inner east pcp primary care partnership

Major findings

Health and Wellbeing Needs of Older People Living in the Eastern Region of Melbourne

January 2017

Health and Wellbeing Needs of Older People Living in the Eastern Region of Melbourne

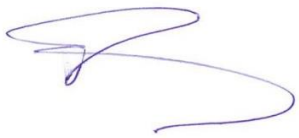
A Foreword from the Chair

With rising life expectancy, across the globe we are experiencing growing numbers of older people living in the community. This change is mirrored in the Eastern Metropolitan Region (EMR) with population projections showing an increase of over 56,000 people aged over 60 years in the next 10 years. As a community it is important that we are prepared for this significant change in our demographic and consider how we can best support the health and wellbeing of older people in the EMR, together with older people, within a positive ageing approach.

I am pleased to present the Health and Wellbeing Needs of Older People Living in the Eastern Region of Melbourne. This report contains extensive qualitative and quantitative data about older people in the EMR and presents a comprehensive picture of their health and wellbeing. The report is presented within the World Health Organisation Healthy Ageing Framework and includes: personal characteristics such as ethnicity, gender and education; health characteristics such as rates of cancer or dementia; health behaviours such as healthy eating and smoking rates; and environments such as social and community networks. This report provides an evidence base for agencies across the EMR to assist with policy and planning to support healthy ageing and will provide a platform for collaborative work to support healthy ageing across the region and into the future.

The report has been developed by Inner East Primary Care Partnership and ASDF consulting, with funding from the Department of Health and Human Services and input from a steering committee with representation of agencies across the East.

I recommend this report to all who are interested in promoting positive ageing and encourage you to use this resource to support your work in this area within your agencies and in collaboration with partner agencies.



Kevin Feeney
CEO, Bestchance

Chairperson, Inner East Primary Care Partnership

This document provides a summary of the key methodology and major findings of the "Health and Wellbeing Needs of Older People Living in the Eastern Region of Melbourne". The full report was written by Sharon Porteous, Integrated Care Coordinator, Inner East Primary Care Partnership and Christy Arnott, ASDF Research. The grey literature review was undertaken by Vivian Yin, and Kathleen Brasher, This Day and Age, contributed to the healthy ageing framework section.

We would like to acknowledge the contributions of our partner agencies and Outer East Primary Care Partnership, who participated on the Steering Group.

The "Health and Wellbeing Needs of Older People Living in the Eastern Region of Melbourne" was supported by the Victorian Government.

This report may be used by agencies across the EMR to assist with policy development, planning, grant writing and delivery of services. This could include local government in their health and wellbeing planning and development of positive ageing strategies, community health and other agencies with their strategic plans. It is hoped that the report will encourage and assist agencies to work collaboratively in the future on a range of healthy ageing activities that assist the community to age well.

We encourage agencies to use any relevant data and request that you acknowledge this report where it has served as a reference.

Suggested reference:

Arnott, C & Porteous, S. (2017). *Health and wellbeing needs of older people living in the Eastern region of Melbourne*, Inner East Primary Care Partnership, Melbourne.

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Introduction

Primary Care Partnerships (PCPs) are funded by the state government to provide a partnership platform to support local health and community service agencies to work together to improve the health and wellbeing of the community within their catchment. The Eastern Metropolitan Region (EMR) of Melbourne is comprised of two PCP catchments: Inner East and Outer East. The Inner East PCP (IEPCP) covers four local government areas – Boroondara, Manningham, Monash and Whitehorse. The Outer East PCP (OEPCP) is comprised of three local government areas – Knox, Maroondah and Yarra Ranges.

PCP partner agencies identified the need for a systematic collection of data about the health and wellbeing, independence and safety needs of older people in order to provide an evidence base from which to identify issues with the view to future collaboration. Without this more detailed understanding, the catchment is at risk of a disjointed and uncoordinated approach to key health and wellbeing, independence and safety issues affecting our ageing population and of being unaware of significant and emerging issues for older people.

The two key reasons to undertake this project were:

1. An ageing population;
2. That older people have a strong desire to remain living independently in the community in their own homes.

The needs analysis of older people living in the Eastern Metropolitan Region (EMR) of Melbourne systematically addresses the research question of what older people in the EMR need to maintain health, wellbeing, independence and safety.

Healthy ageing conceptual framework and indicators

The World Health Organisation (WHO) provides a philosophical perspective that aligns with the goals of this project. WHO defines healthy ageing as 'the process of developing and maintaining the functional ability that enables wellbeing in older age' (World Health Organization, 2015, p. 28).

This definition is rooted in a social determinants approach, recognising the diversity within the population of older people where any individual, depending on their course through life, will exhibit a range of physical and mental capacities that impact on their ability to function. A person's ability to live the life they value is determined by both their intrinsic capability—the personal, health and genetic characteristics within them—and the environment in which they live.

Healthy ageing, therefore, is the interdependent relationship between a person's intrinsic capacity, and the environment in which they live. The WHO Age Friendly Cities and Communities (World Health Organisation (WHO), 2007) initiative articulates the components of an environment most conducive to enhancing a person's functional ability:

- outdoor spaces and buildings
- transport
- housing
- social participation
- respect and social inclusion
- civic participation and employment
- communication and information
- community support and health services

b. Indicator selection

In addition to the academic literature researched, the final list of indicators for this project was developed in consultation with the Steering Group and key informants such as Eastern Melbourne PHN and Helen Keleher, consultant for IEPCP.

It was important that indicators have data available through existing routine data sources, and be disaggregated by age groups, gender, and local government areas.

The final selection of indicators used in this needs analysis is presented below within the WHO Healthy Ageing Framework:

Intrinsic Capacity	
Personal characteristics	Age Gender Aboriginal and Torres Strait Islander Country of Birth and new arrivals Language and English Proficiency Income Education Employment and retirement
Health characteristics	Self-assessed health Body weight, high blood pressure, cholesterol Diabetes Asthma Incidence of disease (respiratory, cardiovascular, coronary, cerebrovascular, peripheral vascular), cancer prevalence, kidney disease Dementia Bone and joint diseases Injuries/falls Oral Health Mental Health Emergency department presentations, ambulatory care sensitive conditions Deaths Disability Need for assistance with core activities
Health Related Behaviours	Physical inactivity (sedentary or insufficient activity) Fruit and vegetable consumption Consumption of sugar-sweetened soft drinks Alcohol consumption Smoking Influenza vaccination rates Screening rates Avoidable mortality
Lifestyle behaviours	Gambling incidence

Environments	
Social and Community Networks	Live alone Presence of carer/unpaid carer status Religion Volunteering Incidence of elder abuse Participation activities Feeling part of the community Contact with family and friends
Age Friendly Cities	Housing – type, cost, affordability Public open space Food accessibility Transport access, walkability Community safety - perceptions Being comfortable to walk day/night Access to internet Use of technology Citizen engagement
Other socio-economic, cultural and environmental conditions	Disadvantage (SEIFA) Life Expectancy

It should be noted that there is some variation between this list and the data presented in this report which was dependent on availability and access. In addition, some additional data was included that may not have been identified initially.

Regional Definitions

Key regions are defined as follows:

Inner East	Local government areas of: Boroondara, Manningham, Monash, Whitehorse.
Outer East	Local government areas of: Knox, Maroondah, Yarra Ranges.
Eastern	Combined Inner and Outer regions as defined above.
Eastern Melboume PHN	Eastern Melbourne Primary Health Network which covers a wider geographic area than just the inner east and outer east areas as defined above. This region also includes Banyule, Mitchell (partial), Murrindindi (partial), Nillumbik and Whittlesea.
Melbourne Metro or Greater Melbourne	Metropolitan area of Melbourne as outlined in Appendix 2.
Victoria	The entire state of Victoria.

Project Methodology

The findings in this report are informed by qualitative and quantitative data gathered through previous consultations, openly available data bases, and data collected by partner agencies.

For this project the following scopes were defined, and where possible, data was sought to meet these parameters:

- Geographic coverage: Boroondara, Knox, Manningham, Maroondah, Monash, Whitehorse and Yarra Ranges local government areas.
- People aged over 60 years, ideally in 10 year age ranges (60-69, 70-79 and 80+).

The grey literature review identified, collected and synthesised existing unpublished reports that were analysed thematically in line with the health and wellbeing indicators chosen for this research.

Data was also extracted from a range of quantitative data bases, most of which are publicly available.

Note that many of the health and wellbeing items within this report are drawn from a data output request from the 2014 VPHS survey. (Department of Health and Human Services, 2014) This data provides a robust sample per LGA across a wide range of measures.

Another key data source is the database of patient admissions in Victoria (Department of Health and Human Services, 2015-2016). This data was provided by the State Government of Victoria on request.

Major Findings

With population projections showing a likely increase of over 56,000 60+ year olds in the Eastern Metropolitan Region (EMR) in the next 10 years, it is particularly important to understand the impact of this increase.

Intrinsic capacity

M1. Personal characteristics

The number of 60+ year olds in the EMR is projected to increase significantly in the next 10 years, particularly in Knox and Yarra Ranges. As is the case nationally, life expectancy is higher for females than males, therefore the gender distribution of 60+ year olds switches from relatively even for 60-79 year olds to female dominated amongst 80+ year olds.

An essential part of maintaining independence and receiving health messages in Australia is an understanding of the English language. Almost a quarter (23.9%) of EMR residents aged 60 years and over speak a language other than English at home, with the primary languages being Greek, Italian and Cantonese. Most profess to speak English well or very well (71%), which is higher than the Melbourne metropolitan average (64%). Therefore, language barriers are likely to be an issue for around a third of the 60+ year old population, with particular languages with high levels of not speaking English well, being Mandarin, Vietnamese, Cantonese, Turkish and Greek.

Financial Security

Older people face a unique set of potential financial stresses as they enter retirement, which can impact on their ability to live healthy and fulfilling lives.

According to the grey literature, the key issues impacting on financial security were housing affordability and housing costs, particularly for people living alone. Lack of disposable income also limits access to healthy food, physical activity and recreation, and services. The grey literature also points to an asset rich population but with potentially insufficient resources to finance daily expenses. More information is sought by older people about financial matters and affordable supports and services.

Having a fixed income can enable security and independence. In the EMR 45% of 60-69 year olds are still working, however over half (60%) of those aged 65 years or over are receiving an Aged Pension and 45.5% of those aged 60 years or over are on an income of less than $400 a week..

These reduced incomes may be manageable for the 66% of 60+ year olds who own their home outright, however almost one in five (19.1%) 60-69 year olds and even 4.4% of 80+ year olds still have a mortgage. Indeed, 7.3% 60+ year olds in the region pay a mortgage of over $1,000 a month and 3.7% pay more than $250 a week in rent. This finding illustrates that some older people may need to continue in the workforce beyond typical retirement age to pay off mortgages. Females are particularly susceptible to these financial stresses as they age; due to a longer life expectancy (females 85.4 compared to 82 for males) increasing proportions will be living on a single income once they are over the age of 75 (76.3% of 75+ year old females live alone).

Further financial stresses are potentially occurring for the 30% of EMR residents aged 60 years or over who provide unpaid assistance to a person with a disability; this is higher than recorded for the Melbourne metropolitan area (26.2%). The grey literature identified that carers need more financial support for their caring role.

Education

Older people in the EMR are more often educated at or beyond year 12 equivalent (36% year 12, 38% post-secondary) than the Victorian average (27.2% and 30.8% respectively), although the incidence does decrease with age. As the population ages, the average level of education amongst older people will improve.

M2. Health characteristics

It is important to view health characteristics holistically. Often there are comorbidities between separate health conditions and suffering from a particular negative health condition can often lead to further health conditions in the future.

A lower proportion of 60+ year olds in the EMR self-report their health as fair or poor than the average for Metropolitan Melbourne.

Nearly two in ten 60-79 year olds in the EMR are classified as obese (17%; dropping to 12% 80+ year olds) and almost 2% 60+ year olds are underweight.

There are a wide range of health complications that are more common amongst people aged 60 years and over, specifically high blood pressure (61% 70+ year olds), diabetes (15% 70-79 year olds, then decreasing to 12% amongst 80+ year olds+ year olds), heart disease (28% 80+ year olds), arthritis (58% 80+ year olds), vision impairment that can't be fixed with glasses/contacts (9% 80+ year olds) and dementia, for which there are predicted to be over 65,000 residents in the EMR with dementia by 2050 (up from 19,900 currently). Heart disease, high blood pressure, diabetes and arthritis are all related to overweight and obesity.

The incidence of doctor diagnosed depression in older people in the EMR is at 20% amongst 60-69 year olds and then decreases with age to 13% 80+ year olds. Less than one in ten (7% 60-69 down to 5% 80+ year olds) are categorised as having a high or very high level of psychological distress using the Kessler 10 scale.

Over a third (36.1%) of residents aged 65 years or over need assistance with one or more activities, and one in six (17.8%) need assistance with 3 or more activities, increasing to 38% amongst those aged 80 years or over. One in ten (11.8%) residents aged 65 years or over have a severe or profound disability. In many instances these people are cared for by their partners, with over 9,000 residents aged 65 years or over in the EMR who care for someone who needs assistance.

Falls are a significant risk for older people which increases with age and can impact on loss of independence and mortality; in the EMR it is estimated that around 11.2 in 1,000 60-69 year olds will present to hospital due to a fall, increasing to 16.9 in 1,000 70-79 year olds and 49.3 in 1,000 80+ year olds. Furthermore, around 50 EMR residents aged 65 or over are admitted to hospital each year for pedestrian related accidents.

Death

The primary causes of death amongst 55-75 year olds are cancer and coronary artery disease; then as people age the primary causes of death for 75-84 year olds are more commonly heart disease and stroke, and then for 85+ year olds it is dementia. In terms of cancer, the main cancers in 60-69 year olds are bowel, prostate and lung; then for 70+ year olds prostate and breast are the main cancers.

M3. Health Related Behaviours

There are a range of lifestyle factors which can lead to older people being at risk of reduced health and wellbeing. The following observations relating to older people in the EMR are all in line with state and Melbourne metropolitan averages. Specifically:

- More than one quarter of 70+ year olds don't meet physical activity guidelines (28%), which can lead to a reduction of strength and agility, resulting in falls and other health issues such as diabetes;
- Over four in ten don't meet fruit and vegetable consumption guidelines (43%);
- One in ten 80+ year olds consume sugar-sweetened drinks on a daily basis (10%); and
- Many don't participate in screening for key diseases such as breast cancer (43%), cervical cancer (49%) and bowel cancer (66%), and only 17% of 75+ year olds have regular health checks.

The grey literature also identified:

- The preferred physical activity type for older people is walking;
- Groups most at risk of physical inactivity are people over 80 years, carers, and people living with chronic conditions;
- Factors affecting physical activity levels include self-motivation, medical conditions, weather, time, cost and

safety (such as a fear of falling);

Despite these areas of need for improved knowledge and behaviour, it is encouraging to note that both alcohol and cigarette consumption decreases with age amongst those aged 60 years and over.

Gambling is another lifestyle factor that can cause issues for older people, as it is perceived to be a social activity, yet can be severely detrimental for those on low incomes. Almost three quarters of 65-69 year olds gamble in some way (73%) and one in ten 65-79 year olds are at risk or currently problem gamblers (10%). This decreases with age, with 49% of 85+ year olds undertaking some form of gambling and 5% at risk or problem gamblers. The primary gambling activities for 65+ year olds are lotto, raffles and sweeps, electronic gambling machines and race betting.

Environments

M5. Social and Community Networks

According to the grey literature, people who are vulnerable to social isolation are those that live alone, live in retirement villages and nursing homes, carers and people with chronic conditions. Factors that contribute to social isolation are lack of time, financial stress, poor health, limited mobility, transport access, language and culture, lack of knowledge about activities and services available and feelings of stigma. There was a preference for affordable or free activities with accessible transport and a preference for more spaces with good facilities. Older people want to be involved in decision making about activities.

More than eight in ten 60+ year olds living in the EMR indicate that they are affiliated with a religion (primarily Christianity), which can provide community and social networks. Although, this is likely to decrease over time as younger people with lower instances of affiliation age.

Another key resource for connection to the community and seeking health information is the internet. At present, less than half of those aged 80+ have access to the internet, although this will increase as more internet savvy people age.

Living conditions can impact on an individual's ability to engage with other people and the community. This is particularly evident when older people are living alone, which is the case for a third of the population aged 75 years or over in the EMR (34%), increasing to three quarters of females aged 75 years or over (76.3%, highest incidence in the state).

The key positive community participation activity covered in the data is volunteering, which is common amongst those aged 60-79 (21%), however drops off significantly as people age over 80 years (12% 80-89 and 4% 90+). Participation in volunteering is considered to be a beneficial activity for social cohesion and the wellbeing of the volunteer.

A lower proportion of residents aged 65 years and over in the EMR identify as carers (18.4%) when compared to the state average (19.8%), however a higher proportion look after children (16%, 13% Victoria). Carers are a resource to the community, but being a carer can also be a challenge for the individual when they do not receive adequate support or face transport limitations.

M6. Age Friendly Cities

The EMR provides a number of living conditions at a higher standard when compared to the wider Melbourne metropolitan area. Three of the LGAs boast high land areas of green space (Yarra Ranges, Manningham and Knox), in the inner east a high proportion of the land area is in close proximity to public transport.

Whilst most 60+ year olds in the EMR live in private dwellings (91.8%), around 10,000 people across the region live in nursing homes or accommodation for the aged. Considering the projected population increase in the next 10 years, with around 5% of the 60+ aged population in nursing homes, there may be a need for another 2,800 places in nursing homes or accommodation for the aged by 2026.

In general (across all ages), the crime rate in the EMR is lower than the state average, however most of this occurs in the younger age ranges, particularly for crimes against the person (6.39 per 1,000 for under 60 year olds compared to 1.56 per 1,000 for 60+ year olds). For crimes against property, the rate for 60+ year olds is lower in the EMR (12.7 per 1,000) than the state average (18.5 per 1,000) suggesting that older people in the EMR are more at risk of crime

directed against their property than against their person.

Access to spaces and activities is important to enable community engagement and participation. On average, residents in the EMR have access to 2 parklands or garden public open spaces per 1,000 population and 0.5 organised recreation areas per 1,000 population; this is on par with the Melbourne metropolitan average. On average residents in the region can travel for less than 1km to reach one of these open space resources.

Access to transport can have a significant impact on older people's ability to engage with the community and access health services, particularly for carers. Car ownership decreases significantly once residents enter their 80s (down to 56%, from 90% 60-69 year olds) and one in five EMR residents aged 55 years or over (23%) experience transport limitations, which is slightly lower than the Melbourne metropolitan average. Across the whole EMR, 12.1% of the total land area is within 400m of a bus or tram stop, or 800m of a train stop. This is low mostly due to poor public transport availability in Yarra Ranges (3.1%); however, most LGAs have very high levels of access, at more than 60%. According to the grey literature, people most likely to experience transport issues were carers, people with chronic conditions, people with mental health issues and people who are socially isolated. Issues identified were a lack of public transport options, particularly in the outer east. The community is concerned about cost, difficulties with MYKI, safety when boarding and disembarking and travelling at night. Taxis were viewed as unreliable and community transport is not well known as an alternate option. Improvements could be made by offering more transport options with greater frequency and reach and improved safety.

Health Literacy

Although health literacy was not identified as a separate indicator of health and wellbeing, it was a key theme identified in the grey literature review. Older people identified limited understanding of services, information about chronic conditions, lack of skills to access technology and a desire for a stronger understanding of the health system, health issues and keeping well. Language and culture particularly impacted on health literacy. It was recommended to provide more health information through councils, GPs, forums and events.

M7. Other socio-economic, cultural and environmental conditions

Whilst overall the region shows high SEIFA scores, there are clear pockets of disadvantage throughout which can result in inequality/inequity and in turn impact on social cohesion, health and wellbeing.

Life expectancy is higher than the average for the Melbourne metropolitan area.

Regional Specifics

Within the data there are some notable variations by region which can assist with place-based approaches to improving the health and wellbeing of older people.

a. Inner and outer east

The inner east region is generally showing better performance on a range of indicators than the outer east, likely due to the nature of better access to services and transport. The grey literature corroborates this with the inner east community identifying good access to public transport, social activities and quality parks and open spaces. People who live in the inner east have a higher life expectancy and lower levels of avoidable mortality than the outer eastern region.

The key area of need in the inner east is with regards to languages other than English. The inner east has a higher proportion of residents born overseas (43.1%, compared to 38% outer east), particularly non-English speaking locations; for outer east the main location of birth for those born overseas is England, whereas for inner east it is Greece and Italy. The main languages spoken in the inner east by those who speak a language other than English (29.4%, compared to 14.2% outer east) are Greek, Italian, Cantonese and Mandarin, and 32% of those who speak a language other than English say that they don't speak English well or at all (compared to 22% outer east).

In the outer east the data reveals a range of challenges for older people, mostly revolving around low incomes. This region has a higher incidence of 60+ year old lone person households with a low income and high housing costs, a high percentage of people aged 65+ on the aged pension (67% compared to 56% inner east), and a higher percentage of 60+ year olds on an income of less than $400 a week (48.7% compared to 43.6% inner east), and a higher crime rate (57.1 per 1,000 compared to 43.5 for inner east). The 2015-16 hospital data shows that outer east older adults also present to hospital at a higher rate. In particular, 80+ year olds in the outer east present to hospital for a range of complications at a higher rate than in the inner east, including diabetes, heart failure, circulatory and respiratory system diseases and disorders, kidney disease and musculoskeletal system diseases and disorders.

These challenges for the outer east are particularly important to address given that it is estimated that the number of 70-79 year olds in the outer east region will almost double from 2011-2026, from 21,700 to 42,000 (93.5%), and the number of 80+ year olds is estimated to increase from 14,400 to 25,000 (73.6%). Comparatively, the increase in the inner east is much smaller (70-79 year olds increase 31% from 44,149 in 2011 to 58,005 in 2026, and 80+ year olds increase by 41% from 31,593 in 2011 to 44,431 in 2026).

b. Boroondara

In Boroondara more than half of 60-69 year olds are still working (52%), compared to 45% average for the inner east region. This may be contributing to residents in this area being in a better financial position than most, with a lower incidence of residents aged 60+ who are on a low income of $400 or less a week (45.9% compared to a state average of 66.6%). However, a higher than average proportion of residents aged 60-69 provide unpaid assistance to people with a disability (19%, compared to 16% average across Melbourne metropolitan area) and the LGA is the second highest in the state for incidence of females aged 75 years or over living alone (79%). This LGA shows the highest incidence of residents aged 60 years or over who volunteer (22.6%).

A higher number of elder abuse incidences were recorded within this municipality (101 in 2015-16).

c. Manningham

The data relating to Manningham reveals a number of items that present unique challenges for the health and wellbeing of older people, potentially contributing to the higher incidence of 80+ year olds self-reporting fair or poor health (34%, EMR average 23%).

A high proportion of residents were born overseas (49.6%, EMR average 41.3%), primarily Italy, Greece and China; resulting in a higher than average incidence of 60+ year olds speaking a language other than English (37.9%, EMR average 23.9%) and potentially not having access to health information in a format that they understand. There is a low percentage of land area within 400m of a bus/tram or 800m of a train (37%, most other regions are above 60%), translating to 29% of 55+ year olds experiencing transport limitations compared to a Melbourne metropolitan average of 25%. These aspects are likely to be contributing to pockets of low SEIFA scores along Doncaster Rd and near the Thompson Rd and Manningham Rd intersection.

A relatively high 18% of residents aged 60 years and over care for children other than their own, compared to an average of 14% across the Melbourne metropolitan area.

d. Monash

Monash is predicted to have the smallest increase in 60+ year olds across the region in the 15 year period from 2011 to 2026 (17%, approximately 6,500 individuals), therefore this region will have less of a challenge to cater for significantly increased numbers of older people compared to the other regions in the EMR.

In this region there is a relatively high instance of 60+ year olds born overseas (49.5%, EMR average 41.3%) and consequently a high incidence of people who speak a language other than English (35.5%, EMR average 23.9%); primarily Greek, Italian and Cantonese.

Monash shows pockets of SEIFA disadvantage in Clayton and around Power Avenue in the North East of the Region, and has a notably high incidence of 60-69 year olds who are retired rather than staying in the workforce (59%, EMR average 54%).

In terms of the health of 60+ year olds, Monash may benefit from diabetes services and information for older residents. Trends regarding diabetes show that incidence usually increases as people reach 60 years and over, then fall in their 80s. However in Monash the incidence of diabetes continues to increase with age, from 14% 60-69 year olds through to 20% 80+ year olds.

e. Whitehorse

As was observed in Monash, the incidence of diabetes in Whitehorse doesn't follow the usual trend of decreasing once people pass the age of 80 years; instead the incidence amongst 80+ year olds (18%) is similar to 70-79 year olds (19%) and 60-69 year olds (18%).

The only other key variations within the City of Whitehorse when compared to regional averages were a slightly higher incidence of residents in public housing (2.4%, EMR average 1.7%) and a slightly higher incidence of those aged 60 years or over volunteering (21.3%, compared to 19.3% across the EMR).

f. Knox

From 2011 to 2026 the 60+ aged population in Knox is predicted to increase by approximately 18,000 individuals, or 64%. This increase is being primarily driven by 70+ year olds, which is expected to double, from 13,193 in 2011 to 26,431 in 2026. These population increases will result in a significant increase in the number of cases of dementia, from 2,491 cases in 2016 to an estimated 12,711 in 2050.

Most demographic indicators for Knox are on par with regional averages, with the exception of 80+ year olds who need assistance with 3 or more activities which is notably high at 42% (EMR average 38%).

Knox residents of all ages show higher incidences of self-reported poor dental health (8.6%, EMR average 4%) and show lower levels of participation in cervical screening (46% of 60-69 year old female population, EMR average 51%) and bowel screening (32% 50-65 year olds, EMR average 34%).

g. Maroondah

When compared to most other regions, Maroondah shows a notably high incidence of 60+ year olds who live in public or social housing (2.5%, EMR average 1.7%). This region also registers a higher incidence of 60+ year olds in lone person households with low incomes and high living costs (1.3%, EMR average 0.8%) and 41% 80+ year olds need assistance with 3 or more activities (EMR average 38%).

Within Maroondah, there are pockets of SEIFA disadvantage near the Ringwood exit to the Eastern freeway and the Eastern region bordering the Lilydale train line.

Health data suggests that 80+ year olds in Maroondah may need additional assistance with a range of health issues. A relatively high proportion of 80+ year olds self-reported fair or poor health (33%, EMR average 23%) and/or vision difficulties that can't be fixed with glasses or contact lenses (14%, EMR average 9%). This 80+ age group in Maroondah also recorded a higher incidence of falls (68.1 per 1,000 population, EMR average 49.3) and a higher rate of being admitted to hospital for diabetes (2.4 per 1,000 population, EMR average 1.5).

Maroondah older residents (65+ years) also show a higher rate of alcohol related ambulance attendances (21.6 per 100,000) than other regions, with this rate remaining high in recent years whilst it falls in other regions.

Furthermore, the rate per 100,000 of deaths from cardiovascular disease is highest of all regions in the EMR (9.2 per 100,000).

h. Yarra Ranges

Yarra ranges varies a great deal from the other regions mostly due to the regional nature of much of the municipality. It also has the highest number of Aboriginal and Torres Strait Islander residents (172).

From 2011 to 2026 the 60+ aged population in Yarra Ranges is predicted to increase by approximately 15,500 individuals, or 56%. This increase is being primarily driven by 70-79 year olds, which is expected to more than double, from 7,435 in 2011 to 15,550 in 2026. As a result the estimated number of dementia cases will increase significantly in the near future, from 2,118 in 2016 to 15,656 in 2050.

Given the regional nature of this area, it takes longer for residents to travel to recreation areas and only 3% of the land area is within 400m of a bus/tram or 800m of a train station (EMR average 12.1%). However, this does not translate to perceived transport limitation, perhaps due to car reliance.

There are pockets of SEIFA disadvantage in the outer regional centres around Healesville and Warburton.

A range of health issues are more common in Yarra Ranges, including poor dental health (7.6%, EMR average 4%), 80+ year olds with poor vision that can't be fixed by glasses or contact lenses (18%, EMR average 9%), and incidence of 80-89 year olds being admitted to hospital for a fall (70.9 per 1,000 population, EMR average 49.3). This region also shows lower incidences of participation in cervical cancer screening (46% of 60-69 year old female population, EMR average 51%). The 2015-16 hospital admissions data shows that 80+ year olds in Yarra Ranges present to hospital emergency departments at a notably higher rate than other LGAs monitored (141.5 per 1,000 population, EMR average 102.9), and show a higher rate of being admitted to hospital for heart failure, circulatory and respiratory diseases and disorders, and musculoskeletal diseases and disorders.