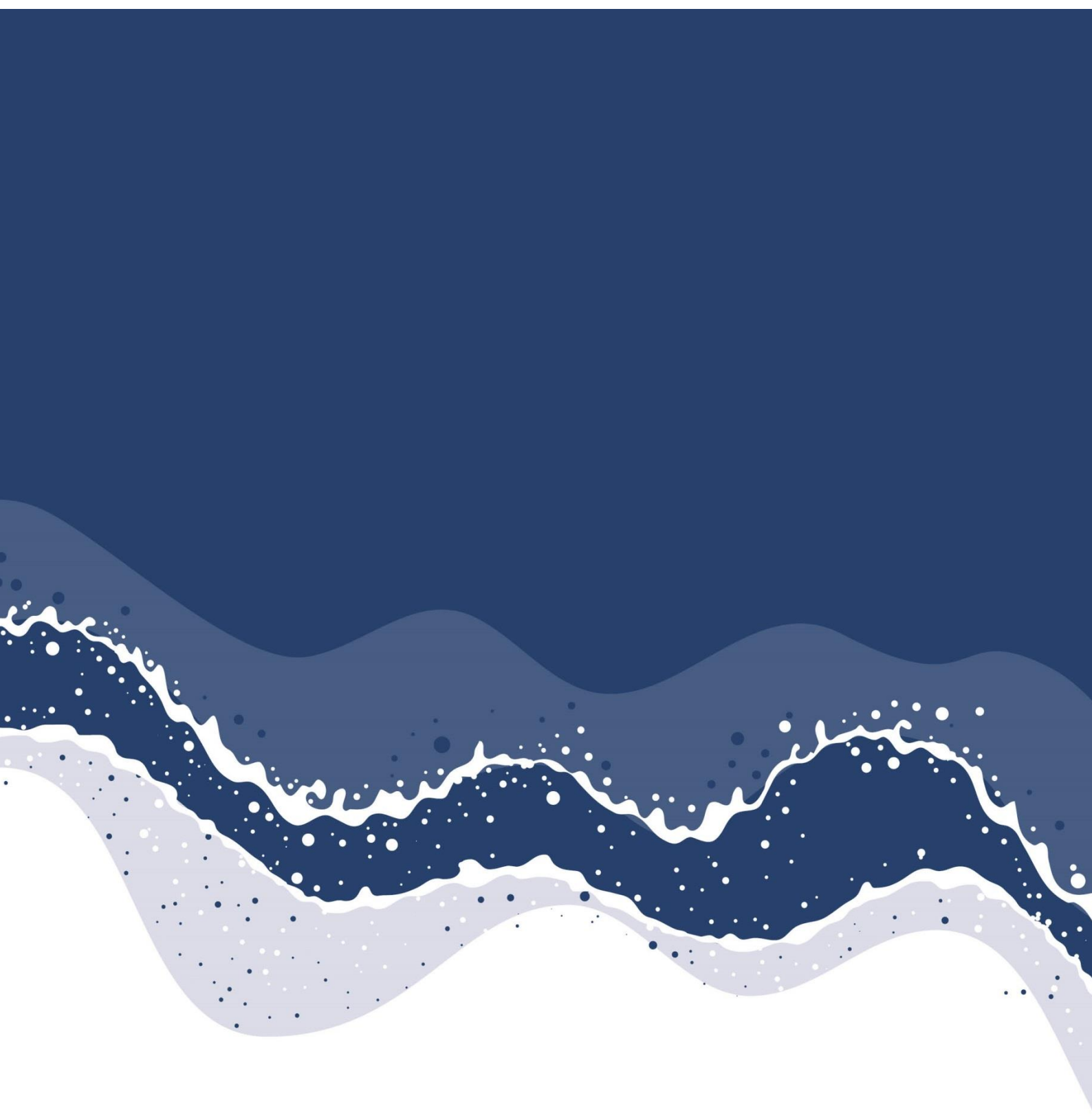

Health Status and System Utilisation in Wyndham

2023

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Contents

Introduction

The intention of this report is to provide a wide-ranging overview of the Australian health system as it applies to Wyndham. The report has been structured to include a brief review of health determinants, and policies and strategies Wyndham City Council (WCC) have, or are, undertaking to address these. A significant issue facing Wyndham is the extraordinary population growth forecast over the next two decades. A review of the available data has been provided to provide insights into lie stages, growth and diversity.

The following section will look more closely at the diseases, disability and the different levels within the health system. Where possible, local rates and estimates have been used to determine the current status of chronic diseases communicable diseases, cancers and disability. Where local rates are not available estimates have been inferred using state-based averages. The pros and cons of this approach will be discussed in the relevant sections of the report. The final section is looking at the current number of providers servicing Wyndham and estimating current and future gaps in need. Finally, examining how people access primary, secondary and tertiary health services and the obstacles that may be present.

Policy context

In Victoria, the *Public Health and Wellbeing Act 2008* gives state and local government specific responsibilities to plan for and contribute to protecting and improving health and wellbeing. The Act requires a State public health and wellbeing plan and municipal public health and wellbeing plans to be prepared sequentially every four years. These plans inform each other and provide the basis for an integrated planning approach in our state.

The Victorian public health and wellbeing plan 2023-2027 continues the Victorian Government's vision for the public health and wellbeing of Victorians:

> *A Victoria free of the avoidable burden of disease and injury so that all Victorians can enjoy the highest attainable standards of health, wellbeing and participation at every age.*

The plan provides continuity for the priorities of the previous plan, while recognising two leading threats to health and wellbeing globally: the health impacts of climate change and antimicrobial resistance (the ability to effectively treat infections in our community).

Each council's approach and strategy are documented in their Municipal Public Health and Wellbeing Plan (MPHWP), setting the broad mission, goals and priorities for the municipality to enable people to achieve optimum health and wellbeing.

In preparing a health and wellbeing plan, the *Public Health and Wellbeing Act 2008* requires council MPHWPs to be consistent with the corporate plan of the council and the council land use plan required by the Municipal Strategic Statement (MSS). Achieving strategic alignment is critical to achieving health and wellbeing outcomes in local communities. Other local plans of community partners with an interest in local public health should sit alongside the MPHWP. MPHWPs also need to consider the priorities of the Victorian public health and wellbeing plan 20123–2027 as required under the Act.

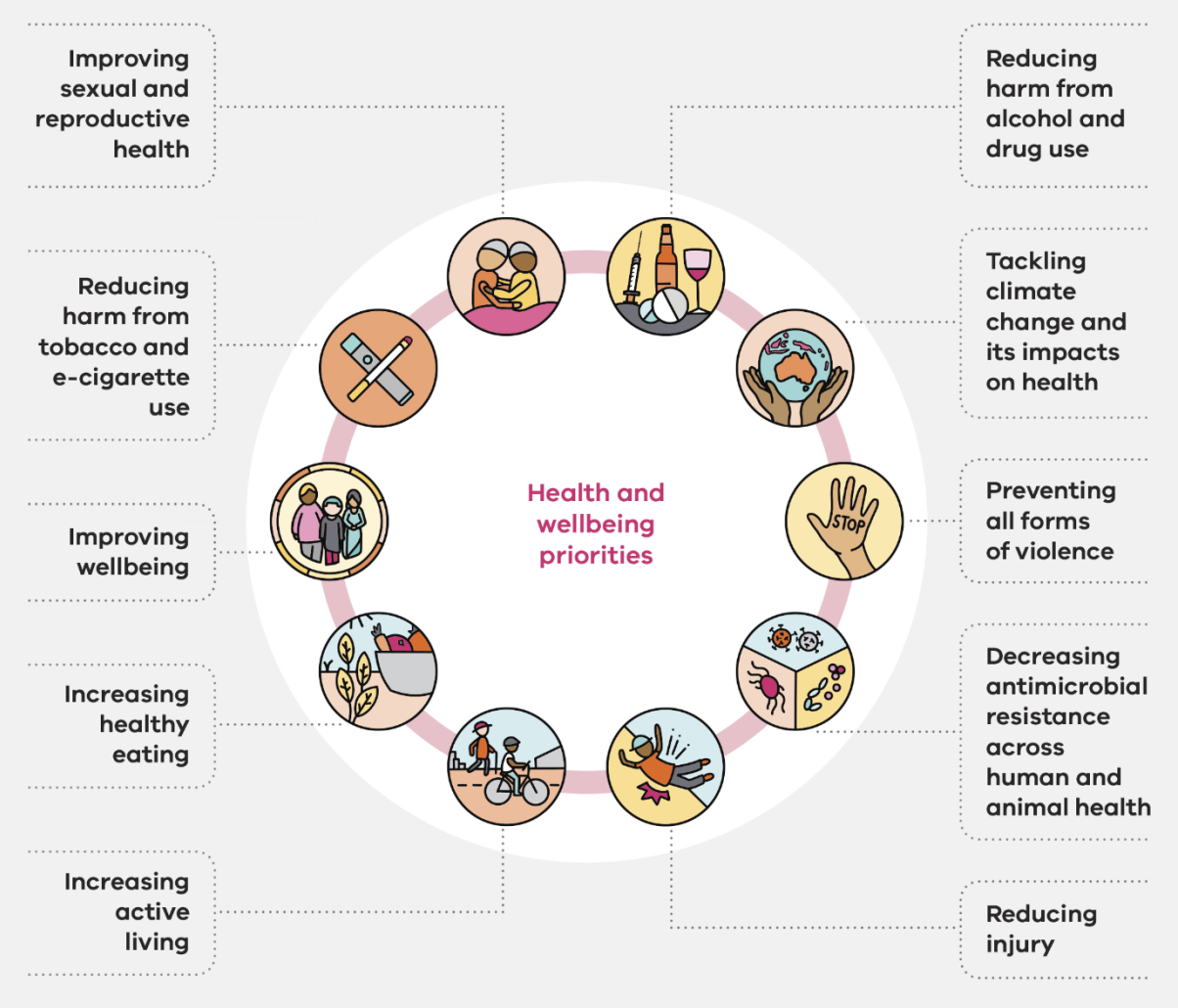


Figure 1 - Victorian public health and wellbeing plan 2023-2027, ten priorities

Determinants of Health

Introduction

The of determinants of health are well known and well documented. The goal is not to redo what has already been written and said, but to provide a Wyndham lens on some of the activities and initiatives Council can do improve health and wellbeing.

Natural Environment

We depend upon the natural environment for the air we breathe, the water we drink and the food that we eat. A healthy natural environment is fundamental to health of wellbeing of all organisms. Unfortunately, the health of the environment has been waning since European settlement through deforestation, industrial pollution and degradation of sensitive ecosystems that support many of our iconic plants and animals. These environmental imbalances have led to a changing climate resulting in more extreme weather events and less reliable rainfall. The ongoing increase in population within

Wyndham will continually place pressure upon the remnant ecosystems through encroachment and more people accessing them.

Wyndham is home to several significant and unique natural features, including the Western Treatment Plant Wetlands, one of Australia's most important wetlands for waterbirds listed under the international Ramsar Convention. The future Western Grassland Reserve dominates our western rural area -protecting endangered grasslands of national significance. Others include the Werribee River, Little River and Skeleton Creek, the Truganina Cemetery remnant grassland and the Point Cook Coastal Park.

To protect, conserve and improve the environment, Wyndham Council has the City Forest and Habitat Strategy (2017 – 2040) which aims for Wyndham to be a vibrant living ecosystem with shade and green spaces that support healthy communities and resilient, connected, natural environments. By implementing this Strategy, Wyndham will:

- Be threaded with natural habitat corridors to foster biodiversity including local wildlife.
- Have a significant increase in tree coverage and diversity.
- Incorporate natural ecosystems into urban areas.
- Provide residents access to nature for recreation and enhanced experiences of public spaces.
- Use vegetation to stabilise urban temperature and humidity as well as increasing resilience to a changing climate; and,
- Facilitate the exchange of information about urban and rural living, well-being and ecological integration.

Areas of focus of the strategy include protecting and enhancing the environment of:

- The Werribee River
- Little River
- The Volcanic Plains Grasslands and Woodlands
- Urban Habitat Connections
- Streetscapes
- Parks and Reserves

Built

The built environment encompasses all those environments that aren't natural. These include, buildings, roads, housing estates and towns, industrial and commercial site and infrastructure, parklands and the interconnections that allow access between all of these. Essentially, its where we live, work and socialise. All councils have regulations and policies on what can be built, where it can be built and the specifications a building must align to. For Wyndham, the most apparent form of construction currently in progress are houses and housing estates and the associated town centres. Integral to these are an accessible and well-connected open space network which contributes to the social interaction, health and wellbeing of our community and protection of our natural and cultural environment now and into the future. Wyndham has several strategies to guide how this done:

- Wyndham Open Space Strategy 2045 (link)

- Wyndham City Water Sensitive Urban (WSUD) Selection & Design Guidelines 2018 (Link)

Social

The social aspect of health are those environments in which a person born, raised and lives. The social determinants of health (SDH) are the most complex and wide ranging of the determinants of health. The World Health Organisation (WHO) defines the SDH as:

> *The social determinants of health are the conditions in which people are born, grow, live, work and age. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels. The social determinants of health are mostly responsible for health inequities - the unfair and avoidable differences in health status seen within and between countrie*s

To properly address the SDH would be a report unto itself, which is not the intention. The WHO and AIHW provide a good sources of evidence based information for further consideration.

Wyndham City Council actively addresses the social determinants of health through a range of policies and strategies. The life course framework is a strategic document which is intended to strengthen strategic coordination across key life stages by providing a structure for considering the changing needs of residents throughout their lives. Living Your Best Life In Wyndham: A Lifecourse Framework provides a structure for considering the changing needs of Wyndham residents throughout their lives and ensures that Council and its partners are best placed to work in a flexible and future-focused manner, developing solutions for the long term.

Wyndham's new Accessibility Action Plan (AAP) seeks to increase the access, inclusion and equitable participation of people with disability within Council and the greater community. The Action Plan is named an 'Accessibility' Action Plan as it seeks to remove barriers to participation, promote inclusion and achieve real changes in attitudes and practices that impact on people with disability.

Access and inclusion are about providing people with disability the same opportunity to enter or use community services, premises and facilities and to participate and be included in the community on an equal basis with others.

The AAP sets out the strategies and actions that Council will undertake to improve access and inclusion of people with disability. Its development has focussed on the whole organisation, and on strategically making access and inclusion a ‘business as usual’ approach.

The Plan has been the subject of significant community and organisational consultation during its development and takes into account feedback received during the public exhibition period.

The AAP is for a three-year period and sets out the strategies and actions that Council will undertake to improve the access and inclusion of people with disability.

The vision is: People with disability, their families and/or carers experience in all aspects of their daily lives the same dignity, respect and access to opportunities and services as everyone else. The plan is built on two sets of distinct but highly interrelated goals. The first set of goals relates to the aims of the Disability Action Plan as specified under the Disability Act 2006:

1. To reduce barriers to persons with disability accessing goods, services and facilities.
2. To reduce barriers to persons with disability obtaining and maintaining employment.
3. To promote inclusion and participation in the community of persons with disability.
4. To achieve tangible changes in attitudes and practices which discriminate against persons with disability.

The second set of goals have emerged during the development of the AAP, including the results of consultation and engagement, and relate specifically to Wyndham's current context. These are:

1. To ensure Wyndham City Council has a lens of access and inclusion of people with disability as a 'business as usual approach'
2. To improve the disability confidence of Wyndham City
3. To improve Wyndham City's engagement and participation of people with disability in the community
4. Encourage contribution and leadership from community members with disability
5. To support the transition to the National Disability Insurance Scheme (NDIS) in Wyndham.
6. Aims and actions are organised by the themes of the Wyndham 2040 and the City Plan, and the strategic priorities that define these. Timeframes and lead departments are specified for each.
7. The defined actions encompass the breadth and complexity of Council business, with a focus on both organisational and community change.

Behavioural

The behavioural aspects of health are all those activities a person undertakes that influences their health and wellbeing, either positively or negatively. These can include the following:

- Tobacco smoking
- Alcohol consumption
- Illicit drug use
- Insufficient physical activity
- Diet
- Overweight and obesity

Ill health is usually the result of a combination of determinants and not the just one influencing factor. Some are modifiable, but many are not. They are the conditions we are born into and live in, which perversely also influence how modifiable the modifiable determinants are.

The Active Wyndham Strategy seeks to ensure that all members of our community are supported and empowered to reach health and wellbeing goals through physically activity.

As part of the Wyndham 2040 Vision, the community outlined their aspiration to be connected and to have opportunities to stay fit and healthy through leisure facilities like pools and gyms, clubs, lesser known sports, walking and cycling. As part of this Vision, Council proposed the development of sport and recreation that increase(s) access for all members of the community.

Demographics

The City of Wyndham has an estimated resident population of 288,212 in 2020. Between 2013 and 2018, Wyndham experienced the third largest population growth across Australia, and the largest in Victoria, adding over 65,000 people in 5 years. Wyndham also experienced the fourth fastest population growth in Australia, and the second fastest in Victoria. Over the next 20 years an extra 220,000 will call Wyndham home, when considering the effects this will have on the health and wellbeing on residents two interrelated issues present:

- Access to affordable health care
- Burden upon the health system

People

The population of WCC is expected to grow at about 10,000 per year averaged out of the next two decades. As WCC is not an island and part of growth corridor, one must also consider the growth of neighbouring LGAs. For example, Melton Shire is expected to grow at a similar rate as Wyndham meaning approximately 900,000 people will be living in these LGAs alone. The following table provides the estimates for Wyndham by five-year age group:

	2021		2031		2041		Change 2021→2041
Age group	**Number**	**%**	**Number**	**%**	**Number**	**%**	**Number**
0 to 4	26,955	9.1%	36,417	8.9%	42,942	8.6%	15,987
5 to 9	27,251	9.2%	34,796	8.5%	42,031	8.4%	14,780
10 to 14	21,547	7.3%	29,610	7.2%	37,008	7.4%	15,461
15 to 19	16,192	5.5%	25,377	6.2%	31,283	6.2%	15,091
20 to 24	18,606	6.3%	24,206	5.9%	28,700	5.7%	10,094
25 to 29	22,963	7.8%	29,110	7.1%	33,398	6.7%	10,435
30 to 34	29,608	10.0%	38,909	9.5%	44,298	8.8%	14,690
35 to 39	33,609	11.3%	42,386	10.3%	49,760	9.9%	16,151
40 to 44	23,971	8.1%	35,558	8.7%	43,658	8.7%	19,687
45 to 49	17,411	5.9%	28,028	6.8%	34,652	6.9%	17,241
50 to 54	14,111	4.8%	19,963	4.9%	27,062	5.4%	12,951
55 to 59	11,976	4.0%	15,459	3.8%	21,909	4.4%	9,933
60 to 64	10,137	3.4%	12,944	3.2%	16,962	3.4%	6,825
65 to 69	7,987	2.7%	10,866	2.7%	13,617	2.7%	5,630
70 to 74	6,193	2.1%	9,031	2.2%	11,285	2.2%	5,092
75 to 79	3,691	1.2%	7,242	1.8%	9,420	1.9%	5,729
80 to 84	2,211	0.7%	5,522	1.3%	7,506	1.5%	5,295
85 and over	1,773	0.6%	4,365	1.1%	6,143	1.2%	4,370
Total persons	296,192	100.0%	409,789	100.0%	501,634	100.0%	205,442

https://forecast.id.com.au/wyndham

Table 1 - Projected Age Profile 2021, 2031 and 2041

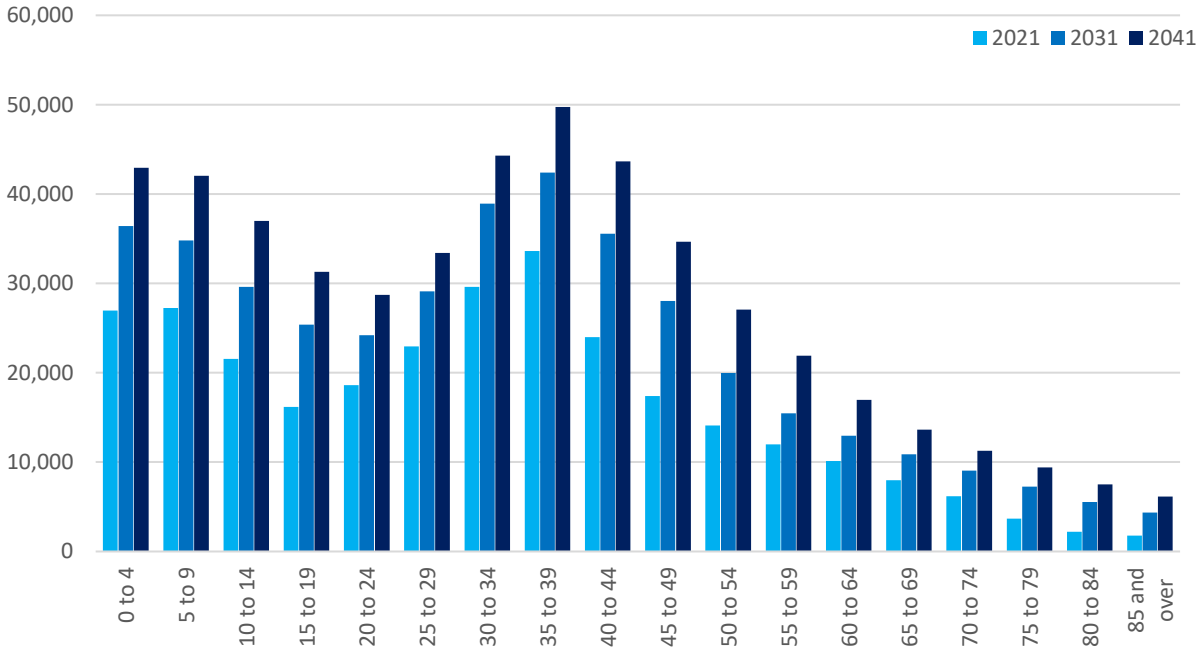


Figure 2 - Projected Age Profile 2021, 2031 and 2041

Age and Sex Profile

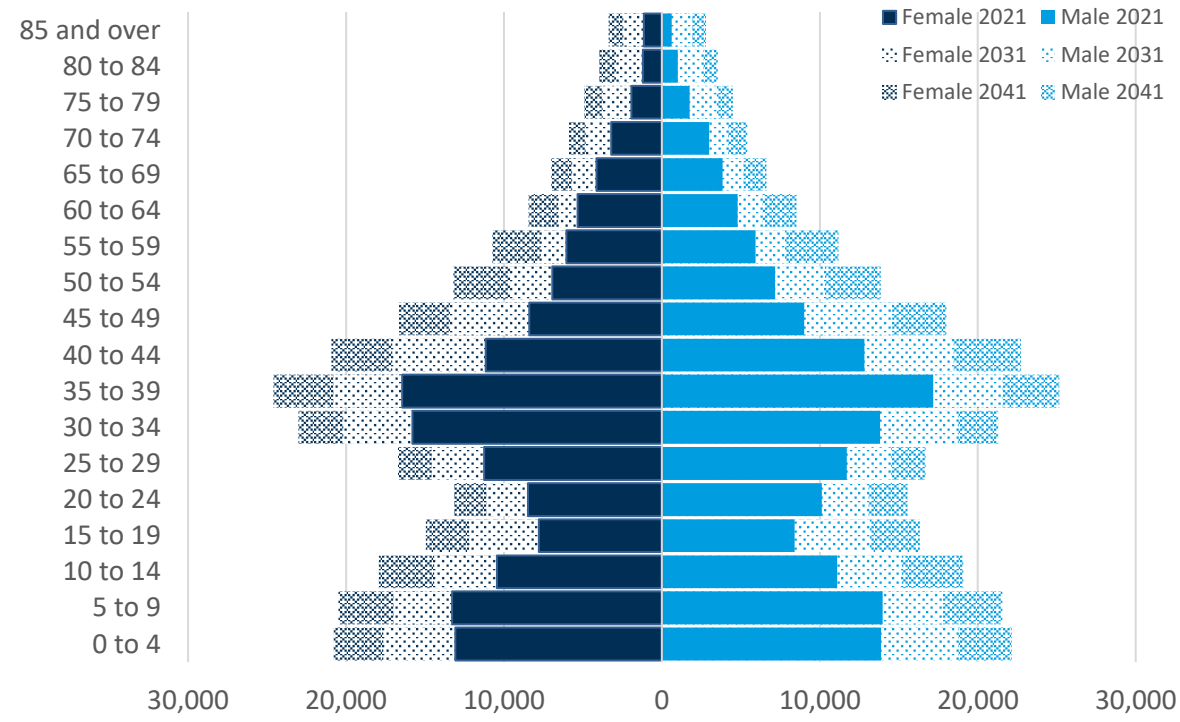


Figure 3 - Projected Age Profile by age and sex 2021,2031 and 2041

Cultural and Linguistic Diversity

In this section we will look at the profiles of indigenous peoples, people born overseas and people of non-English speaking backgrounds. These profiles are included as there is a degree of vulnerability associated with certain cultures with respect to chronic disease and life expectancy.

Indigenous Population

Number of persons usually resident	2016	2021	%	Change 2016-2021	Victoria % Indigenous
Total indigenous population	1,738	2,508	100.0	+592	100.0
Males	910	1,248	49.8	+331	50.1
Females	828	1,260	50.2	+261	49.9
Indigenous status					
Aboriginal	1,663	2,399	95.7	+599	94.2
Torres Strait Islander	41	42	1.7	-19	3.2
Both Aboriginal and Torres Strait Islander	29	67	2.7	+9	2.6
Dwellings					
Persons counted in non-private dwellings	137	137		+77	
Persons counted in private dwellings	1,609	2,366		+526	
Occupied private dwellings	762	1,190		+237	

https://profile.id.com.au/wyndham/indigenous-keystatistics

Table 2 - Aboriginal and Torres Strait Islander peoples living in Wyndham, 2021

The Aboriginal and Torres Strait Islander population for the City of Wyndham in the 2016 Census was 1,738, with proportionally more males than females.

Indigenous population by age

Service age group	2016	2021	% by age group	Change 2016 to 2021	Victorian. Indigenous population %
0 to 4	218	318	12.6	+100	10.7
5 to 11	285	397	15.7	+112	15.0
12 to 17	217	286	11.3	+69	12.0
18 to 24	229	335	13.3	+106	12.7
25 to 34	297	434	17.2	+137	15.4
35 to 49	284	404	16.0	+120	15.7
50 to 59	124	178	7.1	+54	9.2
60 to 64	41	72	2.9	+31	3.4
65 and over	42	99	3.9	+57	6.0
Total people	1,737	2,523	100.0	+786	100.0

https://profile.id.com.au/wyndham/indigenous-keystatistics

Table 3 - Aboriginal and Torres Strait Islander Peoples by service age groups living in Wyndham, 2021

Generally, the indigenous population living in Wyndham is younger than the non-indigenous population.

Non-English-Speaking Background (NESB)

People from NESB have special needs when accessing health services. There are often language barriers if engaging with people from outside of their cultural groups. It does not, however, mean they can't speak English, just that their first language is something else (this can also include sign languages).

	2016			2021			Change 2016 to 2021
	Number	%	%Gtr Melb	Number	%	%Gtr Melb	
0 to 4	8,739	9.8	6.0	12,867	8.8	5.9	4,128
5 to 9	6,838	7.7	5.2	12,904	8.9	6.0	6,066
10 to 14	4,700	5.3	4.4	8,868	6.1	5.0	4,168
15 to 19	4,017	4.5	5.5	5,976	4.1	4.5	1,959
20 to 24	4,563	5.1	8.2	7,923	5.4	6.6	3,360
25 to 29	8,274	9.3	9.5	11,477	7.9	8.4	3,203
30 to 34	13,787	15.5	10.4	18,125	12.5	9.8	4,338
35 to 39	11,381	12.8	8.6	22,704	15.6	10.4	11,323
40 to 44	7,054	7.9	7.2	14,651	10.1	8.1	7,597
45 to 49	5,070	5.7	6.6	8,234	5.7	6.4	3,164
50 to 54	3,829	4.3	5.9	5,615	3.9	5.7	1,786
55 to 59	3,209	3.6	5.1	4,323	3.0	5.1	1,114
60 to 64	2,746	3.1	4.4	3,826	2.6	4.5	1,080
65 to 69	1,996	2.2	3.8	3,245	2.2	3.9	1,249
70 to 74	1,183	1.3	2.9	2,169	1.5	3.3	986
75 to 79	807	0.9	2.7	1,177	0.8	2.4	370
80 to 84	557	0.6	2.0	732	0.5	2.1	175
85 and over	415	0.5	1.7	585	0.4	2.0	170
Total people	**89,165**	**100.0**	**100.0**	145,401	100.0	100.0	56,236

https://profile.id.com.au/wyndham/non-english-speaking-by-age

Table 4 - Profile of non-English-speakers by census year and age

The profile of NESB people in Wyndham mirrors the trend of parent-child: there are a high number of people aged 25-39 and corresponding children aged 0-10. Between 2001 and 2016 there have been 40,191 people from NESB move into Wyndham, a 45 per cent increase.

The following table presents the companion data to the above, by presenting the proportion of people who are proficient in English. For Wyndham as a whole, there is a comparatively smaller proportion of people who are English only speakers. The data also suggests bilingualism is higher in Wyndham than Greater Melbourne, whereas people monolingual in another language is proportionally the same.

English proficiency

	2016			2021			Change
	Number	%	%Gtr Melb	Number	%	%Gtr Melb	2011 to 2016
Speaks English only	115,332	53.1	62.0	128,559	44.0	61.1	+11,162
Speaks another language, and English well or very well	76,546	35.3	26.7	128,919	44.1	28.9	+34,656
Speaks another language, and English not well or not at all	12,440	5.7	5.6	16,883	5.8	5.4	+5,453
Not stated	12,799	5.9	5.7	17,651	6.0	4.6	+4,271
Total population	**217,117**	**100.0**	**100.0**	292,012	100.0	100.0	**+55,542**

https://profile.id.com.au/wyndham/non-english-speaks-english

Table 5 - English proficiency status for people living in Wyndham, 2016 and 2021

People Born Overseas

	2016			2021			Change
	Number	%	%Gtr Melb	Number	%	%Gtr Melb	2016 to 2021
0 to 4	1,497	1.7	1.0	1,461	1.0	0.6	621
5 to 9	3,310	3.7	2.1	5,098	3.6	2.0	1,195
10 to 14	4,048	4.5	2.6	5,733	4.1	2.6	1,734
15 to 19	4,061	4.5	3.9	5,695	4.1	3.2	1,918
20 to 24	4,683	5.2	7.1	8,451	6.0	5.7	1,611
25 to 29	8,932	9.9	9.4	12,350	8.8	8.4	2,904
30 to 34	14,911	16.5	10.9	19,799	14.1	10.5	7,658
35 to 39	12,559	13.9	9.1	24,796	17.7	11.3	6,585
40 to 44	8,189	9.1	7.6	16,471	11.8	9.0	3,079
45 to 49	6,332	7.0	7.2	9,797	7.0	7.2	1,820
50 to 54	5,278	5.8	7.1	7,164	5.1	6.6	1,481
55 to 59	4,533	5.0	6.6	5,997	4.3	6.6	1,297
60 to 64	3,941	4.4	6.1	5,325	3.8	6.1	1,146
65 to 69	3,161	3.5	5.9	4,493	3.2	5.6	1,323
70 to 74	1,938	2.1	4.4	3,417	2.4	5.3	589
75 to 79	1,367	1.5	3.7	1,964	1.4	3.8	432
80 to 84	861	1.0	2.7	1,181	0.8	2.9	248
85 and over	635	0.7	2.5	933	0.7	2.8	195
Total people	**90,236**	**100.0**	**100.0**	140,125	100.0	100.0	**35,836**

https://profile.id.com.au/wyndham/overseas-born-introduction

Table 6 - Profile of people born overseas by census year and age

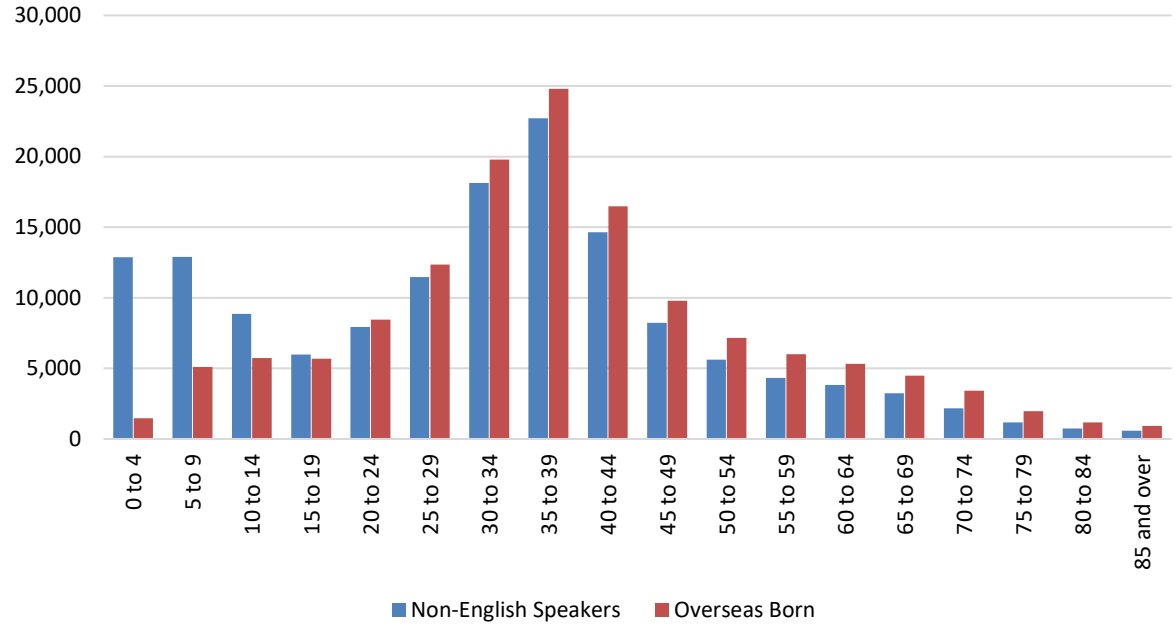


Figure 4 - Contrast between people of non-English speaking background and people born overseas, 2021

By combining the two datasets of people from non-English speaking background and people born overseas a concordance between the groups becomes apparent.

SEIFA

The Socio-economic Indexes for Areas (SEIFA) are general measures used to determine, amongst other things, the level of disadvantage of areas across Australia. The SIEFA Index of Disadvantage (IRSD) used in the following table outlines disadvantage by allocating a standardised score based on several key census variables. An area with a score less than 1000 is considered to be more disadvantage than an area with score greater than 1000. Wyndham has an IRSD score of 1006 placing it in the 8th decile. However, Wyndham has some of the most disadvantaged areas in Australia. Areas around Vincent Crescent in Werribee that have been social housing have score below 800. This indicates disadvantage well below the rest of Wyndham.

It is well documented that people form advantaged backgrounds benefit from better health outcomes than people from more disadvantaged backgrounds (see Australia Health 2022, Socioeconomic position). When we correlate the number of long-term health conditions with the IRSD we can see that There is a higher proportion of people in the lower deciles 1-5 than 6-10:

SIEFA IRSD Deciles	One condition	Two conditions	Three or more conditions	One or more Conditions	None of the selected conditions	Not stated	Total
Decile 1	0.8%	0.3%	0.2%	1.2%	2.5%	0.4%	4.2%
Decile 2	1.6%	0.6%	0.3%	2.5%	5.5%	0.8%	8.9%
Decile 3	2.2%	0.7%	0.4%	3.3%	8.9%	1.2%	13.3%
Decile 4	1.8%	0.5%	0.3%	2.5%	8.4%	1.0%	11.8%
Decile 5	2.2%	0.5%	0.2%	3.0%	12.2%	1.2%	16.3%
Decile 6	1.6%	0.3%	0.1%	2.0%	11.1%	1.0%	14.1%
Decile 7	1.5%	0.3%	0.1%	1.9%	9.8%	0.8%	12.5%
Decile 8	1.2%	0.2%	0.1%	1.5%	8.0%	0.6%	10.2%
Decile 9	0.7%	0.1%	0.0%	0.8%	4.4%	0.3%	5.6%
Decile 10	0.3%	0.0%	0.0%	0.4%	2.2%	0.1%	2.7%
N/A	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.4%
Decile <5	8.5%	2.5%	1.4%	12.4%	37.5%	4.6%	54.5%
Decile >5	5.3%	1.0%	0.4%	6.7%	35.5%	3.0%	45.1%
Total	13.8%	3.6%	1.7%	19.1%	73.0%	7.9%	100.0%

Table 7 - Correlation between SEIFA IRSD deciles and LTHC comorbities, 2021

Victorian Public Health Survey (VPHS) Indicators

The Victorian Population Health Survey (VPHS) is a bi-annual survey conducted by the Victorian Department of Health and Human Services. The importance of this survey is realised by many sectors where health and services planning is a core activity. Here at Wyndham City we use the results to inform how our residents are faring by comparing result across the Western Melbourne area and Victoria as a whole.

Wyndham summary

Wyndham had results significantly different[1] from the Victorian benchmark in the below areas:

- Lower rate of diagnosed cancers, with 4.1% of Wyndham respondents compared to 8.1% of all Victorians.
- Lower risk of alcohol harm from lifetime drinking and binge drinking: lifetime risk applies to 49.2% of Wyndham respondents compared with 59.5% of all Victorian respondents, and short-term risk from binge drinking to 33% of Wyndham respondents versus 43.3% of Victorian respondents.
- More people who are overweight or obese: 57.9% of Wyndham respondents are overweight compared with 50.8% of all Victorian respondents.
- Higher daily consumption of sugary drinks: 15.8% of Wyndham respondents consume these daily compared with 10.1% of all Victorian respondents.
- Higher levels of daily physical inactivity: 54.5% of Wyndham respondents engage in insufficient physical activity compared with 44.1% of all Victorian respondents.
- Lower daily consumption of fruit and vegetables: 36.6% of Wyndham respondents meet the daily fruit consumption guidelines compared with 43.2% of all Victorian respondents.

***Legend**: Grey bar: range of results across all LGAs; dark red line: Victorian estimate; yellow dot: Wyndham value not significantly different from Victorian estimate; green dot: LGA value significantly more favourable than Victorian estimate; red dot: LGA value significantly less favourable than Victorian estimate*

Figure 5 - Estimated disease prevalence by sex

[1] Statistical significance provides an indication of how likely it is that a result, such as the difference between two values, is due to chance. For example, if Wyndham's wellbeing score is higher than the Victorian estimate, but the difference is not statistically significant, it is possible that the difference is due to chance. Significant difference is indicated when confidence intervals for Wyndham estimates do not overlap with confidence intervals for the Victorian estimate. A confidence interval is a range of values

that is expected to contain the true value of an estimate, to a 95% level of probability (in the VPHS). This means that if the same population is sampled 100 times, the expected population estimate will fall within the interval 95 times (95%) and outside the estimate five times (5%).

Other key results are that 15.4% of Wyndham respondents smoke, almost a quarter (23.9%) have low life satisfaction levels, more than a quarter have been diagnosed with anxiety and/or depression (25.9%), 7.1% have Type 2 diabetes, and just under half of respondents aged 50+ have done a bowel cancer screening test in the last five years (49.6%).

Differences between 2014 and 2017 are minimal. The only significant differences between 2014 and 2017 are that the rate of people who complete and return the bowel cancer screening test has gone up (from 56.7% in 2014 to 72.7% in 2017), while the proportion of people who are satisfied or very satisfied with life has decreased (from 92.2% in 2014 to 74.5% in 2017).

Long-term Health Conditions (LTHC)

The following section is going to present a comprehensive view of chronic disease prevalence, cancer incidence and mortality, and reportable communicable diseases. Chronic diseases (CD), or long-term health conditions (LTHC), are the main cause of death in males and females in Australia. As people age, the likelihood of having more than one LTHC is multiplied. The AIHW (2016) report that the leading cause of death for males was heart disease, and the leading cause of death for females was dementia and Alzheimer's disease. Both of these tend to be related to older age, however with advances in diagnosis, these are being detected earlier and treatment commenced at a point where life expectancy can be improved. However, not all diseases are aliments of age. The graphic at Table 5 from Deaths in Australia (AIHW, 2023) is a matrix of the five leading causes of death by age group.

Cancer makes an appearance in this table from the age of 45 years and above. Deaths form both lung and colorectal cancers can be reduced or prevented through smoking cessation, diet and screening. Absent from the table are communicable diseases largely because Australia has a strong public health focus. Vaccination is the most effective means of prevention, along with surveillance and other prophylactic measures (needle exchange and safe sex practices for example). We are, however, not immune to epidemics and pandemics as COVID-19 has made us all aware. Globalisation has reduced the time and a disease can be transmitted via the vast transport networks that cross countries and continents.

Age group (years)	Rank 1st	2nd	3rd	4th	5th
Under 1	Perinatal and congenital conditions	Other ill-defined causes	Sudden infant death syndrome	Selected metabolic disorders	Accidental threats to breathing
1–14	Land transport accidents	Perinatal and congenital conditions	Brain cancer	Other ill-defined causes	Suicide
15–24	Suicide	Land transport accidents	Accidental poisoning	Other ill-defined causes	Assault
25–44	Suicide	Accidental poisoning	Land transport accidents	Coronary heart disease	Other ill-defined causes
45–64	Coronary heart disease	Lung cancer	Suicide	Colorectal cancer	Liver disease
65–74	Lung cancer	Coronary heart disease	Chronic obstructive pulmonary disease	Colorectal cancer	Cerebrovascular disease
75–84	Coronary heart disease	Dementia incl. Alzheimer's disease	Lung cancer	Cerebrovascular disease	Chronic obstructive pulmonary disease
85–94	Dementia incl. Alzheimer's disease	Coronary heart disease	Cerebrovascular disease	Chronic obstructive pulmonary disease	Diabetes
95+	Dementia incl. Alzheimer's disease	Coronary heart disease	Cerebrovascular disease	Heart failure	Influenza and pneumonia

Notes

1. 'Other ill-defined causes' include the following codes: Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (ICD-10 codes R00–R99, excluding R95: Sudden infant death syndrome (SIDS)); Respiratory failure of newborn (P28.5); Respiratory failure, unspecified (J96.9). AIHW General Record of Incidence of Mortality (GRIM) books are available for selected leading causes of death.

2. Heart failure refers to 'Heart failure and complications and ill-defined heart disease (I50–I51)'.

3. There were no suicide deaths in children under 5. The number of deaths of children attributed to suicide can be influenced by coronial reporting practices, see Deaths due to intentional self-harm (suicide): Coding of suicide in the Methodology of Causes of Death, Australia, ABS.

Source: AIHW National Mortality Database; Table S3.2.

Table 8 - Leading causes of death by age group, 2019-2021

Source: AIHW, Deaths in Australia, 2023 Link

Long-term Conditions by Age and Sex for the Total Population

Table 9 - Prevalence of long-term health conditions by age and sex, 2021

Long-term Health Condition	0-14 years	15-24 years	25-34 years	35-49 years	50-64 years	65-74 years	75+ years	Prevalence	Male	Female
Arthritis	0.4%	0.8%	3.2%	15.1%	33.2%	26.2%	20.9%	4.6%	3.1%	6.0%
Asthma	18.7%	13.2%	15.9%	25.5%	15.9%	6.7%	4.1%	6.5%	5.9%	7.2%
Cancer (including remission)	1.4%	1.4%	3.0%	15.0%	30.3%	27.0%	22.0%	1.3%	1.2%	1.5%
Dementia (including Alzheimer's)	0.0%	0.0%	0.0%	1.2%	7.7%	17.0%	73.2%	0.3%	0.2%	0.3%
Diabetes (excluding gestational diabetes)	0.8%	1.5%	4.6%	24.8%	33.2%	22.0%	13.1%	4.4%	4.8%	3.9%
Heart disease (including heart attack or angina)	1.7%	1.3%	2.4%	10.8%	28.7%	28.9%	26.4%	2.1%	2.7%	1.6%
Kidney disease	5.6%	2.1%	5.4%	16.4%	24.4%	21.4%	24.3%	0.6%	0.6%	0.5%
Lung condition (including COPD or emphysema)	1.5%	1.6%	3.0%	9.4%	29.1%	29.2%	26.3%	0.8%	0.8%	0.9%
Mental health condition (including dep. or anx.)	6.0%	15.9%	19.7%	27.5%	19.8%	6.5%	4.7%	5.7%	4.3%	7.1%
Stroke	1.3%	0.4%	2.7%	10.8%	24.9%	27.7%	31.2%	0.5%	0.5%	0.5%
Any other long-term health condition(s)	14.4%	8.3%	11.8%	24.6%	23.1%	10.8%	7.0%	6.0%	5.4%	6.7%
No long-term health condition(s)	30.2%	12.4%	19.1%	26.0%	9.1%	2.4%	0.8%	69.7%	70.8%	68.7%
Not stated	25.7%	13.2%	18.9%	23.6%	11.5%	4.1%	3.1%	7.8%	8.3%	7.3%
Total	25.4%	11.7%	17.5%	25.5%	12.4%	4.9%	2.7%	100.0%	100.0%	100.0%

[a] Includes Type 1 and Type 2 diabetes, and type unknown
[b] Includes bronchitis and emphysema. Asthma is reported separately.
[c] Self-reported hypertension only, excludes measured high blood pressure results.
[d] Includes rheumatoid, osteoarthritis, other and type unknown.

COPD: Chronic obstructive pulmonary disorder
IHD: other ischaemic heart diseases
CVD: cerebrovascular diseases
https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/4364.0.55.001~2017-18~Main%20Features~Key%20Findings~1

Table 10 - Count of long-term health conditions by age and sex, 2021

Long-term Health Condition	0-14 years	15-24 years	25-34 years	35-49 years	50-64 years	65-74 years	75+ years	Total	Male	Female
Arthritis	47	108	423	2,014	4,419	3,494	2,789	13,294	4,605	8,705
Asthma	3,565	2,516	3,031	4,872	3,045	1,287	780	19,096	8,639	10,463
Cancer (including remission)	56	53	117	586	1,184	1,053	858	3,907	1,743	2,167
Dementia (including Alzheimer's)	0	0	0	10	62	137	590	799	323	487
Diabetes (excluding gestational diabetes)	97	194	593	3,185	4,261	2,828	1,678	12,836	7,142	5,682
Heart disease (including heart attack or angina)	104	82	151	679	1,797	1,814	1,655	6,282	3,912	2,360
Kidney disease	91	35	88	267	398	349	395	1,623	847	783
Lung condition (including COPD or emphysema)	37	39	73	230	708	710	641	2,438	1,121	1,313
Mental health condition (including dep. or anx.)	995	2,641	3,279	4,570	3,287	1,087	775	16,634	6,326	10,296
Stroke	19	6	40	161	371	412	465	1,474	788	697
Any other long-term health condition(s)	2,534	1,456	2,066	4,321	4,066	1,904	1,222	17,569	7,945	9,636
No long-term health condition(s)	61,523	25,190	38,918	53,043	18,476	4,928	1,603	203,681	104,352	99,313
Not stated	5,870	3,011	4,328	5,399	2,621	926	705	22,860	12,290	10,574
Total	74,119	34,052	51,017	74,358	36,125	14,418	7,916	292,005	147,444	144,566

[a] Includes Type 1 and Type 2 diabetes, and type unknown
[b] Includes bronchitis and emphysema. Asthma is reported separately.
[c] Self-reported hypertension only, excludes measured high blood pressure results.
[d] Includes rheumatoid, osteoarthritis, other and type unknown.

COPD: Chronic obstructive pulmonary disorder
IHD: other ischaemic heart diseases
CVD: cerebrovascular diseases
Source: https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/4364.0.55.001~2017-18~Main%20Features~Key%20Findings~1

The numbers in the above table represent the number of discrete diagnoses. This can often inflate the number of total diseases as it doesn't include the primary condition and the number of comorbid conditions a person may have. Comorbidities are presented in the next section.

Long-term Conditions by Sex

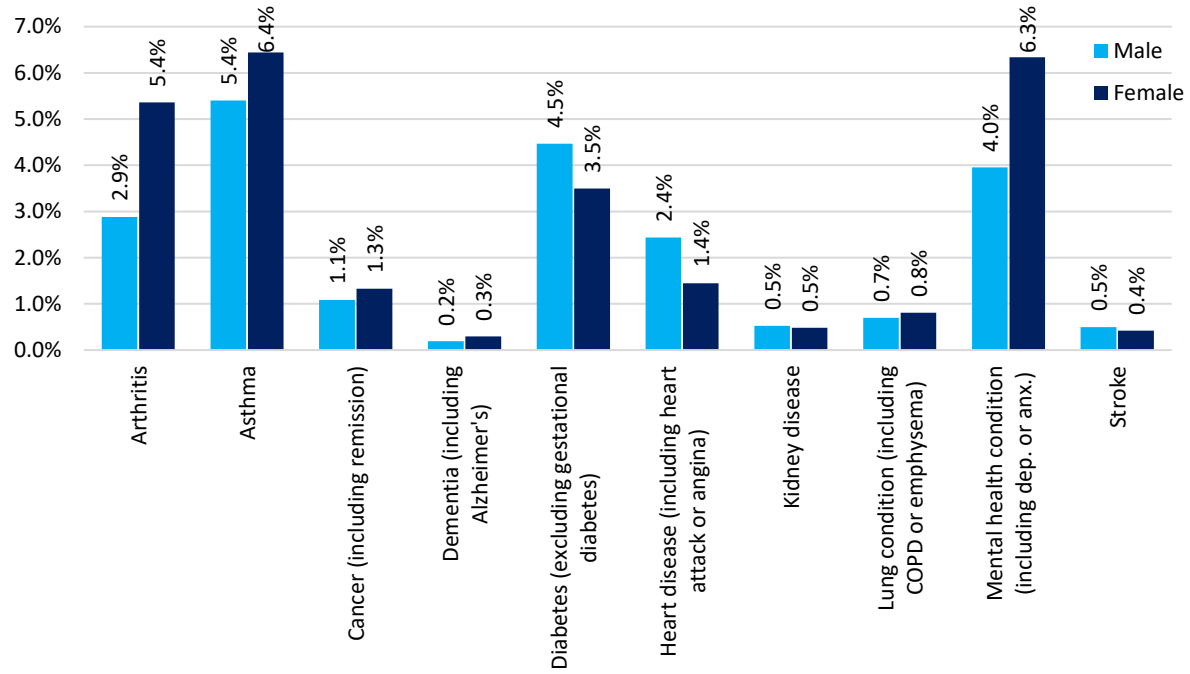


Figure 6 - Wyndham disease prevalence by sex, 2021

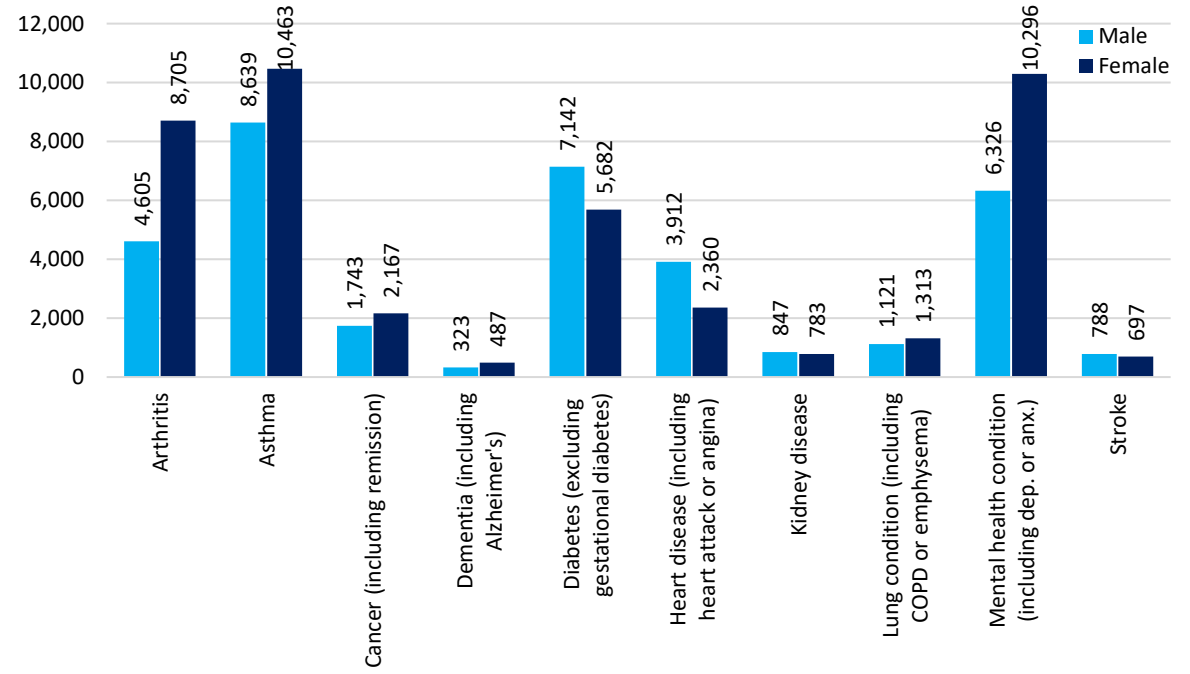


Figure 7 - Wyndham First Nations disease count by sex, 2021

Comorbidities

Comorbidity refers to occurrence of one or more diseases that co-occur with a primary diagnosed condition. There may be no apparent concordance between comorbid conditions, however one condition often leads to others due to the nature of the disease and the impacts it can have on physical mobility and wellbeing. Common risk factors such as age, smoking, poor diet, inadequate physical exercise, and excessive alcohol consumption are common to the onset of many long-term health conditions. Understanding more about comorbidities can provide vital information for prevention, management and treatment of chronic diseases (AIHW, 2016).

The 2021 Census of Population and Housing for the first time collected information on long-term health conditions (LTHC) across the Australian population. When looking specifically at the Wyndham local government area, 55,698 people indicated they had at least one long-term condition. The following are some key statistics from this data set:

- 55,698 people have at least one LTHC (19.1%)
    - 40,356 people have one LTHC (13.8%)
    - 10,311 people have two LTHC (3.5%)
    - 5,031 people have three or more LTHC (1.7%)
- People aged over 65 years with a CD are more likely to have comorbid conditions.
- Females with a CD are more likely to have comorbid conditions.
- People with a CD living the lowest socioeconomic areas are more likely to have comorbid conditions.

For the **First Nations** people residing in Wyndham the Key statistics are:

- 857 people have at least one LTHC (34.1%
    - 554 people have at least one LTHC (8.0%)
    - 202 people have two LTHC (8.0%)
    - 101 people have three of more LTHC (4.0%)

You can see the proportion of people who identified as First Nations have a higher prevalence of long-term health conditions than the broader Wyndham population. Care must be used when making assumptions on the causative nature of this phenomenon as the population size and constitution are not the same. It can, however, be stated that this outcome is consistent with broader analysis; indigenous peoples have poorer health outcomes than the non-indigenous people. Again, this needs to be contextualised. Access to primary care and hospital services is not equal to all, especially people living in remote locations.

The following section provide further detail on long-term health conditions, firstly in the broader Wyndham community, followed by First Nations specific data.. The following graphic provides an overview of the relationship between age and chronic disease comorbidity:

Figure 8 - Count of comorbidity of selected chronic diseases by age, 2021

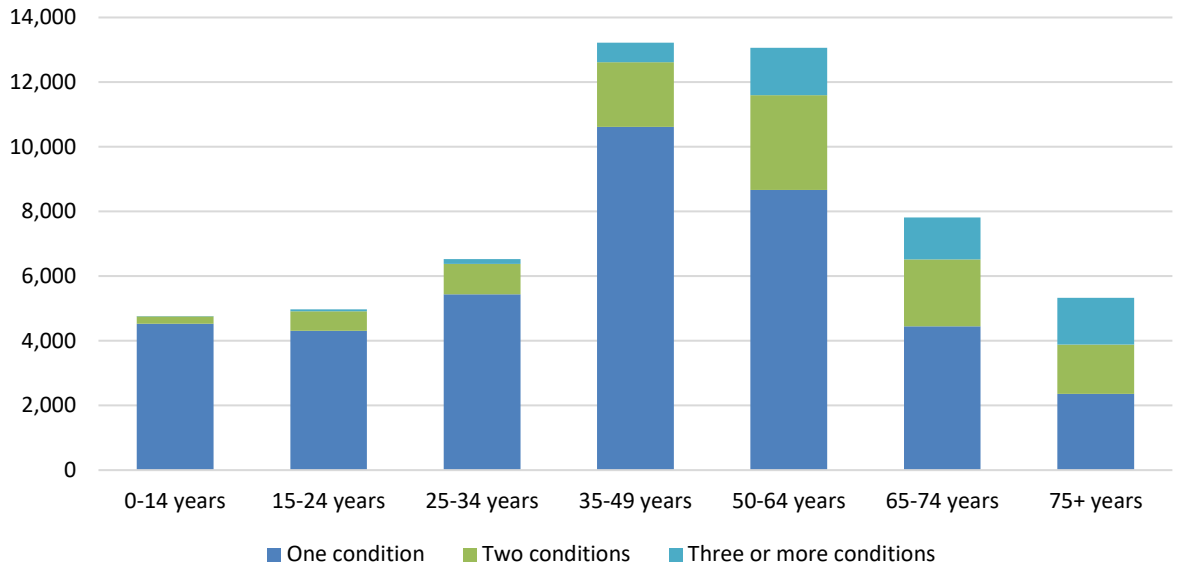
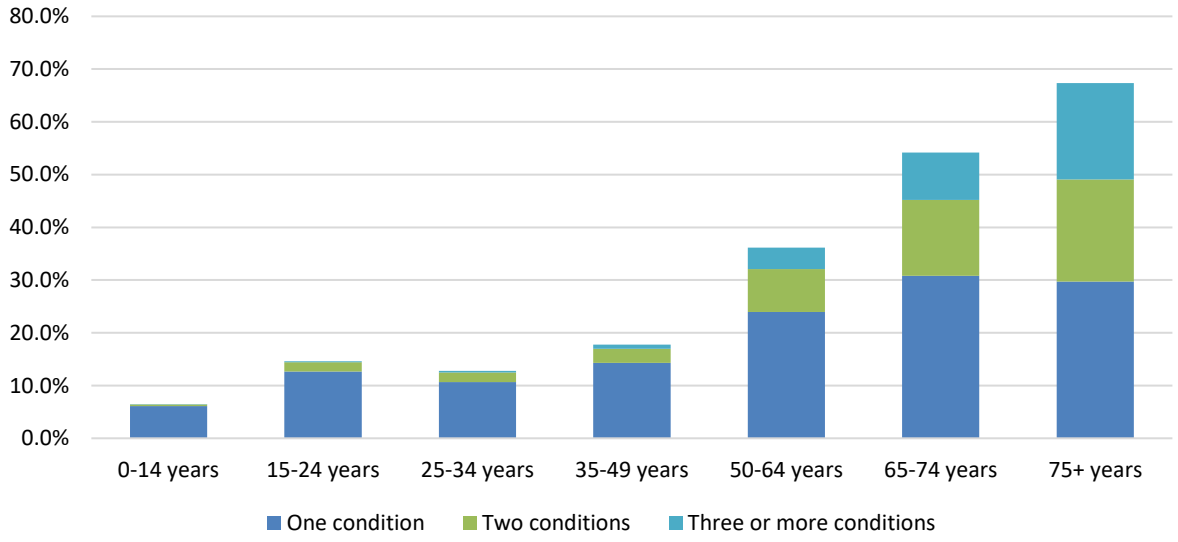
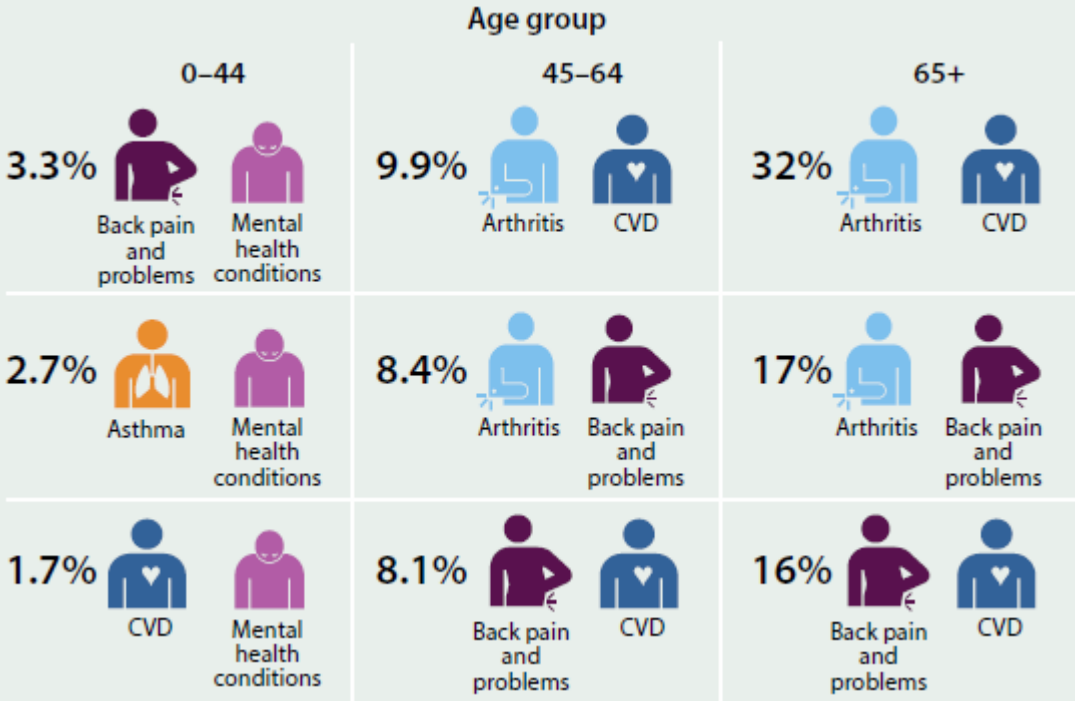


Figure 9 - Percentage of comorbidities for selected chronic diseases by age, 2021



As previously stated, there are affiliations between CDs and some occur together in higher frequency than others. The most common pairing of diseases are arthritis and cardiovascular disease which is equal highest for both females and males. Musculoskeletal conditions appear as the most common comorbidity and result from injuries (strains, sprains, tears, and breaks), congenital and age related (rheumatoid arthritis, osteoarthritis, osteoporosis, and osteopenia). The following figure is a pictorial representation of the most common comorbid conditions across age groups:

Figure 10 - Most common comorbidities of selected chronic disease by age, 2021



Source: https://www.aihw.gov.au/reports/australias-health/australias-health-2016/contents/chapter-3-leading-causes-of-ill-health

The above conditions are what would be referred to as high prevalence conditions, that is they occur at a higher frequency in the wider population than others. Other diseases such as cancer, diabetes and COPD are low prevalence conditions, but have a high rate of comorbidity. This is due to people with these conditions being older (a risk factor for chronic disease) and the diseases them themselves can be catalysts for others.

The following table provides an overview of the situation of chronic disease in Wyndham. The national average proportions have been applied to the Wyndham population and an estimate calculated.

Table 11 - Number of comorbid conditions by long-term health condition

Long-term Health Condition (LTHC)	Number of selected chronic conditions			None of the selected conditions	Total
	1	2	3		
Arthritis	5,677	4,205	3,426		13,294
Asthma	12,528	4,165	2,393		19,096
Cancer[1]	1,759	1,076	1,082		3,907
Dementia[2]	188	213	398		799
Diabetes[3]	7,219	3,112	2,474		12,836
Heart disease[4]	2,129	1,880	2,266		6,282
Kidney disease	469	389	765		1,623
Lung condition[5]	481	665	1,300		2,438
Mental health condition[6]	9,533	4,530	2,580		16,634
Stroke	369	421	689		1,474
Any other LTHC	4,593	2,010	1,216	9,773	17,569
Total	40,358	10,304	5,032	213,441	292,005

[1]including remission
[2]including Alzheimer's
[3]excluding gestational diabetes
[4]including heart attack or angina
[5]including COPD or emphysema
[6]including depression or anxiety

The above table can be a bit confusing to interpret, as the bottom row doesn't equal the above columns. The bottom row is reflective of the entire population and all conditions combined, so includes people with multiple conditions across all conditions. The diagnoses in the left-hand row and the corresponding case counts, are only for that condition. In this instance this is the *primary diagnosis*, or the condition that was diagnosed first (to make it more complicated, this may not be the first condition to physically manifest, just the first to be diagnosed).

For some conditions the likelihood of having multiple comorbid conditions is highly correlated with the nature of the disease. For example, kidney disease can occur as a discrete condition but often is comorbid with diabetes as it's the result of poor glucose control and high blood pressure, key symptoms of diabetes. This trend is present in the data. COPD has similar characteristics, as people lose the ability to breath normally, they are greater risk of diabetes, cardiovascular diseases (especially if the COPD was tobacco related, then cancer also gets added to the list) and bone and joint disease from immobility.

Mental and behavioural conditions have the highest rate of single diagnosis and a high, although declining rate of comorbidity. Mental health conditions are usually comorbid with all conditions, it can manifest after a person is diagnosed with a long-term condition and progressively get more severe depending upon the disease and severity of the symptoms. Health is not always this binary, mental health conditions are just as likely to have been present before diagnosis and may actually be the cause the of other chronic diseases. In reality, disease is multifactorial, and a single cause-effect pathway is not the best way to think how and why something has occurred. The following table is a matrix of Primary conditions and comorbidities.

First Nations Long-term Health Conditions

First Nations Population Long-term Conditions by Age and Sex for the

Table 12 - Prevalence of long-term health conditions in First Nations people by age and sex, 2021

Long-term Health Condition	0-14 years	15-24 years	25-34 years	35-49 years	50-64 years	65-74 years	75+ years	Prevalence	Male	Female
Arthritis	0.0%	3.0%	7.7%	22.0%	32.7%	19.6%	8.9%	4.6%	3.1%	6.0%
Asthma	23.3%	17.3%	20.7%	22.3%	9.5%	4.8%	1.2%	6.5%	5.9%	7.2%
Cancer (including remission)	0.0%	0.0%	0.0%	34.2%	47.4%	26.3%	0.0%	1.3%	1.2%	1.5%
Dementia (including Alzheimer's)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.2%	0.3%
Diabetes (excluding gestational diabetes)	0.0%	8.6%	6.7%	23.8%	35.2%	16.2%	0.0%	4.4%	4.8%	3.9%
Heart disease (including heart attack or angina)	0.0%	7.7%	16.9%	18.5%	15.4%	24.6%	7.7%	2.1%	2.7%	1.6%
Kidney disease	0.0%	0.0%	13.6%	13.6%	0.0%	13.6%	0.0%	0.6%	0.6%	0.5%
Lung condition (including COPD or emphysema)	0.0%	0.0%	0.0%	18.6%	41.9%	16.3%	0.0%	0.8%	0.8%	0.9%
Mental health condition (including dep. or anx.)	12.3%	24.2%	24.0%	22.0%	15.4%	3.7%	1.1%	5.7%	4.3%	7.1%
Stroke	0.0%	0.0%	0.0%	25.0%	30.0%	0.0%	0.0%	0.5%	0.5%	0.5%
Any other long-term health condition(s)	26.5%	15.1%	16.7%	18.0%	18.0%	9.8%	1.2%	6.0%	5.4%	6.7%
No long-term health condition(s)	47.3%	19.5%	13.8%	11.4%	6.8%	1.1%	0.0%	69.7%	70.8%	68.7%
Not stated	25.8%	17.0%	27.1%	22.7%	5.7%	0.0%	0.0%	7.8%	8.3%	7.3%
Total	34.4%	18.5%	17.4%	16.2%	9.9%	3.0%	0.9%	100.0%	49.3%	50.7%

[a] Includes Type 1 and Type 2 diabetes, and type unknown
[b] Includes bronchitis and emphysema. Asthma is reported separately.
[c] Self-reported hypertension only, excludes measured high blood pressure results.
[d] Includes rheumatoid, osteoarthritis, other and type unknown.

COPD: Chronic obstructive pulmonary disorder
IHD: other ischaemic heart diseases
CVD: cerebrovascular diseases
https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/4364.0.55.001~2017-18~Main%20Features~Key%20Findings~1

Table 13 - Count of long-term health conditions in First Nations people by age and sex, 2021

Long-term Health Condition	0-14 years	15-24 years	25-34 years	35-49 years	50-64 years	65-74 years	75+ years	Total	Male	Female
Arthritis	0	5	13	37	55	33	15	158	57	101
Asthma	98	73	87	94	40	20	5	417	180	237
Cancer (including remission)	0	0	0	13	18	10	0	41	8	33
Dementia (including Alzheimer's)	0	0	0	0	0	0	0	0	0	0
Diabetes (excluding gestational diabetes)	0	9	7	25	37	17	0	95	35	60
Heart disease (including heart attack or angina)	0	5	11	12	10	16	5	59	40	19
Kidney disease	0	0	3	3	0	3	0	9	6	3
Lung condition (including COPD or emphysema)	0	0	0	8	18	7	0	33	4	29
Mental health condition (including dep. or anx.)	56	110	109	100	70	17	5	467	167	300
Stroke	0	0	0	5	6	0	0	11	3	8
Any other long-term health condition(s)	65	37	41	44	44	24	3	258	116	142
No long-term health condition(s)	629	259	184	151	90	14	0	1,327	670	657
Not stated	59	39	62	52	13	0	0	225	188	37
Total	864	464	437	408	249	75	22	2,519	1,243	1,276

[a] Includes Type 1 and Type 2 diabetes, and type unknown
[b] Includes bronchitis and emphysema. Asthma is reported separately.
[c] Self-reported hypertension only, excludes measured high blood pressure results.
[d] Includes rheumatoid, osteoarthritis, other and type unknown.

COPD: Chronic obstructive pulmonary disorder
IHD: other ischaemic heart diseases
CVD: cerebrovascular diseases
https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/4364.0.55.001~2017-18~Main%20Features~Key%20Findings~1

First Nations Long-term Conditions for People by Sex

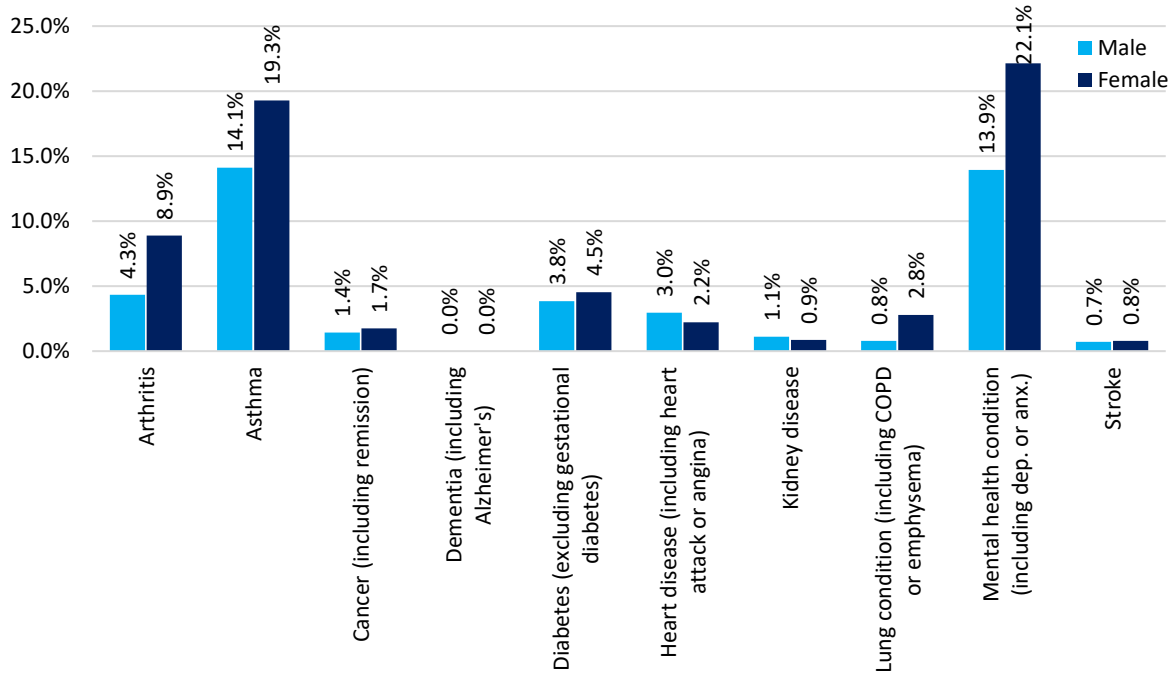


Figure 11 - First Nations disease prevalence by sex, 2021

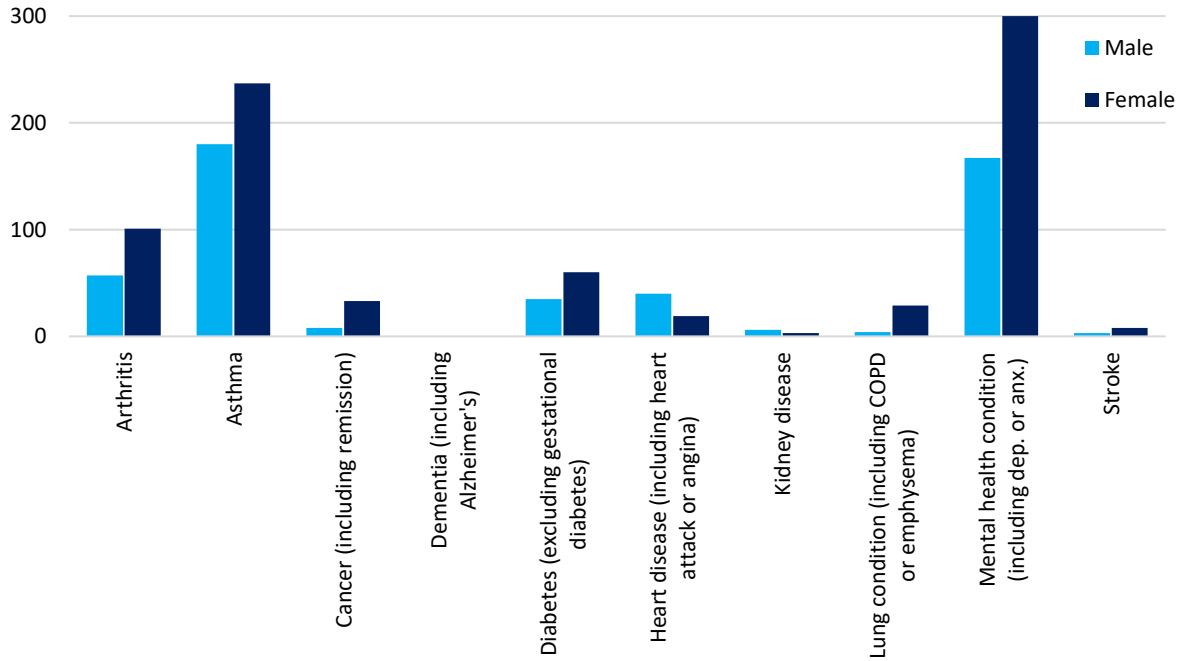


Figure 12 - First Nations disease count by sex, 2021

The following chart provides a contrast between the total Wyndham population and the First Nations population with regards to long term health conditions. The First Nations denominator was the total First Nations population count as of the 2021 Census (N=2,519), the denominator for the Wyndham prevalence was the 2021 Census total (N=292,005). The diseases that stand as being significantly higher in the First Nations population are Asthma and Mental Health conditions. Cautions should be used when trying to interpret these data as the sample size for the First Nations

population is much smaller than the Wyndham total. Small changes in the numerator can have a large effect on percentages.

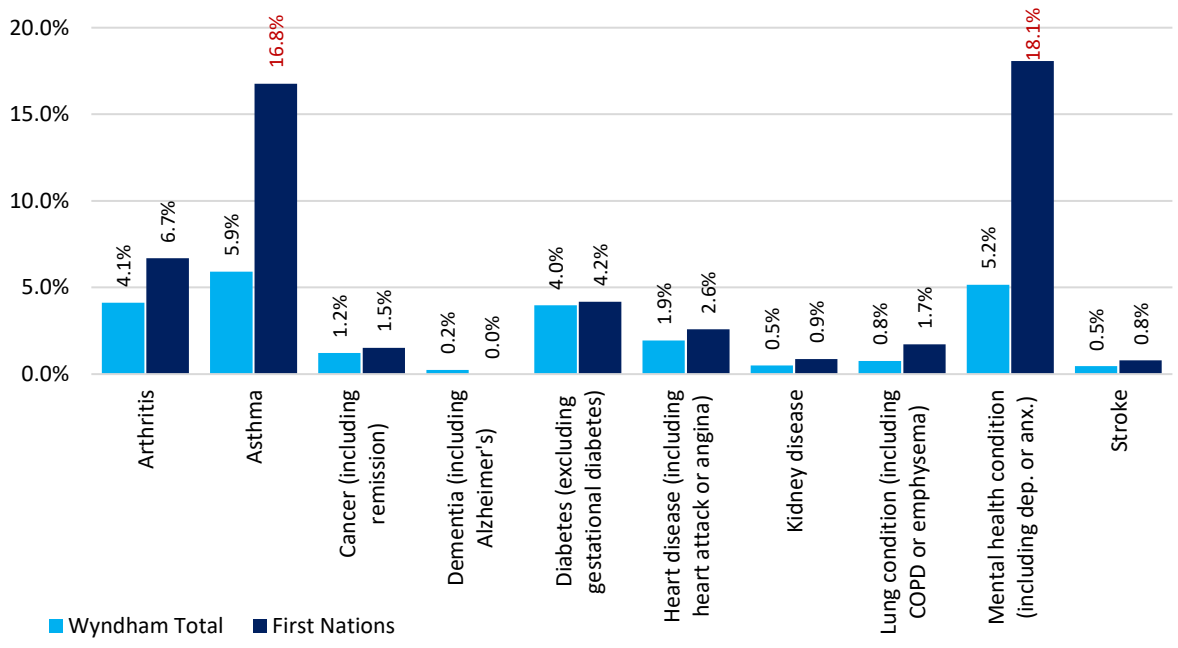


Figure 13 - First Nations disease count by sex, 2021

First Nations Comorbidities

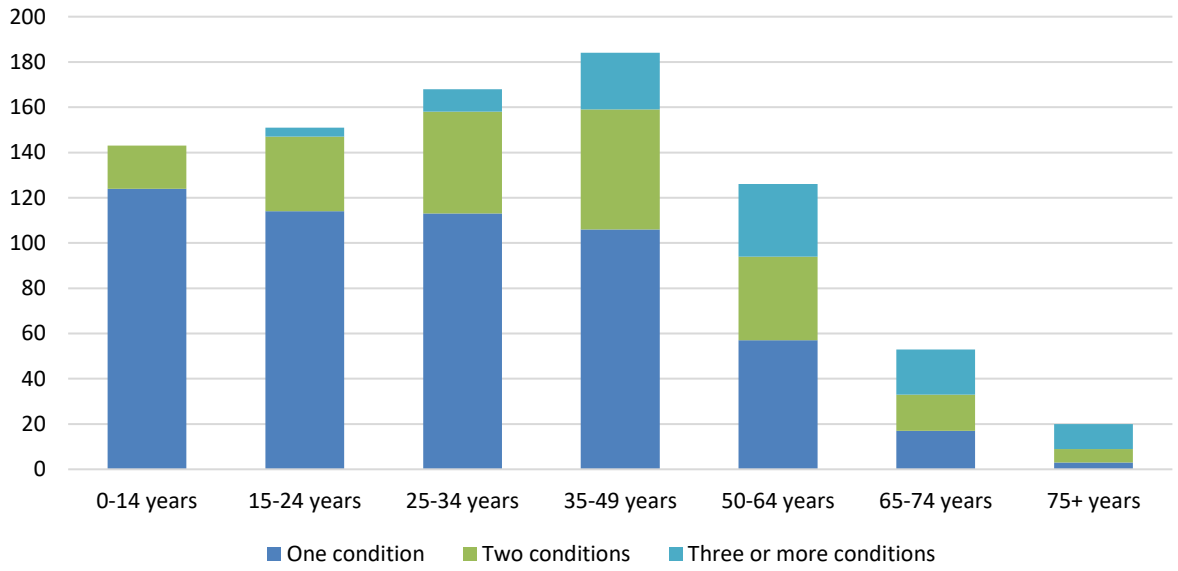


Figure 14 - First Nations comorbidity count by age and number of conditions, 2021

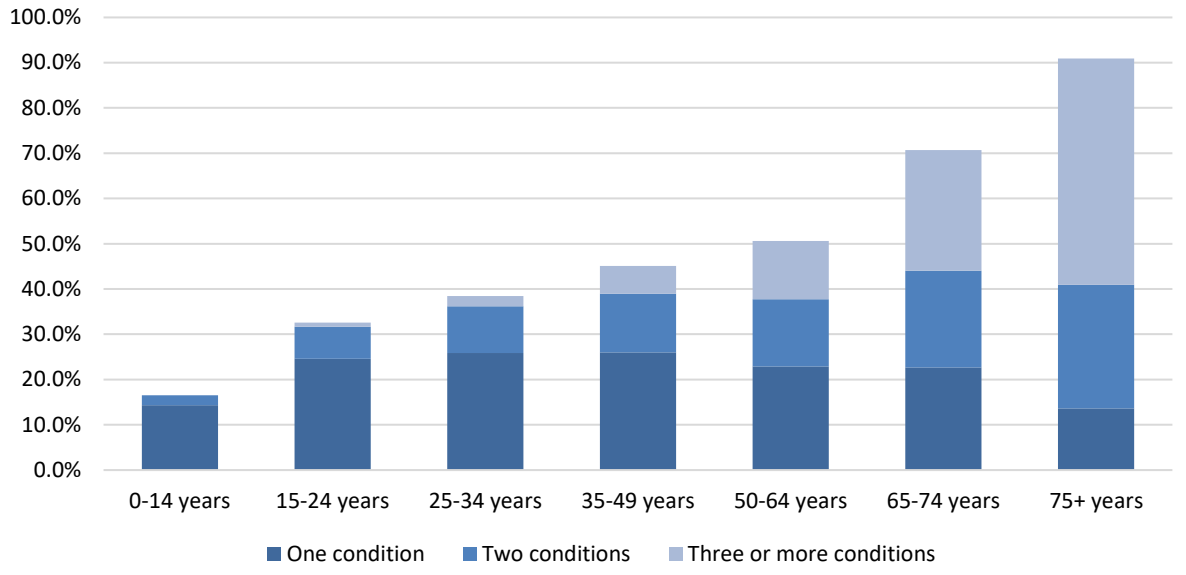


Figure 15 - First nations comorbidity percentage by age and number of conditions, 2021

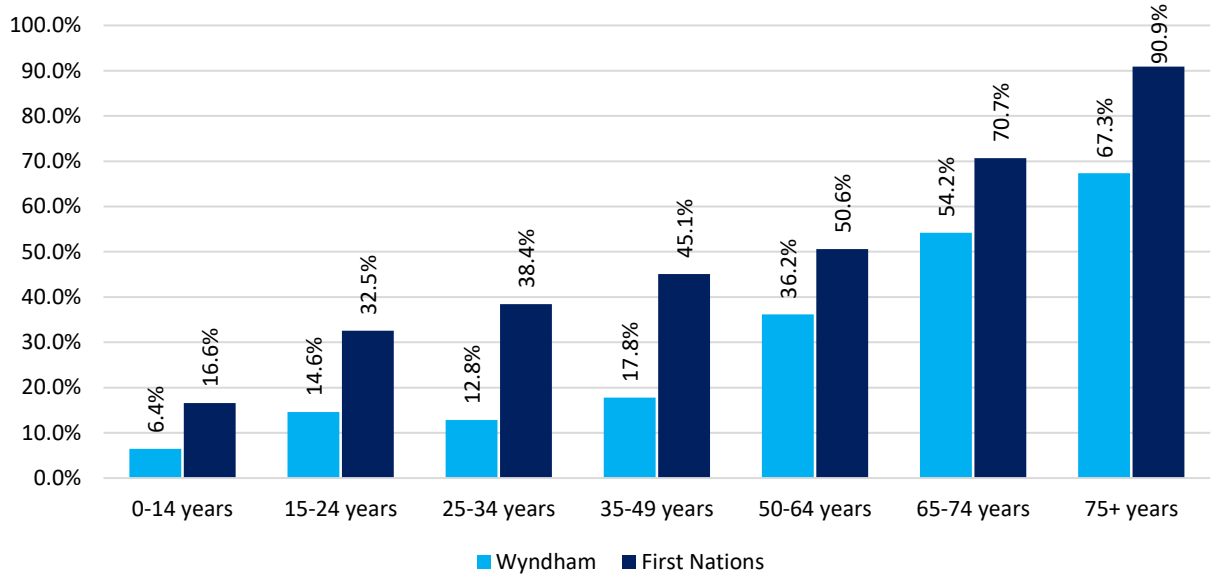


Figure 16 - Comparison between Wyndham population and First Nations, 2021

The above chart shows the percentage of people with at least one long term health condition. It's apparent, the First Nations population have proportionally more conditions and they are present at a young age at a higher rate and persist like this across their life span.

Table 14 - Number of comorbid conditions by long-term health condition, 2021

Long-term Health Condition (LTHC)	Number of selected chronic conditions 1	2	3	None of the selected conditions	Total
Arthritis	40	65	59		168
Asthma	210	129	82		421
Cancer[1]	14	13	17		38
Dementia[2]	0	0	0		0
Diabetes[3]	31	30	43		105
Heart disease[4]	16	9	39		65
Kidney disease	0	6	15		22
Lung condition[5]	7	10	31		43
Mental health condition[6]	238	141	69		454
Stroke	3	5	14		20
Any other LTHC	81	42	30	94	245
Total	554	202	101	1424	2511

[1]including remission
[2]including Alzheimer's
[3]excluding gestational diabetes
[4]including heart attack or angina
[5]including COPD or emphysema
[6]including depression or anxiety

As discussed for Table 10 on page 22, The bottom row is reflective of the entire population and all conditions combined, so includes people with multiple conditions across all conditions. The diagnoses in the left-hand row and the corresponding case counts, are only for that condition. In this instance this is the primary diagnosis, or the condition that was diagnosed first (to make it more complicated, this may not be the first condition to physically manifest, just the first to be diagnosed).

Cancer

Cancer is a major cause of illness in Australia and has a substantial social and economic impact on individuals, families and the community. In 2019, it is estimated that 144,713 people will be diagnosed with cancer and 49,896 people will die from cancer. It results when abnormal cells divide in an uncontrolled way, spreading to organ systems throughout the body. The causes of cancer can be environmental (radiation and pollutants), disease (HPV), congenital (family history) and behavioural (smoking, alcohol consumption, poor diet), but likely to be a combination of two or more of these.

Screening

Screening programmes are an effective public health method to detect certain cancers early and treat accordingly are. These involve systematic an integrated testing at national level usually for specific cohorts such as age and sex. The three national programmes currently in operation in Australia are for Bowel (50-74 years – every two years), Breast (females 50-74– every two years) and cervical (females 25-74 years - every five years). The following section provides results for the most recent data at the lowest possible geography.

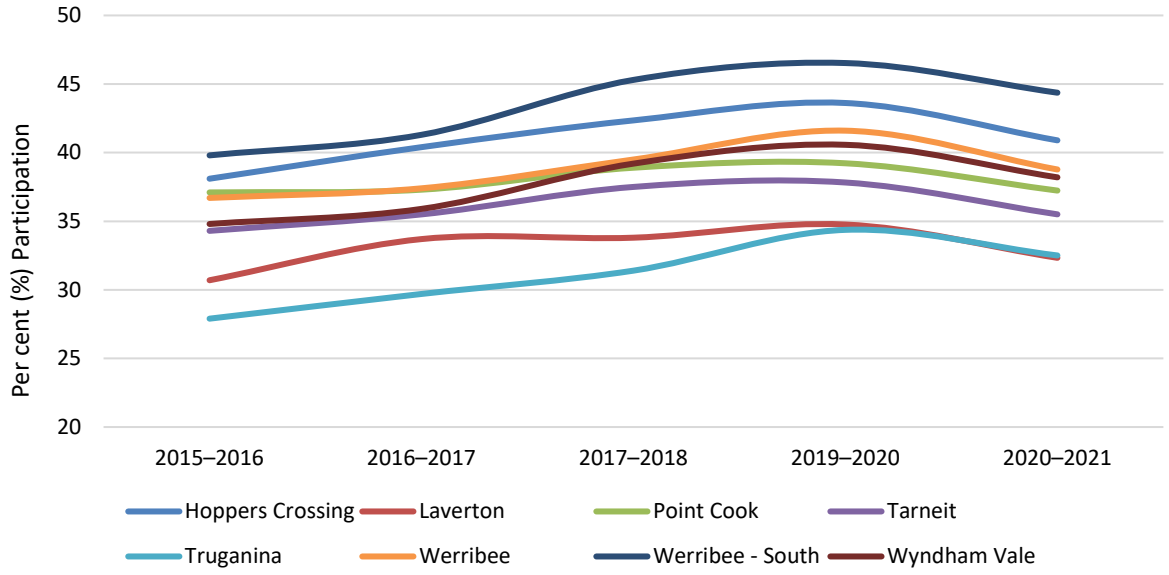


Figure 17 - National bowel cancer screening program participation (SA2)

Source: https://www.aihw.gov.au/reports/cancer-screening/national-cancer-screening-programs-participation/contents/summary

The overall results are showing an downward trend across all SA2 areas, the overall results are below the national rate of 42.4% and state rate of 45.2%. Only Werribee South (45.3%) is above this, although it does have a small sample size.

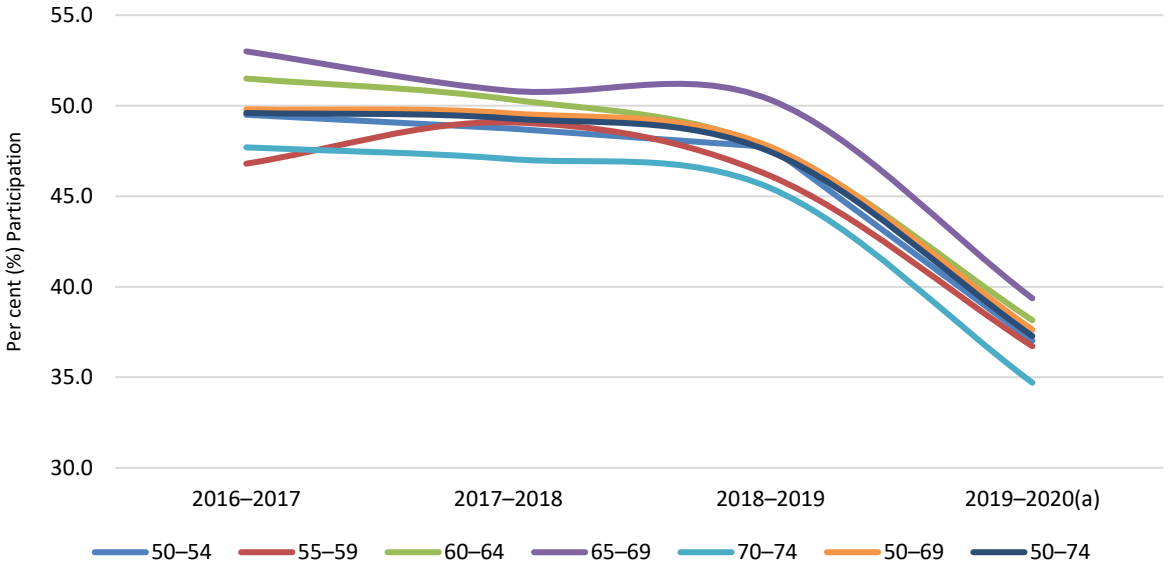


Figure 18 - National breast cancer screening program participation (Wyndham SA3) by age group

Source: https://www.aihw.gov.au/reports/cancer-screening/national-cancer-screening-programs-participation/contents/summary

Wyndham has an overall coverage is 56.6% of eligible women which is lower than the national (62.4%) and state (61.9%)

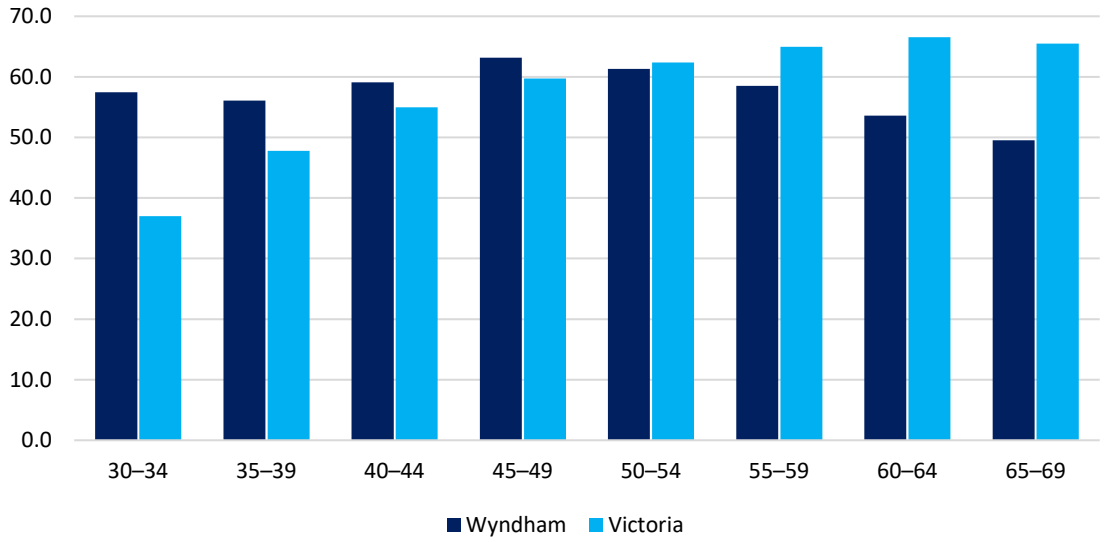


Figure 19 - National cervical cancer screening program participation (Wyndham SA3) by age group

Source: https://www.aihw.gov.au/reports/cancer-screening/national-cancer-screening-programs-participation/contents/summary

Wyndham has an overall coverage is 49.0% of eligible women which is lower than the national (55.4%) and state (57.0%).

Effective uptake of cancer screening programmes has been shown to reduce the number of cancer cases and improve survival. Unfortunately, Wyndham is below both national and state averages on all three.

Communicable Diseases

Immunisation

Immunisation is one of the most effective public health initiatives to protect the population from unnecessary illness and future disability. Childhood immunisation is essential for protecting children with developing immune systems against infectious diseases. The results below are for Wyndham in 2016-17. The overall aim of the national immunisation programme is to have a minimum of 95% coverage. The results show that there is progress toward achieving this:

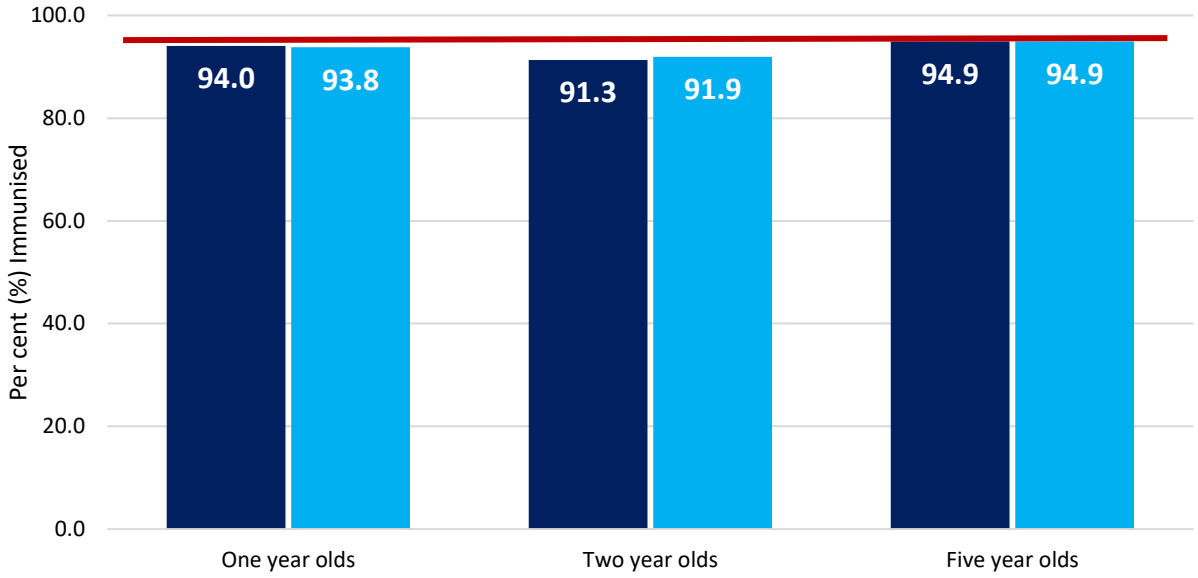


Figure 20 - Children who were fully immunised, Wyndham June 2023 (SA3)

Communicable Disease Surveillance

Due to the volatile nature of communicable diseases, it would be best to use the local government areas surveillance summary report. As we all experienced with COID-19, rate of infection can change drastically in a very short period of time. The link above will show you the daily infections for an extensive range of notifiable diseases that can be viewed by LGA, age, sex and time.

Disability

Disability can be broadly described as the impairment or loss of functioning that can be either physical or mental. The data in the following tables are estimates calculated by applying the proportions from the Disability, Ageing, and Carers survey 2018 conducted by the ABS. As they are based on the national averages, they will not exactly replicate the actual situation Wyndham experiences. What they provide is a guide to indicate the potential number of people in a particular age group with a certain impairment.

Disability by Age and Sex

Age group	Males	Females	All persons
0–4	533	488	1,021
5–14	2,703	1,440	4,143
15–24	1,625	1,787	3,412
25–34	1,540	2,010	3,550
35–44	2,317	2,206	4,523
45–54	2,459	2,217	4,676
55–59	1,376	1,309	2,685
60–64	1,337	1,561	2,899
65–69	1,313	1,479	2,792
70–74	1,126	1,351	2,477
75–79	1,003	1,080	2,083
80–84	769	877	1,646
85+	630	969	1,599
Total	**18,729**	**18,776**	**37,505**

https://www.abs.gov.au/ausstats/abs@.nsf/mf/4430.0

Table 15 - Estimated number of people with a disability, Wyndham (LGA) 2018

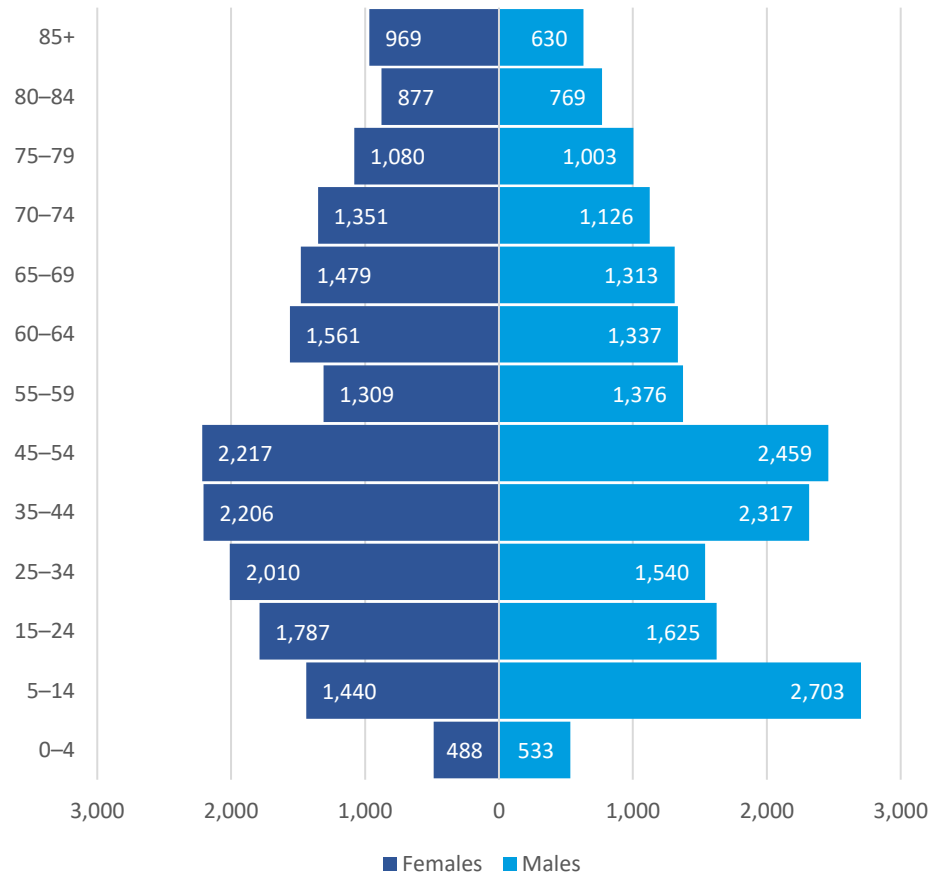


Figure 21 - Estimated number of people with a disability, Wyndham (LGA) 2018

Disability Status by Age

Table 16 - Disability by limitation category, restriction type and long-term health condition status, Wyndham (LGA) 2018

Age group (years)	Profound or severe core activity limitation	Moderate or mild core activity limitation	Schooling or employment restriction	All with specific limitations or restrictions [a]	All with reported disability [b]	No reported disability		Total
						With long-term health condition	Without long-term health condition	
0–4	755	112	0	755	1,118	1,314	25,361	27,961
5–14	2,301	1,038	3,249	3,971	4,196	5,008	35,961	45,121
15–24	1,360	698	2,476	2,964	3,488	3,836	27,551	34,875
25–34	912	1,073	2,306	2,896	3,486	9,976	40,224	53,632
35–44	880	2,103	3,228	3,619	4,548	9,733	34,578	48,908
45–54	986	2,639	3,116	4,102	4,707	9,159	17,968	31,801
55–59	629	1,547	1,773	2,314	2,691	4,452	5,421	12,577
60–64	746	1,688	1,916	2,641	2,962	4,184	3,231	10,357
65–69	570	1,733	570	2,352	2,773	3,789	1,725	8,254
70–74	611	1,571	480	2,182	2,469	2,712	1,035	6,235
75–79	669	1,271	342	1,944	2,101	1,515	358	3,935
80–84	629	950	221	1,584	1,634	746	87	2,487
85+	1,103	488	216	1,587	1,600	466	14	2,068
Male %	48.5%	50.3%	50.4%	48.8%	49.6%	48.4%	51.0%	50.1%
Female %	51.5%	49.7%	49.6%	51.2%	50.4%	51.6%	49.0%	49.9%
Total	**12,151**	**8,296**	**9,965**	**16,188**	**18,617**	**28,324**	**97,945**	**191,485**

https://www.abs.gov.au/ausstats/abs@.nsf/mf/4430.0

[a] Total may be less than the sum of the components as persons may have both a core activity limitation and a schooling or employment restriction.

[b] Includes those who do not have a specific restriction or limitation.

Health Sector Services

The focus of this section is to examine the status of the primary health care system in Australia as it occurs in Wyndham. A strong primary health system is essential to the health and wellbeing of all society. By addressing issues earlier through primary health care can reduce the impact of disease and injury and keep people from attending hospital. The economic benefit of keeping people away from hospitals is the freeing up of resources to attend with more serious health events. In the process of doing so it reduces costs to the health system, governments and the taxpayer. Wyndham is designated as an area of workforce shortage for secondary care (specialists), but not for primary care. A situation that is likely to change as the population continues to grow.

The number and type of healthcare services in Wyndham can easily be sourced from the links provided. However, knowledge of the Australian health system is beneficial to ensure the correct search parameters are used. This is more of an issue with general practitioners (GP) as it is more the setting of where they practise medicine rather than the profession name.

The following table outlines the number of selected practitioners grouped into their overarching hierarchies.

Table 17 - Estimated number of health care providers, 2021

Profession	2016	2021	Change	People per Provider	Providers per 10K person
GP	314	370	+56	692	14
Allied Health [a]	321	531	+210	936	11
Primary Care Nurse [b]	206	207	+1	1,054	10
Mental Health Clinician [c]	348	363	+15	624	16
Dentist	95	162	+67	2,285	4
Medical Specialist [d]	76	129	+53	624	16

Source: Department of Health, Health Workforce Data,: https://hwd.health.gov.au/

(a) Included Allied Health providers include: Chiropractors, Medical Radiation Practitioners, Occupational Therapists, Optometrists, Osteopaths, Physiotherapists, and Podiatrists

(b) Primary care nurses are based within GP clinics and provide support and ancillary services to patients.

(c) Included Mental Health providers include: Psychologists, Alcohol and other drug (AOD) clinicians, other mental health clinicians

(d) Included Medical specialties include: Addiction medicine, Anaesthesia, Dermatology, Emergency medicine, Intensive care medicine, Obstetrics and gynaecology, Occupational and environmental medicine, Ophthalmology, Paediatrics and child health, Pain medicine, Palliative medicine, Pathology, Physician, Psychiatry, Public health medicine, Radiation Oncology, Radiology, Rehabilitation medicine, Sexual health medicine, Sport and exercise medicine, and Surgery

Compared to other metropolitan Melbourne LGAs (21), the patient load is markedly different. For example, inner suburbs have an average of 486 people per GP and conversely, 22 providers for every ten thousand people. Without further workforce increases, the burden upon the hospital system will increase in Wyndham as to the likelihood of deleterious health events related to delayed access to medical services. The following section will demonstrate a simple technique to model the future need of health professionals based on forecasted population growth and the number of existing providers located across the state.

Providers and Projections

The following projections are based on the current number of practitioners within an LGA and the population size as of the 2021census. A simple linear regression model was created using the peer groups of Greater Melbourne, Regional Victoria and Victoria. The timeseries projections are based on the Wyndham population forecasts provided by id. The intention was to display the number of providers Wyndham would need in 2020 and at five-year interval to 2040. Being a basic linear model, there are numerous factors that haven't been included and the actual number will depend upon the changing nature of society and future development. With the following charts, the peer group to apply to Wyndham is the Greater Melbourne model.

General Practitioners

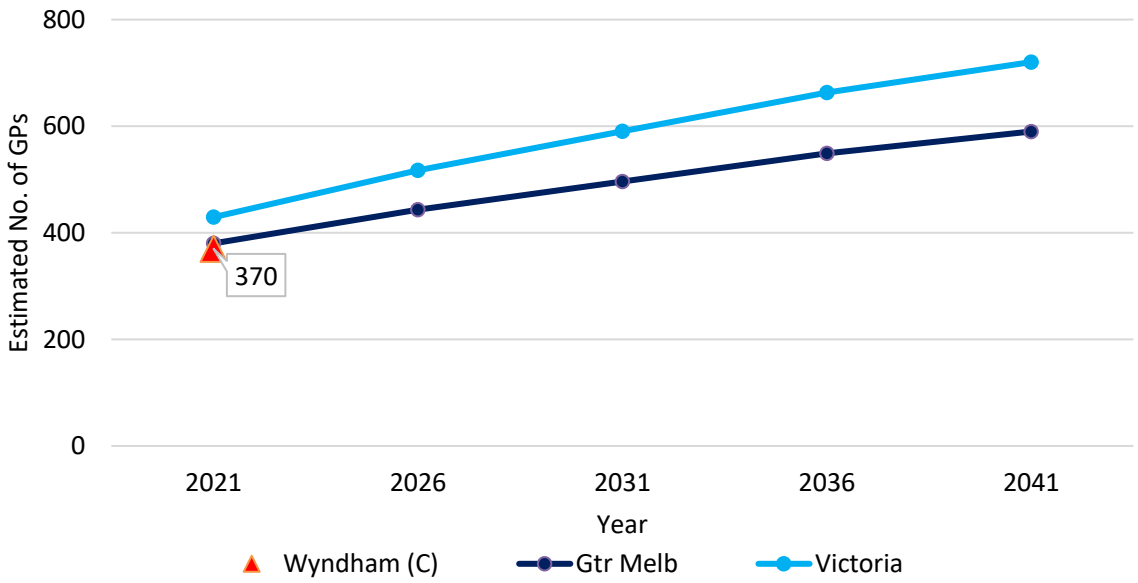


Figure 22 - Modelled estimates of general practitioners (GPs), 2021-2041

Based on the above chart, it would appear that Wyndham has a deficit in the number of providers required when compared to all peer groups. The 2020 estimate for the peer groups is what would be considered the "ideal". Using Greater Melbourne as an example, being an urban region there is higher population density and a higher number of GPs so the modelled estimate is lower than the other two models. If we use this as the best-case scenario, Wyndham would have an almost optimal number of GPs for the population they service (some LGAs in Gtr. Melb. can be considered as being over serviced, i.e.: inner eastern suburbs, and others under serviced, i.e.: outer western suburbs). The converse is true for Regional Victoria: lower numbers of GPs and lower population density. Applying this model to Wyndham could result in over servicing as it suggests more than twice as many GPs are required in 2020 (654) than already exist.

NOTE: the number of GPs for Wyndham is based on the most recent workforce registration data (2021) available. The value of 314 was checked by comparing the number of GPs by doing an audit of websites for known practices and a value of 397 was acquired. This method also highlighted some gaps as some practices list either no GPs or several who work in a number of affiliated clinics. To maintain consistency the HWD dataset was used for all professions

Primary Care Nursing

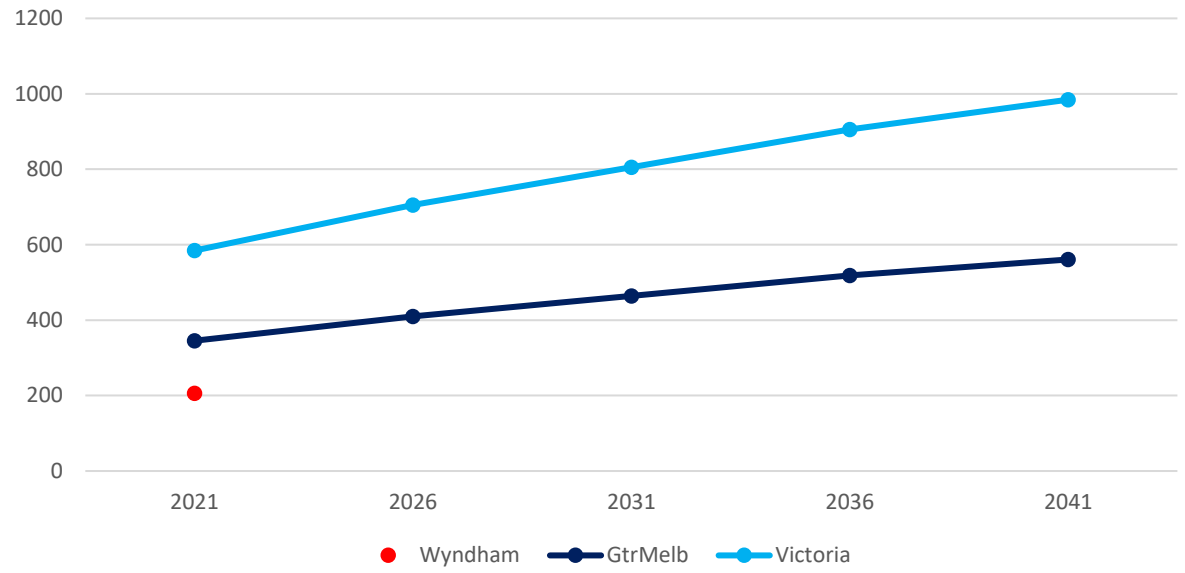


Figure 23 - Modelled estaimates of primary care nurses, 2021-2041

Primary care nurses work in GP clinics and provide ancillary care and administrative support to GPs. They often undertake activities such as wound dressing, immunisation and chronic disease management. Some of their services are bulk billed through the Medicare Benefits Scheme (MBS).

Allied health Providers

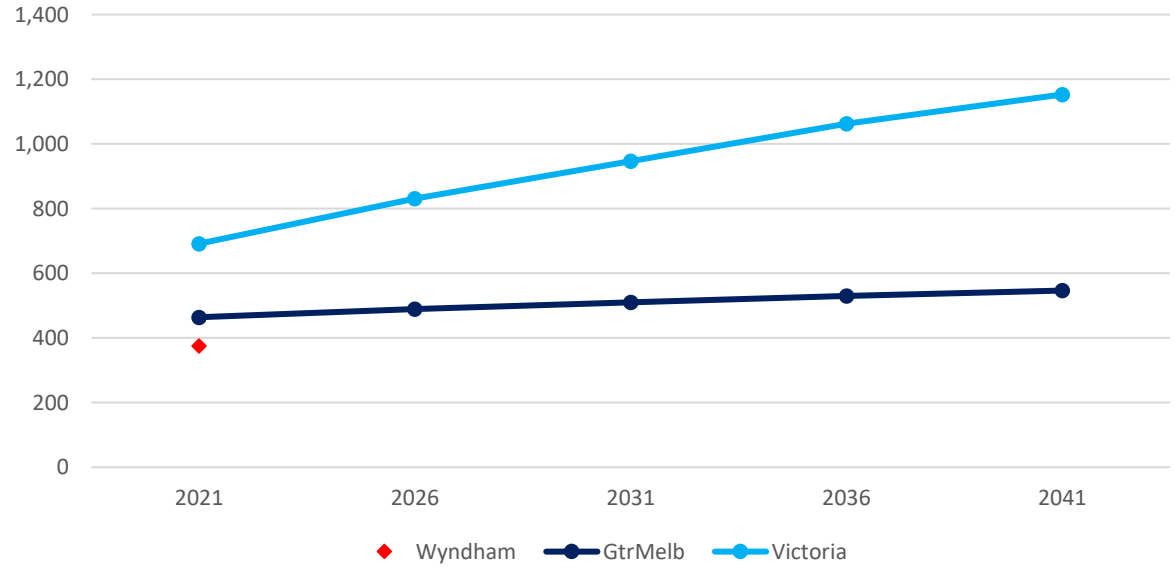


Figure 24 - Modelled estimates of allied health practitioners, 2021-2041

The number of allied health is often contingent upon the availability of GPs for referrals usually for chronic disease management. Referrals are not usually required for treatment for full fee-paying patients.

Pharmacists

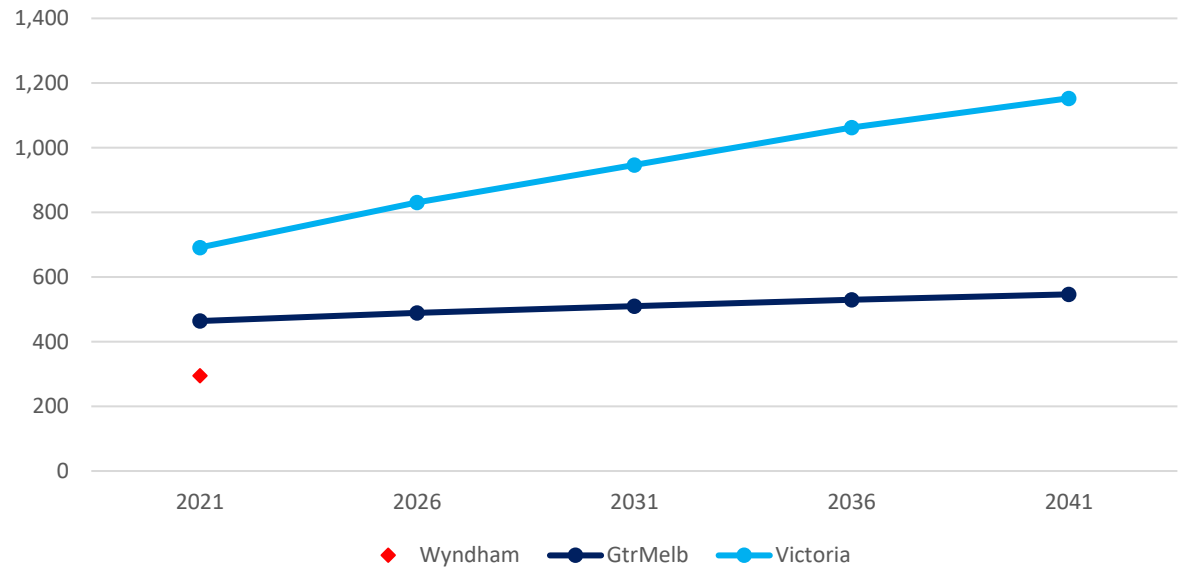


Figure 25 - Modelled estimates of pharmacists, 2021-2041

Mental Health Providers

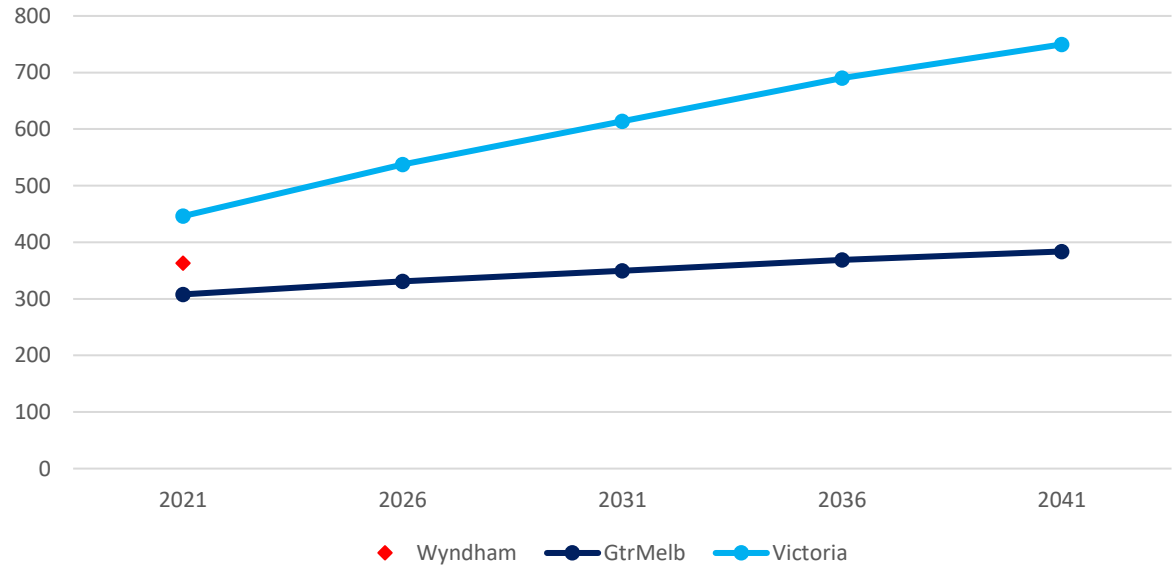


Figure 26 - Modelled estimates of mental health practitioners, 2021-2041

The above chart indicates that the need for mental health clinicians in Greater Melbourne will be greater than GPs over the next 20 years.

Dentists

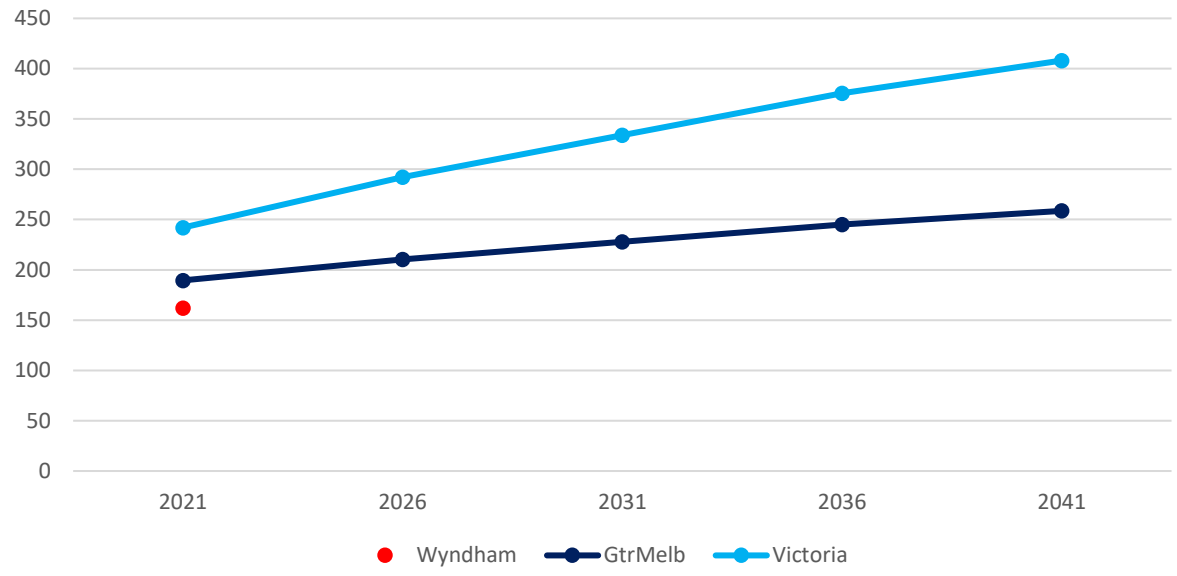


Figure 27 - Modelled estimates of dentists, 2021-2041

Dental hygiene and care is often neglected due to the cost as services are not covered under the MBS. Thus, without the same demand as GPs, the numbers are much lower.

Secondary Care (Medical Specialists)

Unlike the provider services given in the above section, specialists are different as they tend to concentrate more around hospitals rather than distributed throughout a community. As a result, applying the same methodology is not valid as there are areas such as Melbourne CBD with many large hospitals and several thousand providers, and suburbs with no hospitals and very few specialists. In many cases, medical specialists have days allocated where they practise out of a local clinic depending upon demand. This is difficult to quantify without auditing individual websites, and in many cases the specialist may not be named, or their hour advertised. The following table provides a list of the medical specialities in the National health Workforce Dataset (2021):

Table 18 - Speciality type and number of medical specialists practising in Wyndham

Specialty	2016	2021	Change
Physician	11	24	13
Psychiatry	14	22	8
Anaesthesia	9	16	7
Paediatrics and child health	9	14	5
Surgery	9	13	4
Emergency medicine	6	12	6
Obstetrics and gynaecology	10	9	-1
Radiology	5	6	1
Occupational and environmental medicine	0	4	4
Dermatology	3	3	0

Intensive care medicine	0	3	3
Ophthalmology	0	3	3
Addiction medicine	0	0	0
Medical administration	0	0	0
Pain medicine	0	0	0
Palliative medicine	0	0	0
Pathology	0	0	0
Public health medicine	0	0	0
Radiation Oncology	0	0	0
Rehabilitation medicine	0	0	0
Sexual health medicine	0	0	0
Total	76	129	53

Source: National Health Workforce Dataset (HWD)

Many of the above are specialities associated with hospitals (surgery and births) and psychiatric inpatient units. Access to service data for pain and sexual health in Wyndham are not available and definitely worth pursuing as the region continues to mature and grow.

Specialist Appointments at Mercy Health-Werribee

A specialist clinic is a unit within a hospital that provides planned, non-admitted services. *This data is no longer available on the VAHI website and has been left in as a reference only.*

A new appointment at a specialist clinic is recorded when a person is seen by that particular clinic for the first time. A review appointment at a specialist clinic is when the primary purpose is to assess the patient following a previous specialist clinic appointment, treatment as an inpatient or day surgery.

Quarter	No. of new Appointments	% of State Total	No. of Review Appointments	% of State Total
Oct - Dec 2018	9,151	5.7%	36,191	6.1%
Jan - Mar 2019	9,150	5.7%	35,761	6.2%
Apr - Jun 2019	8,960	5.5%	37,046	6.2%
Jul - Sep 2019	9,234	5.4%	36,669	5.8%
Oct - Dec 2019	8,504	5.7%	35,623	6.1%
Total	44,999		181,290	

Source: Victorian Agency for Health Information, https://vahi.vic.gov.au/reports/victorian-health-services-performance/specialist-clinics

Table 19 - The number of new and specialist appointments at Werribee Mercy Hospital

A routine first appointment is where a patient has been referred to a specialist clinic and the clinician determines the patient should be seen within 365 days from the date the referral was received. The proportion of routine patients who were seen by the specialist clinic within the recommended time of 365 days from receiving the referral. The statewide target is 90%:

Quarter	No. new routine Appointments	% Patients seen in recommend time	State benchmark
Oct - Dec 2018	5,010	96.3	93.3
Jan - Mar 2019	4,686	98.4	94.2
Apr - Jun 2019	4,399	98.8	93.9
Jul - Sep 2019	4,511	98.0	93.8
Oct - Dec 2019	3,964	98.3	94.1
	22,570	97.7	93.9

Table 20 - The number of new routine appointments and percentage seen within 365 days

Tables 19 and 20 above provide a guide as to the patient load the specialist clinic at the Werribee Mercy have experienced over the past 18 months. An indicator of this load is the wait times to be seen - overall about 98% of people are seen within the recommended 365 days, but two per cent are not (460 patients).

Tertiary Care (Hospital care)

Emergency Department presentations

When presenting to an ED, a person will be triaged into one of five categories depending upon the severity of the ailment they are presenting with. Table 18 lists these categories from most important to least important. When gauging the patient load within an ED, examining the least important is a good place to start. The triage categories 4 and 5 are commonly known as GP type presentations and are health conditions that can be treated effectively in most GP clinics. There are many reasons why people attend an ED to have treatment, one of the main reasons is cost. As will be presented in a following section, the rate of services that are bulk billed (i.e.: no cost to the patient if they have a Medicare card) is above 90% in Wyndham. There are other factors outside of the data that aren't published, the main one being the rate of bulk billing at the personal level (not everyone is bulk billed). Other factors include access to services and knowledge of the health system. The following table and chart show the number of presentations by triage category over eight financial years. The most common type of presentation is the semi-urgent triage group, conditions that can potentially be treated by a GP:

Table 21 - Presentations to Werribee Mercy Hospital in the last five years grouped by triage category

Triage Category	2017–2018	2018–2019	2019–2020	2020–2021	2021–2022
Triage 1. Resuscitation	87	97	176	227	261
Triage 2. Emergency	5,178	7,592	8,021	9,424	13,499
Triage 3. Urgent	10,582	13,489	20,180	22,237	23,952
Triage 4. Semi-Urgent	22,900	22,905	31,263	28,864	27,827

Triage 5. Non-Urgent	2,100	1,374	2,496	3,189	2,387
Total	40,847	45,457	62,136	63,941	67,926

https://www.aihw.gov.au/reports-data/myhospitals/sectors/emergency-department-care

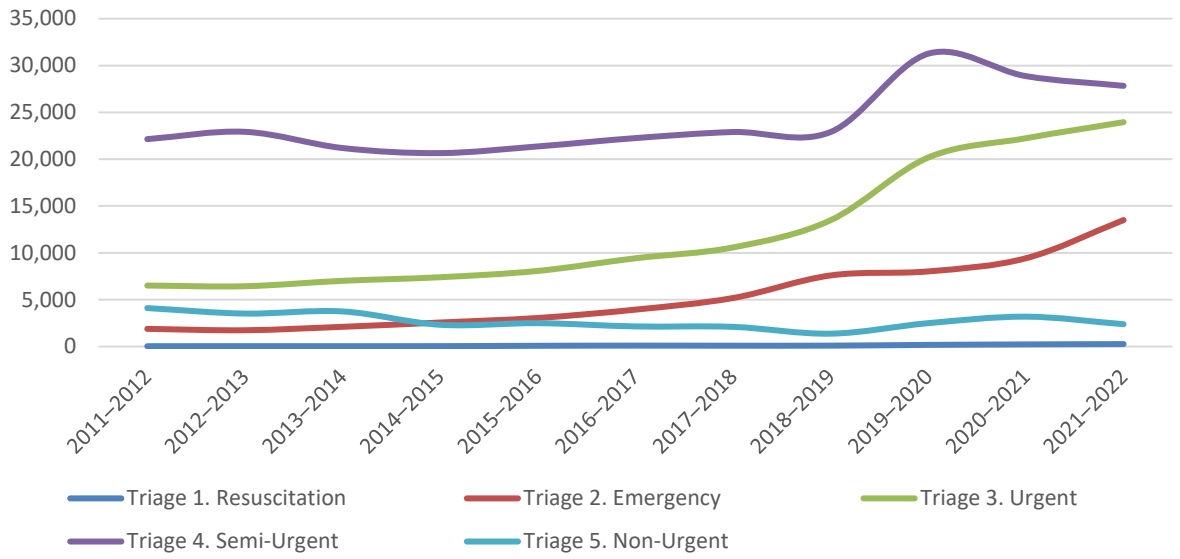


Figure 28 - Presentations to Werribee Mercy Hospital grouped by triage category, AIHW 2023

One of the detractors of going to an ED to receive treatment is the wait time. The following charts provide a guide to the amount of time a person has to wait to be triaged and/or treated. The percentage of patients seen on time is a measure of the maximum allocated time presented below:

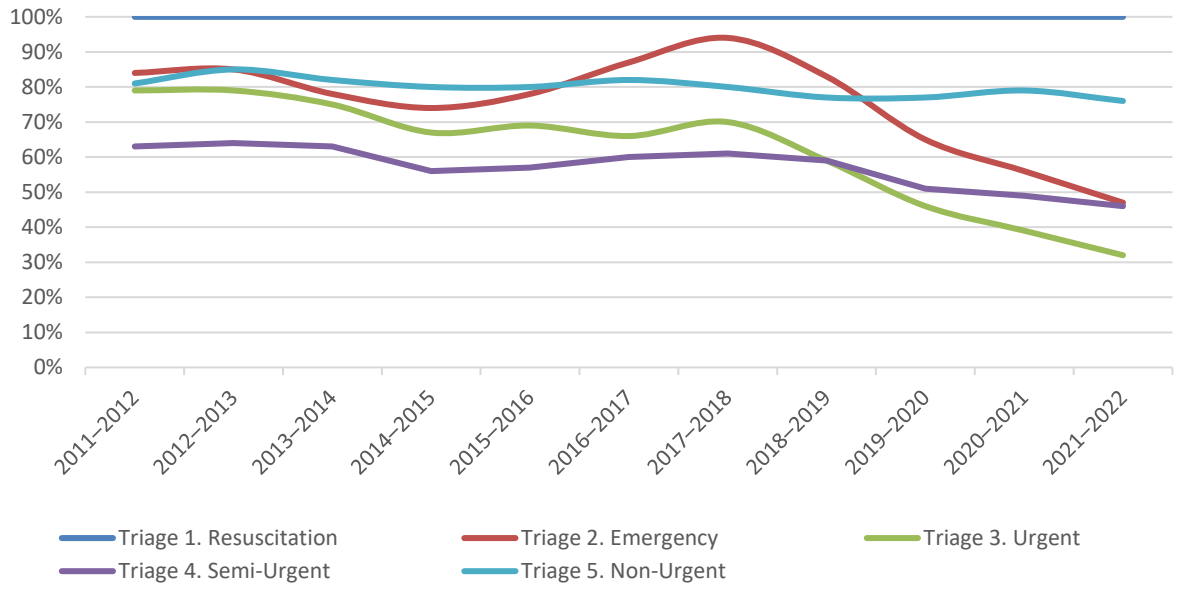


Figure 29 - Percentage of patients seen on time, AIHW 2023

Triage 1. Resuscitation (requires immediate treatment, which was defined for this report as commencement of clinical care within 2 minutes from presentation time)
Triage 2. Emergency (treatment required within 10 minutes)
Triage 3. Urgent (treatment required within 30 minutes)
Triage 4. Semi-urgent (treatment required within 60 minutes)
Triage 5. Non-urgent (treatment recommended within 120 minutes)

Triage category 1 is obviously the one you would like to see at 100%, as these are life threatening and time critical. Triage categories 2 also need to be treated within a short time frame as they have the potential to be life threatening if delayed. Category 3 conditions are normally not life threatening but require treatment to prevent deterioration, such as deep cuts and falls. For categories 4 and 5 there is little chance the condition for which the individual has presented is to be life threatening. There will likely be some pain and discomfort which may be exacerbated by a wait of two hours or more.

The timeseries profiles may seem to imply some lower triage categories are getting priority over higher categories. However, the maximum allocated time for required treatment tends to skew the outcome. For example, Non-urgent presentations have 77% of cases treated within 120 minutes whereas Urgent presentations have 59% of cases treated but within 30 minutes. The following chart shows the treatment outcomes compared against peer group hospitals (other medium sized metropolitan hospitals). Apart for Resuscitation and Emergency categories Werribee Mercy is performing below the peer group average:

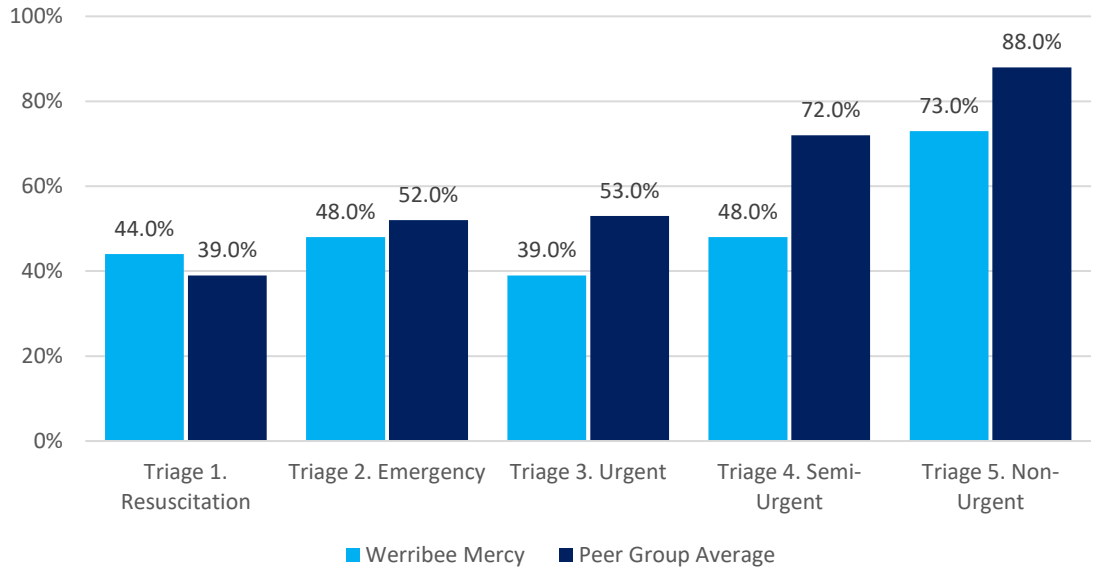


Figure 30 - Percentage of patients seen on time, AIHW 2023

The final factor to consider with ED presentation is the proportion of people discharged within the national benchmark of four hours. Some of the people treated in these group may have been admitted to, especially the Resuscitation and Emergency patients and possibly the Urgent patients. For 46% of Semi-urgent and 19% Non-Urgent the wait in ED is longer than four hours:

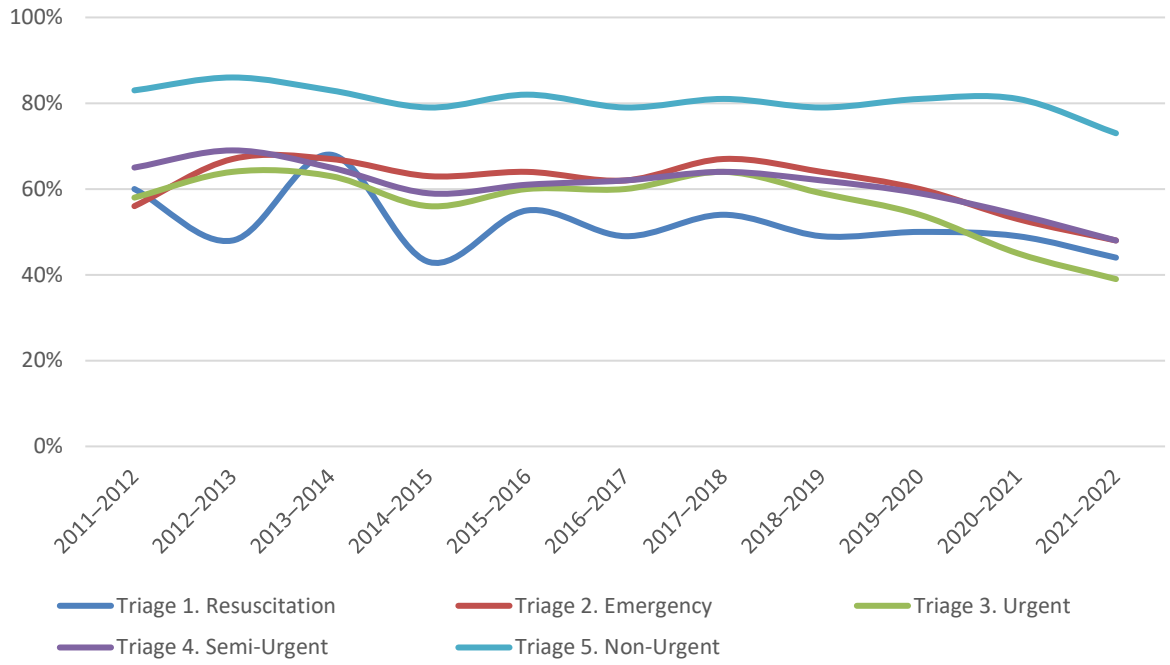


Figure 31 - Percentage who depart ED within four hours, AIHW 2023

Medical Benefits Schedule (MBS) Utilisation

The MBS is form of socialised health care whereby the government subsidises the cost of treatment of certain medical procedures and consultations. It is funded by the taxpayer through taxes and levies. The following table summarises details of the number of people accessing the MBS and the amount of subsidies:

Table 22 - Medicare subsidised GP, allied health, diagnostic imaging and specialist health care Wyndham (SA3) 2021-2022

	Age Group	No. of patients	No. of services	Total Medicare benefits paid ($)	Total provider fees ($)
Allied Health attendances (total)	0-24	23,363	49,243	$3,184,387	$4,187,762
	25-44	32,478	82,818	$5,624,474	$6,875,988
	45-64	26,153	67,053	$4,082,187	$4,607,128
	65+	14,139	46,663	$2,649,476	$2,793,973
	Female	53,669	145,606	$9,506,291	$11,364,138
	Male	42,464	100,171	$6,034,233	$7,100,713
	Total	96,133	245,777	$15,540,524	$18,464,851
Diagnostic Imaging (total)	0-24	21,628	37,012	$3,426,606	$3,716,050
	25-44	41,511	100,591	$12,491,415	$14,719,119
	45-64	26,178	70,526	$11,294,215	$12,045,758
	65+	13,497	43,267	$7,494,555	$7,677,780
	Female	59,313	156,929	$20,386,389	$23,227,500
	Male	43,501	94,468	$14,320,401	$14,931,208
	Total	102,814	251,397	$34,706,790	$38,158,707
GP attendances (total)	0-24	99,121	604,903	$26,564,514	$26,902,273
	25-44	97,514	891,849	$41,283,583	$42,385,378
	45-64	53,124	553,643	$26,536,366	$27,340,079
	65+	22,422	342,988	$17,015,452	$17,213,894
	Female	138,325	1,354,932	$63,435,709	$64,966,455
	Male	133,857	1,038,451	$47,964,206	$48,875,170

	Total	272,181	2,393,383	$111,399,915	$113,841,624
Nursing and Aboriginal Health Workers (total)	0-24	2,062	2,616	$55,930	$65,362
	25-44	6,383	8,760	$165,809	$182,830
	45-64	5,893	8,224	$116,446	$119,484
	65+	4,998	8,257	$110,763	$111,803
	Female	10,860	15,998	$269,290	$291,806
	Male	8,476	11,859	$179,657	$187,673
	Total	19,336	27,857	$448,948	$479,479
Specialist attendances (total)	0-24	17,689	39,419	$4,169,240	$6,447,756
	25-44	23,910	63,971	$5,500,032	$8,581,058
	45-64	18,405	56,121	$4,713,032	$7,242,145
	65+	13,051	51,031	$4,175,306	$5,759,756
	Female	40,382	120,376	$10,413,414	$15,813,512
	Male	32,674	90,166	$8,144,195	$12,217,203
	Total	73,055	210,542	$18,557,610	$28,030,715
Total	0-24	172,978	766,768	$39,840,764	$44,007,429
	25-44	195,471	1,132,224	$63,523,026	$70,475,513
	45-64	117,739	735,177	$45,309,535	$49,541,439
	65+	75,596	482,555	$32,222,682	$34,479,283
	Female	302,549	1,793,841	$104,011,093	$115,663,411
	Male	260,972	1,335,115	$76,642,692	$83,311,967
	Total	561,784	3,116,724	$180,896,007	$198,503,664

https://www.aihw.gov.au/reports/primary-health-care/medicare-subsidised-gp-allied-health-and-specialis/data

Table 23 - Average service use and bulk billing rate of Medicare subsidised GP, allied health, diagnostic imaging and specialist health care, Wyndham (SA3) 2021-2022

	Age Group	Ave. No. of Service per person	Ave. Cost per Service	Ave. Cost per Person/Year	Estimated Bulk Billing Rate
Allied Health attendances (total)	0-24	2.1	$64.67	$136	76.0%
	25-44	2.5	$67.91	$173	81.8%
	45-64	2.6	$60.88	$156	88.6%
	65+	3.3	$56.78	$187	94.8%
	Female	2.7	$65.29	$177	83.7%
	Male	2.4	$60.24	$142	85.0%
	Total	2.6	$63.23	$162	84.2%
Diagnostic Imaging (total)	0-24	1.7	$92.58	$158	92.2%
	25-44	2.4	$124.18	$301	84.9%
	45-64	2.7	$160.14	$431	93.8%
	65+	3.2	$173.22	$555	97.6%
	Female	2.6	$129.91	$344	87.8%
	Male	2.2	$151.59	$329	95.9%
	Total	2.4	$138.06	$338	91.0%
GP attendances (total)	0-24	6.1	$43.92	$268	98.7%
	25-44	9.1	$46.29	$423	97.4%
	45-64	10.4	$47.93	$500	97.1%
	65+	15.3	$49.61	$759	98.8%
	Female	9.8	$46.82	$459	97.6%
	Male	7.8	$46.19	$358	98.1%
	Total	8.8	$46.54	$409	97.9%
Nursing and Aboriginal Health Workers (total)	0-24	1.3	$21.38	$27	85.6%
	25-44	1.4	$18.93	$26	90.7%
	45-64	1.4	$14.16	$20	97.5%
	65+	1.7	$13.41	$22	99.1%
	Female	1.5	$16.83	$25	92.3%
	Male	1.4	$15.15	$21	95.7%
	Total	1.4	$16.12	$23	93.6%
Specialist attendances (total)	0-24	2.2	$105.77	$236	64.7%
	25-44	2.7	$85.98	$230	64.1%
	45-64	3.0	$83.98	$256	65.1%
	65+	3.9	$81.82	$320	72.5%
	Female	3.0	$86.51	$258	65.9%
	Male	2.8	$90.32	$249	66.7%
	Total	2.9	$88.14	$254	66.2%
Total	0-24	4.4	$51.96	$230	90.5%
	25-44	5.8	$56.10	$325	90.1%
	45-64	6.2	$61.63	$385	91.5%
	65+	6.4	$66.78	$426	93.5%
	Female	5.9	$57.98	$344	89.9%
	Male	5.1	$57.41	$294	92.0%
	Total	5.5	$58.04	$322	91.1%

[1] This figure will not truly represent how people access health services. The data provided only lists overall numbers, certain people will have higher health care needs than others and access services more frequently

[2] This data represents the cost to the person accessing the service. It is the fees charged by the provider divided by the average number of services per person.

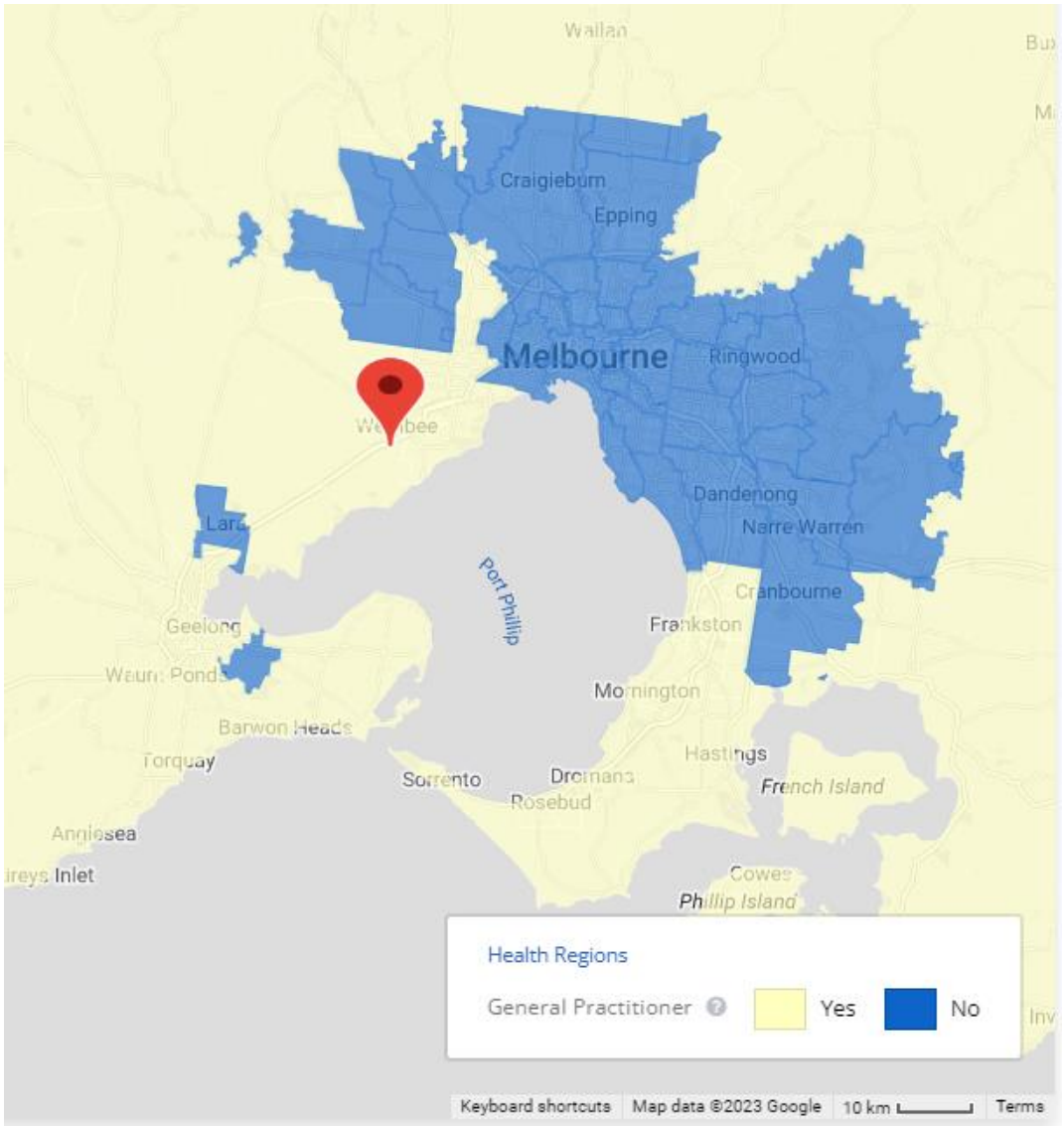
[3] This is a crude estimate based on the amount charged by the service providers and the benefits paid through Medicare. As the average cost per service implies, there are some people who aren't bulk billed. As a result, the cost per person not bulk billed is much higher than indicated.

Workforce Shortage

General Practitioners

Evaluation of how a region is deemed to be an area or workforce shortage is complex and based on models that consider gender, demographics, and the socio-economic status of patients living in an area. The Commonwealth Department of Health (DoH) call this classification the Distribution Priority Area (DPA). This classification identifies locations in Australia with a shortage of medical practitioners. International medical graduates work in a DPA to be eligible for Medicare (DoH, 2020). DPA identifies areas where people don't have enough access to doctors, based on the needs of the community. Regions are defined using the Modified Monash Model (MMM) which classifies them as city, rural, remote or very remote. The following a map for Greater Melbourne showing Werribee as the red maker:

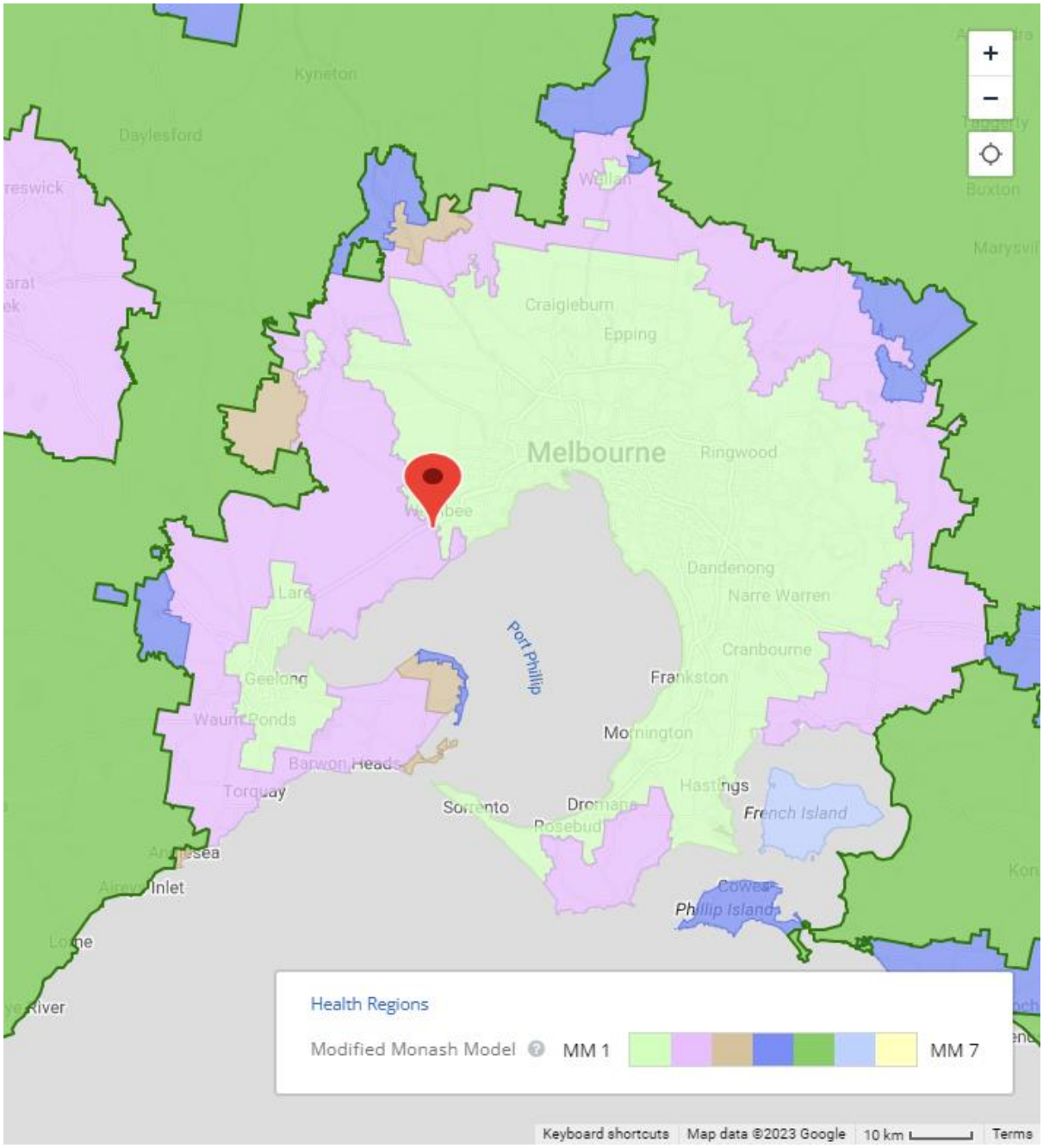
Figure 32 - Distribution Priority Areas, July 2022



https://www.health.gov.au/resources/apps-and-tools/health-workforce-locator/health-workforce-locator

Wyndham is classified as being area of need for medical practitioners.

Figure 33 - Modified Monash model 2019



https://www.health.gov.au/resources/apps-and-tools/health-workforce-locator/health-workforce-locator

This is the MMM for Greater Melbourne, again showing Werribee as the red marker. Basically, the areas that are coloured light green, pink (some, not all) and brown are regions deemed to have sufficient GPs. The regions of darker green are rural areas and have been assessed as being areas of health workforce need.

Medical Specialists

With all of the medical specialities available to map, Wyndham is an area of District Workforce Shortage (DWS). People who live in areas outside of the blue areas have poorer access to medical specialists. Even regions with major hospitals such as Sunshine and Footscray (western Health) still have lower levels of access to specialists. It appears that inner east Melbourne, Frankston and Geelong have sufficient practitioners based on this model.

Figure 34 - Anaesthetists

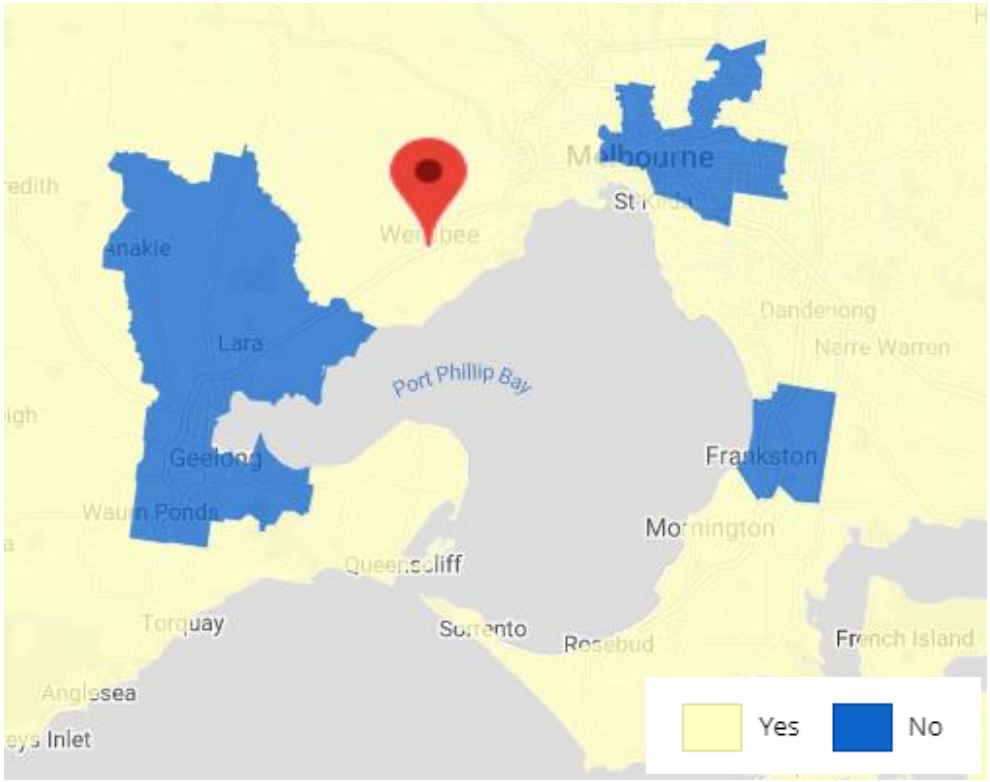


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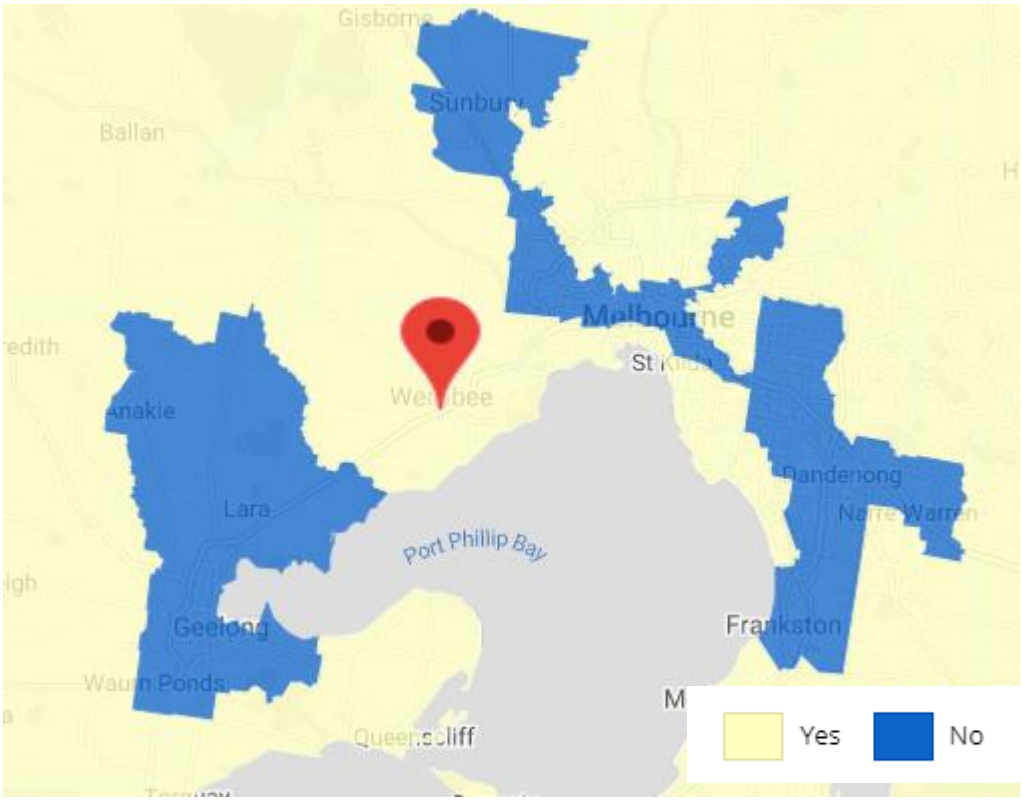
Figure 35 - Cardiologists

https://www.health.gov.au/resources/apps-and-tools/health-workforce-locator/health-workforce-locator

Figure 36 - Diagnostic radiology



https://www.health.gov.au/resources/apps-and-tools/health-workforce-locator/health-workforce-locator

Figure 37 - General surgery

https://www.health.gov.au/resources/apps-and-tools/health-workforce-locator/health-workforce-locator

Figure 38 - Obstetrician and Gynaecologists

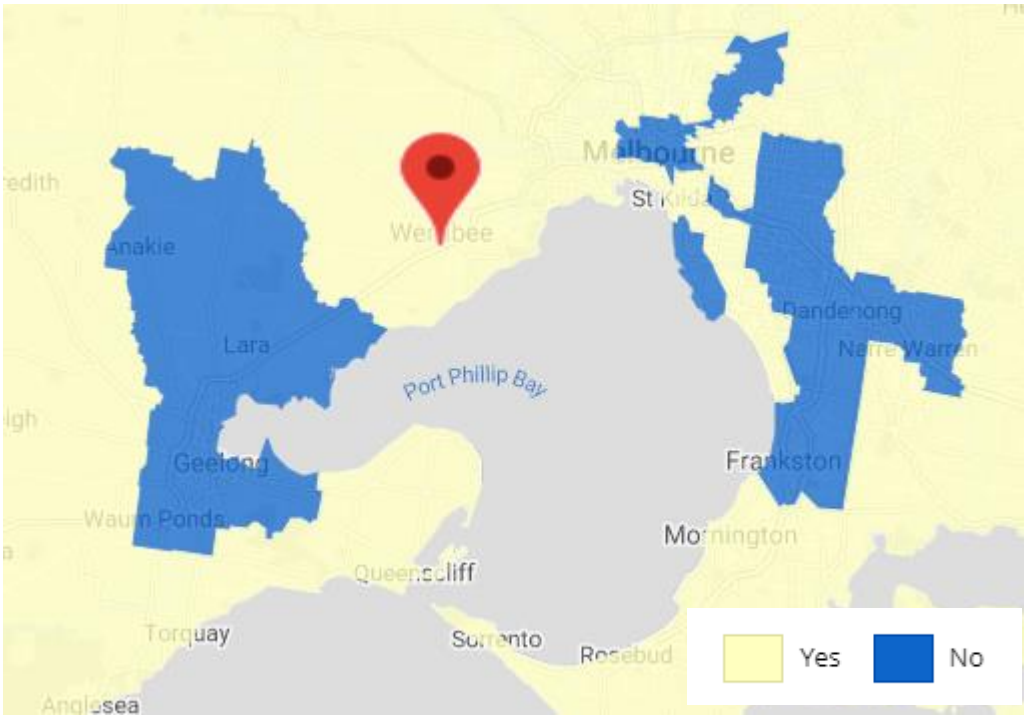


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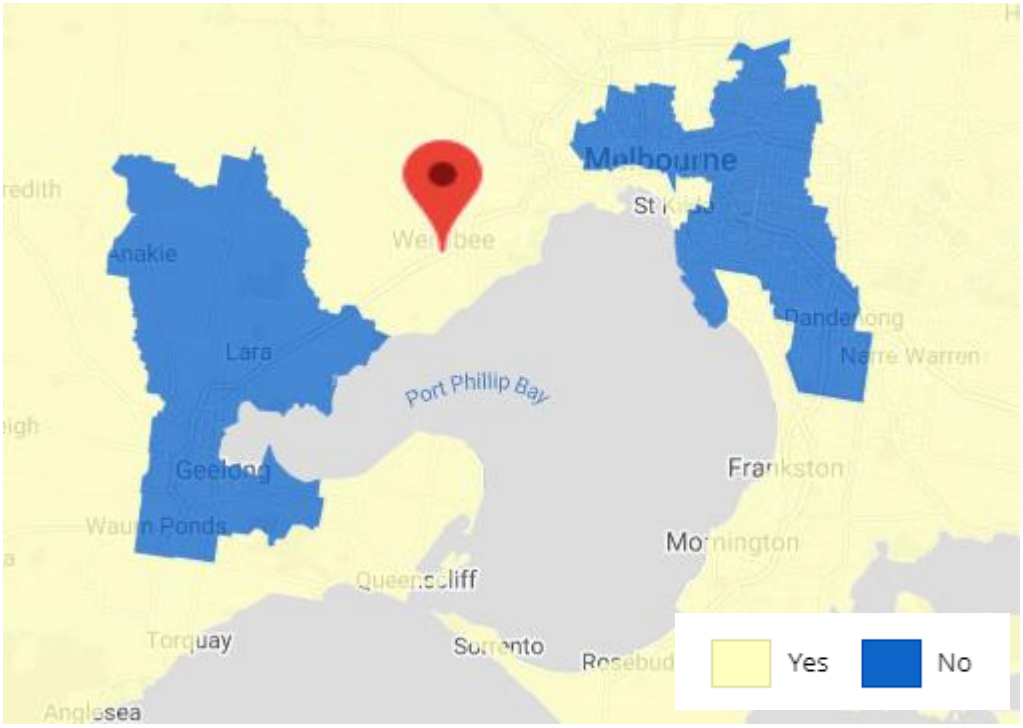
Figure 39 - Ophthalmologists



https://www.health.gov.au/resources/apps-and-tools/health-workforce-locator/health-workforce-locator

Figure 40 - Medical Oncology

Figure 41 - Psychiatry