | | | 0.0 | 49 |

Source: Crime Statistics Agency (2024). *Criminal incidents by principal offence, local government area and postcode or suburb/town - January 2014 to December 2023.*

<https://www.crimestatistics.vic.gov.au/crime-statistics/latest-victorian-crime-data/download-data>

PART 6: KEY LIFE STAGES

Children and young people

Overview

Demographics

Yarra Ranges has more than 48,000 children and young people aged 0-24 (31% of total residents). Most are dependent children or students, whilst those who are working usually still live at home. A shortage of rentals means that Yarra Ranges has very few young people living alone or in group households. More than 1,000 young people have caring responsibilities.

Yarra Ranges has an above average birth rate, but the birth rate is dropping a lot in the Urban Area and most parts of the Hills. The Yarra Valley and Upwey-Tecoma are seeing substantial growth in birth rates.

The number of 0-14 year olds has fallen over the past five years, as has the number of 20-14 year olds; the number of 15-19 year olds was static. The population share of 18-24 year olds is forecast to continue to fall over the next ten years. Population growth will be concentrated amongst families with kindergarten and primary school children. Yarra Ranges tends to gain families with primary school children from other outer-eastern local government areas (LGAs), and to lose teenagers and young adults. Teenagers and their parents are moving to other outer-eastern and south-eastern municipalities. Young adults tend to move to the inner city, Monash, or other eastern and interface LGAs. The Hills and the Valley lost the most teenagers and young adults over the past five years.

The main drivers of population movement for this age group include starting higher education, employment opportunities, and changes in housing needs. Between 2016 and 2021, 15-24 year olds accounted for 41% of net migration out of Yarra Ranges - more than 1,100 young adults, mostly aged 20-24. The areas with the most young adults leaving for inner Melbourne and Monash – both key university precincts - were Mooroolbark (96), Lilydale-Coldstream (84), Yarra Valley (78), Belgrave-Selby (72) and Mount Dandenong-Olinda (63).

Education and employment

Yarra Ranges has a high level of kindergarten participation by 3 and 4 year olds. This is a positive, with kindergarten considered crucial to childhood development. However, the level of kindergarten hours required will increase over the next few years, which may put pressure on service availability.

School statistics show a large fall in the level of students attending school at least 90% of the time. Reasons are thought to include increased ill-health and anxiety over school attendance, along with general disengagement from school during lockdowns in 2020 and 2021. Attendance remained low in 2023. A project talking to primary school students in 2022 and 2023 found that the COVID-related disruptions had had significant impact on students' engagement with school. They also encountered challenges with socialising once they were back at school.

Independent schools had slightly higher attendance amongst primary school students, and much higher attendance in 2023 amongst secondary school students. This indicates potential differences according to socio-economic status and school policy, in terms of getting students back to school in 2023.

Year 12 retention also fell. Whilst it stayed about the same during COVID, it fell substantially across all Victorian regions in both 2022 and 2023. Across Victoria, Year 12 retention is now at its lowest level covered in the data. The trend data goes back to 2012, and 2023 levels are lower than the 2012 levels. This shift is concentrated amongst government schools, with minimal drop in retention amongst independent school students. Data for Yarra Ranges only goes up to 2020, but the 2020 data show a large drop in Year 12 completion in 2020. Those who left school were most likely to leave for work (26% compared to 23% for Victoria), school not being for them (20% compared to 11%), and ill health (18% compared to 10%). The level leaving because school was not for them or due to ill health roughly doubled in 2020. Those who finished school were much more likely to do apprenticeships/traineeships or work in 2021, and less likely to do further study, compared to 2019. Yarra Ranges has a much lower level of high school graduates who are doing Bachelor degrees, a much higher level of apprentices and trainees, and a very high level who are working.

During 2024, youth unemployment in the outer east rose to 15%, the highest level since March 2021, and well above the Victorian average. This issue is specific to young people, as the total unemployment rate in the outer east is comparatively low.

Maternal and child health

Yarra Ranges has good infant health on the available indicators. It has an above average rate of newborn babies being breastfed, a reducing level of mothers who smoke during pregnancy, a low level of low birthweight babies and high child immunisation rates. The level of pre-term births has fallen. There was a large drop in the length of post-birth hospital stays during COVID, a pattern replicated across Eastern Melbourne.

Most children starting school are in very good health. However, Yarra Ranges has an above average level of children with speech or language issues, need for hearing specialists, behavioural and emotional issues, parental history of mental illness, and families experiencing high stress. Yarra Ranges has had high growth in the level of children with a disability. Developmental delay, stroke and autism were the disabilities with the highest growth amongst residents in the past twelve months; autism was the main disability for 41% of NDIS participants in Yarra Ranges.

Australia's Children's Commissions, Anne Hollands, has identified isolation, poor education and a lack of social interaction as factors which can lead children towards crime and now increasingly towards political radicalisation. She has stated that these children often have complex needs and disabilities, such as learning problems, neurodevelopmental disabilities and mental health issues.⁶² At the same time, NAPLAN education results released in August 2024 showed that one in three Australian school students are still not meeting literacy and numeracy benchmarks, and more than one in ten are so far behind they need additional support. Thus poor education is growing as a problem, not reducing.

Some health risk factors, such as vaping and loneliness, are not yet available by age. But state-level data indicates that vaping has increased the most amongst teenagers and young adults:

- 18-24 year olds - the level rose from about 7% in the second half of 2020, to 19.8% in the first quarter of 2023.
- 14-17 year olds - the level rose from about 3% to 14.5%.

⁶² ABC (6 August 2024). *Young Australians at threat of radicalisation*. [Young Australians at threat of radicalisation - ABC listen](#)

HOW DID MENTAL HEALTH CHANGE DURING THE PANDEMIC?

Trend data for Yarra Ranges shows that young people's mental health worsened on numerous indicators during the COVID-19 pandemic, including:

- A 25% increase in self-harm hospitalisations amongst young people in 2020/21, and growing emergency department use for suicide attempts amongst 10-24 year olds.
- A 41% jump in hospital use mental health issues amongst 15-24 year olds, especially stress, depression, anxiety, eating disorders and gender identity disorders.
- Children, teenagers and young adults all have a high rate of hospital use for mental health issues – the rate was nearly triple the average for children, 60% above average for 15-24 year olds and 70% above average for 25-34 year olds.
- Increases in 0-24 year olds using prescription mental health medications - Yarra Ranges ranked second-highest on 0-17 year old patients with mental-health related prescriptions.
- Patients seeing psychiatrists.
- Mental health service usage amongst existing patients.
- Growing emergency department use for mental health issues, including schizophrenia, anorexia nervosa and psychosis.
- A survey of COVID impacts for young people in Victoria found that 84% felt that their mental health was still impacted by the pandemic; many could not access the mental health support that they needed; most felt that their education was still affected by the pandemic; most felt that their relationships with family and partners were affected by the pandemic; they were less likely than before to feel a sense of belonging with family, with friends, at school or in the workplace; and they were struggling with finances and housing affordability.

OTHER KEY HEALTH INDICATORS

Other key health and wellbeing indicators include:

- An increasing number of STDs amongst females aged 15-19 and males aged 20-24.
- Yarra Ranges has a high teenage birth rate, and the rate jumped by 36% in Yarra Ranges between 2019 and 2020, compared to a 10% fall across Victoria. There is a tendency for the teenage birth rate to be high in interface areas, so there may be a link between teenage births and poorer access to women's health services.
- 15-24 year olds have the highest rate of hospitalisations for transport injuries, compared to other age groups.

- Crimes amongst 10-17 year olds have risen by 35% since 2019. Other outer eastern LGAs also saw a rise in child crime, with a 51% jump in Knox and a 15% increase in Maroondah.
- Amongst 0-24 year olds, there was a decline in use of Nursing and Aboriginal Health Workers during COVID; early intervention service use for children jumped.
- Yarra Ranges has a high level of child clients of specialist homelessness services.

Demographics

Yarra Ranges has nearly 159,000 residents, and 31% are children and young people aged 0-24. The Urban Area has the highest level of preschoolers; the Hills and the Valley have the highest levels of primary school children. Upper Yarra Valley has a very low level of teenagers and young adults, and a small total population. Yarra Ranges has an above average birth rate, but the birth rate is dropping a lot in the Urban Area and most parts of the Hills. The Yarra Valley and Upwey-Tecoma are seeing substantial growth in birth rates.

Data on recent population movement by age shows which age groups are moving to or leaving Yarra Ranges, and indicates why people might be moving.⁶³ The only group where Yarra Ranges has gained residents recently is families with primary school children, who have tended to move in from Maroondah, Knox and Whitehorse. This shift would be partly driven by growing families moving in search of larger more affordable homes.

The groups leaving Yarra Ranges include retirees, families with older children, and young adults. Teenagers and their parents are moving to other eastern municipalities, and to south-eastern municipalities; young adults aged 18-24 tend to move to Melbourne CBD, the inner east and Monash. Thus the number of families with dependent students aged 15 plus has fallen over the past five years. The main drivers of population movement for this age group include employment and education opportunities, and changes in housing needs.

Over the next decade, population growth in Yarra Ranges will be concentrated amongst families with kindergarten and primary school children, along with working age residents and older retirees. Relatively low growth is expected in the number of secondary school students and young adults aged 18-24, and their population share will fall.

⁶³ Note that movement of under-fives can't be tracked, as they were born during the past five years.

BIRTH RATE

Yarra Ranges has an above average fertility (birth) rate, at 1.82 births per female in 2023, compared to 1.49 across Victoria. The rate has dropped by 2.2% in Yarra Ranges over the past four years, compared to a 9.1% drop for Victoria. However, the fertility rate is just one factor contributing to the number of babies and young children in Yarra Ranges. Movement in and out of the area, by families with young children, also has a major impact. Over the next ten years, it is forecast that more families with 0-4 year olds will move into Yarra Ranges than will move out, so this will support growth in the number of pre-schoolers.

The areas with the highest fertility rates were Upper Yarra Valley (2.1); and Mount Evelyn, Wandin-Seville, Chirnside Park and Healesville-Yarra Glen (1.87-1.95 each). Upper Yarra Valley has very few births, at zero in 2019, and 3 to 4 per year during 2020 to 2023. The only areas with substantial growth in fertility rates between 2019 and 2023 were Yarra Valley (10.7%) and Upwey-Tecoma (7.7%). Mount Evelyn, Kilsyth, Montrose and Healesville-Yarra Glen had lower growth in their fertility rates (less than 5%).

There were substantial drops in fertility in the Urban Area, with declines of 11% in Mooroolbark, 10% in Lilydale-Coldstream and 7% in Chirnside Park. The Hills also experienced declining fertility, with drops of 8.5% in Wandin Seville, 5.5% in Monbulk-Silvan, 4% in Belgrave-Selby, and 3.5% in Mount Dandenong-Olinda. The fertility rate is not published for Upper Yarra Valley due to the low number of births.

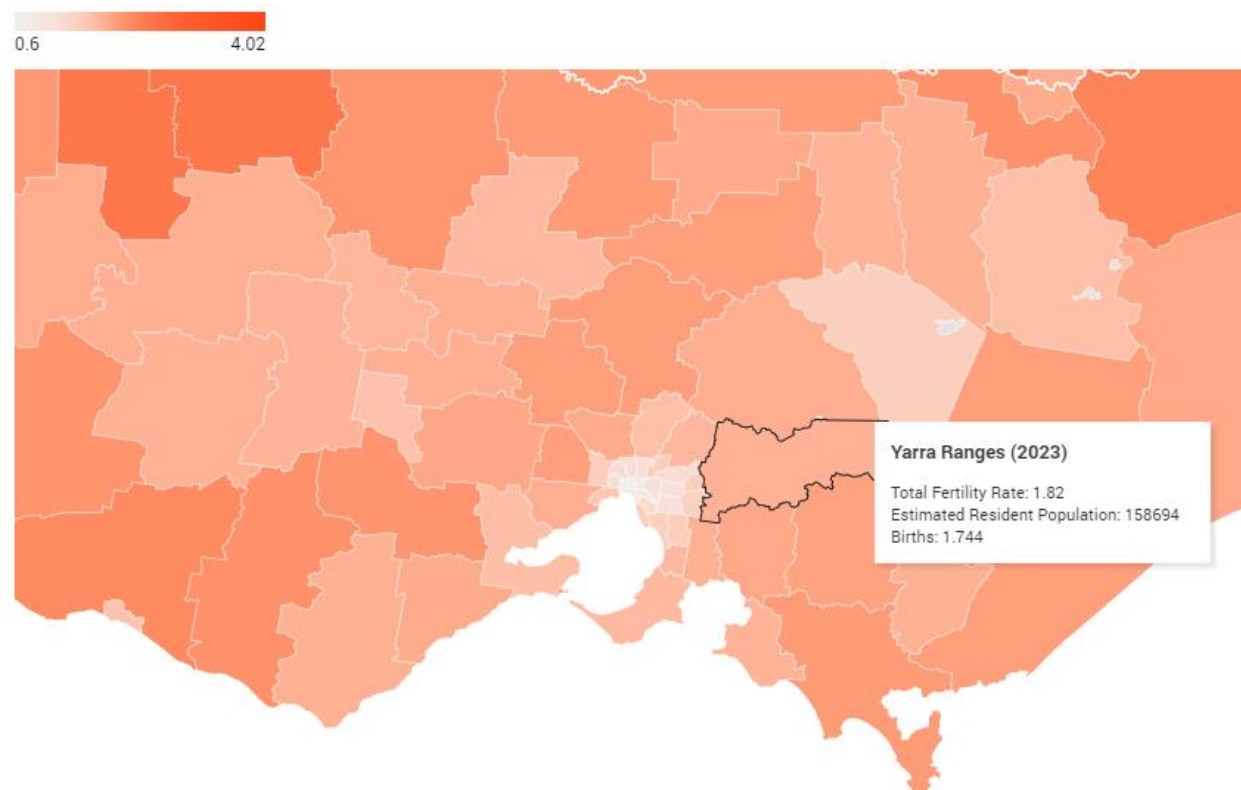
Births, Summary, Statistical Areas Level 2: Yarra Ranges, 2019-2023

| SA2 | 2019 | | 2020 | | 2021 | | 2022 | | 2023 | | 2019-2023 | | Trend |
|-------------------------|--------------|----------------------|--------------|----------------------|--------------|----------------------|--------------|----------------------|--------------|----------------------|----------------------------------|-------------|-------|
| | Births | Total Fertility rate | Births | Total Fertility rate | Births | Total Fertility rate | Births | Total Fertility rate | Births | Total Fertility rate | % change in total fertility rate | | |
| | no. | rate | no. | rate | no. | rate | no. | rate | no. | rate | | | |
| Belgrave-Selby | 111 | 1.80 | 105 | 1.75 | 104 | 1.69 | 110 | 1.74 | 97 | 1.73 | -3.9% | down | |
| Chirnside Park | 159 | 2.01 | 146 | 1.90 | 165 | 1.92 | 148 | 1.86 | 147 | 1.87 | -7.0% | down | |
| Healesville-Yarra Glen | 137 | 1.85 | 139 | 1.77 | 142 | 1.72 | 153 | 1.81 | 142 | 1.87 | 1.1% | static | |
| Kilsyth | 120 | 1.72 | 139 | 1.68 | 145 | 1.69 | 142 | 1.76 | 150 | 1.77 | 2.9% | static | |
| Lilydale-Coldstream | 245 | 1.86 | 200 | 1.73 | 220 | 1.68 | 224 | 1.63 | 222 | 1.67 | -10.2% | down | |
| Monbulk-Silvan | 52 | 1.82 | 56 | 1.77 | 52 | 1.71 | 53 | 1.78 | 46 | 1.72 | -5.5% | down | |
| Montrose | 83 | 1.78 | 74 | 1.75 | 87 | 1.83 | 74 | 1.83 | 70 | 1.83 | 2.8% | static | |
| Mooroolbark | 347 | 1.88 | 303 | 1.79 | 323 | 1.81 | 294 | 1.72 | 269 | 1.67 | -11.2% | down | |
| Mount Dandenong-Olinda | 91 | 1.71 | 91 | 1.67 | 73 | 1.64 | 83 | 1.68 | 79 | 1.65 | -3.5% | down | |
| Mount Evelyn | 125 | 1.88 | 101 | 1.76 | 136 | 1.79 | 141 | 1.89 | 109 | 1.95 | 3.7% | static | |
| Upwey-Tecoma | 117 | 1.69 | 100 | 1.70 | 115 | 1.76 | 113 | 1.80 | 92 | 1.82 | 7.7% | up | |
| Wandin-Seville | 102 | 2.01 | 93 | 1.96 | 93 | 1.84 | 93 | 1.79 | 103 | 1.84 | -8.5% | down | |
| Yarra Valley | 173 | 1.96 | 174 | 1.85 | 228 | 1.95 | 188 | 2.02 | 209 | 2.17 | 10.7% | up | |
| Upper Yarra Valley | 0 | np | 3 | np | 4 | np | 3 | np | 3 | np | np | np | |
| Yarra Ranges | 1,873 | 1.86 | 1,730 | 1.79 | 1,896 | 1.79 | 1,823 | 1.80 | 1,744 | 1.82 | -2.2% | down | |
| Outer Eastern Melbourne | 5,785 | 1.68 | 5,374 | 1.59 | 5,555 | 1.57 | 5,306 | 1.55 | 5,042 | 1.54 | -8.3% | down | |
| Total Victoria | 77,220 | 1.64 | 73,543 | 1.55 | 75,363 | 1.52 | 75,189 | 1.51 | 71,889 | 1.49 | -9.1% | down | |

np = not published.

Source: Australian Bureau of Statistics (2024). *Births, Australia, 2023*. <https://www.abs.gov.au/statistics/people/population/births-australia/latest-release#data-downloads>

Births: Total fertility rates by local government area, Victoria, 2023



Map: .id (informed decisions) • Source: Australian Bureau of Statistics. (2023). Births, Australia • Map data: PSMA Australia Limited • Created with Datawrapper

Source: Australian Bureau of Statistics (2024). *Births, Australia, 2023*. <https://www.abs.gov.au/statistics/people/population/births-australia/latest-release#data-downloads>

POPULATION BY AGE AND AREA

0-14 YEAR OLDS

Children aged 0-14 accounted for 19% of the Yarra Ranges population in 2023 – 29,654 residents. The level of 0-14 year olds is consistent across Yarra Ranges, ranging from 17% to 20% in most areas. Upper Yarra Valley has a lower level (15%), and Mount Evelyn has a slightly higher level (21%).

The number of 0-14 year olds in Yarra Ranges fell by 396 between 2018 and 2023. The main areas losing 0-4 year olds are the Hills and the Valley. Most growth in 0-4 year olds occurred in the Urban Area, along with the Yarra Valley. There has been almost no change in the number of 0-4 year olds in Yarra Ranges in the past five years (an increase of 34 children). Similarly, the main areas losing 5-9 and 10-14 year olds are the Hills and the Valley. Lilydale-Coldstream also had a drop in this age group, with a 15% fall in the number of 5-9 year olds and a 7% fall in the number of 10-14 year olds. Most growth in the number of 5-14 year olds occurred in the Urban Area, along with the Upper Yarra Valley (but numeric growth was minimal in Upper Yarra, at twelve 5-9 year olds and one 10-14 year old).

15-24 YEAR OLDS

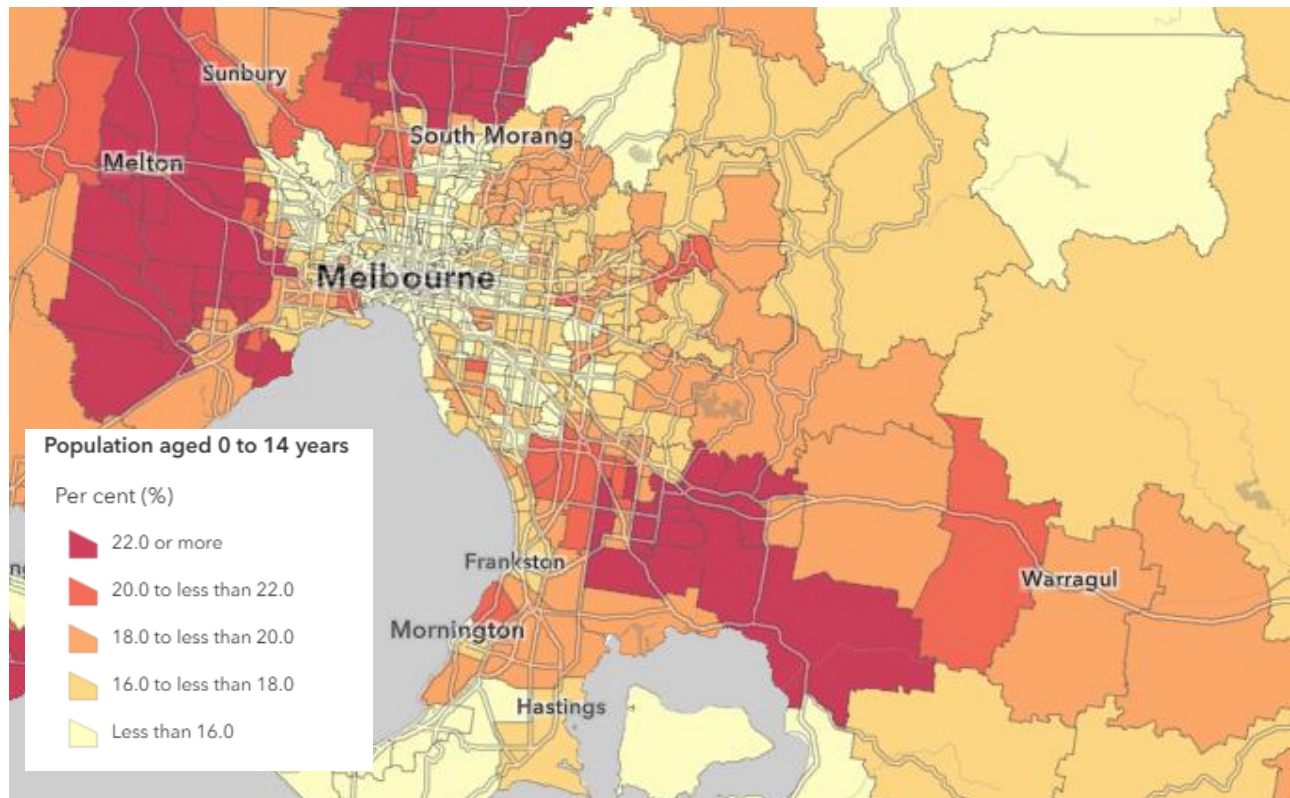
Teenagers and young adults aged 15-24 accounted for 12% of the population in 2023 – 18,691 residents. The level of 15-24 year olds is very consistent across Yarra Ranges, ranging from 11% to 13% in each area. However, patterns of growth during the past five years have been much more varied. This indicates that the differences in the level of young people will shift noticeably over time, as the population continues to change.

Yarra Ranges had a 1% rise in the number of 15-19 year olds between 2018 and 2023. Growth within this age group was spread out, with growth occurring in Upper Yarra Valley; Chirnside Park, Kilsyth and Mooroolbark in the Urban Area; and Monbulk-Silvan and Mount Dandenong-Olinda in the Hills.

There is a drastically different pattern of population movement in 20-24 year olds. Yarra Ranges had a 13% fall in the number in this age group, between 2018 and 2023. All areas except Chirnside Park had decreases of 2% to 19% in their number of young adults; Chirnside Park has a small 2% rise.

Across the 15-24 age group, only Upper Yarra Valley (200% growth in numbers), Chirnside Park (9%) and Monbulk-Silvan (5%) had growth in this group. Overall, the number of 15-24 year olds in Yarra Ranges fell by 6%.

Population aged 0 to 14 years: SA2s in Greater Melbourne, 2023



Source: Australian Bureau of Statistics (2023). *Regional population by age and sex, 2023*.
<https://www.abs.gov.au/statistics/people/population/regional-population-age-and-sex/latest-release#victoria>

Estimated resident population by age and SA2: Yarra Ranges residents aged 0-24, 30 June 2018 and 30 June 2023

| | 0-4 | 5-9 | 10-14 | 0-14 | 0-14 | 15-19 | 20-24 | 15-24 | 15-24 | Total persons |
|--------------------------|-------|--------|--------|--------|-------|-------|-------|--------|-------|---------------|
| SA2 name | no. | no. | no. | no. | % | no. | no. | no. | % | no. |
| 2018 | | | | | | | | | | |
| Upper Yarra Valley | 16 | 8 | 6 | 30 | 14.6% | 11 | - | 11 | 5.3% | 206 |
| Belgrave - Selby | 634 | 716 | 731 | 2,081 | 20.0% | 703 | 635 | 1,338 | 12.8% | 10,429 |
| Chirnside Park | 711 | 672 | 666 | 2,049 | 18.5% | 726 | 767 | 1,493 | 13.5% | 11,046 |
| Healesville - Yarra Glen | 809 | 906 | 899 | 2,614 | 18.2% | 857 | 742 | 1,599 | 11.1% | 14,367 |
| Kilsyth | 689 | 606 | 497 | 1,792 | 18.5% | 500 | 632 | 1,132 | 11.7% | 9,685 |
| Lilydale - Coldstream | 1,087 | 1,256 | 1,274 | 3,617 | 18.2% | 1,278 | 1,400 | 2,678 | 13.5% | 19,822 |
| Monbulk - Silvan | 358 | 408 | 438 | 1,204 | 20.5% | 369 | 320 | 689 | 11.7% | 5,865 |
| Montrose | 452 | 474 | 450 | 1,376 | 19.3% | 427 | 458 | 885 | 12.4% | 7,139 |
| Mooroolbark | 1,721 | 1,572 | 1,442 | 4,735 | 20.1% | 1,473 | 1,649 | 3,122 | 13.2% | 23,587 |
| Mount Dandenong - Olinda | 523 | 645 | 673 | 1,841 | 18.3% | 582 | 480 | 1,062 | 10.5% | 10,074 |
| Mount Evelyn | 676 | 682 | 658 | 2,016 | 20.0% | 710 | 712 | 1,422 | 14.1% | 10,086 |
| Upwey - Tecoma | 607 | 655 | 638 | 1,900 | 19.0% | 638 | 627 | 1,265 | 12.6% | 10,024 |
| Wandin - Seville | 501 | 545 | 562 | 1,608 | 20.1% | 576 | 552 | 1,128 | 14.1% | 8,011 |
| Yarra Valley | 951 | 1,117 | 1,119 | 3,187 | 18.9% | 1,067 | 1,013 | 2,080 | 12.3% | 16,862 |
| Yarra Ranges total | 9,735 | 10,262 | 10,053 | 30,050 | 19.1% | 9,917 | 9,987 | 19,904 | 12.7% | 157,203 |

| SA2 name | 0-4 | 5-9 | 10-14 | 0-14 | 0-14 | 15-19 | 20-24 | 15-24 | 15-24 | Total persons |
|--------------------------|-------|-------|-------|--------|-------|-------|---------|---------|-------|---------------|
| | no. | no. | no. | no. | % | no. | no. | no. | % | no. |
| 2023 | | | | | | | | | | |
| Upper Yarra Valley | 11 | 20 | 7 | 38 | 15.4% | 22 | 11 | 33 | 13.4% | 247 |
| Belgrave - Selby | 578 | 652 | 680 | 1,910 | 19.2% | 704 | 573 | 1,277 | 12.8% | 9,961 |
| Chirnside Park | 859 | 842 | 771 | 2,472 | 19.9% | 843 | 782 | 1,625 | 13.1% | 12,392 |
| Healesville - Yarra Glen | 759 | 813 | 865 | 2,437 | 17.3% | 824 | 675 | 1,499 | 10.6% | 14,121 |
| Kilsyth | 740 | 680 | 577 | 1,997 | 19.3% | 509 | 576 | 1,085 | 10.5% | 10,351 |
| Lilydale - Coldstream | 1,186 | 1,064 | 1,186 | 3,436 | 17.1% | 1,255 | 1,169 | 2,424 | 12.1% | 20,043 |
| Monbulk - Silvan | 293 | 385 | 415 | 1,093 | 18.8% | 407 | 314 | 721 | 12.4% | 5,807 |
| Montrose | 438 | 489 | 472 | 1,399 | 20.2% | 427 | 386 | 813 | 11.7% | 6,928 |
| Mooroolbark | 1,636 | 1,632 | 1,521 | 4,789 | 20.0% | 1,518 | 1,382 | 2,900 | 12.1% | 23,985 |
| Mount Dandenong - Olinda | 439 | 584 | 629 | 1,652 | 17.1% | 619 | 412 | 1,031 | 10.7% | 9,633 |
| Mount Evelyn | 719 | 724 | 619 | 2,062 | 20.8% | 628 | 578 | 1,206 | 12.2% | 9,919 |
| Upwey - Tecoma | 588 | 631 | 622 | 1,841 | 18.8% | 628 | 524 | 1,152 | 11.8% | 9,777 |
| Wandin - Seville | 489 | 488 | 514 | 1,491 | 18.7% | 529 | 494 | 1,023 | 12.8% | 7,989 |
| Yarra Valley | 1,034 | 935 | 1,068 | 3,037 | 17.9% | 1,054 | 848 | 1,902 | 11.2% | 16,963 |
| Yarra Ranges total | 9,769 | 9,939 | 9,946 | 29,654 | 18.8% | 9,967 | 8,724 | 18,691 | 11.8% | 158,116 |
| Numeric change | 34 | - 323 | - 107 | - 396 | | 50 | - 1,263 | - 1,213 | | 913 |

Source: Australian Bureau of Statistics (2023). *Regional population by age and sex, 2023*.

<https://www.abs.gov.au/statistics/people/population/regional-population-age-and-sex/latest-release#victoria>

Change in number by age and SA2: Yarra Ranges residents aged 0-24, 2018-2023

| % change in number, 2018-2023 | 0-4 | 5-9 | 10-14 | 0-14 | 15-19 | 20-24 | 15-24 | Total persons |
|-------------------------------|------|------|-------|------|-------|-------|-------|---------------|
| Upper Yarra Valley | -31% | 150% | 17% | 27% | 100% | n/a | 200% | 20% |
| Belgrave - Selby | -9% | -9% | -7% | -8% | 0% | -10% | -5% | -4% |
| Chirnside Park | 21% | 25% | 16% | 21% | 16% | 2% | 9% | 12% |
| Healesville - Yarra Glen | -6% | -10% | -4% | -7% | -4% | -9% | -6% | -2% |
| Kilsyth | 7% | 12% | 16% | 11% | 2% | -9% | -4% | 7% |
| Lilydale - Coldstream | 9% | -15% | -7% | -5% | -2% | -17% | -9% | 1% |
| Monbulk - Silvan | -18% | -6% | -5% | -9% | 10% | -2% | 5% | -1% |
| Montrose | -3% | 3% | 5% | 2% | 0% | -16% | -8% | -3% |
| Mooroolbark | -5% | 4% | 5% | 1% | 3% | -16% | -7% | 2% |
| Mount Dandenong - Olinda | -16% | -9% | -7% | -10% | 6% | -14% | -3% | -4% |
| Mount Evelyn | 6% | 6% | -6% | 2% | -12% | -19% | -15% | -2% |
| Upwey - Tecoma | -3% | -4% | -3% | -3% | -2% | -16% | -9% | -2% |
| Wandin - Seville | -2% | -10% | -9% | -7% | -8% | -11% | -9% | 0% |
| Yarra Valley | 9% | -16% | -5% | -5% | -1% | -16% | -9% | 1% |
| Yarra Ranges total | 0% | -3% | -1% | -1% | 1% | -13% | -6% | 1% |

Source: Australian Bureau of Statistics (2023). *Regional population by age and sex, 2023*.

<https://www.abs.gov.au/statistics/people/population/regional-population-age-and-sex/latest-release#victoria>

POPULATION MOVEMENT

Across all age groups, housing is a key reason for moving – e.g., moving to a bigger house, downsizing, reaching the end of a rental lease.⁶⁴ This emphasises the importance of having a range of housing options within an area, to allow people to change dwellings within their local community if they wish to stay local.

Young adults tend to move to commence higher education, enter the work force or start a family.⁶⁵ For dependent children and students, moving is tied to family reasons; however, families often move in order to access better education options for their children.

The only group where Yarra Ranges experienced a net gain over the past five years was families with primary school children. Yarra Ranges is gaining all of these age groups from Maroondah, Knox and Whitehorse, which is likely to be partly driven by growing families moving in search of larger and more affordable homes.

Those of the age to have teenagers and young adult children at home are tending to move closer to the city, but some are shifting to other interface areas. Young people of the leaving school and starting post-school education age appear to be moving to the inner and outer east with their families, or moving by themselves to be closer to the university precincts. The number of families with dependent students aged 15 plus has dropped in Yarra Ranges over the past five years. Where these groups move to varies considerably by age, giving insight into why they might be moving:

- 12-17 year olds are moving to a range of areas, but the highest loss in numbers is to Maroondah and Knox in the outer east.
- 18-24 year olds, who are usually working or studying, are most likely to move to Knox, Boroondara, Melbourne, Whitehorse, Casey, Monash and Yarra.

⁶⁴ https://population.gov.au/sites/population.gov.au/files/2021-09/why_do_people_move_a_quick_guide.pdf

⁶⁵ <https://www.abs.gov.au/articles/population-movement-australia>

Migration by age group: Yarra Ranges, 2016-2021

| Age group | In migration | Out migration | Net migration |
|-------------------|--------------|---------------|---------------|
| 5 to 11 years | +2,367 | -2,055 | +312 |
| 12 to 17 years | +1,286 | -1,426 | -140 |
| 18 to 24 years | +1,659 | -3,011 | -1,352 |
| 25 to 34 years | +6,245 | -6,223 | +22 |
| 35 to 44 years | +4,803 | -3,538 | +1,265 |
| 45 to 54 years | +2,658 | -2,863 | -205 |
| 55 to 64 years | +1,904 | -2,971 | -1,067 |
| 65 years and over | +1,964 | -3,565 | -1,601 |
| Total population | +22,886 | -25,652 | -2,766 |

Source: ID Consulting (2023). *Migration by age group 2021*. <https://profile.id.com.au/yarra-ranges/migration-by-age>

YOUNG PEOPLE LEAVING YARRA RANGES

Yarra Ranges had total net migration of 2,724 residents leaving the area between 2016 and 2021. Forty-one percent of net migration was amongst 15-24 year olds.

15-19 YEAR OLDS

Teenagers aged 15-19 are less likely to leave Yarra Ranges. Between 2016 and 2021, 827 older teenagers moved into Yarra Ranges and 934 moved out. The net migration was 121 15-19 year olds leaving the area.

Most movement amongst this age group was within Yarra Ranges. Outside of Yarra Ranges, the main destinations were the inner city, nearby municipalities, and interface areas. Forty-one 15-19 year olds moved to various inner city LGAs and Monash. Over the same period, 586 teenagers moved into Yarra Ranges from outer metropolitan and regional areas. So Yarra Ranges tends to gain teenagers from surrounding areas, and lose them to the inner city.

The main areas that they moved to were:

- Maroondah (249 young people),
- Knox (153),
- Cardinia (73),
- Casey (48),
- Murrindindi (42),
- Manningham (33),

- Mornington Peninsula (29),
- Whitehorse (27),
- Frankston (26),
- Bass Coast (21), and
- Monash (18).

The main areas which 15-19 year olds came from to live in Yarra Ranges were Melton (355 young people) and Loddon (127).

The Hills and the Valley were losing the most 15-19 year olds. Healesville-Yarra Glen had 80 young people leave, 58 left Mount-Dandenong Olinda and 24 left the Yarra Valley. A small number also left the Urban Area: 22 left Mooroolbark, 18 left Lilydale-Coldstream and 11 left Montrose. Nine people left Wandin-Seville and two left Monbulk-Silvan. There was no change in Belgrave-Selby or Kilsyth.

The areas most likely to lose young people to the inner city were Lilydale-Coldstream and Chirnside Park. But overall, a large number of young people moved into Chirnside Park – it gained 86 15-19 year olds.

20-24 YEAR OLDS

Over the past five years, nearly 1,000 young adults have left Yarra Ranges. Between 2016 and 2021, 1,100 20-24 year olds moved into Yarra Ranges and 2,105 moved out. Net migration was 986 young adults leaving.

Mostly, young adults moved between local areas within Yarra Ranges. Their top ten external destinations were split 50:50 between nearby municipalities, and university and inner city areas such as Melbourne and Monash. The main areas that they moved to were:

- Maroondah (466 young people),
- Knox (333),
- Whitehorse (171),
- Casey (117),
- Cardinia (117),
- Monash (88),
- Melbourne (69),
- Boroondara (66),

- Manningham (53) and
- Yarra (52).

The areas which lost the most young adults were: Yarra Valley (158), Mount Evelyn (152), Belgrave-Selby (144) and Healesville-Yarra Glen (127), Monbulk-Silvan (98) and Mount Dandenong-Olinda (96).

Belgrave-Selby, Mooroolbark and Healesville-Yarra Glen were the areas most likely to lose young people to Monash. Mooroolbark and Mount Dandenong-Olinda were the areas most likely to lose young people to Melbourne.

Combined breakdowns by age, the area that people are leaving and the area that they are going to, tend to create very small numbers. So it is more useful to look at groupings of LGAs, to identify movement patterns. Looking at all inner Melbourne LGAs (plus Monash), the areas with the most young people leaving for inner Melbourne were Mooroolbark (96), Lilydale-Coldstream (84), Yarra Valley (78), Belgrave-Selby (72) and Mount Dandenong-Olinda (63).

Net migration amongst 20-24 year olds: Yarra Ranges, 2016-2021

| LGA | Belgrave - Selby | Chirnside Park | Healesville - Yarra Glen | Kilsyth | Lilydale - Coldstream | Monbulk - Silvan | Montrrose | Mooroolbark | Mount Dandenong - Olinda | Mount Evelyn | Upwey - Tecoma | Wandin - Seville | Yarra Valley | Total |
|-----------------|------------------|----------------|--------------------------|---------|-----------------------|------------------|-----------|-------------|--------------------------|--------------|----------------|------------------|--------------|--------|
| Yarra Ranges | -437 | -516 | -548 | -301 | -928 | -272 | -304 | -1,054 | -351 | -526 | -411 | -442 | -691 | -6,781 |
| Maroondah | -17 | -46 | -22 | -43 | -74 | -18 | -20 | -105 | -11 | -38 | -14 | -19 | -39 | -466 |
| Knox | -44 | -17 | -5 | -18 | -33 | -11 | -20 | -38 | -34 | -24 | -48 | -18 | -23 | -333 |
| Whitehorse | -10 | -9 | -5 | -8 | -26 | -6 | -4 | -31 | -9 | -13 | -15 | -11 | -24 | -171 |
| Casey | -27 | -4 | -4 | 0 | -9 | -9 | -3 | -17 | -7 | -3 | -16 | -4 | -14 | -117 |
| Cardinia | -31 | 0 | -6 | -4 | -4 | -18 | 0 | -12 | -8 | -3 | -10 | 0 | -10 | -106 |
| Monash | -14 | 0 | -11 | 0 | -9 | -8 | 0 | -12 | -7 | -10 | -7 | -3 | -7 | -88 |
| Melbourne | -4 | -4 | -4 | 0 | -7 | -4 | -3 | -15 | -11 | -4 | -7 | 0 | -6 | -69 |
| Boroondara | -15 | 0 | -7 | 0 | -8 | 1 | 0 | -9 | -3 | -5 | -3 | -7 | -10 | -66 |
| Manningham | 0 | -8 | -8 | -3 | -9 | 0 | 0 | -9 | -5 | -4 | -4 | 0 | -3 | -53 |
| Yarra | -5 | -3 | -6 | -3 | -7 | 0 | -4 | -4 | -3 | -6 | -3 | 0 | -8 | -52 |
| Other LGAs | | | | | | | | | | | | | | -495 |
| Inner Melbourne | -72 | -27 | -52 | -17 | -84 | -23 | -11 | -96 | -63 | -54 | -52 | -27 | -78 | -656 |
| Total | -144 | 23 | -127 | 83 | -78 | -98 | -26 | -76 | -96 | -152 | -91 | -46 | -158 | -986 |

Notes: Upper Yarra Valley is not included in this due to very small population numbers.

Rows will not add up to the total, as there were areas that people moved away to, and areas that people moved from to live in Yarra Ranges.

Source: ID Consulting (2024). Customised data.

Net migration amongst 15-19 year olds: Yarra Ranges, 2016-2021

| LGA | Belgrave - Selby | Chirn- side Park | Healesville - Yarra Glen | Kil- syth | Lilydale - Coldstream | Monbulk - Silvan | Mon- trose | Moorool- bark | Mount Dandenong - Olinda | Mount Evelyn | Upwey - Tecoma | Wandin - Seville | Yarra Valley | Total |
|-------------------------------------|---------------------|------------------------|--------------------------------|--------------|--------------------------|---------------------|---------------|------------------|--------------------------------|-----------------|-------------------|---------------------|-----------------|--------|
| Yarra Ranges | -530 | -513 | -668 | -383 | -1058 | -338 | -364 | -1097 | -536 | -571 | -526 | -478 | -849 | -7,911 |
| Maroondah | 0 | -24 | -17 | -37 | -29 | -3 | -23 | -63 | -8 | -13 | -3 | -11 | -18 | -249 |
| Knox | -27 | -3 | 0 | -16 | -11 | -9 | -3 | -13 | -25 | -3 | -37 | 0 | -6 | -153 |
| Cardinia | -25 | 0 | 0 | 0 | -7 | -21 | 0 | -12 | -4 | 0 | 0 | 0 | -4 | -73 |
| Casey | -13 | 0 | -5 | -4 | -10 | 0 | 0 | -13 | 0 | 0 | 0 | 4 | -7 | -48 |
| Murrindindi | 0 | 0 | -19 | -6 | -3 | 0 | 0 | -5 | 0 | -5 | 0 | 0 | -4 | -42 |
| Manning- ham | 0 | -11 | -4 | 0 | -9 | 0 | 0 | -9 | 0 | 0 | 0 | 0 | 0 | -33 |
| Mornington Peninsula | -4 | -6 | -8 | 0 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | -3 | 0 | -29 |
| Whitehorse | 3 | -8 | -4 | 0 | -5 | -6 | 0 | -3 | 0 | 0 | 0 | 0 | -4 | -27 |
| Frankston | 0 | -4 | -3 | 0 | -7 | 0 | 0 | -5 | -4 | 0 | 0 | 0 | -3 | -26 |
| Bass Coast | 0 | 0 | -6 | 0 | -5 | -3 | 0 | 0 | 0 | -3 | 0 | 0 | -4 | -21 |
| Monash | -3 | 0 | 0 | 0 | -4 | 0 | 0 | -4 | -3 | 0 | -4 | 0 | 0 | -18 |
| Total | 0 | 86 | -80 | 0 | -18 | -2 | -11 | -22 | -58 | 9 | 8 | -9 | -24 | -121 |
| Inner city & Monash (49 LGAs) | 6 | -13 | -4 | 4 | -14 | -9 | 0 | -8 | -4 | 0 | 5 | 0 | -4 | -41 |
| Other | 64 | 88 | -11 | 47 | 77 | 29 | 18 | 115 | 27 | 32 | 46 | 17 | 19 | 568 |

Notes: Upper Yarra Valley is not included in this due to very small population numbers.

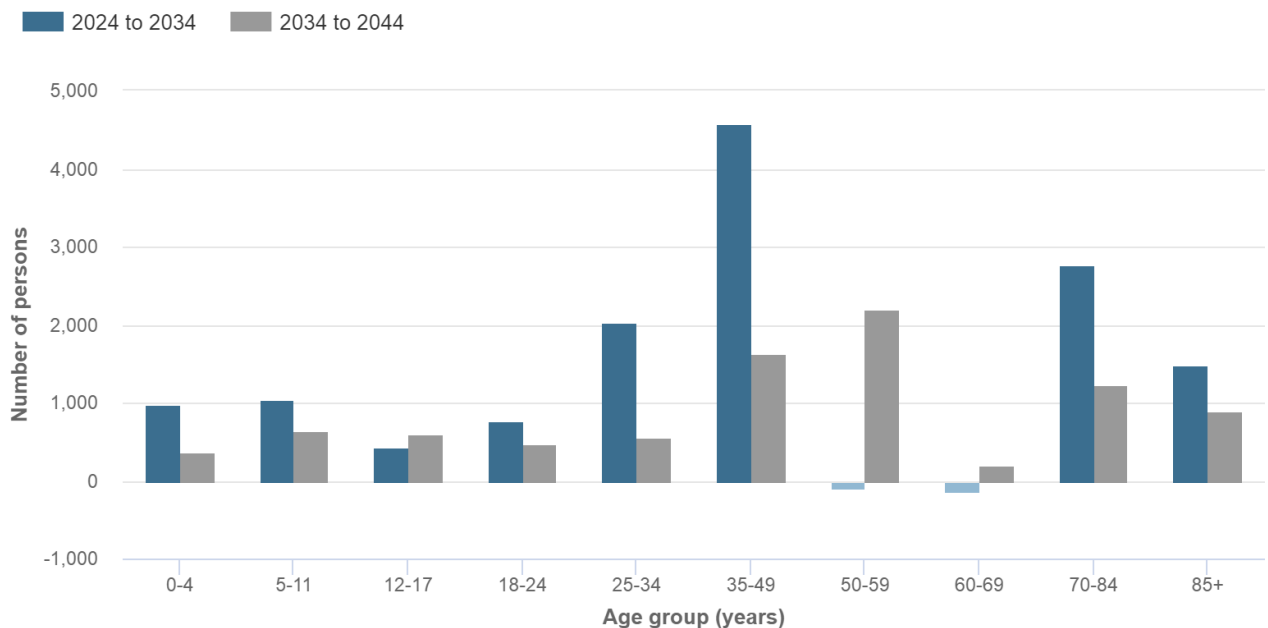
Rows will not add up to the total, as there were areas that people moved away to, and areas that people moved from to live in Yarra Ranges.

Source: ID Consulting (2024). Customised data.

FORECASTS BY AGE AND AREA

Forecast change in age structure - Service age groups

Yarra Ranges Council - Total persons



Source: Population and household forecasts, 2021 to 2046, prepared by .id([opens a new window](#)) (informed decisions), November 2023.

.id informed decisions

Yarra Ranges' population is forecast to grow 9% over the next ten years, adding 13,861 residents, with a population of nearly 174,000 residents in 2034. There will be growth in the number of families with pre-school and primary school age children, working age residents, and older retirees:

- The number of primary school age children aged 5-11 is expected to grow by 1,043 persons, with minimal change in population share.
- The number of 0-4 year olds is expected to increase by 986, also with minimal shift in population share.

There will be low growth in the number of teenagers and young adults. The number of 12-17 year olds is expected to rise by 426 persons, with their population share falling from 7.5% to 7.2%; the number of 18-24 year olds is expected to grow by 773 persons, with their population share falling from 7.9% to 7.7%. Thus whilst the number of teenagers and young adults will remain stable, their relative contribution to the age mix in Yarra Ranges will decline.

Forecast change in age structure by service age groups: Yarra Ranges, 2024-2034

| Age group (years) | 2024 | | 2034 | | Change between 2024 & 2034 |
|--|---------|-------|---------|-------|----------------------------|
| | Number | % | Number | % | Number |
| Babies and pre-schoolers (0 to 4) | 9,793 | 6.1 | 10,779 | 6.2 | +986 |
| Primary schoolers (5 to 11) | 13,796 | 8.6 | 14,839 | 8.5 | +1,043 |
| Secondary schoolers (12 to 17) | 12,021 | 7.5 | 12,446 | 7.2 | +426 |
| Tertiary education & independence (18 to 24) | 12,637 | 7.9 | 13,410 | 7.7 | +773 |
| Young workforce (25 to 34) | 19,859 | 12.4 | 21,894 | 12.6 | +2,035 |
| Parents and homebuilders (35 to 49) | 31,879 | 19.9 | 36,448 | 21.0 | +4,569 |
| Older workers and pre-retirees (50 to 59) | 21,025 | 13.2 | 20,933 | 12.0 | -92 |
| Empty nesters and retirees (60 to 69) | 18,539 | 11.6 | 18,408 | 10.6 | -131 |
| Seniors (70 to 84) | 17,376 | 10.9 | 20,136 | 11.6 | +2,760 |
| Elderly aged (85 and over) | 2,936 | 1.8 | 4,429 | 2.5 | +1,493 |
| Total persons | 159,861 | 100.0 | 173,722 | 100.0 | +13,861 |

Source: ID Consulting (2023). *Population and household forecasts, 2021 to 2046*.

<https://forecast.id.com.au/yarra-ranges>

RELATIONSHIP IN HOUSEHOLD

Most 15-24 year olds in Yarra Ranges were dependent students (46%), or non-dependent and still living at home (36%). Six percent were married – usually in a de facto marriage - and 0.5% (87 persons) were lone parents. Not many were living alone or in share houses – 293 lived in group households and 175 lived alone.

Relationship in household: 15-24 year olds in Yarra Ranges, 2021

| Relationship in household | Number | Share of total |
|---|--------|----------------|
| Partner in a registered marriage | 135 | 0.8% |
| Partner in de facto marriage | 927 | 5.3% |
| Lone parent | 87 | 0.5% |
| Dependent student (aged 15-24 years) | 8,061 | 46.2% |
| Non-dependent child | 6,339 | 36.3% |
| Other related individual | 479 | 2.7% |
| Unrelated individual living in family household | 423 | 2.4% |
| Group household member | 293 | 1.7% |
| Lone person | 175 | 1.0% |
| Visitor (from within Australia) | 533 | 3.1% |
| Total | 17,447 | 100.0% |

Source: Australian Bureau of Statistics (2022). *2021 Census of Population and Housing, General Community Profile, Yarra Ranges*. <https://www.abs.gov.au/census/find-census-data/search-by-area>

CARERS

Whilst care is usually assumed to be done by parents and older adults, some young people are also carers. 15-24 year olds accounted for 5.6% of all persons provided unpaid care in Yarra Ranges, compared to 15% across metropolitan Melbourne. Within their age group, 4.5% of 15-19 year olds and 7% of 20-24 year olds are carers, compared to 4.6% and 6.1% for metropolitan Melbourne. So 20-24 year olds in Yarra Ranges are slightly more likely to be carers when compared to young adults across metropolitan Melbourne.

Provided unpaid assistance to a person with a disability, health condition or due to old age (during two weeks before Census Night): Yarra Ranges, 2021

| Age group | Number of carers | Yarra Ranges | | | Metropolitan Melbourne | |
|--------------------|------------------|--------------|--------------------|-----------------|------------------------|-----------------|
| | | Total | Share of age group | Share of carers | Share of age group | Share of carers |
| 15-19 years | 425 | 9,465 | 4.5% | 2.3% | 4.6% | 6.8% |
| 20-24 years | 626 | 8,692 | 7.2% | 3.3% | 6.1% | 8.2% |
| 25-34 years | 1,744 | 19,122 | 9.1% | 9.3% | 7.3% | 19.6% |
| 35-44 years | 2,943 | 20,374 | 14.4% | 15.7% | 12.0% | 18.3% |
| 45-54 years | 4,214 | 21,524 | 19.6% | 22.5% | 18.5% | 15.6% |
| 55-64 years | 4,685 | 20,271 | 23.1% | 25.0% | 21.0% | 13.2% |
| 65-74 years | 2,802 | 16,358 | 17.1% | 15.0% | 15.9% | 10.1% |
| 75-84 years | 1,067 | 8,550 | 12.5% | 5.7% | 12.0% | 5.8% |
| 85 years & over | 201 | 2,677 | 7.5% | 1.1% | 7.0% | 2.5% |
| Total | 18,711 | 127,036 | 14.7% | 100.0% | 12.6% | 100.0% |

Source: Australian Bureau of Statistics (2022). *2021 Census of Population and Housing, General Community Profile, Yarra Ranges, Greater Melbourne*. <https://www.abs.gov.au/census/find-census-data/search-by-area>

EDUCATION AND EMPLOYMENT

KINDERGARTEN PARTICIPATION

In 2023, Yarra Ranges had a high level of kindergarten participation for both 3 year olds and 4 year olds. The participation was 92% for 3 year olds, compared to 89% for Victoria; it was 97% for 4 year olds, compared to 96% for Victoria. Three year old participation increased from 89% in 2022; 4 year old participation increased substantially from 91% in 2022.

Kindergarten participation rates by age: Yarra Ranges and Victoria, 2021-2023

| Year | 3 year olds | | 4 year olds | |
|------|--------------|----------|--------------|----------|
| | Yarra Ranges | Victoria | Yarra Ranges | Victoria |
| 2021 | n/a | n/a | 91% | 93% |
| 2022 | 89% | 78% | 91% | 92% |
| 2023 | 92% | 89% | 97% | 96% |

Source: Department of Education (2024). *2023 Yarra Ranges (S) Early childhood education profile*.

YARRA VALLEY MIDDLE YEARS CONVERSATIONS PROJECT

The Middle Years Conversations project sought to gather the perspectives of middle years children from the Yarra Valley region of Yarra Ranges, focusing on child wellbeing following the COVID-19 pandemic. The project was conducted with students across eight primary schools in late 2022 and throughout 2023.

Conversation sessions were used to gather qualitative data regarding children's perspectives on their wellbeing. This included looking at students' perspectives around their experiences transitioning back to school post COVID-19, what they find stressful, their strategies for coping with stress, their personal strengths, and ideas for promoting wellbeing.

The key findings from the data were that:

- Students' experiences of remote learning demonstrated the variety of ways that people learn, and highlighted the impact of significant disruptions to routine on students' engagement in learning.
- Seeing friends again was a great highlight when returning to school post-COVID; however, students experienced concerns with navigating friendships and managing peer conflict.

The important areas for wellbeing in middle years explored through the conversations were:

- Getting along with others and having positive friendships (e.g., experiencing peer conflict and loneliness).
- Feeling loved and safe at home (e.g., experiencing family conflict).
- Support for learning (e.g., difficult schoolwork and making mistakes).
- Managing essential everyday activities (e.g., getting ready for school and chores);
- Being listened to.

Source: Yarra Ranges Council (2024). *Middle Years (MY) Conversations 2023: Perspectives on wellbeing from children in the Upper Yarra and Valley*.

SCHOOL ATTENDANCE

School attendance levels plummeted during the pandemic. In most schools, attendance has not recovered to pre-pandemic levels. Across Yarra Ranges, the attendance rate (percentage of days attended) dropped from 89% to 88%. But the level of students who attended at least 90% of the time dropped from 72% in 2019 to 61% in 2023. This pattern affected most schools in Yarra Ranges, with large drops in the level of students who attended most of the time.

Part of this fall has been attributed to parents' increased capacity to work from home if their children are unwell. However, if this was the main driver, less change would be expected amongst secondary students, who are old enough to stay home by themselves and are less likely to need a parent at home with them. But there was no discernable difference in the shift in attendance levels when comparing primary and secondary schools, or government, independent and Catholic schools.

Reasons are thought to include increased ill-health and anxiety over school attendance, along with general disengagement from school during lockdowns in 2020 and 2021.

Amongst combined primary and secondary schools, the shift in 90% attendance levels ranged from a 40% drop at Sherbrook Community School, to a 5% increase at Yarra Ranges Special Development School. Amongst primary schools, the shift in 90% attendance levels ranged from a 51% drop at Hoddles Creek Primary School, to a 14% increase at St Mary's School in Mount Evelyn. And amongst secondary schools, the shift in 90% attendance levels ranged from a 35% drop at Worawa Aboriginal College, to a 4% drop at Mount Lilydale Mercy College in Lilydale. No secondary schools had increased or unchanged attendance levels.

Victorian data on student attendance shows that attendance levels were stable throughout the pandemic. Attendance levels then plunged in 2022, and only recovered slightly in 2023. Attendance levels would have been low in 2022 due to the impact of COVID-19 and other infectious diseases, but continued low attendance in 2023 is a concern.

Attendance levels had a larger fall in primary schools, and recovered less in 2023 than they did in secondary schools. There was little difference in attendance between males and females. Independent schools had slightly higher attendance amongst primary school students, and much higher attendance in 2023 amongst secondary school students. This indicates potential differences according to socio-economic status and school policy, in terms of getting students back to school in 2023.

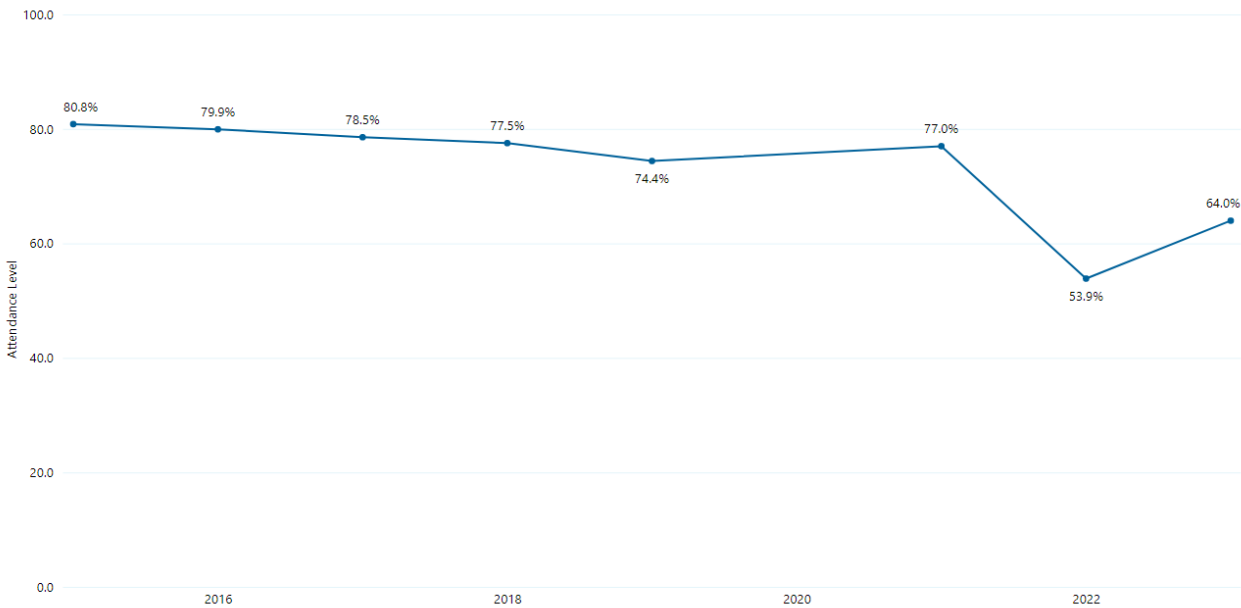
Student attendance levels: Victoria, 2021-2023

| Year level | 2021 | 2022 | 2023 |
|------------|-------|-------|-------|
| Years 1-6 | 80.5% | 56.0% | 67.7% |
| Years 7-10 | 72.3% | 51.0% | 58.8% |

***Student attendance level** is defined as the proportion of Years 1–10 full-time students, whose attendance rate is greater than, or equal to, 90% over the (reporting) period.*

Source: ACARA (2024). *Student attendance*. <https://www.acara.edu.au/reporting/national-report-on-schooling-in-australia/student-attendance>

Student attendance level for Years 1-10 students in all schools in Victoria, time series



Source: ACARA (2024). *Student attendance*. <https://www.acara.edu.au/reporting/national-report-on-schooling-in-australia/student-attendance>

School attendance: Yarra Ranges, 2019 and 2023

| School name | Suburb | School type | Student attendance rate, Semester 1 2019 | Student attendance level, Semester 1 2019 (% attending 90% or more of the time) | Student attendance rate, Semester 1 2023 | Student attendance level, Semester 1 2023 (% attending 90% or more of the time) | Change in student attendance rate | Change in student attendance level |
|--|-------------------|-------------|--|---|--|---|-----------------------------------|------------------------------------|
| Combined primary/secondary schools: | | | | | | | | |
| Sherbrooke Community School | SASSAFRAS | Government | 84% | 56% | 63% | 16% | -21% | -40% |
| Belgrave Heights Christian School | BELGRAVE HEIGHTS | Independent | 93% | 77% | 91% | 65% | -2% | -12% |
| Mount Evelyn Christian School | MOUNT EVELYN | Independent | 90% | 62% | 87% | 52% | -3% | -10% |
| Edinburgh College | LILYDALE | Independent | 93% | 78% | 91% | 69% | -2% | -9% |
| Mooroolbark Grammar | MOOROOLBARK | Independent | 92% | 65% | 82% | 58% | -10% | -7% |
| Oxley Christian College | CHIRNSIDE PARK | Independent | 95% | 86% | 93% | 81% | -2% | -5% |
| Billanook College | MOOROOLBARK | Independent | 93% | 78% | 92% | 75% | -1% | -3% |
| Little Yarra Steiner School | YARRA JUNCTION | Independent | 89% | 57% | 88% | 57% | -1% | 0% |
| Yarra Ranges Special Developmental School | MOUNT EVELYN | Government | 85% | 52% | 88% | 57% | 3% | 5% |
| Lyrebird College | COLDSTREAM | Independent | n/a | n/a | 93% | 73% | n/a | n/a |
| Mountain District Christian School | MONBULK | Independent | n/a | n/a | 83% | 17% | n/a | n/a |
| Primary schools: | | | | | | | | |
| Hoddles Creek Primary School | HODDLES CREEK | Government | 92% | 75% | 82% | 24% | -10% | -51% |
| Sassafras Primary School | SASSAFRAS | Government | 91% | 77% | 84% | 43% | -7% | -34% |
| Silvan Primary School | SILVAN | Government | 94% | 85% | 90% | 52% | -4% | -33% |
| Dandenong Ranges Steiner School - School Road Campus | NARRE WARREN EAST | Independent | 93% | 75% | 87% | 46% | -6% | -29% |
| Monbulk Primary School | MONBULK | Government | 93% | 84% | 88% | 57% | -5% | -27% |

| School name | Suburb | School type | Student attendance rate, Semester 1 2019 | Student attendance level, Semester 1 2019 (% attending 90% or more of the time) | Student attendance rate, Semester 1 2023 | Student attendance level, Semester 1 2023 (% attending 90% or more of the time) | Change in student attendance rate | Change in student attendance level |
|------------------------------------|-----------------|-------------|--|---|--|---|-----------------------------------|------------------------------------|
| Wandin Yallock Primary School | WANDIN NORTH | Government | 94% | 84% | 88% | 59% | -6% | -25% |
| Kilsyth Primary School | KILSYTH | Government | 93% | 83% | 90% | 62% | -3% | -21% |
| Macclesfield Primary School | MACCLESFIELD | Government | 91% | 75% | 87% | 54% | -4% | -21% |
| Seville Primary School | SEVILLE | Government | 92% | 82% | 89% | 61% | -3% | -21% |
| Ferny Creek Primary School | FERNY CREEK | Government | 93% | 77% | 89% | 57% | -4% | -20% |
| St Peter Julian Eymard | MOOROOLBARK | Catholic | 93% | 76% | 89% | 56% | -4% | -20% |
| Coldstream Primary School | COLDSTREAM | Government | 94% | 88% | 90% | 68% | -4% | -20% |
| Tecoma Primary School | TECOMA | Government | 94% | 85% | 90% | 65% | -4% | -20% |
| Warburton Primary School | WARBURTON | Government | 92% | 69% | 82% | 49% | -10% | -20% |
| Chum Creek Primary School | CHUM CREEK | Government | 93% | 79% | 89% | 60% | -4% | -19% |
| Yering Primary School (9 students) | YERING | Government | 91% | 65% | 82% | 46% | -9% | -19% |
| Belgrave South Primary School | BELGRAVE SOUTH | Government | 93% | 82% | 90% | 64% | -3% | -18% |
| St Richard's Primary School | KILSYTH | Catholic | 93% | 76% | 90% | 60% | -3% | -16% |
| Gladesville Primary School | KILSYTH | Government | 95% | 88% | 91% | 72% | -4% | -16% |
| Yarra Glen Primary School | YARRA GLEN | Government | 94% | 85% | 92% | 69% | -2% | -16% |
| Selby Primary School | SELBY | Government | 93% | 85% | 91% | 70% | -2% | -15% |
| Menzies Creek Primary School | MENZIES CREEK | Government | 90% | 69% | 86% | 54% | -4% | -15% |
| Healesville Primary School | HEALESVILLE | Government | 92% | 70% | 89% | 56% | -3% | -14% |
| Launching Place Primary School | LAUNCHING PLACE | Government | 94% | 78% | 90% | 65% | -4% | -13% |
| Yarra Junction Primary School | YARRA JUNCTION | Government | 93% | 81% | 90% | 68% | -3% | -13% |
| Pembroke Primary School | MOOROOLBARK | Government | 93% | 79% | 90% | 67% | -3% | -12% |
| The Patch Primary School | THE PATCH | Government | 93% | 77% | 89% | 65% | -4% | -12% |

| School name | Suburb | School type | Student attendance rate, Semester 1 2019 | Student attendance level, Semester 1 2019 (% attending 90% or more of the time) | Student attendance rate, Semester 1 2023 | Student attendance level, Semester 1 2023 (% attending 90% or more of the time) | Change in student attendance rate | Change in student attendance level |
|----------------------------------|-----------------|-------------|--|---|--|---|-----------------------------------|------------------------------------|
| Upwey South Primary School | UPWEY | Government | 93% | 82% | 92% | 70% | -1% | -12% |
| Montrose Primary School | MONTROSE | Government | 94% | 81% | 91% | 70% | -3% | -11% |
| Billanook Primary School | MONTROSE | Government | 94% | 83% | 91% | 72% | -3% | -11% |
| Wandin North Primary School | WANDIN NORTH | Government | 94% | 82% | 92% | 71% | -2% | -11% |
| Mount Dandenong Primary School | MOUNT DANDENONG | Government | 93% | 83% | 92% | 73% | -1% | -10% |
| Badger Creek Primary School | HEALESVILLE | Government | 91% | 66% | 88% | 57% | -3% | -9% |
| St Brigid's School | HEALESVILLE | Catholic | 93% | 76% | 91% | 67% | -2% | -9% |
| Bimbadeen Heights Primary School | MOOROOLBARK | Government | 94% | 83% | 92% | 74% | -2% | -9% |
| Woori Yallock Primary School | WOORI YALLOCK | Government | 93% | 76% | 91% | 67% | -2% | -9% |
| Olinda Primary School | OLINDA | Government | 91% | 67% | 79% | 59% | -12% | -8% |
| Manchester Primary School | MOOROOLBARK | Government | 92% | 73% | 90% | 65% | -2% | -8% |
| St Patrick's School | LILYDALE | Catholic | 96% | 93% | 94% | 86% | -2% | -7% |
| Lilydale Primary School | LILYDALE | Government | 93% | 76% | 90% | 69% | -3% | -7% |
| Wesburn Primary School | WESBURN | Government | 93% | 77% | 91% | 70% | -2% | -7% |
| Upwey Primary School | UPWEY | Government | 92% | 70% | 90% | 63% | -2% | -7% |
| Mooroolbark East Primary School | MOOROOLBARK | Government | 94% | 82% | 92% | 76% | -2% | -6% |
| Birmingham Primary School | MOUNT EVELYN | Government | 92% | 77% | 92% | 72% | 0% | -5% |
| Millwarra Primary School | MILLGROVE | Government | 87% | 54% | 86% | 49% | -1% | -5% |
| Chirnside Park Primary School | CHIRNSIDE PARK | Government | 92% | 70% | 91% | 65% | -1% | -5% |
| Don Valley Primary School | DON VALLEY | Government | 91% | 60% | 89% | 55% | -2% | -5% |
| Kallista Primary School | KALLISTA | Government | 93% | 77% | 91% | 73% | -2% | -4% |
| Mount Evelyn Primary School | MOUNT EVELYN | Government | 92% | 76% | 92% | 73% | 0% | -3% |

| School name | Suburb | School type | Student attendance rate, Semester 1 2019 | Student attendance level, Semester 1 2019 (% attending 90% or more of the time) | Student attendance rate, Semester 1 2023 | Student attendance level, Semester 1 2023 (% attending 90% or more of the time) | Change in student attendance rate | Change in student attendance level |
|-------------------------------|----------------|-------------|--|---|--|---|-----------------------------------|------------------------------------|
| St Paul's School | MONBULK | Catholic | 91% | 69% | 91% | 66% | 0% | -3% |
| Gladysdale Primary School | GLADYSDALE | Government | 93% | 71% | 91% | 68% | -2% | -3% |
| St Thomas More's School | BELGRAVE | Catholic | 92% | 64% | 89% | 64% | -3% | 0% |
| Rolling Hills Primary School | MOOROOLBARK | Government | 93% | 76% | 93% | 79% | 0% | 3% |
| Ghilgai School | KILSYTH | Independent | 90% | 59% | 90% | 70% | 0% | 11% |
| St Joseph's School | YARRA JUNCTION | Catholic | 90% | 60% | 92% | 73% | 2% | 13% |
| Victoria Road Primary School | LILYDALE | Government | 90% | 61% | 92% | 74% | 2% | 13% |
| St Mary's School | MOUNT EVELYN | Catholic | 93% | 81% | 95% | 95% | 2% | 14% |
| Secondary schools: | | | | | | | | |
| Worawa Aboriginal College | HEALESVILLE | Independent | 94% | 85% | 89% | 50% | -5% | -35% |
| Mooroolbark College | MOOROOLBARK | Government | 90% | 72% | 82% | 40% | -8% | -32% |
| Cire Community School | LILYDALE | Independent | 69% | 25% | 48% | 0% | -21% | -25% |
| Lilydale High School | LILYDALE | Government | 91% | 72% | 85% | 48% | -6% | -24% |
| Yarra Hills Secondary College | MOOROOLBARK | Government | 88% | 64% | 82% | 43% | -6% | -21% |
| Healesville High School | HEALESVILLE | Government | 91% | 60% | 85% | 41% | -6% | -19% |
| Upwey High School | UPWEY | Government | 92% | 74% | 87% | 55% | -5% | -19% |
| Lilydale Heights College | LILYDALE | Government | 90% | 70% | 86% | 52% | -4% | -18% |
| Upper Yarra Secondary College | YARRA JUNCTION | Government | 89% | 59% | 84% | 44% | -5% | -15% |
| Monbulk College | MONBULK | Government | 90% | 67% | 86% | 54% | -4% | -13% |
| Mater Christi College | BELGRAVE | Catholic | 93% | 78% | 91% | 74% | -2% | -4% |
| Mount Lilydale Mercy College | LILYDALE | Catholic | 92% | 71% | 90% | 67% | -2% | -4% |
| Yarra Ranges average | | | 89% | 72% | 88% | 61% | -1% | -11% |

Student attendance rate is defined as a number of actual full-time equivalent student days attended by full-time students in Years 1–10 as a percentage of the total number of possible student days attended over the (reporting) period.

Student attendance level is defined as the proportion of Years 1–10 full-time students, whose attendance rate is greater than, or equal to, 90% over the (reporting) period.

Student attendance rate and level information is collected by schools and reported on My School twice yearly by Indigenous status for Semester 1 (Terms 1 and 2) and Term 3.

Source: ACARA (July 2024). My School data. <https://www.myschool.edu.au/>

YEAR 12 RETENTION

Most school students stay at school until they have completed Year 12. Across Victoria, Year 12 retention was 94% in 2018 and 92% in 2019. During COVID, Year 12 retention in Victoria did not drop, staying at roughly 91% in both 2020 and 2021. Retention dropped in 2022, and fell further in 2023.

In the North-Eastern region (which covers Yarra Ranges), Year 7-12 retention dropped from 92% in 2019, to 88% in 2022 and then down to 83% in 2023. Across Victoria, Year 12 retention is now at its lowest level covered in the data. The trend data goes back to 2012, and 2023 levels are lower than the 2012 levels. This shift is concentrated amongst government schools, with minimal drop in retention amongst independent school students.

Year 12 retention, Victorian government schools by region: 2018-2023

| School region | Years 7-12 | | | | | |
|----------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
| North-Eastern | 95.4% | 92.2% | 90.5% | 92.7% | 87.7% | 83.4% |
| North-Western | 99.6% | 96.8% | 97.0% | 95.3% | 93.2% | 89.0% |
| South-Eastern | 94.0% | 92.7% | 93.1% | 92.4% | 88.3% | 85.6% |
| South-Western | 89.1% | 86.0% | 85.6% | 86.5% | 83.7% | 79.6% |
| Total | 94.3% | 91.7% | 91.3% | 91.5% | 88.0% | 84.2% |

Source: Department of Education (2024). *Schools Apparent Retention Rates, Victoria, February Census 2012-2023*. <https://discover.data.vic.gov.au/dataset/schools-apparent-retention-rates-victoria>; <https://www.vcaa.vic.edu.au/administration/research-and-statistics/Pages/SeniorSecondaryCompletion.aspx>

YEAR 12 COMPLETION

The level of Year 12 students in Yarra Ranges who finished the year fell from 76.3% in 2018 to 71.6% in 2020.

Year 12 completion: Yarra Ranges, 2018-2020

| Indicator | Year completed or exited Year 12 | | |
|-------------------------|----------------------------------|-------|-------|
| | 2018 | 2019 | 2020 |
| Non-completer | 461 | 462 | 535 |
| Completed Year 12 | 1,483 | 1,368 | 1,352 |
| % who completed Year 12 | 76.3% | 74.8% | 71.6% |

Source: Department of Education (accessed 2024). *On Track 2021 survey results - Destinations of students who exited school in 2020, Yarra Ranges (S)*. <https://www.vic.gov.au/on-track-survey>

POST-SCHOOL DESTINATIONS

For Yarra Ranges students those who left school in 2020 without completing Year 12, the three main reasons for leaving were:

- Work/career reasons (26%, compared to 23% across Victoria).
- 20% said that “school not for them /not good environment/not learning”, compared to 11% across Victoria. This compares to 9% in 2018 (this figure was not published for the 2019 cohort due to small numbers selecting this response).
- 18% said ill health, compared to 10% across Victoria. This compares to 9% in 2018 (this figure was not published for the 2019 cohort due to small numbers selecting this response).

For those who completed Year 12 in 2020, their main destinations for 2021 were;

- Further education - Bachelor degrees (40%) or certificates/diplomas (12%).
- Employment (29%).
- Apprenticeships or traineeships (15%).
- Only 3.6% were looking for work.

Compared to those who completed Year 12 in 2019, the main changes were:

- A drop in the level doing further study, from 57% to 51%.
- A jump in the level doing apprenticeships or traineeships, from 10% to 15%.
- An increase in the level who were employed, from 26% to 29%, with a matching drop in those looking for work, from 6.4% to 3.6%.

Yarra Ranges has a much lower level of high school graduates who are doing Bachelor degrees, a much higher level of apprentices and trainees, and a very high level who are working.

Destinations of Year 12 or equivalent completers six months after leaving school, % of total: Yarra Ranges and Victoria, 2017 to 2021

| Year/ Area | Bachelor degree | Certificates/ Diplomas | Apprentice/ Trainee | Employed | Looking for work | NILFET |
|---------------------|--------------------|---------------------------|------------------------|----------|---------------------|--------|
| Yarra Ranges | | | | | | |
| 2017 | 41.1 | 17.3 | 11.7 | 24.2 | 4.2 | 1.5 |
| 2018 | 43.6 | 14.7 | 10.1 | 26.6 | 4.9 | NDP |
| 2019 | 44.7 | 13.7 | 9.4 | 27.4 | 4.3 | NDP |
| 2020 | 41.7 | 15.1 | 9.7 | 26.1 | 6.4 | 1.0 |
| 2021 | 39.7 | 11.6 | 14.5 | 29.4 | 3.6 | 1.1 |
| Victoria | | | | | | |
| 2017 | 53.8 | 12.9 | 8.1 | 19.5 | 4.6 | 1.0 |
| 2018 | 54.9 | 12.1 | 8.1 | 19.8 | 4.3 | 0.8 |
| 2019 | 54.1 | 12.8 | 8.2 | 19.7 | 4.4 | 0.8 |
| 2020 | 54.5 | 11.9 | 8.2 | 17.6 | 6.4 | 1.5 |
| 2021 | 56.1 | 11.3 | 9.8 | 18.0 | 3.9 | 0.9 |

Note: NILFET = Not in the labour force, employment or training

NDP = no data published

Source: Department of Education (accessed 2024). *On Track 2021 survey results - Destinations of students who exited school in 2020, Yarra Ranges (S)*. <https://www.vic.gov.au/on-track-survey>

YOUTH ALLOWANCE

In June 2024, Yarra Ranges had 300 16-24 year olds on Youth Allowance (other) who were seeking employment; and 585 on Youth Allowance (student and apprentice) who were studying.

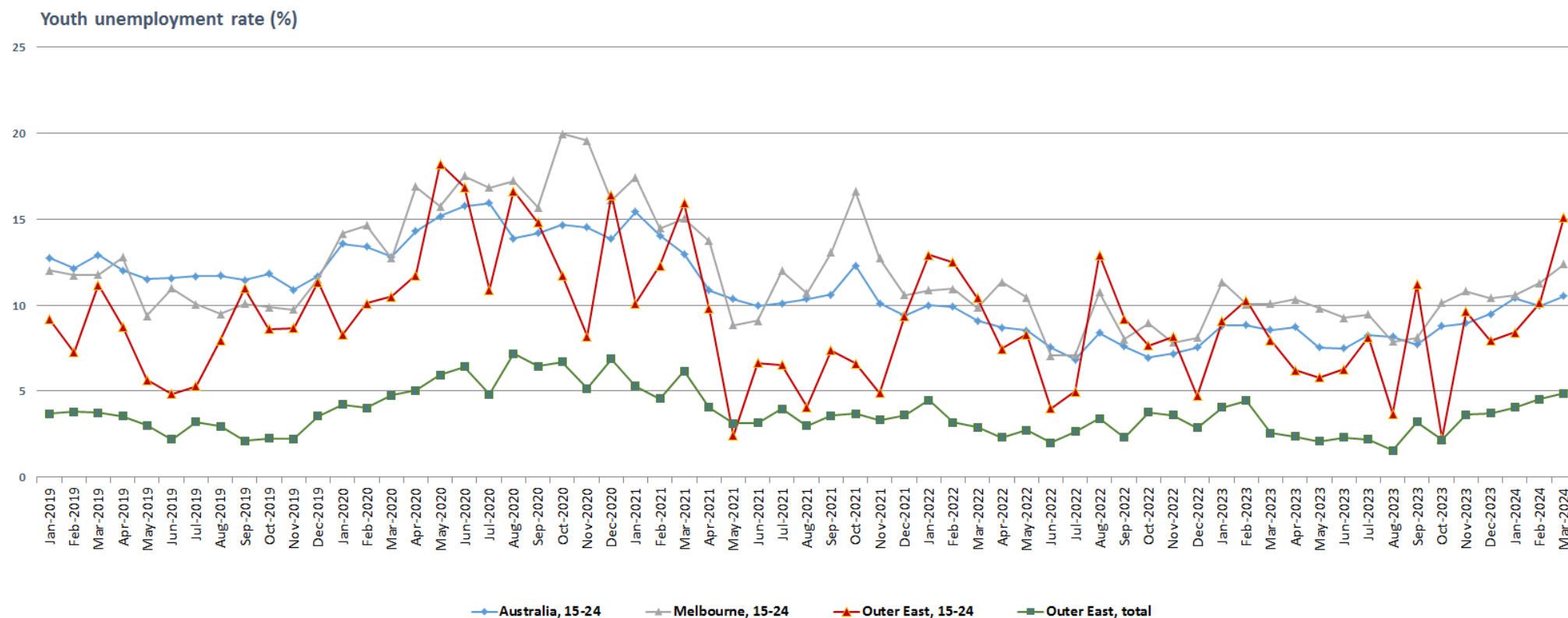
Source: Department of Social Security (2024). *DSS Benefit and Payment Recipient Demographics - quarterly data*. <https://data.gov.au/data/dataset/dss-payment-demographic-data>

YOUTH UNEMPLOYMENT

In March 2024, youth unemployment in the outer east hit 15.1%, the highest level since the level of 15.9% in March 2021 – which was the beginning of the second year of the pandemic. This is much higher than average. The average rate was 10.5% for Australia,

11.9% for Victoria and 12.4% for Melbourne. The total unemployment rate across the Outer East was 4.9%, well below the youth rate.

Youth unemployment rates in the outer east seem to be highly volatile. Often they have been well below the Melbourne average. But they have been rising sharply in the first quarter of 2024 and are now well above the metropolitan average for 15-24 year olds.



Source: Australian Bureau of Statistics (2024). 6291.0.55.001 - RM1 - Labour force status by Age, Labour market region (ASGS) and Sex, October 1998 onwards. [Labour Force, Australia, Detailed, June 2024 | Australian Bureau of Statistics \(abs.gov.au\)](https://abs.gov.au)

Maternal and child health

In 2019/20, 57% of infants were exclusively breastfed to three months of age.⁶⁶ This is better than the 51% Victorian average, but has dropped from a high of 65.5% in 2014/15. Roughly 8% of mothers smoked in the first 20 weeks of pregnancy (similar to the average), down from 13.3% in 2012. The level stayed the same between 2019 and 2020. It did not continue the previous downwards trend, but nor did it go up. Thus it appears that COVID may have temporarily halted previous success in reducing smoking during pregnancy.

Yarra Ranges had a low level of low birthweight babies in 2020, at 3.6% compared to 4.8% across Victoria; the level went down by 14.3% in 2020. It is unknown whether a suspected international trend was replicated in Yarra Ranges – where premature births went down and stillbirths went up. In NSW, stillbirths jumped by 14% between 2019 and 2020⁶⁷; nationally, the stillbirth rate hit a 20-year high. This coincided with severe bushfires and the first year of the COVID-19 pandemic in Australia. In 2021, the rate returned to the same level as in 2019.⁶⁸

Immunisation levels in Yarra Ranges are quite high. In the year to September 2023, the level of children who were fully immunised was:

- 94.12% amongst 1 year olds (down from 95.27% in December 2019);
- 91.94% amongst 2 year olds (down from 93.69% in December 2019);
- 94.68 amongst 5 year olds (down from 95.7% in December 2019).

Thus whilst there have been slight falls compared to pre-COVID, overall immunisation coverage is very high. Immunisation amongst 2 year olds has had the largest fall, of nearly 2%. The national target is 95%.

ANTENATAL CARE AND HEALTH

During COVID, there was a drop in usage of antenatal care in the first 14 weeks of pregnancy amongst women in Yarra Ranges. The level who had at least one antenatal visit

⁶⁶ Department of Health (2024). *Victorian Public Health and Wellbeing Outcomes Dashboard*.
<https://www.health.vic.gov.au/victorian-public-health-and-wellbeing-outcomes-dashboard>

⁶⁷ <https://www.health.nsw.gov.au/hsnsw/Publications/mothers-and-babies-2021.pdf>

⁶⁸ <https://www.aihw.gov.au/reports/mothers-babies/stillbirths-and-neonatal-deaths>

in the first 14 weeks of pregnancy fell from 94% in 2019 to 90% in 2021, whilst the level increased Victoria-wide. However, Yarra Ranges remained above the Victorian average of 81% in 2021.

The level who had had five or more antenatal visits throughout their entire pregnancy remained stable, at 99% in Yarra Ranges and 93% in Victoria's major cities. Thus, the drop in antenatal care was likely to be focused on reduced care in the first trimester of pregnancy.

LABOUR AND BIRTH

The length of hospital stays post-birth dropped substantially during COVID. In Victoria's major cities, the level of women who were in hospital for less than one day after birth rose from 14% in 2019 to 21% in 2021. In Yarra Ranges, the level jumped from 18.5% in 2019 to 36% in 2021. Thus, whilst the level of women leaving hospital after less than one day rose by 50% across Victoria, it nearly doubled in Yarra Ranges, with a 95% increase. The level also increased by 87% in Upper Goulburn Valley, which covers the Upper Yarra Valley part of the Yarra Ranges LGA. The high increases are very much concentrated in eastern Melbourne LGAs.

Similarly, the level of babies who were in hospital for less than a day jumped, by 42% across Victorian major cities and by 87% in Yarra Ranges. The level rose from 18% to 25% for major cities and from 19% to 36% for Yarra Ranges.

BABY OUTCOMES

The level of pre-term births fell slightly between 2019 and 2021, both for Victorian cities and for Yarra Ranges. The level fell from 8.5% to 7.9% in major cities, and from 8.9% to 7% in Yarra Ranges. The level of low birthweight babies also fell, from 6.7% to 6.1% in Victorian major cities, and from 5.7% to 3.6% in Yarra Ranges. This was a 37% drop in Yarra Ranges, much higher than the 9% drop for Victorian major cities. The level of babies who were small for their gestational age fell from 9.6% to 9.1% in Victorian major cities, and from 7.1% to 5.4% in Yarra Ranges. This was a 24% drop in Yarra Ranges, much higher than the 5% drop for Victorian major cities.

During COVID, there was an international trend that saw a reduced level of pre-term births and an increased level of stillbirths. This trend does not seem to have been born out in Victoria – the level of stillbirths and perinatal deaths dropped in the second year of COVID, and the level of neonatal deaths stayed the same. Nationally, there was a 7% jump in the level of stillbirths in 2020; the rate went back down in 2021. There was a 5% jump nationally in the level of perinatal deaths in 2020; again, the rate went back down in 2021. The level of neonatal deaths stayed the same across Australia.

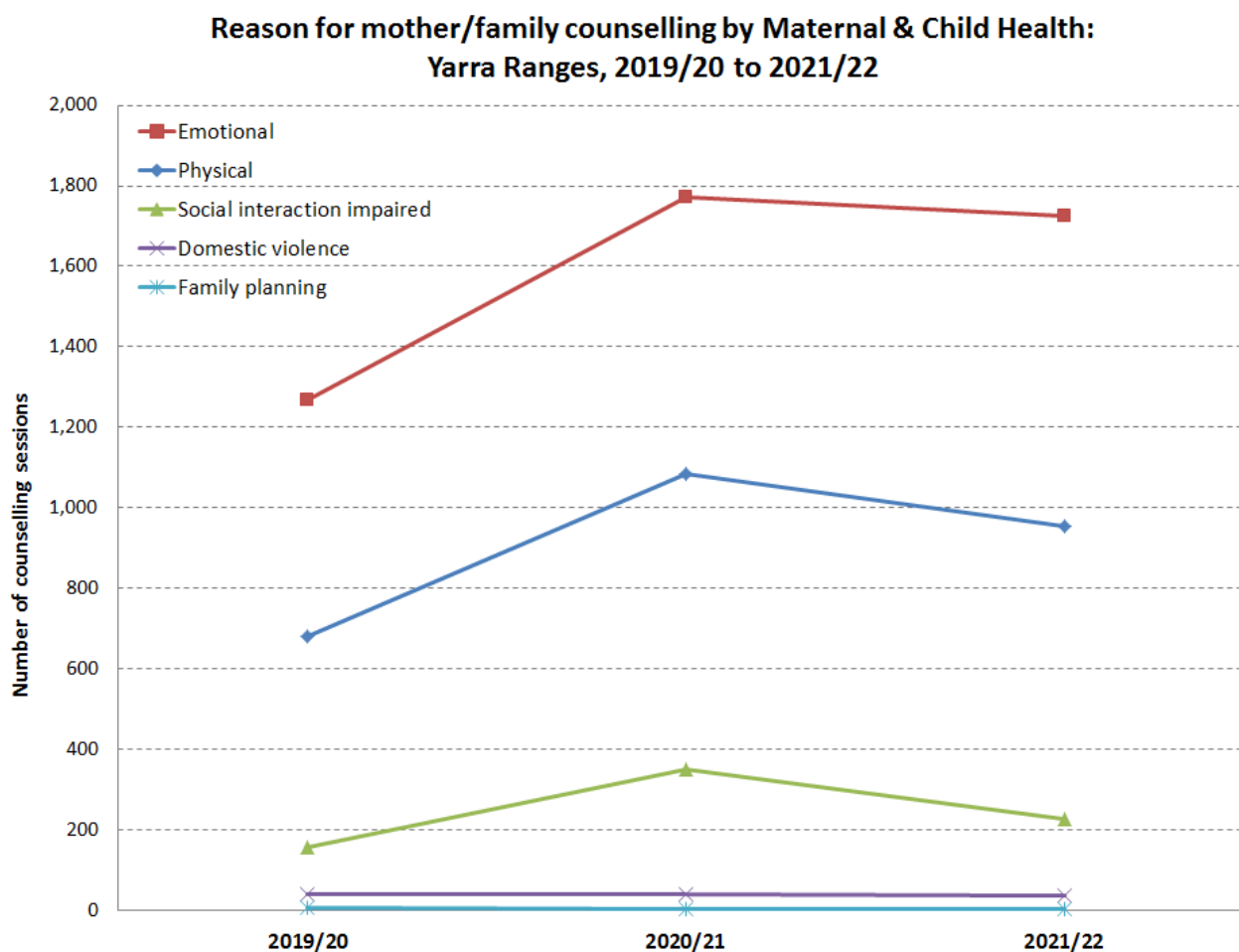
Changes in maternal and perinatal outcomes during the 2020 and 2021 COVID-19 pandemic: Yarra Ranges & major cities in Victoria, 2019-2021

| Year | Major cities (Vic) | | | | Yarra Ranges | | | |
|--|--------------------|------|------|-------------------------------|--------------|------|------|-------------------------------|
| | 2019 | 2020 | 2021 | Change in %, 2019- 2021 | 2019 | 2020 | 2021 | Change in %, 2019- 2021 |
| Antenatal period | | | | | | | | |
| Women who gave birth and had at least one antenatal visit in the first trimester (less than 14 weeks) - percentage | 73.5 | 78.8 | 81.4 | 11% | 94.0 | 93.0 | 90.4 | -4% |
| Women who gave birth and had 5 or more antenatal visits - percentage | 92.8 | 94.1 | 93.0 | 0% | 99.1 | 98.2 | 98.7 | 0% |
| Women who gave birth and smoked at anytime during pregnancy | 6.3 | 6.6 | 5.8 | -8% | 7.5 | 7.9 | 7.1 | -5% |
| Labour and birth | | | | | | | | |
| Women who gave birth in hospital and had a length of postnatal stay of 1 day or less | 14.1 | 18.7 | 21.2 | 50% | 18.5 | 32.2 | 36.0 | 95% |
| Baby outcomes | | | | | | | | |
| Pre-term births | 8.5 | 8.1 | 7.9 | -7% | 8.9 | 7.8 | 7.0 | -21% |
| Low birthweight live births | 6.7 | 6.3 | 6.1 | -9% | 5.7 | 5.5 | 3.6 | -37% |
| Small for gestational age births | 9.6 | 9.4 | 9.1 | -5% | 7.1 | 6.3 | 5.4 | -24% |
| Babies born in hospital who had a length of stay of 1 day or less | 17.6 | 23.6 | 25.0 | 42% | 19.4 | 31.7 | 36.2 | 87% |

Source: Australian Institute of Health and Welfare (2024). Maternal and perinatal outcomes during the 2020 and 2021 COVID-19 pandemic - data tables.

[Maternal and perinatal outcomes during the 2020 and 2021 COVID-19 pandemic, Introduction - Australian Institute of Health and Welfare \(aihw.gov.au\)](https://www.aihw.gov.au/reports/maternity/maternal-and-perinatal-outcomes-during-the-2020-and-2021-covid-19-pandemic/introduction)

MATERNAL AND CHILD HEALTH COUNSELLING & REFERRALS FOR EMOTIONAL ISSUES



In 2019/20, there were 1,268 maternal and child health sessions for counselling for emotional reasons, and 92 referrals for emotional reasons. In 2020/21, the level of emotional counselling sessions increased substantially, whilst the level of referrals for emotional counselling fell: counselling sessions jumped 40% to 1,771 sessions in 2020/21; referrals fell 37% to 58 referrals. The numbers then appeared to level out in 2021/22, at 1,725 counselling sessions and 55 referrals.

The data indicate a substantial spike in mother and family counselling after the start of COVID-19, with a 51% rise overall, due to increases in counselling for emotional, physical and social interaction. However, the reasons for the drop in referrals are not apparent from the data. It

may be due to a lack of face-to-face services to refer people to, but this can't be known without further research. Also, the level of referrals was consistently much lower than the level of counselling services, so this indicates that in general, maternal and child health tended to focus on providing counselling rather than referring to secondary providers.

2022/23 MATERNAL AND CHILD HEALTH REPORTS

In 2022/23, there were 1,785 birth notifications in Yarra Ranges. 640 births were to first-time mothers; nine infants were stillborn. 96% of infants (1,715 infants) received a post birth home consultation. Of this group:

- 34 children were indigenous.
- 76% were fully breastfed on discharge from hospital and 11% were partially breastfed.
- 46 spoke a language other than English at home (2.6%); there were 23 families where the primary care giver required an interpreter

Source: Yarra Ranges Council (2023). *Maternal & Child Health Annual Report, 1 July 2022 to 30 June 2023*

COUNSELLING AND REFERRALS

In 2022/23, there were 6,186 child health and wellbeing counselling sessions provided. The main reasons for child health and wellbeing counselling were development (30.2%), nutrition (29.5%) and growth (15.5%) and dental oral issues (9.4%). There were 865 child health and wellbeing referrals. The main reasons for referral were DDH (26%), development (14.1%), potentially disabling condition (13.5%), communication (12.5%), auditory (hearing) issues (9.6%).

In 2022/23, the number of maternal and child health mother/family counselling sessions dropped for all reasons apart from domestic violence. Counselling for domestic violence nearly tripled between 2021/22 and 2022/23, rising from 36 to 99.

There were 2,139 sessions for mother/family counselling in 2022/23. The main reasons were emotional (63%, or 1,343 sessions), physical (685 referrals), domestic (99 referrals), social

interaction impaired (9 referrals) and family planning (three referrals). There were also 134 mother/family referrals. The main reasons were emotional (67 referrals), physical (42), domestic violence (13) and social interaction impaired (12).

Reason for mother/family counselling: Yarra Ranges, 2019/20 to 2022/23

| Reason | Number | | | | % change 2020/21-2021/22 |
|--------------------------------|---------|---------|---------|---------|-----------------------------|
| | 2019/20 | 2020/21 | 2021/22 | 2022/23 | |
| Emotional | 1,268 | 1,771 | 1,725 | 1,343 | 39.7% |
| Physical | 682 | 1,085 | 953 | 685 | 59.1% |
| Social interaction impaired | 158 | 351 | 227 | 9 | 122.2% |
| Domestic violence | 40 | 39 | 36 | 99 | -2.5% |
| Family planning | 8 | 2 | 2 | 3 | -75.0% |
| Total | 2,156 | 3,248 | 2,943 | 2,139 | 50.6% |

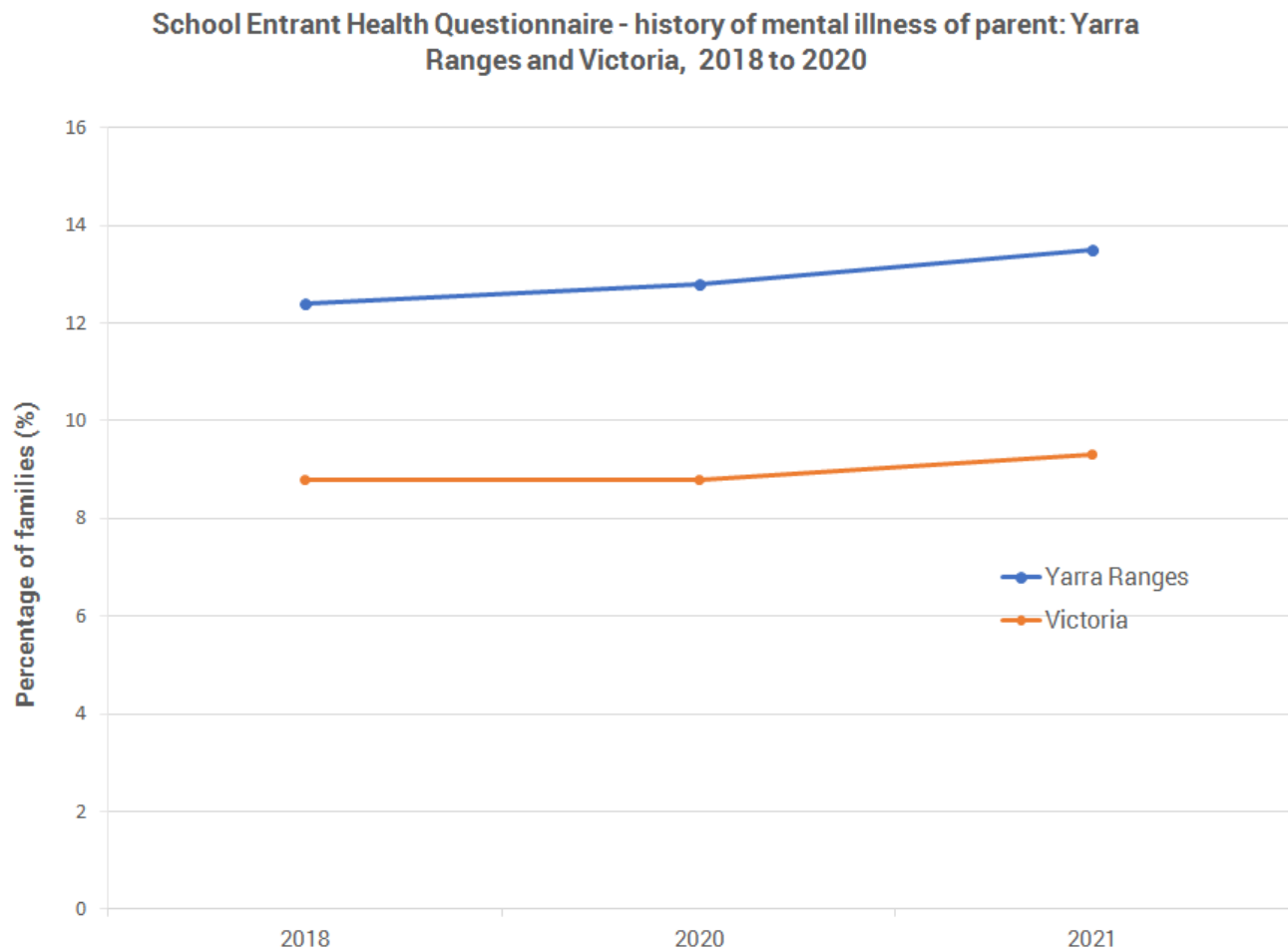
Source: Yarra Ranges Council (2022). *Maternal and child health annual reports*. Unpublished.

Reason for Mother/Family Referrals: Yarra Ranges, 2019/20 to 2021/2023

| Reason | Number | | | | % change 2020/21- 2021/22 |
|-----------------------------------|---------|---------|---------|---------|------------------------------|
| | 2019/20 | 2020/21 | 2021/22 | 2022/23 | |
| Emotional | 92 | 58 | 55 | 67 | -37.0% |
| Physical | 58 | 32 | 33 | 42 | -44.8% |
| Social interaction impaired | 28 | 27 | 16 | 12 | -3.6% |
| Domestic violence | 23 | 22 | 7 | 13 | -4.3% |
| Family planning | 0 | 0 | 0 | 0 | - |
| Total | 201 | 139 | 111 | 134 | -30.8% |

Source: Yarra Ranges Council. (2022). *Maternal and child health annual reports*. Unpublished.

SCHOOL ENTRANT HEALTH QUESTIONNAIRE



The school entrant health questionnaire (SEHQ) is a parent reporting instrument which records parents' concerns and observations about their child's health and well-being as they begin primary school in Victoria. The survey is conducted annually.

Between 2018 and 2020, there was little change in the level of families with a history of mental illness of the parent; there was a slight increase between 2020 and 2021. In 2021, 13.5% of Yarra Ranges families of foundation (first year) students recorded a history of mental illness of the parent, compared to 12.8% in 2020 and 12.4% in 2019. Victoria-wide, there was no change between 2018 and 2020, followed by a small increase in 2021, from 8.8% to 9.3%.

The indicator of families experiencing stress in the past month rose from 11.5% in 2018 to 12.5% in 2020, then dropped down to 10.3% in 2021. Not all students are surveyed at the same point in the year, so this is a less useful indicator – depending on the lockdown situation

at various points in 2020 and 2021, the level of stress for families in the past month is likely to have varied a lot at different points in the year. There was a similar pattern across Victoria, with the indicator rising from 8.3% to 10% between 2018 and 2020, then dropping to 8.8% in 2021.

Selected indicators of family stress (%): Yarra Ranges and Victoria, 2018 to 2021

| Family stress | 2021 | | 2020 | | 2018 | |
|---|--------------|----------|--------------|----------|--------------|----------|
| | Yarra Ranges | Victoria | Yarra Ranges | Victoria | Yarra Ranges | Victoria |
| Whether children have experienced the stressor: history of mental illness of parent | 13.5 | 9.3 | 12.8 | 8.8 | 12.4 | 8.8 |
| Families experiencing high or very high stress during the month prior to the survey | 10.3 | 8.8 | 12.5 | 10.0 | 11.5 | 8.3 |

Source: Department of Education and Training. (2022). *Outcomes for Victorian children at school entry, findings from the School Entrant Health Questionnaire 2020, Yarra Ranges (S)*. <https://www.vic.gov.au/school-entrant-health-questionnaire#2021-school-entrant-health-questionnaire-summary-sheets-for-victorian-local-government-areas>

Due to ongoing COVID-19 related events, there was significant disruption to the distribution of the SEHQ throughout 2021, reducing participation. The questionnaire is completed by the child's parent or carer; it does not report medical diagnoses or opinions of health professionals.

In 2021, there were 1,641 children involved in the questionnaire in Yarra Ranges. The key findings from the SEHQ 2021 were:

- An above average level of difficulties with speech or language.
- Relatively high use of hearing specialists, indicating that Yarra Ranges may have a high level of children with hearing issues.
- A high level of behavioural and emotional issues, including parental concern about their child's behaviours; and an above average level at risk of emotional symptoms, conduct problems or hyperactivity.
- Yarra Ranges had a very high level of children whose parents had a history of mental illness (13.5%).

- An above average level of children had families experiencing high or very high stress in the month before the survey.

The level of families experiencing stress in the past month rose from 10.8% in 2019 to 12.5% in 2020, then dropped down to 10.3% in 2021; family stress in Yarra Ranges was consistently higher than the Victorian level. The level of parents with a history of mental illness also rose between 2019 and 2021, from 11.6% to 13.5%, whilst the level stayed about the same for Victoria. Again, this indicator was consistently worse in Yarra Ranges compared to the level across Victoria.

Demographics

Yarra Ranges had an above average level of Indigenous children starting school, at 2.3% compared to 1.2% across metropolitan Melbourne. Children had a low level of disadvantage, and a low level who had been born overseas or spoke another language at home.

Health

Most children were in excellent or very good health (87.8%); 8.5% had allergies and 9.3% had asthma. Children in Yarra Ranges had a below average level of asthma action plans at school (56.2% compared to 62.7%). Fifteen percent of parents were concerned about their child's oral health (e.g., teeth, gums).

Development

An above average level of children were reported to have difficulties with speech or language, at 18.1% compared to 15.3%; 36% were accessing speech pathology services, which is better than the 27.8% average. Also, 8.6% of children starting school had an intellectual or learning disability, or developmental delay, slightly above the 7.9% Melbourne average.

Service use

Yarra Ranges had a high level of children who'd seen an audiologist/hearing specialist in the past year, at 10.1% compared to 5.8% across Melbourne. They had an above average level of use of maternal and child health checks, and participation in kindergarten; and an average level of use of optometrists and paediatricians. Annual dental visits were above average – 46.9% compared to 41.6%. However, as dental visits provide preventative care as well as treatment, a high level in this area may be a positive indicator.

Behavioural and emotional wellbeing and problems

Parents of children starting school in Yarra Ranges reported an above average level of behavioural and emotional concerns for their children:

- 17.6% were concerned about their child's behaviour, compared to 14.6% across Melbourne.
- In terms of behavioural or emotional problems, Yarra Ranges had an above average level who were at risk of emotional symptoms (9%), conduct problems (12.1%) or hyperactivity (11.1%), and a below average level of positive social behaviours - giving Yarra Ranges an above average score in the high risk range for difficulties. Twenty-three percent were at high risk of developmental or behavioural problems (slightly below average).
- Children had a slightly below average level of peer problems.

Family stress

An above average level of children had families experiencing high or very high stress in the month before the survey, at 10.3% compared to 8.2%; and a very high level had a history of mental illness of parent (13.5% compared to 7.6%). There was a slightly above average level of: alcohol or drug related problem in family (4%), history of abuse to parent or child (5.4% and 2%), and child witness to violence (3.8%). There was a very low level of gambling problems in the family.

Child health and wellbeing: Yarra Ranges, metropolitan Melbourne and Victoria, 2021

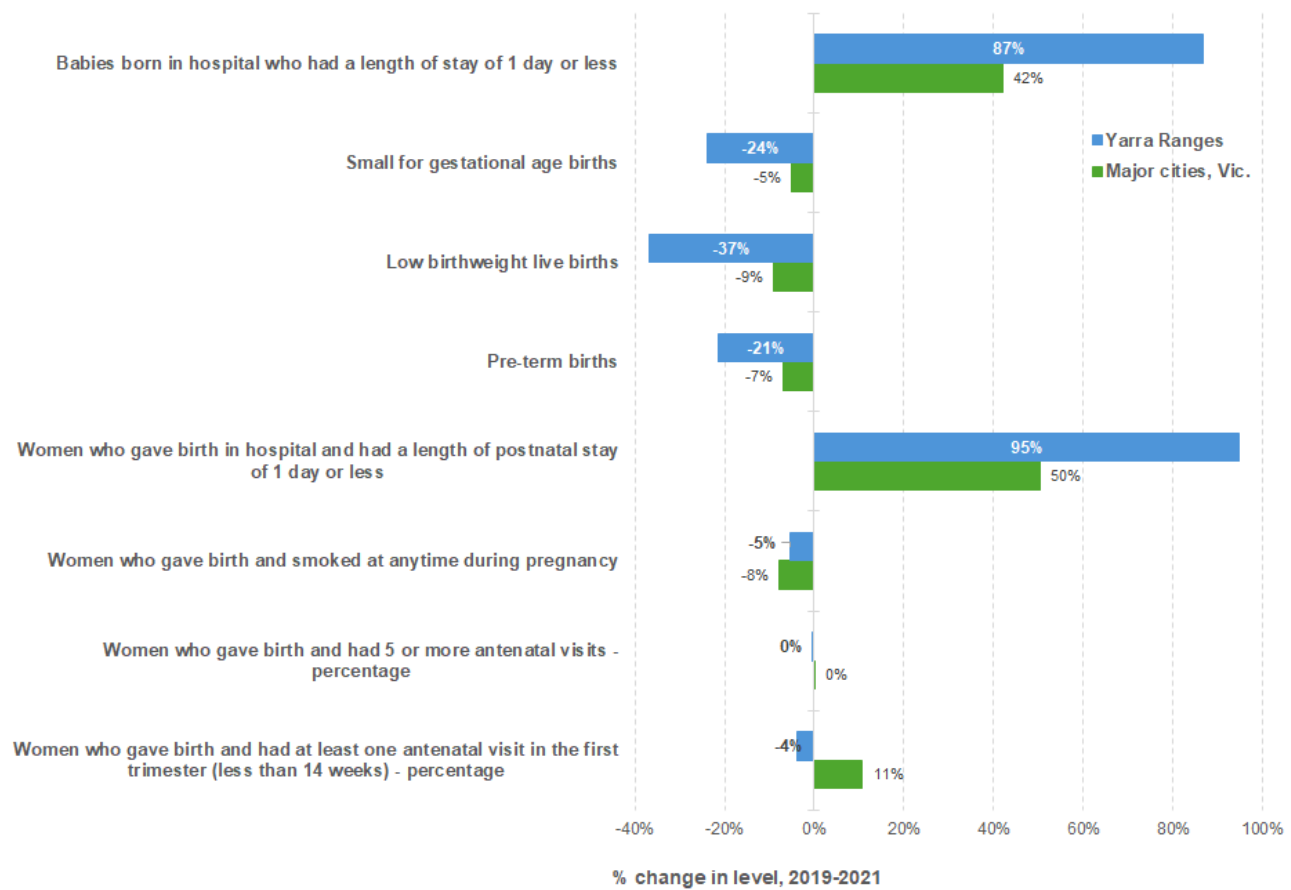
| Characteristics | Yarra Ranges | | Metropolitan Melbourne | Victoria |
|---|--------------|-------------|------------------------|-------------|
| | Number | Percent (%) | Percent (%) | Percent (%) |
| Child and family demographics | | | | |
| Aboriginal and/or Torres Strait Islander children | 37 | 2.3 | 1.2 | 1.9 |
| Children living in an area with the most socio-economic disadvantage | 41 | 2.5 | 16.4 | 19.5 |
| Children living in an area with the least socio-economic disadvantage | 291 | 17.7 | 23.8 | 19.4 |
| Children who were not born in Australia | 46 | 2.8 | 9.9 | 8.1 |
| Children who speak a language other than English at home | 35 | 2.1 | 12.4 | 9.7 |
| Children who live with one parent (mother only or father only) | 149 | 9.1 | 9.3 | 10.5 |
| Health | | | | |
| Children reported to be in excellent or very good health | 1,440 | 87.8 | 83.9 | 84.3 |
| Children reported to have allergies | 140 | 8.5 | 9 | 9 |

| Characteristics | Yarra Ranges | | Metropolitan Melbourne | Victoria |
|---|--------------|-------------|------------------------|-------------|
| Child and family demographics | Number | Percent (%) | Percent (%) | Percent (%) |
| Children reported to have been told by a doctor they have asthma | 153 | 9.3 | 8.8 | 9.6 |
| Parents concerned about their child's oral health (eg, teeth, gums etc) | 250 | 15.2 | 16.1 | 15.9 |
| Development | | | | |
| Children reported to have an intellectual disability, developmental delay or learning disability | 141 | 8.6 | 7.9 | 8.2 |
| Children reported to have difficulties with speech and/or language | 297 | 18.1 | 15.3 | 16.4 |
| <i>Of the children above, those who are seeing a speech pathologist</i> | 107 | 36 | 27.8 | 28.4 |
| Service use | | | | |
| Children reported to have attended a Maternal and Child Health Centre for their 3 ½ year old check | 1,180 | 71.9 | 68.9 | 69.9 |
| Children reported to have been seen by an optometrist in the past year | 220 | 13.4 | 13.6 | 14.3 |
| Children reported to have been seen by a paediatrician in the past year | 174 | 10.6 | 10 | 10.6 |
| Children reported to have been seen by a dentist in the past year | 769 | 46.9 | 41.6 | 43.6 |
| Children reported to have been seen by an audiologist/hearing specialist in the past year | 166 | 10.1 | 5.8 | 6.2 |
| Children reported to have participated in a kindergarten program led by a qualified early education teacher | 1,455 | 88.7 | 86.5 | 86.5 |
| Behavioural and emotional wellbeing | | | | |
| Parents concerned about the behaviour of their child | 288 | 17.6 | 14.6 | 15.7 |
| Children at risk of developmental and behavioural problems | | | | |
| Children at high risk of developmental or behavioural problems | 382 | 23.3 | 25 | 24.9 |
| Children at moderate risk of developmental or behavioural problems | 545 | 33.2 | 31 | 30.7 |
| Children at high risk of behavioural and emotional problems | | | | |
| Emotional symptoms | 148 | 9 | 6.5 | 7.1 |
| Conduct problems | 199 | 12.1 | 10.1 | 11.2 |
| Hyperactivity | 182 | 11.1 | 8.5 | 9.7 |
| Peer problems | 127 | 7.7 | 8.8 | 8.9 |

| Characteristics | Yarra Ranges | | Metropolitan Melbourne | Victoria |
|---|--------------|-------------|------------------------|-------------|
| Child and family demographics | Number | Percent (%) | Percent (%) | Percent (%) |
| Pro social | 36 | 2.2 | 2.9 | 2.9 |
| Total difficulties (score in the 'high risk' range) | 125 | 7.6 | 6.2 | 7.1 |
| Family stress | | | | |
| Families experiencing high or very high stress during the month prior to the survey | 169 | 10.3 | 8.2 | 8.8 |
| Alcohol or drug related problem in family | 66 | 4 | 2.7 | 3.5 |
| History of abuse to parent | 89 | 5.4 | 4.1 | 5.2 |
| History of abuse to child(ren) | 32 | 2 | 1.5 | 1.9 |
| Parent witness to violence | NDA | NDA | NDA | NDA |
| Child witness to violence | 63 | 3.8 | 2.5 | 3.2 |
| Gambling problem in family | 5 | 0.3 | 0.6 | 0.6 |
| History of mental illness of parent | 222 | 13.5 | 7.6 | 9.3 |

Source: Department of Education and Training. (2022). *Outcomes for Victorian children at school entry, findings from the School Entrant Health Questionnaire, 2021, Yarra Ranges (S)*. <https://www.vic.gov.au/school-entrant-health-questionnaire#2021-school-entrant-health-questionnaire-summary-sheets-for-victorian-local-government-areas>

**Changes in maternal and perinatal outcomes during the 2020 and 2021 COVID-19 pandemic:
Yarra Ranges & major cities in Victoria, 2019-2021**



COVID impacts on young people

The pandemic has had a marked impact on the mental health, relationships, finance, housing, work and education of young people in Victoria. This information is not available at local level, so the Victorian data has been included as an overview.

Mental health

- Nearly 84% of young people in Victoria still thought their mental health was impacted by the COVID-19 pandemic, and approximately one-quarter rated their mental health as poor or very poor.
- Close to 40% of young people sought mental health support (more in some years and locations). Approximately one-third of those who sought help did not receive it.

Relationships

- Young people continued to feel their relationships with family and romantic partners were impacted by the pandemic. In 2023, approximately 70% of young people in Victoria reported that relationships with family were affected, and more than half reported their relationships with romantic partners were impacted.
- Between 2021 and 2023, young people became less optimistic about their future relationships, with approximately half expecting to live in a long-term relationship or have children in the future.
- Levels of loneliness and social connectedness are an emerging concern. Decreasing proportions of young people felt a sense of belonging when spending time with family or with friends.

Finances

- The proportion of young people who perceived that the pandemic impacted their financial situation decreased from 2021 to 2023; however, approximately three-quarters still reported financial impacts in 2023.
- The proportion of young people who experienced financial difficulties fluctuated, peaking at 95% in 2022.
- Many young people were not optimistic about their financial future. In 2023, around 60% of young people in both states expected to be worse off than their parents. Slightly more

than half were confident that they would achieve financial security in the future. Less than half were often able to save part of their income.

Housing

- 59% of young people in Victoria still perceived the COVID-19 pandemic as having impacted their housing situation in 2023.
- The proportion of young people who thought they would be able to afford a comfortable place to live in the next 12 months dropped to less than 35% in both states in 2023.
- Decreasing proportions of young people thought it likely or extremely likely that they would be able to purchase a property in the future.

Work

- The proportion of young people who perceived the pandemic as impacting their work situation decreased from 2021 to 2023, but remained high at over 70%. Only about half felt a sense of belonging at work.
- The proportion of young people who reported experiencing periods of unemployment decreased between 2021 and 2023, but more than half still reported periods of underemployment in 2023.

Education

- High proportions of young people reported that the pandemic impacted their education or learning experience. Although this proportion decreased, close to 80% in both states still thought their education was affected in 2023.
- An increasing proportion (41.7%) of young people in Victoria reported feeling a sense of belonging at their school or educational institution in 2023.

Source: Deng, Z. Walsh, L., Huynh, T.B. & Cutler, B. (2024). *The pandemic years and their impact on young people in New South Wales and Victoria: Insights from the Australian Youth Barometer*. Monash University. <https://doi.org/10.26180/25735479>

A worsening global youth mental health crisis

“Mental ill health represents the principal threat to the health, wellbeing, and productivity of young people who are in transition from childhood to mature adulthood. Emerging adulthood, from puberty through to the mid-to-late twenties, is a vulnerable period for the onset of mental illnesses: up to 75% of mental illnesses have their onset before the age of 25 years. Yet the majority of young people are unable to access good quality, evidence based care and the policy focus and funding for prevention are grossly inadequate. Mental illnesses are a major cause of premature death from physical illness and suicide and are the largest and most rapidly growing cause of disability and lost human potential and productivity across the lifespan. There is now substantial evidence showing that youth mental health has deteriorated since the early 2010s, with rising anxiety, depression, psychological distress, self-harm, and suicide. Since the COVID-19 pandemic, young people have experienced disproportionately poorer mental health outcomes.

Megatrends, an interconnected set of socioeconomic and commercial forces, have over the past two decades seriously undermined young people’s personal and economic security and hope for the future. The growing existential threats of climate change, unregulated and harmful social media, declining social cohesion, and socioeconomic precarity—as reflected in insecure employment, reduced access to affordable housing, rapidly growing intergenerational inequality, and polarisation of political views—have combined to create a bleak present and future for young people. It is no exaggeration to say young people and their mental health act as the early warning system for contemporary society; they are manifesting the warning signs and symptoms of a society and world that is in serious trouble.”

Source: The Lancet Psychiatry Commission (2024). *The Lancet Psychiatry Commission on Youth Mental Health – Policy Brief*. <https://www.thelancet.com/pb-assets/Lancet/stories/commissions/youth-mental-health/policy-1723555044810.pdf>

OVERVIEW

The COVID-19 pandemic and associated lockdowns have had a wide of health impacts on Victorian communities, particularly in the area of mental health. Young people, Indigenous residents, females, people on low incomes and people with a disability are more likely to experience mental health issues.

The trend data show that mental health status in Yarra Ranges has worsened on a range of indicators, including increases in self-harm amongst young people, young people on prescribed mental health medications, and parents and carers of young children needing emotional counselling.

HOW DID MENTAL HEALTH CHANGE DURING THE PANDEMIC?

The mental health of Yarra Ranges became much worse during the COVID-19 pandemic, particularly amongst females, children and young people. Demand increased for some services, and service usage appeared to increase substantially amongst existing clients. Key shifts include:

- The number of patients with mental health-related prescriptions increased by 7% amongst 0-17 year olds and by 3% amongst 18-24 year olds in 2020/21; the number of prescriptions also rose substantially for 18-24 year olds, possibly indicating an increased need for medication amongst patients in this age group. Yarra Ranges ranked second-highest on 0-17 year old patients with mental-health related prescriptions, across Victoria, and also ranked high for other age groups.
- The rate of intentional self-harm hospitalisations rose by 25.5% amongst 0-24 year olds in 2020/21.
- There was a substantial spike in mother and family counseling after the start of COVID-19, with a 51% rise overall, due to increases in counselling for emotional, physical and social interaction. In terms of mental health, maternal and child health emotional counselling sessions rose by 40% in 2020/21. Referral numbers dropped – the reasons for this are not clear.
- The level of families of students starting primary school, who were experiencing stress, rose in 2020 and then fell in 2021. The data is not gathered at a consistent point in time,

so the impacts of COVID on family stress levels cannot be accurately assessed from these data.

Yarra Ranges also has an above average hospital admission rate for mental health issues, combined with a lack of services such as GPs and psychiatrists. Data on suicide rates are combined for five-year periods, meaning that year-on-year change cannot be assessed.

PREVALENCE

The 2021 Census of Population and Housing showed that Yarra Ranges has a comparatively high level of residents with mental health conditions, and it is the most common long-term health condition amongst residents. The groups with the highest level of mental health conditions include Indigenous residents, females and young people.

Poor mental health as a teenager and young adult tends to follow young people into their adult life. Yarra Ranges has the fourth-highest level of teenagers and young adults with a mental health condition, across all metropolitan LGAs - 13.3% of 15-24 year olds had a mental health condition. Young women have nearly double the prevalence of mental health issues, compared to young men - 17.9% of young women in Yarra Ranges have a mental health condition, compared to 9.1% of young men.

In 2020/21, the level of maternal and child health sessions for counselling for emotional reasons jumped by 40%, whilst the level of referrals for emotional counselling fell by 37%. The data indicate a substantial spike in mother and family counseling after the start of COVID-19, with a 51% rise overall rise in counselling, due to increases in counselling for emotional, physical and social interaction.

The school entrant health questionnaire (SEHQ) indicated little change in the level of families with a history of mental illness of the parent between 2018 and 2020. The questionnaire tends to be done early in the year, so many of the survey responses are likely to have been done pre-COVID-19. There was a slight increase in parental mental illness between 2020 and 2021.

SERVICE USAGE

The total number of patients with mental health-related prescriptions fell by 1.9% between 2019/20 and 2020/21, but the number rose in the 0-17 and 18-24 age groups. The total number of prescriptions also fell, but rose amongst 0-17 year olds and 18-24 year olds. Compared to other Victorian LGAs, Yarra Ranges ranked 3rd-highest for patients aged 0-17.

The need for mental health services is known to have increased during lockdowns, with substantial increases in psychological distress. But the service restrictions caused by lockdowns, alongside both fear of infection and difficulties getting into services that were open (e.g., seeing a GP for a referral) due to demand from issues such as COVID, meant that this did not necessarily translate into increased patient numbers. In Yarra Ranges, there was a drop in 2020/21 in the number of patients seeking mental health care from clinical and other psychologists, and from other allied health providers; whilst there was an 11% rise in the number of people seeing psychiatrists.

The service data indicate that for those residents already linked into services, service usage jumped, with the total number of services increasing by 10.2%, including growth in mental health services provided by psychiatrists, psychologists, GPs and other allied health providers. For example, the number of patients of psychiatrists increased by 11% but the number of services provided through psychiatrists rose by 13.5% - meaning that the average number of visits per patient increased.

The level of emergency department presentations for mental health issues also fell, which may be due partly to concerns about service usage during lockdown. This was a Victoria-wide phenomenon. But despite these falls, Yarra Ranges had a mental health hospital admission rate more than 10% above the Victorian average, and ranked twelfth out of forty metropolitan LGAs.

TRENDS IN FAMILY STRESS AND MENTAL ILLNESS

The indicator of families experiencing stress in the past month rose from 10.8% in 2019 to 12.5% in 2020, then dropped down to 10.3% in 2021. Not all students are surveyed at the same point in the year, so this is a less useful indicator – depending on the lockdown situation at various points in 2020 and 2021, the level of stress for families in the past month is likely to have varied a lot at different points in the year. There was a similar pattern across Victoria, with the indicator rising from 8.3% to 10% between 2018 and 2020, then dropping to 8.8% in 2021. However, family stress in Yarra Ranges was consistently higher than the Victorian level.

The level of parents with a history of mental illness also rose between 2019 and 2021, from 11.6% to 13.5%, whilst the level stayed about the same for Victoria. Again, this indicator was consistently worse in Yarra Ranges compared to the level across Victoria.

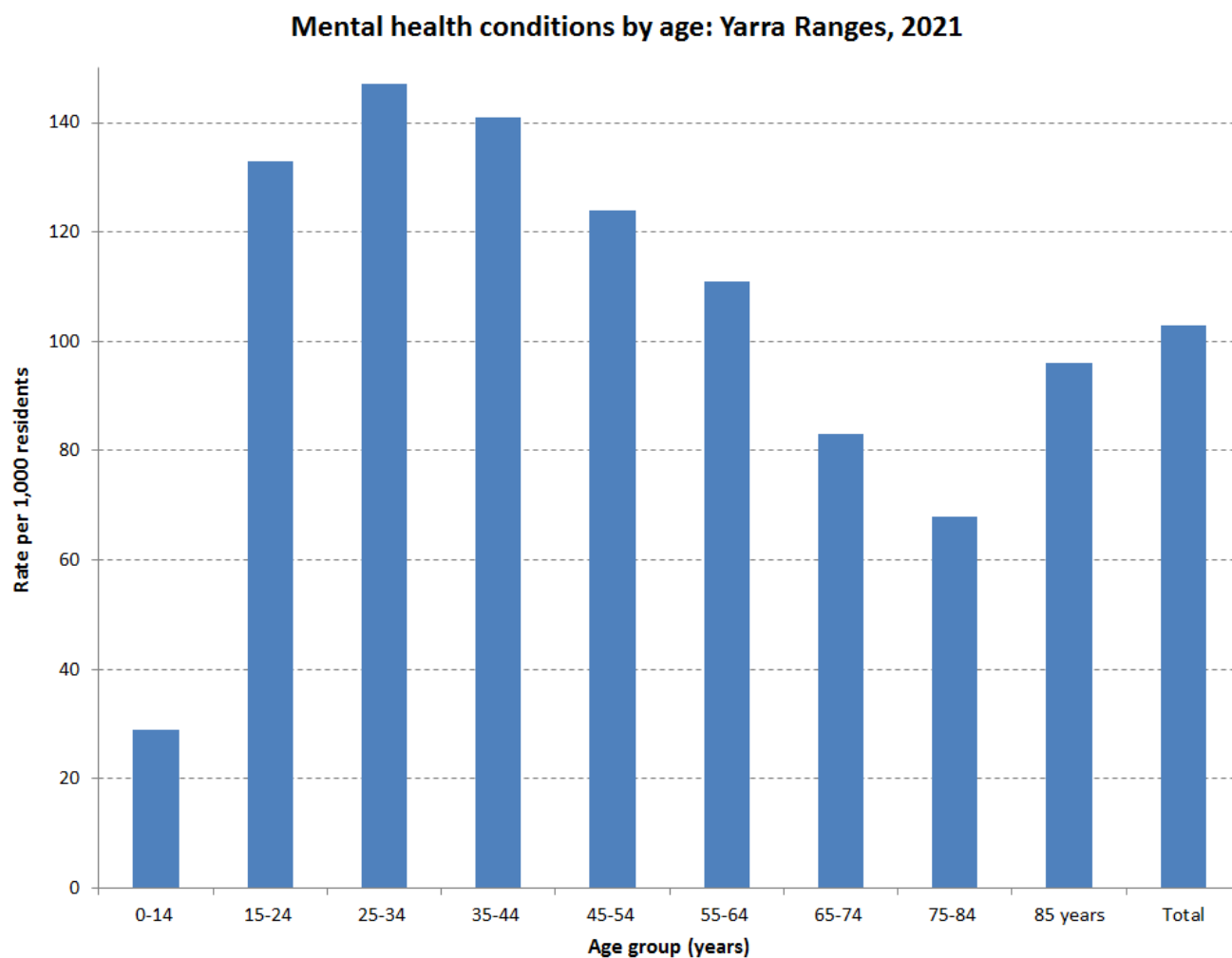
Selected indicators of family stress (%): Yarra Ranges and Victoria, 2018 to 2021

| Indicator | 2021 | | 2020 | | 2019 | |
|---|------------------|--------------|------------------|--------------|------------------|--------------|
| | Yarra Ranges (%) | Victoria (%) | Yarra Ranges (%) | Victoria (%) | Yarra Ranges (%) | Victoria (%) |
| History of mental illness of parent | 13.5 | 9.3 | 12.8 | 8.8 | 11.6 | 9.0 |
| Families experiencing high or very high stress during the month prior to the survey | 10.3 | 8.8 | 12.5 | 10.0 | 10.8 | 8.1 |

Source: Department of Education and Training. (2022). Outcomes for Victorian children at school entry, findings from the School Entrant Health Questionnaire 2019, 2020, 2021, Yarra Ranges (S).

<https://www.vic.gov.au/school-entrant-health-questionnaire#2021-school-entrant-health-questionnaire-summary-sheets-for-victorian-local-government-areas>

LONG-TERM MENTAL HEALTH CONDITIONS



In 2021, 13% of young people aged 15-24 had been diagnosed with a mental health condition such as depression or anxiety. The only age groups with a higher prevalence of long-term mental health issues were 25-34 year olds (15%) and 35-44 year olds (14%). The reported prevalence was lowest amongst under-15 year olds (3%). Note that many mental health conditions first appear during the early teenage years, which would be part of the reason for low prevalence amongst under-15 year olds.

Long-term health conditions by age: Yarra Ranges, 2021

| Age group (years) | Mental health condition (including depression or anxiety) | Total persons | Share of age group |
|-------------------|---|---------------|--------------------|
| 0-14 | 851 | 29,033 | 2.9% |
| 15-24 | 2,417 | 18,154 | 13.3% |
| 25-34 | 2,802 | 19,122 | 14.7% |
| 35-44 | 2,866 | 20,374 | 14.1% |
| 45-54 | 2,674 | 21,524 | 12.4% |
| 55-64 | 2,241 | 20,271 | 11.1% |
| 65-74 | 1,355 | 16,358 | 8.3% |
| 75-84 | 580 | 8,550 | 6.8% |
| 85 years | 257 | 2,677 | 9.6% |
| Total | 16,047 | 156,068 | 10.3% |

Source: Australian Bureau of Statistics (2021). *Census of Population and Housing*.
<https://www.abs.gov.au/census/find-census-data/search-by-area>

MENTAL HEALTH SERVICE UTILISATION

MENTAL HEALTH HOSPITAL ADMISSIONS AMONGST 15-24 YEAR OLDS

In 2022/23, there were 460 mental health admissions amongst 15-24 year olds in Yarra Ranges. Recurrent themes for young people included growing stress, depression and anxiety; also eating disorders and gender identity. Between 2019/20 and 2022/23, the number of mental health hospital admissions jumped by nearly 40% amongst 15-24 year olds. This included a large increase in admissions for:

- reaction severe stress and adjustment disorder - a 179% increase in the number of admissions;
- recurrent depressive disorder - a 145% increase;
- eating disorders - a 72% increase; and
- other anxiety disorders - a 47% increase.

Given that young people faced a number of barriers in accessing services during COVID, this may be an understatement of the increased level of mental health service need amongst young people. However, 2022/23 is the first year of data post-lockdowns, and may mark the start of a downwards trend. The data show a big jump in admissions after 2018/19, with large increases across 2019/20, 2020/21 and 2021/22; the numbers then decline in 2022/23. Thus if the data for 2018/19 and 2021/22 (which includes the last part of lockdowns) are compared, there is an 84% increase in mental health hospital admissions for young people.

The 74% increase in hospital admissions for eating disorders compares to a much lower 23% rise across Victoria. However, this increase is from a low base – eating disorders accounted for less than 2% of hospital admissions amongst 15-24 year olds in 2022/23. The data is showing that there has been a large percentage increase, much more so in Yarra Ranges than was seen across Victoria. Nearly all gender identity disorder hospital admissions were amongst 15-24 year olds but again, the actual number was very small.

The numbers by themselves do not show whether:

- the large increase in admissions means that residents mean were not having issues accessing hospital services mental health;

- residents could not access primary care services (GPs, counselling, etc.), so they had to resort to hospital care instead (EMPHN analysis supports this theory);
- the increase is due to a combination of these demand drivers.

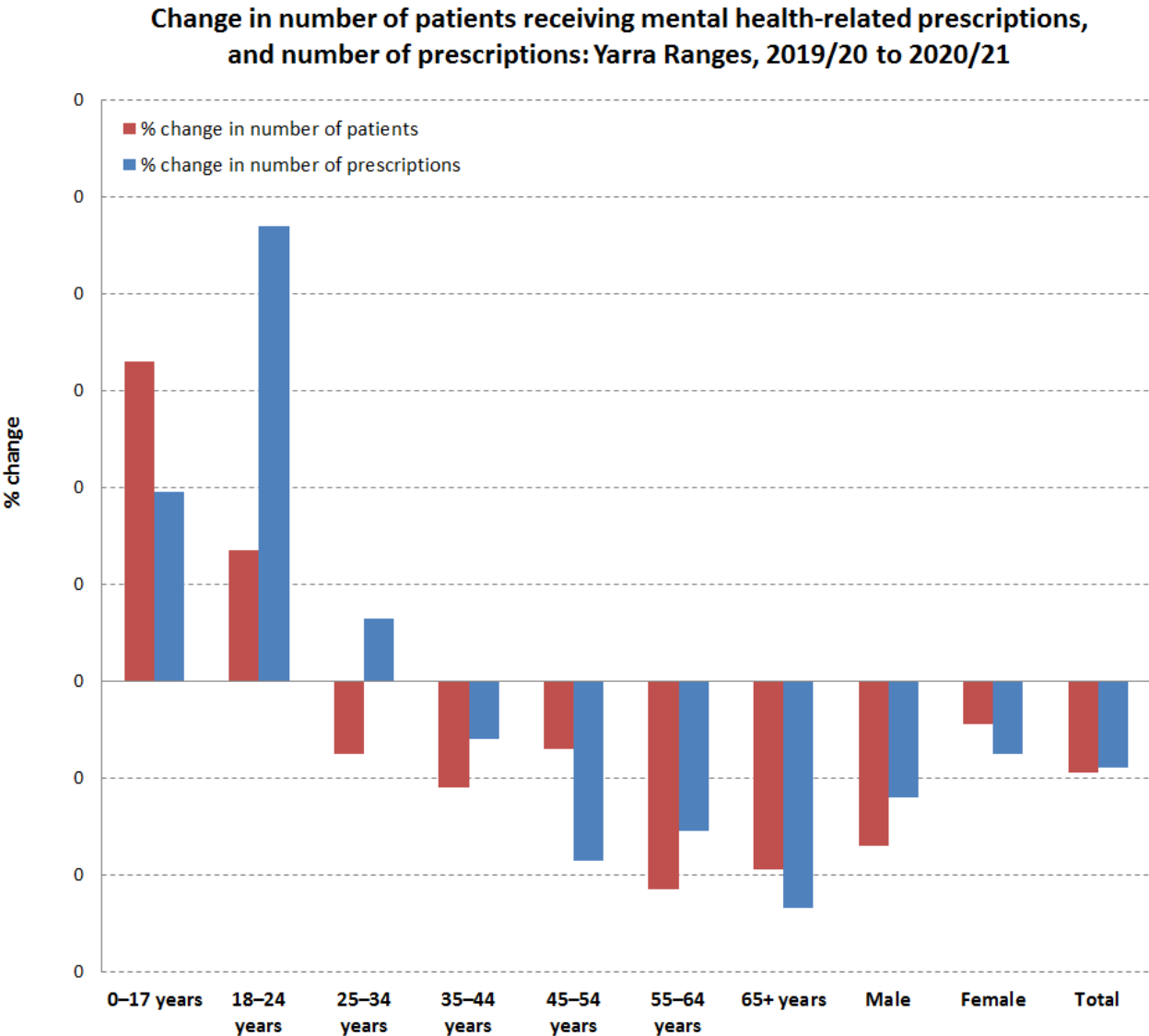
Similarly, mental health admissions only account for 1.2% of total hospital admissions in Yarra Ranges, so the numbers are quite low. These data show what has changed for mental health, rather than how large a problem mental health is in the overall scheme of things.

Change in number of hospital admissions for mental and behavioural disorders, by diagnosis: 15-24 year olds and total residents in Yarra Ranges, 2018/19-2022/23

| Diagnosis group | % change all ages, Yarra Ranges | % change 15-24 year olds, Yarra Ranges | % change all ages, Victoria | % change 15-24 year olds, Victoria |
|---|---------------------------------|--|-----------------------------|------------------------------------|
| Dementia in Alzheimers disease | 286% | n/a | 17% | n/a |
| Dementia in oth dis classified elsewhere | 40% | n/a | -25% | n/a |
| Unspecified dementia | -40% | n/a | -14% | n/a |
| Delirium not dt alco & oth psyact subs | -4% | n/a | 14% | -53% |
| Person & beh disrd dt brain dis dam dysf | -100% | n/a | -24% | -33% |
| Mental & behavioural disrd dt alcohol | -15% | -57% | 13% | 12% |
| Mental & behavioural disrd dt opioid use | 25% | n/a | -10% | 22% |
| Ment/beh disrd dt use of cannabinoids | 58% | -63% | -1% | -6% |
| Ment/beh disrd dt stimulant incl caffeine | 74% | 0% | -5% | -25% |
| Ment/beh disrd mult drug & psyact subs | -30% | n/a | -47% | -62% |
| Schizophrenia | -36% | -100% | -8% | -12% |
| Persistent delusional disorders | 0% | n/a | 1% | -5% |
| Schizoaffective disorders | 9% | -100% | -15% | 3% |
| Unspecified nonorganic psychosis | 100% | n/a | 11% | -7% |
| Manic episode | 0% | n/a | 8% | 16% |
| Bipolar affective disorder | -36% | 25% | -21% | -17% |
| Depressive episode | -52% | -64% | -27% | -26% |
| Recurrent depressive disorder | 27% | 145% | -6% | 139% |
| Persistent mood [affective] disorders | 258% | n/a | -66% | -73% |
| Other anxiety disorders | -35% | 47% | -20% | -15% |
| Obsessive-compulsive disorder | -20% | n/a | 14% | 24% |
| Reaction sev stress & adjustment disrd | 63% | 179% | 1% | 32% |
| Dissociative [conversion] disorders | 44% | n/a | 22% | 105% |
| Eating disorders | 74% | 72% | 29% | 23% |
| Specific personality disorders | 66% | 5% | -16% | -10% |
| Gender identity disorders | 50% | 40% | 11% | 29% |
| Pervasive developmental disorders | -17% | n/a | 20% | 36% |
| Conduct disorders | -100% | -100% | -31% | -40% |

Source: Victorian Agency for Health Information (2024). *Customised VAED and VEMD hospital data.*

MENTAL HEALTH-RELATED PRESCRIPTIONS



During the pandemic, Yarra Ranges experienced substantial growth in the number of under-25 year old patients with mental health prescriptions, and ranked second-highest in Victoria for the number of 0-17 year old patients. The number of prescriptions per patient also increased for 18-24 year olds.

Between 2019/20 and 2020/21, the number of patients with mental health prescriptions fell by 1.9% in Yarra Ranges, compared to growth of 2.8% across Victoria. However, the number of patients rose substantially for young people, growing by 6.6% amongst 0-17 year olds, and

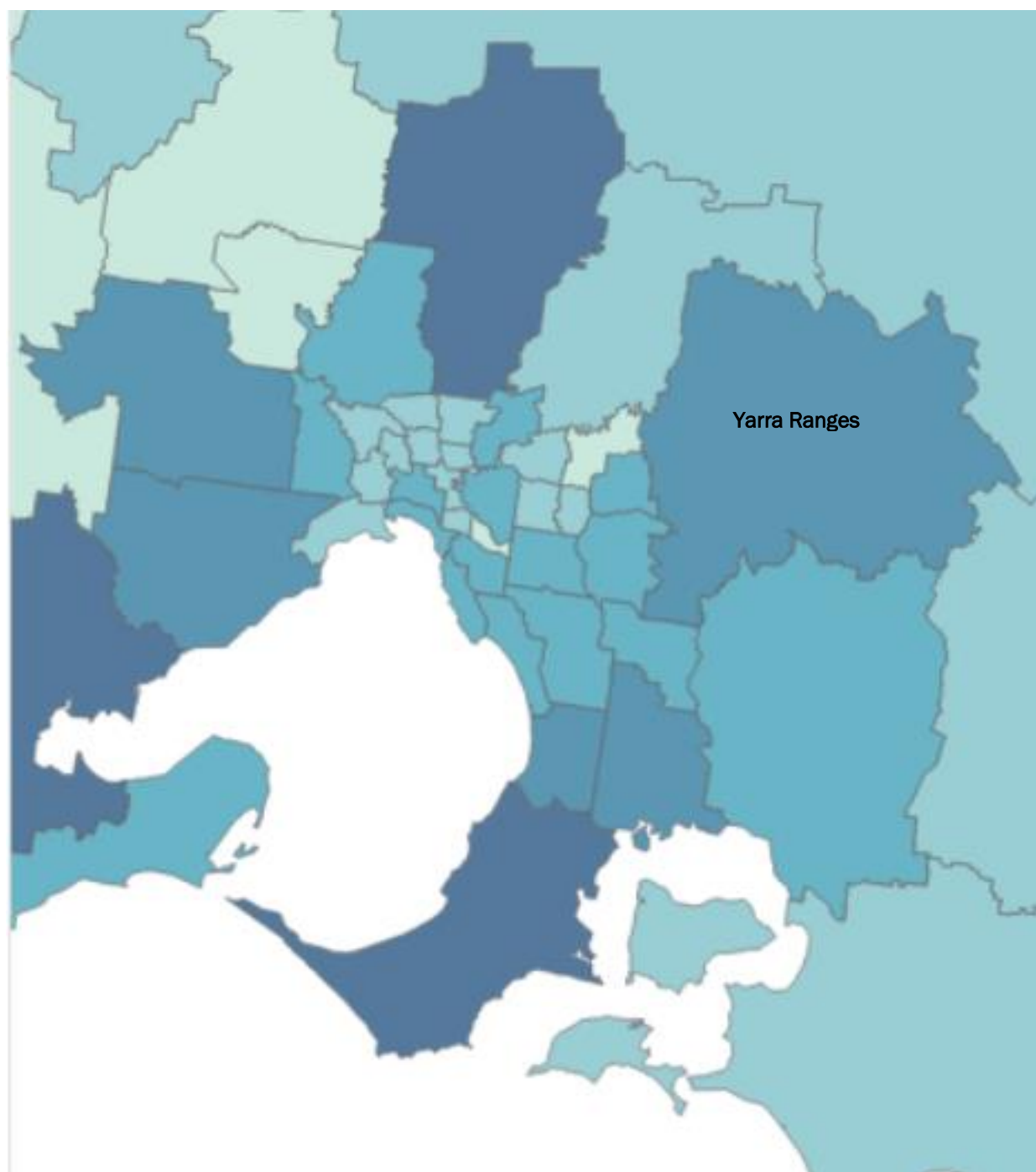
2.7% amongst 18-24 year olds. The total number of prescriptions rose by 3.9% amongst 0-17 year olds and by 9.4% amongst 18-24 year olds, despite a 1.8% fall in prescriptions across the total population. The number of prescriptions also had a slight 1.3% increase amongst 25-34 year olds.

Yarra Ranges ranked very high on this measure compared to other Victorian SA3s, ranking:

- second-highest for the number of patients aged 0-17 - the map below shows the metropolitan areas with high numbers of 0-17 year olds receiving mental health-related prescriptions;
- sixth-highest for 18-24 year olds;
- eighth-highest for 24-34 year olds;
- ninth-highest for 35-44 year olds;
- seventh-highest for 45-54 year olds;
- fifth-highest for 55-64 year olds; and
- ninth-highest for persons aged 65 years or more.

Yarra Ranges ranked sixth-highest for the number of female patients, seventh-highest for the number of male patients and sixth-highest overall. Note that age-standardised rates are not provided for this data set at SA3 level, meaning that rankings are affected by population size in each municipality.

Spotlight data for 0-17 year olds in metropolitan Melbourne SA3s: How many patients received a mental health-related prescription in 2020-21?



Source: Australian Institute of Health and Welfare. (2021). *Spotlight data for 0-17 year olds: How many patients received a mental health-related prescription in 2020-21?* <https://www.aihw.gov.au/mental-health/topic-areas/mental-health-prescriptions>

Patients and mental health-related prescriptions dispensed (subsidised and under co-payment), by demographic variables: Yarra Ranges and Victoria, 2018/19 to 2020/21

| Demographic value | 2018/19 | 2019/20 | 2020/21 | Change, 2019/20-2020/21 |
|---------------------------------|---------------|---------------|---------------|-------------------------|
| Number of patients: | | | | |
| Yarra Ranges | | | | |
| 0–17 years | 1,636 | 1,845 | 1,967 | 6.6% |
| 18–24 years | 2,112 | 2,120 | 2,178 | 2.7% |
| 25–34 years | 3,657 | 3,808 | 3,752 | -1.5% |
| 35–44 years | 4,129 | 4,382 | 4,287 | -2.2% |
| 45–54 years | 4,953 | 5,100 | 5,028 | -1.4% |
| 55–64 years | 4,771 | 4,914 | 4,703 | -4.3% |
| 65+ years | 7,694 | 8,260 | 7,935 | -3.9% |
| Male | 11,226 | 11,971 | 11,566 | -3.4% |
| Female | 17,726 | 18,458 | 18,284 | -0.9% |
| Total | 28,952 | 30,429 | 29,850 | -1.9% |
| Victoria | n/a | 1,086,853 | 1,117,101 | 2.8% |
| Number of prescriptions: | | | | |
| Yarra Ranges | | | | |
| 0–17 years | 12,877 | 14,876 | 15,450 | 3.9% |
| 18–24 years | 15,175 | 16,116 | 17,626 | 9.4% |
| 25–34 years | 30,041 | 32,552 | 32,985 | 1.3% |
| 35–44 years | 39,178 | 41,969 | 41,455 | -1.2% |
| 45–54 years | 49,232 | 52,474 | 50,558 | -3.7% |
| 55–64 years | 45,111 | 48,404 | 46,906 | -3.1% |
| 65+ years | 73,306 | 80,604 | 76,845 | -4.7% |
| Male | 99,781 | 109,744 | 107,163 | -2.4% |
| Female | 165,139 | 177,250 | 174,663 | -1.5% |
| Total | 265,832 | 288,035 | 282,730 | -1.8% |
| Victoria | n/a | 10,251,302 | 10,745,818 | 4.8% |

Note: Data are for the Yarra Ranges SA3.

Source: Australian Institute of Health and Welfare. (2021). *Mental health-related prescriptions 2020-21*. <https://www.aihw.gov.au/mental-health/topic-areas/mental-health-prescriptions>

SUICIDE AND SELF-HARM

EMERGENCY DEPARTMENT USE

In 2022/23, there were 322 emergency department presentations for suicide attempts without ideation. Between 2018/19 and 2022/23, there was a high level of growth in presentations for mental health issues such as schizophrenia (up 108%), anorexia nervosa (up 56%) and psychotic episodes (up 43%). 10-24 year olds accounted for 53% of presentations for attempted suicide.

During COVID, there was a large increase in presentations for attempted suicide:

- For 10-14 year olds, the number rose from 17 in 2018/19 to 22 in 2019/20, 52 in 2020/21 and 72 in 2021/22. It dropped to 38 in 2022/23, but is still more than double the pre-pandemic level.
- For 15-19 year olds, the number rose from 83 in 2018/19 to 113 in 2019/20, 122 in 2020/21 and 107 in 2021/22. It dropped to 78 in 2022/23, slightly below the pre-pandemic level.
- For 20-24 year olds, the number rose from 48 in 2018/19 to 96 in 2019/20. It then dropped to 76 in 2020/21, and down to 56 in 2021/22. The number then did not change in 2022/23; this number is slightly above the pre-pandemic level.

Trends in emergency department presentations for attempted suicide by age: Yarra Ranges, 2018/19 to 2022/23

| Year | 10-14 years | 15-19 years | 20-24 years |
|---------|----------------|----------------|----------------|
| 2018/19 | 17 | 83 | 48 |
| 2019/20 | 22 | 113 | 96 |
| 2020/21 | 52 | 122 | 76 |
| 2021/22 | 72 | 107 | 56 |
| 2022/23 | 38 | 78 | 56 |

Source: Victorian Agency for Health Information (2024). *Customised VAED and VEMD hospital data.*

Emergency department presentations for attempted suicide by age: Yarra Ranges, 2022/23

| Age group, years | Number of presentations for suicide attempt without injury/ideation | Share by age group |
|------------------|---|--------------------|
| 10-14 | 38 | 11.8% |
| 15-19 | 78 | 24.2% |
| 20-24 | 56 | 17.4% |
| 25-29 | 34 | 10.6% |
| 30-34 | 36 | 11.2% |
| 35-39 | 20 | 6.2% |
| 40-44 | 12 | 3.7% |
| 45-49 | 20 | 6.2% |
| 50-54 | 16 | 5.0% |
| 55-59 | 12 | 3.7% |
| Total | 322 | 100.0% |

Source: Victorian Agency for Health Information (2024). *Customised VAED and VEMD hospital data.*

INTENTIONAL SELF-HARM HOSPITALISATIONS

The latest data show a 13% drop in intentional self-harm hospitalisations, from 95 in 2019/20 to 83 in 2020/21. The rate per 100,000 residents fell by 36% amongst 25-44 year olds and by 38% amongst those aged 45 years or more. However, the rate jumped by 25.5% amongst 0-24 year olds.

Intentional self-harm hospitalisations by age: Yarra Ranges, 2018/19-2020/21

| Measure | 0-24 | 25-44 | 45+ | Total |
|--|--------------|---------------|---------------|-------|
| 2021/22 | | | | |
| Number | 32 | 17 | 16 | 65 |
| Rate (per 100,000) | 66.8 | 42.4 | 23.3 | 41.5 |
| 2020/21 | | | | |
| Number | 46 | 20 | 17 | 83 |
| Rate (per 100,000) | 93.0 | 48.8 | 24.8 | n/a |
| 2019/20 | | | | |
| Number | 37 | 31 | 27 | 95 |
| Rate (per 100,000) | 74.1 | 76.0 | 39.8 | n/a |
| 2018/19 | | | | |
| Number | 43 | 31 | 32 | 106 |
| Rate (per 100,000) | 86.1 | 76.9 | 47.7 | n/a |
| Change in rate, 2019/20-2020/21 | 25.5% | -35.8% | -37.6% | |

Source: Australian Institute of Health and Welfare. (2022). *Suicide and self-harm monitoring: National Hospital Morbidity Database*. <https://www.aihw.gov.au/suicide-self-harm-monitoring/data/data-downloads>

SUICIDE RATES IN YARRA RANGES

Yarra Ranges has a higher suicide rate than the Victorian average, at 12 per 100,000 compared to 10.5 per 100,000 for Victoria. Most of the difference is due to a rise between 2014-2018 and 2015-2019, with minimal change since this period. The data on suicide deaths are available for combined five year periods. This makes it hard to identify potential COVID impacts, but available data show little change in either Yarra Ranges or Victoria.

In Yarra Ranges, there was a 4.4% rise in the period 2016-2020, when compared to 2015-2019 - an increase of two deaths. The number of suicide deaths in 2017-2021 in Yarra Ranges was the same as in 2016-2020. Victoria experienced a slight drop in suicide rates in both 2016-2020 and 2017-2021.

Age-standardised suicide rate, by year of registration of death: Yarra Ranges and Victoria, 2014–2018, 2015–2019, 2016–2020 and 2017–2021

| 5-year period | Deaths | Yarra Ranges SA3 ASR (per 100,000) | Change in rate | Victoria State ASR (per 100,000) | Change in rate |
|---------------|--------|--|----------------|--|----------------|
| 2014–2018 | 78 | 10.2 | | 10.9 | |
| 2015–2019 | 87 | 11.4 | 11.8% | 10.9 | 0.0% |
| 2016–2020 | 89 | 11.9 | 4.4% | 10.7 | -1.8% |
| 2017–2021 | 89 | 12.0 | 0.8% | 10.5 | -1.9% |

ASR = age standardised rate

Source: Australian Institute of Health and Welfare. (2022). *Suicide and self-harm monitoring*. <https://www.aihw.gov.au/suicide-self-harm-monitoring/data/data-downloads>

Hospital admissions

Children and young adults had the worst health status, based on the number of diagnosis groups with significantly above average admission rates. Children aged 0-4 had an above average admission rate for ten diagnosis groups, 5-9 year olds were above average for ten diagnoses, and 10-14 year olds were above average for thirteen diagnoses (out of 21 diagnosis groups).

CHANGES IN ADMISSIONS DURING THE PANDEMIC

The COVID-19 pandemic saw reduced access to many forms of medical care, including preventative care and screening, alongside community concerns about using face-to-face care due to risk of infection. Thus there was the possibility that hospital admissions would rise in the aftermath of the pandemic. One condition which rose in prevalence, and primarily affects children, was congenital malformations. Compared to Victoria, Yarra Ranges had above average growth in admissions for congenital malformations. These rose by 29% during the pandemic, much higher than the 8% Victoria average. Hospital admissions for these causes primarily affect infants but can occur at any age due to the lifelong impacts. Fifty-five percent of admissions in 2022/23 were amongst 0-4 year olds. This category mostly refers to diseases, conditions and physical abnormalities present from birth.

Increases for this category were highest in Belgrave-Selby (a 171% increase), Mount Evelyn (107%), Healesville-Yarra Glen (71%), Monbulk-Silvan (63%), Kilsyth (40%), Montrose (26%), Mooroolbark (22%) and Chirnside Park (15%). However, except in Mount Evelyn and Mooroolbark, there were less than 30 admissions for this category in most small areas.

MAIN REASONS FOR ADMISSION

The main reasons for admission to hospital in 2022/23, across Yarra Ranges 0-24 year olds, were:

- Factors Influencing Health Status and Contact with Health Services (19%).
- Diseases of the Digestive System (12%).
- Symptoms Signs and Abnormal Clinical Laboratory Findings NEC (10%).
- Injuries and poisoning (10%).
- Respiratory system diseases (9%).

- Mental and behavioural disorders (6%).

0-14 YEAR OLDS

Infants and pre-schoolers aged less than 5 were mostly likely to be hospitalised for:

- factors influencing health status and contact with health services (30%);
- certain conditions originating in the perinatal period (14%);
- respiratory diseases (13%); and
- symptoms, signs and abnormal clinical laboratory findings NEC (12%).

Amongst children aged 5-14, the main reasons for admission were:

- diseases of the digestive system (16%);
- injury, poisoning and certain other consequences of external causes (15%); and
- symptoms, signs and abnormal clinical laboratory findings NEC (12%).

Infants and preschoolers aged 0-4 had a high admission rate for:

- diseases of the musculoskeletal system and connective tissue (60% above average);
- certain infectious and parasitic diseases (40% above);
- diseases of the ear and mastoid process (40% above);
- injury, poisoning and certain other consequences of external causes (20% above);
- congenital malformations, deformations and chromosomal abnormalities (10% above);
- diseases of the digestive system (10% above);
- diseases of the genitourinary system (10% above);
- diseases of the respiratory system (10% above);
- diseases of the skin and subcutaneous tissue (10% above);
- symptoms, signs and abnormal clinical laboratory findings not elsewhere classified (10% above).

Children aged 5-14 had a high admission rate for ten diseases and their total admission rate was 20% above average:

- mental and behavioural disorders (190% above average, or 2.9 times the Victorian average rate);
- diseases of the eye and adnexa (60% above average);
- diseases of the ear and mastoid process (50% above average);

- factors influencing health status and contact with health services (40% above average);
- symptoms, signs and abnormal clinical laboratory findings (40% above average);
- certain infectious and parasitic diseases (30% above);
- diseases of the blood and blood-forming organs, and certain disorders involving the immune mechanism (30% above);
- diseases of the nervous system (20% above);
- injury, poisoning and certain other consequences of external causes (20% above);
- neoplasms (20% above).

15-24 YEAR OLDS

For teenagers and young adults aged 15-24, the main reasons for admission were:

- diseases of the digestive system (20%);
- mental and behavioural disorders (13%);
- injury, poisoning and certain other consequences of external causes (12%); and
- factors influencing health status and contact with health services (11%).

Teenagers and young adults aged 15-24 had a high admission rate for

- factors influencing health status and contact with health services (90% above average);
- mental and behavioural disorders (60% above);
- congenital malformations, deformations and chromosomal abnormalities (30% above);
- diseases of the genitourinary system (20% above);
- diseases of the musculoskeletal system and connective tissue (20% above);
- certain infectious and parasitic diseases (10% above);
- diseases of the circulatory system (10% above).

Hospital admissions, 0-24 year olds: Yarra Ranges, 2022/23

| Diagnosis | Share of total |
|---|----------------|
| Certain infectious and parasitic diseases | 4% |
| Neoplasms | 2% |
| Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism | 1% |
| Endocrine nutritional and metabolic diseases | 1% |
| Mental and behavioural disorders | 6% |
| Diseases of the nervous system | 4% |
| Diseases of the eye and adnexa | <1% |
| Diseases of the ear and mastoid process | 3% |
| Diseases of the circulatory system | <1% |
| Diseases of the respiratory system | 9% |
| Diseases of the digestive system | 12% |
| Diseases of the skin and subcutaneous tissue | 2% |
| Diseases of the musculoskeletal system and connective tissue | 3% |
| Diseases of the genitourinary system | 4% |
| Symptoms signs and abnormal clinical laboratory findings nec | 10% |
| Injury poisoning and certain other consequences of external causes | 10% |
| Factors influencing health status and contact with health services | 19% |
| Codes for special purposes | <1% |
| Total | 100.0% |

Source: Victorian Department of Health (2023). *Victorian Admitted Episodes Dataset (VAED) and Victorian Emergency Minimum Dataset (VEMD) - Unpublished hospital usage data for Yarra Ranges and Victoria, 2018/19-2022/23.*

Hospital admissions by age and diagnosis chapter: Yarra Ranges residents aged 0-24, share of total admissions, 2022/23

| Diagnosis group | 0-4 | 5-14 | 15-24 | Total population |
|--|------|------|-------|------------------|
| Certain conditions originating in the perinatal period | 14% | 0% | 0% | 1% |
| Certain infectious and parasitic diseases | 6% | 4% | 2% | 2% |
| Codes for special purposes | 0% | 0% | 0% | 0% |
| Congenital malformations, deformations and chromosomal abnormalities | 4% | 2% | 1% | 0% |
| Diseases of the blood and blood-forming organs, and certain disorders involving the immune mechanism | 0% | 3% | 1% | 2% |
| Diseases of the circulatory system | 0% | 1% | 1% | 4% |
| Diseases of the digestive system | 3% | 16% | 20% | 12% |
| Diseases of the ear and mastoid process | 4% | 4% | 0% | 1% |
| Diseases of the eye and adnexa | 0% | 2% | 0% | 4% |
| Diseases of the genitourinary system | 1% | 3% | 6% | 5% |
| Diseases of the musculoskeletal system and connective tissue | 1% | 3% | 5% | 6% |
| Diseases of the nervous system | 4% | 6% | 3% | 4% |
| Diseases of the respiratory system | 13% | 10% | 4% | 4% |
| Diseases of the skin and subcutaneous tissue | 1% | 2% | 3% | 1% |
| Endocrine, nutritional and metabolic diseases | 0% | 2% | 2% | 2% |
| Factors influencing health status and contact with health services | 30% | 10% | 11% | 23% |
| Injury, poisoning and certain other consequences of external causes | 4% | 15% | 12% | 6% |
| Mental and behavioural disorders | 0% | 4% | 13% | 4% |
| Neoplasms | 1% | 3% | 2% | 7% |
| Pregnancy, childbirth and the puerperium | 0% | 0% | 5% | 4% |
| Symptoms, signs and abnormal clinical laboratory findings NEC | 12% | 12% | 8% | 9% |
| Undefined | 0% | 0% | 0% | 0% |
| Total | 100% | 100% | 100% | 100% |

NEC = not elsewhere classified.

Source: Victorian Department of Health (2023). *Victorian Admitted Episodes Dataset (VAED) and Victorian Emergency Minimum Dataset (VEMD) - Unpublished hospital usage data for Yarra Ranges and Victoria, 2018/19-2022/23.*

**Rate ratios for hospital admissions by age and diagnosis:
Yarra Ranges residents compared to Victorian residents, 2022/23**

| Diagnosis group | Rate ratio, Yarra Ranges: Victoria | | |
|---|------------------------------------|------|-------|
| | 00-04 | 5-14 | 15-24 |
| Certain conditions originating in the perinatal period | 0.9 | 0.0 | n/a |
| Certain infectious and parasitic diseases | 1.4 | 1.3 | 1.1 |
| Codes for special purposes | 1.0 | 0.0 | 1.0 |
| Congenital malformations deformations and chromosomal abnormalities | 1.1 | 1.1 | 1.3 |
| Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism | 0.7 | 1.3 | 0.5 |
| Diseases of the circulatory system | 0.5 | 0.9 | 1.1 |
| Diseases of the digestive system | 1.1 | 1.0 | 1.0 |
| Diseases of the ear and mastoid process | 1.4 | 1.5 | 0.0 |
| Diseases of the eye and adnexa | 0.8 | 1.6 | 0.5 |
| Diseases of the genitourinary system | 1.1 | 1.0 | 1.2 |
| Diseases of the musculoskeletal system and connective tissue | 1.6 | 1.1 | 1.2 |
| Diseases of the nervous system | 1.0 | 1.2 | 0.9 |
| Diseases of the respiratory system | 1.1 | 1.0 | 0.9 |
| Diseases of the skin and subcutaneous tissue | 1.1 | 0.9 | 1.0 |
| Endocrine nutritional and metabolic diseases | 0.4 | 0.9 | 0.7 |
| Factors influencing health status and contact with health services | 1.0 | 1.4 | 1.9 |
| Injury poisoning and certain other consequences of external causes | 1.2 | 1.2 | 1.0 |
| Mental and behavioural disorders | 0.0 | 2.9 | 1.6 |
| Neoplasms | 0.9 | 1.2 | 1.0 |
| Pregnancy childbirth and the puerperium | n/a | 0.0 | 0.7 |
| Symptoms signs and abnormal clinical laboratory findings NEC | 1.1 | 1.4 | 0.9 |
| Undefined | 0.0 | 0.0 | 0.0 |
| Total | 1.1 | 1.2 | 1.1 |

A rate ratio compares rates between two groups. The hospital admissions rate ratio compares admissions for Yarra Ranges to admissions across Victoria, where 1 means that Yarra Ranges has the same rate as the average. A high rate ratio means that Yarra Ranges is above average – a rate ratio of 1.2 places Yarra Ranges 20% above average. A low rate ratio means that Yarra Ranges is below average.

Source: Victorian Department of Health (2023). *Victorian Admitted Episodes Dataset (VAED) and Victorian Emergency Minimum Dataset (VEMD) - Unpublished hospital usage data for Yarra Ranges and Victoria, 2018/19-2022/23.*

DRUG AND ALCOHOL ADMISSIONS

In 2021, Yarra Ranges had 153 hospital admissions for alcohol and drug use amongst 0-24 year olds, a rate of 97.2 per 100,000. Nearly one-third of these admissions (50 admissions) were for alcohol use; 78 admissions were for illicit drugs.

Source: Turning Point (2024). *Alcohol and drug related hospitalisations: Yarra Ranges, 2021*. <https://aodstats.org.au/explore-data/hospital-admissions/>

DENTAL ADMISSIONS

Data on potentially preventable dental hospitalisations amongst children are available for 2020/21. For Yarra Ranges, the numbers were too small for the rates to be shown. This may indicate that dental health issue was not that much of a problem at this time, or it may be due to dental issues not being picked up, as preventative dental care was not available during COVID lockdowns.

Source: Department of Health (2024). *Victorian public health and wellbeing outcomes dashboard*. <https://www.health.vic.gov.au/victorian-public-health-and-wellbeing-outcomes-dashboard>

Disability

The Census measure of disability counts people with a profound or severe core activity limitation. People with a profound or severe core activity limitation need assistance in their day to day lives in one or more core activities of self-care, mobility and communication, due to a long-term health condition (lasting six months or more), a disability (lasting six months or more) or old age.

Amongst children and young people, 5–14 year olds have the highest level of disability (5.2%). Children aged 0-4 year olds have a low level of disability (1.4%), which would be partly due to the time involved in identification and diagnosis. Amongst teenagers aged 15-19, 4.3% have a need for assistance; 3.5% of 20-24 year olds have a need for assistance.

Younger age groups had the highest level of growth in disability between 2016 and 2021. There was a 47% increase in the number of 5-14 year olds with a need for assistance.

Core activity need for assistance by age and Indigenous status: Yarra Ranges, 2021

| Age group | Total population | Indigenous residents |
|------------------|------------------|----------------------|
| 0-4 years | 1.4% | 1.7% |
| 5-14 years | 5.2% | 12.5% |
| 15-19 years | 4.3% | 5.7% |
| 20-24 years | 3.5% | 2.4% |
| Total population | 5.4% | 9.6% |

Source: Australian Bureau of Statistics (2021). *Census of Population and Housing*.
<https://www.abs.gov.au/census/find-census-data/search-by-area>

NATIONAL DISABILITY INSURANCE SCHEME (NDIS)

In September 2023, Yarra Ranges had 4,310 active NDIS participants. Nearly two-thirds were aged less than 25. The level of NDIS recipients grew by 11% over the year to September 2023, and most of this growth has been amongst 0-24 year olds. Between June 2022/23 and March 2023/24, Yarra Ranges residents experienced:

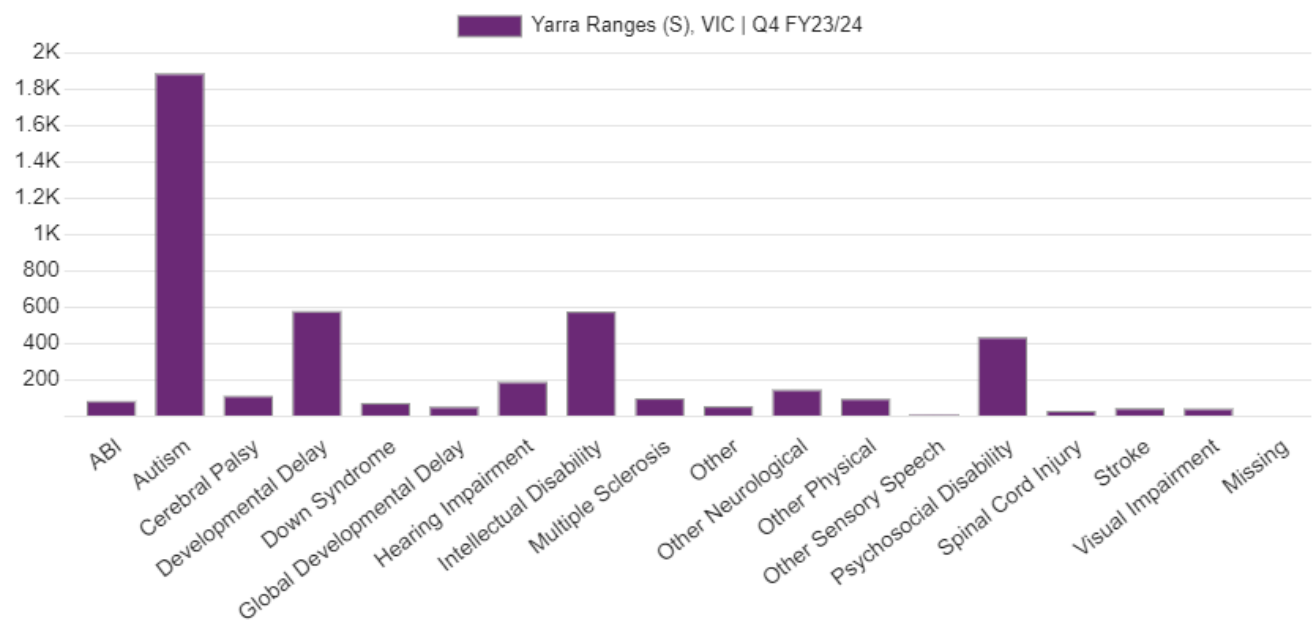
- 16% growth in the number of 0-6 year olds who were participating in the NDIS scheme, from 546 to 632;
- 12% growth amongst 7-14 year olds, from 1,187 to 1,332;
- 12% growth amongst 15-18 year olds, from 357 to 400; and
- 15% growth amongst 19-24 year olds, from 296 to 341.

Active NDIS participants by age: Yarra Ranges, June 2022/23 to March 2023/24

| Age group (years) | September 2023 | June 2023 | March 2023 | December 2022 | Change over the past 12 months |
|-------------------|----------------|-----------|------------|---------------|--------------------------------|
| 0 to 6 | 632 | 580 | 580 | 546 | 15.8% |
| 7 to 14 | 1,332 | 1,267 | 1,232 | 1,187 | 12.2% |
| 15 to 18 | 400 | 391 | 373 | 357 | 12.0% |
| 19 to 24 | 341 | 317 | 306 | 296 | 15.2% |
| 25 to 34 | 367 | 363 | 352 | 339 | 8.3% |
| 35 to 44 | 312 | 302 | 290 | 288 | 8.3% |
| 45 to 54 | 384 | 391 | 379 | 372 | 3.2% |
| 55 to 64 | 385 | 377 | 383 | 373 | 3.2% |
| 65 plus | 157 | 149 | 145 | 140 | 12.1% |
| Total | 4,310 | 4,137 | 4,040 | 3,898 | 10.6% |

Source: NDIS (2024). *Explore data.* <https://data.ndis.gov.au/explore-data>

Active participants by primary disability



Source: NDIS (2024). Explore data. <https://data.ndis.gov.au/explore-data>

Disability tends to be thought of in terms of physical disability, such as persons in wheelchairs. However, the main disabilities affecting NDIS recipients were intellectual – autism (41%), intellectual disability (14%), development delay (12%) and psychosocial disability (10%).

Active NDIS participants by primary disability: Yarra Ranges, September 2023

| Primary disability | Number of active participants | Share of total |
|----------------------------|-------------------------------|----------------|
| ABI | 79 | 2% |
| Autism | 1,786 | 41% |
| Cerebral Palsy | 114 | 3% |
| Developmental delay | 503 | 12% |
| Down Syndrome | 70 | 2% |
| Global developmental delay | 45 | 1% |
| Hearing Impairment | 185 | 4% |
| Intellectual Disability | 587 | 14% |
| Multiple Sclerosis | 94 | 2% |
| Other | 46 | 1% |
| Other Neurological | 152 | 4% |
| Other Physical | 91 | 2% |
| Other Sensory Speech | 11 | 0% |
| Psychosocial disability | 435 | 10% |
| Spinal Cord Injury | 29 | 1% |
| Stroke | 41 | 1% |
| Visual Impairment | 42 | 1% |

Source: NDIS (2024). *Explore data.* <https://data.ndis.gov.au/explore-data>

Developmental delay and autism, key disabilities amongst young people, are part of what is driving the number of participants up. Over the past twelve months, the disabilities with the most growth in participant numbers were:

- developmental delay (35.6%);
- stroke (17.1%);
- autism (14%);
- spinal cord injury (11.5%); and
- other (15%);

Trends in active NDIS participants by primary disability: Yarra Ranges, December 2022 to September 2023

| Primary disability | September 2023 | June 2023 | March 2023 | December 2022 | Change over the past 12 months |
|----------------------------|----------------|-----------|------------|---------------|--------------------------------|
| ABI | 79 | 81 | 79 | 78 | 1.3% |
| Autism | 1,786 | 1,702 | 1,646 | 1,566 | 14.0% |
| Cerebral Palsy | 114 | 116 | 115 | 113 | 0.9% |
| Developmental delay | 503 | 433 | 410 | 371 | 35.6% |
| Down Syndrome | 70 | 71 | 72 | 71 | -1.4% |
| Global developmental delay | 45 | 43 | 44 | 43 | 4.7% |
| Hearing Impairment | 185 | 183 | 179 | 175 | 5.7% |
| Intellectual Disability | 587 | 576 | 565 | 562 | 4.4% |
| Multiple Sclerosis | 94 | 93 | 96 | 94 | 0.0% |
| Other | 46 | 43 | 43 | 40 | 15.0% |
| Other Neurological | 152 | 149 | 147 | 145 | 4.8% |
| Other Physical | 91 | 93 | 92 | 92 | -1.1% |
| Other Sensory Speech | 11 | 11 | 11 | 13 | -15.4% |
| Psychosocial disability | 435 | 433 | 433 | 431 | 0.9% |
| Spinal Cord Injury | 29 | 29 | 28 | 26 | 11.5% |
| Stroke | 41 | 40 | 40 | 35 | 17.1% |
| Visual Impairment | 42 | 41 | 40 | 43 | -2.3% |
| Total | 4,310 | 4,137 | 4,040 | 3,898 | 10.6% |

Source: NDIS (2024). *Explore data.* <https://data.ndis.gov.au/explore-data>

Chronic diseases

In 2021, 25% of Yarra Ranges residents aged 15-24 had one or more long-term health condition. A lower 13% of 0-14 year olds had one or more chronic conditions. The average across all ages is 35%.

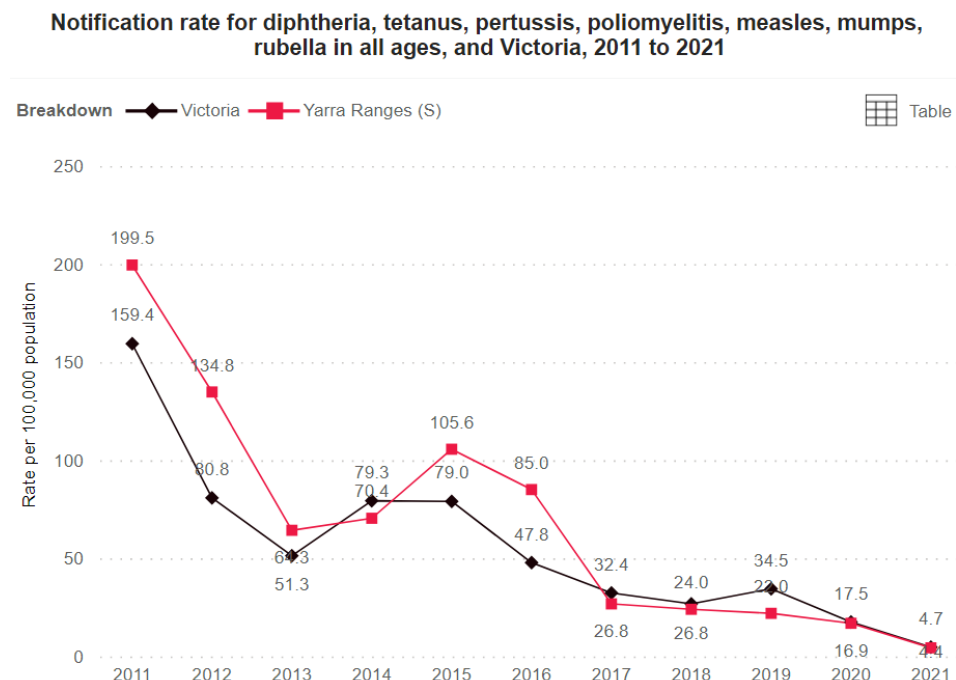
Long-term health conditions by age: Yarra Ranges, 2021

| Age group (years) | Proportion of age group |
|-------------------|-------------------------|
| 0-14 | 13.2% |
| 15-24 | 25.3% |
| Total population | 35.2% |

Source: Australian Bureau of Statistics (2021). *Census of Population and Housing*.
<https://www.abs.gov.au/census/find-census-data/search-by-area>

Infectious diseases

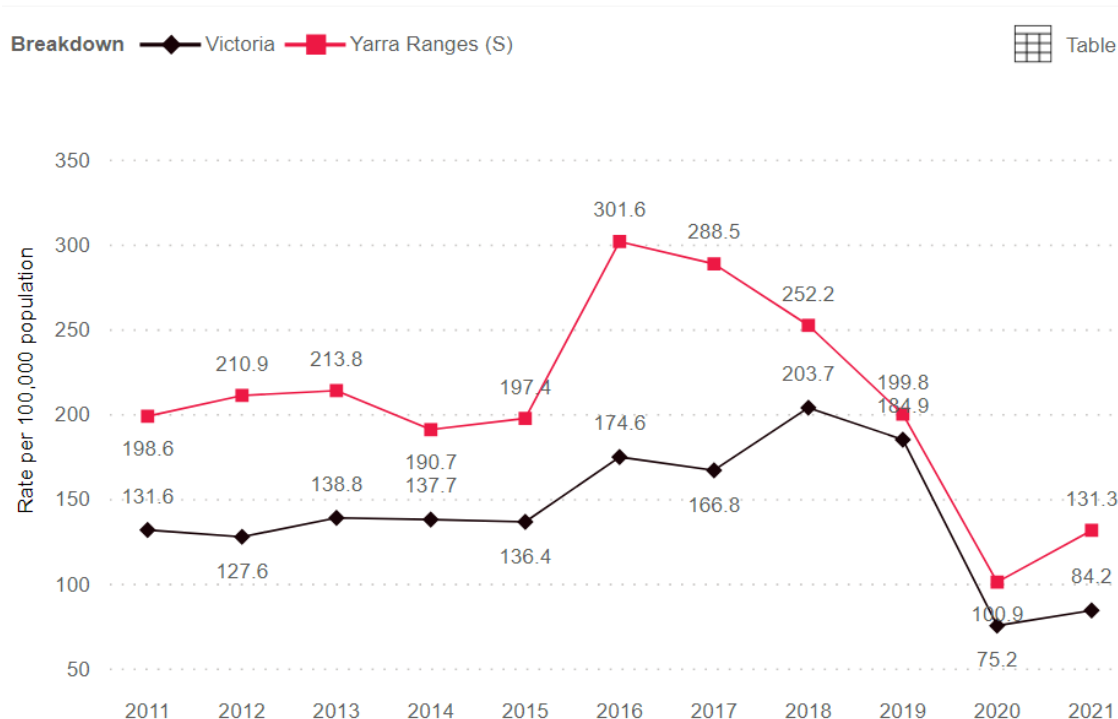
The chart below shows the steady downwards trend for the main childhood diseases. Yarra Ranges has gone from having an above average rate of notifications in 2011, to being in line with the Victorian average in 2021.



Source: Department of Health (2024). *Victorian public health and wellbeing outcomes dashboard*. <https://www.health.vic.gov.au/victorian-public-health-and-wellbeing-outcomes-dashboard>

For diseases added to the immunisation schedule more recently, notifications were steady from 2011 to 2015, then spiked in 2016, particularly in Yarra Ranges. Cases in Yarra Ranges then declined, with a large drop in 2020, the first year of lockdowns. Local cases then increased sharply in 2021; missed vaccinations during lockdowns may have contributed to this.

Notification rate for Hib, hep B, meningococcal & pneumococcal disease and varicella-zoster virus in infants and children (aged 0-11), and Victoria, 2011 to 2021



Source: Department of Health (2024). *Victorian public health and wellbeing outcomes dashboard*. <https://www.health.vic.gov.au/victorian-public-health-and-wellbeing-outcomes-dashboard>

CHILD IMMUNISATION COVERAGE

Immunisation levels in Yarra Ranges are quite high. In the year to September 2023, the level of children who were fully immunised was:

- 94.12% amongst 1 year olds (down from 95.27% in December 2019);
- 91.94% amongst 2 year olds (down from 93.69% in December 2019);
- 94.68 amongst 5 year olds (down from 95.7% in December 2019).

Thus whilst there have been slight falls compared to pre-COVID, overall immunisation coverage is very high. Immunisation amongst 2 year olds has had the largest fall, of nearly 2%. The national target is 95%.

Childhood immunisation coverage: Yarra Ranges SA3, 2019 and 2023

| Age Group | % DTP | % Polio | % HIB | % HEP | % MMR | % Pneumo | % MenC | % Varicella | % Fully |
|-----------------------|-------|---------|-------|-------|-------|----------|--------|-------------|---------|
| September 2023 | | | | | | | | | |
| 1 Year olds | 94.50 | 94.50 | 94.50 | 94.94 | 0.00 | 95.92 | 0.00 | 0.00 | 94.12 |
| 2 Year olds | 92.66 | 95.37 | 93.65 | 95.32 | 92.82 | 94.54 | 95.06 | 93.13 | 91.94 |
| 5 Year olds | 94.90 | 94.79 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 94.68 |
| December 2019 | | | | | | | | | |
| 12-<15 Months | 95.49 | 95.49 | 95.38 | 95.55 | 0.00 | 96.69 | 0.00 | 0.00 | 95.27 |
| 24-<27 Months | 94.56 | 96.50 | 95.85 | 96.44 | 94.61 | 96.01 | 95.69 | 94.93 | 93.69 |
| 60-<63 Months | 95.85 | 95.85 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 95.70 |

Source: Department of Health and Aged Care (2024). *VIC childhood immunisation coverage data by SA3*.

<https://www.health.gov.au/resources/publications/vic-childhood-immunisation-coverage-data-by-sa3?language=en>

PERTUSSIS (WHOOPIING COUGH)

2024 has seen a huge jump in local cases of pertussis – more commonly known as whooping cough. There were 302 cases in Yarra Ranges in 2024 (September year to date) – 51 times the number in 2023. There were only five cases in 2022 and six cases in 2023. Yarra Ranges has the highest rate of whooping cough cases in Victoria, at 194.4 per 100,000 residents, compared to 67.4 across Victoria.

Victoria-wide, there has also been a large jump in cases. The number has nearly doubled compared to 2019, from 2,210 to 4,166. The current rate is the highest since 2015. Generally, cases are highest in females (55% of all cases), and most cases in adults are amongst women. But for children and teenagers, most cases are amongst males.

The age groups most affected also changed in 2024, in both Yarra Ranges and Victoria. Over the past three years (2022-2024), case numbers have been highest amongst 25-49 year old adults. But in 2024, cases were by far the highest amongst 0-19 year olds - particularly 10-14 year olds and 5-9 year olds. 0-19 year olds accounted for 80% of cases in Yarra Ranges and 73% of Victorian cases.

The current immunisation schedule includes three primary doses with a booster at 18 months and 4 years of age, followed by another pertussis-containing vaccine in year 7 (at 12-13 years of age). The adolescent school-based program was heavily affected by COVID-related lockdowns, increasing the level of adolescents missing out on the year 7 booster.

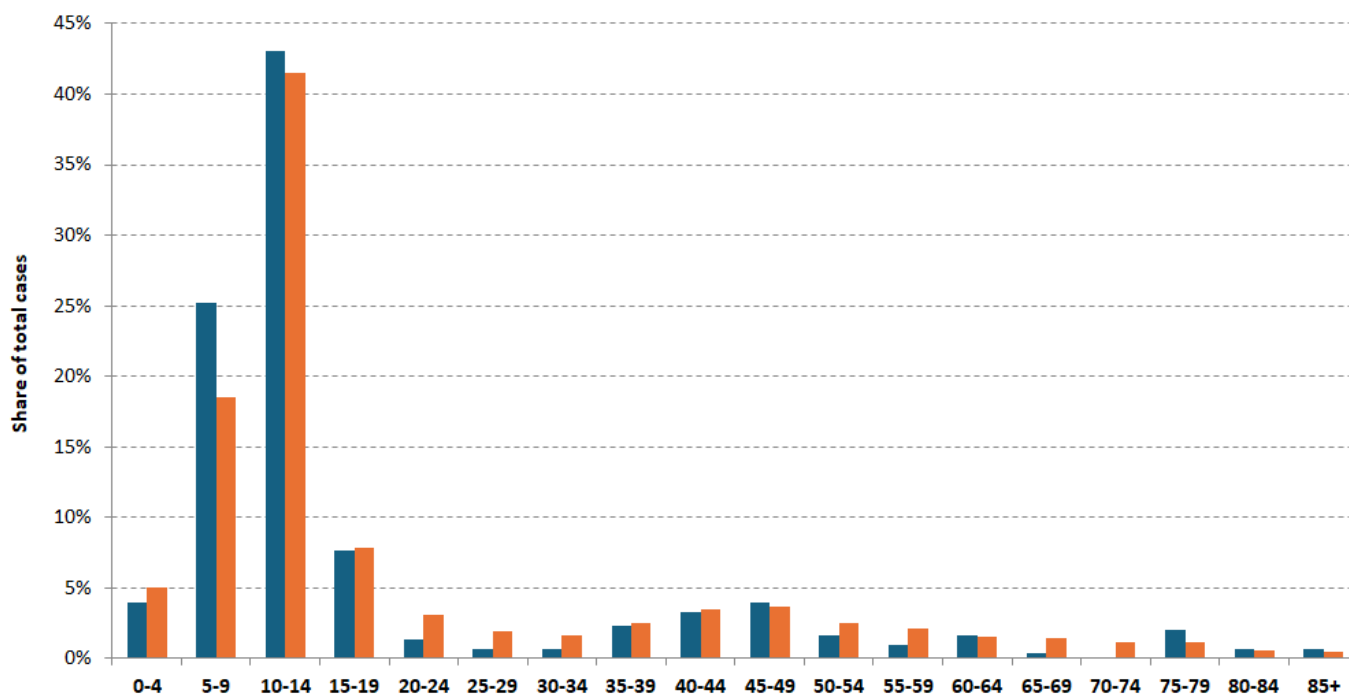
Number of pertussis events by age group: Yarra Ranges and Victoria, 2024 YTD

| Age group | Number | | Share of total | |
|-------------|--------------|--------------|----------------|--------------|
| | Yarra Ranges | Victoria | Yarra Ranges | Victoria |
| 0-4 | 12 | 208 | 4.0% | 5.0% |
| 5-9 | 76 | 772 | 25.2% | 18.5% |
| 10-14 | 130 | 1,728 | 43.0% | 41.5% |
| 15-19 | 23 | 325 | 7.6% | 7.8% |
| 0-19 | 241 | 3,033 | 79.8% | 72.8% |
| Total | 302 | 4,166 | 100.0% | 100.0% |

Source: Department of Health (16 September 2024). *Victoria, local public health areas and local government areas surveillance summary report*.

<https://www.health.vic.gov.au/infectious-diseases/local-government-areas-surveillance-report>

Whooping cough cases by age group: Yarra Ranges and Victoria, 2024 YTD



IMMUNISATION COVERAGE FOR PERTUSSIS

Pre-school immunisation levels for pertussis are high. In 2023/24, the pre-school immunisation level for pertussis in Yarra Ranges was 94.1% amongst 1 year olds, 92.3% amongst 2 year olds and 95.2% amongst 5 year olds. This is similar to the level in 2022/23.

Adolescent vaccination is administered by state and territory health services through school vaccination programs, which also include vaccinations for diphtheria, tetanus and whooping cough (dTpa). Among young people turning 15 in Australia in 2022, 86.9% had received an adolescent dTpa dose. Vaccination coverage rates were slightly lower in 2022 than in 2021 for all adolescents, which is likely due to nation-wide COVID-19 pandemic-related disruption to school-based programs.⁶⁹

⁶⁹ Australian Institute of Health and Welfare (2024). *Immunisation and vaccination*.

<https://www.aihw.gov.au/reports/australias-health/immunisation-and-vaccination>

In June 2024, approximately 82% of 15 year olds in Yarra Ranges had been immunised for whooping cough.⁷⁰ This is slightly below the Victorian average of 84% and the North Eastern Public Health Unit average of 84%; it is well below the 90% average for the Eastern Metropolitan Region. The local level of immunisation ranged from 50% to 100%, depending on the area. DTP immunisation rates were less than 80% in some areas:

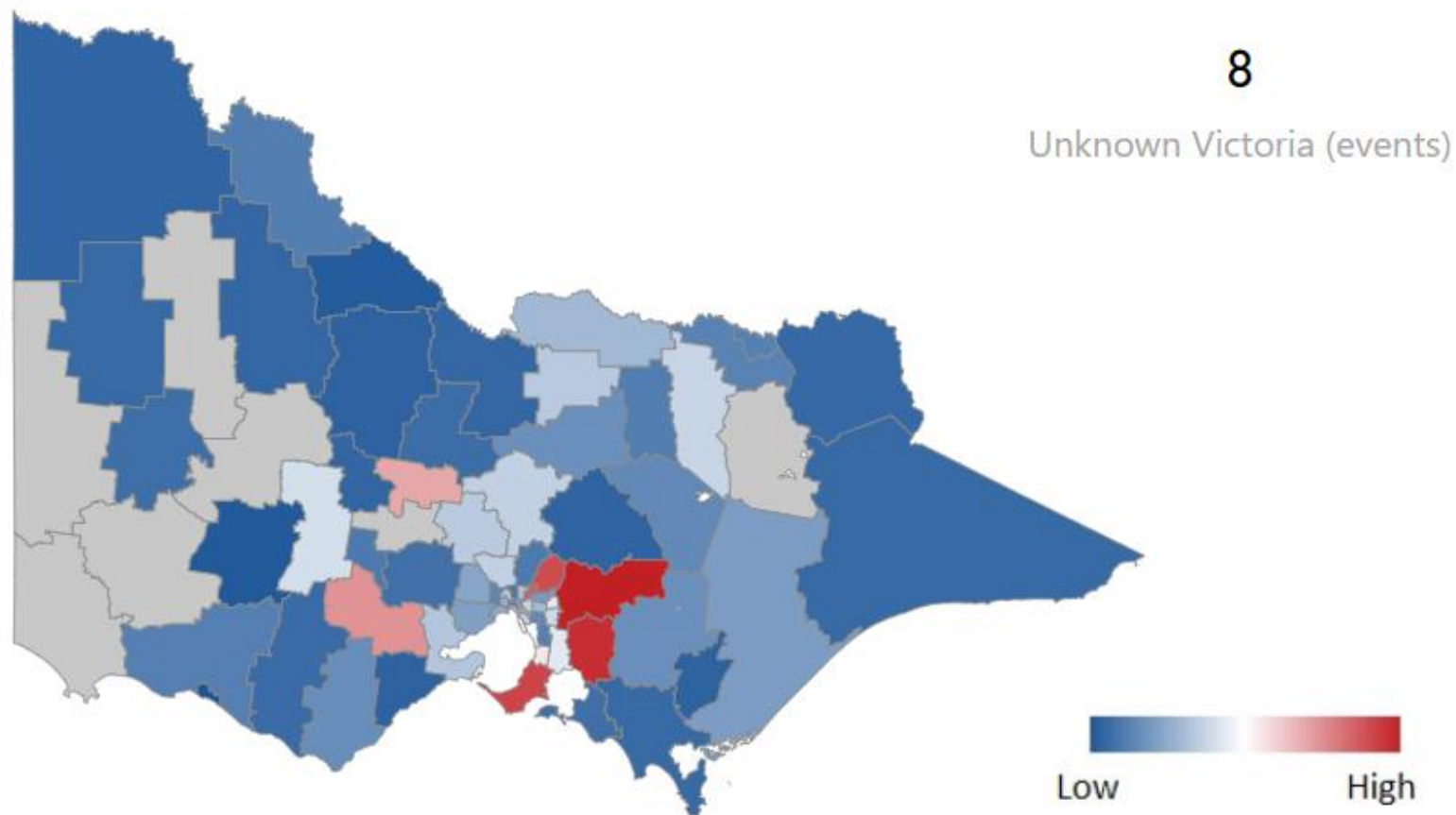
- Don Valley, Hoddles Creek, Launching Place, Seville, Seville East, Wandin East, Wandin North, Woori Yallock, Yellingbo.
- Lilydale.
- Belgrave, Belgrave Heights, Belgrave South, Tecoma.
- Montrose.
- Badger Creek, Castella, Chum Creek, Healesville, Mount Toolebewong, Toolangi.

The following areas also had low immunisation rates, but also had less than ten 15 year olds: Ferny Creek, Sassafras, Kallista, The Patch and Silvan.⁷¹

⁷⁰ This calculation only counts postcode data where there were 10 or more 15 year olds.

⁷¹ Yarra Ranges Council (September 2024). Unpublished data – Adolescent coverage report, June 2024.

Rates by local government area



Source: Department of Health (16 September 2024). *Victoria, local public health areas and local government areas surveillance summary report*. <https://www.health.vic.gov.au/infectious-diseases/local-government-areas-surveillance-report>

DROWNINGS

The number of people who died from drowning has increased since the pandemic. 2020/21 experienced a record breaking number of deaths in Victoria. Whilst the number of deaths in 2021/22 was slightly lower, 53 people drowned, an 18% increase on the annual average (43 people) for the previous decade. The rate of drownings amongst children aged 0-4 increased by 19%, and the rate amongst 15-24 year olds increased by 5%.

TRANSPORT INJURIES

Yarra Ranges residents had 383 hospitalisations for transport injuries in 2020. The rate dropped by 5.3% between 2019 and 2020, to 239.4 per 100,000. The hospitalisation rate was by far the highest amongst 15-24 year olds, who had a rate of 374.5 per 100,000 and accounted for 18.8% of hospitalisations.

Source: Victorian Injury Surveillance Unit (2024). *Injury Atlas Transport*.
<https://vicinjuryatlas.org.au/transport/#>

CRIME RATES

Alleged criminal offenders in Yarra Ranges were most likely to be aged 45 plus (602 incidents), 10-17 (500 incidents) or 18-24 (271 incidents); 10-24 year olds accounted for 33% of alleged criminal offenders in March 2024. Children and young people aged 0-24 were the most likely to be victims of crime, at 637 incidents – 39% of total crimes.

TRENDS IN CRIME NUMBERS

In the year to March 2024, children aged 10-17 committed 460 alleged offences (18%); 18-24 year olds allegedly 362 alleged offences (14%). Overall, 10-24 year olds accounted for one-third of alleged offenders. 593 victims of crime were aged under 25 (22% of the total). Crimes amongst 10-17 year olds have risen by 35% since 2019, whilst crimes amongst 18-24 year olds have dropped by 13%. Other outer eastern LGAs also saw a rise in child crime, with a 51% jump in Knox and a 15% increase in Maroondah.

There has been a fall in crimes where young people were the victim. Crimes against under 25 year olds in Yarra Ranges fell by 11% between 2019 and 2024. The number fell by 16% in Knox and 2% in Maroondah.

Alleged offender incidents by age group and local government area – Outer Eastern LGAs, 2019 and 2024

| LGA | Age Group | Alleged Offender Incidents | % change, March 2019 to March 2024 |
|--------------------------------|---------------|----------------------------|------------------------------------|
| Year ending March 2024: | | | |
| Knox | 10 - 17 years | 481 | 50.8% |
| Knox | 18 - 24 years | 518 | -24.9% |
| Maroondah | 10 - 17 years | 472 | 15.4% |
| Maroondah | 18 - 24 years | 502 | -7.4% |
| Yarra Ranges | 10 - 17 years | 460 | 34.5% |
| Yarra Ranges | 18 - 24 years | 362 | -13.4% |
| Year ending March 2019: | | | |
| Knox | 10 - 17 years | 319 | |
| Knox | 18 - 24 years | 690 | |
| Maroondah | 10 - 17 years | 409 | |
| Maroondah | 18 - 24 years | 542 | |
| Yarra Ranges | 10 - 17 years | 342 | |
| Yarra Ranges | 18 - 24 years | 418 | |

Note that detailed crime trends data are available by suburb but not by age. The numbers would be too low to breakdown by age at suburb level or detailed crime level.

Source: Crime Statistics Agency (2024). *Alleged offender incidents by age group and local government area - April 2014 to March 2024.* [Download data | Crime Statistics Agency Victoria](#)

Victims of crime – under 25 year olds in Outer Eastern LGAs, 2019 and 2024

| LGA | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | % change, March 2019 to March 2024 |
|--------------|------|------|------|------|------|------|------|------|------|------|--|
| Knox | 827 | 836 | 1073 | 899 | 870 | 913 | 703 | 615 | 629 | 727 | -16.4% |
| Maroondah | 565 | 614 | 699 | 611 | 618 | 592 | 534 | 546 | 563 | 604 | -2.3% |
| Yarra Ranges | 578 | 647 | 708 | 619 | 669 | 750 | 587 | 586 | 676 | 593 | -11.4% |

Note that data on crimes by age are not available at suburb level.

Source: Crime Statistics Agency (2024). *Alleged offender incidents by age group and local government area - April 2014 to March 2024.* [Download data | Crime Statistics Agency Victoria](#)

FAMILY VIOLENCE

The age groups most likely to be victims of family violence were adults aged 25-54. In the year to March 2024, there were 253 0-17 year olds and 165 18-24 year olds who were victims of family violence. The alleged perpetrators (“other parties”) of family violence were also most likely to be aged 25-54. There were 230 other parties aged less than 18, and 201 who were aged 18-24. Most of the alleged offenders (72%) were male. In 2022/23:

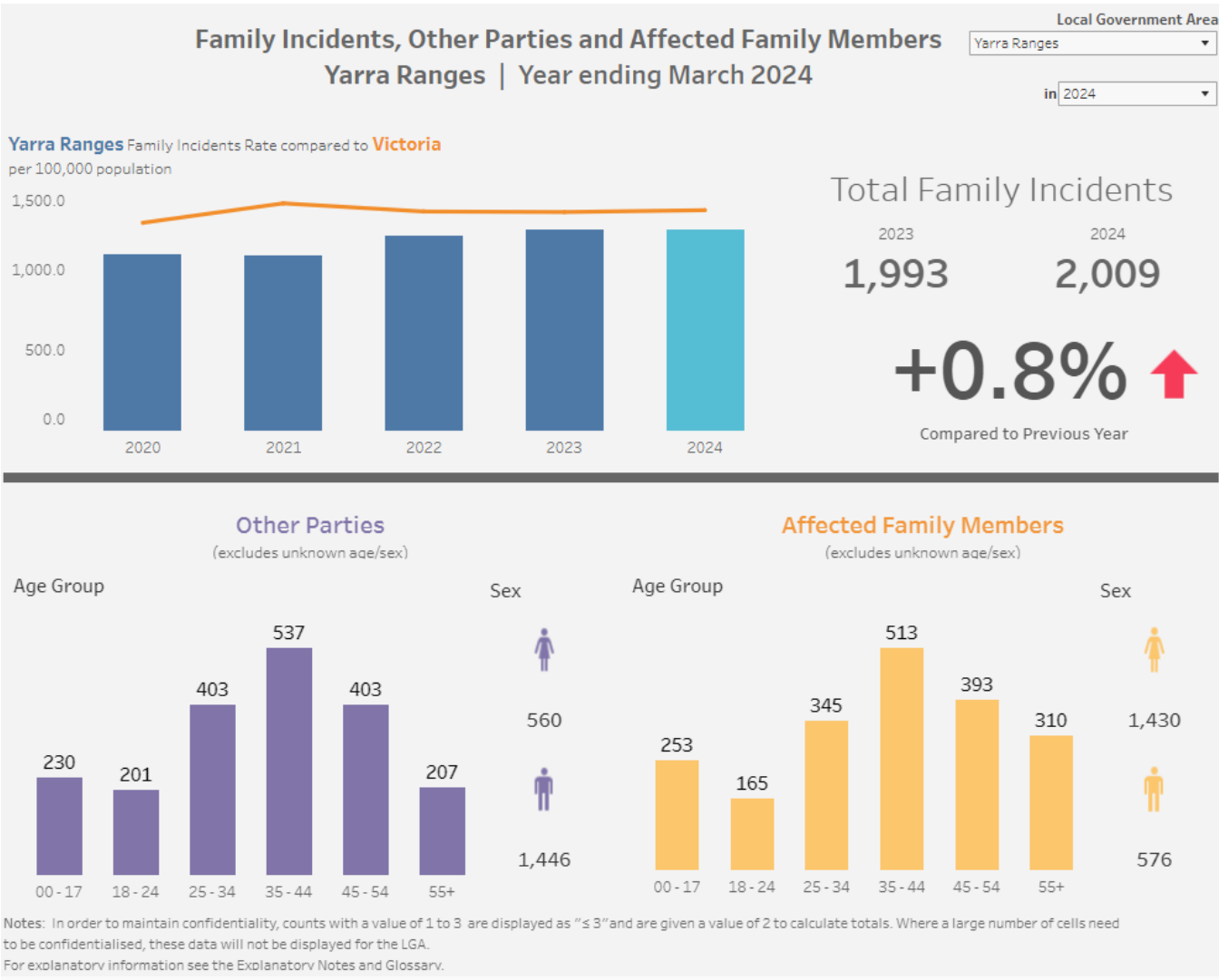
- A child was present as a victim or a witness in 41.4% of incidents.
- There were 230 incidents (12%) with a child victim - 185 with an adult perpetrator, 37 with a youth perpetrator and 8 where the perpetrator was elderly.
- There were 219 incidents (11%) where a child was the perpetrator – 170 with an adult victim, 37 with a youth victim and 12 with an elderly victim.
- There were 136 incidents (7%) of elder abuse - 96 where an adult was the perpetrator, 28 where another elderly person was the perpetrator, and 12 where a child was the perpetrator.
- There were 81 incidents (4%) with an elderly perpetrator - 45 where the victim was an adult, 28 where the victim was also elderly and 8 where the victim was a child.

Family incidents by age: Yarra Ranges, year to March 2024

| Age group (years) | Affected family members* | Alleged offenders (other parties) |
|-------------------|--------------------------|-----------------------------------|
| Less than 18 | 253 | 230 |
| 18-24 | 165 | 201 |
| 25-34 | 345 | 403 |
| 35-44 | 513 | 537 |
| 45-54 | 393 | 403 |
| 55+ | 310 | 207 |
| Total | 2,006 | 2,006 |

* Victims of family violence.

Source: Crime Statistics Agency (2024). *Crime by Area - Data Visualisation – Family Violence Dashboard*. [Latest crime data by area | Crime Statistics Agency Victoria](#)



Source: Crime Statistics Agency (2024). *Crime by Area - Data Visualisation – Family Violence Dashboard*. [Latest crime data by area | Crime Statistics Agency Victoria](#)

CHANGE IN FAMILY VIOLENCE BY AGE

Over the past four years, the number of family violence victims aged less than 18 has risen by 11%. The number of perpetrators aged less than 18 rose by 72%.

The number of assaults by 0-17 year olds against other children has more than doubled over the past four years. It more than tripled from 16 in 2019/20 to 49 in 2020/21 (the first full year of COVID lockdowns), then dropped to 33 in 2023/24. However, the number is still much higher than pre-COVID.

Number of unique perpetrator-victim pairs involving child (under 17) victims by child perpetrators (0-17) age group: Yarra Ranges, 1 July 2019 to 30 June 2024

| Local government area | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|-----------------------|---------|---------|---------|---------|---------|
| Yarra Ranges | 16 | 49 | 24 | 38 | 33 |

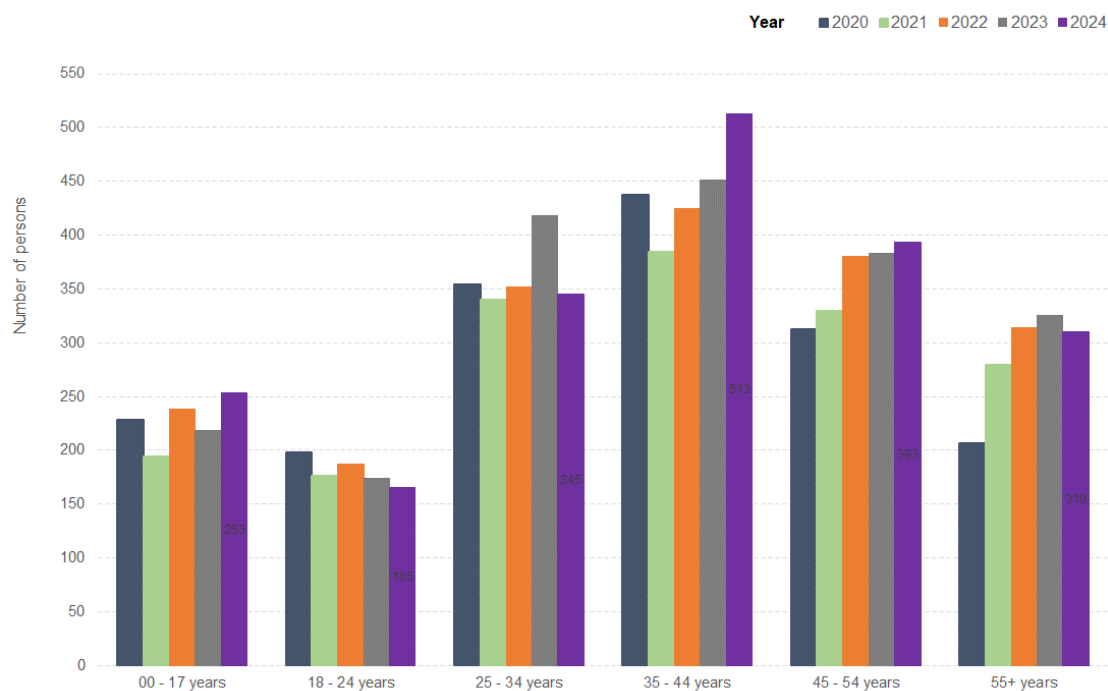
Source: Crime Statistics Agency (2025). *Data by Local Government Area, DFFH Region and Police Region, 1 July 2019 to 30 June 2024.* [Latest crime data by area | Crime Statistics Agency Victoria](https://www.crimestatistics.vic.gov.au/crime-statistics/latest-victorian-crime-data/download-data)

Affected family members and other parties by age group: Yarra Ranges, 2020 to 2024 (year ending March)

| Age group | 2020 | 2021 | 2022 | 2023 | 2024 | % change, 2020-2024 |
|---|------|------|------|------|------|---------------------|
| Affected family member | | | | | | |
| 00 - 17 years | 228 | 194 | 238 | 218 | 253 | 11.0% |
| 18 - 24 years | 198 | 176 | 187 | 174 | 165 | -16.7% |
| 25 - 34 years | 354 | 340 | 352 | 418 | 345 | -2.5% |
| 35 - 44 years | 437 | 384 | 425 | 451 | 513 | 17.4% |
| 45 - 54 years | 313 | 330 | 380 | 383 | 393 | 25.6% |
| 55+ years | 207 | 279 | 314 | 325 | 310 | 49.8% |
| Other parties (alleged perpetrators) | | | | | | |
| 00 - 17 years | 134 | 174 | 192 | 213 | 230 | 71.6% |
| 18 - 24 years | 204 | 196 | 207 | 206 | 201 | -1.5% |
| 25 - 34 years | 420 | 375 | 381 | 459 | 403 | -4.0% |
| 35 - 44 years | 532 | 518 | 536 | 495 | 537 | 0.9% |
| 45 - 54 years | 350 | 291 | 386 | 396 | 403 | 15.1% |
| 55+ years | 102 | 156 | 199 | 205 | 207 | 102.9% |

Source: Crime Statistics Agency (2024). *Data Tables LGA Family Incidents Year Ending March 2024.* <https://www.crimestatistics.vic.gov.au/crime-statistics/latest-victorian-crime-data/download-data>

Family violence incidents by age of victim: Yarra Ranges, 2020 to 2024, year ending March



FOOD SECURITY

VicHealth undertook a specific COVID impact survey in 2020, which identified increased food insecurity as a major wellbeing issue. Statewide, the level of people who ran out of food and could not buy more nearly doubled. And nearly one-quarter (23%) had relied on low-cost unhealthy food because of financial concerns during the lockdown, compared to 13% in the previous comparison survey. It also identified three key cohorts who were most affected by food insecurity during the pandemic: young adults, females and Indigenous residents. These vulnerable cohorts are priority target groups for resilient recovery in Yarra Ranges.

VAPING

Data on vaping by age is not available at local government level, but state data shows a large increase in vaping rates amongst 14-17 year olds and 18-24 year olds from early 2020 to early 2023.

The health harms associated with vaping include: nicotine addiction; intentional and unintentional poisoning; acute nicotine toxicity causing seizures; burns and injuries; lung injury. Vaping is also associated with taking up cigarette smoking and can thus be considered a 'gateway' to further risk and health complications.

[E-cigarettes and vaping - Lung Foundation Australia](#)

Vaping rates appear to have increased rapidly in Victoria from 2020 onwards, according to estimates from a Cancer Council Victoria survey. This increase has been pronounced amongst young people:

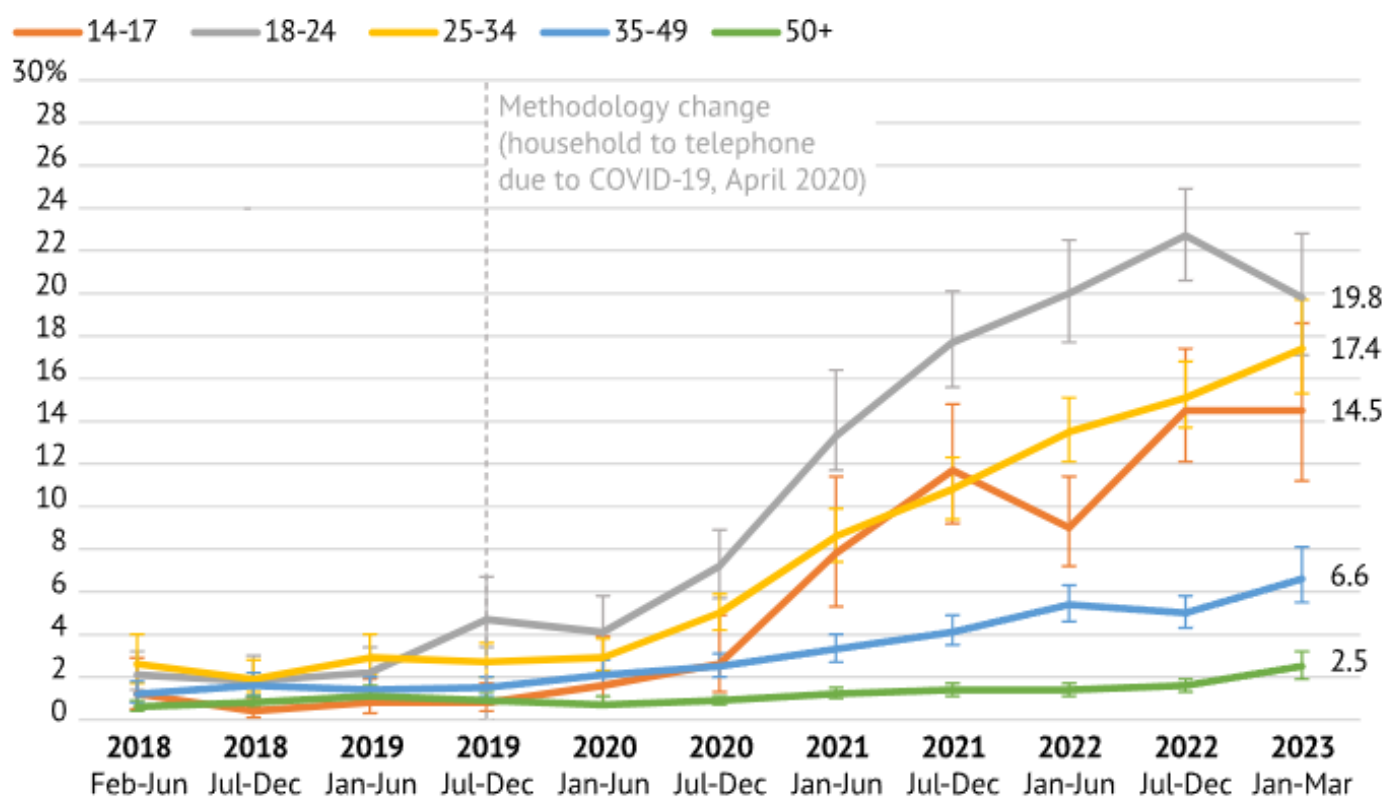
- 18-24 year olds - the level rose from about 7% in the second half of 2020, to 19.8% in the first quarter of 2023.
- 14-17 year olds - the level rose from about 3% to 14.5%.

A staggering 77,200 Victorian adults who previously never smoked started vaping between 2018/19 and 2022. Many are unaware of the health risks: one-third of Victorian adults think that the dangers may have been exaggerated, and one-in-five are not aware that e-cigarettes contain dangerous chemicals. The Cancer Council Victoria notes that:

“E-cigarette liquids can contain more than 200 chemicals, and some of these – such as arsenic and benzene – are known to cause cancer. E-cigarette usage has been confirmed to cause seizures, lung, facial and oral injuries, dizziness, loss of concentration, and nicotine poisoning. Exposure to nicotine can exacerbate mood disorders and has been linked to negative impacts on cognitive performance and brain structure.”

Source: Cancer Council Victoria (1 June 2023). Get the facts on vaping - Victorians urged to 'see through the haze'. <https://www.cancervic.org.au/get-support/stories/get-the-facts-on-vaping-victorians-urged-to-see-through-the-haze.html>

Vaping by age group, 2018 to 2023



Error bars represent 95% confidence intervals around survey estimates. ^Data for 2023 covers three months only.
Source: Cancer Council Victoria, prepared for Health Department in May 2023

Source: Ireland, O. (2023, December 31). Medical industry braces for vape addiction as first stage of ban begins. *The Age*. <https://www.theage.com.au/politics/federal/medical-industry-braces-for-vape-addiction-as-first-stage-of-ban-begins-20231228-p5eu2i.html>

SEXUALLY TRANSMITTED DISEASES (STDs)

STDs mostly affect 20-34 year olds. Yarra Ranges has avoided the post-COVID national trend for significant growth in STDs such as chlamydia, gonorrhoea and syphilis. Chlamydia was the main STD affecting young people, so most STD cases amongst 10-24 year olds were amongst females. The number of STDs dropped between 2019 and 2021, but then increased to a higher level than pre-pandemic. The number went from 475 in 2019 to 402 in 2020 and to 332 in 2021. It then climbed up to 422 in 2022 and to 506 in 2023. The rate is now about the same as the rate in 2018. Amongst young people, STDs rose amongst females aged 15-19 and males aged 20-24.

Amongst 15-19 year olds, STDs dropped during the pandemic for both males and females, but then rose in 2022 for males and in 2023 for females. The levels are now higher than in 2019 for females; they are about the same for males. STDs are much higher in female 15-19 year olds compared to males. Overall, the number of STDs rose by 15% for 15-19 year old females between 2019 and 2023, and dropped by 10% for 15-19 year old males.

A different pattern was seen amongst 20-24 year olds. The level of STDs rose in the first year of the pandemic amongst males, but then dropped for both sexes in 2021. The number rose again in 2022 – for both sexes - but was static in 2023. Overall, the number of STDs rose by 3% for 20-24 year old females between 2019 and 2023, and rose by 19% for 20-24 year old males.

Sexually Transmitted Disease notifications: 15-24 year olds in Yarra Ranges, 2019-2023

| Age & sex | 2019 | 2020 | 2021 | 2022 | 2023 | Change 2019-2023 |
|--------------|------------|------------|------------|------------|------------|------------------|
| 15-19 | 82 | 67 | 50 | 78 | 89 | 9% |
| Female | 62 | 51 | 39 | 46 | 71 | 15% |
| Male | 20 | 16 | 11 | 32 | 18 | -10% |
| 20-24 | 137 | 148 | 112 | 147 | 150 | 9% |
| Female | 80 | 82 | 61 | 83 | 82 | 3% |
| Male | 57 | 66 | 51 | 64 | 68 | 19% |

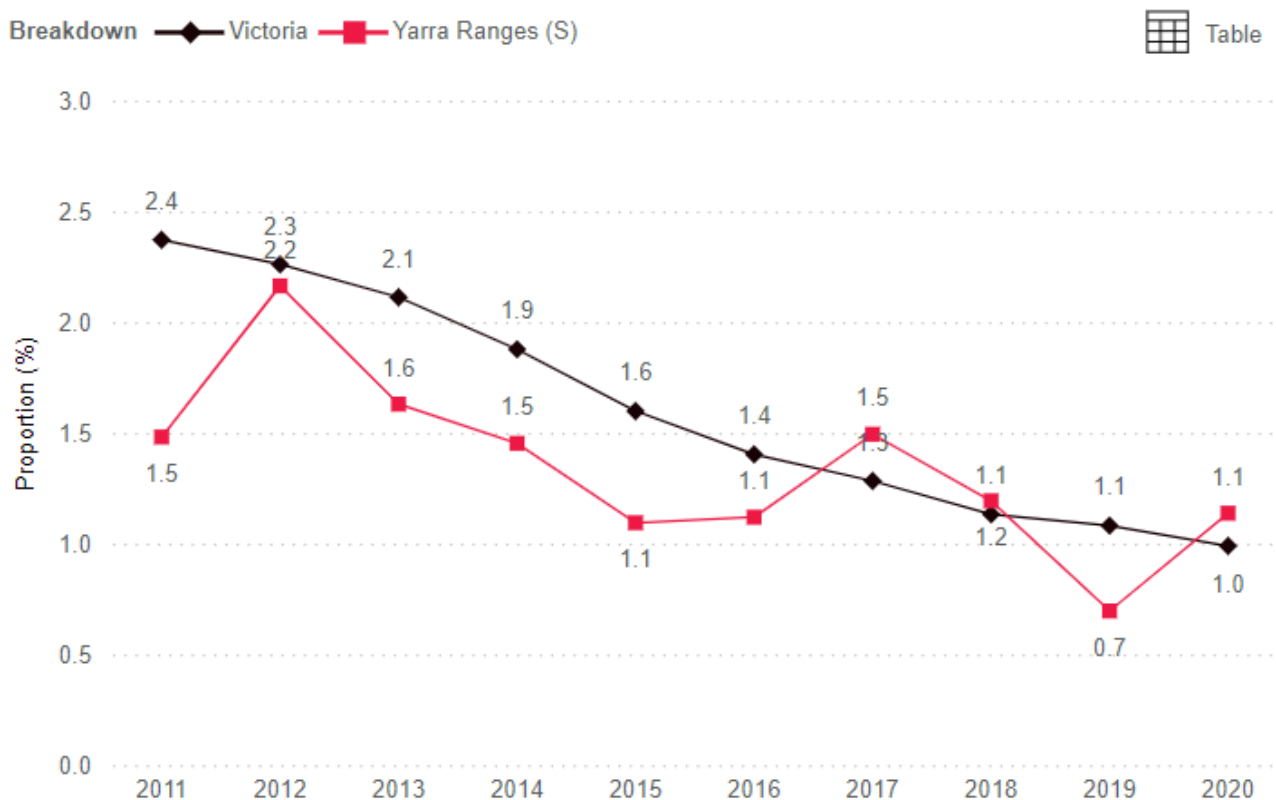
Notes: includes chlamydia, gonorrhea, Hepatis C, HIV and syphilis.

Source: Department of Health (16 September 2024). *Victoria, local public health areas and local government areas surveillance summary report*. <https://www.health.vic.gov.au/infectious-diseases/local-government-areas-surveillance-report>

TEENAGE BIRTHS

Yarra Ranges has a high teenage birth rate, and the rate jumped by 36% in Yarra Ranges between 2019 and 2020, compared to a 10% fall across Victoria.⁷² Yarra Ranges is the only Eastern Metropolitan Council where this happened; the other LGAs were all below average for teenage births. Prior to the pandemic, the rate had been trending down. There is a tendency for the teenage birth rate to be high in interface areas, so there may be a link between teenage births and poorer access to women's health services.

Birth rate for young women 15-19 years, and Victoria, 2011 to 2020

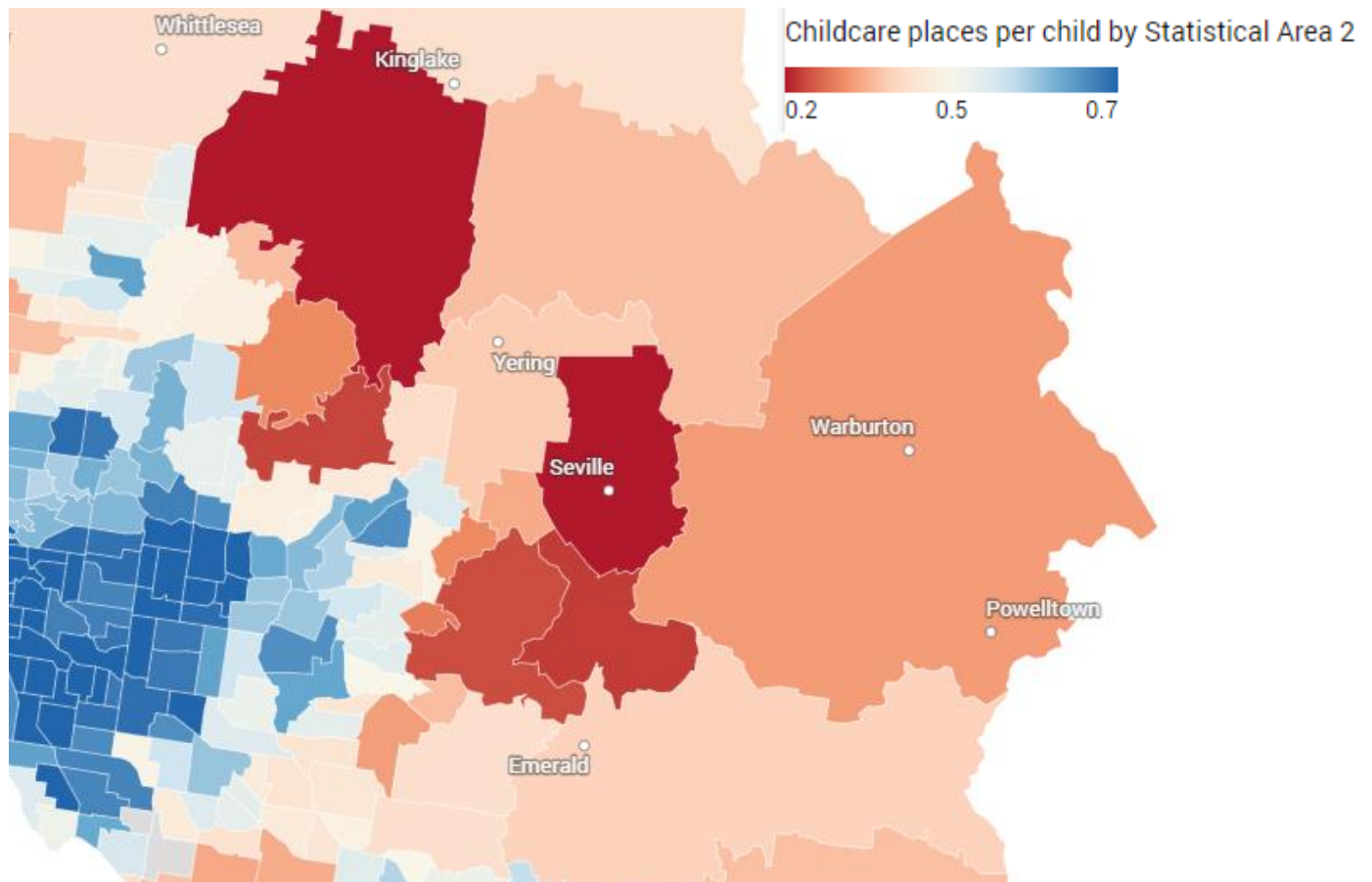


Source: Department of Health (2024). *Victorian Public Health and Wellbeing Outcomes Dashboard*.
<https://www.health.vic.gov.au/victorian-public-health-and-wellbeing-outcomes-dashboard>

⁷² Source: Department of Health (2024). *Victorian Public Health and Wellbeing Outcomes Dashboard*. <https://www.health.vic.gov.au/victorian-public-health-and-wellbeing-outcomes-dashboard>

CHILDCARE

Number of childcare places per child: Yarra Ranges local areas, 2024



Source: Mitchell Institute (2024). *International childcare report: Mapping the deserts? – Key findings and interactive maps*. [700,000 Australians with no childcare access | Victoria University \(vu.edu.au\)](https://www.vu.edu.au/700000-Australians-with-no-childcare-access)

Access to quality childcare is considered a key predictor of early childhood development. However, childcare is limited in Yarra Ranges. In 2022, the Casey electorate, which covers Yarra Ranges, was considered a ‘childcare desert’, with nearly four children aged four and under competing for each childcare spot within a 20-minute drive of their home. Melbourne’s Outer East was particularly short of childcare places. Within Yarra Ranges, the level of childcare places was lowest in the Hills and the Upper Yarra Valley.

Data on childcare access was updated by SA2 in 2024. It shows that Wandin-Seville now has the lowest number of places per child in Melbourne and the fifth-lowest number of places in Victoria. Note that this comparative measure excludes areas with zero places –

Upper Yarra Valley is one of the worst areas in Australia, with no childcare places whatsoever.

A score of 0.2 would indicate five children per childcare place and a score of 0.5 indicates two children per place. Most areas in Yarra Ranges have two to five children competing for each place. Access is highest in the Urban Area and Belgrave, including Mooroolbark (0.547 places per child), Kilsyth (0.485), Belgrave-Selby (0.419) and Chirnside Park (0.409).

Victoria University research shows that where you live impacts childcare accessibility - Childcare places per child by area in Yarra Ranges, 2024

| SA2 name | Childcare places per child, 2024 |
|--------------------------|----------------------------------|
| Mooroolbark | 0.547 |
| Kilsyth | 0.484 |
| Belgrave - Selby | 0.419 |
| Chirnside Park | 0.409 |
| Healesville - Yarra Glen | 0.365 |
| Upwey - Tecoma | 0.363 |
| Lilydale - Coldstream | 0.381 |
| Mount Evelyn | 0.340 |
| Yarra Valley | 0.322 |
| Montrose | 0.301 |
| Mount Dandenong - Olinda | 0.240 |
| Monbulk - Silvan | 0.225 |
| Wandin - Seville | 0.115 |
| Upper Yarra Valley | 0.000 |
| Total Yarra Ranges* | 0.270 |

* Data for Yarra Ranges is from 2022.

Source: Mitchell Institute (2024). *International childcare report: Mapping the deserts? – Key findings and interactive maps*. [700,000 Australians with no childcare access | Victoria University \(vu.edu.au\)](https://www.vu.edu.au/700,000-Australians-with-no-childcare-access)

In December 2022, Yarra Ranges had a very low level of centre-based day care (CBDC). The average ratio of places to 0-5 year olds was 0.27 across Yarra Ranges. It was 0.28 in Healesville-Yarra Glen and 0.2 in Yarra Valley. Yarra Ranges has an average level of all forms of childcare - centre-based, family day care and dedicated pre-schools. The ratio was 0.43 per child aged 0-5 across Yarra Ranges, 0.46 in Yarra Valley, 0.44 in Healesville-Yarra Glen and 0 in Upper Yarra Valley. The difference occurs because preschool access is much better than access to centre-based day care in Yarra Ranges. Data on average

access for the whole of Yarra Ranges also hides substantial variation in small areas within the municipality.⁷³

HEALTH SERVICE USE

There was a large fall in use of Nursing and Aboriginal Health Workers during COVID - the number of patients fell by 3% and the rate of service use fell by 6%. The drop in patient numbers was highest amongst 0-24 year olds and 45-64 year olds.

GP attendances rose across all age groups, particularly 0-24 year olds, with an 11% increase in patient numbers; and a 24% increase in the rate of services compared to 15% across the total population.

Early intervention services for children jumped, with a 16% increase in patients and services, and a 33% rise in the service rate. This may be due to the developmental impacts of COVID lockdowns.

Total specialist attendances rose amongst 0-24 year olds and 25-44 year olds, with a 3% rise in patient numbers.

COMMUNITY DENTAL SERVICES

Yarra Ranges has one community dental clinic⁷⁴, based at the Inspiro community health centre in Lilydale. In 2021/22, Inspiro saw 3,599 dental clients across 8,887 appointments. One-quarter of these were new clients. Note that the first half of this year would have been affected by COVID lockdowns. 1,230 clients had emergency appointments in 2021/22. 1,045 children were involved in the Smiles for Miles program.⁷⁵

In 2022/23, Inspiro saw 4,459 dental clients across 11,666 appointments. This was a 24% increase in the number of clients compared to 2021/22. 1,344 clients had emergency appointments in 2022/23. Whilst this may be partly due to a rebound in numbers from

⁷³ Source: Productivity Commission (2024). *A path to universal early childhood education and care Inquiry report*. <https://www.pc.gov.au/inquiries/completed/childhood/report>

⁷⁴ https://www.dhsv.org.au/_data/assets/pdf_file/0011/187337/Dental-Health-Services-Victoria-Annual-Report-2021-2022-FINAL-021222-small.pdf

⁷⁵ <https://inspiro.org.au/wp-content/uploads/2022/10/2021-22-Inspiro-Annual-Report-Digital-Summary.pdf>

2021/22 – a year affected by COVID - 35% were new clients. As well as the likely need for dental services post-lockdown, cost of living may also have led patients to look for more affordable alternatives. Much of this dental usage was for emergencies, with 30% of clients having an emergency appointment. Children aged less than 10 accounted for 65% of new dental clients and 29% of all dental clients in 2022/23. All children aged 0–12 years are eligible for public dental care in Victoria, which would contribute to these figures.

SPECIALIST HOMELESSNESS SERVICES

Customised data for 2019/20 shows that SHS clients in Yarra Ranges were:

- Much more likely to be children aged 0-17, at 39% of clients compared to 26% across Greater Melbourne. Twenty-one percent were aged 0-9 (compared to 16%), 11% were aged 10-14 (compared to 6%), and 7% were aged 15-17 (compared to 4%).
- More likely to be single parents with children, with this group accounting for 40% of total clients, compared to 32% across Greater Melbourne. Male sole parents accounted for 12% of clients (compared to 10% for Greater Melbourne); females accounted for 28% of clients (compared to 23% for Greater Melbourne). This aligns with the high level of clients who were children.

Data for 2021/22 shows that Yarra Ranges had the following differences in SHS clients:

- A higher proportion of Yarra Ranges SHS clients were children aged 0-14 (29% compared to 20% for Greater Melbourne).
- Yarra Ranges clients were less likely to be living alone (10% compared to 17%); and more likely to be female in a couple with children (10% compared to 6%).

Older residents

Overview

The past four years have seen the COVID-19 pandemic and lockdowns, which potentially had a range of impacts on health and wellbeing amongst older residents. Pandemic impacts may have included increased hospital admissions for dementia, less preventative health checks for bowel cancer and breast cancer, and decreased volunteering. State-wide issues such as increased hospital admissions for falls do not appear to have been an issue in Yarra Ranges.

Older residents aged 65 plus have a higher level of chronic diseases than other age groups. Hospital admissions for dementia have increased substantially over recent years. The total level of residents with dementia is highest in the Urban Area and the Valley, and most residents with dementia are women. Falls are a key risk factor for older residents, with Yarra Ranges having an above average hospital admission rate for falls, including amongst 65-79 year olds. Whilst older residents tend to have a higher level of disability than younger age group, the level in Yarra Ranges is below average. A high level of frail aged residents are living alone. Yarra Ranges has a high level of volunteering amongst older residents, but the level dropped in 2021.

Yarra Ranges has a major shortage of residential care services, particularly in the Hills and the Urban Area. In general, the Hills has been identified by service providers as having a high number of gaps in age and disability services, but there are a range of service gaps across the municipality.

Bowel cancer screening rates dropped during lockdown amongst 50-74 year olds, after half a decade of increases; the Hills had the largest drop in participation. This is likely to be at least partly due to lockdown impacts on service access and usage. Breast cancer screening dropped amongst women in 2019/20 at local level, and state level shows a large fall for 2020/21.⁷⁶

Older residents are much more likely to have chronic diseases, with nearly two-thirds of residents aged 65 years or more having at least one chronic disease; this level rises to 75%

⁷⁶ Local data are not yet available for 2020/21.

of persons aged 85 plus. Chronic disease prevalence amongst older residents is similar to the Victorian average.

Older residents have a high level of hospital admissions for diseases of the nervous system, digestive system, skin and musculoskeletal system. There has been a large increase in admissions for dementia over the past four years. In 2021, the estimated number of residents with dementia was highest in Lilydale-Coldstream, Mooroolbark, Healesville-Yarra Glen and Yarra Valley; more than 60% of residents with dementia were women.

Falls are a major health risk for older residents, with the rate of hospital admissions getting much higher with age. Yarra Ranges has an above average rate of hospital admissions for falls across all age groups, except amongst persons aged 80 plus.

Human services in Yarra Ranges have identified a range of issues for age and disability services. These include gaps in the availability of carer support, disability support, services for older people, respite care and residential care, across the municipality. The highest number of overall age and disability service gaps was in the Hills. Yarra Ranges has large gaps in residential aged care services, with no services at all in the Hills and a large shortfall in the Urban Area.

Bowel cancer screening is a preventative health program targeting 50-74 year olds. Screening rates in Yarra Ranges dropped 6% in 2020/21, after five years of steady increases – this is likely to be at least partly due to lockdown impacts on service access and usage. The Hills had the largest fall in participation. Bowel cancer screening is crucial to reducing the risk of severe bowel cancer, by catching the disease early, and this drop in screening increases the level of people at risk of developing more advanced bowel cancer. Breast cancer screening amongst 50-74 year old women in Yarra Ranges dropped in 2019/20; data are not yet available at local level for 2020/21, but state data indicate a substantial fall that year.

Persons aged 65 plus have the highest level of disability, ranging from 7% for 65-74 year olds, to 50% of persons aged 85 plus. However, the level is below the Victorian average. Many older people are carers, particularly 55-64 year olds and 45-54 year olds - this is the age group whose parents tend to be aged 75 plus, and needing more care and assistance. Many retirees are also carers, often for partners. Indigenous residents in Yarra Ranges tend to have carer responsibilities at a much younger age.

Yarra Ranges has a below average level of older people who are living alone, but the level is extremely high for persons aged 85 plus, with 40% living alone – often due to the death of a partner or a partner's relocation into residential care.

Yarra Ranges has a high level of volunteering, with one in five 65-74 year olds being volunteers, along with 17% of 75-84 year olds. As would be expected, volunteering rates are lower amongst those aged 85 plus. Most older residents aged 65 or over are retired and receiving the age pension; those who are still working tend to be working part-time. Amongst 55-64 year olds, most were still working, generally full-time. A fairly low level were receiving income from superannuation (1,789); however, older retirees would not have had access to superannuation for all of their working lives, and some may have used up their available superannuation.

Health issues amongst older residents

CHRONIC DISEASES

In 2021, 35% of Yarra Ranges residents had one or more long-term health conditions, above the 31% Victorian average. Chronic diseases are much more prevalent amongst older residents, with the rate rising from 13% amongst 0-14 year olds, to 75% of persons aged 85 years or more. Nearly two-thirds (64%) of Yarra Ranges residents aged 65 years or more have at least one long-term health condition.

Yarra Ranges had a high level of residents with long-term health conditions, across all age group. However, the difference was most pronounced amongst 15-54 years olds, and only slightly higher for persons aged 65 plus.

Proportion of age group with long-term health conditions: Yarra Ranges and Victoria, 2021

| Age group (years) | Yarra Ranges | Victoria |
|-------------------|--------------|----------|
| 0-14 | 13.2% | 11.4% |
| 15-24 | 25.3% | 21.4% |
| 25-34 | 29.0% | 22.9% |
| 35-44 | 31.7% | 25.4% |
| 45-54 | 35.5% | 32.6% |
| 55-64 | 45.7% | 43.9% |
| 65-74 | 59.4% | 57.5% |
| 75-84 | 69.6% | 67.9% |
| 85 years | 75.4% | 73.8% |
| Total | 35.2% | 31.4% |

Source: Australian Bureau of Statistics (2021). *Census of Population and Housing*.
<https://www.abs.gov.au/census/find-census-data/search-by-area>

HOSPITAL ADMISSIONS

In 2022/23, the main reasons for admission to hospital, amongst persons aged 65 plus, were:

- factors influencing health status and contact with health services (28.4%);
- neoplasms (10%);
- diseases of the digestive system (9.3%);
- symptoms signs and abnormal clinical laboratory findings not elsewhere classified (8.2%);
- diseases of the eye and adnexa (6.8%); and
- diseases of the circulatory system (6.5%).

Across Yarra Ranges' total population, there was a large increase in mental health hospital admissions for dementia disorders, between 2018/19 and 2022/23. This included:

- a 286% increase in hospital admissions for dementia in Alzheimer's disease;
- a 40% increase in hospital admissions for dementia in other disorders classified elsewhere.

Compared to the Victorian average, older residents in Yarra Ranges had a significantly above average level of admissions for:

- Diseases of the nervous system (36% above average);
- Diseases of the digestive system (23% above average);
- Diseases of the skin and subcutaneous tissue (18% above average); and
- Diseases of the musculoskeletal system and connective tissue (16% above average).

Hospital admissions for persons aged 65 years or more: Yarra Ranges, 2022/23

| Diagnosis | Share of total admissions | | |
|---|---------------------------|----------|------------|
| | Yarra Ranges (S) | Victoria | Rate ratio |
| Certain infectious and parasitic diseases | 1% | 1% | 0.92 |
| Neoplasms | 10% | 9% | 1.10 |
| Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism | 2% | 2% | 0.86 |
| Endocrine nutritional and metabolic diseases | 2% | 2% | 0.79 |
| Mental and behavioural disorders | 1% | 2% | 0.71 |
| Diseases of the nervous system | 3% | 2% | 1.36 |
| Diseases of the eye and adnexa | 7% | 6% | 1.07 |
| Diseases of the ear and mastoid process | 0% | 0% | 0.92 |
| Diseases of the circulatory system | 6% | 7% | 0.89 |
| Diseases of the respiratory system | 3% | 3% | 1.01 |
| Diseases of the digestive system | 9% | 8% | 1.23 |
| Diseases of the skin and subcutaneous tissue | 1% | 1% | 1.18 |
| Diseases of the musculoskeletal system and connective tissue | 7% | 6% | 1.16 |
| Diseases of the genitourinary system | 3% | 3% | 1.06 |
| Pregnancy childbirth and the puerperium | n/a | n/a | n/a |
| Certain conditions originating in the perinatal period | n/a | n/a | n/a |
| Congenital malformations deformations and chromosomal abnormalities | 0% | 0% | 0.00 |
| Symptoms signs and abnormal clinical laboratory findings nec | 8% | 8% | 0.97 |
| Injury poisoning and certain other consequences of external causes | 6% | 6% | 0.97 |
| Factors influencing health status and contact with health services | 28% | 31% | 0.92 |
| Codes for special purposes | 1% | 1% | 1.15 |
| Total | 100% | 100% | 1.00 |

A rate ratio of more than 1.1 means that the level of hospital admissions was more than 10% above the Victorian average.

Source: Victorian Agency for Health Information (2023). Unpublished hospital admissions data for Yarra Ranges and Victoria, 2018/19-2022/23.

DEMENTIA

In 2021, Yarra Ranges had an estimated 2,209 residents with dementia. The numbers were highest in Lilydale-Coldstream (33218 persons), Mooroolbark (303), Healesville-Yarra Glen (276) and Yarra Valley (260). The rate per 1,000 residents was highest in Healesville-Yarra Glen (19.5 per 1,000), Kilsyth (18.8), Montrose (18.6) and Lilydale-Coldstream (16.8). The Australian average is 15.6 per 1,000.

These data are not age-standardised. Dementia prevalence increases with age, so areas with a high level of older people will have a higher rate of dementia prevalence. As women tend to live for longer than men, the older age profile of the female population means that 61% of residents with dementia were female and 39% were males.

Number of persons living with dementia by area and sex: Yarra Ranges, 2022

| SA2 name | Males | Females | Persons | Rate per 1,000 residents |
|---------------------------|------------|--------------|--------------|--------------------------|
| Belgrave - Selby | 49 | 58 | 107 | 10.6 |
| Chirnside Park | 67 | 101 | 168 | 14.1 |
| Healesville - Yarra Glen | 106 | 170 | 276 | 19.5 |
| Kilsyth | 69 | 119 | 188 | 18.8 |
| Lilydale - Coldstream | 122 | 210 | 332 | 16.8 |
| Monbulk - Silvan | 33 | 52 | 85 | 14.5 |
| Montrose | 44 | 86 | 130 | 18.6 |
| Mooroolbark | 114 | 189 | 303 | 12.9 |
| Mount Dandenong - Olinda | 59 | 74 | 134 | 13.7 |
| Mount Evelyn | 43 | 66 | 109 | 11.1 |
| Upper Yarra Valley | n.p. | n.p. | n.p. | n/a |
| Upwey - Tecoma | 40 | 60 | 100 | 10.2 |
| Wandin - Seville | 39 | 58 | 97 | 12.2 |
| Yarra Valley | 102 | 157 | 260 | 15.3 |
| Total Yarra Ranges | 887 | 1,400 | 2,289 | 14.6 |

Notes:

1. Due to the lack of data on the variability of dementia prevalence rates by geographic and socioeconomic areas, dementia prevalence estimates were calculated by applying the Australian Institute of Health and Welfare national age- and sex-specific dementia prevalence rates to the population of each geographic or socioeconomic area.

2. Estimates with a count less than 5 are suppressed due to unreliability (n.p. – no published).

Source: Australian Institute of Health and Welfare (2024). *Data tables: Dementia in Australia – Incidence and prevalence*. <https://www.aihw.gov.au/reports-data/health-conditions-disability-deaths/dementia/data>

FALLS

The level of hospitalisations for falls amongst adults aged 65 plus tends to fluctuate over time. The rate in 2021 was slightly higher than previous years. In 2020/21, the total hospitalisation rate for falls was 889.6 per 100,000 residents. This compared to 916.7 in 2018/19 and 880.3 in 2019/20. So there was no increase during COVID-19, although data are not yet available for 2021/22 or 2022/23.

The rate only starts to increase above age 60, with the rate rising from 1,014 per 100,000 for 60-69 year olds, to 2,243 for 70-79 year olds, then jumping to 6,727 for persons aged 80 years or more.

Yarra Ranges had an above average rate of falls hospitalisations for all age groups except for persons aged 80 plus (6,727 compared to 7,526 for Victoria). The rate was 1,014 for 60-69 year olds, compared to 990 across Victoria; the rate was 2,243 for 70-79 year olds, compared to 2,157 across Victoria. For the total population aged 60 plus, Yarra Ranges had a below average rate of falls hospitalisations, at 2,373.7 per 100,000 compared to 2,646 for Victoria; this is due to the low rate amongst those aged 80 plus.

Unintentional falls were the main cause (40%) of unintentional and intentional external cause deaths in Yarra Ranges which were reported to the coroner. Most of these occurred amongst elderly people.⁷⁷

⁷⁷ Coroners Court of Victoria (2024). *Yarra Ranges suicides, 1 January 2018 to 19 April 2024*. Coroners Prevention Unit, data summary.

Falls hospitalisations by age : Yarra Ranges and Victoria, 2020/21

| Age groups | Rate per 100,000, Yarra Ranges | Number of admissions, Yarra Ranges | Rate per 100,000, Victoria |
|-------------|-----------------------------------|--|----------------------------------|
| 0-9 Years | 740.3 | 147 | 560.1 |
| 10-19 Years | 494.3 | 97 | 313.2 |
| 20-29 Years | 254.9 | 52 | 223.2 |
| 30-39 Years | 285.3 | 59 | 253.2 |
| 40-49 Years | 319.7 | 71 | 344.8 |
| 50-59 Years | 647.0 | 135 | 563.9 |
| 60-69 Years | 1,013.9 | 183 | 990.2 |
| 70-79 Years | 2,243.2 | 275 | 2,156.5 |
| 80+ Years | 6,726.6 | 404 | 7,525.8 |

Source: Victorian Injury Atlas (2024). *Victorian Admitted Episodes Dataset, compiled and presented in vicinjuryatlas.org.au* by Victorian Injury Surveillance Unit.

<https://vicinjuryatlas.org.au/>

CHANGE IN FAMILY VIOLENCE BY AGE

Over the past four years, there has been 50% substantial growth in the number of family violence victims aged 55 plus. There was also a large shift in the age profile of perpetrators. The number aged 55 plus more than doubled (a 103% increase), and the number aged 0-17 rose by 72%. This indicates that there may be increased elder⁷⁸ abuse happening. This could be within older couples, by teenagers against adult parents, and by adult children towards older parents.

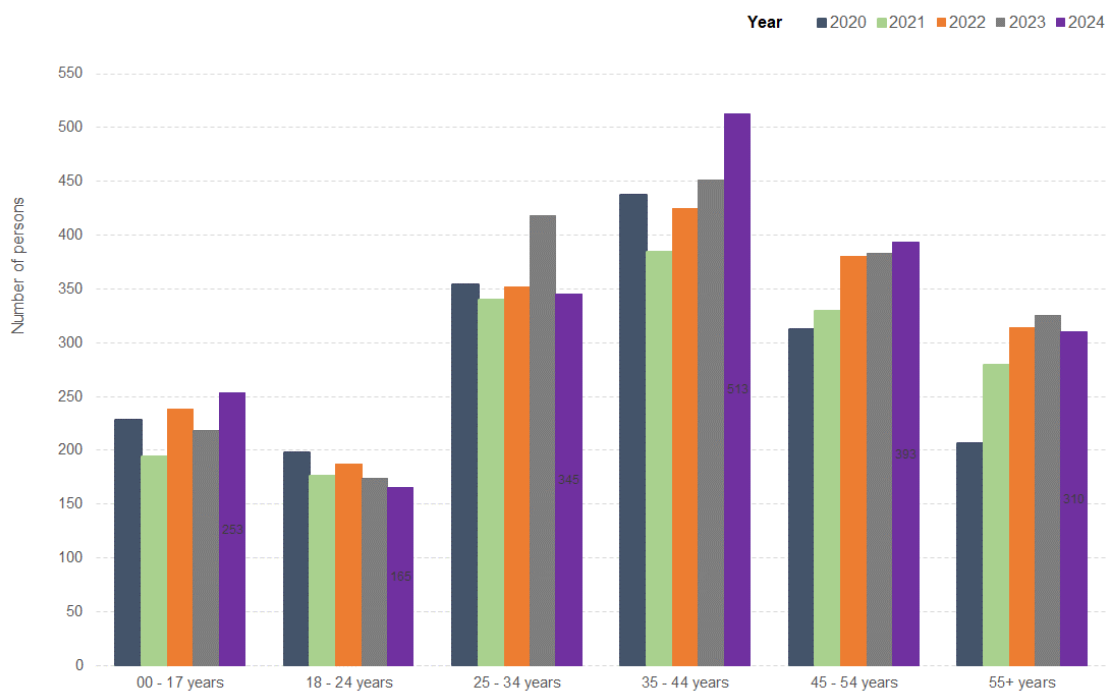
Affected family members and other parties by age group: Yarra Ranges, 2020 to 2024 (year ending March)

| Age group | 2020 | 2021 | 2022 | 2023 | 2024 | % change, 2020-2024 |
|---|------|------|------|------|------|---------------------|
| Affected family member | | | | | | |
| 55+ years | 207 | 279 | 314 | 325 | 310 | 49.8% |
| Other parties (alleged perpetrators) | | | | | | |
| 00 - 17 years | 134 | 174 | 192 | 213 | 230 | 71.6% |
| 18 - 24 years | 204 | 196 | 207 | 206 | 201 | -1.5% |
| 25 - 34 years | 420 | 375 | 381 | 459 | 403 | -4.0% |
| 35 - 44 years | 532 | 518 | 536 | 495 | 537 | 0.9% |
| 45 - 54 years | 350 | 291 | 386 | 396 | 403 | 15.1% |
| 55+ years | 102 | 156 | 199 | 205 | 207 | 102.9% |

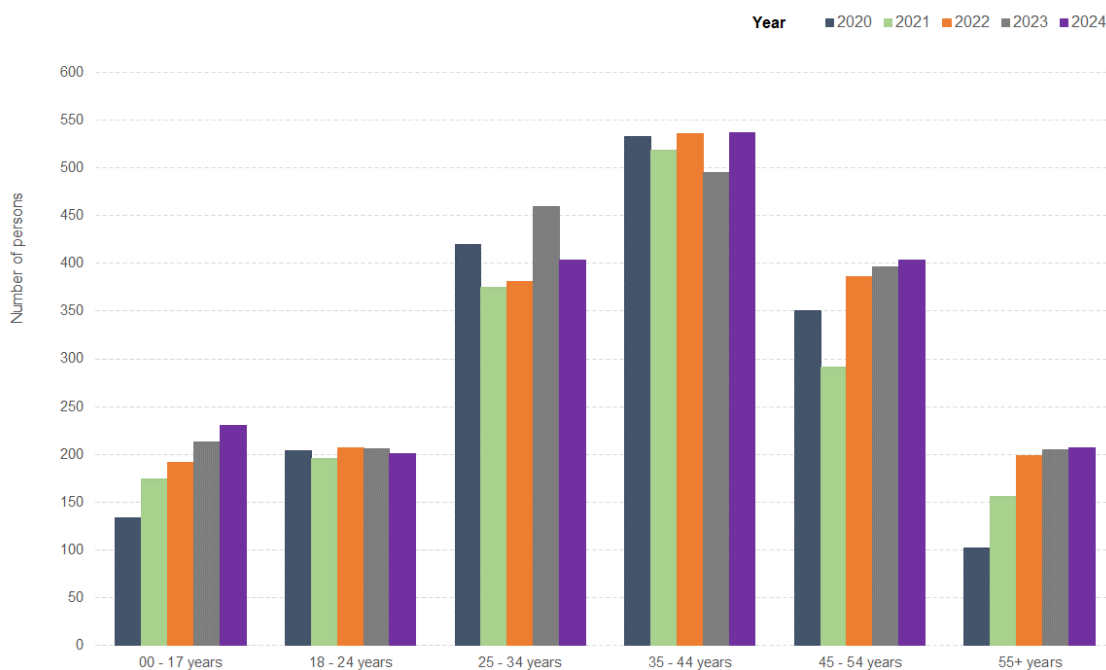
Source: Crime Statistics Agency (2024). *Data Tables LGA Family Incidents Year Ending March 2024*.
<https://www.crimestatistics.vic.gov.au/crime-statistics/latest-victorian-crime-data/download-data>

⁷⁸ Elderly usually refers to people aged 65+.

Family violence incidents by age of victim: Yarra Ranges, 2020 to 2024, year ending March



Family violence incidents by age of perpetrator: Yarra Ranges, 2020 to 2024, year ending March



ROAD ACCIDENTS

There were four deaths from road accidents amongst persons aged 60 plus, in the year to 26 February 2024. There were 43 hospitalisations for road accidents amongst persons aged 60 plus, in the 2022/23 financial year – 25 males and 17 females. These included 25 drivers, 9 motorcyclists, 5 passengers, 1 pedestrian and 3 where the type of road user was unknown.

Source: TAC (2024). *Online crash database*. https://www.tac.vic.gov.au/road-safety/statistics/online-crash-database/search-crash-data?date-after=1-Jan-2018&date-before=31-Dec-023&meta_J_orsand=&meta_G_orsand=&query=%21padrenull&collection=tac-xml-meta&meta_D_orsand=%22Yarra+Ranges%22&clive=tac-fatalities-xml#mapview

HUMAN SERVICES NEEDS ANALYSIS

In 2023, Yarra Ranges Council conducted an analysis of the need for human services in Yarra Ranges. The Human Services Needs Analysis (HSNA) provides insight into the main issues affecting services, including age and disability services.

SERVICE TYPES

Thirty-nine percent (26 services) of the services surveyed provided age and disability services. Most provided multiple types of service, including:

- Services for older people (19 services).
- Disability support (14 services).
- Support for unpaid carers (7 services).
- Respite care (3 services).
- Residential care (2 services).
- Other services (3 services).

Other age and disability services included:

- Support for persons living with dementia.
- Day programs.
- A7S program for older people and younger people with disabilities.
- Allied health and nursing support.

There were no services which organisations planned to stop providing in the next five years. Three services planned to add services supporting unpaid carers, and two planned to add new residential care services. There were no plans amongst existing services to add additional services for older people, disability support services or respite care services.

Age and disability services: Of the services listed below, please tell us which services you currently provide, plan to add or plan to stop providing?

| Service | Currently provide | | Plan to add new service in the next 5 years | | Plan to stop providing within the next 5 years | | Total |
|------------------------------|-------------------|----|---|---|--|---|-------|
| Services for people aged 65+ | 100% | 19 | 0% | 0 | 0% | 0 | 19 |
| Support for unpaid carers | 70% | 7 | 30% | 3 | 0% | 0 | 10 |
| Residential care | 50% | 2 | 50% | 2 | 0% | 0 | 4 |
| Disability support | 100% | 14 | 0% | 0 | 0% | 0 | 14 |
| Respite care | 100% | 3 | 0% | 0 | 0% | 0 | 3 |
| Other | 100% | 3 | 0% | 0 | 0% | 0 | 3 |

Source: Yarra Ranges Council (2023). *Access to human services in Yarra Ranges, 2023*.
<https://www.yarraranges.vic.gov.au/Community/Health-and-Wellbeing/Human-Services-Needs-Analysis>

SERVICE GAPS

The main service gaps were for:

- Support for unpaid carers (identified as a gap by 12 services).
- Disability support (11 services).
- Services for older people (10 services).
- Respite care (8 services).
- Residential care (8 services).

These gaps typically affected the whole of Yarra Ranges (70%-92%, depending on service type). For specific geographic areas, one or two services tended to identify gaps for each service type and local area, indicating a fairly even spread of gaps across Yarra Ranges. Disability support was only identified as a specific gap for the Hills - as well as for the whole of Yarra Ranges - and by only one service. The highest number of overall age and disability service gaps was in the Hills (8 services identified gaps). Fewer gaps were identified in the Valley (5 services), Healesville-Yarra Glen (5 services) and the Urban Area (3 services).

Age and disability services: Are there any service gaps affecting the following areas of Yarra Ranges?

| Question | Whole of Yarra Ranges | | Hills | | Valley | | Urban | | Healesville/Yarra Glen | | Total |
|---------------------------|-----------------------|----|-------|---|--------|---|-------|---|------------------------|---|-------|
| Services for older people | 70% | 7 | 20% | 2 | 10% | 1 | 0% | 0 | 20% | 2 | 10 |
| Support for unpaid carers | 92% | 11 | 8% | 1 | 17% | 2 | 8% | 1 | 8% | 1 | 12 |
| Residential care | 88% | 7 | 25% | 2 | 13% | 1 | 13% | 1 | 13% | 1 | 8 |
| Disability support | 91% | 10 | 9% | 1 | 0% | 0 | 0% | 0 | 0% | 0 | 11 |
| Respite care | 88% | 7 | 25% | 2 | 13% | 1 | 13% | 1 | 13% | 1 | 8 |

Source: Yarra Ranges Council (2023). *Access to human services in Yarra Ranges, 2023*.
<https://www.yarraranges.vic.gov.au/Community/Health-and-Wellbeing/Human-Services-Needs-Analysis>

INCREASES IN DEMAND SINCE 2019

Over the past four years, increased demand had the most impact for:

- Services for older people – 14 services identified this as an issue, both for the whole of Yarra Ranges (11) and also in the Hills (3), Valley (1) and Urban Area (1).
- Disability support services – 13 services identified this as an issue, primarily as a Yarra Ranges-wide issue (12).

Seven services identified support for unpaid carers as a growing area of demand, five identified respite care and three identified residential care – primarily as a Yarra Ranges-wide issue.

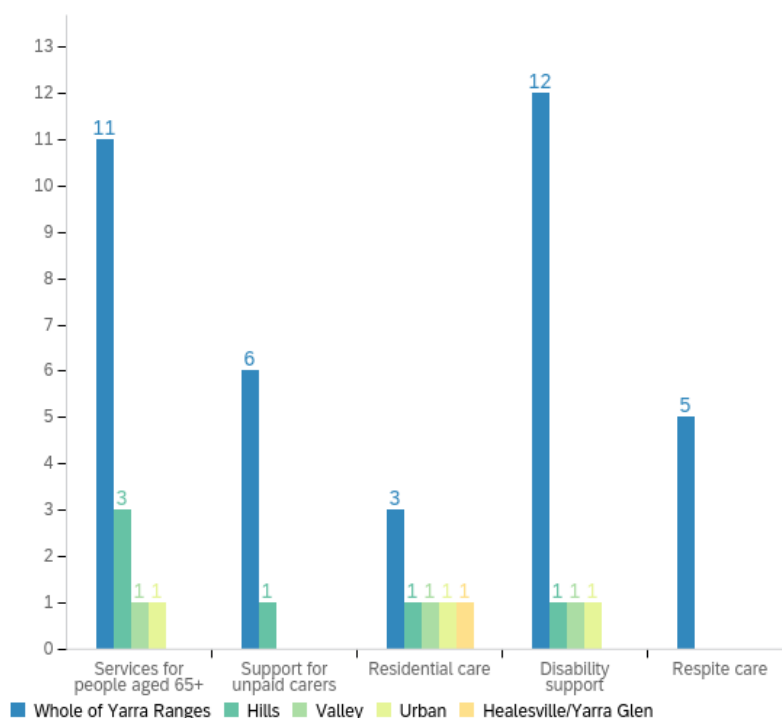
The main increase in demand identified for the Hills was services for older people. Shifts in demand were more evenly spread across service types for the Urban Area and the Valley, and minimal increases in demand were specifically identified for Healesville-Yarra Glen.

Age and disability services: Has your service noticed an increase in demand over the past four years? If yes, for which services and areas?

| Question | Whole of Yarra Ranges | | Hills | | Valley | | Urban | | Healesville/Yarra Glen | | Total |
|---------------------------|-----------------------|----|-------|---|--------|---|-------|---|------------------------|---|-------|
| Services for older people | 79% | 11 | 21% | 3 | 7% | 1 | 7% | 1 | 0% | 0 | 14 |
| Support for unpaid carers | 86% | 6 | 14% | 1 | 0% | 0 | 0% | 0 | 0% | 0 | 7 |
| Residential care | 100% | 3 | 33% | 1 | 33% | 1 | 33% | 1 | 33% | 1 | 3 |
| Disability support | 92% | 12 | 8% | 1 | 8% | 1 | 8% | 1 | 0% | 0 | 13 |
| Respite care | 100% | 5 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 5 |

Source: Yarra Ranges Council (2023). *Access to human services in Yarra Ranges, 2023*.
<https://www.yarraranges.vic.gov.au/Community/Health-and-Wellbeing/Human-Services-Needs-Analysis>

Age and disability services with increased demand over the past 4 years, by service type and area



RESIDENTIAL AGED CARE SERVICES

The target populations for residential aged care are persons aged 65 plus, and Indigenous people aged 50–64. Yarra Ranges has large gaps in residential aged care services, with no services in the Hills and a large shortfall in the Urban Area. The goal for service provision is 78 places per 1,000 people aged 70 plus; this ratio will be temporarily reduced to 60.1 places per 1,000, over three years starting from 2024-25.

The Urban Area has a shortfall of 302 places, the Hills has a shortfall of 279 places and the Valley has a shortfall of 64 places. The Hills has no residential age care; nor do Wandin-Seville, Upper Yarra Valley or Mount Evelyn. Montrose, Kilsyth, Healesville-Yarra Glen and Chirnside Park have a higher level of supply than the Yarra Ranges average, whilst Lilydale-Coldstream and Mooroolbark have an undersupply. Yarra Valley has more places than the Yarra Ranges average, but below the current national benchmark.

Victoria had 59,369 places in September 2023 and 772,281 residents aged 70 years or more, giving it 76.9 places per 1,000 older residents. This is only slightly below the national benchmark.

Residential care places: Yarra Ranges small areas, June 2023

| SA2 Name | Residents 70+ | Places (no.) | Places per 1,000 70+ | Shortfall in places |
|--------------------------|---------------|--------------|----------------------|---------------------|
| Yarra Valley | 2,116 | 142 | 67 | 23 |
| Montrose | 984 | 277 | 282 | -200 |
| Kilsyth | 1,525 | 220 | 144 | -101 |
| Healesville - Yarra Glen | 2,264 | 250 | 110 | -73 |
| Lilydale - Coldstream | 2,608 | 95 | 36 | 108 |
| Mooroolbark | 2,484 | 75 | 30 | 119 |
| Chirnside Park | 1,447 | 144 | 100 | -31 |
| Wandin - Seville | 807 | 0 | 0 | 63 |
| Upper Yarra Valley | 19 | 0 | 0 | 1.5 |
| Mount Dandenong - Olinda | 1,227 | 0 | 0 | 96 |
| Monbulk - Silvan | 713 | 0 | 0 | 56 |
| Mount Evelyn | 962 | 0 | 0 | 75 |
| Belgrave - Selby | 879 | 0 | 0 | 69 |
| Upwey - Tecoma | 755 | 0 | 0 | 59 |
| Total Yarra Ranges | 18,975 | 1,203 | 63 | 277 |
| Victoria | 772,281 | 59,369 | 77 | |
| National benchmark | | | 78 | |

Source: Australian Institute of Health and Welfare (2023). *Victoria service list, 30 June 2023*. <https://www.gen-agedcaredata.gov.au/Resources/Access-data/2023/September/Aged-care-service-list-30-June-2023>; <https://www.abs.gov.au/census/find-census-data/quickstats/2021/211051280>

Residential aged care service list: Yarra Ranges, 30 June 2023

| Service Name | Physical Suburb | Residential Places | Organisation Type | SA2 Name |
|-------------------------------|-----------------|--------------------|---------------------------|--------------------------|
| AdventCare Yarra Ranges | Warburton | 42 | Religious | Yarra Valley |
| Mercy Place Boronia | Montrose | 43 | Charitable | Montrose |
| Walmsley Aged Care | Kilsyth | 120 | Private Incorporated Body | Kilsyth |
| MiCare Overbeek Lodge | Kilsyth | 55 | Community Based | Kilsyth |
| Monda Lodge Hostel | Healesville | 30 | State Government | Healesville - Yarra Glen |
| MiCare Margriet Manor | Kilsyth | 45 | Community Based | Kilsyth |
| Kirkbrae Kilsyth Nursing Home | Kilsyth | 110 | Religious | Montrose |
| Lilydale Aged Care | Lilydale | 95 | Charitable | Lilydale - Coldstream |
| Mercy Place Montrose | Montrose | 124 | Charitable | Montrose |
| Estia Health Yarra Valley | Yarra Junction | 100 | Private Incorporated Body | Yarra Valley |
| Holmwood Aged Care | Healesville | 100 | Private Incorporated Body | Healesville - Yarra Glen |
| BlueCross Baradine | Mooroolbark | 75 | Private Incorporated Body | Mooroolbark |
| Aurum Healesville | Healesville | 120 | Private Incorporated Body | Healesville - Yarra Glen |
| Chirnside Views | Chirnside Park | 144 | Private Incorporated Body | Chirnside Park |

Source: Australian Institute of Health and Welfare (2023). *Victoria service list, 30 June 2023*.

<https://www.gen-agedcaredata.gov.au/Resources/Access-data/2023/September/Aged-care-service-list-30-June-2023>; <https://www.abs.gov.au/census/find-census-data/quickstats/2021/211051280>

PREVENTATIVE HEALTH CARE

GENERAL PRACTITIONER MANAGEMENT PLANS & TEAM CARE ARRANGEMENTS

A GP Management Plan (GPMP)) can help people with chronic medical conditions by providing an organised approach to care. It is a plan of action agreed between a patient and their GP. The plan identifies the patient's health and care needs, sets out the services to be provided by the GP, and lists the actions the patient can take to help manage their condition.

For patients with type 2 diabetes, a GPMP provides Medicare-subsidised care from selected allied health care providers for group allied health treatment services. Eligible allied health services include diabetes education services, exercise physiology and dietetics. This is in addition to individual allied health services made available through Team Care Arrangement (TCAs).

Patients with complex care needs requiring multidisciplinary care are eligible for TCAs. These help to coordinate the care needed from a patient's GP, and other health or care providers. TCAs require a GP to collaborate with at least two other health or care providers who will provide ongoing treatment and services. They provide access to Medicare-subsidised care from selected allied health care providers. Eligible services include Indigenous health services, diabetes education services, audiology, exercise physiology, dietetics, mental health services, occupational therapy, physiotherapy, podiatry, chiropractic services, osteopathy, psychology and speech pathology.

In Yarra Ranges in 2019, 106.2 services per 1,000 residents were provided for GPMPs, above the Victorian average of 101.5%. For Team Care Arrangements (TCAs), 84.8 services per 1,000 Yarra Ranges residents were provided, below the Victorian average of 89. Trend data are not publicly available for this dataset.

The higher use of GPMPs may indicate a higher rate of chronic diseases, given that Yarra Ranges does not have good access to GPs, thus the figures are unlikely to reflect a high level of service access.

Provision of GPMP and TCA services: Yarra Ranges, 2019

| SA3 name | GPMP | | TCAs | |
|--------------|----------------|--|----------------|--|
| | Total services | Rate per 1,000 population (age-standardised) | Total services | Rate per 1,000 population (age-standardised) |
| Yarra Ranges | 18,717 | 106.2 | 16,081 | 84.8 |
| Victoria | 720,558 | 101.5 | 633,370 | 89.0 |

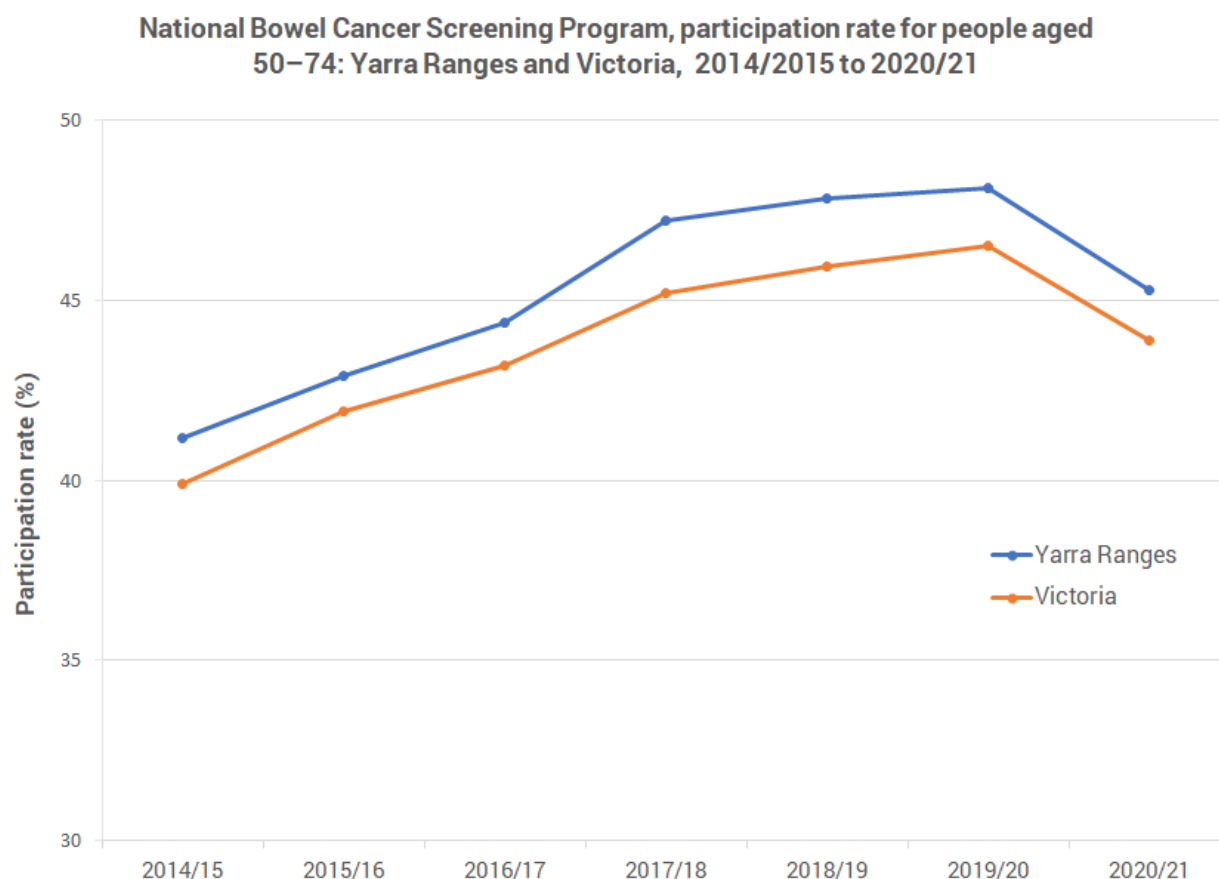
Source: Australian Institute of Health and Welfare (2022). Use of Medicare Chronic Disease Management and allied health services.

<https://www.aihw.gov.au/reports/chronic-disease/medicare-chronic-disease-allied-health-items/data>

CANCER SCREENING RATES

Cancer is one of the main causes of illness and death amongst Australians. Some cancers can be detected through screening, allowing for early detection, intervention and treatment amongst defined target groups. Screening data are also useful in analysing service utilisation patterns, and identifying which areas and groups most need increased screening.

BOWEL CANCER SCREENING



Bowel cancer screening rates dropped in 2020/21, both in Yarra Ranges and Victoria-wide. Yarra Ranges had a 5.9% drop in bowel cancer screening amongst 50-74 years olds, whilst Victoria had a 5.6% drop. Screening rates had been consistently increasing for the five years leading up to the pandemic. So this change can reasonably be attributed to the impacts of lockdowns on service access and usage. Bowel cancer screening is crucial to reducing the risk of severe bowel cancer, by catching the disease early, and this drop in screening increases the level of people at risk of developing more advanced bowel cancer.

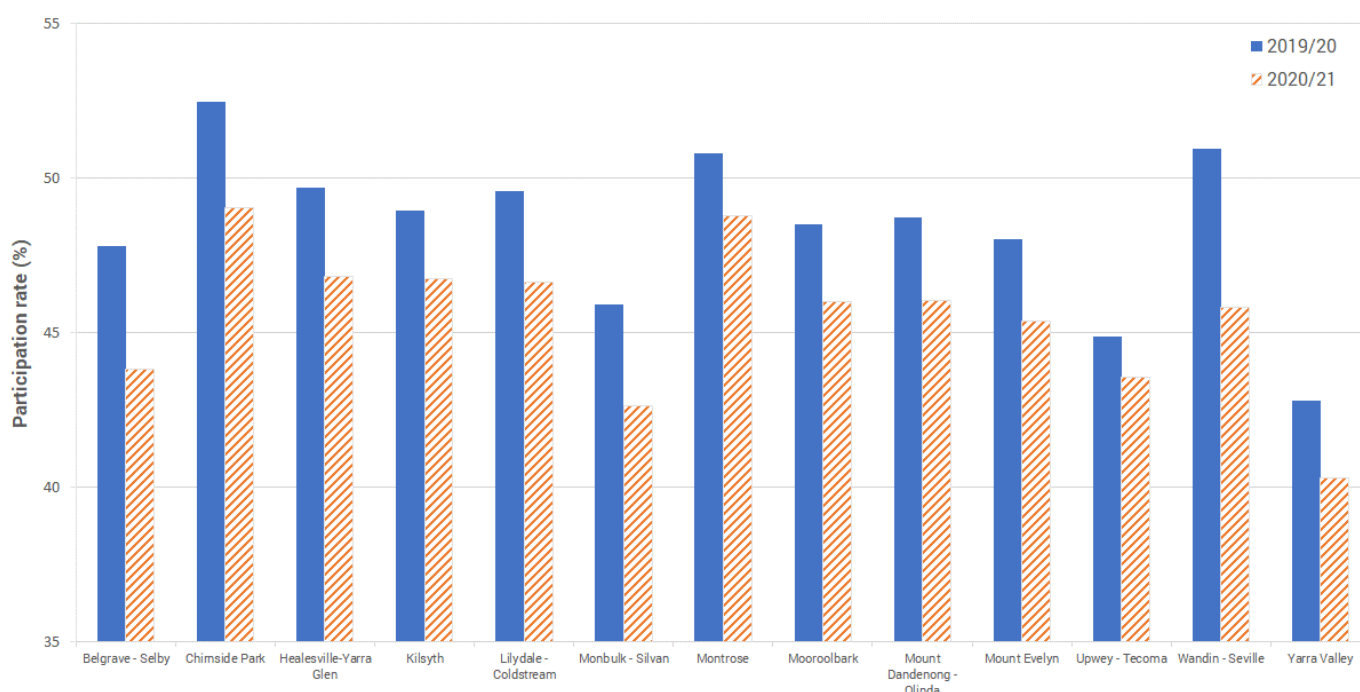
Note that it is important to note that the National Bowel Cancer Screening Program has both widened its target group and increased the recommended frequency of testing in recent years, meaning that the drop may understate the change in 2020/21 compared to what could have normally been expected for that year.

Participation rate (%) in the National Bowel Cancer Screening Program, people aged 50–74: Yarra Ranges and Victoria, 2014/2015 to 2020/21

| Area | 2014/ 15 | 2015/ 16 | 2016/ 17 | 2017/ 18 | 2018/ 19 | 2019/ 20 | 2020/ 21 | % change, 2019/20- 2020/21 |
|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|
| Yarra Ranges | 41.2 | 42.9 | 44.4 | 47.2 | 47.8 | 48.1 | 45.3 | -5.9% |
| Victoria | 39.9 | 41.9 | 43.2 | 45.2 | 46.0 | 46.5 | 43.9 | -5.6% |

Source: Australian Institute of Health and Welfare. (2022). *Cancer screening programs: quarterly data*. <https://www.aihw.gov.au/reports/cancer-screening/national-cancer-screening-programs-participation>

National Bowel Cancer Screening Program, participation rate for people aged 50–74: Yarra Ranges small areas, 2019/2020 to 2020/21



The changes in participation rates varied substantially by local area. Decreases were largest in Wandin-Seville, Belgrave-Selby and Monbulk-Silvan, with changes of 10%, 8.3% and 7.2% respectively, compared to 5.9% across Yarra Ranges. The decreases were lowest in Upwey-Tecoma (2.9%), Montrose (4%) and Kilsyth (4.5%). Data were not published for Upper Yarra Valley.

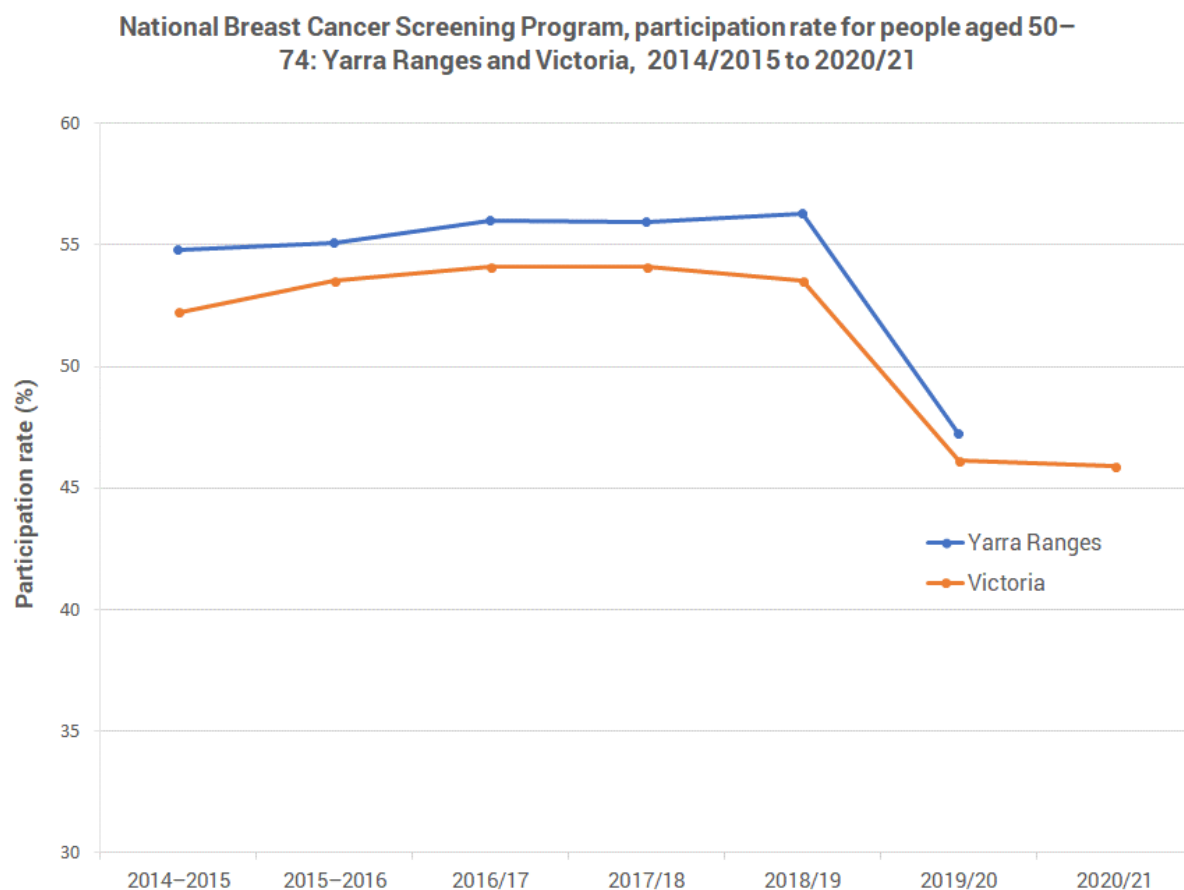
Participation rate (%) in the National Bowel Cancer Screening Program, people aged 50 – 74: Yarra Ranges SA2s, 2019/20 and 2020/21

| SA2 Name | 2019/20 | 2020/21 | Change in participation rate, 2019/20-2020/21 |
|--------------------------|---------|---------|--|
| Belgrave - Selby | 47.8 | 43.8 | -8.3% |
| Chirnside Park | 52.4 | 49.0 | -6.5% |
| Healesville-Yarra Glen | 49.7 | 46.8 | -5.8% |
| Kilsyth | 48.9 | 46.7 | -4.5% |
| Lilydale - Coldstream | 49.6 | 46.6 | -6.0% |
| Monbulk - Silvan | 45.9 | 42.6 | -7.2% |
| Montrose | 50.8 | 48.8 | -4.0% |
| Mooroolbark | 48.5 | 46.0 | -5.2% |
| Mount Dandenong - Olinda | 48.7 | 46.0 | -5.6% |
| Mount Evelyn | 48.0 | 45.4 | -5.5% |
| Upwey - Tecoma | 44.9 | 43.6 | -2.9% |
| Wandin - Seville | 50.9 | 45.8 | -10.0% |
| Yarra Valley | 42.8 | 40.3 | -5.9% |
| Upper Yarra Valley | n.p. | n.p. | n.p. |

n.p.: not published

Source: Australian Institute of Health and Welfare. (2022). *Cancer screening programs: quarterly data*. <https://www.aihw.gov.au/reports/cancer-screening/national-cancer-screening-programs-participation>

BREAST CANCER SCREENING



In 2019/20, 47.2% of 50-74 year old women in Yarra Ranges participated in the breast cancer screening program. This is similar to the 45.9% Victorian average, but down from 56.3% in 2018/19. Screening rates were consistently in the mid-50s in the five preceding years. Victoria-wide, there was also a substantial fall in participation in 2020/21 (these data are not yet available at SA3 level). The number being screened in 2019/20 fell by 15.2% in Yarra Ranges and 11.5% across Victoria; the percentage fell by 16% in Yarra Ranges and 14% across Victoria.

Breast Screen Victoria closed from 24 March 2020 until early May 2020, and these closures are viewed as linked to lockdowns.⁷⁹ The Australian Institute of Health and Welfare has not produced equivalent commentary on the 2021 lockdowns, however, as levels in

⁷⁹ <https://www.aihw.gov.au/reports/cancer-screening/cancer-screening-and-covid-19-in-australia/contents/did-fewer-people-screen-for-cancer-during-the-covid-19-pandemic>

2020/21 were almost identical to 2019/20 levels, they appear to have had a similar impact on participation.

Participation rate (%) by age in BreastScreen Australia, women aged 50–74: Yarra Ranges and Victoria, 2014/15-2020/21

| Age group | 2014–2015 | 2015–2016 | 2016/17 | 2017/18 | 2018/19 | 2019/20 | 2020/21 |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Yarra Ranges | | | | | | | |
| 50–54 | 54.8 | 52.8 | 54.0 | 53.3 | 52.2 | 42.4 | n/a |
| 55–59 | 52.0 | 52.7 | 53.3 | 53.0 | 55.1 | 46.9 | n/a |
| 60–64 | 58.0 | 59.6 | 58.4 | 57.6 | 57.9 | 48.0 | n/a |
| 65–69 | 59.5 | 60.1 | 60.9 | 61.1 | 60.4 | 52.1 | n/a |
| 50–69 | 55.8 | 55.9 | 56.4 | 55.9 | 56.2 | 47.1 | n/a |
| 70–74 | 47.4 | 48.9 | 53.6 | 55.9 | 57.1 | 48.1 | n/a |
| 50–74 | 54.8 | 55.1 | 56.0 | 55.9 | 56.3 | 47.2 | n/a |
| Victoria | | | | | | | |
| 50–54 | 50.6 | 51.8 | 51.5 | 50.9 | 50.1 | 42.4 | 42.3 |
| 55–59 | 51.4 | 51.1 | 51.5 | 52.0 | 51.5 | 44.4 | 43.9 |
| 60–64 | 56.8 | 57.1 | 57.1 | 56.6 | 55.6 | 47.4 | 47.4 |
| 65–69 | 57.4 | 58.3 | 58.6 | 58.5 | 57.5 | 49.9 | 49.8 |
| 50–69 | 53.7 | 54.3 | 54.3 | 54.2 | 53.4 | 45.8 | 45.6 |
| 70–74 | 42.7 | 48.8 | 52.5 | 53.5 | 54.2 | 47.9 | 47.6 |
| 50–74 | 52.2 | 53.5 | 54.1 | 54.1 | 53.5 | 46.1 | 45.9 |

Source: Australian Institute of Health and Welfare. (2022). *Cancer screening programs: quarterly data*. <https://www.aihw.gov.au/reports/cancer-screening/national-cancer-screening-programs-participation>

Demographics

CARERS

In 2021, 15% of Yarra Ranges residents aged 15 years or more had caring responsibilities, providing unpaid assistance to a person needing assistance due to disability, health conditions or old age. Persons aged 45 years or more account for 55% of all unpaid carers, and the main carer responsibilities are felt by 45-64 year olds. Twenty-three percent of 55-64 year olds are carers, as are 20% of 45-54 year olds. This is the age group whose parents tend to be aged 75 plus, and needing more care and assistance. Many retirees are also carers: 17% of 65-74 year olds, 12.5% of 75-84 year olds, and 7.5% of those aged 85 plus. For this group, care would be focused on the needs of partners, but would still include frail aged parents and dependent adult children. The level of older carers is slightly above the Victorian average.

For Indigenous residents, carer responsibilities are spread more evenly by age group, and experienced at a much younger age – 20% of Indigenous 25-34 year olds are carers, compared to 9% for the total population. Twenty-four percent % of 35-64 year olds are carers, and 18% of persons aged 65 plus are carers.

Unpaid assistance to a person with a disability, health condition or due to old age, by age: Yarra Ranges, 2021

| Age group | Proportion of all residents providing unpaid care, Yarra Ranges | Proportion of Indigenous residents providing unpaid care, Yarra Ranges | Proportion of all residents providing unpaid care, Victoria |
|-----------------|---|--|---|
| 15-19 years | 4.5% | 8.2% | 4.8% |
| 20-24 years | 7.2% | 9.0% | 6.2% |
| 25-34 years | 9.1% | 19.7% | 7.6% |
| 35-44 years | 14.4% | 23.9% | 12.5% |
| 45-54 years | 19.6% | 24.5% | 18.6% |
| 55-64 years | 23.1% | 24.2% | 21.0% |
| 65-74 years | 17.1% | (65+) 18.4% | 15.7% |
| 75-84 years | 12.5% | | 12.0% |
| 85 years & over | 7.5% | | 6.8% |
| Total | 14.7% | 18.1% | 12.9% |

Source: Australian Bureau of Statistics (2021). *Census of Population and Housing*.
<https://www.abs.gov.au/census/find-census-data/search-by-area>

LIVING ALONE

Eight percent of the total Yarra Ranges population lives alone (compared to 10% across Victoria), but residents aged 55 years or more are much more likely to live alone. The level of residents who live alone increases with age partly due to the death of partners. In Yarra Ranges, a below average level of older residents live alone:

- 13% of 55-64 year olds live alone, compared to 15.6% across Victoria.
- 18.6% of 65-74 year olds live alone, compared to 21% across Victoria.
- 26% of 75-84 year olds live alone, compared to 28.3% across Victoria.
- 40.3% of persons aged 85 plus live alone, compared to 43.6% across Victoria.
- 6% of Indigenous residents live alone (105 persons) - this data is not available by age.

Source: Australian Bureau of Statistics (2021). *Census of Population and Housing*.
<https://www.abs.gov.au/census/find-census-data/search-by-area>

VOLUNTEERING

In 2021, 15.5% of Yarra Ranges residents aged 15 years or more volunteered with an organisation or group, compared to 13.3% across Victoria. The level has dropped substantially from 21.3% in 2016. The changes in the level of volunteering are generally attributed to the impacts of the COVID-19 pandemic and associated lockdowns.

Females are more likely to volunteer than males, with 16.7% of females aged 15 plus volunteering for an organisation or group, compared to 14.2% of males. Volunteering is highest amongst 65-74 year olds, at 20%, compared to 17% amongst 35-44 year olds, 45-54 year olds and 75-84 year olds. It is lower amongst persons aged 85 plus, at 7%. Yarra Ranges has an above average level of volunteers amongst all age groups except for 20-24 year olds.

Voluntary work for an organisation or group by age: Yarra Ranges and Victoria, 2021

| Age group | Number of volunteers | Yarra Ranges Total number | Share of total | Victoria Share of total |
|-----------------|----------------------|------------------------------|----------------|----------------------------|
| 15-19 years | 1,169 | 9,465 | 12.4% | 11.9% |
| 20-24 years | 1,073 | 8,692 | 12.3% | 12.8% |
| 25-34 years | 2,061 | 19,122 | 10.8% | 9.6% |
| 35-44 years | 3,509 | 20,374 | 17.2% | 13.1% |
| 45-54 years | 3,747 | 21,524 | 17.4% | 15.4% |
| 55-64 years | 3,209 | 20,271 | 15.8% | 14.4% |
| 65-74 years | 3,248 | 16,358 | 19.9% | 17.7% |
| 75-84 years | 1,486 | 8,550 | 17.4% | 15.2% |
| 85 years & over | 191 | 2,677 | 7.1% | 6.1% |
| Total | 19,695 | 127,036 | 15.5% | 13.3% |

Source: Australian Bureau of Statistics (2021). *Census of Population and Housing*.
<https://www.abs.gov.au/census/find-census-data/search-by-area>

DISABILITY

The Census measures disability via persons with a profound or severe core activity limitation. People with a profound or severe core activity limitation are those needing assistance in their day to day lives in one or more of the three core activity areas of self-care, mobility and communication because of a long-term health condition (lasting six months or more), a disability (lasting six months or more), or old age.

The average level of disability across the whole population is 5.4%. The age groups with the highest need for assistance with core activities are children aged 5–14 and older residents aged 65 years or more. The age ranges with the lowest level of disability are 15-64 year olds, with disability rates ranging from 2.2% to 4.4%; and 0-4 year olds (1.4%) with disability lower in this age group due to the time involved in identification and diagnosis. Amongst children aged 5-14, 5.2% have a need for assistance. 7.3% of 65-74 year olds have a disability, with the level jumping to 18.2% for 75-84 year olds, and to 49.9% for persons aged 85 years or more. Indigenous residents have much higher levels of disability amongst older residents, when compared to the total population.

When looking at the percentage increase, or growth in each age cohort, it is interesting to see that younger age groups with a core need for assistance experienced the highest rate of growth between 2016 and 2021. In particular, the number of people with a need for assistance in the 5-14 year age group increased by 46.7%.

Yarra Ranges has a below average level of residents with a disability amongst persons aged 65 plus; it has an above average level amongst 5-34 year olds.

Core activity need for assistance by age and Indigenous status: Yarra Ranges & Victoria, 2021

| Age group | Total population, Yarra Ranges | Indigenous residents, Yarra Ranges | Total population, Victoria |
|-----------------|-----------------------------------|---------------------------------------|-------------------------------|
| 0-4 years | 1.4% | 1.7% | 1.3% |
| 5-14 years | 5.2% | 12.5% | 4.3% |
| 15-19 years | 4.3% | 5.7% | 3.5% |
| 20-24 years | 3.5% | 2.4% | 2.3% |
| 25-34 years | 2.4% | 7.5% | 1.8% |
| 35-44 years | 2.2% | 2.5% | 2.1% |
| 45-54 years | 3.1% | 11.3% | 3.5% |
| 55-64 years | 4.4% | 21.6% | 5.7% |
| 65-74 years | 7.3% | 22.4% | 9.9% |
| 75-84 years | 18.2% | | 22.7% |
| 85 years & over | 49.9% | | 51.7% |
| Total | 5.4% | 9.6% | 5.9% |

Source: Australian Bureau of Statistics (2021). *Census of Population and Housing*.
<https://www.abs.gov.au/census/find-census-data/search-by-area>

HOMELESSNESS

In 2021, an estimated 41 persons aged 65 plus in Yarra Ranges were homeless, along with 30 persons aged 60-64 and 32 persons aged 55-59.⁸⁰

LABOUR FORCE STATUS

Most persons aged 65 years or more were retired, with 79% not in the labour force. Those who were still working were most likely to be working part-time (53%) rather than full-time (38%). This age group had a very low unemployment rate of 2.1% (of those in the labour force).

⁸⁰ Source: Parliament of Australia (2024). *Your Electorate – Casey, 2021*.
https://www.aph.gov.au/About_Parliament/Parliamentary_departments/Parliamentary_Library/pubs/Dashboards/YourElectorate

Most residents aged 55-64 were still working, with 70.5% in the labour force. Most of this group were working full-time (56%) rather than part-time (37%). They had a low unemployment rate, at 2.9%.

Labour force status, persons aged 55 years or more: Yarra Ranges & Victoria, 2021

| Labour force status | 55-64 years | | 65 years & over | | Total |
|---------------------------------|---------------|---------------|-----------------|---------------|----------------|
| Employed, worked: | | | | | |
| Full-time | 7,816 | 38.6% | 1,704 | 6.2% | 45,782 |
| Part-time | 5,105 | 25.2% | 2,354 | 8.5% | 28,190 |
| Employed, away from work | 813 | 4.0% | 347 | 1.3% | 4,737 |
| Hours worked not stated | 134 | 0.7% | 82 | 0.3% | 1,191 |
| Total employed | 13,876 | 68.5% | 4,477 | 16.2% | 79,903 |
| Unemployed, looking for: | | | | | |
| Full-time work | 241 | 1.2% | 28 | 0.1% | 1,389 |
| Part-time work | 175 | 0.9% | 59 | 0.2% | 1,549 |
| Total unemployed | 414 | 2.0% | 95 | 0.3% | 2,941 |
| Total labour force | 14,295 | 70.5% | 4,578 | 16.6% | 82,842 |
| Not in the labour force | 5,262 | 26.0% | 21,757 | 78.9% | 39,255 |
| Labour force status not stated | 715 | 3.5% | 1,248 | 4.5% | 4,940 |
| Total | 20,271 | 100.0% | 27,585 | 100.0% | 127,036 |

Source: Australian Bureau of Statistics (2021). *Census of Population and Housing*.
<https://www.abs.gov.au/census/find-census-data/search-by-area>

RETIREMENT INCOME

In 2023, Yarra Ranges had 16,112 age pensioners. In 2020, it had 1,789 residents aged 60 years or more receiving superannuation income, with an average income of \$27,940 and a median income of \$16,881. Average incomes include both very high and very low incomes, so the median is more indicative of the midpoint of superannuation incomes.

Personal income: Yarra Ranges, year ended 30 June 2023

| Description | |
|--|--------------|
| Superannuation and annuity income earners (no.) | 1,789 |
| Superannuation and annuity income earners - median age | 59 years |
| Total superannuation and annuity income | \$50 million |
| Median superannuation and annuity income | \$16,881 |
| Mean superannuation and annuity income | \$27,940 |
| Superannuation and annuity income as main source of income (% of total population) | 1.1% |

Source: Australian Bureau of Statistics (2024). *Region summary: Yarra Ranges*.

<https://dbr.abs.gov.au/region.html?lyr=lga&rgn=27450>

PART 7: ACCESS TO HEALTH SERVICES

Health services include general practitioners (GPs); mental health; community health and allied health (e.g., physiotherapy, dentists); and acute health (e.g., hospitals).

General factors affecting health workforce shortages

Workforce shortages have exacerbated service access issues over the past four years. However, the number of registered health professionals in Australia has risen by 18% since the COVID-19 pandemic, including doctors, nurses and psychologists. Thus the issue is not an absolute lack of numbers. It is more about the type, location and participation patterns of the health workforce. Factors contributing towards shortages in many areas of Australia include:

- Workers are not necessarily based in the areas of highest need, causing localized shortages. There aren't enough workers in the areas that need them the most, especially rural and remote areas. There are also variations based on type of worker – the Outer East has a low level of health professionals across all service types, but has a particularly low level of psychiatrists.
- More workers are working part-time, so growth in numbers does not necessarily mean growth in effective full-time workers.
- The skills of workers such as nurses are under-utilised due to regulations; and too much time is spent in administrative tasks, especially for General Practitioners (GPs).
- The burden of disease is changing, due to population ageing and a growing level of chronic disease. This means that the health workforce needs to keep growing at a faster rate than population growth.
- Other factors include staff burnout; and the ongoing effects of the pandemic, including backlogs, delayed care, mental health problems and long-COVID.⁸¹

⁸¹ Chysantho, N. (2023). *The Age - Australia is registering 5000 new healthcare workers a month. So why is there still a staffing crisis?* <https://www.theage.com.au/politics/federal/australia-is-registering-5000-new-healthcare-workers-a-month-so-why-is-there-still-a-staffing-crisis-20230817-p5dxab.html>

Workforce variations include:

GPs: Inner Eastern Melbourne has 2.39 GPs per 1,000 residents, whilst Outer Melbourne has 1.43 per 1,000, roughly 60% of the level in the inner east.

Psychiatrists: The discrepancy for psychiatrists is particularly high. Inner Eastern Melbourne has 0.3 psychiatrists per 1,000 residents, whilst Outer Melbourne has 0.08 per 1,000, the second lowest level in metropolitan Melbourne and only about one-quarter of the rate available in the inner east.

Clinical psychologists: Inner Eastern Melbourne has 1.38 clinical psychologists per 1,000 residents, whilst Outer Melbourne 0.72 per 1,000, roughly half the level.

The lack of GPs affects patient capacity to get a referral to a mental health professional. And once people obtain a referral, the low level of psychologists and psychiatrists creates a major gap in service access, compounding the already high levels of mental health issues in outer metropolitan areas.

Shortages of medical practitioners

DISTRIBUTION PRIORITY AREAS FOR GP SERVICES

Distribution Priority Areas (DPAs) compare available general practitioner (GP) services to GP service benchmarks. The data was last updated on 21 July 2022. All parts of the Yarra Valley are classified as DPAs for GPs. The Urban Area and the Hills are classified as having an adequate number of GPs for their population.

DISTRICTS OF WORKFORCE SHORTAGE

Districts of Workforce Shortage (DWS) assess the number of non-GP medical specialists compared to the population of an area⁸². The data was last updated on 21 July 2022. Yarra Ranges had a workforce shortage for each type of medical specialist, in every area of the municipality:

- Anaesthetics – all areas of Yarra Ranges had a workforce shortage.
- Diagnostic radiology – all areas of Yarra Ranges.
- Obstetrics and gynocaelogy – all areas of Yarra Ranges.
- Medical oncology – all areas of Yarra Ranges.
- Cardiology – all areas of Yarra Ranges.
- General surgery – all areas of Yarra Ranges.
- Ophthalmology – all areas of Yarra Ranges.
- Psychiatry – all areas of Yarra Ranges.

Access was worst for anaesthetics, obstetrics and gynocaelogy, ophthalmology, and psychiatry – no services were available anywhere in outer eastern Melbourne. Diagnostic radiology and medical oncology had somewhat closer availability, as they were available in Croydon in the outer east; similarly, cardiology and general surgery were available in Bayswater in the outer east.

GP COSTS & NUMBERS

GP data is available grouped by federal electorate. Yarra Ranges is in the Casey electorate, and Casey's boundaries align with those of Yarra Ranges. Casey has 37 GP clinics, 36 of which responded to the Cleanbill GP survey. The survey found that 34 clinics (94.4%) were willing to take on new patients. This is better than the Victorian average of 88.9%. However, only four clinics bulk bill, giving Casey an extremely low bulk billing rate of 11.8%, compared to 34.6% for Victoria. The average out of pocket cost is \$35.28, below the Victorian average of \$40.10.

⁸² Department of Health (2023). *Health Workforce Locator, 21 July 2022 data*.

<https://www.health.gov.au/topics/rural-health-workforce/classifications/dpa>

<https://www.health.gov.au/resources/apps-and-tools/health-workforce-locator/app>

GP bulk-billing rates: Casey and Victoria, 2023

| Indicator | Casey electorate | Victoria |
|--|------------------|----------|
| Total clinics | 37 | 1,553 |
| Quoted clinics | 36 | n/a |
| Available clinics | 34 | n/a |
| Bulk billing clinics | 4 | n/a |
| Average cost (standard consultation) | \$75.03 | n/a |
| Availability rate | 94.4% | 88.9% |
| Bulk billing rate | 11.8% | 34.6% |
| Average out-of-pocket cost (standard consultation) | \$35.28 | \$40.10 |

Source: Cleanbill (2023). *Health of the nation report*. <https://cleanbill.com.au/wp-content/uploads/2023/04/Cleanbill-Health-of-the-Nation-Report-April-2023-1.pdf>

HEALTH WORKFORCE MAPPING - SHORTAGES OF ALLIED HEALTH WORKERS & MEDICAL PRACTITIONERS

OVERVIEW

The Rural Health Workforce Mapping Tool is a data tool which integrates data across health professions by geographic area and compares these data to the workforce in major cities. This highlights disparities in the supply of health workers around the country. The bigger the deficit, the worse the maldistribution of the health workforce. The data include:

- A summation of workforce across professions. Note that these can be influenced by large or small numbers of single professions and may mask gaps for individual professions.
- Clinical full time equivalent (Clin FTE) is used rather than a headcount, to adjust for differences in hours worked by different clinicians and time spent on travel and other non-clinical tasks that might increase with geographic remoteness.
- Data are adjusted for population differences between areas and therefore standardised as a figure per 100,000 people. This enables comparison between areas with very different population sizes (and therefore different absolute workforce needs, based solely on population). Note: in remote area, more clinicians are required due to the need to service small populations spread over vast distances.

YARRA RANGES

Yarra Ranges has a major shortage of medical workers, compared to major city averages. The age-standardised rate of chronic disease was 30.5 per 100 residents. It ranks third highest in Melbourne for its workforce deficit, at -1,406 workers per 100,000 residents (behind Melton with -1,514 and Cardinia with -1,503). It had a shortage of 1,297 nurses/midwives, 488 medical practitioners and 428 allied health workers. Osteopaths and paramedics were the only types of medical workers of which Yarra Ranges has enough.

For allied health, the largest shortages were for physiotherapists (106 workers needed), medical radiation practitioners (84), occupational therapists (80), pharmacists (66), psychologists (61) and dentists (59). Yarra Ranges had no ATSI health practitioners. For nurses and midwives, the largest shortage was for registered nurses (1,229 workers needed); there was also a shortage of 71 enrolled nurses and 68 registered midwives. For medical practitioners, the largest shortages were for nurses/midwives (1,297 workers needed), specialists (239), specialists-in-training (117) and hospital non-specialists (108).

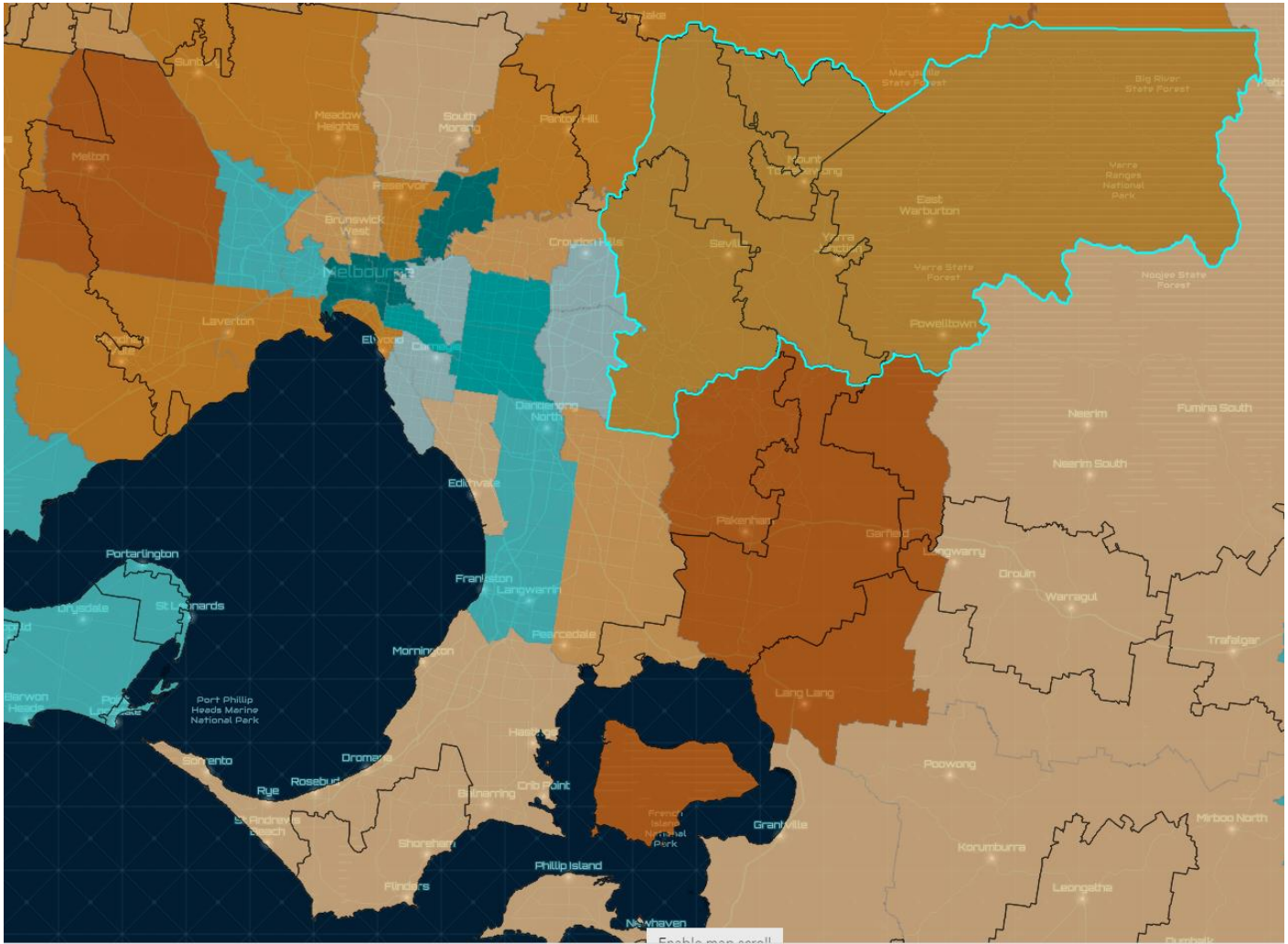
LGA total workforce – Yarra Ranges, October 2024

| | Actual workforce (Clin FTE) | Per population workforce (Clin FTE/100,000) | Workforce deficit compared to major cities (Clin FTE/100,000) | Workforce deficit (number of workers needed) |
|--|-----------------------------------|---|--|--|
| ATSI Health Practitioners | 0.0 | 0.0 | -0.5 | -0.8 |
| Chiropractors | 18.6 | 11.8 | -4.4 | -7.0 |
| Chinese Medicine Practitioners | 14.2 | 9.0 | -3.5 | -5.4 |
| Dental Practitioners | 67.8 | 43.1 | -37.7 | -59.3 |
| Medical Radiation Practitioners | 12.6 | 8.0 | -53.1 | -83.6 |
| Occupational Therapists | 44.4 | 28.2 | -50.6 | -79.6 |
| Optometrists | 16.9 | 10.7 | -10.3 | -16.2 |
| Osteopaths | 30.1 | 19.1 | 10.2 | 16.1 |
| Pharmacists | 77.2 | 49.1 | -42.1 | -66.3 |
| Physiotherapists | 76.2 | 48.4 | -67.1 | -105.5 |
| Podiatrists | 23.0 | 14.6 | -3.5 | -5.5 |
| Paramedicine Practitioners | 156.5 | 99.4 | 29.3 | 46.1 |
| Psychologists | 81.8 | 52.0 | -38.5 | -60.5 |
| Total Allied Health & Other Workforce | 619.3 | 393.5 | -271.7 | -427.6 |
| Enrolled Nurses | 205.7 | 130.7 | -44.9 | -70.7 |
| Registered Midwives | 49.0 | 31.1 | -43.0 | -67.7 |
| Registered Nurses | 341.2 | 216.8 | -780.7 | -1,228.8 |
| Total Nurses/Midwives | 533.8 | 339.2 | -824.2 | -1,297.2 |
| General Practitioners | 158.8 | 100.9 | -5.5 | -8.7 |
| Hospital Non-Specialists | 0.0 | 0.0 | -68.9 | -108.4 |
| Non-Clinicians | 0.0 | 0.0 | -0.4 | -0.6 |
| Other Clinicians | 3.0 | 1.91 | -8.2 | -12.9 |
| Specialists | 13.9 | 8.8 | -151.9 | -239.1 |
| Specialists-in-Training | 12.6 | 8.0 | -74.5 | -117.2 |
| Total Medical Practitioners | 187.8 | 119.3 | -309.8 | -487.5 |
| Total Workforce | 1,340.9 | 852.0 | -1,405.7 | -2,212.3 |

Source: National Rural Health Alliance. *Rural Health Workforce Mapping Tool*.

<https://alga.com.au/rural-health-workforce-mapping-tool/>

LGA total workforce – Melbourne LGAs, October 2024



Source: National Rural Health Alliance. *Rural Health Workforce Mapping Tool*.
<https://alga.com.au/rural-health-workforce-mapping-tool/>

WHAT TYPES OF CARE WERE PEOPLE USING LESS OF?

For Medicare-subsidised GP, allied health and specialist health care, the last full year of data pre-COVID is for 2018/19. The latest data is for 2021/22; the first six months of this financial year still involved substantial lockdowns. So comparing 2018/19 and 2021/22 shows what changes occurred in service demand during COVID, but not whether service usage has returned to normal patterns since lockdown. Note that all comparisons in this section are of 2021/22 compared to 2018/19.

ALLIED HEALTH

Residents aged 45-64 were using less allied health services overall. The number of patients did not change significantly (down 1.4%) but the number of total services used dropped by 6.6%, leading to a 5.3% drop in services per 100 residents. This shows that patients were using less services per person. Other age groups had relatively static total allied health service usage.

Allied health physical health care was also being used less. The number of patients dropped by 5.2%, services dropped by 6.5% and the rate of service use dropped by 5%. Other allied health fell hugely, with patient numbers falling by 51% and service numbers falling by 50%.

CHRONIC DISEASE, PREVENTATIVE CARE AND SERVICE PROVISION

Use of the asthma cycle of care practice incentives program (PIP) dropped hugely during COVID, with the number of patients and services dropping by 37.5%, and the rate of service use halving. Similarly, use of the diabetes cycle of care PIP dropped substantially during COVID, with the number of patients and services dropping by about 15%, and the rate of service use dropping by 14%. Overall, the number of patients and services for PIPs fell by 13%. Use of GP chronic disease management plans fell in terms of patient numbers (down 6%), service numbers (down 8%) and the overall service rate (down 6.5%).

GPS

Long GP appointments fell by 6% and service use per patient fell substantially – the number of services fell by 16% and the service rate fell by 15%. Prolonged GP services also fell significantly - the general level of prolonged appointments fell by 6% in terms of patient

numbers and 11% for service numbers. The number of patients for 'GP Prolonged – Imminent danger of death' fell by 63%, and service use per 100 residents fell by 73%. There were substantial restrictions on GP use for patients with COVID-like symptoms, so this may have redirected respiratory patients to emergency departments.

GP enhanced primary care appointments fell by 6.5% for patient numbers and by 8% for service numbers.

The number of patients for urgent GP after-hours care fell by 6%, with a 13% drop in services and a 12% drop in the service rate. This may have been replaced by use of emergency departments; these data will be checked when available.

Telehealth fell by 100%, presumably due to changes in funding for telehealth.

PHYSICAL CARE

There was a substantial drop in use of chiropractic services – the number of patients dropped by 9.5% and the number of services dropped by 11.5%, leading to a 10% drop in the service rate. There was a similar pattern in use of exercise physiology, with patient numbers dropping by 11%. Service use per person rose, so the number of services decreased by a lower 6% level and the service rate dropped by 4%. GP acupuncture also fell, with a 3% drop in patient numbers and a 6% drop in services; the service rate fell by 5%. Osteopathy experienced a 3% fall in patient numbers and a 4% fall in the rate of service use. Physiotherapy experienced a 5% fall in both patient numbers and the rate of service use.

MENTAL HEALTH

GP mental health appointments dropped, with an 8% drop in patients and a 10.5% drop in service numbers. A GP referral is needed to use clinical psychology, so lower GP mental health service use would flow on to lower use of clinical psychology.

The number of clinical psychology patients dropped by 6%, but existing patients used a higher level of services, so there was little change in the number of services or the service rate. The number of patients for other psychologists fell by 7%.

Allied health mental health services were being used less in 2021/22, despite the growing prevalence of mental health issues during COVID. The number of patients dropped by 6.6% and the number of services dropped by 4.7%; services per 100 people dropped by 3.2%.

Other allied mental health had a 3% fall in patient numbers and an 8% fall in service numbers, meaning that patients were using less services per person.

INDIGENOUS HEALTH CARE

There was a large fall in use of Nursing and Aboriginal Health Workers during COVID. The number of patients fell by 3% and the rate of service use fell by 6%. The decline was similar amongst both males and females. The drop in patient numbers was highest amongst 0-24 year olds and 45-64 year olds; service use per patient had the largest decline amongst 45-64 year olds. There was less change amongst those aged 25-44, and a decline in service use per person amongst those aged 65 plus.

The number of patients for practice nurses/Aboriginal health workers fell by 8% and service use per patient fell, leading to an 8% fall in the rate of service use.

OTHER

Other Non-referred Medical Practitioner attendances fell by 32% in terms of patient numbers and 45% in terms of service rate, meaning that there was less service use per patient compared to pre-COVID.

WHAT TYPES OF CARE WERE PEOPLE USING MORE OF?

SPECIALIST HEALTH CARE

Audiology rose considerably, with an 18% rise in the number of patients and a 27% rise in the number of services; the rate of services per 100 people rose by one-third.

The number of dietetics patients rose by 5% and the number of services rose by 13%. This means that there was higher service use per patient. Leading to a 14% rise in the rate of service use.

PREVENTATIVE CARE

Cervical smear PIPs rose by 8% in terms of number of patients/services, and 10% in terms of service rate.

GPS AND NURSES

GP attendances rose across all age groups, particularly 0-24 year olds, with an 11% increase in patient numbers; and a 24% increase in the rate of services compared to 15%

across the total population. The number of male patients rose by 10%, compared to a 5% rise amongst females.

Other GP services with a substantial increase in patient and service numbers include: multidisciplinary case conferences, with a substantial rise in service use per patient; pregnancy support counselling, with a 9% rise in patient numbers; and short GP appointments, with a very large 58% rise in patient numbers.

The number of patients of GP nurse practitioners rose by 7%.

MENTAL HEALTH

Use of GP focused psychological strategies and family group therapy rose substantially, with a 16% increase in patients and very high 69% increase in service use, showing a large jump in service use per patient. This led to a 67% increase in the rate of services per 100.

There was a large jump in psychiatric patients and services – the number of patients rose by 15% and service use per patient increased, with a 32% rise in the service rate.

OTHER

Early intervention services for children jumped, with a 16% increase in patients and services, and 33% rise in the service rate. This may be due to the developmental impacts of COVID lockdowns.

Use of occupational therapy had a very large rise, with a 54% increase in patient numbers and a 64% increase in the rate of service provision. The number of speech pathology patients rose by 12%. Total specialist attendances rose amongst 0-24 year olds and 25-44 year olds, with a 3% rise in patient numbers. Medication management review also had a large rise, with a 19% jump in patient numbers.

There was a large rise in midwifery patients – possibly due to concerns about accessing hospital-based services. The number of patients rose by 18% and the number of services rose by 32%.

MINIMAL CHANGE IN USAGE

Services which experienced minimal change in patient numbers or level of service use included:

- Allied health attendances (all ages apart from 45-64).
- Optometry. This one would have been expected to fall due to limited availability post-COVID. It may rise in 2022/23 due to declining eye health during lockdown.
- Diagnostic imaging (all ages).
- Diabetes education.
- GP use for health assessments, standard length appointments, or non-urgent after hours care.
- Podiatry.
- Total specialist attendances amongst persons aged 45 years or more, all persons, and males and females.
- Medication management reviews (residential).

Medicare-subsidised GP, allied health and specialist health care: Yarra Ranges, 2018/19 to 2021/22

| Type of provider/care | No. of patients | | No. of services | | Services per 100 people | | % change, 2018-19 to 2021-22 | | |
|--|-----------------|---------|-----------------|---------|-------------------------|---------|------------------------------|-----------------|-------------------------|
| | 2018-19 | 2021-22 | 2018-19 | 2021-22 | 2018-19 | 2021-22 | No. of patients | No. of services | Services per 100 people |
| Allied Health attendances (total) | | | | | | | | | |
| 0-24 | 12,198 | 10,388 | 34,607 | 31,356 | 69.29 | 65.43 | -2.9% | -4.5% | -1.4% |
| 25-44 | 12,182 | 12,209 | 34,864 | 39,805 | 86.46 | 99.31 | 1.4% | -1.2% | 0.9% |
| 45-64 | 19,565 | 18,727 | 50,275 | 47,418 | 119.23 | 113.95 | -1.4% | -6.6% | -5.3% |
| 65+ | 16,565 | 17,775 | 53,936 | 55,713 | 216.66 | 206.44 | 4.3% | 3.0% | 0.9% |
| All persons | 60,510 | 59,099 | 173,683 | 174,291 | 110.39 | 111.3 | 0.6% | -2.1% | -0.5% |
| Female | 35,457 | 34,893 | 105,501 | 110,317 | 133.07 | 139.99 | 0.1% | -1.5% | 0.1% |
| Male | 25,054 | 24,206 | 68,181 | 63,974 | 87.36 | 82.23 | 1.2% | -3.1% | -1.6% |
| Allied Health subtotal - Mental Health Care | 11,807 | 10,121 | 55,522 | 58,190 | 35.29 | 37.16 | -6.6% | -4.7% | -3.2% |
| Allied Health subtotal - Optometry | 44,526 | 43,774 | 60,323 | 56,992 | 38.34 | 36.39 | 2.8% | 1.9% | 3.5% |
| Allied Health subtotal - Other | 9,706 | 10,206 | 29,752 | 30,399 | 18.91 | 19.41 | -0.6% | 0.2% | 1.7% |
| Allied Health subtotal - Physical Health Care | 8,674 | 8,921 | 28,086 | 28,708 | 17.85 | 18.33 | -5.2% | -6.5% | -5.0% |
| Asthma Cycle of Care PIP | 575 | 35 | 575 | 35 | 0.37 | 0.02 | -37.5% | -37.5% | -50.0% |
| Audiology | | 92 | | 183 | | 0.12 | 17.9% | 27.1% | 33.3% |
| Cervical Smear PIP | 453 | 170 | 453 | 170 | 0.29 | 0.11 | 7.6% | 7.6% | 10.0% |
| Chiropractic Services | 851 | 948 | 2,825 | 3,100 | 1.80 | 1.98 | -9.5% | -11.5% | -10.0% |
| Clinical Psychologist | 4,064 | 3,337 | 18,106 | 19,558 | 11.51 | 12.49 | -6.0% | -1.2% | 0.4% |
| Diabetes Education | 1,106 | 700 | 2,053 | 1,083 | 1.30 | 0.69 | 2.8% | 0.4% | 1.5% |
| Diabetes Mellitus Annual Cycle of Care PIP | 1,468 | 677 | 1,469 | 679 | 0.93 | 0.43 | -15.2% | -14.9% | -14.0% |
| Diagnostic Imaging (total) | | | | | | | | | |
| 0-24 | 12,998 | 12,009 | 23,474 | 21,736 | 47.00 | 45.36 | 2.1% | -0.9% | 2.3% |
| 25-44 | 15,568 | 15,777 | 37,367 | 38,349 | 92.67 | 95.68 | 1.8% | 0.0% | 2.2% |
| 45-64 | 19,393 | 18,758 | 51,847 | 51,662 | 122.95 | 124.15 | 0.5% | -0.3% | 1.1% |
| 65+ | 15,509 | 16,564 | 52,056 | 55,618 | 209.10 | 206.09 | 3.7% | 4.0% | 1.8% |
| All persons | 63,469 | 63,108 | 164,744 | 167,364 | 104.71 | 106.87 | 2.0% | 1.1% | 2.7% |

| Type of provider/care | No. of patients | | No. of services | | Services per 100 people | | % change, 2018-19 to 2021-22 | | |
|---|-----------------|---------|-----------------|-----------|-------------------------|---------|------------------------------|-----------------|-------------------------|
| | 2018-19 | 2021-22 | 2018-19 | 2021-22 | 2018-19 | 2021-22 | No. of patients | No. of services | Services per 100 people |
| Female | 36,484 | 36,297 | 101,446 | 102,312 | 127.96 | 129.83 | 1.9% | 0.9% | 2.5% |
| Male | 26,985 | 26,811 | 63,299 | 65,052 | 81.10 | 83.62 | 2.0% | 1.5% | 3.0% |
| Dietetics | 1,300 | 1,109 | 2,131 | 2,149 | 1.35 | 1.37 | 5.3% | 13.0% | 14.2% |
| Early Intervention Services for Children | 117 | 57 | 117 | 57 | 0.07 | 0.04 | 16.3% | 16.3% | 33.3% |
| Exercise Physiology | 1,153 | 670 | 2,709 | 1,624 | 1.72 | 1.04 | -11.1% | -5.8% | -3.7% |
| GP Acupuncture | 416 | 317 | 2,205 | 1,753 | 1.40 | 1.12 | -3.1% | -6.4% | -5.1% |
| GP After-hours (non-urgent) | 36,127 | 23,624 | 69,913 | 43,634 | 44.44 | 27.86 | -0.6% | -1.4% | 0.1% |
| GP After-hours (urgent) | 2,658 | 1,383 | 4,328 | 2,121 | 2.75 | 1.35 | -6.1% | -12.6% | -11.8% |
| GP attendances (total) | | | | | | | | | |
| 0-24 | 42,703 | 43,116 | 222,478 | 237,159 | 445.47 | 494.9 | 11.2% | 20.2% | 24.1% |
| 25-44 | 36,581 | 38,810 | 235,879 | 298,990 | 584.96 | 745.98 | 9.3% | 18.5% | 21.1% |
| 45-64 | 38,938 | 39,866 | 270,154 | 336,623 | 640.66 | 808.96 | 4.1% | 9.8% | 11.4% |
| 65+ | 25,354 | 28,302 | 290,275 | 383,860 | 1,166.00 | 1422.39 | 4.2% | 7.9% | 5.6% |
| All persons | 143,576 | 150,094 | 1,018,786 | 1,256,632 | 647.55 | 802.45 | 7.4% | 13.0% | 14.8% |
| Female | 74,902 | 76,843 | 592,657 | 727,302 | 747.54 | 922.91 | 5.0% | 11.1% | 12.9% |
| Male | 68,675 | 73,251 | 426,129 | 529,330 | 545.98 | 680.42 | 10.1% | 15.7% | 17.5% |
| GP Chronic Disease Management Plan | 23,023 | 23,947 | 55,758 | 59,325 | 35.44 | 37.88 | -5.8% | -8.0% | -6.5% |
| GP Focused Psychological Strategies and Family Group Therapy | 102 | 57 | 198 | 154 | 0.13 | 0.1 | 16.3% | 69.2% | 66.7% |
| GP Health Assessment | 4,266 | 4,215 | 4,324 | 4,266 | 2.75 | 2.72 | -0.2% | 0.1% | 1.5% |
| GP Long (Level C) | 61,931 | 57,452 | 137,237 | 116,267 | 87.23 | 74.24 | -6.0% | -15.9% | -14.6% |
| GP Mental Health | 18,523 | 17,520 | 31,848 | 30,202 | 20.24 | 19.29 | -7.8% | -10.5% | -9.1% |
| GP Multidisciplinary Case Conference | 223 | 166 | 449 | 371 | 0.29 | 0.24 | 2.5% | 32.5% | 33.3% |
| GP Pregnancy Support Counselling | 91 | 106 | 113 | 134 | 0.07 | 0.09 | 9.3% | 8.1% | 12.5% |
| GP Prolonged - Imminent danger of death | 114 | 52 | 124 | 56 | 0.08 | 0.04 | -63.1% | -76.6% | -73.3% |
| GP Prolonged (Level D) | 7,763 | 7,416 | 12,267 | 11,044 | 7.80 | 7.05 | -5.7% | -11.3% | -10.0% |

| Type of provider/care | No. of patients | | No. of services | | Services per 100 people | | % change, 2018-19 to 2021-22 | | |
|--|-----------------|---------|-----------------|---------|-------------------------|---------|------------------------------|-----------------|-------------------------|
| | 2018-19 | 2021-22 | 2018-19 | 2021-22 | 2018-19 | 2021-22 | No. of patients | No. of services | Services per 100 people |
| GP Short (Level A) | 13,190 | 34,223 | 18,063 | 50,974 | 11.48 | 32.55 | 58.4% | 61.0% | 63.5% |
| GP Standard (Level B) | 133,734 | 133,652 | 642,297 | 721,051 | 408.25 | 460.44 | 1.7% | -0.6% | 1.0% |
| GP subtotal - After-hours | 37,232 | 24,263 | 74,242 | 45,755 | 47.19 | 29.22 | -0.7% | -2.0% | -0.4% |
| GP subtotal - Enhanced Primary Care | 39,327 | 38,943 | 93,331 | 94,768 | 59.32 | 60.52 | -6.5% | -8.3% | -6.9% |
| GP subtotal - Other | 140,650 | 139,355 | 848,727 | 925,651 | 539.46 | 591.09 | 2.0% | -0.7% | 0.8% |
| GP subtotal - PIP | 2,466 | 881 | 2,497 | 884 | 1.59 | 0.56 | -12.7% | -12.6% | -12.5% |
| GP Telehealth (patient-end support) | 26 | - | 29 | - | 0.02 | 0 | n/a | n/a | n/a |
| Medication Management Review (domiciliary) | 411 | 409 | 412 | 410 | 0.26 | 0.26 | 19.2% | 19.5% | 18.2% |
| Medication Management Review (residential) | 524 | 440 | 530 | 441 | 0.34 | 0.28 | -0.2% | -0.7% | 0.0% |
| Midwifery | 85 | 154 | 666 | 896 | 0.42 | 0.57 | 17.6% | 32.3% | 32.6% |
| Nurse Practitioners | 609 | 830 | 813 | 1,521 | 0.52 | 0.97 | 6.8% | -2.9% | -1.0% |
| Nursing and Aboriginal Health Workers (total) | | | | | | | | | |
| 0-24 | 709 | 655 | 957 | 915 | 1.92 | 1.91 | -7.9% | -5.7% | -2.6% |
| 25-44 | 1,233 | 1,480 | 2,154 | 2,852 | 5.34 | 7.12 | -4.8% | -4.7% | -2.6% |
| 45-64 | 2,876 | 3,064 | 3,941 | 4,495 | 9.35 | 10.8 | -7.9% | -12.6% | -11.3% |
| 65+ | 4,679 | 6,015 | 7,898 | 9,885 | 31.72 | 36.63 | 0.8% | -6.1% | -8.1% |
| All persons | 9,496 | 11,214 | 14,950 | 18,147 | 9.50 | 11.59 | -3.0% | -7.6% | -6.1% |
| Female | 5,567 | 6,613 | 8,998 | 10,813 | 11.35 | 13.72 | -3.5% | -7.9% | -6.5% |
| Male | 3,929 | 4,601 | 5,952 | 7,334 | 7.63 | 9.43 | -2.3% | -7.0% | -5.6% |
| Occupational Therapy | 184 | 229 | 566 | 570 | 0.36 | 0.36 | 53.7% | 64.7% | 63.6% |
| Osteopathy | 1,649 | 1,922 | 5,133 | 5,971 | 3.26 | 3.81 | -2.9% | -5.4% | -4.0% |
| Other Allied Health | | 525 | | 904 | | 0.58 | -51.3% | -49.7% | -48.7% |
| Other Allied Mental Health | 1,229 | 993 | 5,224 | 5,133 | 3.32 | 3.28 | -2.6% | -8.3% | -6.8% |
| Other Non-referred Medical Practitioner attendances | 17,984 | 6,577 | 36,194 | 12,046 | 23.01 | 7.69 | -32.2% | -45.5% | -44.7% |
| Other Psychologist | 7,088 | 6,229 | 32,192 | 33,499 | 20.46 | 21.39 | -7.2% | -6.0% | -4.6% |

| Type of provider/care | No. of patients | | No. of services | | Services per 100 people | | % change, 2018-19 to 2021-22 | | |
|--|-----------------|---------|-----------------|---------|-------------------------|---------|------------------------------|-----------------|-------------------------|
| | 2018-19 | 2021-22 | 2018-19 | 2021-22 | 2018-19 | 2021-22 | No. of patients | No. of services | Services per 100 people |
| Physiotherapy | 5,667 | 5,891 | 17,419 | 18,013 | 11.07 | 11.5 | -4.6% | -5.9% | -4.5% |
| Podiatry | 7,574 | 8,212 | 23,572 | 24,877 | 14.98 | 15.89 | 1.5% | 2.0% | 3.6% |
| Practice Nurse/Aboriginal Health Worker | 8,833 | 10,284 | 13,471 | 15,730 | 8.56 | 10.04 | -4.0% | -9.5% | -8.1% |
| Psychiatry | 2,392 | 2,843 | 11,069 | 12,907 | 7.04 | 8.24 | 15.1% | 29.7% | 31.6% |
| Specialist attendances (total) | | | | | | | | | |
| 0-24 | 9,402 | 10,096 | 22,085 | 25,661 | 44.22 | 53.55 | 3.1% | 1.3% | 4.6% |
| 25-44 | 9,989 | 11,063 | 26,494 | 33,196 | 65.70 | 82.83 | 3.2% | 2.6% | 4.9% |
| 45-64 | 15,589 | 15,422 | 47,260 | 50,755 | 112.08 | 121.97 | 0.4% | -2.1% | -0.7% |
| 65+ | 15,876 | 17,584 | 61,220 | 73,572 | 245.91 | 272.62 | 4.7% | 4.9% | 2.7% |
| All persons | 50,856 | 54,166 | 157,059 | 183,184 | 99.83 | 116.98 | 2.8% | 2.0% | 3.6% |
| Female | 28,085 | 29,816 | 88,204 | 104,069 | 111.25 | 132.06 | 2.0% | 2.3% | 3.9% |
| Male | 22,771 | 24,350 | 68,855 | 79,116 | 88.22 | 101.7 | 3.9% | 1.6% | 3.1% |
| Speech Pathology | 308 | 208 | 1,203 | 635 | 0.76 | 0.41 | 11.8% | -6.3% | -4.7% |

Source: Australian Institute of Health and Welfare. Medicare-subsidised GP, allied health and specialist health care across local areas: 2021–22. <https://www.aihw.gov.au/reports/primary-health-care/medicare-subsidised-gp-allied-health-and-specialis/report-editions>; Australian Institute of Health and Welfare. Medicare-subsidised GP, allied health and specialist health care across local areas: 2021–22 - Technical notes for 2021-22. <https://www.aihw.gov.au/reports/primary-health-care/medicare-subsidised-gp-allied-health-and-specialis/contents/technical-notes>; Australian Institute of Health and Welfare. Medicare-subsidised GP, allied health and specialist health care across local areas: 2013–14 to 2018–19 <https://www.aihw.gov.au/reports/primary-health-care/medicare-subsidised-health-local-areas-2019/data>; Australian Institute of Health and Welfare. Medicare-subsidised GP, allied health and specialist health care across local areas: 2019–20 to 2020–21. <https://www.aihw.gov.au/reports/primary-health-care/medicare-subsidised-health-local-areas-2021-22/data>

Ambulance services

In 2022/23, 50% of Code 1 events were responded to in 15 minutes or less, compared to 62% across Victoria. The response level has dropped by 35% since 2018/19; across Victoria, the response level has dropped by a lower 25%.

The drop in the level of incidents responded to quickly is a Victoria-wide phenomenon, but the drop has been much worse in Yarra Ranges. Yarra Ranges already had the third-lowest level of timely responses (after Nillumbik and Cardinia), and continued to have the third-lowest level in 2022/23. The state-wide target is that 85% of Code 1 emergencies are responded to in 15 minutes or less. Overall, response times have been trending down since COVID.

Average response times have more than doubled in Yarra Ranges, rising by 54% from just under 12 minutes to just over 18 minutes. Victoria-wide there was a 43% rise in average response times, from 11 minutes to 16 minutes.

Response times have been affected by record demand for ambulance services. There was a 20% rise in time-critical Code 1 emergencies over the past four years; across Victoria, there was a larger 32% rise.

Thus Yarra Ranges has experienced less growth in demand than the whole of Victoria, yet has experienced a bigger drop in the level of Code 1 emergencies which are responded to quickly.

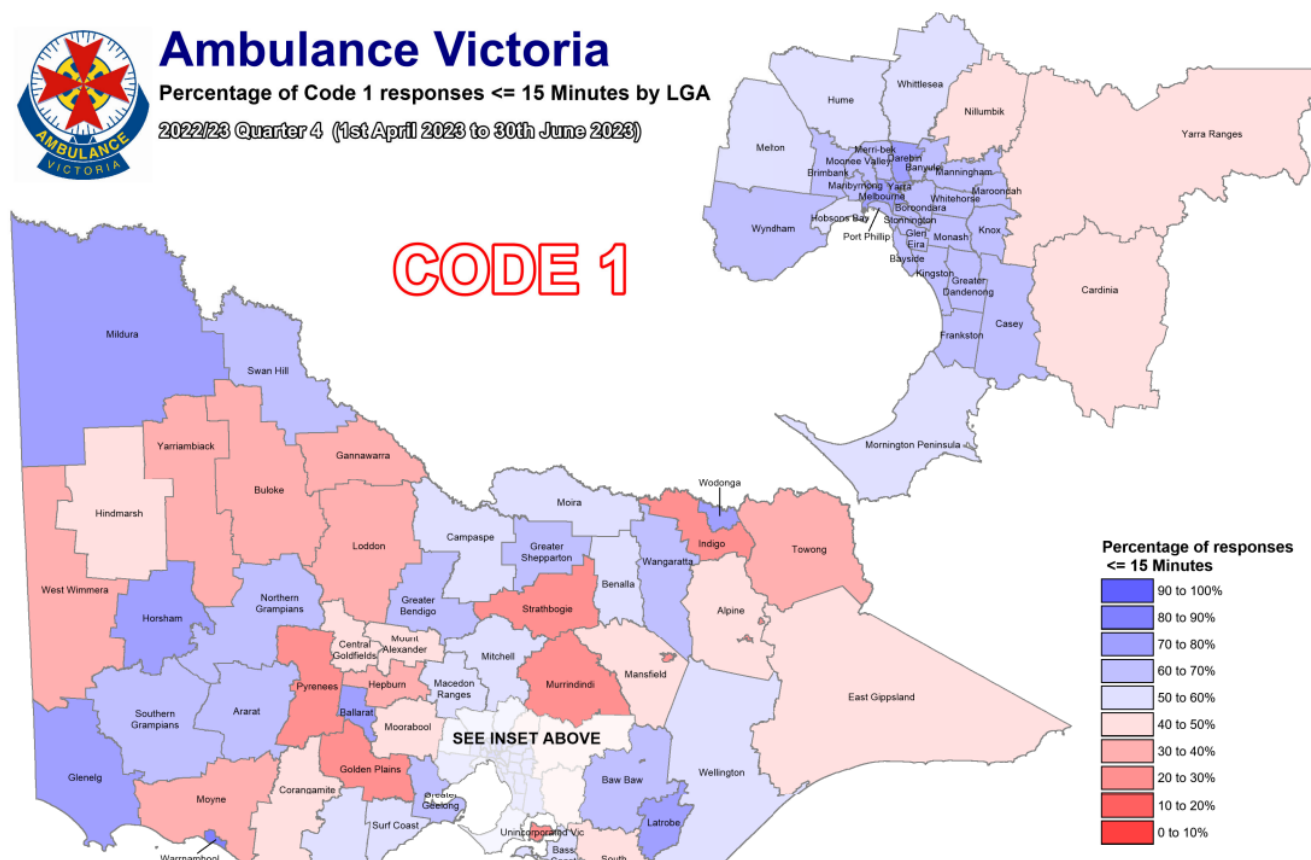
Code 1 First Response Performance: Yarra Ranges & Victoria, 2018/19 to 2022/23

| Local Government Area | 2022/23 | 2021/22 | 2020/21 | 2019/20 | 2018/19 | % change, 2018/19 to 2022/23 |
|--|---------|---------|---------|---------|--------------|------------------------------|
| % Responses <= 15 Minutes | | | | | | |
| Yarra Ranges (S) | 50.4% | 59.7% | 69.2% | 76.1% | 77.9% | -35.3% |
| Total Victoria | 62.8% | 67.5% | 77.2% | 82.3% | 83.9% | -25.2% |
| Average Response Times Minutes | | | | | | |
| Yarra Ranges (S) | 18:21 | 16:08 | 13:48 | 12:17 | 11:56 | 53.77% |
| Total Victoria | 15:57 | 15:02 | 12:48 | 11:34 | 11:10 | 42.84% |
| Total Number of First Responses | | | | | | |
| Yarra Ranges (S) | 8,096 | 7,871 | 7,254 | 6,921 | 6,722 | 20.44% |
| Total Victoria | 384,752 | 363,018 | 313,424 | 301,255 | 291,220 | 32.12% |

Code 1 patients are those who require urgent paramedic and hospital care, and these patients receive a lights and sirens response.

Source: Ambulance Victoria (2023). *Annual Reports, 2018/19, 2019/20, 2020/21, 2021/22, 2022/23.*

<https://www.ambulance.vic.gov.au/about-us/our-performance/>



Source: Ambulance Victoria (2023). *Ambulance Victoria's Performance, 2022/23 Quarter 4.*

<https://www.ambulance.vic.gov.au/wp-content/uploads/2023/08/2022-23-Q4-Ambulance-Response-Quarter-4-FY2022-23.pdf>

Community dental services

Yarra Ranges has one community dental clinic⁸³, based at the Inspiro community health centre in Lilydale. In 2021/22, Inspiro saw 3,599 dental clients across 8,887 appointments. One-quarter of these were new clients. Note that the first half of this year would have been affected by COVID lockdowns. 1,230 clients had emergency appointments in 2021/22. 1,045 children were involved in the Smiles for Miles program.⁸⁴

In 2022/23, Inspiro saw 4,459 dental clients across 11,666 appointments. This was a 24% increase in the number of clients compared to 2021/22. 1,344 clients had emergency appointments in 2022/23. Whilst this may be partly due to a rebound in numbers from 2021/22 – a year affected by COVID - 35% were new clients. As well as the likely need for dental services post-lockdown, cost of living may also have led patients to look for more affordable alternatives. Much of this dental usage was for emergencies, with 30% of clients having an emergency appointment.

Children aged less than 10 accounted for 65% of new dental clients and 29% of all dental clients in 2022/23. All children aged 0–12 years are eligible for public dental care in Victoria, which would contribute to these figures.

In 2021/22, the level of dental use which was for emergencies was similar across all age groups aged 20 plus, but in 2022/23, use of emergency dental services was noticeably higher amongst persons aged 40 plus.

⁸³ https://www.dhsv.org.au/_data/assets/pdf_file/0011/187337/Dental-Health-Services-Victoria-Annual-Report-2021-2022-FINAL-021222-small.pdf

⁸⁴ <https://inspiro.org.au/wp-content/uploads/2022/10/2021-22-Inspiro-Annual-Report-Digital-Summary.pdf>

Community dental clients by age: Inspiro community dental services, 2022/23

| Age group | All dental | Emergency dental | New clients dental | Total | All dental | Emergency dental | New clients dental | Most likely to have visits which were emergencies |
|-----------|------------|------------------|--------------------|-------|------------|------------------|--------------------|---|
| 0 to 04 | 857 | 14 | 753 | 1624 | 19% | 1% | 48% | 1% |
| 05 to 09 | 544 | 65 | 265 | 874 | 12% | 5% | 17% | 7% |
| 10 to 14 | 237 | 35 | 26 | 298 | 5% | 3% | 2% | 12% |
| 15 to 19 | 137 | 45 | 16 | 198 | 3% | 3% | 1% | 23% |
| 20 to 24 | 102 | 38 | 24 | 164 | 2% | 3% | 2% | 23% |
| 25 to 29 | 127 | 49 | 32 | 208 | 3% | 4% | 2% | 24% |
| 30 to 34 | 120 | 54 | 34 | 208 | 3% | 4% | 2% | 26% |
| 35 to 39 | 138 | 55 | 30 | 223 | 3% | 4% | 2% | 25% |
| 40 to 44 | 143 | 65 | 27 | 235 | 3% | 5% | 2% | 28% |
| 45 to 49 | 182 | 76 | 23 | 281 | 4% | 6% | 1% | 27% |
| 50 to 54 | 196 | 92 | 39 | 327 | 4% | 7% | 2% | 28% |
| 55 to 59 | 195 | 80 | 32 | 307 | 4% | 6% | 2% | 26% |
| 60 to 64 | 213 | 115 | 35 | 363 | 5% | 9% | 2% | 32% |
| 65 to 69 | 232 | 115 | 46 | 393 | 5% | 9% | 3% | 29% |
| 70 to 74 | 309 | 133 | 62 | 504 | 7% | 10% | 4% | 26% |
| 75 to 79 | 338 | 130 | 70 | 538 | 8% | 10% | 4% | 24% |
| 80 to 84 | 251 | 112 | 44 | 407 | 6% | 8% | 3% | 28% |
| 85 & over | 137 | 70 | 14 | 221 | 3% | 5% | 1% | 32% |
| Total | 4,458 | 1343 | 1572 | 7373 | 100% | 100% | 100% | 18% |

Mental health services

Availability of psychiatrists and GPs

Lack of access to GPs and local mental health specialists are a major barrier for seeking appropriate mental health care. The federal government's Health Workforce Locator classifies all areas of the Yarra Ranges LGA as a District of Workforce Shortage for psychiatrists (as of July 2022). Pre-COVID-19 data are not available, but this indicator can be

used to track future changes in the availability of psychiatrists.⁸⁵ The outer eastern area of Yarra Ranges, from Seville outwards, is also classified as a Distribution Priority Area for GPs.

Unpublished GP and hospital data

The Eastern Melbourne Primary Health Network (EMPHN) collects a range of My Health data from general practices, and has access to hospital data. The Yarra Ranges LGA has 46 GPs – 85% are registered with My Health, meaning that 15% are not covered in the EMPHN data analysis. Data in this section are sourced the November 2021 EMPHN LGA Profile - Yarra Ranges V1.1; and are averages of 2019/20 and 2020/21, unless otherwise stated. Updated data are expected to be available when the latest version of the EMPHN Needs Assessment Report is released.

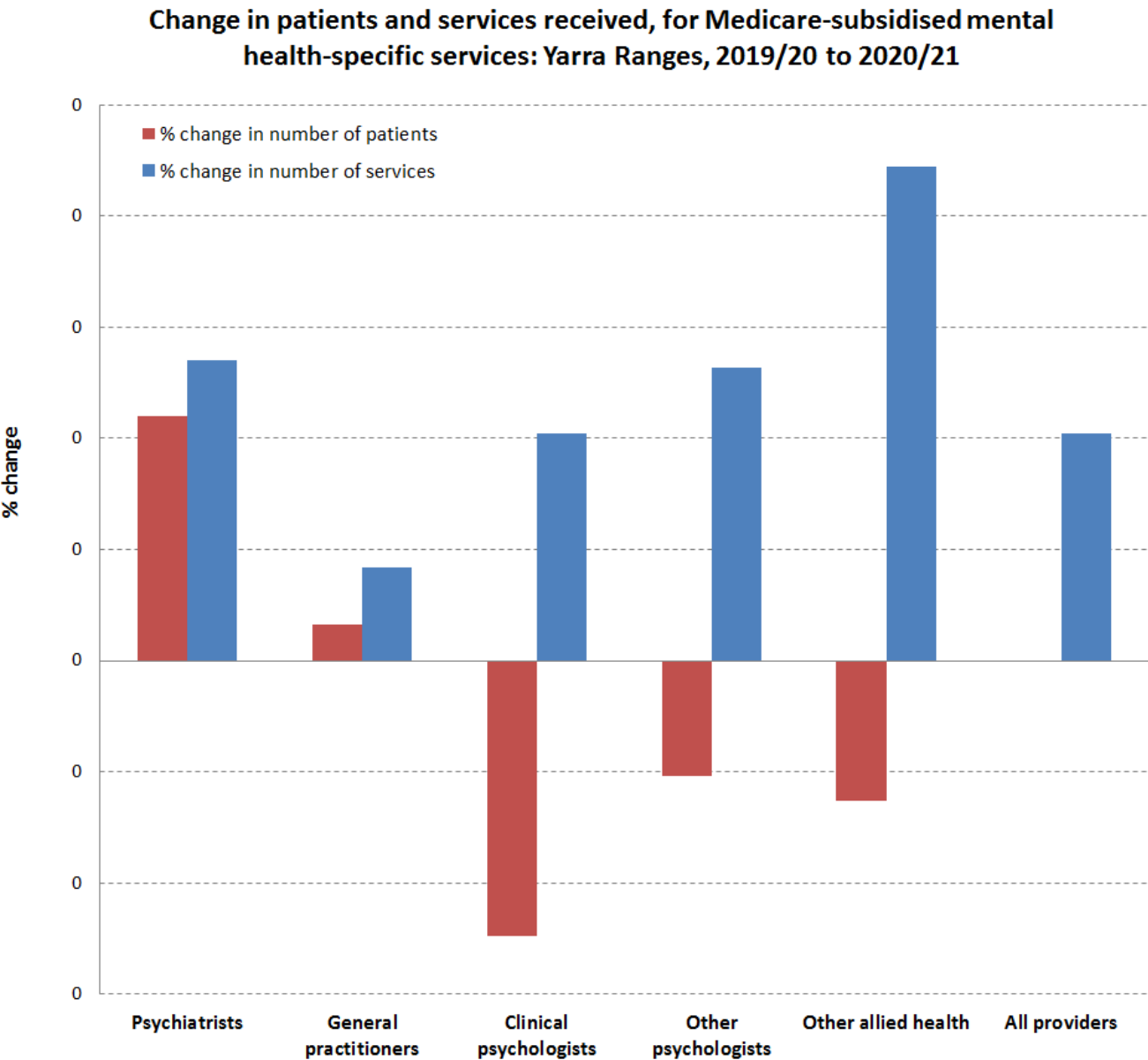
Preliminary data from the profile show that the Yarra Ranges LGA has the third-highest prevalence of mental health issues in general practice, within the EMPHN catchment - 5.8% of residents had visited their GP for mental health concerns, compared to 5.12% across the EMPHN. The EMPHN data reveal significant variation in mental health service use across Yarra Ranges:

- The areas with the highest levels of general practitioner (GP) visits for mental health issues include The Patch, Monbulk, Wesburn, Yarra Junction and Seville.
- The areas with high mental health-related emergency department presentations and hospital admissions include Kilsyth, Mooroolbark, Olinda and Sherbrooke.
- Yarra Ranges has a high level of emergency department presentations for mental health (33 per 1,000 residents), but a lower than expected rate of people presenting to general practice for mental health concerns.

⁸⁵ Department of Health and Aged Care. (2022). *Health workforce locator*.

<https://www.health.gov.au/resources/apps-and-tools/health-workforce-locator/app>

Medicare-subsidised mental health-specific services



In 2020/21, there was no increase in Yarra Ranges in the total number of mental health care patients. In fact, there were drops in the number of patients attending clinical psychologists (a 12.4% drop), other psychologists (a 5.2% drop), and other allied health providers (a 6.3% drop). There was a minimal rise in GP patients (1.6%) and a substantial rise in the number of people seeing psychiatrists (11%).

The service data imply that for those residents already linked into services, service usage per person jumped, with the number of services increasing by:

- 22.2% for other allied health providers;
- 13.5% for psychiatrists;
- 13.2% for other psychologists;
- 10.2% for clinical psychologists;
- 4.2% for GPs; and
- an average of 10.2% across all provider types.

The year 2021/22 covered roughly five months of lockdown and seven months out of lockdown. Whilst the data for this year cannot be considered 'post-pandemic' data, they show a fall in patient numbers and services provided, across all mental health services. However, it cannot be known whether this is due to reducing service demand in the second year of lockdown, or difficulties in accessing services. Once data for 2022/23 are released, it can be confirmed whether the 2021/22 data was the beginning of a return to demand at pre-pandemic levels.

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Medicare-subsidised mental health-specific services and people receiving Medicare-subsidised mental health-specific services, by SA3 area and provider: Yarra Ranges, 2017/88 to 2020/21

| Provider type | 2017/ 18 | 2018/ 19 | 2019/ 20 | 2020/ 21 | 2021/22 | % change 2019/20-2020/21 Yarra Ranges | % change 2020/21-2021/22 Victoria | % change 2020/21-2021/22 Yarra Ranges |
|-----------------------------|----------|----------|----------|----------|---------|--|--------------------------------------|--|
| Number of patients: | | | | | | | | |
| Psychiatrists | 2,457 | 2,495 | 2,576 | 2,859 | 2,843 | 11.0% | 6.6% | -0.6% |
| General practitioners | 18,483 | 18,662 | 18,845 | 19,149 | 17,520 | 1.6% | 5.9% | -8.5% |
| Clinical psychologists | 3,793 | 4,053 | 4,020 | 3,523 | 3,337 | -12.4% | -1.8% | -5.3% |
| Other psychologists | 7,357 | 7,137 | 7,117 | 6,744 | 6,229 | -5.2% | -0.2% | -7.6% |
| Other allied mental health | 1,221 | 1,241 | 1,134 | 1,063 | 993 | -6.3% | 6.6% | -6.6% |
| All providers | 33,311 | 33,588 | 33,692 | 33,338 | 30,922 | 0.0% | 3.4% | -7.2% |
| Mental Health Care subtotal | | | | | 10,121 | | | |
| Number of services: | | | | | | | | |
| Psychiatrists | 15,327 | 15,582 | 16,418 | 18,629 | 12,907 | 13.5% | 8.2% | -30.7% |
| General practitioners | 33,451 | 32,528 | 33,027 | 34,402 | 30,202 | 4.2% | 9.9% | -12.2% |
| Clinical psychologists | 16,437 | 18,067 | 17,837 | 19,658 | 19,558 | 10.2% | 24.8% | -0.5% |
| Other psychologists | 32,615 | 32,383 | 31,458 | 35,601 | 33,499 | 13.2% | 20.7% | -5.9% |
| Other allied mental health | 5,313 | 5,252 | 4,758 | 5,813 | 5,133 | 22.2% | 28.9% | -11.7% |
| All providers | 103,143 | 103,812 | 103,498 | 114,103 | 101,299 | 10.0% | 16.1% | -11.2% |
| Mental Health Care subtotal | | | | | 58,190 | | | |

Note: Data are for the Yarra Ranges SA3.

Source: Australian Institute of Health and Welfare. (2022). *Mental health services in Australia: Medicare-subsidised mental health-specific services*. <https://www.aihw.gov.au/mental-health/topic-areas/medicare-subsidised-services>; Australian Institute of Health and Welfare. (2022). Medicare-subsidised GP, allied health and specialist health care across local areas: 2021–22 - Medicare-subsidised services, by Statistical Area Level 3 (SA3): 2021–22 <https://www.aihw.gov.au/reports/primary-health-care/medicare-subsidised-gp-allied-health-and-specialis/data>

PART 8: DEMOGRAPHICS

Population profile

Overview

Yarra Ranges has an estimated 156,840 residents (June 2021). Its population is slightly older than the Victorian average, with a higher level of residents aged 50 plus. The Urban Area has the highest level of preschoolers, and the Hills and the Valley have the highest levels of primary school children. The levels of 15-64 year olds were highest in the Yarra Valley and the Urban Area. Healesville-Yarra Glen, Kilsyth and Mount Dandenong-Olinda have the highest levels of residents aged 65 plus.

Border closures and restrictions on population movement during the COVID-19 pandemic brought population growth to a virtual halt in 2019/20, and caused population numbers to fall slightly in 2020/21 and 2021/22. Birth rates have been falling in Yarra Ranges and Victoria for the past nine years, also contributing to lower population growth. In 2021/22, Chirnside Park, Upper Yarra Valley and Kilsyth were the only areas in Yarra Ranges with any population growth, due to more people moving in than leaving. Other parts of Yarra Ranges either:

- Had stagnant population numbers, relying on overseas migration or more births than deaths to maintain their population numbers - Yarra Valley, Mooroolbark, Lilydale-Coldstream, Wandin-Seville, Healesville-Yarra Glen and Monbulk-Silvan.
- Lost residents due to people moving out of the area, around the Hills and foothills - Belgrave-Selby, Mount Dandenong-Olinda, Mount Evelyn, Upwey-Tecoma and Montrose.

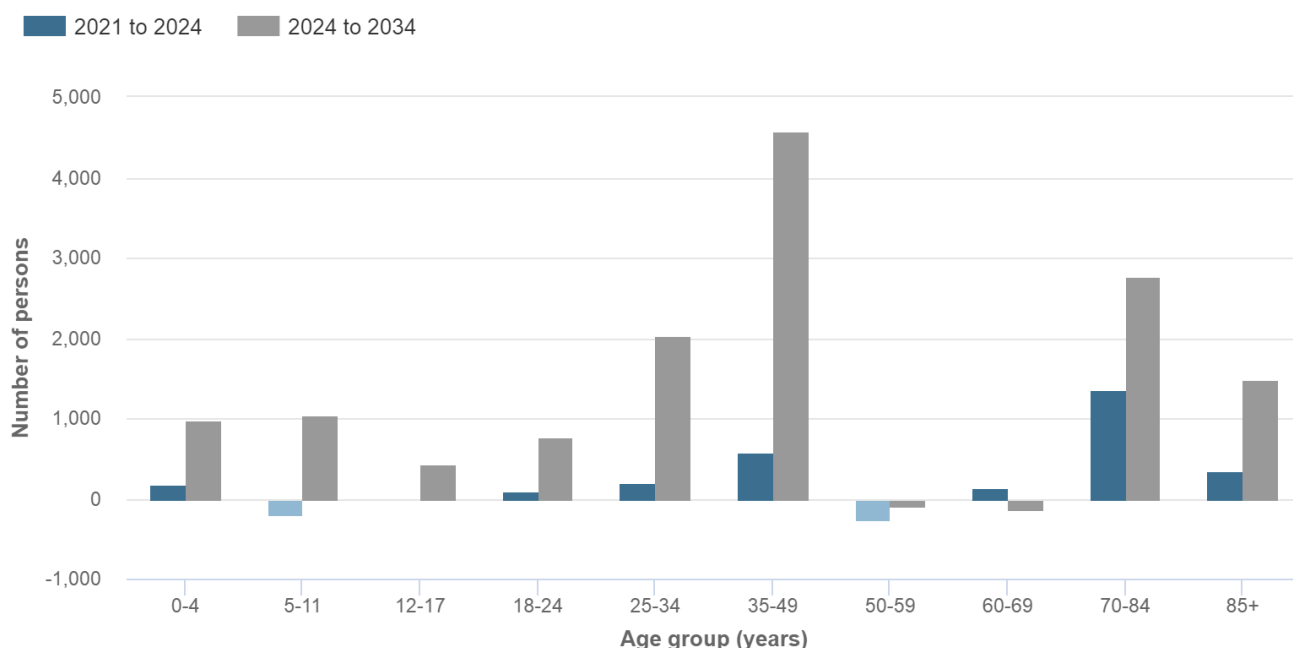
Yarra Ranges is highly reliant on people moving into the area from other areas of Australia, to achieve population growth. It tends to gain residents from other areas in the eastern metropolitan region, and lose them to south-eastern Melbourne, Queensland and regional Victoria. The only age groups where Yarra Ranges has experienced a net gain over the past five years are families with primary school children, with these households moving in from Maroondah, Knox and Whitehorse. This is likely to be partly driven by growing families moving in search of larger and/or more affordable homes.

The groups where Yarra Ranges is losing the highest number of residents are retirees, families with older children, and young adults. Retirees and pre-retirees are moving to regional Victoria, Mornington Peninsula and Cardinia; teenagers and their parents are moving to other eastern and south-eastern municipalities; and 18-24 year olds are tending to move to the city, the inner east and Monash – presumably for work and study. The number of families with dependent students aged 15 years or more has dropped in Yarra Ranges over the past five years.

Over the next ten years, Yarra Ranges is forecast to have 8.7% population growth, adding 13,861 residents and giving it nearly 174,000 residents by 2034. Total population growth over the next ten years is forecast to be limited to the Urban Area and Yarra Junction, with 44% growth forecast for the population in Lilydale. The main growth will be amongst families with pre-school and primary school age children; working age residents; and older retirees. There will be relatively low growth in the number of secondary school students and young adults aged 18-24, and their population share will fall. The level of residents aged 70 plus is expected to rise from 12.7% to 14.1% - an extra 4,253 residents in this age group. The highest growth in older residents will be in the Valley, Healesville-Yarra Glen and the Hills.

Forecast change in age structure - Service age groups

Yarra Ranges Council - Total persons



Source: Population and household forecasts, 2021 to 2046, prepared by .id([opens a new window](#)) (informed decisions), November 2023.

Current population by age and area

As of 30 June 2021, Yarra Ranges had an estimated resident population (ERP) of 156,840 persons. Its current population profile is slightly older than the Victorian average, with 37% of residents aged 50 years or more, compared to 34% across Victoria. Yarra Ranges has a below average level of adults aged 25-49, at 32.4% compared to 35.8% across Victoria. The level of 0-24 year olds is 30.6%, similar to the Victorian average of 30.2%.

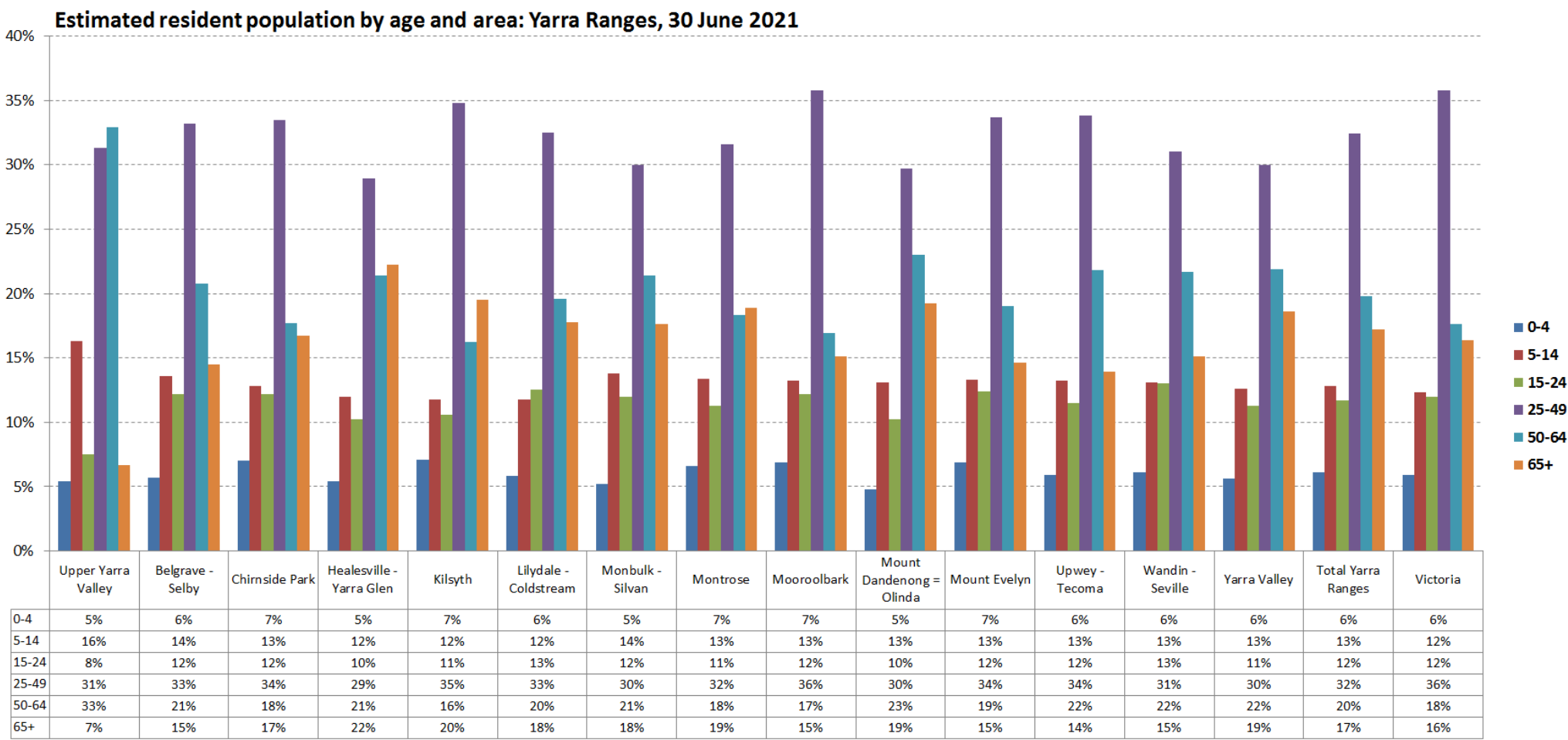
The age profile of residents is different depending on the local area. The highest levels of children aged 0-4 were in the Urban Area, accounting for 7% of residents in Kilsyth, Chirnside Park, Mooroolbark and Mount Evelyn. The Hills and the Yarra Valley had the highest levels of 5-14 year olds: 16.3% in Upper Yarra Valley, 13.8% in Monbulk-Silvan and 13.6% in Belgrave-Selby. The actual number of 5-14 year olds in Upper Yarra Valley was very low (39 children).

Overall, levels of 15-64 year olds were highest in the Yarra Valley and the Urban Area; but the level of young people aged 15-24 was fairly consistent across Yarra Ranges, at 10% to 13%. The exception was Upper Yarra Valley – it had an extremely low level of young people, with 15-24 year olds accounting for 7.5% of the population, only 18 residents. Levels were highest in Wandin-Seville and Lilydale-Coldstream (135%). The level of adults aged 25-49 was highest in the Urban Area, with the proportion ranging from 28.9% in Healesville-Yarra Glen and 29.7% in Mount Dandenong-Olinda, to 34.8% in Kilsyth and 35.8% in Mooroolbark. Adults aged 50-64 were concentrated in the Upper Yarra Valley (32.9%) and Mount Dandenong-Olinda (23%). Again, actual numbers in Upper Yarra Valley were very low, with 79 adults aged 50-64.

The level of retirees varies considerably across Yarra Ranges, with a concentration in Kilsyth reflecting the area's number of residential care facilities.⁸⁶ As shown on the map, the level of residents aged 65 years or more was highest in Healesville-Yarra Glen (22.2%), Kilsyth (19.5%) and Mount Dandenong-Olinda (19.2%). It was lowest in Upper Yarra Valley, at 6.7% (16 persons).

⁸⁶ <https://www.health.gov.au/resources/apps-and-tools/2020-acar-residential-care-places-map/app>

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Estimated resident population by age and SA2: Yarra Ranges residents, 30 June 2021

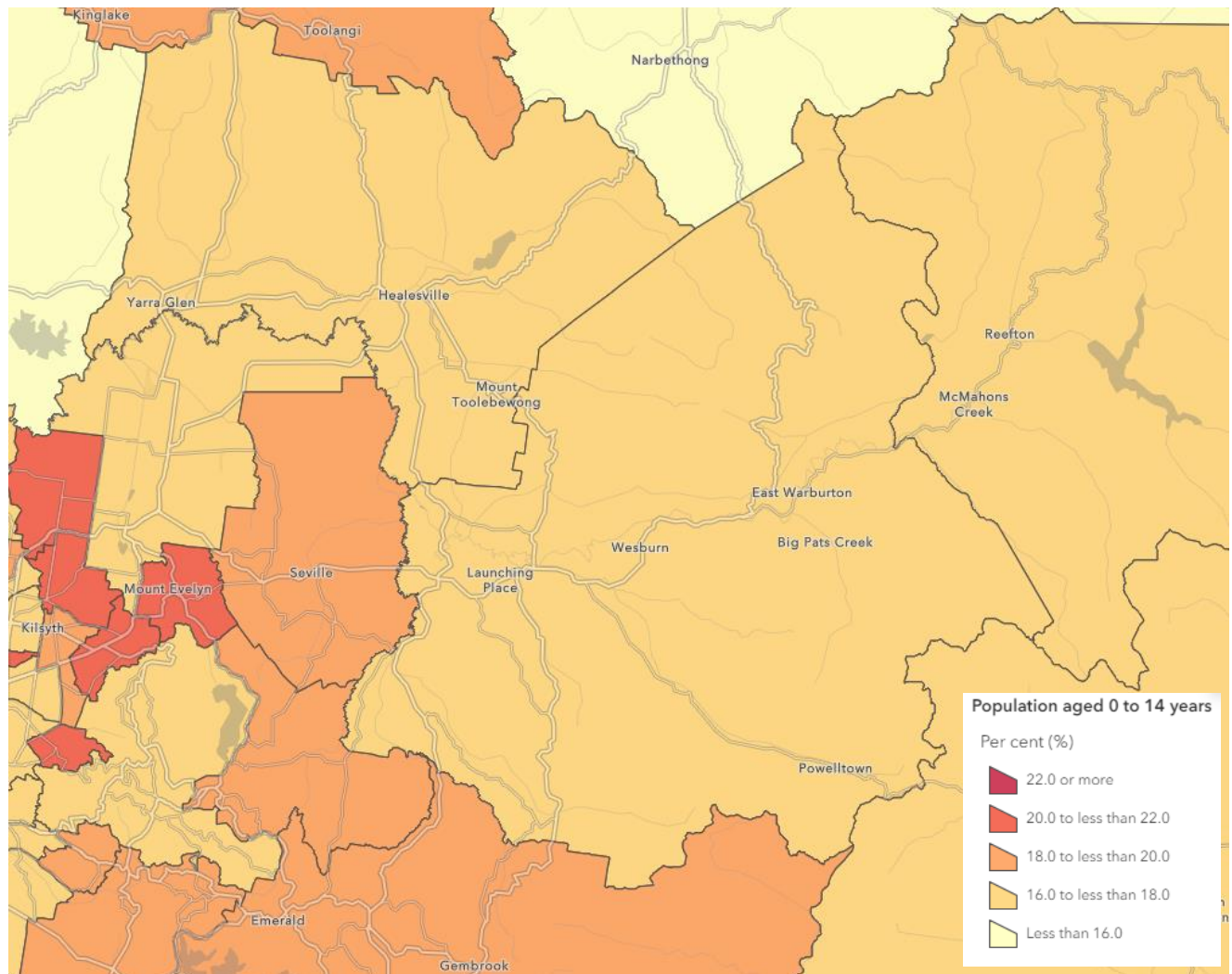
| SA2 name | 0-4 | 5-14 | 15-24 | 25-49 | 50-64 | 65+ | Total | 0-4 | 5-14 | 15-24 | 25-49 | 50-64 | 65+ | Total |
|-----------------------------|--------------|---------------|---------------|---------------|---------------|---------------|----------------|-------------|--------------|--------------|--------------|--------------|--------------|---------------|
| Upper Yarra Valley | 13 | 39 | 18 | 75 | 79 | 16 | 240 | 5.4% | 16.3% | 7.5% | 31.3% | 32.9% | 6.7% | 100.0% |
| Belgrave - Selby | 574 | 1,377 | 1,233 | 3,347 | 2,101 | 1,463 | 10,095 | 5.7% | 13.6% | 12.2% | 33.2% | 20.8% | 14.5% | 100.0% |
| Chirnside Park | 836 | 1,522 | 1,448 | 3,976 | 2,103 | 1,988 | 11,873 | 7.0% | 12.8% | 12.2% | 33.5% | 17.7% | 16.7% | 100.0% |
| Healesville – Yarra Glen | 759 | 1,700 | 1,447 | 4,092 | 3,038 | 3,145 | 14,181 | 5.4% | 12.0% | 10.2% | 28.9% | 21.4% | 22.2% | 100.0% |
| Kilsyth | 709 | 1,176 | 1,053 | 3,478 | 1,617 | 1,947 | 9,980 | 7.1% | 11.8% | 10.6% | 34.8% | 16.2% | 19.5% | 100.0% |
| Lilydale - Coldstream | 1,151 | 2,341 | 2,474 | 6,423 | 3,870 | 3,524 | 19,783 | 5.8% | 11.8% | 12.5% | 32.5% | 19.6% | 17.8% | 100.0% |
| Monbulk - Silvan | 303 | 809 | 705 | 1,756 | 1,255 | 1,029 | 5,857 | 5.2% | 13.8% | 12.0% | 30.0% | 21.4% | 17.6% | 100.0% |
| Montrose | 465 | 936 | 788 | 2,207 | 1,277 | 1,322 | 6,995 | 6.6% | 13.4% | 11.3% | 31.6% | 18.3% | 18.9% | 100.0% |
| Mooroolbark | 1,608 | 3,096 | 2,866 | 8,389 | 3,955 | 3,533 | 23,447 | 6.9% | 13.2% | 12.2% | 35.8% | 16.9% | 15.1% | 100.0% |
| Mount Dandenong – Olinda | 465 | 1,277 | 999 | 2,899 | 2,251 | 1,880 | 9,771 | 4.8% | 13.1% | 10.2% | 29.7% | 23.0% | 19.2% | 100.0% |
| Mount Evelyn | 684 | 1,310 | 1,224 | 3,325 | 1,876 | 1,444 | 9,863 | 6.9% | 13.3% | 12.4% | 33.7% | 19.0% | 14.6% | 100.0% |
| Upwey - Tecoma | 582 | 1,298 | 1,132 | 3,324 | 2,145 | 1,367 | 9,848 | 5.9% | 13.2% | 11.5% | 33.8% | 21.8% | 13.9% | 100.0% |
| Wandin - Seville | 488 | 1,046 | 1,037 | 2,464 | 1,725 | 1,199 | 7,959 | 6.1% | 13.1% | 13.0% | 31.0% | 21.7% | 15.1% | 100.0% |
| Yarra Valley | 955 | 2,128 | 1,920 | 5,082 | 3,717 | 3,146 | 16,948 | 5.6% | 12.6% | 11.3% | 30.0% | 21.9% | 18.6% | 100.0% |
| Total Yarra Ranges | 9,592 | 20,055 | 18,344 | 50,837 | 31,009 | 27,003 | 156,840 | 6.1% | 12.8% | 11.7% | 32.4% | 19.8% | 17.2% | 100.0% |
| Victoria | | | | | | | | 5.9% | 12.3% | 12.0% | 35.8% | 17.6% | 16.4% | 100.0% |

Source: Australian Bureau of Statistics (2023). *Regional population by age and sex, 2021*.

<https://www.abs.gov.au/statistics/people/population/regional-population-age-and-sex/latest-release#victoria>

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Population distribution by age, 0-14 year olds: Yarra Ranges, 2022

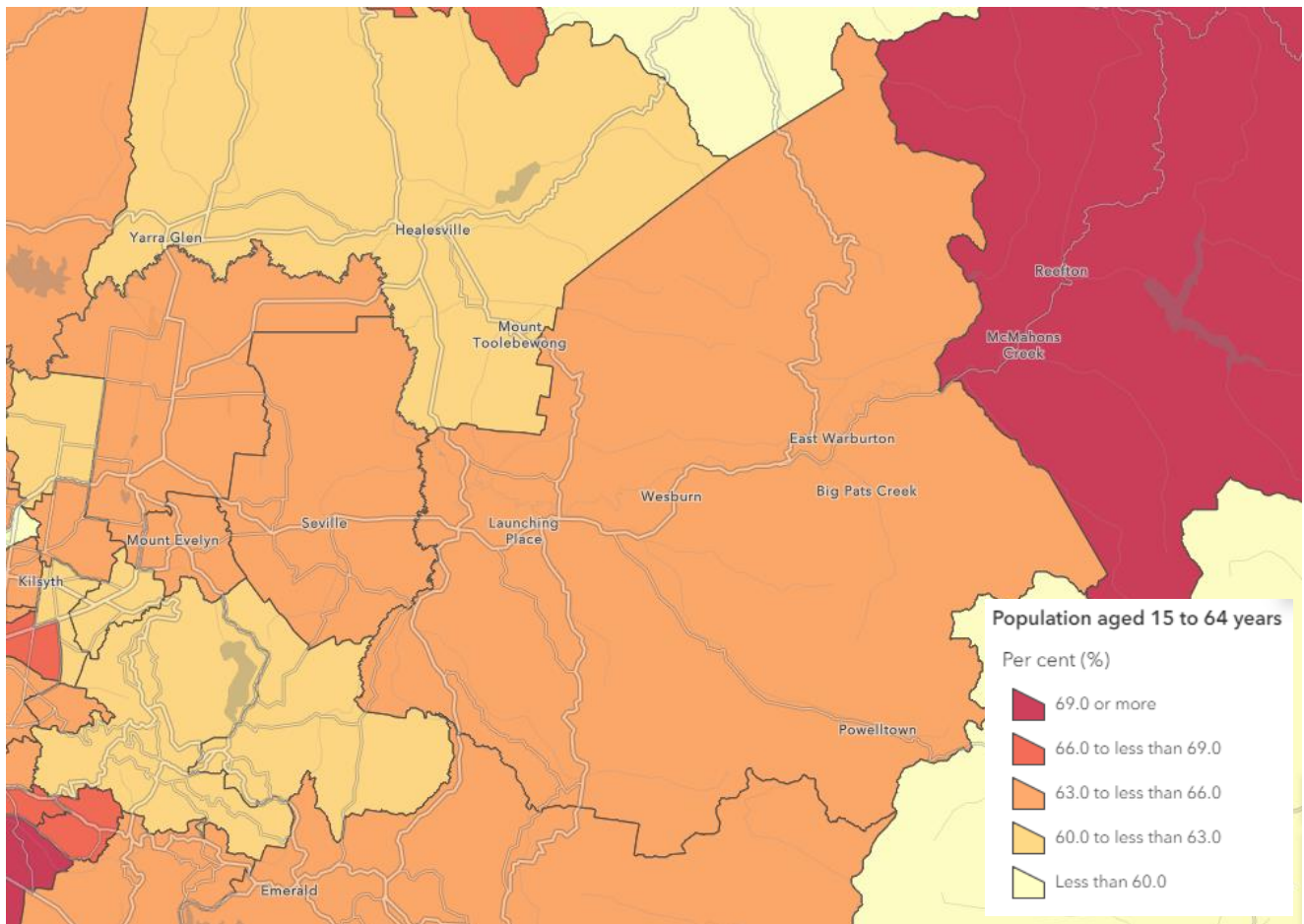


Source: Australian Bureau of Statistics (2023). *Regional population by age and sex 2022: Age distribution, Statistical Areas Level 2, 5 October 2023.*

<https://storymaps.arcgis.com/stories/3a8dbc463b47418aab2a813c08a6a7fe>

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Population distribution by age, 15-64 year olds: Yarra Ranges, 2022

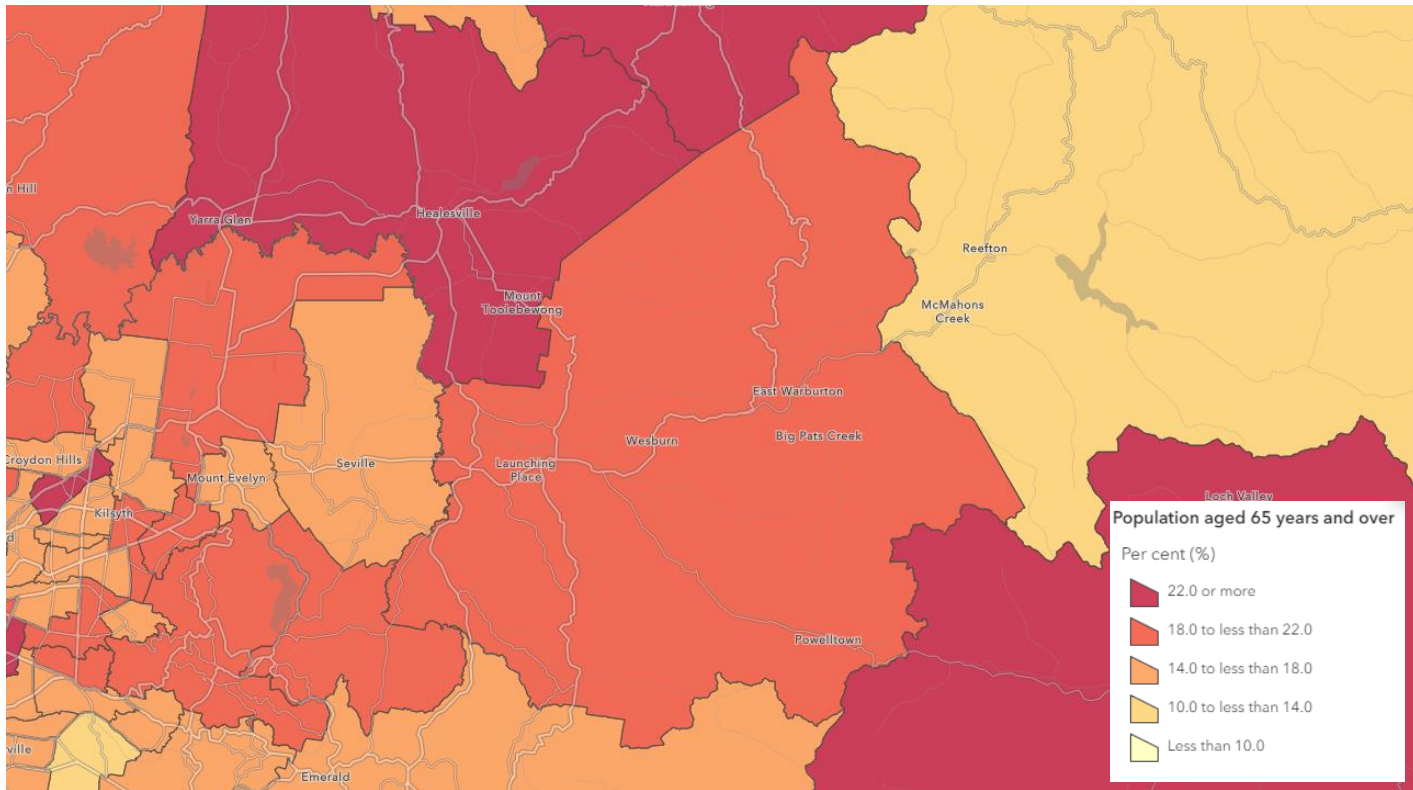


Source: Australian Bureau of Statistics (2023). *Regional population by age and sex 2022: Age distribution, Statistical Areas Level 2, 5 October 2023.*

<https://storymaps.arcgis.com/stories/3a8dbc463b47418aab2a813c08a6a7fe>

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Population distribution by age, persons 65 years and over: Yarra Ranges, 2022



Source: Australian Bureau of Statistics (2023). *Regional population by age and sex 2022: Age distribution, Statistical Areas Level 2, 5 October 2023.*

<https://storymaps.arcgis.com/stories/3a8dbc463b47418aab2a813c08a6a7fe>

Historic population change

CHANGE IN TOTAL POPULATION, 2006 TO 2022

The COVID-19 pandemic had a major impact on the total population of Yarra Ranges. After steady growth between 2005/06 and 2018/19, in 2019/2020 the population barely changed, with an increase of only 131 people. In 2020/21, the population dropped by 1,455 people. In 2021/2022, the population dropped less, by only 33 people; this financial year would still have been partially affected by lockdowns and limits on movement into Australia. Once data for 2022/23 are released, it will be possible to assess whether population growth has now returned to normal levels in Yarra Ranges.⁸⁷ The map below illustrates that growth during 2021/22 was limited to Chirnside Park, Kilsyth and the Upper Yarra Valley.

Estimated Resident Population (ERP): Yarra Ranges, 2005/06 to 2021/22

| Year (ending June 30) | Number | Change in number | Change in % |
|-----------------------|---------|------------------|-------------|
| 2006 | 143,393 | | |
| 2007 | 144,485 | +1,092 | +0.76 |
| 2008 | 145,884 | +1,399 | +0.97 |
| 2009 | 147,663 | +1,779 | +1.22 |
| 2010 | 148,473 | +810 | +0.55 |
| 2011 | 148,901 | +428 | +0.29 |
| 2012 | 149,864 | +963 | +0.65 |
| 2013 | 150,902 | +1,038 | +0.69 |
| 2014 | 151,968 | +1,066 | +0.71 |
| 2015 | 153,391 | +1,423 | +0.94 |
| 2016 | 155,226 | +1,835 | +1.20 |
| 2017 | 156,696 | +1,470 | +0.95 |
| 2018 | 157,819 | +1,123 | +0.72 |
| 2019 | 158,745 | +926 | +0.59 |
| 2020 | 158,876 | +131 | +0.08 |
| 2021 | 157,421 | -1,455 | -0.92 |
| 2022 | 157,388 | -33 | -0.02 |

Source: Australian Bureau of Statistics (2023). Regional Population Growth, Australia (3218.0). Compiled and presented in profile.id by [.id](https://profile.id) (informed decisions).

<https://profile.id.com.au/yarra-ranges/population-estimate>

⁸⁷ Update due for release 26 March 2024.

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Regional population 2021-22: Population change, 2021-2022, by SA2



Source: Australian Bureau of Statistics (2024). *Regional Population 2021-22: Population change*.
<https://storymaps.arcgis.com/stories/5037f0410e3941e580720802ec9e5123>

CHANGE IN FERTILITY RATES AND BIRTHS

Total fertility rates are declining worldwide, as measured by births per woman over a lifetime. In Yarra Ranges, whilst the number of births rose by 1.7% between 2013 and 2022, the population grew by much more than this. Thus the total fertility rate dropped by 8.2%, from 1.96 to 1.8 births per woman. Victoria-wide, the fertility rate fell by an even higher 16.6%.

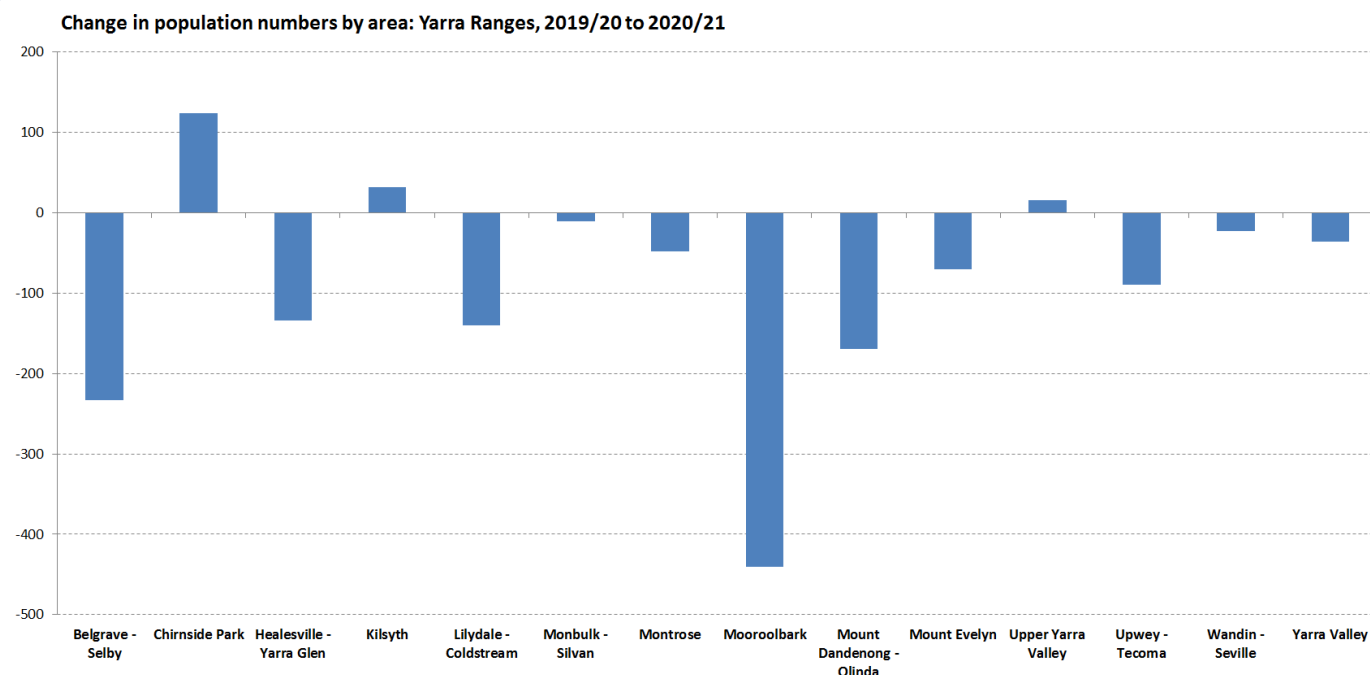
Births: Yarra Ranges and Victoria, 2013 to 2022

| | 2013 Number of births | 2013 Total fertility rate | 2022 Number of births | 2022 Total fertility rate | 2013-2022 % change in number of births | 2013-2022 % change in total fertility rate |
|--------------|-----------------------------|---------------------------------|-----------------------------|---------------------------------|---|--|
| Yarra Ranges | 1,792 | 1.96 | 1,823 | 1.80 | 1.7% | -8.2% |
| Victoria | 73,969 | 1.81 | 75,189 | 1.51 | 1.6% | -16.6% |

Total fertility rate is the number of births each woman is expected to have in her lifetime, averaged over a three-year period.

Source: Australian Bureau of Statistics (2023). 33010DO003 Births, Australia, 2022.
<https://www.abs.gov.au/statistics/people/population/births-australia/latest-release#data-downloads>

RECENT POPULATION CHANGE BY AREA



In terms of recent population change, local areas within Yarra Ranges fell into three main categories: population loss, stagnant and high growth.

- The areas which have had high percentage growth between 2016 and 2021 were: Upper Yarra Valley (30.4% growth), Chirnside Park (15.7%) and Kilsyth (5.4%). These three areas were the only parts of Yarra Ranges where more people were moving in than leaving. In the year to June 2022, Chirnside Park and Kilsyth have had natural population increase - more births than deaths; and also net internal migration – the number of people moving in, minus those moving out. Upper Yarra Valley has some internal migration from within Australia, but negative natural increase, and the growth in actual numbers in Upper Yarra Valley has been very small.
- The areas which have been stagnant are: Yarra Valley (2%), Mooroolbark (1.8%), Lilydale-Coldstream (1.7%), Wandin-Seville (1%), Healesville-Yarra Glen (0.5%) and Monbulk-Silvan (0.5). Over the past year, these areas have also had negative internal migration - their populations have only stayed about the same due to overseas migration, or having more births than deaths.
- The areas which have lost residents are: Belgrave-Selby (-3.4%), Mount Dandenong-Olinda (-3.3%), Mount Evelyn (-2.2%), Upwey-Tecoma (-1.9%) and Montrose (-1.2%). This is due to people moving out of the area. Over the past year, they have all been

experiencing net overseas migration in, and, they have all been experiencing natural increase (more births than deaths). However, from within Australia, more residents are leaving than are moving in.

Overall, all areas apart from Upper Yarra Valley had some people moving in from overseas. But only Chirnside Park, Kilsyth and Upper Yarra Valley had people move in from within Australia. These are the areas of Yarra Ranges which had population growth, indicating that Yarra Ranges is very reliant on net internal migration for growth. Births outnumbered deaths in all areas, apart from Upper Yarra Valley.

Components of population change by SA2: Yarra Ranges, 2020/21 – 2021/22

| Area | Components of population change 2021-22 | | |
|--------------------------|---|------------------------|------------------------|
| | Natural increase | Net internal migration | Net overseas migration |
| Upper Yarra Valley | -3 | 7 | 0 |
| Belgrave - Selby | 75 | -220 | 39 |
| Chirnside Park | 97 | 55 | 53 |
| Healesville - Yarra Glen | -28 | -97 | 37 |
| Kilsyth | 28 | 62 | 29 |
| Lilydale - Coldstream | 84 | -28 | 58 |
| Monbulk - Silvan | 17 | -102 | 20 |
| Montrose | 4 | -58 | 20 |
| Mooroolbark | 201 | -149 | 98 |
| Mount Dandenong - Olinda | 36 | -211 | 44 |
| Mount Evelyn | 84 | -177 | 29 |
| Upwey - Tecoma | 80 | -243 | 42 |
| Wandin - Seville | 60 | -91 | 15 |
| Yarra Valley | 82 | -113 | 32 |

Source: Australian Bureau of Statistics (2023). *Regional population, 2021-22 - Estimated resident population and components, Statistical Areas Level 2, Victoria*

<https://www.abs.gov.au/statistics/people/population/regional-population/latest-release#data-downloads>

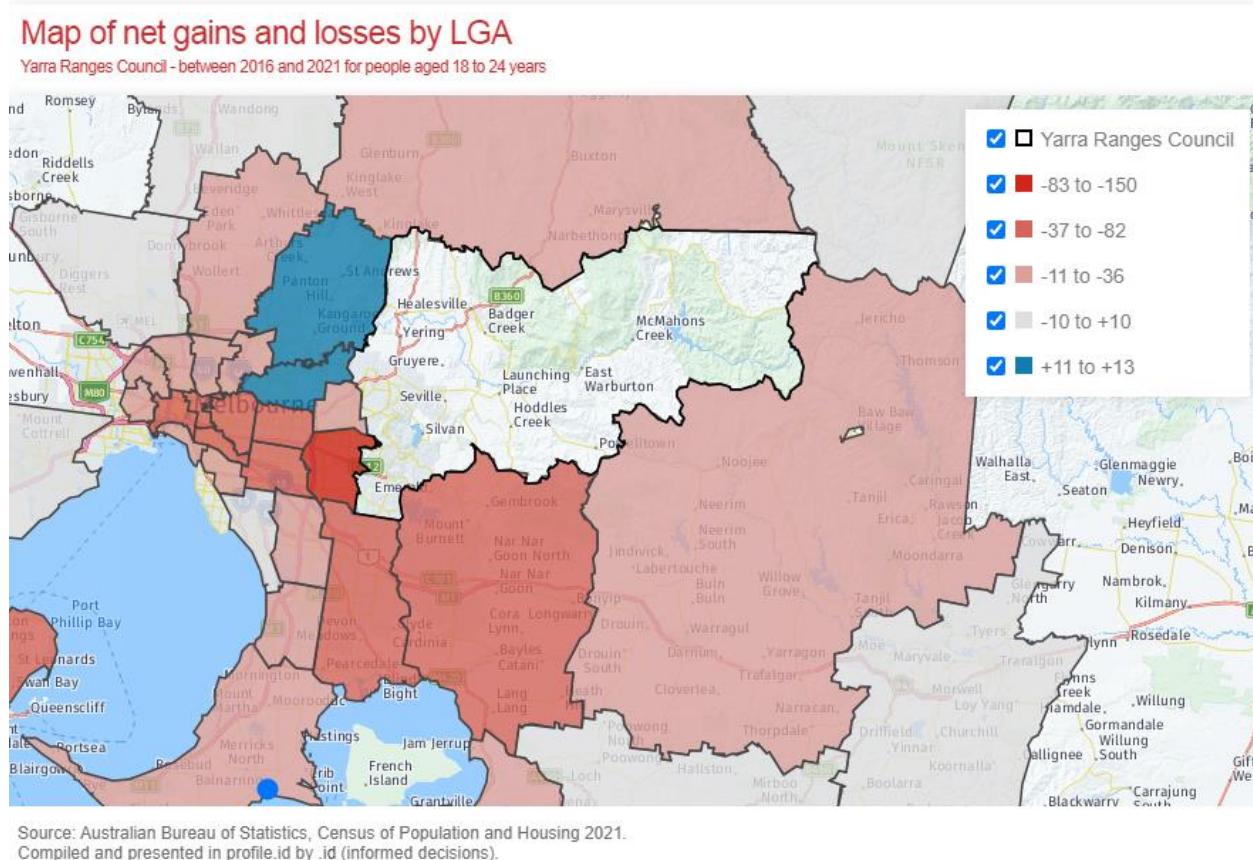
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Estimated resident population by SA2: Yarra Ranges, 2016 - 2021

| Area | 2016 | 2021 | % change, 2016-2021 |
|--------------------------|---------|---------|---------------------|
| Belgrave - Selby | 10,453 | 10,095 | -3.4% |
| Chirnside Park | 10,266 | 11,873 | 15.7% |
| Healesville - Yarra Glen | 14,106 | 14,181 | 0.5% |
| Kilsyth | 9,470 | 9,980 | 5.4% |
| Lilydale - Coldstream | 19,448 | 19,783 | 1.7% |
| Monbulk - Silvan | 5,827 | 5,857 | 0.5% |
| Montrose | 7,078 | 6,995 | -1.2% |
| Mooroolbark | 23,027 | 23,447 | 1.8% |
| Mount Dandenong - Olinda | 10,109 | 9,771 | -3.3% |
| Mount Evelyn | 10,081 | 9,863 | -2.2% |
| Upper Yarra Valley | 184 | 240 | 30.4% |
| Upwey - Tecoma | 10,040 | 9,848 | -1.9% |
| Wandin - Seville | 7,884 | 7,959 | 1.0% |
| Yarra Valley | 16,622 | 16,948 | 2.0% |
| Total Yarra Ranges | 154,595 | 156,840 | 1.5% |

Source: Australian Bureau of Statistics (2023). *Regional population by age and sex, 2021*.
<https://www.abs.gov.au/statistics/people/population/regional-population-age-and-sex/latest-release#victoria>

POPULATION MOVEMENT BY LGA, 2016 TO 2021



Yarra Ranges tends to gain residents from other areas in the east. Between July 2021 and June 2022, its largest gains were from Maroondah (net gain of 772 residents), Knox (127 residents), Whitehorse (113), Manningham (95) Monash (89) and Boroondara (68).

Yarra Ranges tends to lose resident to south-eastern Melbourne, losing 247 residents to Cardinia, 148 to Casey and 113 to Mornington Peninsula; it lost 64 residents to Melbourne. It also lost residents to Queensland, particularly the Sunshine Coast (105 residents), the Gold Coast (95 residents) and Brisbane (78 residents). Regional LGAs which Yarra Ranges residents were most likely to move to were Murrindindi, Bass Coast, Great Geelong, Wellington, Greater Bendigo and East Gippsland.

Top LGAs with net population losses: Yarra Ranges Council, July 2021 - June 2022

| LGA | In migration | Out migration | Net migration |
|----------------------|--------------|---------------|---------------|
| Cardinia | 327 | 574 | -247 |
| Casey | 372 | 520 | -148 |
| Mornington Peninsula | 128 | 241 | -113 |
| Sunshine Coast | 32 | 137 | -105 |
| Murrindindi | 117 | 221 | -104 |
| Gold Coast | 60 | 155 | -95 |
| Bass Coast | 87 | 180 | -93 |
| Greater Geelong | 92 | 178 | -86 |
| Brisbane | 36 | 114 | -78 |
| Wellington | 41 | 118 | -77 |
| Greater Bendigo | 38 | 111 | -73 |
| East Gippsland | 45 | 116 | -71 |
| Melbourne | 126 | 190 | -64 |

Source: ID Consulting (2023). *Net gains and losses by LGA, Yarra Ranges Council, July 2021 - June 2022*. <https://profile.id.com.au/yarra-ranges/annual-migration-by-location>

Top LGAs with net population gains: Yarra Ranges Council, July 2021 - June 2022

| LGA | Net migration |
|------------|---------------|
| Knox | +127 |
| Whitehorse | +113 |
| Manningham | +95 |
| Monash | +89 |
| Boroondara | +68 |

Source: ID Consulting (2023). *Net gains and losses by LGA, Yarra Ranges Council, July 2021 - June 2022*. <https://profile.id.com.au/yarra-ranges/annual-migration-by-location>

POPULATION MOVEMENT BY AGE, 2016 TO 2021

The only groups where Yarra Ranges has experienced a net gain over the past five years are families with primary school children: residents aged 5-11 and 35-44. Yarra Ranges is gaining all of these age groups from Maroondah, Knox and Whitehorse. This is likely to be partly driven by growing families moving in search of larger and/or more affordable homes.

The groups where Yarra Ranges is losing the highest numbers are retirees and families with older children, with the highest losses being amongst those aged 65 plus and 18-24. Where these groups move to varies considerably by age, and provides an indication of why they might be moving:

- Retirees aged 65 plus are most likely to move to Bass Coast, Mornington Peninsula and Cardinia.
- Those aged 55-64 – retirees and pre-retirees - are most likely to move to Bass Coast, Mornington Peninsula, Murrindindi and Cardinia.
- Those aged 45-54 – working adults and often parents of high school and university age children - are most likely to move to Maroondah, Knox, Cardinia, Casey and Whitehorse.
- Those aged 18-24, who are usually working or in further education, are most likely to move to Knox, Boroondara, Melbourne, Whitehorse, Casey, Monash and Yarra.
- 12-17 year olds are moving to a range of areas, but the highest loss in numbers is to Maroondah and Knox in the outer east.

Retirees are allowed to downsize housing and put extra money into their superannuation. This policy, along with adult children leaving home and rising property values, may mean that some retirees and pre-retirees are sea-changing or cashing in on house values whilst changing areas. Those of the age to have teenagers and young adult children at home are tending to move closer to the city, but some are shifting to other interface areas. Young people of the leaving school and starting post-school education age appear to be moving to the inner and outer east with their families, or moving by themselves to be closer to the university precincts (Monash, Melbourne and Boroondara). The number of families with dependent students aged 15 plus has dropped in Yarra Ranges over the past five years.

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Migration by age group: Yarra Ranges, 2016-2021

| Age group | In migration | Out migration | Net migration |
|-------------------|--------------|---------------|---------------|
| 5 to 11 years | +2,367 | -2,055 | +312 |
| 12 to 17 years | +1,286 | -1,426 | -140 |
| 18 to 24 years | +1,659 | -3,011 | -1,352 |
| 25 to 34 years | +6,245 | -6,223 | +22 |
| 35 to 44 years | +4,803 | -3,538 | +1,265 |
| 45 to 54 years | +2,658 | -2,863 | -205 |
| 55 to 64 years | +1,904 | -2,971 | -1,067 |
| 65 years and over | +1,964 | -3,565 | -1,601 |
| Total population | +22,886 | -25,652 | -2,766 |

Source: ID Consulting (2023). *Migration by age group 2021*. <https://profile.id.com.au/yarra-ranges/migration-by-age>

Change in country of birth

Border closures in 2020 and 2021, and restrictions on travel, meant that Yarra Ranges had a lot less people moving in from overseas in the eighteen months preceding the 2021 Census. A large number of overseas-born residents also appear to have left Yarra Ranges between 2016 and 2021. Overall, Yarra Ranges lost 907 overseas-born residents, including residents from England (460), the Netherlands (203), Germany (136) and Italy (68). Many of those who left were in the 'country of birth not stated' category. Note that these residents could have moved to other areas in Australia, or move back overseas.

In 2021, the top ten countries of birth for Yarra Ranges were England, New Zealand, the Netherlands, Myanmar and India, China, Germany, South Africa, Scotland and Italy. Five years prior, in 2016, Germany and Italy were in the top five for Yarra Ranges. So the past five years have seen a shift towards Asian countries of birth, as the number of residents from Myanmar, India and China has grown substantially. The countries with the highest increases in numbers between 2016 and 2021 were Myanmar, India, China, Iran, Malaysia, the Phillipines, the USA, Sri Lanka, South Africa and Scotland.

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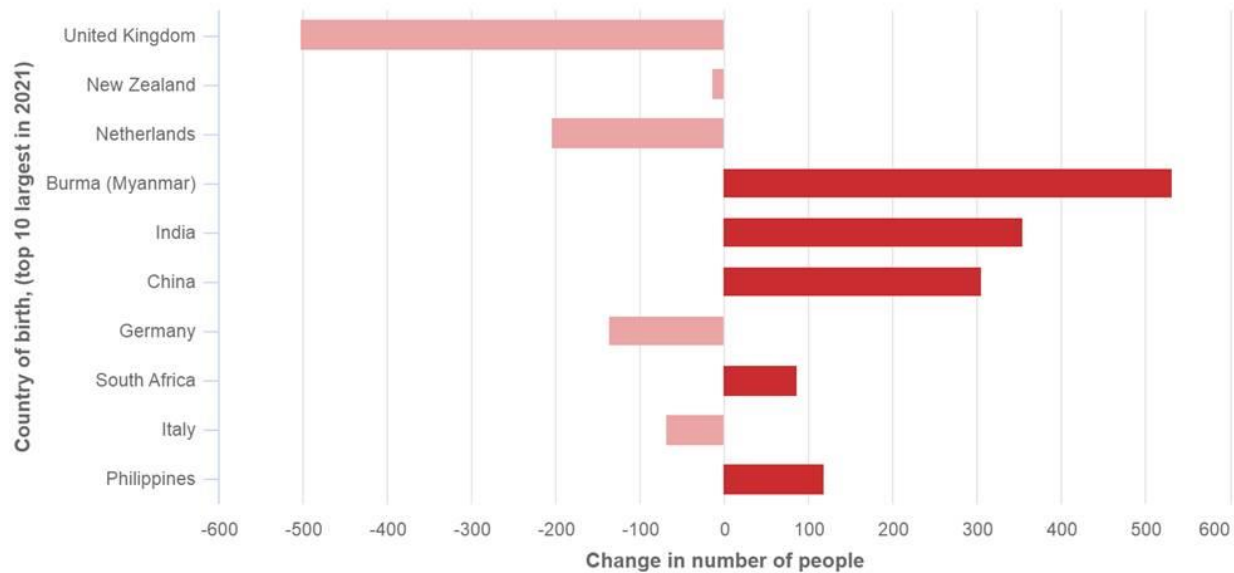
Country of birth: Yarra Ranges, 2016 and 2021

| Country of birth | 2016 | 2021 | Numeric change | Numeric change, ranked | % change |
|-----------------------------|----------------|----------------|----------------|------------------------|------------|
| Australia(b) | 116,547 | 123,985 | 7,438 | | 6% |
| China | 681 | 986 | 305 | 3 | 45% |
| England | 8,094 | 7,634 | -460 | 47 | -6% |
| Germany | 1,109 | 973 | -136 | 45 | -12% |
| India | 761 | 1,115 | 354 | 2 | 47% |
| Iran | 117 | 310 | 193 | 4 | 165% |
| Ireland | 320 | 375 | 55 | 11 | 17% |
| Malaysia | 308 | 463 | 155 | 5 | 50% |
| Myanmar | 716 | 1,249 | 533 | 1 | 74% |
| Netherlands | 1,590 | 1,387 | -203 | 46 | -13% |
| New Zealand | 1,855 | 1,842 | -13 | 41 | -1% |
| Philippines | 460 | 578 | 118 | 6 | 26% |
| Scotland | 860 | 842 | -18 | 43 | -2% |
| South Africa | 777 | 863 | 86 | 9 | 11% |
| Sri Lanka | 308 | 419 | 111 | 8 | 36% |
| Thailand | 219 | 336 | 117 | 7 | 53% |
| United States of America | 480 | 548 | 68 | 10 | 14% |
| Born elsewhere | 1,879 | 2,288 | 409 | | 22% |
| Country of birth not stated | 8,572 | 5,792 | -2,780 | | -32% |
| Total born overseas | 32,990 | 32,083 | -907 | | -3% |
| Total population | 149,537 | 156,068 | 6,531 | | 4% |

Source: Australian Bureau of Statistics. *2021 Census of Population and Housing, General Community Profile, Yarra Ranges*. <https://www.abs.gov.au/census/find-census-data/search-by-area>

Change in birthplace, 2016 to 2021

Yarra Ranges Council



Source: Australian Bureau of Statistics, Census of Population and Housing, 2016 and 2021 (Usual residence data). Compiled and presented in profile.id by .id (informed decisions).



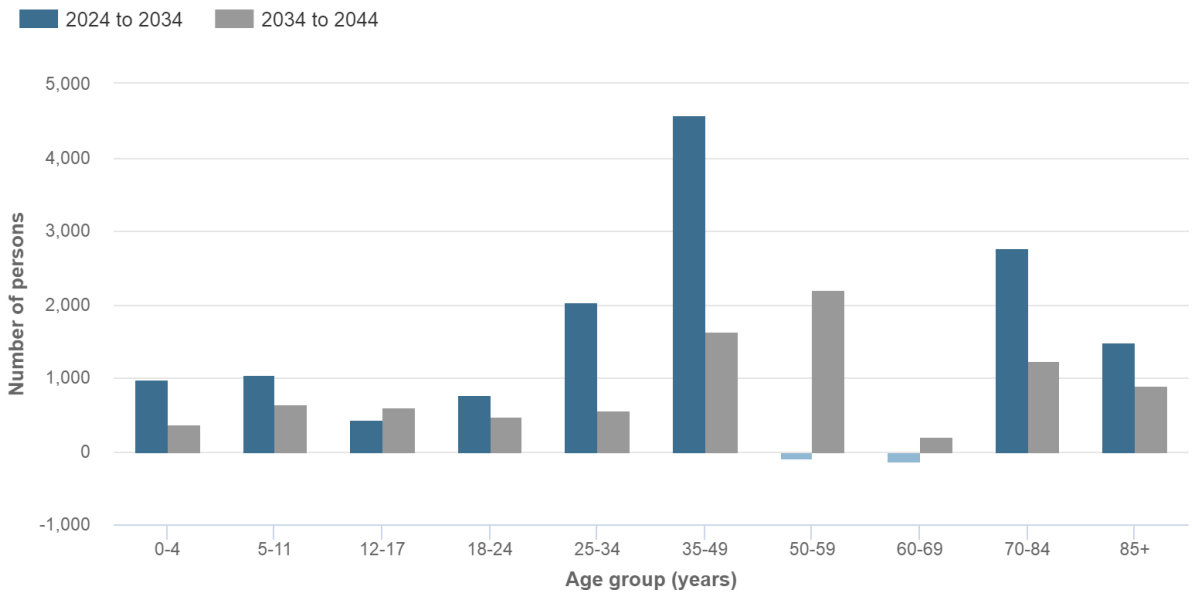
Source: ID Consulting (2024). Change in birthplace, 2016 to 2021.
<https://profile.id.com.au/yarra-ranges/birthplace>

Forecast population change, 2024-2034

FORECASTS BY AGE AND AREA

Forecast change in age structure - Service age groups

Yarra Ranges Council - Total persons



Source: Population and household forecasts, 2021 to 2046, prepared by .id(opens a new window) (informed decisions), November 2023.



Understanding how a community’s age structure is expected to change can assist with planning and advocacy for age-based services and infrastructure, such as childcare, recreation, aged care, housing and education. The current and future age structure of an area is affected by changes in age amongst current residents; the number of births and deaths; the age and number of people moving into and out of an area; the appeal of the location, including its proximity to family, friends, services, infrastructure and employment; and factors such as the type, cost and availability of housing.

The total population of Yarra Ranges is forecast to grow by 8.7% over the next ten years, adding 13,861 residents. Yarra Ranges is forecast to have nearly 174,000 residents in 2034. The main growth will be amongst families with pre-school and primary school age children, working age residents, and older retirees:

- The number of adults aged 35-49 will grow by 4,569 persons, with slight growth in population share, from 19.9% to 21%.
- The number of older residents aged 70 and over will grow by 4,253 persons, and their population share will rise from 12.7% to 14.1%.

- The number of younger adults aged 25-34 will grow by 2,035 persons, with minimal change in population share (from 12.4% to 12.6%).
- The number of primary school age children aged 5-11 is expected to grow by 1,043 persons, with a minimal change in population share (from 8.6% to 8.5%); the number of 0-4 year olds is expected to increase by 986, also with minimal shift in population share (from 6.1% to 6.2%).

There will be relatively low growth amongst secondary school students and young adults aged 18-24, and their share of the total population will decrease. The number of 12-17 year olds is expected to grow by 426 persons, with their population share falling from 7.5% to 7.2%; the number of 18-24 year olds is expected to grow by 773 persons, with their population share falling from 7.9% to 7.7%. Thus whilst the number of teenagers and young adults will remain stable, their relative contribution to the age mix in Yarra Ranges will decline.

RETIREEES

The current pension age is 67, depending on year of birth. Superannuation can be accessed from age 60 onwards. The average age that people want to retire at is 65.5 years. And for those who retired in 2020, the average age at retirement was 65.4 years for men and 63.7 years for women, with an average of 64.3 years across both genders. Thus the early retirement cohort is age 60 to 65, and most people are at least partly retired from age 70 onwards. The average retirement age in Australia has been steadily increasing since 2000.

In Yarra Ranges, the number of pre-retirees and early stage retirees aged 50-69 is expected to fall by 223 persons, with their population share dropping from 24.8% in 2024 to 22.6% in 2034. The level of people aged 70 plus will increase over the next ten years, with population ageing expected to be most pronounced in:

- Warburton-Upper Yarra Valley, where the proportion aged 70 years or more will rise from 16% to 24%;
- Rural South East, where the proportion will rise from 14% to 19%.
- Yarra Glen and surrounds, with a rise from 16% to 20%; and
- Upwey-Tecoma, with a rise from 10% to 14%.

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Forecast change in age structure by service age groups: Yarra Ranges, 2024-2034

| Age group (years) | 2024 | | 2034 | | Change between 2024 & 2034 Number |
|--|---------|-------|---------|-------|-----------------------------------|
| | Number | % | Number | % | |
| Babies and pre-schoolers (0 to 4) | 9,793 | 6.1 | 10,779 | 6.2 | +986 |
| Primary schoolers (5 to 11) | 13,796 | 8.6 | 14,839 | 8.5 | +1,043 |
| Secondary schoolers (12 to 17) | 12,021 | 7.5 | 12,446 | 7.2 | +426 |
| Tertiary education & independence (18 to 24) | 12,637 | 7.9 | 13,410 | 7.7 | +773 |
| Young workforce (25 to 34) | 19,859 | 12.4 | 21,894 | 12.6 | +2,035 |
| Parents and homebuilders (35 to 49) | 31,879 | 19.9 | 36,448 | 21.0 | +4,569 |
| Older workers and pre-retirees (50 to 59) | 21,025 | 13.2 | 20,933 | 12.0 | -92 |
| Empty nesters and retirees (60 to 69) | 18,539 | 11.6 | 18,408 | 10.6 | -131 |
| Seniors (70 to 84) | 17,376 | 10.9 | 20,136 | 11.6 | +2,760 |
| Elderly aged (85 and over) | 2,936 | 1.8 | 4,429 | 2.5 | +1,493 |
| Total persons | 159,861 | 100.0 | 173,722 | 100.0 | +13,861 |

Source: ID Consulting (2023). *Population and household forecasts, 2021 to 2046*.

FORECAST GROWTH BY AGE AND AREA

The largest population growth in the next ten years is forecast to be concentrated in the Urban Area and the area around Yarra Junction: Lilydale (44% growth), Chirnside Park (14% growth), Kilsyth (9% growth), Yarra Junction-Wesburn-Millgrove (7% growth) and Mooroolbark (7%) growth.

The population is forecast to decrease by 186 people in Mount Dandenong-Olinda and by 134 people in Warburton-Upper Yarra Valley. There will be a slight drop in Belgrave-Selby (17 people), and Yarra Glen and Surrounds (9 people). Montrose is expected to have minimal growth of 9 people.

Across Yarra Ranges, the number of females will grow by 8.9% over the next ten years. The largest growth in the number of females will be in: Lilydale (44.6%), Chirnside Park (14.9%), Yarra Junction-Wesburn-Millgrove (10.5%) and Kilsyth (10.1%). The number is forecast to drop by 6% in Warburton-Upper Yarra Valley, and to have slight decreases in Mooroolbark, Montrose, Belgrave-Selby, and Yarra Glen and Surrounds.

Across Yarra Ranges, the number of males will grow by 8.4% over the next ten years. The largest growth in the number of females will be in: Lilydale (43.9%), Chirnside Park (12.8%), Kilsyth (8.8%) and Mooroolbark (7.3%). The number is forecast to drop by 2% in Warburton-Upper Yarra Valley, Mount-Dandenong-Olinda, and Upwey-Tecoma. There will be a slight decrease in Yarra Glen and Surrounds, and Belgrave-Selby.

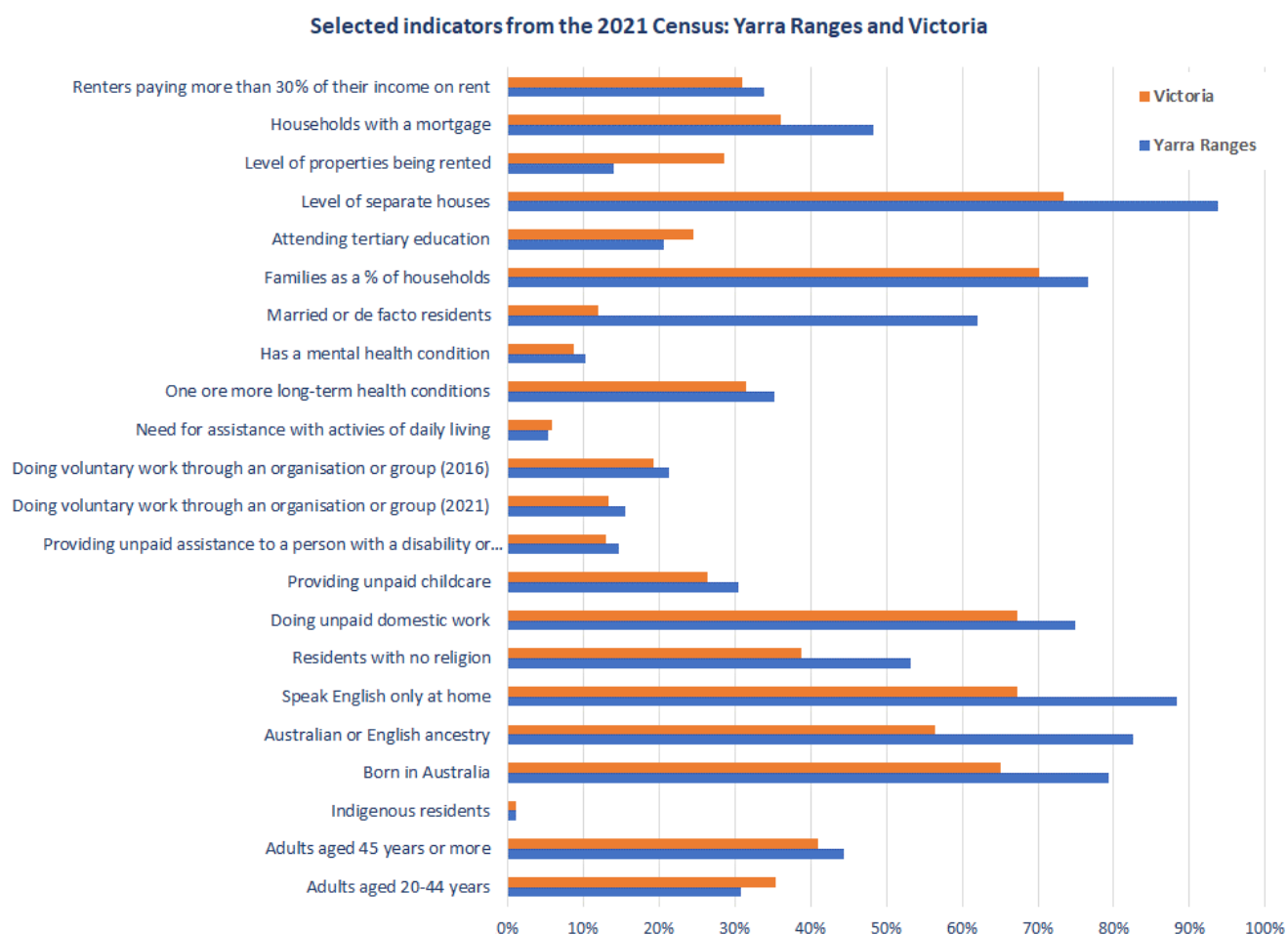
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Forecast change in population size by area and sex: Yarra Ranges local areas, 2024-2034

| Area | 2024 | | | 2034 | | | % change | | | Forecast change in number | | |
|--|--------|--------|---------|--------|--------|---------|----------|-------|--------|---------------------------|-------|--------|
| | Female | Male | Person | Female | Male | Person | Female | Male | Person | Female | Male | Person |
| Belgrave - Selby | 4,913 | 5,004 | 9,914 | 4,901 | 4,996 | 9,897 | -0.2% | -0.2% | -0.2% | -12 | -8 | -17 |
| Chirnside Park | 6,464 | 6,204 | 12,670 | 7,427 | 6,996 | 14,420 | 14.9% | 12.8% | 13.8% | 963 | 792 | 1,750 |
| Coldstream - Yering | 1,135 | 1,206 | 2,341 | 1,175 | 1,266 | 2,441 | 3.5% | 5.0% | 4.3% | 40 | 60 | 100 |
| Healesville and surrounds | 5,444 | 5,061 | 10,506 | 5,707 | 5,185 | 10,892 | 4.8% | 2.5% | 3.7% | 263 | 124 | 386 |
| Kilsyth | 5,475 | 5,027 | 10,506 | 6,026 | 5,470 | 11,495 | 10.1% | 8.8% | 9.4% | 551 | 443 | 989 |
| Launching Place - Don Valley - Woori Yallock | 2,927 | 3,106 | 6,034 | 2,965 | 3,214 | 6,177 | 1.3% | 3.5% | 2.4% | 38 | 108 | 143 |
| Lilydale | 9,504 | 9,095 | 18,601 | 13,739 | 13,084 | 26,822 | 44.6% | 43.9% | 44.2% | 4,235 | 3,989 | 8,221 |
| Monbulk - Silvan | 3,030 | 3,167 | 6,198 | 3,187 | 3,367 | 6,556 | 5.2% | 6.3% | 5.8% | 157 | 200 | 358 |
| Montrose | 3,520 | 3,468 | 6,989 | 3,491 | 3,507 | 6,998 | -0.8% | 1.1% | 0.1% | -29 | 39 | 9 |
| Mooroolbark | 12,027 | 12,019 | 24,045 | 12,774 | 12,900 | 25,675 | 6.2% | 7.3% | 6.8% | 747 | 881 | 1,630 |
| Mount Dandenong - Olinda | 4,802 | 4,878 | 9,681 | 4,721 | 4,773 | 9,495 | -1.7% | -2.2% | -1.9% | -81 | -105 | -186 |
| Mount Evelyn | 4,916 | 4,914 | 9,831 | 4,949 | 5,042 | 9,992 | 0.7% | 2.6% | 1.6% | 33 | 128 | 161 |
| Rural South East | 990 | 1,191 | 2,181 | 990 | 1,215 | 2,207 | 0.0% | 2.0% | 1.2% | - | 24 | 26 |
| Upwey - Tecoma | 4,888 | 4,894 | 9,783 | 4,915 | 4,809 | 9,724 | 0.6% | -1.7% | -0.6% | 27 | -85 | -59 |
| Wandin - Seville | 3,990 | 3,913 | 7,903 | 4,035 | 3,933 | 7,967 | 1.1% | 0.5% | 0.8% | 45 | 20 | 64 |
| Warburton - Upper Yarra Valley | 1,589 | 1,650 | 3,238 | 1,493 | 1,612 | 3,104 | -6.0% | -2.3% | -4.1% | -96 | -38 | -134 |
| Yarra Glen and surrounds | 1,844 | 1,865 | 3,706 | 1,841 | 1,855 | 3,697 | -0.2% | -0.5% | -0.2% | -3 | -10 | -9 |
| Yarra Junction - Wesburn - Millgrove | 3,001 | 2,729 | 5,733 | 3,316 | 2,843 | 6,159 | 10.5% | 4.2% | 7.4% | 315 | 114 | 426 |
| Yarra Ranges Council | 80,459 | 79,400 | 159,861 | 87,653 | 86,068 | 173,722 | 8.9% | 8.4% | 8.7% | 7,194 | 6,668 | 13,861 |

Source: ID Consulting (2023). *Population and household forecasts, 2021 to 2046*.

2021 Census highlights



The Census shows the key characteristics of residents, identifies differences between local areas, and provides information for the first time on long-term health conditions. It also reveals inequalities, and provides crucial information for planning services such as health and education. It also shows what population changes have happened over the past five years. Australians overall have been described as “decidedly irreligious”, with a growing multicultural population, more people being willing to identify as Indigenous, and millennials becoming the dominant age group. The 2021 Census marked the 50th anniversary of Indigenous people being full included in the Census. However, they are still under-represented, with the Australian Bureau of Statistics estimating a 17% undercount.

The August 2021 Census counted 156,068 residents in Yarra Ranges. Key findings include:

- The number of residents identifying as Aboriginal and/or Torres Strait Islander (ATSI) rose by 26% between 2016 and 2021. Upper Yarra Valley and Yarra Valley have the highest levels of Indigenous residents.
- Resident age profiles vary markedly across Yarra Ranges, with Healesville-Yarra Glen and the Yarra Valley having higher proportions of older residents; the Urban Area having a higher level of children under 10 and younger parents; the Hills having a higher level of older children and teenagers, and middle aged or retired residents; and the Yarra Valley having a high level of teenagers and adults aged 50 plus. The main age group where Yarra Ranges lost residents was young adults aged 18-24 (a loss of 472 residents since 2016); there was also a slight decline (84 persons) in the number of 50-59 year olds.
- Yarra Ranges residents come from a predominantly Australian or British background, with a much higher level of Australian-born residents than the Victorian average; Yarra Ranges has the seventh-highest level of Australian-born residents, within Victoria. Due to past humanitarian migration, Yarra Ranges has a relatively high level of residents from Myanmar, at 0.8% compared to 0.2% across Victoria. Yarra Ranges has the fourth-highest number of residents from Myanmar, compared to other Victorian municipalities. Mount Evelyn has the highest level of residents with Australian or English ancestry, who speak English only at home and who have no religion.
- The number of new arrivals dropped dramatically in both 2020 and 2021, from the mid-400s down to 163 in 2020 and 71 in 2021. Given that, pre-COVID, Yarra Ranges consistently had several hundred overseas arrivals per year, the low numbers in 2020 and 2021 translate to about 700 less Yarra Ranges residents than could have otherwise been expected.
- Yarra Ranges has a very high level of residents with no religion, at 53.2% of residents compared to 38.8% across Victoria, and this level has risen substantially since 2016. Yarra Ranges has the second-highest level of residents with no religion within metropolitan Melbourne. Amongst those practicing a religion, the main religion was Christianity, at 37.8% of residents. Upwey-Tecoma has the highest level of residents with no religion (61.6%).
- Yarra Ranges residents are much less likely to attend tertiary education, particularly university. Yarra Ranges also has a very high level of young male adults who left school

early and have not completed Year 11. This indicator shows very high variation across Yarra Ranges - Upper Yarra Valley has the lowest level of residents attending tertiary education (3.4%) and Upwey-Tecoma has the highest (24.3%).

- Yarra Ranges has above average family and household incomes. However, 14.5% of households have incomes of less than \$650 per week. This level is highest in Upper Yarra Valley (34.1%) and Yarra Valley (20.2%). Note that the level has dropped since 2016, when 17.1% of households had incomes of less than \$650 per week – this may be partly due to JobKeeper and JobSeeker allowances during lockdowns.
- Yarra Ranges has a relatively high level of residents doing unpaid domestic work, providing unpaid childcare, providing unpaid assistance to a person with a disability or health condition, and doing voluntary work (over the past twelve months). Yarra Ranges has the sixth-highest level of persons providing assistance with unpaid childcare across metropolitan Melbourne, highlighting the impact of the pandemic in terms of increased childcare responsibilities for both working and non-working parents. Mount Evelyn had the highest level of residents who were providing unpaid childcare. Mount Dandenong-Olinda has the highest level of residents doing unpaid domestic work, providing unpaid assistance to a person with a disability, and volunteering. It also had the lowest decline in volunteering between 2016 and 2021, along with Belgrave-Selby. Upper Yarra Valley had the largest drop in its level of volunteers, which fell by 57% - from 18.5% to 8% of adults.
- Whilst Yarra Ranges continues to have a high level of volunteering relative to Victoria, the level of volunteers has dropped dramatically, from 21.3% in 2016 to 15.5% in 2021. Volunteers are essential to a wide range of community sports, activities and services, and this 27% drop in the level of volunteers is a very concerning shift. Women are more likely than men to be carers or volunteers.
- More than one in three residents (35.2%) have one or more long-term health conditions, compared to 31.4% across Victoria. The most common health conditions are mental health, arthritis, asthma, diabetes and heart disease. Yarra Ranges has a comparatively high level of residents with mental health conditions, arthritis or asthma. Healesville-Yarra Glen has the highest level of residents with one or more long-term health conditions.
- Within Yarra Ranges, Indigenous residents, women and young people are disproportionately affected by several long-term health conditions. Indigenous

residents are much more likely to have long-term mental health conditions, asthma, diabetes or kidney disease. Females are much more likely than males to have a long-term health condition, at 38.1% compared to 32.3% of males; and have a higher prevalence of mental health conditions, arthritis and asthma. Males have a higher level of heart disease and diabetes. Teenagers and adults aged less than 45 were the age groups most likely to experience a mental health condition.

- Yarra Ranges ranked seventh-highest for the level of residents with mental health conditions, within metropolitan Melbourne. Within Yarra Ranges, Yarra Valley and Belgrave-Selby have the highest levels of residents with a mental health condition. The prevalence of mental health conditions was also highest amongst 15-44 year olds, females, those on very low incomes, and those with a disability requiring assistance with daily activities. Protective factors for mental health included being born in Australia, being married or in a de-facto relationship, or being in a couple with children household. Risk factors included heading a one parent family, or being in a lone person household.
- In 2021, 5.4% of Yarra Ranges residents (8,430 persons) reported a need for assistance with activities of daily living, with a slightly higher level of disability amongst females, which would be due to there being more frail aged females. The level of residents with a disability was by far highest amongst the frail aged: 49.9% of those aged 85 plus have a disability, along with 18.2% of 75-84 year olds, highlighting the need for supports and service access to enable this age group to retain as much of their independence as possible. Children aged 5-14 also have a relatively high level of disability (5.2%).
- Yarra Ranges has an above average level of residents who are married or part of a de facto couple, and the level is particularly high in Mount Dandenong-Olinda and Wandin-Seville.
- Yarra Ranges has a relatively high level of family households; and an above average level of single parent households which are headed by male parents. The level of non-dependent 15-24 year olds who lived with their parents rose slightly between 2016 and 2021, from 34.2% to 36.3%. Upper Yarra Valley has the highest level of one parent families and lone person households. Wandin-Seville and Belgrave-Selby have the highest levels of family households and couples with children.
- Overall, Yarra Ranges has a high level of occupancy amongst private dwellings, which could indicate a lower level of holiday homes, unoccupied investment properties and

Airbnbs. However, the level of unoccupied private dwellings varies hugely across Yarra Ranges, and is highest in Upper Yarra Valley, Yarra Valley and Mount Dandenong-Olinda. In Upper Yarra Valley, 31% of private dwellings are unoccupied; this would not be due to the pandemic, as the level was about the same in 2016.

- Yarra Ranges has a very high level of separate houses, and a corresponding low level of medium or high density dwellings. This lack of medium to high density housing is linked to a low level of rental dwellings. Lack of rental properties – particularly affordable rentals - is a continuing issue for Yarra Ranges residents, making it difficult for people to form a new household in the same area. Yarra Ranges has one of the lowest levels in Melbourne of both rental properties and social housing. Within Yarra Ranges, Mooroolbark and Kilsyth have the highest level of properties which are being rented (20%). Mount Dandenong-Olinda, Wandin-Seville and Belgrave-Selby have the highest levels of separate houses (99%).
- Yarra Ranges has a very high level of households with a mortgage (48.2% compared to 36.1%). This group accounts for 49% of occupied private dwellings and is potentially vulnerable to continued interest rate rises. Yarra Ranges already has an above average level of renter households in housing stress – more than one-third of renter households have high rent payments, compared to 30.9% across Victoria.⁸⁸ The level of renters in rental stress was by far the highest in Yarra Valley (40%) and Monbulk-Silvan (39%). The level of home owners in mortgage stress was highest in Upper Yarra Valley; and Upper Yarra Valley also has the highest level of households with a mortgage, along with Mount Evelyn and Belgrave-Selby.

⁸⁸ Note that this indicator is not comparable with 2016 QuickStats, as applicable households included in this calculation have changed. The previous measure looked at those in housing cost stress as a percentage of all households, rather than as a percentage of rental or mortgage households.

Key demographics

People and population

The 2021 Census counted 156,068 residents in Yarra Ranges, compared to 149,537 in 2016 (a 4.4% increase). This figure will be adjusted to calculate the estimated resident population, to allow for residents who are absent from their homes on Census night. Loss of access to new arrivals over the past few years means that this number is substantially less than could have been expected with normal population movement.

The population was split roughly 50:50 between males (49.5%) and females (50.5%). The median age of residents is 40 years. Based on the Census data (as opposed to the ERP), Yarra Ranges has a below average level of adults aged 20-44 (30.8% compared to 35.4%), and an above average level of persons aged 45 plus (44.4% compared to 41%); its level of children and teenagers is similar to the Victorian average. The largest age groups in Yarra Ranges are 45-49 year olds and 50-54 year olds (in terms of population share). The age group that has changed the most since 2016 is 70-74 year olds, increasing by 1,716 people, followed by 75-79 year olds (1,485 persons), 35-39 year olds (1,275 persons) and 30-34 year olds (1,245 persons). The number of residents aged 0-14 has increased, along with 30-39 year olds, 50-54 year olds, and persons aged 60 years or more. In terms of service age groups, the main age group where Yarra Ranges lost residents was young adults aged 18-24 (a loss of 472 residents since 2016); there was also a slight decline (84 persons) in the number of 50-59 year olds.

Compared to Yarra Ranges, Healesville-Yarra Glen has an above average proportion of older residents aged 55 years or more, and a below average level of 0-54 year olds. The Hills has a higher level of 5-19 year olds, and 40-74 year olds. The Urban Area has a higher level of 0-9 year olds and 20-39 year olds. Yarra Valley has an above average level of 10-19 year olds, 25-29 year olds and 50-69 year olds.

Yarra Ranges has an above average level of residents who are married or part of a de facto couple. Nearly half of residents aged 15 years or more are married, compared to 46.8% across Victoria; 12.8% are in de facto marriages, compared to 11.2% across Victoria. Mount Dandenong-Olinda and Wandin-Seville have the highest levels of married or de facto residents (66%), and Upper Yarra Valley has the lowest (49%).

In 2021, 2.2% of Yarra Ranges residents had previously served in the Australian Defense Force, slightly above the 1.8% average.

EDUCATION

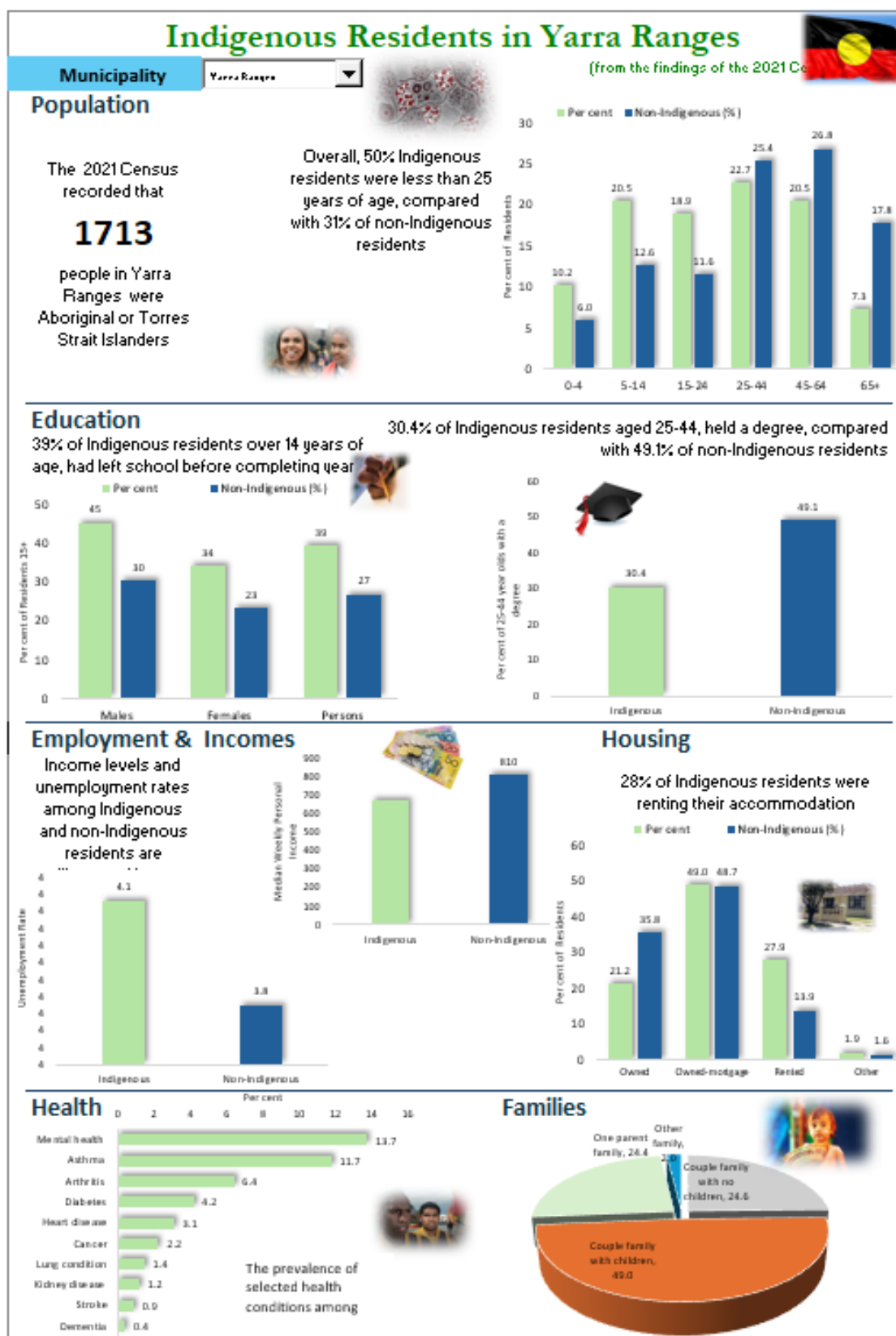
Compared to Victoria overall, Yarra Ranges residents are much less likely to attend tertiary education (20.6% compared to 24.5%). Those residents who are undertaking tertiary education are more likely to undertake vocational education (8.7% compared to 7.9%), and less likely to attend university (11.8% compared to 16.6%). The level undertaking tertiary education has risen slightly, from 18.7% in 2016.

The level of residents attending tertiary education is fairly consistent across Yarra Ranges, at around 20% in most areas (ranging from 18% to 22%). Upwey-Tecoma is the only area with a high enough level of residents attending tertiary education to align with the Victorian average (24.3%). Yarra Valley and Upper Yarra Valley have by far the lowest level of tertiary students (14.6% and 3.4% respectively).

School students have an above average level of attendance at government primary and secondary schools, rather than Catholic or other non-government schools. Yarra Ranges has a high level of young male adults who left school early and have not completed Year 11. The proportion is 14.4% of male 20-24 year olds (compared to 9.7% for Victoria), and 7.8% of female 20-24 year olds (compared to 5.9% for Victoria).

CULTURAL DIVERSITY

In 2021, Yarra Ranges had 1,713 residents who identified as ATSI (1.1% of the population). Whilst this number is still considered to be an understatement, it is up from 1,359 in 2016 (a 26% rise), indicating that more residents now feel more comfortable with identifying as Indigenous in the Census records. Yarra Ranges residents are more likely to state their Indigenous status – only 3.4% did not state it, compared to 4.5% for Victoria. The Indigenous population has a much younger age profile, with 79% aged less than 50, compared to 62% of the non-Indigenous population. Upper Yarra Valley (3.4%) and Healesville-Yarra Glen (2.7%) have the highest levels of Indigenous residents; Upwey-Tecoma (0.4%) has the lowest.



Source: City of Greater Dandenong (2024). *Indigenous residents – infographic*. [Social Statistics \(socialstats.com.au\)](https://socialstats.com.au)

Most Yarra Ranges residents identify with English or Australian ancestry (82.6% compared to 56.4%). The other ancestries in the top five are Irish (11.4%), Scottish (11.2%) and German 5.1%). Thirty-nine percent of residents had at least one parent born overseas. Mount Evelyn has the highest level of residents with Australian or English ancestry, who were born in Australia, or who speak English only at home.

Most residents were born in Australia (79.4% compared to 65%); this is the seventh-highest level in Victoria. The other main countries of birth were: England (4.9%), New Zealand (1.2%), Netherlands (0.9%), Myanmar (0.8%) and India (0.7%). Due to humanitarian migration, Yarra Ranges has a relatively high level of residents from Myanmar, at 0.8% compared to 0.2% across Victoria, although the number is relatively small (1,249 residents). Yarra Ranges has the fourth-highest number of residents from Myanmar, across Victorian municipalities; this group is concentrated in Mooroolbark and Kilsyth.

Most residents speak English only at home (88.3% compared to 67.2%). Across Victoria, nearly one-third of households use a non-English language, compared to 10% in Yarra Ranges. The main languages other than English are Mandarin (0.8%), Italian (0.7%), Chin Haka (0.7%), German (0.4%) and Dutch (0.3%).

Yarra Ranges has a very high level of residents with no religion, at 53.2% of residents compared to 38.8% across Victoria. Fifty-seven percent of residents have no religion or secular beliefs⁸⁹, up from 43% in 2016. Amongst those practicing a religion, the main religion was Christianity, at 37.8% of all residents. No other religion accounted for more than 1% of the population. Yarra Ranges has the second-highest level of residents with no religion within metropolitan Melbourne. Within Yarra Ranges, Upwey-Tecoma has the highest level of residents with no religion.

⁸⁹ 'Secular Beliefs and Other Spiritual Beliefs and No Religious Affiliation', comprises entities which are identifiable and useful groupings which, while not satisfying the criteria of a religion, are necessary to enable the capture of the full range of responses to questions on religious affiliation.

[Type text]

The level of new arrivals fell by 31% between 2019 and 2020. The number recovered nearly to pre-pandemic levels during 2021, with roughly 360 new arrivals, including 258 family reunion migrants and 100 skilled migrants. However, the level of refugees is now close to zero, down from 74 in 2019; family reunion migration has increased and skilled migration has dropped by 21%. Most of those who did arrive over the past two years came from China, the United Kingdom, India or New Zealand.

The lack of arrivals on temporary working visas would also have impacted agricultural businesses in Yarra Ranges (however, the drop in persons on working visas is not quantified via the Census).

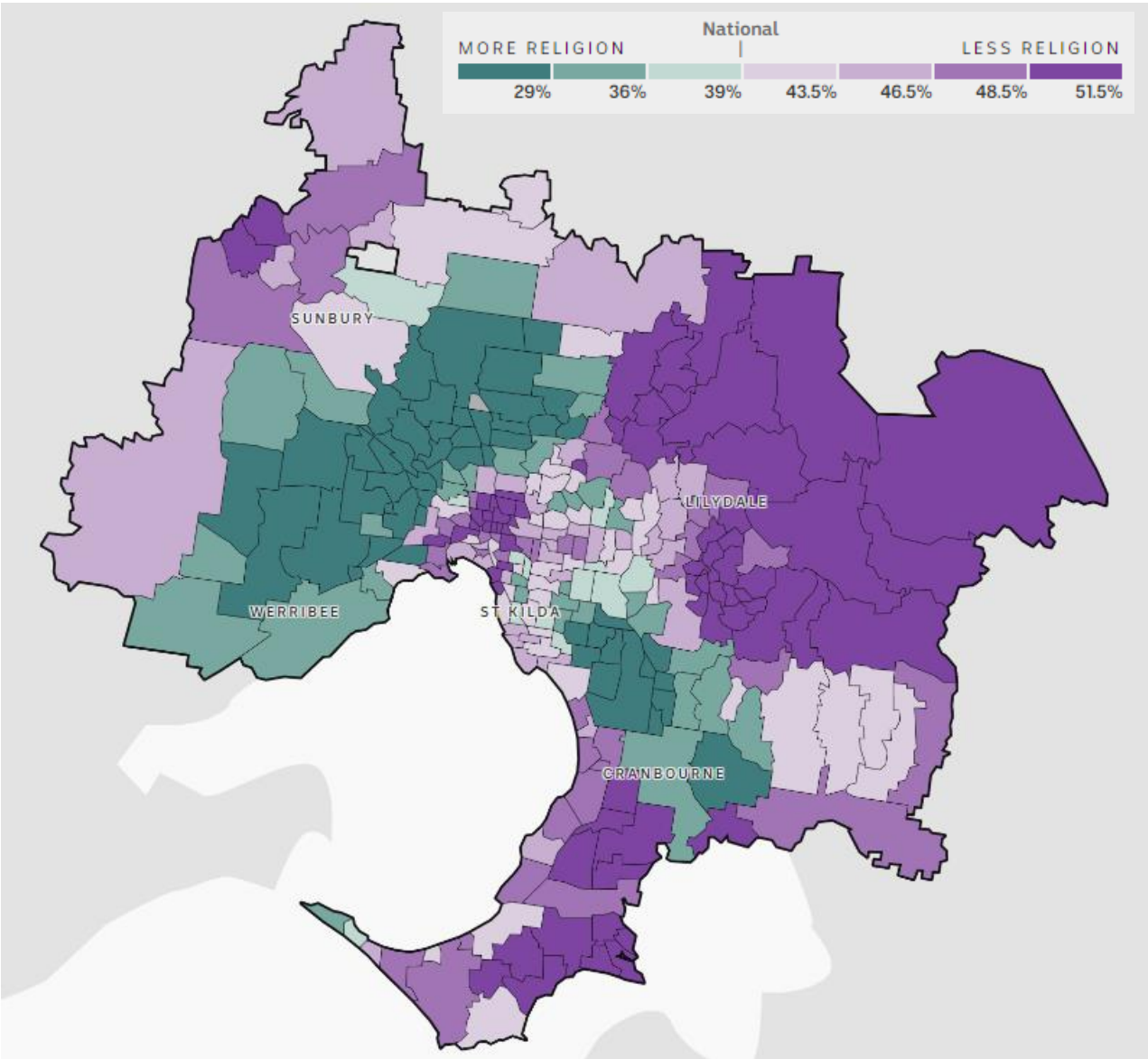
Permanent settlers by migration stream and calendar year: Yarra Ranges, 2019-2021

| Year | Humanitarian (Refugees) | Family | Skilled | Total |
|------|----------------------------|--------|---------|-------|
| 2019 | 74 | 192 | 126 | 392 |
| 2020 | 9 | 179 | 83 | 271 |
| 2021 | <5 | 258 | 100 | 358 |

Source: Department of Home Affairs (2022). *Settlement Reports (2019, 2020, 201)*.
<https://www.data.gov.au/dataset/ds-dga-8d1b90a9-a4d7-4b10-ad6a-8273722c8628/details>

[Type text]

Residents with no religion: Melbourne metropolitan area, 2021



Source: <https://www.abc.net.au/news/2022-07-05/what-australias-2021-census-reveals-about-our-neighbourhoods/101201644#housework>

INCOME

Yarra Ranges has above average family and household incomes. Median weekly family incomes are \$2,203 compared to \$2,136 for Victoria; median household incomes are \$1,881 compared to \$1,759 for Victoria. Personal median incomes are similar to Victoria, at \$808 for Yarra Ranges and \$803 for Victoria. Note that medians are not the same as averages, and represent the mid-point between the highest and lowest incomes. Median weekly household incomes were highest in Belgrave-Selby (\$2,253), and lowest in Yarra Valley and Upper Yarra Valley (\$1,439 and \$900 respectively). In 2021, 14.5% of Yarra Ranges households had incomes of less than \$650 per week; and this level is highest in Upper Yarra Valley (34.1%) and Yarra Valley (20.2%). However, the level of low-income households has dropped since 2016, when 17.1% of Yarra Ranges households had incomes of less than \$650 per week.

EMPLOYMENT

By June 2022, the level of working age residents in Yarra Ranges (15-64 year olds), who were on JobSeeker or youth allowance, had returned to pre-pandemic levels. Most small areas in Yarra Ranges also returned to levels similar to before the pandemic. There were slight increases in the level of residents on employment benefits in:

- Mount Evelyn and Yarra Valley (up 0.4% each); and
- Healesville-Yarra Glen and Upwey-Tecoma (up 0.3% each).

Whilst there was a noticeable decrease in Upper Yarra Valley, with the level on benefits dropping from 17% to 14.9%, the small population in the area means that this change represents only three people. There was also a decrease in Mooroolbark, from 3.9% to 3.5% (67 less people on benefits).

Overall, the Melbourne metropolitan area had a slight increase in residents on unemployment benefits, from 3.7% to 4%.

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JobSeeker by local area: Yarra Ranges, March 2020 and June 2022

| Area | June 2022 | | March 2020 | | Change |
|--------------------------|--|---------------------------|--|---------------------------|--------|
| | JobSeeker and youth allowance recipients | % of 15-64 age population | JobSeeker and Youth allowance recipients | % of 15-64 age population | |
| Upper Yarra Valley | 21 | 14.9 | 24 | 17.0 | -3 |
| Belgrave - Selby | 247 | 3.6 | 258 | 3.7 | -11 |
| Chirnside Park | 214 | 2.9 | 227 | 3.0 | -13 |
| Healesville - Yarra Glen | 389 | 4.3 | 361 | 4.0 | +28 |
| Kilsyth | 258 | 4.2 | 256 | 4.2 | +2 |
| Lilydale - Coldstream | 493 | 3.8 | 511 | 3.9 | -18 |
| Monbulk - Silvan | 118 | 3.2 | 119 | 3.2 | -1 |
| Montrose | 109 | 2.5 | 120 | 2.7 | -11 |
| Mooroolbark | 561 | 3.5 | 628 | 3.9 | -67 |
| Mount Dandenong - Olinda | 175 | 2.7 | 161 | 2.5 | +14 |
| Mount Evelyn | 202 | 3.0 | 174 | 2.6 | +28 |
| Upwey - Tecoma | 238 | 3.5 | 217 | 3.2 | +21 |
| Wandin - Seville | 145 | 2.7 | 134 | 2.5 | +11 |
| Yarra Valley | 666 | 6.2 | 622 | 5.8 | +44 |
| Yarra Ranges - total | 3,831 | 3.7 | 3,807 | 3.7 | +24 |
| Greater Melbourne | 139,427 | 4.0 | 130,653 | 3.7 | +8,774 |
| Victoria | 200,857 | 4.5 | 193,591 | 4.4 | +7,266 |

Source: Department of Social Services - JobSeeker and Youth Allowance recipients - monthly profile data.gov.au. Compiled and presented by .id - informed decisions

UNPAID WORK AND CARE

Yarra Ranges has a very high level of residents doing unpaid work and care:

- 75% of persons aged 15 years or more did unpaid domestic work, compared to 67.2% across Victoria. Yarra Ranges also has a high level of people doing five or more hours of unpaid work - 20.8% were doing less than five hours per week, and 54.2% were doing five or more hours, compared to 19.9% and 47.2% across Victoria. Mount Dandenong-Olinda has the highest level of residents who do unpaid domestic work (82.6%) and Upper Yarra Valley has the lowest (58.7%).
- 30.4% provided unpaid care for a child or children, compared to 26.3% for Victoria. Those doing unpaid childcare were most likely to be aged 35-44 (67.8%), 45-54 (39.7%) or 25-34 (38.2%). Women were more likely to be providing unpaid childcare (33.9% of women) than men (26.7% of men). Yarra Ranges has the sixth-highest level of persons providing assistance with unpaid childcare across metropolitan Melbourne, highlighting the impact of the pandemic in terms of increased childcare responsibilities for both working and non-working parents. Belgrave-Selby has the highest level of residents who do unpaid childcare (33.1%) and Upper Yarra Valley has the lowest (20.1%).
- 14.7% of residents provided unpaid assistance to a person with a disability or health condition, or who needed assistance due to old age. Women were more likely to be providing such assistance, at 17.6% of women compared to 11.7% of men. Those aged 45-64 are the age cohort most likely to be providing assistance (19.6% of 45-54 year olds, and 23.1% of 55-64 year olds). Retirees aged 65 years or more also have a high level of caring responsibilities, at 17.1% of 65-74 year olds, 12.5% of 75-84 year olds and 7.5% of those aged 85 years or more. In most cases this would be due to caring for a partner with disability or health conditions. Mount Dandenong-Olinda and Mount Evelyn have the highest levels of residents who provide unpaid assistance (16%), and Upper Yarra Valley has the lowest (13.4%).
- 15.5% did voluntary work through an organisation or group (during the past 12 months), compared to 13.3% across Victoria. Mount Dandenong-Olinda has the highest level of residents who volunteer (22%) and Upper Yarra Valley has the lowest (8%).

Volunteers were more likely to be females (55%), and to be aged between 35 and 74: 35-44 year olds accounted for 17.8% of volunteers, 45-54 year olds for 19%, 55-64 year olds for

16.3%, and 65-74 year olds for 16.5%. Whilst Yarra Ranges continues to have a high level of volunteering relative to Victoria, the level of volunteers appears to have dropped dramatically during the pandemic, from 21.3% in 2016 to 15.5% in 2021; Victoria experienced a similar drop, from 19.2% to 13.3%. The volunteering data refers to volunteering over the past 12 months, indicating that many people ceased volunteering during lockdowns and then did not return to it afterwards. Volunteers are essential to a wide range of community sports, activities and services, and a 27% drop in the level of volunteers is a very concerning shift. The drop in the level of volunteers was highest in Upper Yarra Valley, where the level of residents who volunteers more than halved; and lowest in Mount Dandenong-Olinda and Belgrave-Selby (21%).

Women were also much more likely to do unpaid domestic work than men, at 78.6% of women compared to 71.2% of men. Those aged 25-64 were most likely to be doing unpaid domestic work: 77% of 25-34 year olds, 83% of 35-44 year olds and 45-54 year olds, and 80% of 55-64 year olds.

FAMILIES

Yarra Ranges has a high level of family households, and the main family type is couples with children. Families and households have relatively high median incomes, with more detailed income data due late 2022. The level of non-dependent 15-24 year olds who lived with their parents rose slightly between 2016 and 2021.

The family types in Yarra Ranges mirror those across Victoria: 46.8% are couples with children, 37.5% are couples without children, 14.7% are one parent families and 1% are other family types. Most single parents are females (78.3%), but Yarra Ranges has a slightly above average level of male single parents (21.8% compared to 19.1%). Upper Yarra Valley has the highest level of single parent families (23.5%). Mount Dandenong-Olinda, whilst having a low level of single parent families (11.5%), has the highest level of lone parents who are male (28%).

Most households are family households (76.7% compared to 70.1%). Single person households account for 21.3% and group households account for 2.1%. Yarra Ranges has very few teenage parents – 0.3% of 15-19 year olds have had a child (14 persons). Wandin-Seville has the highest level of family households (83%) and Upper Yarra Valley has the lowest (58%). Along with Belgrave-Selby, Wandin-Seville also has the highest level of

couples with children (50%), and Upper Yarra Valley again has the lowest (33.3%). Upper Yarra Valley instead has the highest level of lone person households (35.4%), whilst Wandin-Seville has the lowest level (15.7%).

Overall, 11,726 people (7.9%) of those living in private dwellings were non-dependent (adult) children living with their families. This compares to 7.8% in 2016 (10,909 people), so there has not been a major shift in adults living at home. Amongst 15-24 year olds, the level who were living at home as dependent students did not change (46.2% in both 2016 and 2021); the level of non-dependent 15-24 year olds who lived with their parents rose slightly, from 34.2% to 36.3%.

NEW ARRIVALS

Over the past ten years (to June 2024), Yarra Ranges has had 4,589 new arrivals: 2,003 skilled migrants, 1,803 family reunion migrants and 783 refugees. Most of Yarra Ranges new arrivals arrive under the family reunion category. Family reunion accounted for 46% of arrivals in 2022/23, skilled migrants accounted for 39% and refugees accounted for 14.5%. Refugees had the lowest fluency in English – 92% had poor/nil English fluency, compared to 57% for family reunion and 4% for skilled migrants.

The number of new arrivals has jumped by 34% over the past two years, after minimal new arrivals in 2020 and 2021. Yarra Ranges had 337 new arrivals in 2022/23 – 157 family reunion arrivals, 132 skilled migrants and 49 refugees. In 2023/24, it had 453 new arrivals - 219 family reunion arrivals, 185 skilled migrants and 49 refugees.

The main countries of birth for Victorian new arrivals in 2022/23 were China, India, Vietnam and the Philippines. Country of birth is not available for new arrivals to Yarra Ranges, due to the small numbers.

Source: City of Greater Dandenong (2024). *Migrant settlement*.

<https://www.socialstats.com.au/>; Department of Home Affairs (2024). *Financial year 2023/24 by Migration Streams*. <https://immi.homeaffairs.gov.au/settling-in-australia/settlement-reports>; Department of Home Affairs (2024). *Settlement reports*. <https://www.data.gov.au/dataset/ds-dga-8d1b90a9-a4d7-4b10-ad6a-8273722c8628/details>

TRANSPORT

Yarra Ranges continues to have a high level of motor vehicle ownership - 96.3% of households own at least one vehicle, compared to 91.1% across Victoria; 69% of households own two or more vehicles (compared to 55.3%). This high level of vehicle ownership reflects the geographically spread-out nature of Yarra Ranges, combined with poor public transport access in many parts of the shire, and long travel distances to services and facilities from the outer parts of the municipality.

Selected indicators from the 2021 Census: Yarra Ranges and Victoria (part 1)

| Census 2021 indicators | Yarra Ranges | Yarra Valley | Upper Yarra Valley | Healesville-Yarra Glen | Lilydale-Coldstream | Mooroolbark | Kilsyth |
|---|--------------|--------------|--------------------|------------------------|---------------------|-------------|---------|
| Indigenous residents | 1.1% | 1.3% | 3.4% | 2.7% | 1.3% | 0.9% | 1.3% |
| Born in Australia | 79.4% | 80.0% | 73.5% | 80.5% | 79.9% | 75.7% | 76.0% |
| Australian or English ancestry | 82.6% | 86.5% | 78.2% | 86.0% | 83.0% | 76.6% | 78.9% |
| Speak English only at home | 88.3% | 89.9% | 78.2% | 91.1% | 89.0% | 81.7% | 83.7% |
| Residents with no religion | 53.2% | 57.5% | 59.2% | 56.0% | 48.2% | 47.1% | 48.7% |
| Doing unpaid domestic work | 75.0% | 71.4% | 58.7% | 72.7% | 73.6% | 72.5% | 70.3% |
| Providing unpaid childcare | 30.4% | 28.2% | 20.1% | 28.0% | 28.2% | 31.3% | 28.8% |
| Providing unpaid assistance to a person with a disability or health condition | 14.7% | 14.6% | 13.4% | 14.3% | 14.6% | 14.2% | 14.1% |
| Doing voluntary work through an organisation or group (2021) | 15.5% | 14.4% | 8.0% | 15.8% | 14.3% | 13.1% | 12.1% |
| Doing voluntary work through an organisation or group (2016) | 21.3% | 20.5% | 18.5% | 22.0% | 19.7% | 19.1% | 17.0% |
| Decrease in level of volunteers, 2016-2021 | 27% | 30% | 56.8% | 28% | 27% | 31% | 29% |
| One or more long-term health conditions* | 35.2% | 35.8% | n/a | 37.2% | 36.6% | 34.4% | 36.9% |
| Has a mental health condition | 10.3% | 11.4% | 10.5% | 10.2% | 10.5% | 10.3% | 10.8% |
| Married or de facto residents | 62.1% | 58.8% | 48.9% | 61.9% | 60.6% | 60.8% | 57.4% |
| Families as a % of households | 76.7% | 70.9% | 58.3% | 73.8% | 73.8% | 78.5% | 70.0% |
| Couple with children | 46.8% | 41.6% | 33.3% | 41.3% | 45.1% | 48.6% | 42.0% |
| One parent family | 14.7% | 17.3% | 23.5% | 15.1% | 15.1% | 16.1% | 19.2% |
| Percent of lone parents who are male | 21.8% | 23.0% | 25.0% | 21.4% | 18.8% | 20.6% | 20.3% |
| Lone person households | 21.3% | 26.7% | 35.4% | 24.2% | 24.1% | 19.3% | 27.4% |
| Attending tertiary education | 20.6% | 14.6% | 3.4% | 18.4% | 22.0% | 20.9% | 20.8% |
| Level of separate houses | 93.7% | 95.6% | 96.7% | 91.6% | 81.7% | 95.4% | 86.4% |
| Unoccupied private dwellings | 6.1% | 10.2% | 31.2% | 8.9% | 5.0% | 4.3% | 5.2% |
| Households with a mortgage | 48.2% | 48.4% | 55.4% | 42.8% | 44.9% | 46.3% | 43.2% |
| Owners paying more than 30% of their income on mortgages | 14.0% | 16.6% | 25.5% | 15.1% | 14.0% | 13.5% | 16.1% |
| Level of properties being rented | 14.0% | 12.0% | 3.3% | 14.2% | 18.3% | 20.3% | 19.7% |
| Renters paying more than 30% of their income on rent | 33.9% | 40.2% | 0.0% | 33.5% | 35.8% | 32.2% | 34.3% |
| Household income less than \$650 per week | 14.5% | 20.2% | 34.1% | 17.2% | 15.7% | 12.7% | 17.0% |
| Median weekly household income | \$1,881 | \$1,439 | \$900 | \$1,594 | \$1,784 | \$1,992 | \$1,654 |
| Median monthly mortgage repayments | \$1,950 | \$1,690 | \$1,100 | \$1,733 | \$1,950 | \$2,000 | \$1,970 |
| Median weekly rent | \$380 | \$315 | \$260 | \$350 | \$369 | \$400 | \$396 |

* Upper Yarra Valley has a very high level of residents who did not state whether they have any health conditions.

Source: Australian Bureau of Statistics (2022). Yarra Ranges 2021 Census All Persons QuickStats. Retrieved from: <https://www.abs.gov.au/census/find-census-data/quickstats/2021/LGA27450>

Table 4: Selected indicators from the 2021 Census: Yarra Ranges and Victoria (part 2)

| Census 2021 indicators | Mount Evelyn | Mon-trose | Mount Dandenong-Olinda | Monbulk-Silvan | Wandin-Seville | Upwey-Tecoma | Belgrave-Selby | Victoria |
|---|--------------|-----------|------------------------|----------------|----------------|--------------|----------------|----------|
| Indigenous residents | 1.0% | 0.6% | 0.8% | 0.5% | 1.0% | 0.4% | 0.5% | 1.0% |
| Born in Australia | 85.6% | 82.9% | 78.4% | 80.8% | 84.9% | 80.6% | 79.7% | 65.0% |
| Australian or English ancestry | 89.5% | 87.4% | 80.9% | 83.9% | 87.5% | 83.8% | 83.2% | 56.4% |
| Speak English only at home | 93.9% | 92.2% | 89.8% | 90.2% | 92.4% | 91.3% | 90.0% | 67.2% |
| Residents with no religion | 56.0% | 53.0% | 60.4% | 55.3% | 54.0% | 61.6% | 60.6% | 38.8% |
| Doing unpaid domestic work | 78.1% | 74.8% | 82.6% | 77.1% | 75.5% | 81.2% | 81.5% | 67.2% |
| Providing unpaid childcare | 32.7% | 32.6% | 30.4% | 30.4% | 31.4% | 32.9% | 33.1% | 26.3% |
| Providing unpaid assistance to a person with a disability or health condition | 16.0% | 14.5% | 16.1% | 15.0% | 15.0% | 14.9% | 15.1% | 12.9% |
| Doing voluntary work through an organisation or group (2021) | 16.2% | 14.6% | 22.0% | 18.6% | 16.4% | 18.4% | 19.7% | 13.3% |
| Doing voluntary work through an organisation or group (2016) | 22.7% | 20.3% | 27.8% | 24.8% | 21.8% | 23.6% | 25.0% | 19.2% |
| Decrease in level of volunteers 2016-2021 | 29% | 28% | 20.9% | 25% | 25% | 22% | 21.2% | 31% |
| One or more long-term health conditions | 34.8% | 35.2% | 35.6% | 33.5% | 34.0% | 34.7% | 34.5% | 31.4% |
| Has a mental health condition | 10.2% | 9.8% | 9.8% | 9.3% | 9.0% | 10.9% | 11.3% | 8.8% |
| Married or de facto residents | 63.7% | 65.4% | 66.2% | 63.3% | 65.8% | 63.1% | 63.7% | 57.9% |
| Families as a % of households | 80.0% | 79.4% | 77.9% | 78.1% | 83.0% | 78.7% | 81.4% | 70.1% |
| Couple with children | 51.8% | 52.7% | 45.2% | 47.8% | 50.0% | 49.0% | 49.9% | 45.5% |
| One parent family | 12.2% | 11.4% | 11.5% | 12.4% | 11.6% | 15.0% | 14.2% | 15.2% |
| Percent of lone parents who are male | 20.4% | 20.6% | 28.0% | 23.4% | 24.4% | 23.1% | 25.2% | 19.1% |
| Lone person households | 18.1% | 19.2% | 20.2% | 19.6% | 15.7% | 19.3% | 16.2% | 25.9% |
| Attending tertiary education | 21.0% | 19.5% | 22.2% | 20.8% | 19.6% | 24.3% | 22.6% | 24.5% |
| Level of separate houses | 97.8% | 91.9% | 99.2% | 97.2% | 99.2% | 97.7% | 99.1% | 73.4% |
| Unoccupied private dwellings | 3.7% | 5.1% | 9.7% | 5.9% | 4.9% | 4.6% | 5.0% | 11.1% |
| Households with a mortgage | 55.5% | 51.5% | 50.7% | 44.1% | 52.9% | 53.5% | 55.6% | 36.1% |
| Owners paying more than 30% of their income on mortgages | 12.8% | 9.9% | 15.2% | 15.6% | 14.3% | 11.3% | 11.9% | 15.5% |
| Level of properties being rented | 9.1% | 8.4% | 8.2% | 12.3% | 9.9% | 10.8% | 7.4% | 28.5% |
| Renters paying more than 30% of their income on rent | 32.1% | 32.0% | 34.3% | 39.3% | 31.9% | 31.1% | 30.8% | 30.9% |
| Household income less than \$650 per week | 11.9% | 13.8% | 12.8% | 14.0% | 11.4% | 11.6% | 11.2% | 16.4% |
| Median weekly household income | \$2,045 | \$2,094 | \$2,102 | \$1,872 | \$2,066 | \$2,148 | \$2,253 | \$1,759 |
| Median monthly mortgage repayments | \$2,000 | \$2,000 | \$2,028 | \$2,000 | \$1,950 | \$1,950 | \$1,950 | \$1,859 |
| Median weekly rent | \$365 | \$365 | \$400 | \$360 | \$360 | \$375 | \$400 | \$370 |

Note that the IRSD includes a number of these indicators, so it is important to avoid double-counting when referring to different sets of data on vulnerability.

Source: Australian Bureau of Statistics (2022). Yarra Ranges 2021 Census All Persons QuickStats. Retrieved from: <https://www.abs.gov.au/census/find-census-data/quickstats/2021/LGA27450>

Index of Relative Socio-Economic Disadvantage

Socio-Economic Indexes for Areas (SEIFA) provide summary measures of Census data, and rank areas according to their levels socio-economic advantage and disadvantage compared to the whole of Australia. SEIFA combine data such as income, education, employment, occupation, housing and family structure to summarise an area's socio-economic characteristics. Each area receives SEIFA scores indicating how relatively advantaged or disadvantaged that area is compared to other areas, on various groups of measures. The national benchmark score is 1000, meaning that a score above 1000 is above the national average, and a score of less than 1000 is below the national average. Generally, a high score indicates advantage on a specific index and low score indicates disadvantage.

The Index of Relative Socio-economic Disadvantage (IRSD) focuses on relative socio-economic disadvantage and only includes measures of relative disadvantage. A low score indicates higher disadvantage. For example, an area could have a low score if there were many households with low incomes, many people without qualifications, or many people in low-skilled occupations.

Socio-Economic Disadvantage

The IRSD is an effective summary measure of socio-economic disadvantage, and captures a number of the indicators of vulnerability to rising energy costs which have been identified in various research projects. However, it does not look at chronic health conditions where not causing an actual disability (defined by a need for assistance with core activities), elderly residents at risk from heat stress, households affected by housing stress, or rental households (except where they are paying extremely low levels of rent). It is therefore recommended that the indicators used to measure vulnerability include:

- The IRSD.
- Housing stress (home buying or rental households paying more than 30% of their income on housing costs). This indicator would also pick up many rental households in Yarra Ranges, as more than one-third of rental households in Yarra Ranges are in rental stress.
- The level of residents with one or more long-term health conditions.

Indicators such as the level of frail aged residents and the level of Indigenous residents could also be considered; data on transport costs are not available at local level, but those living in outer metropolitan Melbourne tend to incur higher transport costs, so location in one of these local government areas could be used as a proxy indicator, alongside car usage as a method of transport to work.

Using IRSD data, the areas in Yarra Ranges with the highest level of disadvantage include:

- **Upper Yarra Valley and parts of the Yarra Valley - McMahon's Creek, Reefton, Powelltown, Millgrove, Warburton, East Warburton and Big Pats Creek.**
- **Pockets of high disadvantage within Kilsyth, Mooroolbark, Lilydale and Healesville.**

Other [indicators of vulnerability](#) also identify these areas.

Although not disadvantaged according to the IRSD, the areas of Monbulk-Silvan with a high level of households in rental stress may also be vulnerable. These areas can be seen on the map for areas with *Rental costs >30% of income* (<https://atlas.id.com.au/yarra-ranges>). Similarly, the areas of Belgrave-Selby with a high level of residents with a long-term mental health condition may also be vulnerable.

IRSD scores for Yarra Ranges

Key points:

- Compared to the Australian average, Yarra Ranges has a low level of disadvantage and a high level of advantage. It is in the top 20% of scores for both the IRSD and the IRSAD, with scores of 1041 on the IRSD and 1054 on the IRSAD. The IRSD – Index of Relative Socio-economic Disadvantage – is the most commonly-used amongst of the four SEIFA indexes.
- Within Yarra Ranges, the areas with the highest level of disadvantage include: the Upper Yarra Valley region; the suburbs of McMahons Creek, Reefton, Powelltown, Millgrove, Warburton, East Warburton and Big Pats Creek; and some small pockets of high disadvantage within Kilsyth, Mooroolbark, Lilydale and Healesville.

Small areas

The Index of Relative Disadvantage data for small areas indicate that most areas of Yarra Ranges are either relative advantaged or in line with the national average, apart from Upper Yarra Valley:

- Upper Yarra Valley is in the bottom 20% to 30% of Australian SA2s (statistical areas which are groupings of a few suburbs) for all four indexes, indicating relatively high disadvantage. Upper Yarra Valley covers the sparsely populated area east of Warburton and stretches through to Reefton; it has a population of 238 people.
- Belgrave-Selby, Mount Dandenong-Olinda and Upwey-Tecoma are in the top 30% across all four indexes, indicating low disadvantage.
- Chirnside Park, Monbulk-Silvan, Montrose, Mount Evelyn and Wandin-Seville are in the top 30% for scores on the IRSD (low disadvantage).
- Healesville-Yarra Glen, Lilydale-Coldstream, Mooroolbark, Kilsyth and Yarra Valley are average for the IRSD.

Suburbs and smaller areas

At the suburb level, the most disadvantaged areas in Yarra Ranges are in the Yarra Valley and Upper Yarra Valley: McMahons Creek (916 on the Index of Relative Socio-economic Disadvantage), Reefton (916), Powelltown (918), Millgrove (928), Warburton (962), East Warburton (973) and Big Pats Creek (977).

Statistical areas level 1 (SA1s) are small areas with a few hundred people in them – about 200 to 600 people. Mapping disadvantage at this geographic level shows that, even within

areas with an average overall level of disadvantage, there may still be pockets with a high level of disadvantaged residents. There are pockets of high disadvantage in Kilsyth, Mooroolbark, Lilydale and Healesville, as well as within all of the suburbs with high disadvantage. These areas of high disadvantage are shown in red in the map on page 9.

Other indicators of vulnerability

Indicators relevant to Yarra Ranges which are not picked up in the IRSD include Indigenous status, mental health issues, long-term health conditions and housing stress. As the Census data will not pick up on those pushed into mortgage or rental stress due to the interest rate rises throughout 2022 and 2023, looking at the areas with a high level of households with a mortgage or who are renting can be useful.

Valley:

Upper Yarra Valley has a high level of socio-economic disadvantage, a high level of Indigenous residents, and a very high level of working age residents on JobSeeker. It has a high level of households with a mortgage (55.4%) and a high level in mortgage stress (25.5%). It has a high level of households with incomes of less than \$650 per week or \$33,800 per year (34.1%).

Yarra Valley has a high level of people with a long-term mental health condition and a high level of working age residents on JobSeeker. It has a high level of renters paying more than 30% of their income on rent (40.2%), and a high level of households with incomes of less than \$650 per week or \$33,800 per year (20.2%).

Healesville-Yarra Glen:

- Healesville-Yarra Glen has a high level of Indigenous residents and a high level with one or more long-term health conditions.

Hills:

- Belgrave-Selby has a high level of people with a long-term mental health condition.
- Monbulk-Silvan has a high level of households in rental stress.

Urban Area:

- Lilydale-Coldstream and Mooroolbark have a high rate of homelessness, and a high proportion of rental households.
- Kilsyth also has a high level of rental households.

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- Rental households may experience a shift in vulnerability due to increasing rents, and the Urban Area is the most vulnerable to this sort of change.

Index of Socio-Economic Disadvantage and JobSeeker recipients: Statistical Area Level 2, Yarra Ranges, 2021

| Statistical Area Level 2 (SA2) Name | Index of Relative Socio-Economic Disadvantage | | % of 15-64 year olds on JobSeeker |
|-------------------------------------|---|----------|-----------------------------------|
| | Score | Decile | |
| Upper Yarra Valley | 916 | 2 | 14.2% |
| Yarra Valley | 995 | 5 | 5.8% |
| Kilsyth | 1010 | 5 | 4.0% |
| Healesville - Yarra Glen | 1027 | 6 | 4.0% |
| Mooroolbark | 1031 | 6 | 3.5% |
| Lilydale - Coldstream | 1035 | 7 | 3.7% |
| Monbulk - Silvan | 1051 | 8 | 2.7% |
| Mount Evelyn | 1051 | 8 | 2.9% |
| Chirnside Park | 1060 | 8 | 2.9% |
| Wandin - Seville | 1060 | 8 | 2.4% |
| Montrose | 1068 | 9 | 2.4% |
| Upwey - Tecoma | 1071 | 9 | 3.2% |
| Belgrave - Selby | 1072 | 9 | 3.5% |
| Mount Dandenong - Olinda | 1079 | 9 | 2.9% |
| Total Yarra Ranges | 1041 | 9 | 3.6% |

Notes:

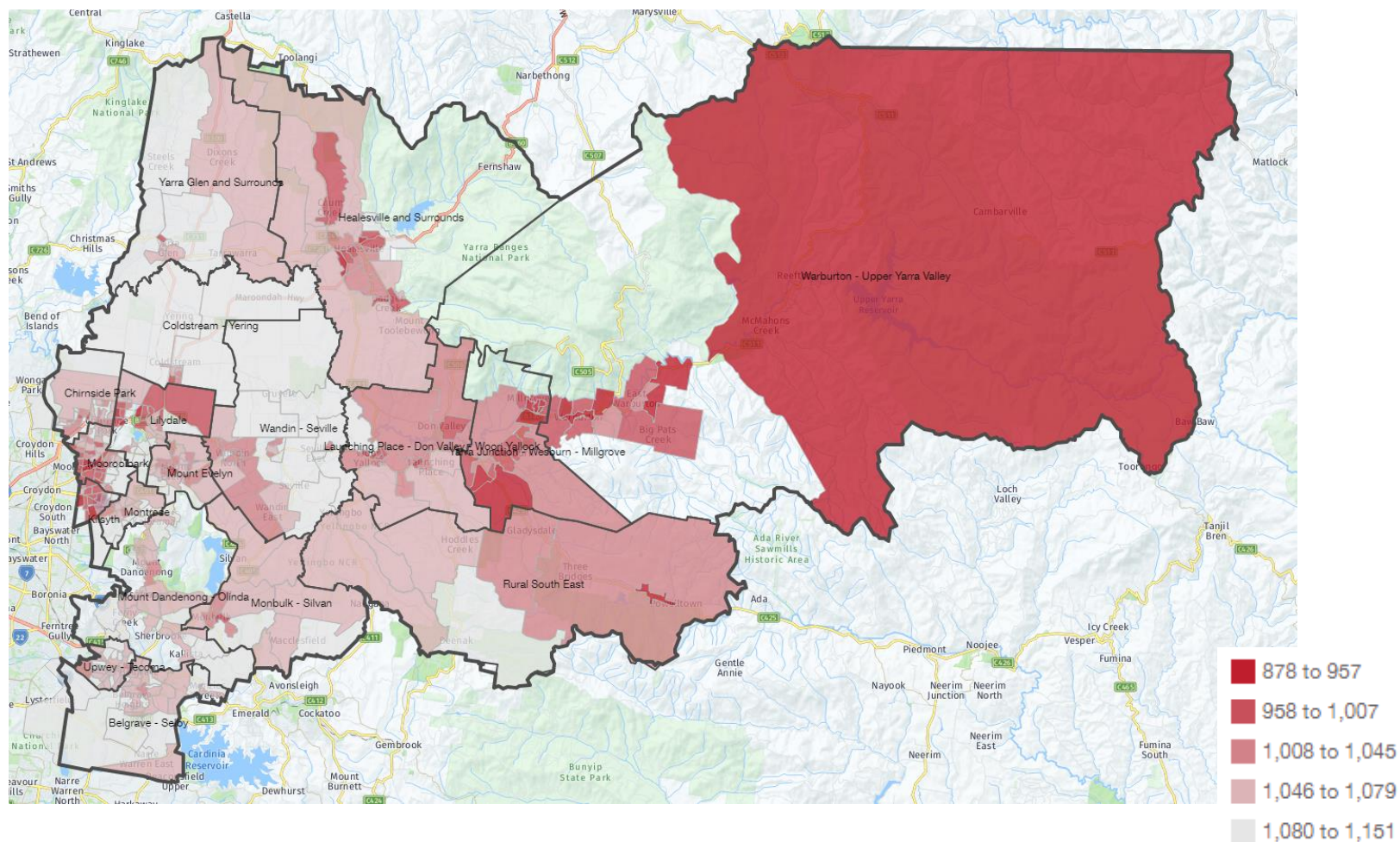
- SA2s are statistical areas which are groups of a few suburbs.

- For the analysis of scores within Yarra Ranges, a decile score of 1, 2 or 3 (the bottom 30%) has been used to categorise an area as relatively disadvantaged; a score of 8, 9 or 10 (the top 30%) has been used to identify relative advantage. Scores of 4, 5, 6 or 7 indicate that an area is in the middle 40% of all areas across Australia.

Source: Australian Bureau of Statistics (2023). *Socio-Economic Indexes for Areas (SEIFA), Australia*. <https://www.abs.gov.au/statistics/people/people-and-communities/socio-economic-indexes-areas-seifa-australia/2021>; Department of Social Services - JobSeeker and Youth Allowance recipients - monthly profile via data.gov.au. Compiled and presented by .id - informed decisions.

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Socio-Economic Indexes for Australia (SEIFA): Map of Statistical Area Level 1 (SA1) Index of Disadvantage scores, Yarra Ranges, 2021



Source: ID Consulting (2023). *Yarra Ranges Council Social Atlas*. <https://atlas.id.com.au/yarra-ranges>

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Socio-Economic Indexes for Australia (SEIFA): Suburbs and localities summary, Yarra Ranges, 2021

| 2021 Suburbs and Localities (SAL) Name | Index of Relative Socio-economic Disadvantage | | Index of Relative Socio-economic Advantage and Disadvantage | | Index of Economic Resources | | Index of Education and Occupation | |
|--|---|----------|---|----------|-----------------------------|----------|-----------------------------------|----------|
| | Score | Decile | Score | Decile | Score | Decile | Score | Decile |
| Badger Creek | 998 | 5 | 945 | 3 | 1018 | 5 | 925 | 3 |
| Beenak | 1101 | 10 | 1042 | 9 | 1072 | 8 | 941 | 4 |
| Belgrave | 1066 | 9 | 1054 | 9 | 1066 | 8 | 1071 | 9 |
| Belgrave Heights | 1072 | 9 | 1049 | 9 | 1087 | 9 | 1030 | 8 |
| Belgrave South | 1082 | 10 | 1062 | 9 | 1113 | 10 | 1044 | 9 |
| Big Pats Creek | 977 | 3 | 955 | 4 | 1018 | 5 | 964 | 5 |
| Chirnside Park | 1060 | 8 | 1037 | 8 | 1074 | 8 | 1014 | 7 |
| Chum Creek | 1023 | 6 | 997 | 6 | 1057 | 7 | 994 | 6 |
| Coldstream (Vic.) | 1048 | 8 | 1000 | 6 | 1070 | 8 | 950 | 4 |
| Dixons Creek | 1069 | 9 | 1044 | 9 | 1079 | 9 | 1036 | 8 |
| Don Valley | 999 | 5 | 969 | 4 | 1056 | 7 | 950 | 4 |
| East Warburton | 973 | 3 | 948 | 3 | 985 | 3 | 962 | 5 |
| Ferny Creek | 1091 | 10 | 1097 | 10 | 1108 | 10 | 1106 | 10 |
| Gilderoy | 1023 | 6 | 976 | 5 | 1054 | 7 | 944 | 4 |
| Gladysdale | 1017 | 6 | 985 | 5 | 1059 | 8 | 963 | 5 |
| Gruyere | 1092 | 10 | 1070 | 9 | 1133 | 10 | 1035 | 8 |
| Healesville | 1012 | 5 | 983 | 5 | 1017 | 5 | 983 | 6 |
| Hoddles Creek | 1059 | 8 | 1024 | 8 | 1096 | 9 | 971 | 5 |
| Kallista | 1082 | 10 | 1071 | 9 | 1076 | 9 | 1091 | 10 |
| Kalorama | 1091 | 10 | 1069 | 9 | 1089 | 9 | 1075 | 9 |
| Kilsyth | 1010 | 5 | 985 | 5 | 1009 | 4 | 980 | 6 |
| Launching Place | 1031 | 7 | 986 | 5 | 1059 | 8 | 963 | 5 |
| Lilydale (Vic.) | 1033 | 7 | 1006 | 7 | 1042 | 7 | 989 | 6 |
| Lysterfield | 1097 | 10 | 1088 | 10 | 1137 | 10 | 1042 | 8 |
| Macclesfield (Vic.) | 1076 | 9 | 1054 | 9 | 1126 | 10 | 1017 | 7 |
| McMahons Creek | 916 | 2 | 893 | 2 | 953 | 2 | 925 | 3 |
| Menzies Creek | 1089 | 10 | 1070 | 9 | 1109 | 10 | 1065 | 9 |
| Millgrove | 928 | 2 | 889 | 1 | 948 | 2 | 891 | 2 |
| Monbulk | 1041 | 7 | 1011 | 7 | 1043 | 7 | 1012 | 7 |
| Montrose (Vic.) | 1068 | 9 | 1034 | 8 | 1080 | 9 | 1008 | 7 |
| Mooroolbark | 1031 | 6 | 1009 | 7 | 1045 | 7 | 992 | 6 |

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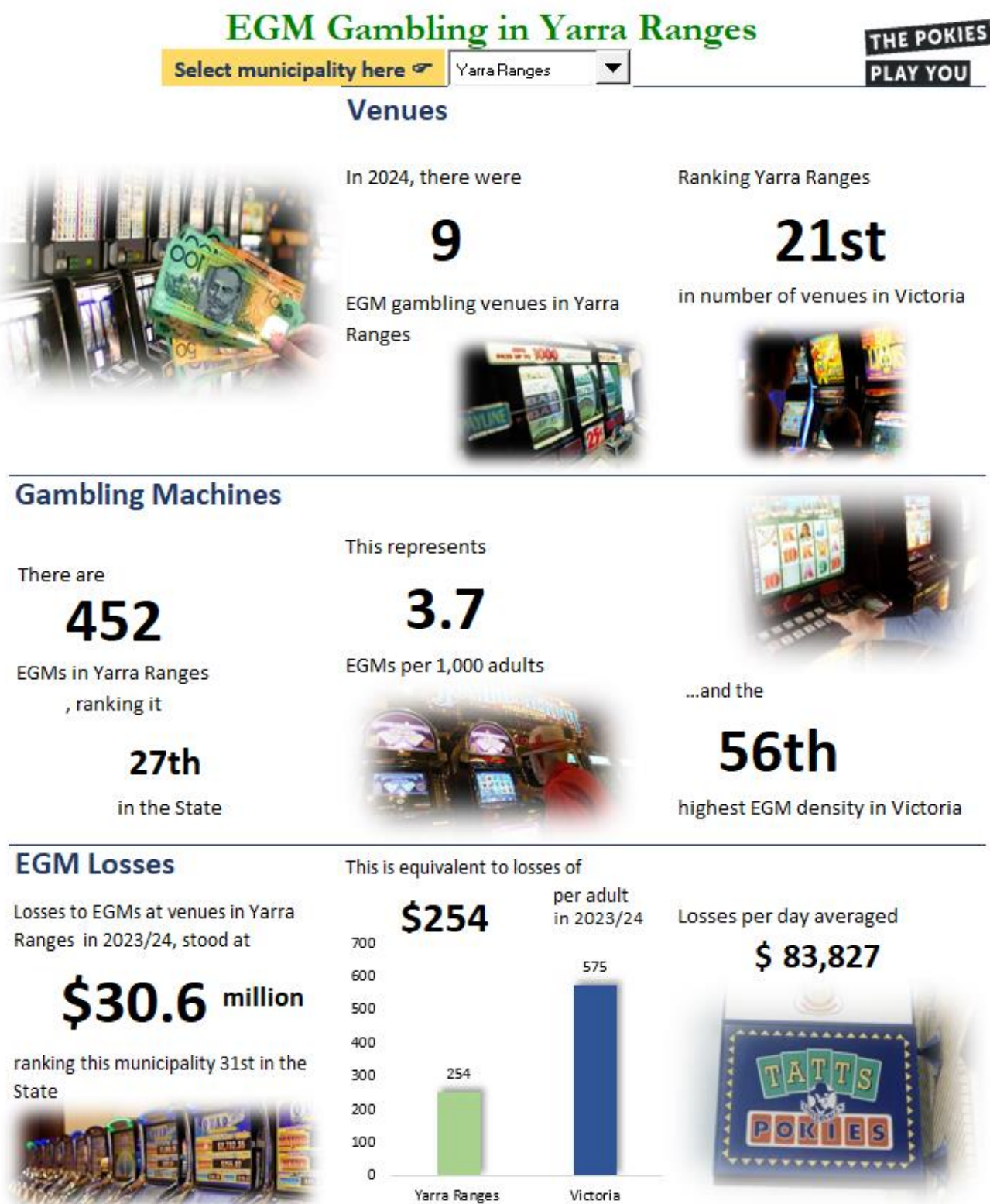
| | | | | | | | | |
|-------------------------|------------|----------|------------|----------|------------|----------|------------|----------|
| Mount Dandenong | 1073 | 9 | 1075 | 10 | 1087 | 9 | 1091 | 10 |
| Mount Evelyn | 1051 | 8 | 1014 | 7 | 1075 | 8 | 992 | 6 |
| Mount Toolebewong | 1059 | 8 | 1038 | 8 | 1078 | 9 | 1027 | 8 |
| Narre Warren East | 1081 | 9 | 1083 | 10 | 1122 | 10 | 1021 | 8 |
| Olinda (Vic.) | 1064 | 9 | 1062 | 9 | 1071 | 8 | 1085 | 10 |
| Powelltown | 918 | 2 | 866 | 1 | 962 | 2 | 862 | 1 |
| Reefton (Vic.) | 916 | 2 | 893 | 2 | 953 | 2 | 925 | 3 |
| Sassafras (Vic.) | 1072 | 9 | 1074 | 10 | 1089 | 9 | 1091 | 10 |
| Selby | 1066 | 9 | 1053 | 9 | 1082 | 9 | 1068 | 9 |
| Seville | 1066 | 9 | 1016 | 7 | 1084 | 9 | 976 | 5 |
| Seville East | 1069 | 9 | 1006 | 7 | 1098 | 10 | 978 | 5 |
| Sherbrooke | 1079 | 9 | 1101 | 10 | 1087 | 9 | 1146 | 10 |
| Silvan | 1062 | 8 | 1041 | 8 | 1088 | 9 | 1003 | 7 |
| Steels Creek | 1086 | 10 | 1053 | 9 | 1113 | 10 | 1018 | 7 |
| Tarrawarra | 1065 | 9 | 1058 | 9 | 1117 | 10 | 1008 | 7 |
| Tecoma | 1062 | 8 | 1041 | 8 | 1043 | 7 | 1055 | 9 |
| The Patch | 1077 | 9 | 1067 | 9 | 1095 | 9 | 1088 | 10 |
| Three Bridges | 1023 | 6 | 976 | 5 | 1054 | 7 | 944 | 4 |
| Toolangi | 1047 | 7 | 1004 | 7 | 1088 | 9 | 976 | 5 |
| Tremont | 1081 | 10 | 1102 | 10 | 1091 | 9 | 1138 | 10 |
| Upper Ferntree Gully | 1046 | 7 | 1027 | 8 | 1049 | 7 | 1033 | 8 |
| Upwey | 1074 | 9 | 1052 | 9 | 1077 | 9 | 1052 | 9 |
| Wandin East | 1043 | 7 | 1038 | 8 | 1096 | 9 | 987 | 6 |
| Wandin North | 1045 | 7 | 1007 | 7 | 1067 | 8 | 976 | 5 |
| Warburton (Vic.) | 962 | 3 | 946 | 3 | 958 | 2 | 991 | 6 |
| Wesburn | 1002 | 5 | 953 | 4 | 1047 | 7 | 915 | 2 |
| Woori Yallock | 1007 | 5 | 951 | 3 | 1025 | 5 | 925 | 3 |
| Yarra Glen | 1067 | 9 | 1028 | 8 | 1080 | 9 | 994 | 6 |
| Yarra Junction | 988 | 4 | 944 | 3 | 1000 | 4 | 924 | 3 |
| Yellingbo | 1069 | 9 | 1039 | 8 | 1128 | 10 | 1003 | 7 |
| Yering | 1092 | 10 | 1069 | 9 | 1145 | 10 | 1033 | 8 |

Source: Australian Bureau of Statistics (2023). *Socio-Economic Indexes for Areas (SEIFA), Australia*.
<https://www.abs.gov.au/statistics/people/people-and-communities/socio-economic-indexes-areas-seifa-australia/2021>

Gambling

Yarra Ranges has a relatively low number of gaming machines and venues. In 2024, Yarra Ranges had 452 electronic gaming machines (EGMs) across nine venues. This ranked Yarra Ranges 21 out of 79 LGAs for its number of venues, and 56 out of 79 for its rate of EGMs (3.7 EGMs per 1,000 residents). Clients lost \$30.6 million at local venues. This equals \$254 losses per adult, less than half the Victorian average of \$575. Note that users of Yarra Ranges venues may come from outside of Yarra Ranges, and residents would also be using EGMs outside Yarra Ranges.

For those who have difficulty controlling their gambling, the effects can include financial hardship, personal distress, family conflict and violence, unemployment and bankruptcy, homelessness, and crime.



Source: City of Greater Dandenong (2024). *Infographic: gambling venues, machines and losses.*
<https://www.socialstats.com.au/>

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PART 9: APPENDICES

Appendix 1: COVID-19 timeline - Victoria, 2020-2021

| Date | Event | Notes | Source |
|-------------------|--------------------------------|---|--|
| 25 January 2020 | First COVID-19 case | | https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp2021/Chronologies/COVID-19AustralianGovernmentAnnouncements |
| 26 March 2020 | First COVID-19 death | | https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp2021/Chronologies/COVID-19StateTerritoryGovernmentAnnouncements#_Toc52275795 |
| 16 March 2020 | State of Emergency declared | Declaration made under the Public Health and Wellbeing Act 2008 with powers enacted allowing for business closures and restricted activities. | https://www.vicbar.com.au/sites/default/files/Victorian%20Bar%27s%20Guide%20to%20Covid-19%20Pandemic%20Declarations%20Directions%20and%20Determinations%20for%20Vic%2020%20April.pdf https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp2021/Chronologies/COVID-19StateTerritoryGovernmentAnnouncements#_Toc52275795 |
| 31 March 2020 | Strengthening of restrictions | Statewide stage 3 restrictions, which restrict individual movements, implemented under Stay at Home Directions and Restricted Activity Directions. | https://www.vicbar.com.au/news-events/victorian-bar%E2%80%99s-guide-covid-19-pandemic-declarations-directions-and-determinations https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp2021/Chronologies/COVID-19StateTerritoryGovernmentAnnouncements#_Toc52275795 |
| 11 May 2020 | Initial easing of restrictions | Easing of restrictions as State of Emergency lifted. State of emergency was declared again 30 June and further extended throughout pandemic. | https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp2021/Chronologies/COVID-19StateTerritoryGovernmentAnnouncements#_Toc52275795 |
| 30 June 2020 | Strengthening of restrictions | From 30 June Stage 3 restrictions began, which restrict individual movements, implemented under Stay at Home Directions and Restricted Activity Directions. Restrictions were initially implemented for specific postcodes within Melbourne then spread to include Melbourne and the Shire of Mitchell. | https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp2021/Chronologies/COVID-19StateTerritoryGovernmentAnnouncements#_Toc52275795 |
| 2 August 2020 | State of disaster declared | Stage 4 restrictions, which includes additional measures such as curfews, in place for Melbourne and stage 3 restrictions for the rest of Victoria. | https://www.abc.net.au/news/2020-08-02/victoria-coronavirus-restrictions-imposed-death-toll-cases-rise/12515914 |
| 14 September 2020 | Easing of restrictions | Easing of restrictions commences following a 'Roadmap to Reopening' based on four steps of phased activity. | https://www.victorianchamber.com.au/news/road-to-recovery-explained https://web.archive.org/web/20201221214200/https://www.premier. |

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| | | | |
|--------------------------|---|--|---|
| | | | vic.gov.au/sites/default/files/2020-09/200906%20-%20Statement%20From%20The%20Premier.pdf |
| 20 November 2020 | Border closes between Victoria and South Australia | Border between Victoria and South Australia reopens 12 December 2020. | https://www.premier.vic.gov.au/temporary-border-controls-south-australia https://www.dhhs.vic.gov.au/south-australian-border-permit-scheme-9-december-2020 |
| 2 January 2021 | Border closes between Victoria and New South Wales | Border between Victoria and New South Wales reopens 17 January 2021 | https://www.premier.vic.gov.au/statement-acting-premier-nsw-border-closure // https://www.thecourier.com.au/story/7089553/victoria-reopens-border-to-more-areas-in-new-south-wales/ |
| 13 February 2021 | Statewide restrictions implemented | Victorian government declares statewide stage 4 restrictions, which includes additional measures such as curfews, due to detection of a new strain of COVID-19. Stage 4 restrictions end 18 February 2021. | https://www.abc.net.au/news/2021-02-12/victoria-coronavirus-lockdown-announced-by-daniel-andrews/13128514 https://7news.com.au/lifestyle/health-wellbeing/victoria-records-another-donut-day-as-state-exits-harsh-snap-covid-lockdown-c-2187481 https://www.abc.net.au/news/2021-02-12/victoria-coronavirus-lockdown-announced-by-daniel-andrews/13128514 |
| 28 May 2021 | Statewide restrictions implemented | Victorian government declares statewide stage 4 restrictions, which includes additional measures such as curfews, due to an outbreak. Stage 4 restrictions end for Regional Victoria 4 June 2021 and for Melbourne 11 June 2021. | https://www.abc.net.au/news/2021-05-27/victoria-covid-cases-melbourne-outbreak-lockdown-restrictions/100169172 https://www.abc.net.au/news/2021-06-03/new-covid-cases-detected-in-victoria-as-lockdown-continues/100186750 https://www.abc.net.au/news/2021-06-11/victoria-new-covid-cases-melbourne-lockdown-lifts/100207318 |
| 16 July 2021 | Statewide restrictions implemented | Victorian government declares statewide stage 4 restrictions, which includes additional measures such as curfews, due to an outbreak. Stage 4 restrictions end 28 July 2021. | https://www.abc.net.au/news/2021-07-15/melbourne-lockdown-response-to-covid-outbreak/100296220 https://www.abc.net.au/news/2021-07-27/list-of-victorias-covid-19-restrictions-after-lockdown-ends/100326128 |
| 21 July 2021 | Border closes between Victoria and New South Wales | Border between Victoria and New South Wales reopens 5 November 2021. | https://www.premier.vic.gov.au/extended-lockdown-and-stronger-borders-keep-us-safe https://www.premier.vic.gov.au/open-borders-between-nsw-and-victoria |
| 5 August 2021 | Statewide restrictions implemented | Victorian government declares statewide stage 4 restrictions, which includes additional measures such as curfews, due to an outbreak. Stage 4 restrictions end for Regional Victoria 10 August 2021 and for Melbourne 22 October 2021. | https://www.abc.net.au/news/2021-08-05/victoria-covid-19-lockdown-restrictions-tightened-/100352444 https://www.premier.vic.gov.au/lockdown-lift-regional-victoria https://www.theguardian.com/australia-news/2021/oct/22/melbourne-covid-lockdown-ends-lifts-today-friday-victoria-end-lift-change-what-are-the-new-restrictions-rules-freedoms-reopening-plan |
| 19 September 2021 | Victoria's Roadmap: Delivering The National Plan released | First easing of restrictions from the roadmap indicative date 26 September 2021. | https://www.premier.vic.gov.au/victorias-roadmap-delivering-national-plan |

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| | | | |
|----------------|--|---|--|
| 21 August 2021 | Restrictions implemented for Regional Victoria | From 21 August 2021, a series of lockdowns occur in Regional Victoria. Areas affected include Ballarat, Greater Geelong, LaTrobe Valley, Mildura, Mitchell Shire and Surf Coast Shire. Mildura is the final area in Regional Victoria to have restrictions lifted on 22 October 2021. | https://www.abc.net.au/news/2021-10-08/mildura-covid-lockdown-shepparton-moorabool-ease/100526008 https://www.abc.net.au/news/2021-10-21/mildura-covid-lockdown-ends-early/100555984 https://www.premier.vic.gov.au/lockdown-across-regional-victoria-keep-us-safe |
|----------------|--|---|--|

Source: Australian Institute of Health and Welfare (2024). *Maternal and perinatal outcomes during the 2020 and 2021 COVID-19 pandemic - data tables*.
[Maternal and perinatal outcomes during the 2020 and 2021 COVID-19 pandemic, Introduction - Australian Institute of Health and Welfare \(aihw.gov.au\)](#)

Appendix 2: List of suburbs by postcode

| Postcode | Suburbs covered by postcode |
|----------|--|
| 3116 | Chirnside Park |
| 3137 | Kilsyth, Kilsyth South |
| 3138 | Mooroolbark |
| 3139 | Don Valley, Hoddles Creek, Launching Place, Seville, Seville East, Wandin East, Wandin North, Woori Yallock, Yellingbo |
| 3140 | Lilydale |
| 3156 | Ferntree Gully, Lysterfield, Lysterfield South, Mountain Gate, Upper Ferntree Gully |
| 3158 | Upwey |
| 3159 | Menzies Creek, Selby |
| 3160 | Belgrave, Belgrave Heights, Belgrave South, Tecoma |
| 3765 | Montrose |
| 3766 | Kalorama |
| 3767 | Mount Dandenong |
| 3770 | Coldstream, Gruyere, Yering |
| 3775 | Christmas Hills, Dixons Creek, Steels Creek, Tarrawarra, Yarra Glen |
| 3777 | Badger Creek, Castella, Chum Creek, Healesville, Mount Toolebewong, Toolangi |
| 3782 | Avonsleigh, Clematis, Emerald, Macclesfield |
| 3786 | Ferny Creek |
| 3787 | Sassafras, Sassafras Gully |
| 3788 | Olinda |
| 3789 | Sherbrooke |
| 3791 | Kallista |
| 3792 | The Patch |
| 3793 | Monbulk |
| 3795 | Silvan |
| 3796 | Mount Evelyn |
| 3797 | Gilderoy, Gladysdale, Powelltown, Three Bridges, Yarra Junction |
| 3799 | Big Pats Creek, East Warburton, McMahan's Creek, Millgrove, Reefton, Warburton, Wesburn |
| 3804 | Narre Warren East, Narre Warren North |

Appendix 3: Maps

Yarra Ranges is in Melbourne's outer east. It is an interface Council, located in the outer ring of metropolitan Melbourne municipalities. Like most interface Councils, Yarra Ranges has both urban and rural areas. Yarra Ranges' main areas are the Urban Area in the inner eastern part of Yarra Ranges; the Hills, which covers townships in the Dandenong Ranges; and the Yarra Valley, which covers the more rural northern and outer eastern parts of Yarra Ranges.

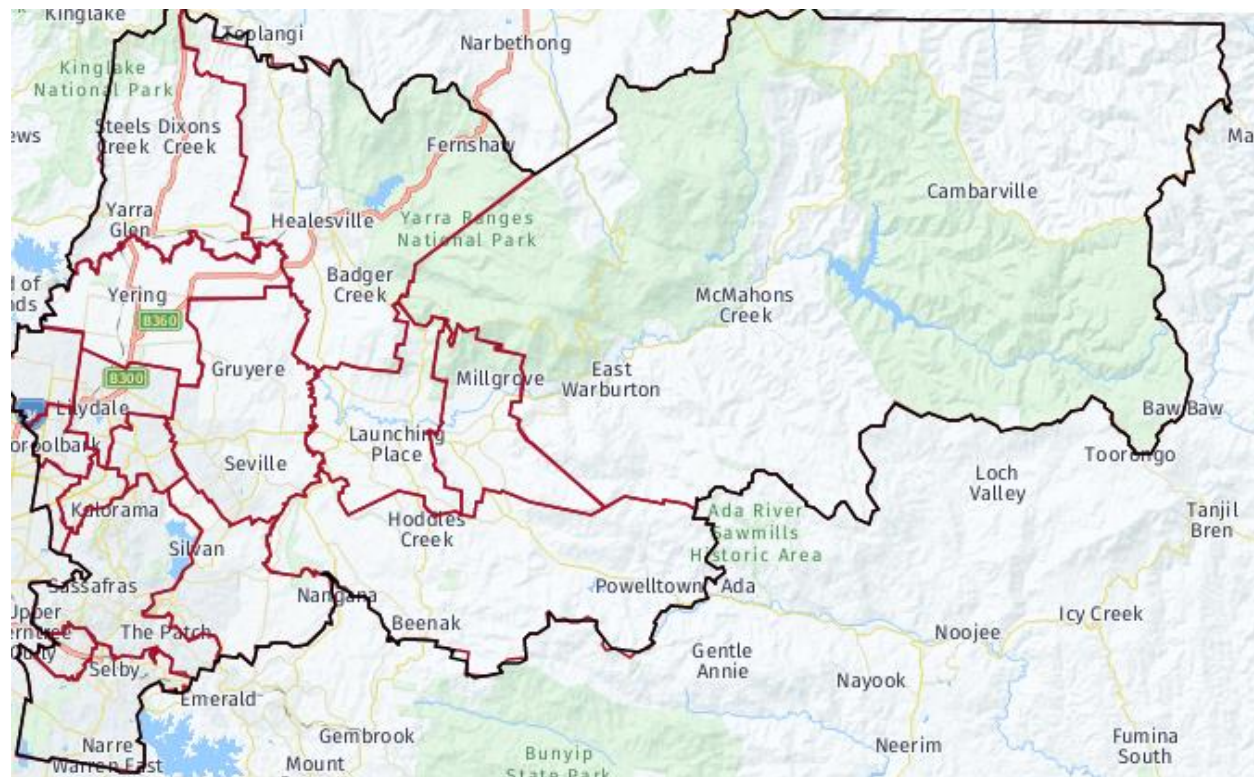
Map of metropolitan local government areas



Source: <http://health.vic.gov.au/maps/downloads/metro/l/downhtml.htm>

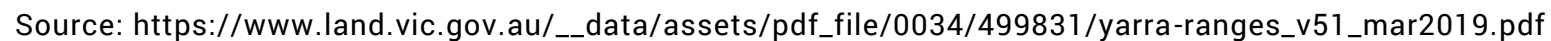
[Type text]

Map of localities in Yarra Ranges



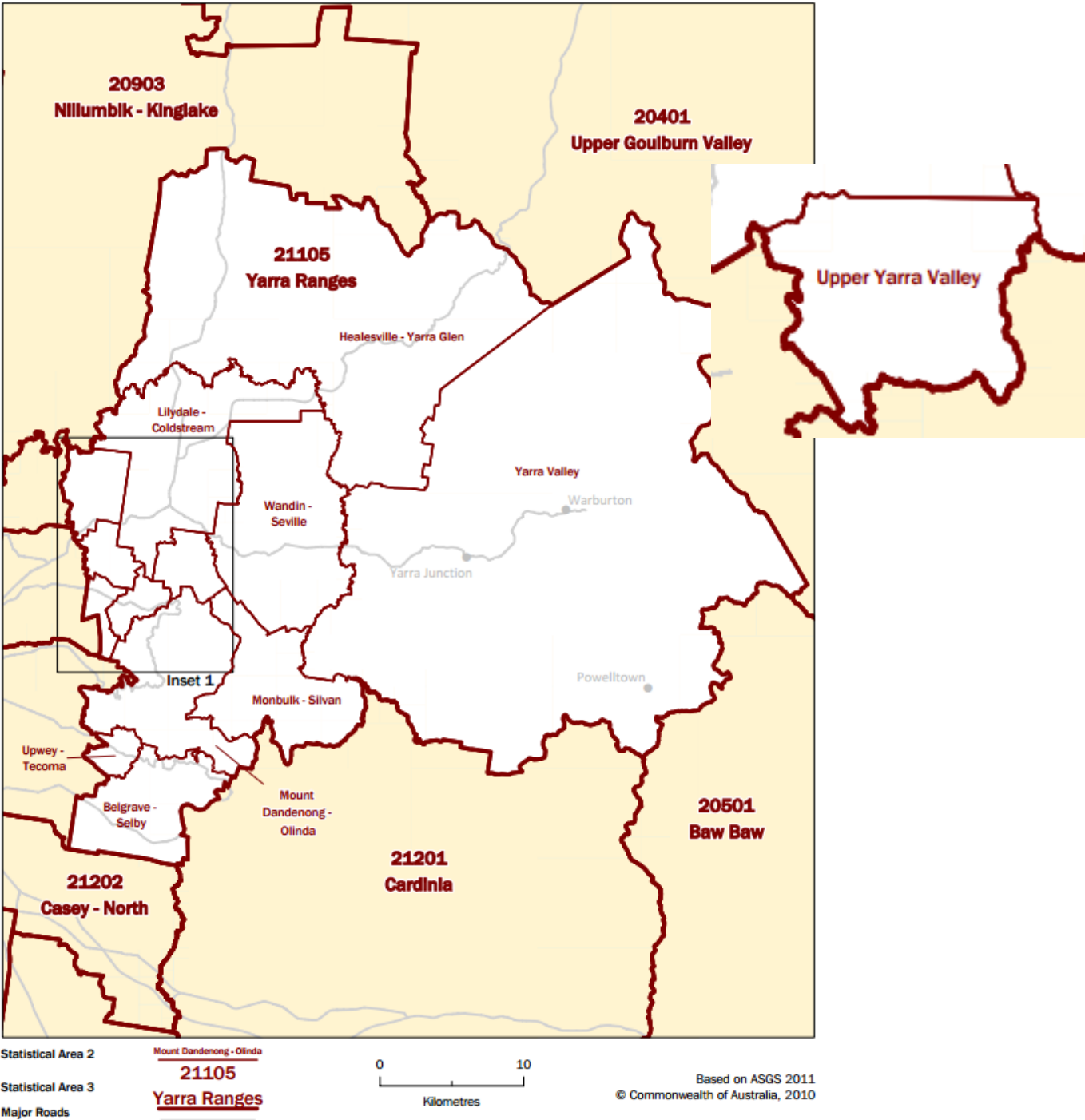
Source: ID consulting <http://profile.id.com.au/yarra-ranges>

Map of Yarra Ranges suburbs

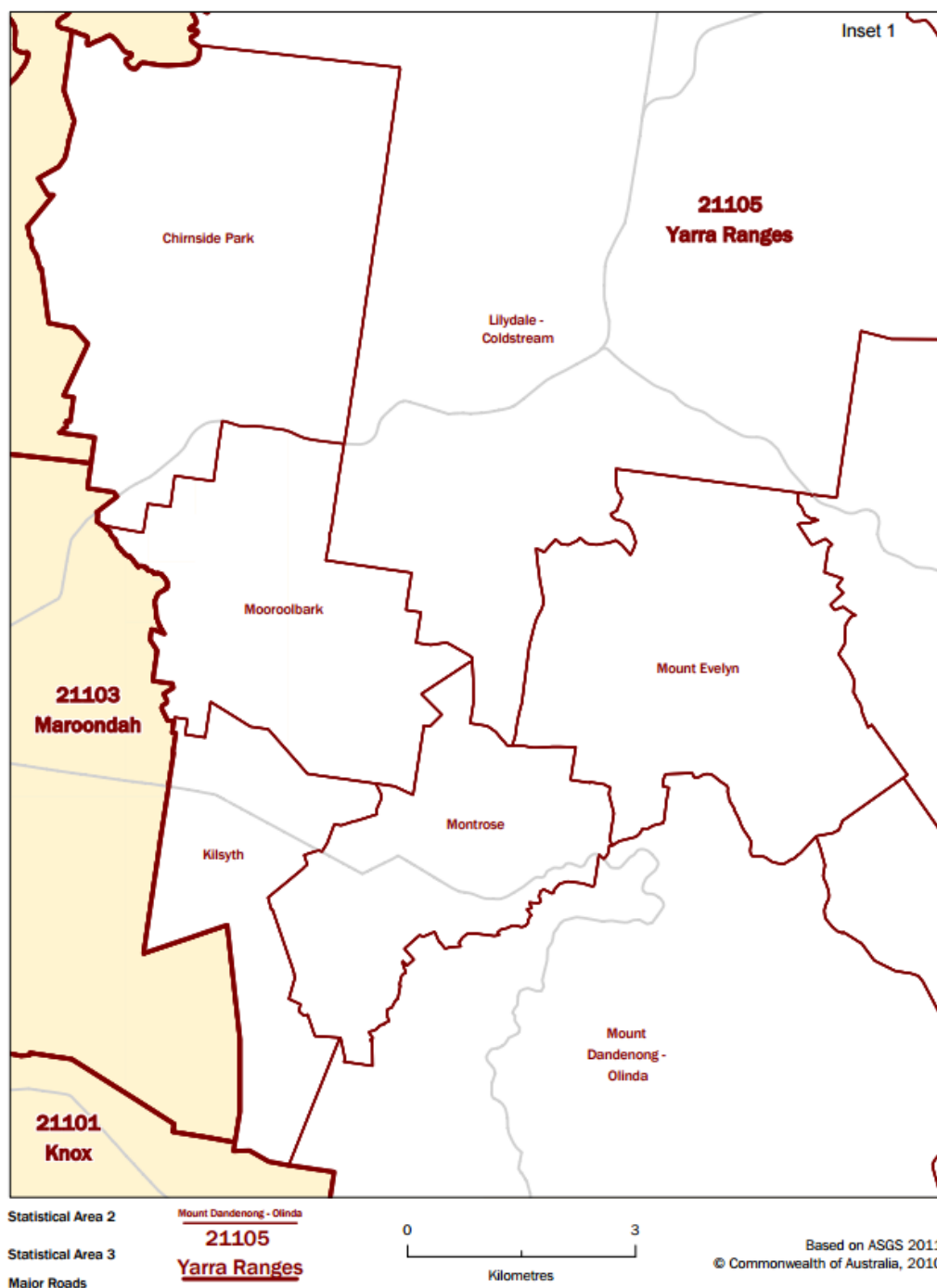


[Type text]

Map of Level 2 Statistical Areas (SA2s) in Yarra Ranges



[Type text]



Note: Upper Yarra Valley is part of the Yarra Ranges local government area, but is not part of the Yarra Ranges SA3 within the statistical geography standards.

Source: Australian Bureau of Statistics (2011). Australian Statistical Geography Standard (ASGS) Volume 1 - Victoria Maps July 2011, Australian Bureau of Statistics Catalogue No. 1270.0.55.001

Appendix 4: ICD-10 codes for hospital admissions

ICD-10 codes are used to code hospital visits. The codes are divided into chapters based on the type of disease or disorder.

Hospital admission diagnostic codes, by type of disease/disorder.

| Chapter/Code/Diagnosis |
|---|
| Certain infectious and parasitic diseases A00-B99 |
| A00-A09 Intestinal infectious diseases |
| A15-A19 Tuberculosis |
| A20-A28 Certain zoonotic bacterial diseases |
| A30-A49 Other bacterial diseases |
| A50-A64 Infections with a predominantly sexual mode of transmission |
| A65-A69 Other spirochetal diseases |
| A70-A74 Other diseases caused by chlamydiae |
| A75-A79 Rickettsioses |
| A80-A89 Viral and prion infections of the central nervous system |
| A90-A99 Arthropod-borne viral fevers and viral hemorrhagic fevers |
| B00-B09 Viral infections characterized by skin and mucous membrane lesions |
| B10-B10 Other human herpesviruses |
| B15-B19 Viral hepatitis |
| B20-B20 Human immunodeficiency virus [HIV] disease |
| B25-B34 Other viral diseases |
| B35-B49 Mycoses |
| B50-B64 Protozoal diseases |
| B65-B83 Helminthiasis |
| B85-B89 Pediculosis, acariasis and other infestations |
| B90-B94 Sequelae of infectious and parasitic diseases |
| B95-B97 Bacterial and viral infectious agents |
| B99-B99 Other infectious diseases |
| Neoplasms C00-D49 |
| C00-C14 Malignant neoplasms of lip, oral cavity and pharynx |
| C15-C26 Malignant neoplasms of digestive organs |
| C30-C39 Malignant neoplasms of respiratory and intrathoracic organs |
| C40-C41 Malignant neoplasms of bone and articular cartilage |
| C43-C44 Melanoma and other malignant neoplasms of skin |
| C45-C49 Malignant neoplasms of mesothelial and soft tissue |
| C50-C50 Malignant neoplasms of breast |
| C51-C58 Malignant neoplasms of female genital organs |
| C60-C63 Malignant neoplasms of male genital organs |
| C64-C68 Malignant neoplasms of urinary tract |
| C69-C72 Malignant neoplasms of eye, brain and other parts of central nervous system |

C73-C75 Malignant neoplasms of thyroid and other endocrine glands
C76-C80 Malignant neoplasms of ill-defined, other secondary and unspecified sites
C7A-C7A Malignant neuroendocrine tumors
C7B-C7B Secondary neuroendocrine tumors
C81-C96 Malignant neoplasms of lymphoid, hematopoietic and related tissue
D00-D09 In situ neoplasms
D10-D36 Benign neoplasms, except benign neuroendocrine tumors
D37-D48 Neoplasms of uncertain behavior, polycythemia vera and myelodysplastic syndromes
D3A-D3A Benign neuroendocrine tumors
D49-D49 Neoplasms of unspecified behavior
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism D50-D89
D50-D53 Nutritional anemias
D55-D59 Hemolytic anemias
D60-D64 Aplastic and other anemias and other bone marrow failure syndromes
D65-D69 Coagulation defects, purpura and other hemorrhagic conditions
D70-D77 Other disorders of blood and blood-forming organs
D78-D78 Intraoperative and postprocedural complications of the spleen
D80-D89 Certain disorders involving the immune mechanism
Endocrine, nutritional and metabolic diseases E00-E89
E00-E07 Disorders of thyroid gland
E08-E13 Diabetes mellitus
E15-E16 Other disorders of glucose regulation and pancreatic internal secretion
E20-E35 Disorders of other endocrine glands
E36-E36 Intraoperative complications of endocrine system
E40-E46 Malnutrition
E50-E64 Other nutritional deficiencies
E65-E68 Overweight, obesity and other hyperalimentation
E70-E88 Metabolic disorders
E89-E89 Postprocedural endocrine and metabolic complications and disorders, not elsewhere classified
Mental, Behavioral and Neurodevelopmental disorders F01-F99
F01-F09 Mental disorders due to known physiological conditions
F10-F19 Mental and behavioral disorders due to psychoactive substance use
F20-F29 Schizophrenia, schizotypal, delusional, and other non-mood psychotic disorders
F30-F39 Mood [affective] disorders
F40-F48 Anxiety, dissociative, stress-related, somatoform and other nonpsychotic mental disorders
F50-F59 Behavioral syndromes associated with physiological disturbances and physical factors
F60-F69 Disorders of adult personality and behavior
F70-F79 Intellectual disabilities
F80-F89 Pervasive and specific developmental disorders
F90-F98 Behavioral and emotional disorders with onset usually occurring in childhood and adolescence

F99-F99 Unspecified mental disorder

Diseases of the nervous system G00-G99

G00-G09 Inflammatory diseases of the central nervous system

G10-G14 Systemic atrophies primarily affecting the central nervous system

G20-G26 Extrapyramidal and movement disorders

G30-G32 Other degenerative diseases of the nervous system

G35-G37 Demyelinating diseases of the central nervous system

G40-G47 Episodic and paroxysmal disorders

G50-G59 Nerve, nerve root and plexus disorders

G60-G65 Polyneuropathies and other disorders of the peripheral nervous system

G70-G73 Diseases of myoneural junction and muscle

G80-G83 Cerebral palsy and other paralytic syndromes

G89-G99 Other disorders of the nervous system

Diseases of the eye and adnexa H00-H59

H00-H05 Disorders of eyelid, lacrimal system and orbit

H10-H11 Disorders of conjunctiva

H15-H22 Disorders of sclera, cornea, iris and ciliary body

H25-H28 Disorders of lens

H30-H36 Disorders of choroid and retina

H40-H42 Glaucoma

H43-H44 Disorders of vitreous body and globe

H46-H47 Disorders of optic nerve and visual pathways

H49-H52 Disorders of ocular muscles, binocular movement, accommodation and refraction

H53-H54 Visual disturbances and blindness

H55-H57 Other disorders of eye and adnexa

H59-H59 Intraoperative and postprocedural complications and disorders of eye and adnexa, not elsewhere classified

Diseases of the ear and mastoid process H60-H95

H60-H62 Diseases of external ear

H65-H75 Diseases of middle ear and mastoid

H80-H83 Diseases of inner ear

H90-H94 Other disorders of ear

H95-H95 Intraoperative and postprocedural complications and disorders of ear and mastoid process, not elsewhere classified

Diseases of the circulatory system I00-I99

I00-I02 Acute rheumatic fever

I05-I09 Chronic rheumatic heart diseases

I10-I1A Hypertensive diseases

I20-I25 Ischemic heart diseases

I26-I28 Pulmonary heart disease and diseases of pulmonary circulation

I30-I5A Other forms of heart disease

I60-I69 Cerebrovascular diseases

I70-I79 Diseases of arteries, arterioles and capillaries

I80-I89 Diseases of veins, lymphatic vessels and lymph nodes, not elsewhere classified

I95-I99 Other and unspecified disorders of the circulatory system

Diseases of the respiratory system J00-J99

J00-J06 Acute upper respiratory infections

J09-J18 Influenza and pneumonia

J20-J22 Other acute lower respiratory infections

J30-J39 Other diseases of upper respiratory tract

J40-J4A Chronic lower respiratory diseases

J60-J70 Lung diseases due to external agents

J80-J84 Other respiratory diseases principally affecting the interstitium

J85-J86 Suppurative and necrotic conditions of the lower respiratory tract

J90-J94 Other diseases of the pleura

J95-J95 Intraoperative and postprocedural complications and disorders of respiratory system, not elsewhere classified

J96-J99 Other diseases of the respiratory system

Diseases of the digestive system K00-K95

K00-K14 Diseases of oral cavity and salivary glands

K20-K31 Diseases of esophagus, stomach and duodenum

K35-K38 Diseases of appendix

K40-K46 Hernia

K50-K52 Non-infective enteritis and colitis

K55-K64 Other diseases of intestines

K65-K68 Diseases of peritoneum and retroperitoneum

K70-K77 Diseases of liver

K80-K87 Disorders of gallbladder, biliary tract and pancreas

K90-K95 Other diseases of the digestive system

Diseases of the skin and subcutaneous tissue L00-L99

L00-L08 Infections of the skin and subcutaneous tissue

L10-L14 Bullous disorders

L20-L30 Dermatitis and eczema

L40-L45 Papulosquamous disorders

L49-L54 Urticaria and erythema

L55-L59 Radiation-related disorders of the skin and subcutaneous tissue

L60-L75 Disorders of skin appendages

L76-L76 Intraoperative and postprocedural complications of skin and subcutaneous tissue

L80-L99 Other disorders of the skin and subcutaneous tissue

Diseases of the musculoskeletal system and connective tissue M00-M99

M00-M02 Infectious arthropathies

M04-M04 Autoinflammatory syndromes

M05-M14 Inflammatory polyarthropathies

M15-M19 Osteoarthritis

M20-M25 Other joint disorders

M26-M27 Dentofacial anomalies [including malocclusion] and other disorders of jaw

M30-M36 Systemic connective tissue disorders

M40-M43 Deforming dorsopathies

M45-M49 Spondylopathies
M50-M54 Other dorsopathies
M60-M63 Disorders of muscles
M65-M67 Disorders of synovium and tendon
M70-M79 Other soft tissue disorders
M80-M85 Disorders of bone density and structure
M86-M90 Other osteopathies
M91-M94 Chondropathies
M95-M95 Other disorders of the musculoskeletal system and connective tissue
M96-M96 Intraoperative and postprocedural complications and disorders of musculoskeletal system, not elsewhere classified
M97-M97 Periprosthetic fracture around internal prosthetic joint
M99-M99 Biomechanical lesions, not elsewhere classified
Diseases of the genitourinary system N00-N99
N00-N08 Glomerular diseases
N10-N16 Renal tubulo-interstitial diseases
N17-N19 Acute kidney failure and chronic kidney disease
N20-N23 Urolithiasis
N25-N29 Other disorders of kidney and ureter
N30-N39 Other diseases of the urinary system
N40-N53 Diseases of male genital organs
N60-N65 Disorders of breast
N70-N77 Inflammatory diseases of female pelvic organs
N80-N98 Noninflammatory disorders of female genital tract
N99-N99 Intraoperative and postprocedural complications and disorders of genitourinary system, not elsewhere classified
Pregnancy, childbirth and the puerperium O00-O9A*
O00-O08 Pregnancy with abortive outcome
O09-O09 Supervision of high risk pregnancy
O10-O16 Edema, proteinuria and hypertensive disorders in pregnancy, childbirth and the puerperium
O20-O29 Other maternal disorders predominantly related to pregnancy
O30-O48 Maternal care related to the fetus and amniotic cavity and possible delivery problems
O60-O77 Complications of labor and delivery
O80-O82 Encounter for delivery
O85-O92 Complications predominantly related to the puerperium
O94-O9A Other obstetric conditions, not elsewhere classified
Certain conditions originating in the perinatal period P00-P96**
P00-P04 Newborn affected by maternal factors and by complications of pregnancy, labor, and delivery
P05-P08 Disorders of newborn related to length of gestation and fetal growth
P09-P09 Abnormal findings on neonatal screening
P10-P15 Birth trauma
P19-P29 Respiratory and cardiovascular disorders specific to the perinatal period

P35-P39 Infections specific to the perinatal period
P50-P61 Hemorrhagic and hematological disorders of newborn
P70-P74 Transitory endocrine and metabolic disorders specific to newborn
P76-P78 Digestive system disorders of newborn
P80-P83 Conditions involving the integument and temperature regulation of newborn
P84-P84 Other problems with newborn
P90-P96 Other disorders originating in the perinatal period

Congenital malformations, deformations and chromosomal abnormalities Q00-Q99

Q00-Q07 Congenital malformations of the nervous system
Q10-Q18 Congenital malformations of eye, ear, face and neck
Q20-Q28 Congenital malformations of the circulatory system
Q30-Q34 Congenital malformations of the respiratory system
Q35-Q37 Cleft lip and cleft palate
Q38-Q45 Other congenital malformations of the digestive system
Q50-Q56 Congenital malformations of genital organs
Q60-Q64 Congenital malformations of the urinary system
Q65-Q79 Congenital malformations and deformations of the musculoskeletal system
Q80-Q89 Other congenital malformations
Q90-Q99 Chromosomal abnormalities, not elsewhere classified

Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified R00-R99#

R00-R09 Symptoms and signs involving the circulatory and respiratory systems
R10-R19 Symptoms and signs involving the digestive system and abdomen
R20-R23 Symptoms and signs involving the skin and subcutaneous tissue
R25-R29 Symptoms and signs involving the nervous and musculoskeletal systems
R30-R39 Symptoms and signs involving the genitourinary system
R40-R46 Symptoms and signs involving cognition, perception, emotional state and behavior
R47-R49 Symptoms and signs involving speech and voice
R50-R69 General symptoms and signs
R70-R79 Abnormal findings on examination of blood, without diagnosis
R80-R82 Abnormal findings on examination of urine, without diagnosis
R83-R89 Abnormal findings on examination of other body fluids, substances and tissues, without diagnosis
R90-R94 Abnormal findings on diagnostic imaging and in function studies, without diagnosis
R97-R97 Abnormal tumor markers
R99-R99 Ill-defined and unknown cause of mortality

Injury, poisoning and certain other consequences of external causes S00-T88

S00-S09 Injuries to the head
S10-S19 Injuries to the neck
S20-S29 Injuries to the thorax
S30-S39 Injuries to the abdomen, lower back, lumbar spine, pelvis and external genitals
S40-S49 Injuries to the shoulder and upper arm
S50-S59 Injuries to the elbow and forearm
S60-S69 Injuries to the wrist, hand and fingers

S70-S79 Injuries to the hip and thigh
S80-S89 Injuries to the knee and lower leg
S90-S99 Injuries to the ankle and foot
T07-T07 Injuries involving multiple body regions
T14-T14 Injury of unspecified body region
T15-T19 Effects of foreign body entering through natural orifice
T20-T25 Burns and corrosions of external body surface, specified by site
T26-T28 Burns and corrosions confined to eye and internal organs
T30-T32 Burns and corrosions of multiple and unspecified body regions
T33-T34 Frostbite
T36-T50 Poisoning by, adverse effect of and underdosing of drugs, medicaments and biological substances
T51-T65 Toxic effects of substances chiefly nonmedicinal as to source
T66-T78 Other and unspecified effects of external causes
T79-T79 Certain early complications of trauma
T80-T88 Complications of surgical and medical care, not elsewhere classified
Codes for special purposes U00-U85
U00-U49 Provisional assignment of new diseases of uncertain etiology or emergency use
U50-U85 Provisional assignment of new diseases of uncertain etiology or emergency use
External causes of morbidity V00-Y99##
V00-V09 Pedestrian injured in transport accident
V10-V19 Pedal cycle rider injured in transport accident
V20-V29 Motorcycle rider injured in transport accident
V30-V39 Occupant of three-wheeled motor vehicle injured in transport accident
V40-V49 Car occupant injured in transport accident
V50-V59 Occupant of pick-up truck or van injured in transport accident
V60-V69 Occupant of heavy transport vehicle injured in transport accident
V70-V79 Bus occupant injured in transport accident
V80-V89 Other land transport accidents
V90-V94 Water transport accidents
V95-V97 Air and space transport accidents
V98-V99 Other and unspecified transport accidents
W00-W19 Slipping, tripping, stumbling and falls
W20-W49 Exposure to inanimate mechanical forces
W50-W64 Exposure to animate mechanical forces
W65-W74 Accidental non-transport drowning and submersion
W85-W99 Exposure to electric current, radiation and extreme ambient air temperature and pressure
X00-X08 Exposure to smoke, fire and flames
X10-X19 Contact with heat and hot substances
X30-X39 Exposure to forces of nature
X50-X50 Overexertion and strenuous or repetitive movements
X52-X58 Accidental exposure to other specified factors
X71-X83 Intentional self-harm

X92-Y09 Assault
Y21-Y33 Event of undetermined intent
Y35-Y38 Legal intervention, operations of war, military operations, and terrorism
Y62-Y69 Misadventures to patients during surgical and medical care
Y70-Y82 Medical devices associated with adverse incidents in diagnostic and therapeutic use
Y83-Y84 Surgical and other medical procedures as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure
Y90-Y99 Supplementary factors related to causes of morbidity classified elsewhere
Factors influencing health status and contact with health services Z00-Z99
Z00-Z13 Persons encountering health services for examinations
Z14-Z15 Genetic carrier and genetic susceptibility to disease
Z16-Z16 Resistance to antimicrobial drugs
Z17-Z17 Estrogen receptor status
Z18-Z18 Retained foreign body fragments
Z19-Z19 Hormone sensitivity malignancy status
Z20-Z29 Persons with potential health hazards related to communicable diseases
Z30-Z39 Persons encountering health services in circumstances related to reproduction
Z40-Z53 Encounters for other specific health care
Z55-Z65 Persons with potential health hazards related to socioeconomic and psychosocial circumstances
Z66-Z66 Do not resuscitate status
Z67-Z67 Blood type
Z68-Z68 Body mass index (BMI)
Z69-Z76 Persons encountering health services in other circumstances
Z77-Z99 Persons with potential health hazards related to family and personal history and certain conditions influencing health status

* Codes from this chapter are for use only on maternal records, never on newborn records. Codes from this chapter are for use for conditions related to or aggravated by the pregnancy, childbirth, or by the puerperium (maternal causes or obstetric causes).

** Codes from this chapter are for use on newborn records only, never on maternal records. Excludes congenital malformations, deformations and chromosomal abnormalities. Includes conditions that have their origin in the fetal or perinatal period (before birth through the first 28 days after birth) even if morbidity occurs later.

This chapter includes symptoms, signs, abnormal results of clinical or other investigative procedures, and ill-defined conditions regarding which no diagnosis classifiable elsewhere is recorded. In general, categories in this chapter include the less well-defined conditions and symptoms that, without the necessary study of the case to establish a final diagnosis, point perhaps equally to two or more diseases or to two or more systems of the body. Practically all categories in the chapter could be designated 'not otherwise specified', 'unknown etiology' or 'transient'. The conditions and signs or symptoms included in categories R00-R94 consist of:

[Type text]

- (a) cases for which no more specific diagnosis can be made even after all the facts bearing on the case have been investigated;
- (b) signs or symptoms existing at the time of initial encounter that proved to be transient and whose causes could not be determined;
- (c) provisional diagnosis in a patient who failed to return for further investigation or care;
- (d) cases referred elsewhere for investigation or treatment before the diagnosis was made;
- (e) cases in which a more precise diagnosis was not available for any other reason;
- (f) certain symptoms, for which supplementary information is provided, that represent important problems in medical care in their own right.

Where a code from this section is applicable, it is intended that it shall be used secondary to a code from another chapter of the Classification indicating the nature of the condition. Most often, the condition will be classifiable to Chapter 19, Injury, poisoning and certain other consequences of external causes (S00-T88).

Source: ICD10data.com (2024). *2024 ICD-10-CM Codes*. <https://www.icd10data.com/ICD10CM/Codes>

Appendix 5: Health and wellbeing impacts of climate change

This table outlines some of the effects of climate change, and how they impact health and wellbeing.

| Climate change effects | Health and wellbeing impacts |
|---|--|
| Extreme heat | <p>Heatwaves have caused more deaths in Australia over the past 100 years than any other natural event.</p> <p>Exposure to prolonged high temperatures leads to higher rates of heat-related illnesses, such as dehydration, heat exhaustion, heatstroke, and worsening of existing health conditions, such as heart and kidney stones and kidney disease, and potentially death. Deaths from cardiovascular disease, respiratory conditions, neurological conditions and chronic diseases are the most frequent forms of mortality from extreme heat.</p> <p>Climate change is predicted to lead to a five-fold increase in the cost of public health through higher temperatures increasing the risk of heatstroke, dehydration and respiratory problems, as well as causing direct injuries and displacement from extreme weather, mental health issues due to disruption and loss, and the spread of disease and illness. The health damages alone are estimated to reach almost \$14.5 trillion a year by 2050.</p> <p>Australia's housing stock has very poor thermal quality - public housing in particular - which fails to provide adequate and safe conditions for occupants, particularly posing an increasing risk to health as average temperatures increase and we experience more frequent and extreme weather events become more frequent.</p> |
| Cyclones and damaging winds Cyclones may become more intense in some | <p>Cyclones may cause injuries, drowning, deaths and damage to essential infrastructure. Outbreaks of diarrhoeal diseases, acute respiratory infections and wound infections may occur in the aftermath, and disruptions to routine medical care can lead to worsening of pre-existing health conditions. Other health impacts</p> |

| | |
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| <p>areas due to climate change.</p> | <p>include: mental health impacts such as depression and PTSD, population displacement and homelessness.</p> <p>Severe tropical Cyclone Yasi, the largest cyclone to cross the Australian coast, hit North Queensland in February 2011 and led to a record number of presentations to the Townsville Hospital Emergency Department. It prompted the evacuation of the Cairns Base Hospital, with 356 patients, staff and relatives transferred by air to Brisbane.</p> |
| <p>Air pollution</p> <p>Burning of fossil fuels releases dangerous air pollutants, like particulate matter, sulphur dioxide, nitrogen oxides, mercury, cadmium and arsenic.</p> | <p>Air pollution contributes to increased chronic obstructive pulmonary disease (COPD) and other respiratory diseases including asthma.</p> <p>Air pollution from coal mining, production and combustion contributes to lung cancer, other lung disease, heart disease and stroke.</p> <p>Urban smog contains air pollutants such as ground-level ozone. Ozone levels increase on hot sunny days, with models predicting increases with climate change. Ozone irritates airways and aggravates conditions like asthma.</p> <p>The health impact of air pollution from the burning of coal in Australia is estimated to be approximately \$2.6 billion per year.</p> <p>The health costs of air pollution from all sources (from coal-fired power stations, vehicles, wood smoke) is estimated to cost Australia \$16 billion per annum.</p> <p>Air pollution from fossil fuel sources is estimated to cause 5700 deaths in Australia annually, or about 4% of all deaths each year.</p> |
| <p>Extreme rainfall, floods, storm surges</p> <p>The risk of severe flooding is expected to increase in many parts of Australia, due to an increase in the frequency and intensity</p> | <p>Floods may cause drowning, body injury, hypothermia, and longer-term mental health impacts. In addition, flooding may cause damage to infrastructure such as sewerage and drinking water supply systems. Fresh water supplies may be limited, and contaminated flood waters may spread harmful bacteria and viruses, leading to an increased risk of diarrhoeal disease. After a flood, stagnant water provides a potential breeding ground for mosquitoes that may transmit diseases, while damp conditions promote mould growth which may aggravate asthma and other allergic diseases.</p> |

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|--|--|
| <p>of heavy rainfall episodes and sea level rise.</p> | |
| <p>Drought</p> | <p>Droughts can cause disruptions in food supply, changing patterns of crops, pests, and weed species, water shortages, malnutrition, food and water-borne disease, influence the emergence of new vector-borne and zoonotic disease, and long term mental health impacts, including suicide.</p> |
| <p>Bushfires</p> <p>The frequency of extreme fire weather has increased since the 1970s, particularly in southeast Australia, and the duration of the bushfire season has increased. The risk of bushfires is expected to continue to increase with climate change, particularly in southern and eastern parts of Australia.</p> | <p>Burns, injuries and death may result directly from bushfire exposure, while dehydration and heat exhaustion are particular risks for firefighters. Smoke inhalation can damage the lungs and airways. Smoke may also be carried hundreds or thousands of kilometres away from the bushfire zone, affecting the health of communities across vast areas.</p> <p>Bushfires also damage and destroy homes, infrastructure and services; health care services may be severely affected, for example due to damage to hospitals and medical centres. Long-term mental health impacts on survivors of bushfires and emergency services personnel can be significant.</p> <p>In Victoria in 2009, the Black Saturday bushfires resulted in 173 deaths, and 414 people presented to public hospital emergency departments in the first 72 hours after the fires.</p> <p>The 2019-20 bushfires caused 33 direct deaths in south-eastern Australia and an estimated additional 417 excess deaths. There were 1305 asthma emergency department presentations, and 3151 hospital admissions for cardiovascular and respiratory conditions through smoke exposure alone. The smoke had a severe impact on the health and development of unborn babies.</p> |
| <p>Pollen count</p> | <p>Warmer temperatures and increasing levels of carbon dioxide in the atmosphere can increase the production, potency and release of allergens such as pollens and spores, aggravating allergic diseases, like asthma. Asthma and other allergic diseases have a major impact on physical health and quality of life, affecting work,</p> |

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| | <p>school, social activities and psychological health. Approximately 1 in 5 Australians has an allergic disease and 1 in 10 suffers from asthma.</p> |
| <p>Rising average temperatures</p> | <p>Increasing temperatures and changing rainfall patterns are expected to change the patterns of mosquito-borne diseases, like Dengue fever and Ross River virus.</p> <p>Increasing temperatures may also increase the risk of foodborne infections such as bacterial gastroenteritis, due to increased growth of pathogens including Salmonella, Campylobacter and E. coli.</p> <p>Research suggests the number of deaths attributable to heat in Australia is at least 50 times higher than records suggest. Over 11 years, 340 deaths in Australia were recorded as due to excessive heat, but further analysis of medical records found 36,765 deaths were actually attributable to heat.</p> |
| <p>Food security</p> | <p>Climate change is emerging as a key threat to global and national food security in the coming decades. Greater variability in rainfall, prolonged droughts and a greater incidence of extreme weather events are expected. In Australia, climate change has the potential to disrupt agricultural production and adversely affect our ability to produce nutritious and affordable food.</p> |
| <p>Biodiversity and habitat loss</p> | <p>Biodiversity supports human and societal needs, including food and nutrition security, energy, development of medicines and pharmaceuticals and freshwater, which together underpin good health. It also supports economic opportunities, and leisure activities that contribute to overall wellbeing.</p> <p>Land use change, pollution, poor water quality, chemical and waste contamination, climate change and other causes of ecosystem degradation all contribute to biodiversity loss and can pose considerable threats to human health.</p> <p>Human health and well-being are influenced by the health of local plant and animal communities, and the integrity of the local ecosystems that they form.</p> <p>Unprecedented biodiversity loss, driven significantly by climate change, is increasing the risk of disease transmission from animals to humans, and air pollution is facilitating transport of these pathogens across large distances.</p> |

| | |
|------------------------------------|--|
| Services and infrastructure | <p>Health leaders and experts agree that governments are not doing enough to tackle climate change, and they want to see a more coordinated approach to climate and health policy.</p> <p>Emergency services are under pressure: for example, Ambulance Victoria had a 97% rise in call-out numbers for cardiac cases during the 2014 heatwave.</p> <p>Australia has one of the world's best health systems, but our health services remain highly vulnerable to climate and weather extremes. Very few health services have conducted a climate risk assessment, despite the fact climate change will damage healthcare infrastructure, disrupt service provision and continuity, negatively impact the workforce, and drive up healthcare costs.</p> <p>Climate change will also lead to a major increase in use of and demand for health care services.</p> |
| Other impacts | <p>Climate anxiety is an emerging health issue, caused by increasing awareness of the threats to wellbeing posed by climate change.</p> <p>Climate change has a range of social impacts, including political instability, changes in migration patterns and increased crime.</p> |

Source: Climate Change and Health Alliance (2024). Communicating the health impacts of climate change. https://www.caha.org.au/comms_guide; Rocque RJ, Beaudoin C, Ndjaboue R, et al. *Health effects of climate change: an overview of systematic reviews*. BMJ Open 2021;11:e046333. <https://bmjopen.bmj.com/content/11/6/e046333>

Appendix 6: Systematic mapping review of Australian research on climate and health interventions

Primary research studies included

| Reference | Study type & Climate impact | Site(s) & Setting | | Intervention(s) | Key findings & Effectiveness |
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| Health system adaptation, vulnerability and resilience | | | | | |
| (Marfori et al. 2020) | Study type: Interviews Climate impact: Wildfires | Site(s): Huon Valley region, Hobart, Tasmania, Australia Setting: households affected by the 2019 wildfires | (1) To understand the level of concern about the impacts of smoke on well-being. (2) To investigate how information about smoke and health was received and understood. (3) To assess if public health information influenced individual actions and behaviour. (4) To determine the acceptability of using portable HEPA cleaners for managing poor indoor air quality during the wildfires. | Public health messaging related to smoke during the 2019 wildfires in Tasmania, and evaluation of effectiveness of HEPA cleaners to improve residential indoor air quality during extreme episodes of air pollution caused by the wildfires. | Key findings: Social media played a crucial role in disseminating information, but diverse communication channels were needed. Concerns about timeliness and effectiveness of interventions arose led to some individuals relocating before official advice. HEPA cleaners accepted to reduce personal symptoms and seek reassurance. Effectiveness: Effective: HEPA cleaners were generally well-accepted by participants and perceived to be a potentially practical intervention during the 2019 wildfire incident in Tasmania. |

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| (Nitschke et al. 2017) | Study type: Randomized Controlled Trial (RCT) Climate impact: Heat | Site(s): Adelaide, Australia Setting: Community | What is the efficacy of heat-health messages, based on known risk factors in South Australia, which are sent out at the beginning of summer and their health impact on older people? | An information pack comprising: (1) information sheet on how to deal with extreme heat conditions; (2) a "Top Tips Heat-Health Card"; (3) the South Australia Health Department's "Extreme Heat Booklet - a guide to coping and staying healthy in the heat"; (4) three South Australia Health advice factsheets | Key findings: Little difference between intervention and control groups regarding modifying behaviours during heat, but air conditioner use, application of wet cloth to the body, and confidence in adequacy of information needed to beat the heat was significantly higher in the intervention group. Significant reduction in the incidence of heat stress in the intervention group compared to the control group. Effectiveness: Effective |
| (Nitschke et al. 2016) | Study type: Ecological study (case-series) Climate impact: Heat | Site(s): Adelaide Setting: Hospital, emergency department, ambulance service | Did heat wave warning system (HWS) reduce morbidity and mortality during the study period? | HWS activated by the State Emergency Service of Adelaide, on advice by the Bureau of Meteorology | Key findings: Significantly lower (59%) cardiac-related call-outs, (30%) renal, and (56%) heat-related emergency presentations in 2014 compared to 2009. Mortality was not reduced in 2014. Effectiveness: Effective in reducing morbidity but not mortality. |
| (Williams et al. 2019) | Study type: Survey Climate impact: Heatwaves | Site(s): Regional (non-metropolitan) areas in South Australia and Victoria Setting: | To assess householders' perspectives and responses to heat and heat-health warnings, including their awareness, recall, and behaviours in | Heat-health warnings and their effectiveness in promoting protective behaviours among the public in response to extreme heat events. | Key findings: Warnings were viewed as appropriate, but impact on behaviour varied with concerns raised about public complacency if warnings are seen as common sense. Women showed greater concern than men, and older age groups had lower risk perceptions. Continuous evaluation and tailored communication strategies were |

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| | | Households | managing extreme heat events. | | recommended to enhance effectiveness of heat-health warnings and address public health risks during heatwaves. Effectiveness: Inconclusive: warnings were well received, but their effectiveness in driving substantial behavioural changes was not clearly demonstrated. |
| (Williams et al. 2022) | Study type: Cost-benefit analysis (including interviews with key informant s) Climate impact: Extreme heatwaves | Site(s): Adelaide, South Australia Setting: NA | To provide a descriptive cost-benefit evaluation for an Australian heat-health warning system (HHWS) intervention, focusing on the economic implications of the HHWS in South Australia. | The intervention measures implemented under the South Australian Heat Health Warning System (HHWS) included public heat warnings, health advisories, and targeted support for vulnerable groups during extreme heat events. The HHWS aimed to provide early warnings and advice to the public to reduce heat-related health risks and enhance preparedness for heatwaves. | Key findings: Estimated cost for a one-week activation of the HHWS was AU\$593,000. Compared to potential savings based on reduced healthcare utilization during extreme heat events, the benefit-cost ratio ranged from 2.0 to 3.3 (cost-effectiveness). HHWSs are crucial and cost-effective public health responses to heatwaves. Effectiveness: Effective: HHWS intervention was effective in reducing the health impacts of heatwaves and mitigating the associated risks. |
| Health co-benefits of climate change mitigation action outside the healthcare system | | | | | |
| (Haddad et al. 2020) | Study type: Health Impact Assessment | Site(s): Darwin, Australia Setting: Municipal | What are the impacts of urban heat mitigation measures on building cooling energy needs, peak | Increased greenery, application of cooling materials on pavements and roofs, water spray system, shading, and green roofs (used | Key findings: Urban greenery reduces the annual cooling load of residential buildings by 2.6%; cool roofs and pavements by 5.8%; combination of greenery, cool roofs and pavements, and urban shading by 7.2%. Application of cool |

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| | (simulation study) Climate impact: Heat | | electricity demand and health? | individually and in combination) on urban overheating. | materials reduces the annual excess hospital admissions from 40.14 to 27.51; greenery reduces it to 34.67; and combining solutions reduces it to 24.49 per 100,000 population. Combination of shading, greening, and cooling materials saves 9.66 excess deaths per year per 100,000 population. Effectiveness: Effective |
| Adaptation and resilience interventions to protect health in sectors outside the healthcare system | | | | | |
| (Chen et al. 2014) | Study type: Health impact assessment (two-scale modelling approach) Climate Impact: Indoor heat stress | Site(s): Melbourne (5 buildings facing north, east, south and west) Setting: Residential buildings | Investigate the role of urban vegetation in reducing heat related mortality in the city of Melbourne, Australia. | Increase of urban vegetation in Melbourne CBD. | Key findings: Average seasonal summer temperatures can be reduced in the range of around 0.5 and 2°C if the city were replaced by vegetated suburbs and parklands, respectively. With the limited buildings and local meso-climates investigated in this study, around 5-28% and 37-99% reduction in heat related mortality rate have been estimated by doubling the city's vegetation. Effectiveness: Not determined |
| (Cowlshaw et al. 2023) | Study type: Randomised Controlled | Site(s): Rural or regional Victoria Setting: | To investigate the efficacy of the Skills for Life Adjustment and Resilience (SOLAR) program delivered by trained | SOLAR program: a brief, trauma-informed, skills-based psychosocial programme that can be delivered by trained lay community members vs 5- | Key findings: SOLAR led to significantly lower levels of anxiety and depression, and PTSD symptom severity between pre- and post-intervention, relative to the Self-Help condition, while controlling for scores at |

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| | Trial (RTC) Climate impact: Disasters (bushfires , drought) | Disaster affected regions of rural or regional Victoria | community members to residents of disaster affected regions in Australia. | week self-help programme (control). | intake. These differences were not statistically different at follow-up. The SOLAR program was associated with large effect size improvements in posttraumatic stress symptoms over time. Effectiveness: Moderately effective |
| (Dufty 2022) | Study type: Case study Climate impact: Heat | Site(s): Blacktown, Sydney Setting: Community | Develop a strategy for enabling Council-owned public amenities to provide refuges from extreme heat for vulnerable residents | Heat refuge strategy | Key findings: The interviews were part of the stakeholder engagement to craft the heat strategy. Effectiveness: Not assessed |
| (Hansen et al. 2011) | Study type: Interviews , focus groups Climate Impact: Heat | Site(s): Adelaide Setting: Diverse settings | What are the stakeholders' views of factors influencing the ability of older persons to adapt to hot conditions, and what are the barriers to adaptation based on recent experience? | Heat-health warnings / Heat protective behaviours | Key findings: Susceptibility of older persons to heat was analysed to revolve around: (1) physiological issues; (2) socio-economic issues; (3) psychological issues; (4) adaptive strategies. Socio-economic issues were very influential in shaping behaviours, as were concerns about power costs when using air conditioning. Publicly cooled spaces can provide a cool environment without costs concerns but can be problematic due to the lack of care facilities and transport to and from the centres in the heat. Effectiveness: Not assessed |

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| (Longman et al. 2023) | Study type: Online workshop s. Climate impact: Drought, bushfire, and floods. | Site(s): Rural NSW (3 areas that experienced extreme weather-related events including drought, bushfire, and floods) Setting: Rural communities | What participants perceived to be effective at building resilience to the mental health impacts of climate change and the necessary components of success of community resilience building | Community activities that build resilience to the mental health and wellbeing impacts of climate change (i.e. provision of general community-led support; community-focused climate action, including inclusive and democratic resilience and adaptation planning; and collective politically focused climate action. | Key findings: Taking action together can build social and relational capital, engender feelings of belonging and increase informal social connectedness, while simultaneously helping communities prepare for the impacts of climate change. Effectiveness: Not assessed |
| (McGill et al. 2024) | Study type: Cross-sectional Climate Impact: Bushfire | Site(s): Rural NSW Setting: Schools and pre-schools | What is the impact of the Bushfire Recovery Program's psychosocial groups on children's wellbeing and resilience? | Psychological interventions supporting children's recovery from bushfires. | Key findings: High levels of endorsement by children: children learnt to talk to and trust adults, share thoughts and experiences with others, recognise they were not alone in their experiences. Parents strongly agreed that their child(ren) knew who to talk to and trusted adults and understood that changes happen in life. The facilitators' ratings were lower than that of parents. Effectiveness: The programme was effective and had positive impacts on children in the areas of coping, expression of emotions, well-being, and peer connections. |

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| (O'Donnell et al. 2020) | Study type: Surveys and interviews Climate Impact: 2015 Sampson Flat or Pinery bushfires | Site(s) South Australia (Country) South Australian Primary Health Network (CSAPHN), the Northern Health Network (NHN), and the Australian Red Cross) Setting: Emergency services | To describe the development and pilot testing of an internationally developed, brief, and scalable psychosocial intervention that targets distress and poor adjustment following disaster and trauma. | The Skills for Life Adjustment and Resilience (SOLAR) program, a skills-based intervention, deliverable by community-based or frontline health or disaster workers with little or no formal mental health training, piloted with 15 Australian bushfire survivors. | Key findings: This study provides preliminary evidence that the SOLAR program is an accessible, brief, and scalable psychosocial intervention that can be delivered by trained frontline workers, including volunteers, professional, and paraprofessional health or disaster workers. The pilot also provided preliminary evidence that SOLAR is acceptable to disaster survivors in the Australian context, with all participants who were eligible to participate completing all five sessions of SOLAR, and all who responded to open-ended questions. Effectiveness: Found that after training, coaches demonstrated improvements in knowledge and confidence in delivering the intervention and were able to implement the intervention in a safe manner that was acceptable to participants, providing support for the intervention's feasibility. Limitations like lack of gender or culture influenced treatment response, lack of input on the difficulty level from the coaches and the utilisation of traditional formulae for calculation of the dRM, which can overestimate the magnitude of effects due to unequal variances. |
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| (Qi et al. 2021) | Study type: Sensitivity analysis Climate Impact: Heat | Site(s): Leppington, Sydney Setting: Community | To develop a model integrating environmental, social, and economic impact assessment and sensitivity analysis, which considers multiple objectives holistically and enables the key planning and design variables for Urban heat mitigation techniques (UHMTs) to be identified. | Applicable urban heat mitigation techniques (greenery and cool materials). | Key findings: Change of pavement colour from black to white reduced average air temperature, land surface temperature, heat-related mortality, energy bills and productivity loss by 0.65°C, 6.38°C, 4.43%, 4.15%, and 1.27%, respectively, while it increased outdoor thermal comfort index by 0.13°C. Effectiveness: This assessment model allows governments and decision makers to identify the weight of multiple objectives based on their policy goals and priorities, ensuring the high-performance UHMTs selected will meet their demands. |
| (Quilty et al. 2023) | Study type: Environmental epidemiology Climate impact: Heat | Site(s): Northern Territory, Australia Setting: Unclear | Compare non-Indigenous and Indigenous societies in a tropical environment and explore the relative importance of physiological, sociocultural, and technological and infrastructural adaptations to heat. | Physiological adaptation to heat. | Key findings: Improved understanding of the holistic impact of urban heat mitigation techniques (UHMTs) on context-based mitigation performance, supporting decision making related to urban heat mitigation and cooling cities and communities. Effectiveness: This study suggests that social and cultural adaptations to increasing hot weather are potentially powerful mechanisms for protecting human health. |
| (Sadeghi et al. 2022) | Study type: Universal Thermal | Site(s): Sydney Greater Metropolitan | To develop an exposure-response method to quantify the impact of urban | Three urban greening infrastructure strategies aimed at mitigating urban heat in the Sydney GMR. | Key findings: (1) Developed a Heat Health Impact (HHI) method using Universal Thermal Climate Index (UTCI) to assess green infrastructure |

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| Comfort Index (UTCI) simulations, and Health impact assessment (HIA) Climate impact: Heatwaves | Region (GMR), across 10 weather stations. Setting: Urban environment | greening strategies on human heat balance and predict their benefits on population health. Objectives: (1) predict the impact of greening adaptation strategies on urban heat in the Sydney GMR; (2) quantify cooling benefits of greening adaptation strategies on a human heat stress thermal physiology model and demonstrate their spatial variation throughout the Sydney GMR during a typical heatwave episode; (3) estimate the heat-related health impacts of adaptation strategies during a typical heatwave day in the Sydney GMR through HIA methods. | benefits; (2) analysed greening scenarios' effects on urban heat and human physiology; (3) showed that urban greening reduced UTCI by up to 1.7°C, with significant cooling observed in western and coastal areas; (4) health impact up to 11.7 fewer heat-related deaths per day during heatwaves with greening interventions; (5) emphasis on integrating green infrastructure into climate strategies for urban resilience and public health protection. Effectiveness: Evaluated and effective; implementation of urban greening infrastructure led to a significant reduction in heat-related mortality. Urban Cooling Effect (UCE) calculated under different greening scenarios showed a notable cooling impact on urban heat levels and human thermal physiology. However, the study was restricted to a single heatwave episode which may not capture the long-term effects of urban greening interventions on population health and heat-related mortality over different seasons or years. |
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| (Santamo uris et al. 2020) | Study type: Experi- mental and numerical impact assess- ment Climate Impact: Urban heat island effect (over- heating) | Site(s): Greater Sydney area, specifically the Local Government Area of the City of Parramatta in Western Sydney, Australia Setting: Urban environment | To assess the impact of regional overheating on urban sustainability and quantify potential sustainability improvements through the implementation of optimized heat mitigation technologies in the City of Parramatta, Western Sydney, Australia | Eight mitigation scenarios involving the use of reflective materials, additional greenery, irrigation to enhance evapotranspiration, and various combinations of these measures to mitigate urban overheating. | Key findings: It found that during heatwaves, temperatures in Western Sydney, particularly in Parramatta, rise significantly compared to coastal areas. Mitigation measures such as increasing albedo, planting trees, and enhancing evapotranspiration showed promise in reducing ambient temperatures and mitigating urban heat island effects. Implementing these strategies could improve energy demand, indoor environmental quality, and decrease heat-related health issues. The research underscores the importance of sustainable urban planning to address urban overheating and enhance cities' resilience to climate change, emphasizing proactive measures to mitigate urban heat island effects and improve overall urban sustainability. Effectiveness: Effective: The outcomes of the evaluation indicated that the mitigation scenarios, which included various strategies such as increasing albedo, planting additional trees, and enhancing evapotranspiration, showed promising results in reducing ambient temperatures and addressing urban heat island effects. These measures were found to have the potential to improve energy |
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| | | | | | demand, indoor environmental quality, vulnerability, survivability, and heat-related mortality and morbidity in the urban environment. |
| (Seale et al. 2023) | Study type: RCT of mask use based on phone interviews Climate Impact: Wildfire smoke | Site(s): Communities across Australia. Setting: Community (residents of bushfire-prone areas) | This study aims to utilise a qualitative approach to understand the current reality around mask use and the factors influencing people to (or not to) wear a mask during bushfire events. | Use of facemasks. | Key findings: The interview responses and data analysis helped the authors to identify four themes: "Limited past experiences with masks for bushfires"; "My favourite strategy is avoidance"; "Relying on visual triggers for use", "We need a kick-start to get people to use masks". Effectiveness: Not assessed |
| (Tomerini et al. 2011) | Study type: Health impact assessment based on RRV disease notification data, and survey on mosquito control Climate Impact: | Site(s): 73 QLD local governments in sub-tropical coastal; tropical coastal; subtropical inland; and temperate inland regions. Setting: Community | The aim of this study was to investigate the relationship between different mosquito management strategies and the incidence of RRV in 4 climatic regions in Queensland, Australia. | Different programs for mosquito borne disease mitigation. | Key findings: The study's findings indicated that mosquito control is an effective public health intervention to reduce mosquito-borne disease; The long-term RRV disease rates were lower in areas where the mosquito control program included pre-emptive (rather than reactive) surveillance based on an extensive (rather than incomplete) knowledge of mosquito habitats, and where treatment of both saltwater and freshwater habitats (compared to only saltwater habitats, in coastal areas) occurred. Effectiveness: |

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| | Mosquito borne disease: Ross River Virus (RRV) | | | | Mosquito control is an effective public health intervention to reduce mosquito-borne disease. |
| (Varghese et al. 2020) | Study type: Cross-sectional survey Climate impact: Heat stress or hot weather | Site(s): Nation-wide online survey (Australia) Setting: Health and safety representatives | (1) Investigate the types of heat-related injuries and their associated risk factors in Australian workplaces during hot weather. (2) Describe and assess the prevention measures adopted for outdoor and indoor workers in relation to heat-related injuries. (3) Examine the existing levels of training, policies, and guidelines related to heat stress in Australian workplaces. | Preventive measures, including a range of control strategies such as education and training, personal protection, administrative controls, and engineering controls. | Key findings: Despite legal requirements for safe thermal work environments, heat stress training availability is limited, with only 35% of representatives reporting its presence. Specific Work Health and Safety (WHS) legislation addressing hot weather work is lacking nationwide, highlighting the need for comprehensive prevention approaches. Barriers to prevention include worker awareness gaps, insufficient training, and organizational issues. Workplaces employ preventive measures like providing Personal Protective Equipment (PPE), sunscreen, and cool drinking water. The study underscores the importance of hot weather policies, heat stress training, and control measures to reduce heat exposure risks. Understanding workplace risk factors is essential for effective prevention strategies. The research stresses the preventable nature of heat-related illnesses and injuries, advocating for enhanced workplace safety standards, education, and |

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| | | | | | resources to safeguard workers from heat stress and associated health issues. Effectiveness: Inconclusive: As the study did not directly assess the impact or outcomes of the interventions against heat stress, it is inconclusive to determine the effectiveness of the interventions based on the information available in the paper. |
| (Wheeler et al. 2021) | Study type: Intervention trial Climate Impact: Extreme air pollution events / bushfires | Site(s): Port Macquarie library in New South Wales, Australia Setting: Public library | (1) To evaluate the potential for a public building to serve as a cleaner indoor air shelter during smoke events. (2) To assess the efficacy of installing HEPA cleaners within a smaller room inside the library area. | Utilizing a large public building, specifically the Port Macquarie library, as a cleaner indoor air shelter during episodes of elevated fire smoke pollution. Additionally, portable HEPA cleaners were installed in a smaller room within the library to further improve indoor air quality by reducing PM2.5 concentrations. | Key findings: Indoor air quality inside the library was significantly cleaner compared to outdoor air, with an average reduction of 70% in outdoor-generated PM2.5 concentrations. Additionally, installing HEPA cleaners in a smaller media room within the library further reduced PM2.5 levels by 17% compared to the main library. Effectiveness: Effective: proved effectiveness of use of public buildings as 'clean indoor air shelters' and the use of HEPA filters to improve indoor air quality during extreme smoke events. The findings suggested that operating appropriately sized HEPA cleaners in indoor spaces can lead to substantial reductions in PM2.5 concentrations, providing a cleaner indoor air environment and potentially protecting public health during episodes of elevated smoke emissions. |

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Source: Interim Australian Centre for Disease Control (2024). *Summary report appendices: Systematic mapping review of Australian research on climate and health Interventions*. <https://www.health.gov.au/resources/publications/systematic-mapping-review-of-australian-research-on-climate-change-and-health-interventions?language=en>

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Included reviews of climate change impacts

| Reference | Review type & Climate impact | Australian studies included & Setting | Aim(s) | Intervention(s) | Key findings & Effectiveness |
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| MJA-Lancet Countdown | | | | | |
| (Zhang et al. 2018) | Study type: Perspective Climate impact: Climate change impacts, exposures, and vulnerability. | Australian studies included: NA Setting: Not defined | Understanding of and suite of health and wellbeing-related responses to the impacts of climate. | Climate change health mitigation and adaptation indicators | Key findings: Australia is vulnerable to the impacts of climate change on health, and policy inaction in this regard threatens Australian lives. Effectiveness: Not assessed |
| (Beggs et al. 2019) | Study type: Perspective Climate impact: Wildfire, heatwaves, and flood | Australian studies included: NA Setting: NA | The report aims to assess the impacts of climate change on Australian health and also evaluate the inaction policies. Covers 31 indicators divided into five broad sections: climate change impacts, exposures and | Climate change health mitigation and adaptation indicators | Key findings: The report tracks progress on health and climate change in Australia across 31 indicators divided into five broad domains: (1) climate change impacts, exposures and vulnerability; (2) adaptation, planning and resilience for health; (3) mitigation actions and health co-benefits; (4) finance and economics; and (5) public and political engagement. Effectiveness: Not assessed |

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| | | | vulnerability; adaptation, planning and resilience for health; mitigation actions and health co-benefits; finance and economics; and public and political engagement | | |
| (Zhang et al. 2020) | Study type: Perspective Climate impact: Heatwaves, bushfire, air pollution (airborne particulates); extreme events (e.g., flooding, cyclones, hail, tornadoes) are included. | Australian studies included: Not specified Setting: NA | The report focuses on the Australia's 2019-20 Black Summer and evaluates bushfire adaptation strategies to better equip the communities for future instances. Focused on flooding. | Climate change health mitigation and adaptation indicators | Key findings: Substantial increases in both fire risk and population exposure to bushfires are having an impact on Australia's health and economy. As a result of the "Black Summer" bushfires, the monthly airborne particulate matter (PM2.5) concentrations in NSW and the ACT in December 2019 were the highest of any month in any state or territory over the period 2000–2019 at 26.0 µg/m3 and 71.6 µg/m3 respectively, and insured economic losses were \$2.2 billion. In addition, the study found a 50% increase in scientific publications and a doubling of newspaper articles on the topic in Australia in 2019 compared with 2018. Effectiveness: Not assessed |

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| (Beggs et al. 2021) | Study type: Perspective Climate impact: Heat, bushfires, and other indicators | Australian studies included: Not specified Setting: NA | The report provides an update on the full suite of indicators and highlights two new indicators: "Heat impact on physical and sporting activities", and Bushfire adaptation" to better equip the communities for future instances. | Climate change health mitigation and adaptation indicators | Key findings: The collaboration tracks the links between public health and climate change across about 40 indicators in five domains: (1) climate change impacts, exposures and vulnerability; (2) adaptation, planning and resilience for health; (3) mitigation actions and health co-benefits; (4) economics and finance; and (5) public and political engagement. Effectiveness: Not assessed |
| (Beggs et al. 2022) | Study type: Perspective Climate impact: Wildfire, heatwave, bushfires, rising sea level, and carbon emissions | Australian studies included: Not specified Setting: National focus or NA | Track progress on an extensive suite of indicators. | Climate change health mitigation and adaptation indicators | Key findings: We track progress on an extensive suite of indicators across these five domains, accessing, assessing and presenting the latest data and further refining and developing our analyses. The study tracks progress in various domains related to health and climate change, including (1) climate change impacts, exposures, and vulnerability; (2) adaptation, planning, and resilience for health; (3) mitigation actions and health co-benefits; (4) economics and finance; (5) and public and political engagement. Effectiveness: Not assessed |

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| (Beggs et al. 2024) | Study type: Perspective Climate impact: Bushfire, drought, heatwaves | Australian studies included: Not specified Setting: National focus or NA | The report aims to assess the sustainability requirements needed in Australia's health care sector. | Climate change health mitigation and adaptation indicators | Key findings: We track progress on an extensive suite of indicators across these five domains, accessing, assessing and presenting the latest data and further refining and developing our analyses. Effectiveness: Not assessed |
| Health system adaptation, vulnerability and resilience | | | | | |
| (Hu et al. 2022) | Study type: Systematic review Climate impact: Heat, dust storms, forest fires | Australian studies included: 4 Setting: Not specified | (1) To systematically evaluate the epidemiological evidence on climate change adaptation measures for asthmatic children; (2) understand current knowledge gaps; and (3) propose future research directions in this field. | Vulnerability assessment. | Key findings: A non-significant trend towards a positive association was observed between forest fires and childhood asthma; (2) Dust storms were associated with increased asthma emergency room visits in children aged ≤ 5 years; (3) male children and children aged 0-4 and 5–9 years had more emergency room visits during periods of extreme heat. Effectiveness: Not assessed |
| (Lokmic-Tomkins et al. 2023) | Study type: Narrative review Climate impact: | Australian studies included: None (but studies from | To examine Digital Health Technologies (DHTs), their advantages and | DHTs for supporting healthcare to populations | Key findings: During the Australian bushfires, emergency evacuation instructions sent via digital messaging were effective, but electronic health records (EHTs) were underutilised. |

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| | Bushfire, flood | Australia mentioned in narrative synthesis) Setting: Not specified | liabilities DHTs confer in the likelihood of climate-related disasters, their prior planning requirements, infrastructural requirements, and vulnerabilities in delivering effective care to the affected populations. | affected by disaster. | During 2022 floods, the Australian EHTs served residents in flood-affected areas in areas such as telehealth appointments, and e-prescribing. Effectiveness: Inconclusive: the perceptions of affected community members of DHT effectiveness is yet to be assessed; requirements for optimization of quality healthcare delivery have also not been assessed. |
| (Palinkas et al. 2020) | Study type: Narrative review Climate impact: Extreme weather (hurricanes, floods, droughts, wildfires, heatwaves) | Australian studies included: Not specified Setting: Not specified | Describe the types and characteristics of mental health services and interventions for the prevention and treatment of mental and behavioural health problems associated with climate change events. | (1) Universal and selective interventions; (2) indicated interventions; (3) treatment interventions. | Key findings: Some of the mental health impacts and services employed in response to these impacts will cut across acute and extreme events, subacute events, and events which permanently alter the physical environment. Some interventions are specific to each type of event. The services which currently target acute and extreme weather events will likely be effective in responding to the mental health consequences of longer duration events. Effectiveness: Not assessed |
| (Vu et al. 2019) | Study type: Systematic review | Australian studies included: | To identify current measures in mitigating the | Heat Action Plans (HAPs) to mitigate the adverse effects | Key findings: (1) Older adults were aware of heat risks but often did not perceive themselves as |

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| Climate impact: Heatwaves | 7 Setting: Community frontline healthcare services, primary care, and community organizations | adverse effects of extreme heat events in older populations. Specifically, to examine older people's perceptions and behaviours against existing heatwave prevention measures, categorize and analyse those measures using the Ottawa Charter for Health Promotion framework, and highlight gaps in existing heat action plans. The study also aimed to establish the need for a more coordinated approach to address the potential public health dilemma | of extreme heat events on older populations (raise awareness, improve vulnerability perception, and promote protective behaviours). | vulnerable; (2) HAPs have reduced mortality and improved behaviours, but confusion remains about specific actions during heatwaves, and causal relationships with outcomes are unclear; (3) more proactive support from healthcare and community personnel is needed to prevent heat-related illnesses among older individuals, enhanced social support and community-based approaches can strengthen resilience; (4) ongoing efforts are essential to improve heat health prevention, better evaluation of HAPs, improved stakeholder coordination, and further research to assess intervention impacts on health outcomes. Effectiveness: Inconclusive: HAPs successful in reducing mortality and morbidity rates and improving adaptive behaviours among older populations; however, lack of clear causal relationships between individual components of HAPs and specific health outcomes suggests that further research and refinement in methodology are needed to determine the true effectiveness of these interventions. |
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| | | | posed by extreme heat events affecting older populations. | | |
| (Walker et al. 2011) | Study type: Systematic review Climate impact: Environmental disasters (droughts, storms, and floods); other hazards (heat, water & air pollution, vector-borne and food-borne infectious diseases). | Australian studies included: Not specified Setting: Not specified | To explore the literature where key concepts in primary health care and health promotion are applied to the issue of climate change. The study discussed health promotion principles and intervention strategies for addressing climate change mitigation and adaptation within the primary health care sector. | Health communication, community building, and settings approaches (examples drawn from literature on community resilience and summer heat). | Key findings: (1) Climate change disproportionately affects vulnerable groups such as low-income individuals, the elderly, Indigenous Australians, and those in poor-quality housing; (2) interventions should promote health equity, climate stabilization, and poverty eradication while addressing specific needs of vulnerable populations; (3) multi-level interventions targeting individuals, households, populations, and communities are essential for greater impact; (4) advocacy actions are crucial for promoting policy changes and community initiatives to address climate change. Effectiveness: Inconclusive: no explicit mention of evaluation of the effectiveness of the intervention measures. |
| (Walter et al. 2024) | Study type: Integrative review Climate impact: | Australian studies included: Not specified Setting: Not specified | To provide insights into approaches for addressing Climate Change Adaptation (CCA) in the context of | Tools, frameworks, and guidance material suitable for CCA | Key findings: Australia is not adequately prepared to manage the adverse health impacts of climate change, putting the population at risk. The review identified a lack of effective adaptation strategies in Australia and underscored the urgent need for proactive |

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| | Extreme weather events | | public health in Australia. Objectives: (1) to conduct an integrative review to capture a comprehensive understanding of tools, frameworks, guidance material, or methods relevant to CCA and appropriate for preventative public health measures; and (2) to explore key themes that can assist in bridging knowledge-action gaps in the context of Australian CCA for public health. | | measures to address the complex health risks associated with climate change. It recommended undertaking a National Adaptation Plan process, improving understanding of managing health risks, and strengthening the public health system to build health resilience, particularly for vulnerable populations. Effectiveness: Inconclusive: no specific evaluation of the effectiveness of any intervention or adaptation measure. |
| (Xu et al. 2023) | Study type: Scoping review Climate impact: | Australian studies included: Not specified Setting: Not specified | To illustrate spatiotemporal patterns of selected climate-related environmental extremes across | Adaptations to heat, bushfires, floods and drought; adaptation to climate-sensitive infectious diseases; | Key findings: Significant impacts of climate-related environmental extremes on the health and well-being of Australians. Effectiveness: Not assessed |

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| | Heatwaves, wildfires, and droughts. | | Australia during the past two decades and summarise climate adaptation measures and actions that have been taken by the national, state/territory, and local governments. | adaptation to the impacts of climate change on Indigenous health. | |
| (Zurynski et al. 2024) | Study type: Systematic review Climate impact: Hurricanes, wildfires, floods | Australian studies included: 7 Setting: Not specified | To answer what are the health workforce impacts of climate-related events; and how are health systems preparing their workforces to respond to climate change impacts. | Responses to climate change-related events and preparations suggested to ensure the workforce is readily equipped for such events. | Key findings: Four impact themes were identified: (1) absenteeism; (2) psychological impacts; (3) system breakdown, and (4) unsafe working conditions. Six responses and preparations themes: (1) training/skill development; (2) workforce capacity planning; (3) interdisciplinary collaboration; (4) role flexibility; (5) role incentivisation, and (6) psychological support. Effectiveness: Effective |
| Health co-benefits of climate change mitigation action outside the healthcare system | | | | | |
| (Willand et al. 2015) | Study type: Realist review Climate impact: | Australian studies included: 2 Setting: | To explain the impacts of residential energy efficiency interventions on | Housing interventions for warmth and energy efficiency, including thermal | Key findings: Interventions improving warmth and reducing humidity in winter were linked to benefits for cardiovascular and respiratory health. Positive effects on mental and |

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| | Indoor heat stress | Housing | householder health, focusing on exploring pathways through which energy efficiency measures influence health outcomes, including cardiovascular, respiratory, mental, and social health; and to identify mediating factors, contextual issues, and the dynamic nature of outcomes related to energy efficiency improvements in households. | retrofits, upgrades, and comprehensive refurbishments to create warmer and drier living environments. | social well-being were noted, often independent of energy cost savings, due to the enriched meaning of a comfortable home. While evidence of negative health impacts from inadequate ventilation was uncommon, it remains a concern that should not be overlooked. Ensuring warm homes during winter was identified as a critical factor for improving physiological, psychological, and social health outcomes. Effectiveness: Mixed: effectiveness evaluated based on various factors and while the interventions showed positive impacts, challenges in establishing clear associations between intervention categories and outcomes across the programs remain. |
| Adaptation and resilience interventions to protect health in sectors outside the healthcare system | | | | | |
| (Adnan et al. 2022) | Study type: Systematic review Climate impact: Heat | Australian studies included: 107 Setting: Urban | To provide a systematic and overarching review of the different components of heatwave | Urban heat exposure assessments, mitigation strategies, heat adaptation measures. | Key findings: Green infrastructures are regarded as a sustainable intervention in mitigating heatwave impacts due to their multifaceted benefits. Extreme temperature impacts in various Australian cities can be reduced by adopting water sensitive urban design; the |

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| | | | vulnerability (e.g., exposure, sensitivity, and adaptive capacity) in Australia. | | use of high albedo surface areas (as well as reflective and radiative cooling materials), when used at the local (building construction) scale, can increase the reflectance of solar radiation, and mitigate any potential heating effects. In terms of heat adaptation, thermal comfort-based urban planning can enhance heat adaptation. High temperature warning systems have already proven to be efficient in limiting occupational injuries in various Australian cities. Effectiveness: Not assessed |
| (Desai and Zhang 2021) | Study type: Scoping review Climate impact: Floods, hurricanes, heat waves, droughts, poor air quality, water salinity, heavy snowfall, blizzards | Australian studies included: 3 Setting: Any | To better understand climate change and women's health to support the development and implementation of climate change strategies and actions. | Strategies to enhance local adaptive capacity to climate change, with more input from women's perspectives regarding management at household levels, Government assistance to women living in areas prone to extreme climatic effects, such as droughts. | Key findings: Women are more negatively affected by droughts and heat waves due to their roles in society and nutritional and physiological requirements during periods of menstruation and pregnancy. Pregnant women are physically more vulnerable because of immune system changes due to hormonal alterations and are also sensitive to changes in temperatures. They are also more susceptible to infectious diseases and poor pregnancy outcomes. Effectiveness: Effective |

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| (Heaney et al. 2021) | Study type: Scoping review Climate impact: Bushfire smoke | Australian studies included: 20 Setting: Community (urban, rural and remote) | To assess the evidence regarding optimal public communication strategies used in smoke-related disaster scenarios to inform the public health and emergency services on the best practices to connect with and empower populations to avoid exposure to bushfire smoke. | Communication techniques utilised to disseminate health warnings to at-risk subgroups and the general population during bushfires and other natural disasters. | Key findings: Social media, television, and radio are among the most common information sources utilised in bushfire smoke events. Message style, content, and method of delivery can directly influence message uptake and behaviour modification. Age, rurality, and geographical location influence information source preferences. Effectiveness: Not assessed |
| (Harley et al. 2011) | Study type: Narrative review Climate impact: Mosquito borne disease | Australian studies included: Not specified Setting: Population health | Current situation and potential future climate change impacts on respiratory, diarrheal, and vector-borne diseases in Australia. | Health promotion and education, surveillance, early warning systems. | Key findings: Decreased influenza and rotavirus incidence, but incidence of Salmonella was projected to increase in Australia. The significance of climate change effects on vector-borne diseases was disputed. Effectiveness: Not assessed |
| (Jay et al. 2021) | Study type: Narrative review | Australian studies included: Not specified | To describe how a future reliance on air conditioning is unsustainable and | Heat reduction strategies (from personal cooling | Key findings: (1) Evidence-based cooling strategies during heat extremes and hot weather are urgently needed to cope with the health |

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| Climate impact: Heat | Setting: Global community | further marginalises the communities most vulnerable to the heat and show that a more holistic understanding of the thermal environment at the landscape and urban, building, and individual scales supports the identification of numerous sustainable opportunities to keep people cooler. | strategies to green cities). | risks associated with the inevitable trajectory of climate change; (2) air conditioning is set to become the most widely adopted heat reduction strategy worldwide, yet it is unaffordable for many of the most vulnerable, financially and environmentally costly, and leaves many defenceless from extreme heat during power outages; (3) strategies at the landscape and urban (e.g., blue and green spaces) and building (e.g., changing materials and natural ventilation) levels can greatly augment society's adaptive capacity to heat extremes and hot weather; (4) effective cooling solutions can be adopted at the individual level, even in low-resource settings, which are more sustainable than air conditioning, and focus on cooling the person to relieve physiological heat strain, as opposed to cooling the surrounding environment; (5) heat action plans that are robust, evidence-based, well communicated, and informed by real-time surveillance provide optimal health protection. Effectiveness: Urban ventilation pathways are especially effective when combined with blue and green infrastructure. Effectiveness of natural cross ventilation is dependent on orientation and window locations. Parks |
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| | | | | | with elevated shading canopies are more effective urban climate moderators than unshaded grass-covered terrain. Self-dousing is effective up to at least 47°C. Reflective pavements and wall coatings are less effective due to the reflected solar radiation absorbed by buildings and pedestrians. |
| (Pitman et al. 2015) | Study type: Systematic review Climate impact: Urban heat island effect (temperature); extreme weather events (floods, storms, extreme winds, and rainfall); climate change impacts on air quality and biodiversity. | Australian studies included: Not specified Setting: Urban environments and communities | To explore the role of Green Infrastructure in delivering multiple environmental, social, and economic values and services to urban communities. | Green Infrastructure: strategic planning and implementation of green spaces and water systems within cities to provide multiple benefits, such as temperature reduction, improved air quality, enhanced biodiversity, and better water management. | Key findings: By implementing strategic intervention measures and leveraging the benefits of Green Infrastructure, cities can better adapt to climate change challenges and create more sustainable and liveable environments for both humans and wildlife. Effectiveness: Inconclusive: no explicit mention of evaluation of effectiveness of Green Infrastructure. While the study emphasizes the benefits of Green Infrastructure, it primarily focuses on highlighting the advantages of Green Infrastructure rather than presenting a specific evaluation of its effectiveness. |

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| (Vien et al. 2024) | Study type: Scoping review Climate impact: Wildfire / bushfire | Australian studies included: 6 Setting: Not specified | To identify: (1) relevant peer-reviewed studies about wildfire smoke risk communications, including communication resources for vulnerable, at-risk populations; (2) characteristics of effective communications, dissemination strategies, and gaps in the peer-reviewed literature; and (3) recommendations to improve wildfire smoke research and communication practices. | Wildfire/bushfire smoke risk communications (communications materials, dissemination strategies, behaviour change, and communications for vulnerable audience) | Key findings: Limited studies describing behaviour change to reduce wildfire smoke exposure, characteristics of effective communication materials and messaging, and communication delivery strategies. Literature on risk communications, dissemination, and behaviour change for vulnerable populations was even more limited. Effectiveness: Inconclusive: many articles included some assessment of effectiveness of risk communications, but more work is needed. |
| (Zhao et al. 2022) | Study type: Narrative review Climate impact: | Australian studies included: 5 Setting: Not specified | To review the effects of climate change on a broad range of health outcomes; to discuss mitigation | Mitigation and adaptation solutions, including health adaptation plans and early warning systems. | Key findings: Pathways between climate change and human health, and possible solutions, including directions for future research. Effectiveness: Not assessed |

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| Suboptimal temperatures, wildfires, smoke, floods, droughts, water scarcity. | and adaptation strategies against climate change and how these strategies may benefit human health in other ways. |
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Source: Interim Australian Centre for Disease Control (2024). *Summary report appendices: Systematic mapping review of Australian research on climate and health Interventions*. <https://www.health.gov.au/resources/publications/systematic-mapping-review-of-australian-research-on-climate-change-and-health-interventions?language=en>

Appendix 6: Activation of Disaster Recovery Funding Arrangements, 2006/07 to 2023/24

| Name of event | Type of hazard |
|--|-----------------|
| AGRN 1122 - Yarra Ranges Floods (commencing 01 April 2024) | Flood |
| AGRN 1108 - Victorian Bushfires and Storms (commencing 13 February 2024) | Bushfire, Storm |
| AGRN 1096 - Victorian Floods and Storms commencing 24 December 2023 | Storm |
| AGRN 1072 - East Victorian Floods (commencing 3 October 2023) | Flood |
| AGRN 1060 - North-East Victorian Storms (commencing 23 March 2023) | Storm |
| AGRN 1037 - Victorian Floods (commencing 6 October 2022) | Flood |
| AGRN 1007 - VIC - Victorian Floods and Storms (commencing 26 January 2022) | Flood |
| AGRN 983 - Victoria Storms (29 October 2021) | Storm |
| AGRN 991 - VIC - South East Victorian Storms (commencing 15 October 2021) | Storm |
| AGRN 969 - Victorian Storms and Floods (commencing 9 June 2021) | Flood |
| AGRN 942 - Central-East Victoria Storms (commencing 15 November 2020) | Storm |
| AGRN 934 - Victoria Storms (commencing 27 August 2020) | Storm |
| East Victoria Storms: commencing 29 April 2020 | Storm |
| Victorian Bushfires (previously known as the South East Victoria Bushfires): 28 February 2019 onwards. | Bushfire |
| Central Victorian Storms: commencing 19 February 2018 | Storm |
| Victorian Floods and Storms: commencing 1 December 2017 | Flood, Storm |
| Victoria Storms and Floods: from 21 March 2017 | Flood, Storm |
| Victoria Storms and Floods: 29 December 2016 | Flood, Storm |
| Victorian Floods and Storms: September / October 2016 | Flood, Storm |
| Eastern Victoria Storms: 12 to 13 July 2016 | Storm |
| Eastern Victoria Storms: 3 May 2016 | Storm |
| Central and Eastern Victoria Storms: 30 April 2016 | Storm |
| Victorian Bushfires: 19 to 25 December 2015 | Bushfire |
| Victorian Storms: 25 November 2015 | Storm |
| South Eastern Floods: 27 August 2015 | Flood |
| Storms: 28 February 2015 | Storm |
| Yarra Ranges storms: 13 February 2015 | Storm |
| Storms and floods: 8 September 2014 | Flood, Storm |
| Storms: July 2014 | Storm |
| Storms: commencing 24 June 2014 | Storm |
| Bushfires: 7 February 2014 | Bushfire |
| Storms: 26 September 2013 | Storm |
| Storms and floods: 13 August 2013 | Flood, Storm |

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| Severe storms: 5 to 8 September 2012 | Storm |
| Yarra Ranges flood: 2 July 2012 | Flood |
| Victoria storms and flooding: 4 June 2012 | Flood, Storm |
| Victoria severe weather Melbourne: 25 December 2011 | Weather event |
| Victoria floods: 6 to 8 February 2011 | Flood |
| Victoria floods: November to December 2010 | Flood |
| Victoria floods: 4 September 2010 | Flood |
| Victorian storms: 6 to 7 March 2010 | Storm |
| Victorian bushfires: January to February 2009 | Bushfire |

Source: Emergency Leaders for Climate Action (2024). *Too close to home*.
https://www.climatecouncil.org.au/wp-content/uploads/2024/06/Too-Close-to-Home_ELCA-and-Climate-Council-report.pdf

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