

# *Mental Health Area Profile*

Data as at November 2017

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We acknowledge the peoples of the Kulin nation as the Traditional Owners of the land on which our work in the community takes place. We pay our respects to their Elders past and present.



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# 1 MENTAL HEALTH AREA PROFILE

## SUMMARY

- Mental health disorders are the leading contributor (49%) to the burden of disease and injury among young Australians aged 15–24. One in four young people have a mental disorder
- There is rapid observed and expected growth in mental health disorders in NMWPHN catchment, particularly in the young adult and adolescent age brackets where 75% of mental health conditions initially manifest. This will drive an ongoing need to focus on the provision of effective primary mental health care.
- English language literacy is one of the key factors that contribute to an individual's capacity to seek treatment and acquire sufficient social supports. Approximately two out of five people living in NWMPHN were born overseas (39.5%), with a higher than average number of people with limited or no English proficiency being reported in a number of Local Government Areas (LGAs). There is also a high proportion of humanitarian arrivals, who may have unique mental health needs.
- The prevalence estimates of mental health conditions in the region are difficult to accurately assess. Some contributing factors include:
- The expected higher prevalence of depression and anxiety in lower median income, lower educated and higher unemployment regions is not reflected in actual prevalence estimates in many parts of the region.
- For example, Brimbank and Hume are within the highest quintile for unemployment, proportion of people with low English proficiency, proportion of people not completing Year 9 and the lowest decile for median personal income yet are below the Greater Melbourne median for prevalence of depression and anxiety.
- Help seeking behaviour is much lower in lower socio-economic regions, such as Brimbank, Moorabool and Melton.
  - Access and usage of mental health services is heterogenous across the NMWPHN area, with low SES regions:
  - More likely to access GP and other allied health professionals than psychiatrists and clinical psychologists
  - Accessing less services per patient compared to higher SES areas.
  - Having less out of pocket fees
- With expected population growth in the 10 to 24 year old age bracket more than double the Victorian average, Wyndham and Melton have grown by almost four times the Victorian average between 2011 and 2016.
- This growth means it is likely that there is an enormous amount of unmet demand for mental health services within the NWMPHN region. There are clear needs to promote and support people to seek help, and to continue to develop strategies to address affordability, cultural and access issues.

## 1.1 Analysis notes

Throughout this profile, colour schemes have been added to tables to provide a ranking within a comparison population. In most analyses where Local Government Area (LGA) values or rates are displayed, the colours correspond to the decile of the value within the distribution comprised of Greater Melbourne LGAs.

In other words, the 31 Greater Melbourne LGA's are ranked in order and arranged into approximately 10 groups (~3 in each). For purposes of consistency, if an LGA within the NWMPHN catchment is performing worse than the median Greater Melbourne LGA it is red, the deeper the red the worse it is. The better performing LGAs are coloured varying shades of green.

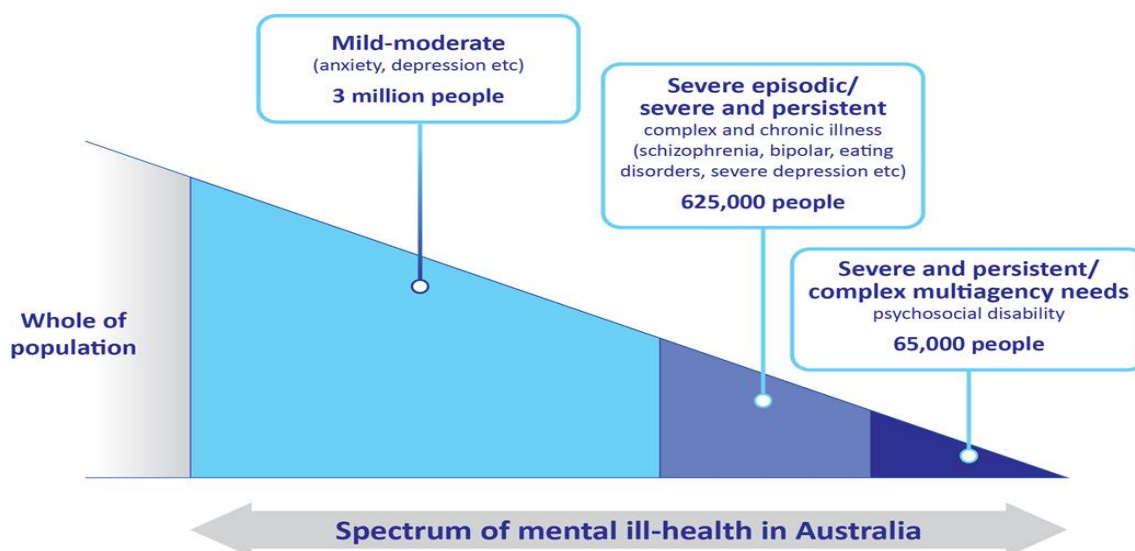
## 1.2 About mental health

Mental health is a complex interaction between biological, psychological and social factors and is not necessarily just the absence of illness. The World Health Organisation defines mental health as a state of wellbeing, where an individual realises their potential and can manage every day stress and can work productively and contribute to the community.<sup>1</sup>

Mental health can be viewed on a spectrum, where on one side people are functioning well and feeling good, and on the other side are experiencing severe mental illness; with people at risk of mental health issues or experiencing mild or moderate mental illness in between. The effect a mental health condition can have upon a person varies and can be episodic to life-long and affect a person's ability to function in everyday situations as well as attracting stigma and discrimination.

Figure 1 (below) illustrates the conceptual burden of mental illness in Australia, with a large prevalence in mild to moderate, and lower prevalence om severe mental illness.

Figure 1: Spectrum of mental illness in Australia



Source: From Contributing lives, thriving communities Report of the National Review of Mental Health Programmes and Services, National Mental Health Commission Nov 2014

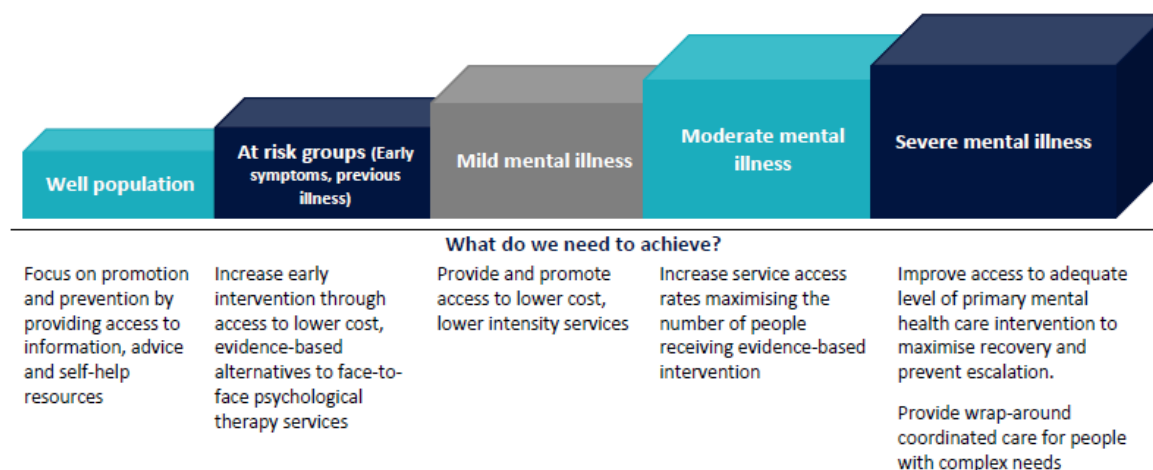
<sup>1</sup> World Health Organisation, 2014 [http://www.who.int/features/factfiles/mental\\_health/en/](http://www.who.int/features/factfiles/mental_health/en/)

Many people with a mental illness can be successfully treated with a range of interventions and often recover well if not fully. However, it is estimated 2 out of 3 Australians with a mental health condition do not seek help, in particular young people and males.<sup>2</sup>

To better support the mental health needs of the community Primary Health Networks have been funded by the Commonwealth to facilitate implementation of stepped care models in mental health service delivery, and to commission services across the continuum of care as per population needs.

The stepped care model stratifies the spectrum of mental health conditions into 5 categories covering severity of mental illness, impact upon a person's lifestyle and interventional pathways.

Figure 2: Mental Health stepped care model



Source: From PHN Primary Mental Health and Suicide Prevention Implementation Guidance – Stepped Care, Department of Health

Primary health care services play a central role in identifying people showing signs of mental illness. Appropriate intervention at this crucial stage of development can have significant short and long-term benefits

From 2011 to 2016, the overall population in the NWMPHN region increased from 1.38 million to 1.61 million people, an increase of 17% or 234,000 people. Using the population level lifetime prevalence values of mental health conditions by stepped model severity this suggests that from 2011, approximately 93,000 additional people are present within the catchment that will be at risk or will develop a mental health condition.

<sup>2</sup> Saxena, S., Thornicroft, G., Knapp, M. and Whiteford, H., 2007. Resources for mental health: scarcity, inequity, and inefficiency. The lancet, 370(9590), pp.878-889

The population projections from Victoria In Future 2016 (estimated residential population for 2021) indicate that this rate of population growth could continue with an additional 300,000 more residents expected in 2021 and a further 135,000 people could be at risk of or will develop mental health condition (Table 1, below).

Table 1: Estimated number of persons with mental health conditions by severity in NWMPHN catchment 2011, 2016, 2021.

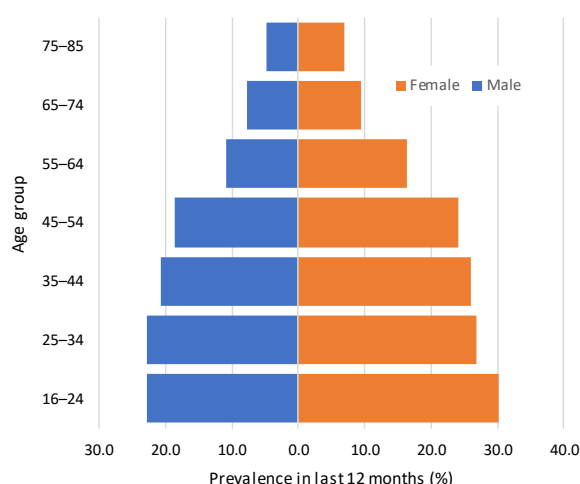
| Stepped Model Classification | Population Prevalence | 2011 Population Estimate ('000s) | 2016 Population Estimate ('000s) | 2021 Projected Estimates ('000s) |
|------------------------------|-----------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>At Risk</b>               | 23.1%                 | 318.6                            | 372.8                            | 445.6                            |
| <b>Mild</b>                  | 9.0%                  | 124.1                            | 145.2                            | 173.6                            |
| <b>Moderate</b>              | 4.6%                  | 63.4                             | 74.2                             | 88.7                             |
| <b>Severe</b>                |                       |                                  |                                  |                                  |
| <b>Overall</b>               | 3.1%                  | 42.8                             | 50.0                             | 59.8                             |
| <b>Episodic/Persistent</b>   | 2.8%                  | 38.8                             | 45.3                             | 54.0                             |
| <b>Persistent/Complex</b>    | 0.3%                  | 4.0                              | 4.7                              | 5.8                              |
| <b>Total</b>                 | 39.8%                 | 548.9                            | 642.2                            | 767.8                            |

Source: NWMPHN analysis of ABS Census 2011, 2016, VIF2016.

Mental health and mental illnesses are determined by multiple and interacting social, psychological, and biological factors, just as they generally are in health and illness. Mental health may be impacted by individual or societal factors, including economic disadvantage, poor housing, lack of social support and the level of access to, and use of, health services.


A person's socio-economic circumstances (eg employment), may impact on their likelihood of developing a mental disorder. Studies have shown that people of lower socio-economic status have a higher prevalence of mental disorders, particularly depression, and certain anxiety disorders. Mental illness may also impact on a person's employment, housing, and social supports.<sup>3</sup> Additionally, prevalence is varied by aged group with higher proportions of people experience a mental health issue in younger age groups (Figure 3, below).

Figure 3: Prevalence of any mental health disorder in the previous 12 months, by age group - Australia



Source: ABS (2008) 4326.0 - National Survey of Mental Health and Wellbeing: Summary of Results, 2007

<sup>3</sup> ABS (2008) 4326.0 - National Survey of Mental Health and Wellbeing: Summary of Results, 2007



Given the variety of drivers for increased prevalence, some components of the NWMPHN population are likely to have higher than average levels due to the interaction with the social determinants of mental health. However, indicators measuring the prevalence may not reflect the true prevalence due to factors including inability to access services because of financial or cultural reasons, identifying need for help in oneself or others, and then seeking help when required.

A recent national report showed that among priority populations, Aboriginal and Torres Strait Islander populations were at higher risk of serious mental health issues (see the NWMPHN Aboriginal and Torres Strait Islander Population Area Profile in App. F.5 for details).

### **1.2.1 NWMPHN response**

Through research and consultation with the community, NWMPHN has developed the mental health system of care (MHSOC), which incorporates key concepts guiding how NWMPHN will work with consumers, carers and service providers in the commissioning of primary mental health services.

The MHSOC encourages service providers to first look at the person presenting and then respond with a co-ordinated, integrated approach. It details the relationship between the person, their community, the services, a set of agreed principles, shared responsibility and a governance framework.

The model also identifies a number of responsibilities – governance, accountability and commissioning efficiency – that are critical in ensuring the MHSOC is effective and accountable. It recognises that the parties involved in delivering care to a person will need to share accountability for the person's health and wellbeing outcomes, regardless of who those parties are.



## 2 TARGET POPULATIONS

### 2.1 Adolescents and young adults

Adolescence and young adulthood is a critical period of development and is characterised by significant neurological and behavioural changes, making this group more vulnerable to particular types of mental illness.<sup>4</sup>

**Error! Reference source not found.** (page 7) illustrates the higher overall prevalence of mental illness in younger age groups, showing the importance of targeting prevention and early intervention efforts at this cohort.

- 75 per cent of mental health disorders having their onset prior to the age of 25 years.
- 23 per cent of males and 30 per cent of females aged 16-24 reported a mental illness in the previous 12 months.
- Mental health disorders are the leading contributor (49%) to the burden of disease and injury among young Australians aged 15–24 and one in four young people have a mental disorder.<sup>5 6</sup>
- Suicide was the leading cause of death among persons aged 25–44 (20% of deaths) and persons aged 15–24 (31% of deaths) in Australia.<sup>7</sup>

The NWMPHN catchment has seen significant population growth between 2011 and 2016 within the 10-24 years old age group, with more than half of all Victorian growth in this group taking place within the NWMPHN catchment. 7 out of 13 LGAs reported growth rates above the Victorian rate of 6.0%; Wyndham and Melton each displayed a growth rate nearly 4 times greater than Victorian rate (Table 2, below) and inner-city Melbourne nearly 9 times greater.

An estimate of future prevalence can be made using the Victoria in Future 2016 population projections<sup>8</sup>. Extrapolation of age specific rates to these data indicate that almost 30,000 more individuals in the 10-24 years age group could reside in the catchment by 2021.

Table 2: NWMPHN LGAs Population and growth of 10 to 24yr from 2011 to 2016, and estimated additional persons in 2021

|                    | LGA Name          | Popn 2011        | Popn 2016        | Growth 2011-16 | % Growth 2011-16 | Est. Growth 2016-21 |
|--------------------|-------------------|------------------|------------------|----------------|------------------|---------------------|
| <b>Victoria</b>    |                   | <b>1,048,385</b> | <b>1,111,195</b> | <b>62,810</b>  | <b>6.0%</b>      |                     |
| <b>NWMPHN</b>      |                   | <b>276,209</b>   | <b>313,766</b>   | <b>37,557</b>  | <b>13.6%</b>     |                     |
| <b>Inner City</b>  | Maribyrnong (C)   | 12,729           | 14,104           | 1,375          | 10.8%            | 2,482               |
|                    | Melbourne (C)     | 27,601           | 42,225           | 14,624         | 53.0%            | 5,162               |
|                    | Yarra (C)         | 10,951           | 12,307           | 1,356          | 12.4%            | 1,666               |
| <b>Suburban</b>    | Brimbank (C)      | 38,582           | 38,563           | -19            | -0.1%            | -1,129              |
|                    | Darebin (C)       | 23,326           | 25,005           | 1,679          | 7.2%             | 1,939               |
|                    | Hobsons Bay (C)   | 14,852           | 14,452           | -400           | -2.7%            | 90                  |
|                    | Moonee Valley (C) | 19,472           | 20,635           | 1,163          | 6.0%             | 1,067               |
|                    | Moreland (C)      | 25,636           | 27,129           | 1,493          | 5.8%             | 1,485               |
| <b>Growth Area</b> | Hume (C)          | 38,718           | 42,200           | 3,482          | 9.0%             | 1,399               |

<sup>4</sup> Giedd JN, Keshavan M, Paus T. Why do many psychiatric disorders emerge during adolescence? Nature reviews Neuroscience. 2008;9(12):947-957. doi:10.1038/nrn2513.

<sup>5</sup> Institute Mission Australia and Black Dog. Youth Mental Health Report. Youth Survey 2012-2016. 2016.

<sup>6</sup> The mental health of Australians 2: report on the 2007 National Survey of Mental Health and Wellbeing. 2009.

<sup>7</sup> <http://www.aihw.gov.au/deaths/leading-causes-of-death/>

<sup>8</sup> Victoria in Future 2016, Department of Environment, Land, Water and Planning, Victorian Government

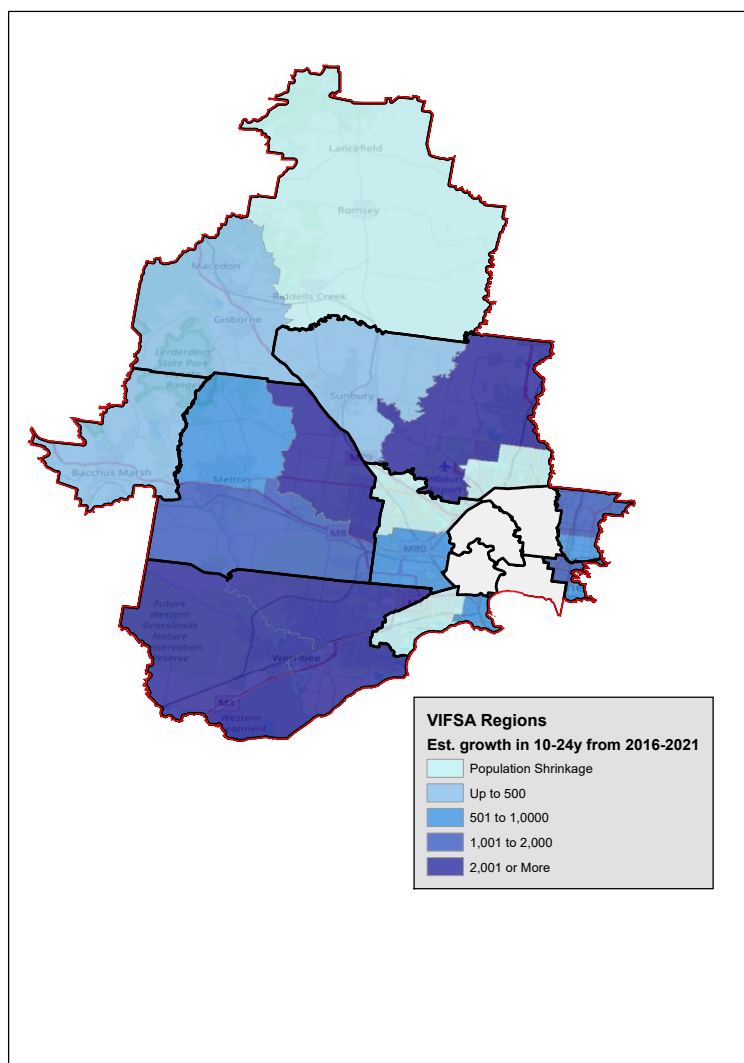
|                   | LGA Name           | Popn 2011 | Popn 2016 | Growth 2011-16 | % Growth 2011-16 | Est. Growth 2016-21 |
|-------------------|--------------------|-----------|-----------|----------------|------------------|---------------------|
|                   | Melton (C)         | 22,537    | 27,548    | 5,011          | 22.2%            | 6,128               |
|                   | Wyndham (C)        | 32,824    | 40,140    | 7,316          | 22.3%            | 8,859               |
| <b>Peri-Urban</b> | Macedon Ranges (S) | 8,093     | 8,305     | 212            | 2.6%             | 227                 |
|                   | Moorabool (S)      | 5,742     | 5,922     | 180            | 3.1%             | 426                 |

Source: ABS Census 2011, 2016, Victoria In Future 2016 - Victorian DEWLP

Expected high growth areas, using Victorian in Future Small Areas (VIFSA) geography, are illustrated in Figure 4 below. Over a third of the estimated growth is expected to be in the VIFSA regions of Point Cook-Werribee South and Hoppers Crossing-Truganina within Wyndham LGA and Caroline Springs-Hillside within Melton LGA.

The 10-24 years old population of Keilor-Sydenham within Brimbank LGA, Broadmeadows within Hume LGA and Altona-Seabrook within Hobsons Bays LGA are forecast to have a decline of between 5 to 11 per cent by 2021, dropping by over 3,000 compared with 2016 levels.

Figure 4: Projected population growth of people aged 10-24 years 2016-2021 (VIF2016)



## 2.2 Culturally and Linguistically Diverse (CALD) Population

The NWMPHN community has a highly diverse CALD population comprising a significant settlement of refugees and asylum seekers and continued migration from all regions of the globe. Most CALD groups are present in NWMPHN, many in significantly higher proportions than the rest of Greater Melbourne.

CALD Australians may experience difficulty accessing mental health services due to language barriers, varied cultural understanding of mental health, cultural stigma and difficulty navigating the Australian health system. These needs can be addressed through culturally appropriate services to improve their quality of life.<sup>9</sup>

Additionally, humanitarian arrivals may have unique mental health needs as they have often experienced great adversity during their journey to resettle in the NWMPHN region, and are often recovering from the effects of torture, trauma, grief and anger.

## 2.3 Country of birth

NWMPHN contains a greater proportion of individuals born overseas (39.5%) compared to both the Victorian (30.4%) and Greater Melbourne populations (36.2%).<sup>10</sup>

In seven out of 13 LGA's within NWMPHN catchment, there is a high proportion (decile 7 and above) of overseas born people. More than half the population within Melbourne and Moreland are born overseas (

Table 3).

Figure 5 illustrates the variation across the NWMPHN region by country of birth in each SA2 area. Brimbank and Melbourne SA2 regions are largely in the 5th Quintile (decile 9 & 10), and there are pockets within most LGAs that display very high proportion of people born overseas, including:

- Maribyrnong: Braybrook and Footscray
- Darebin: Kingsbury
- Hobsons Bay: Laverton
- Moreland: Fawkner
- Hume: Broadmeadows, Campbellfield-Coolaroo, Meadow Heights, Roxburgh Park-Somerton and Craigieburn West
- Melton: Burnside Heights
- Wyndham: Truganina, Point Cook-South, Point Cook-East, Tarneit

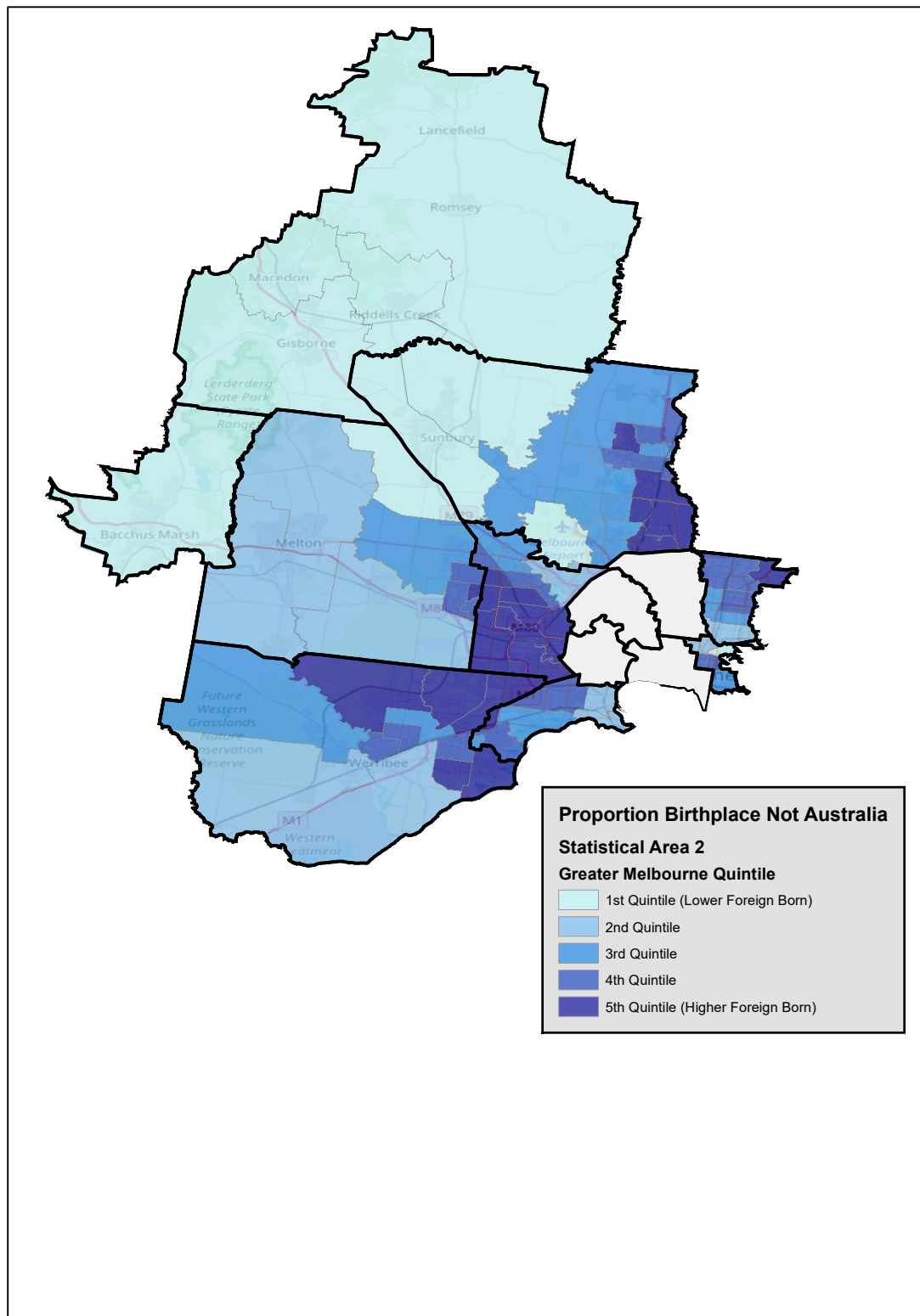
<sup>9</sup> [https://nmhccf.org.au/sites/default/files/docs/nmhccf\\_-\\_advocacy\\_brief\\_-\\_cald\\_-\\_may\\_2014.pdf](https://nmhccf.org.au/sites/default/files/docs/nmhccf_-_advocacy_brief_-_cald_-_may_2014.pdf)

<sup>10</sup> ABS Census 2016

Table 3: Proportion of LGA population with country of origin not Australia (ABS Census 2016) coloured by Greater Melbourne LGA decile

| LGA Name                              |                    | Total population | Proportion not Australian born | Highest Frequency Country of Origin |
|---------------------------------------|--------------------|------------------|--------------------------------|-------------------------------------|
| <b>Victoria</b>                       |                    | <b>1,680,256</b> | <b>30.4%</b>                   |                                     |
| <b>Greater Melbourne (LGA Median)</b> |                    | <b>1,520,253</b> | <b>36.2% (32.5%)</b>           |                                     |
| <b>NWMPHN</b>                         |                    | <b>601,409</b>   | <b>39.5%</b>                   |                                     |
| <b>Inner City</b>                     | Maribyrnong (C)    | 32,989           | 43.3%                          | <b>Vietnam</b>                      |
|                                       | Melbourne (C)      | 75,797           | 63.0%                          | <b>China</b>                        |
|                                       | Yarra (C)          | 25,136           | 32.1%                          | <b>United Kingdom</b>               |
| <b>Suburban</b>                       | Brimbank (C)       | 93,001           | 51.6%                          | <b>Vietnam</b>                      |
|                                       | Darebin (C)        | 48,845           | 36.0%                          | <b>Italy</b>                        |
|                                       | Hobsons Bay (C)    | 27,099           | 32.5%                          | <b>United Kingdom</b>               |
|                                       | Moonee Valley (C)  | 32,265           | 29.6%                          | <b>Italy</b>                        |
|                                       | Moreland (C)       | 55,227           | 36.4%                          | <b>Italy</b>                        |
| <b>Growth Area</b>                    | Hume (C)           | 70,535           | 38.3%                          | <b>Iraq</b>                         |
|                                       | Melton (S)         | 40,613           | 32.1%                          | <b>India</b>                        |
|                                       | Wyndham (C)        | 90,246           | 44.1%                          | <b>India</b>                        |
| <b>Peri-Urban</b>                     | Macedon Ranges (S) | 5,735            | 12.9%                          | <b>United Kingdom</b>               |
|                                       | Moorabool (S)      | 3,921            | 13.6%                          | <b>United Kingdom</b>               |

Figure 5: Deciles of proportion of population not born in Australia, SA2, LGA 2016 (ABS Census 2016)



## 2.4 English proficiency

English proficiency is related to a number of factors including country of birth, education level and ethnicity. Low levels of English proficiency in CALD populations places them at greater risk of mental health problem and reduces accessibility of services. People from CALD populations show higher rates of involuntary admissions, emergency department presentations and are exposed to quality and safety risks, often due to misdiagnosis from language barriers.<sup>11</sup>

Data from the Australian census in (Error! Reference source not found. below and Figure 6) has identified the following key points:

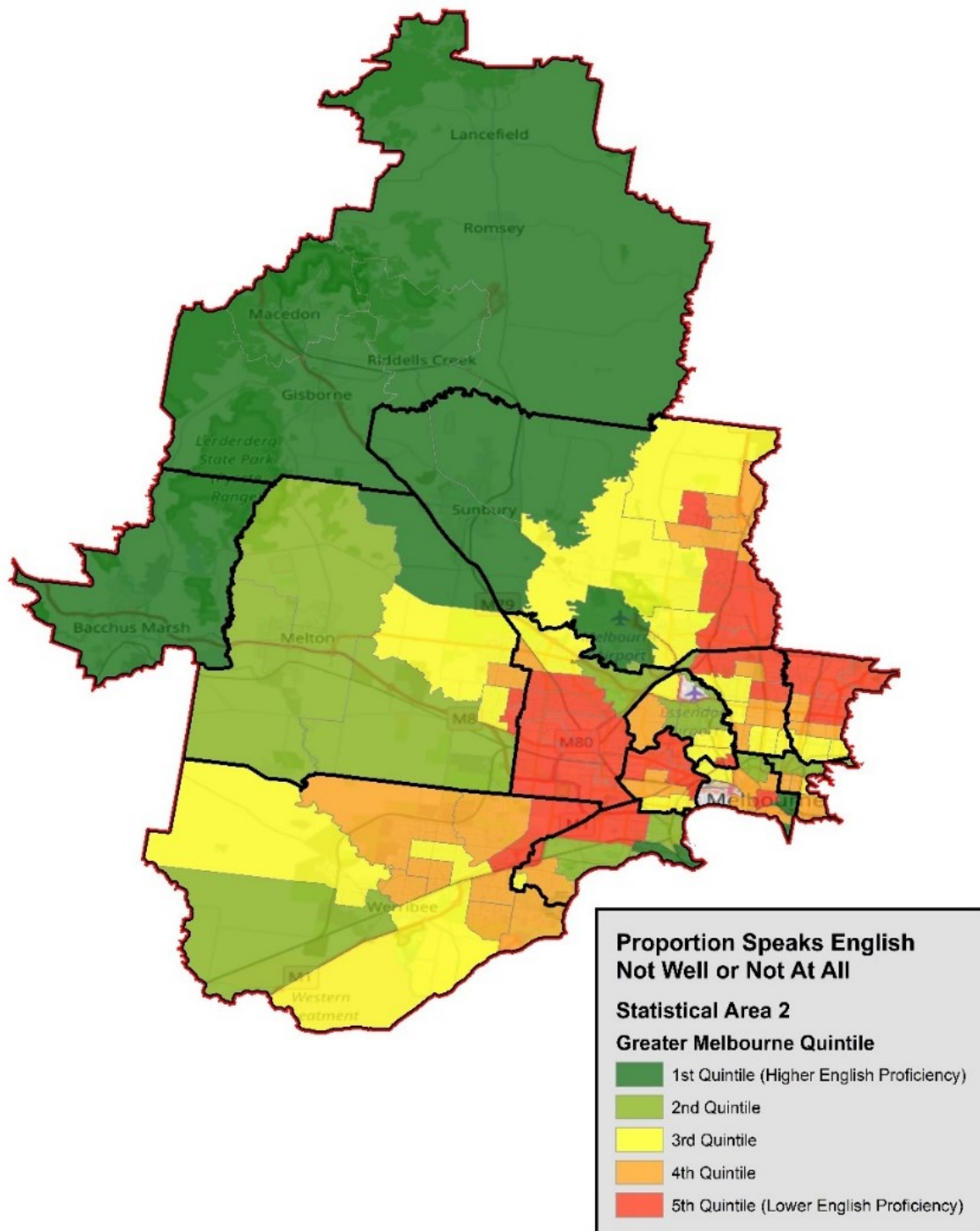
- Ten LGAs within the catchment have higher proportions of people with low English proficiency than both Victoria and Greater Melbourne (4.5% and 5.6% respectively).
- Brimbank (almost 1 in 7 people) and Maribyrnong (1 in 11 people) possess low levels of English proficiency that place them in the highest proportion decile in Greater Melbourne, while Hume also shows very high levels compared the rest of Greater Melbourne.
- The main difference between the country of origin and English proficiency data may be explained by how recently the population arrived in Australia. Migrants in Brimbank, Maribyrnong and Hume have generally originated from countries in newer waves of migration, while Moreland migrants have often resided in Australia for decades longer and Melbourne reflects a younger, more educated intake.
- Most SA2 regions within Brimbank exhibit very high proportions of population with little or no English proficiency, some in excess of 1 in 5 people.
- Sunshine North (22.5%) and St Albans -South (21.3%), have among the highest proportions of the population with low English proficiency in Victoria.

Table 4: Proportion of LGA population who speak English not well or not at all (ABS Census 2016) coloured by Greater Melbourne LGA decile

| LGA Name                       |                    | Total   | Proportion  |
|--------------------------------|--------------------|---------|-------------|
| Victoria                       |                    | 266,080 | 4.5%        |
| Greater Melbourne (LGA Median) |                    | 251,543 | 5.6% (4.2%) |
| NWMPHN                         |                    | 112,237 | 6.8%        |
| Inner City                     | Maribyrnong (C)    | 7,570   | 9.2%        |
|                                | Melbourne (C)      | 9,320   | 6.9%        |
|                                | Yarra (C)          | 4,450   | 5.1%        |
| Suburban                       | Brimbank (C)       | 25,990  | 13.4%       |
|                                | Darebin (C)        | 10,768  | 7.3%        |
|                                | Hobsons Bay (C)    | 4,332   | 4.9%        |
|                                | Moonee Valley (C)  | 5,464   | 4.7%        |
|                                | Moreland (C)       | 10,334  | 6.4%        |
| Growth Area                    | Hume (C)           | 15,974  | 8.1%        |
|                                | Melton (S)         | 5,339   | 3.9%        |
|                                | Wyndham (C)        | 12,437  | 5.7%        |
| Peri-Urban                     | Macedon Ranges (S) | 236     | 0.5%        |
|                                | Moorabool (S)      | 156     | 0.5%        |

<sup>11</sup> Johnstone, M., & Kanitsaki, O. (2006). Culture, language, and patient safety: Making the link. International Journal for Quality in Health Care, 18(5), 383-388.

Figure 6: Deciles of proportion of population that speaks English not well or not at all, SA2, LGA 2016 (ABS Census 2016)





### 3 MENTAL HEALTH IN NORTH WESTERN MELBOURNE PHN

#### 3.1 Other determinants of mental health

Certain segments of the NWMPHN catchment are at higher risk of mental illness due to greater vulnerability to social, economic and environmental inequality.

This disadvantage accumulates and can impact on mental health status throughout life. Improving mental health inequalities requires an understanding of the social determinants of health, such as where a person is born, their educational attainment, employment and income.<sup>12</sup>

In addition to the varied distribution of low English proficiency and country of birth presented earlier, there is diversity in personal income, homelessness, employment levels and educational attainment (Table 5, below). Maps that illustrate the geographical distribution and variation across the region are provided in the Appendix (Figure 8, Figure 9, Figure 10).

Table 5: NWMPHN LGA Median Personal Income, education level and unemployment rate (ABS Census 2016) for persons 15years and over coloured by Greater Melbourne LGA decile

| LGA Name          |                    | Median Personal Gross Weekly Income (\$) | % Completed Year 12 equivalent | % Completed Year 9 or Less | March 2017 Unemployment Rate (%) |
|-------------------|--------------------|--|--------------------------------|----------------------------|----------------------------------|
| Victoria          |                    | 644                                      | 56.6%                          | 11.3%                      | 4.9                              |
| Greater Melbourne |                    | 673                                      | 61.5%                          | 11.6%                      |                                  |
| NWMPHN            |                    |  | 61.6%                          | 11.6%                      |                                  |
| Inner City        | Maribyrnong (C)    | 703                                      | 67.9%                          | 10.3%                      | 7.5                              |
|                   | Melbourne (C)      | 642                                      | 77.8%                          | 2.9%                       | 3.8                              |
|                   | Yarra (C)          | 1,039                                    | 74.8%                          | 6.0%                       | 5.4                              |
| Suburban          | Brimbank (C)       | 487                                      | 54.3%                          | 17.9%                      | 10.7                             |
|                   | Darebin (C)        | 650                                      | 64.4%                          | 13.0%                      | 6.3                              |
|                   | Hobsons Bay (C)    | 704                                      | 58.4%                          | 12.5%                      | 5.9                              |
|                   | Moonee Valley (C)  | 744                                      | 63.3%                          | 11.1%                      | 4.8                              |
|                   | Moreland (C)       | 680                                      | 65.2%                          | 12.7%                      | 6.4                              |
| Growth Area       | Hume (C)           | 529                                      | 52.2%                          | 16.1%                      | 10.2                             |
|                   | Melton (C)         | 658                                      | 53.1%                          | 11.9%                      | 8.6                              |
|                   | Wyndham (C)        | 685                                      | 60.6%                          | 9.9%                       | 7.3                              |
| Peri-Urban        | Macedon Ranges (S) | 702                                      | 52.3%                          | 9.5%                       | 2.5                              |
|                   | Moorabool (S)      | 635                                      | 43.0%                          | 12.9%                      | 6                                |

<sup>12</sup> World Health Organization and Calouste Gulbenkian Foundation. Social determinants of mental health. Geneva, World Health Organization, 2014.

[http://apps.who.int/iris/bitstream/10665/112828/1/9789241506809\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/112828/1/9789241506809_eng.pdf)



## 3.2 Prevalence of mental health conditions

The following section outlines the estimated prevalence of mental health conditions within the diverse NWMPHN population.

Prevalence of mental health conditions, such as depression and anxiety, would be expected to be related to the social determinants, such as employment, income and education, outlined in the previous section. However access to services, an ability to recognise the need for help and willingness to seek assistance also contribute, and potentially complicate prevalence estimates.

### 3.2.1 Lifetime prevalence of depression and anxiety

The Victorian Population Health Survey (VPHS) published in 2015<sup>13</sup> reported the estimated prevalence of anxiety and depression within LGAs (

| LGA Name           |                    | Male Prevalence<br>% of population | Female Prevalence<br>% of population | Persons Prevalence<br>% of population |
|--------------------|--------------------|------------------------------------|--------------------------------------|---------------------------------------|
| <b>Victoria</b>    |                    | <b>14.6</b>                        | <b>25.0</b>                          | <b>19.9</b>                           |
| <b>NWMPHN</b>      |                    | <b>14.1</b>                        | <b>24.2</b>                          | <b>19.2</b>                           |
| <b>Inner City</b>  | Maribyrnong (C)    | 18.2                               | 23.3                                 | 20.7                                  |
|                    | Melbourne (C)      | 15.0                               | 25.1                                 | 19.7                                  |
|                    | Yarra (C)          | 24.1                               | 19.0                                 | 21.3                                  |
| <b>Suburban</b>    | Brimbank (C)       | 11.5                               | 22.8                                 | 17.4                                  |
|                    | Darebin (C)        | 16.8                               | 24.4                                 | 20.5                                  |
|                    | Hobsons Bay (C)    | 12.4                               | 24.2                                 | 18.6                                  |
|                    | Moonee Valley (C)  | 12.1                               | 20.5                                 | 16.4                                  |
|                    | Moreland (C)       | 14.7                               | 29.4                                 | 21.8                                  |
| <b>Growth Area</b> | Hume (C)           | 14.4                               | 24.1                                 | 18.9                                  |
|                    | Melton (C)         | 11.4                               | 28.0                                 | 19.6                                  |
|                    | Wyndham (C)        | 17.3                               | 20.4                                 | 18.9                                  |
| <b>Peri-Urban</b>  | Macedon Ranges (S) | 13.9                               | 26.0                                 | 20.3                                  |
|                    | Moorabool (S)      | 16.9                               | 28.9                                 | 22.8                                  |

, below).

These data illustrate a greater prevalence in female (Figure 12, Figure 13), which is consistent with the results of the National Health Survey 2014-15<sup>14</sup>. The communities of the inner city (Melbourne, Yarra and Maribyrnong) and inner north LGAs (Moreland and Darebin) are estimated to have a higher prevalence in total and within genders, in most cases. Higher prevalence is also observed in the peri-urban areas.

Notably, these estimates do not match the pattern as expected from socio-economic determinants, providing an example of the difficulty in estimating the latent prevalence of mental health disorders within a diverse population.

<sup>13</sup> <https://www2.health.vic.gov.au/public-health/population-health-systems/health-status-of-victorians/survey-data-and-reports/victorian-population-health-survey/victorian-population-health-survey-2015>

<sup>14</sup> National Health Survey: First Results 2014-15, ABS

Table 6: NWMPHN LGA Prevalence of Depression and Anxiety (Victorian Population Health Survey 2015)

| LGA Name           |                    | Male Prevalence<br>% of population | Female Prevalence<br>% of population | Persons Prevalence<br>% of population |
|--------------------|--------------------|------------------------------------|--------------------------------------|---------------------------------------|
| <b>Victoria</b>    |                    | <b>14.6</b>                        | <b>25.0</b>                          | <b>19.9</b>                           |
| <b>NWMPHN</b>      |                    | <b>14.1</b>                        | <b>24.2</b>                          | <b>19.2</b>                           |
| <b>Inner City</b>  | Maribyrnong (C)    | 18.2                               | 23.3                                 | 20.7                                  |
|                    | Melbourne (C)      | 15.0                               | 25.1                                 | 19.7                                  |
|                    | Yarra (C)          | 24.1                               | 19.0                                 | 21.3                                  |
| <b>Suburban</b>    | Brimbank (C)       | 11.5                               | 22.8                                 | 17.4                                  |
|                    | Darebin (C)        | 16.8                               | 24.4                                 | 20.5                                  |
|                    | Hobsons Bay (C)    | 12.4                               | 24.2                                 | 18.6                                  |
|                    | Moonee Valley (C)  | 12.1                               | 20.5                                 | 16.4                                  |
|                    | Moreland (C)       | 14.7                               | 29.4                                 | 21.8                                  |
| <b>Growth Area</b> | Hume (C)           | 14.4                               | 24.1                                 | 18.9                                  |
|                    | Melton (C)         | 11.4                               | 28.0                                 | 19.6                                  |
|                    | Wyndham (C)        | 17.3                               | 20.4                                 | 18.9                                  |
| <b>Peri-Urban</b>  | Macedon Ranges (S) | 13.9                               | 26.0                                 | 20.3                                  |
|                    | Moorabool (S)      | 16.9                               | 28.9                                 | 22.8                                  |

## Psychological Distress, Social Isolation & Help Seeking

The Victorian Population Health Survey reports on self-reported levels of psychological distress, social isolation and help seeking. Table 7 (below) provides a summary of these data by LGA, showing there are high proportions of people experiencing a high or very high level of psychological stress, coupled with high or very high levels of social isolation, in the Growth Areas of Melton and Hume as well as the Suburban Moreland. The proportion of population with high or very high levels of psychological distress is also elevated in Brimbank. Relatively high or very high levels of social isolation are exhibited by Yarra, Maribyrnong and Wyndham.

These higher rates are not correlated with an elevated proportion of people who have sought professional help for mental health issues.

The pattern of high levels of psychological distress and social isolation largely overlap the lower socio-economic status areas where an elevated prevalence of mental health conditions is expected to occur. However, low levels of help seeking behavior is witnessed within these regions, while greater levels of help seeking behaviour is exhibited by higher SES status regions like Melbourne, Darebin and Hobsons Bay.

Within these low SES regions an inability or unwillingness to seek help could potentially be a contributing factor in the discrepancy between expected prevalence as driven by socio-economic factors and the observed prevalence.

*Table 7: NWMPHN LGA Proportion of population proportion - high/very high levels of psychological distress, high/very high levels of social isolation and sought professional help for mental health issues (Victorian Population Health Survey 2014)*

| LGA Name           |                    | %High/Very High Level of Psych. Distress | %High/Very High Level of Social Isolation | % Sought Professional Help Last 12 Months |
|--------------------|--------------------|--|---|---|
| <b>Victoria</b>    |                    | <b>11.1</b>                              | <b>17.3</b>                               | <b>12.4</b>                               |
| <b>NWMPHN</b>      |                    | <b>11.1</b>                              | <b>17.5</b>                               | <b>12.2</b>                               |
| <b>Inner City</b>  | Maribyrnong (C)    | 10.8                                     | 21.0                                      | 11.2                                      |
|                    | Melbourne (C)      | 8.8                                      | 16.2                                      | 13.7                                      |
|                    | Yarra (C)          | 7.8                                      | 22.0                                      | 16.4                                      |
| <b>Suburban</b>    | Brimbank (C)       | 14.4                                     | 18.2                                      | 9.7                                       |
|                    | Darebin (C)        | 11.7                                     | 18.1                                      | 13.7                                      |
|                    | Hobsons Bay (C)    | 12.1                                     | 15.1                                      | 13.3                                      |
|                    | Moonee Valley (C)  | 10.1                                     | 18.4                                      | 10.4                                      |
|                    | Moreland (C)       | 14.4                                     | 19.6                                      | 10.9                                      |
| <b>Growth Area</b> | Hume (C)           | 15.9                                     | 20.5                                      | 11.2                                      |
|                    | Melton (S)         | 20.7                                     | 20.2                                      | 10.2                                      |
|                    | Wyndham (C)        | 11.2                                     | 20.3                                      | 12.0                                      |
| <b>Peri-Urban</b>  | Macedon Ranges (S) | 6.9                                      | 18.0                                      | 11.6                                      |
|                    | Moorabool (S)      | 11.9                                     | 9.9                                       | 9.2                                       |

### 3.2.2 Adolescent Mental Health Condition – 12 Month Prevalence

The Second Australian Child and Adolescent Survey of Mental Health and Wellbeing 2015 (Young Minds Matter survey) was undertaken by the University of Western Australia for the Department of Health in 2013 to provide national estimates of the extent of mental disorders in children and adolescents aged 4-17 years.

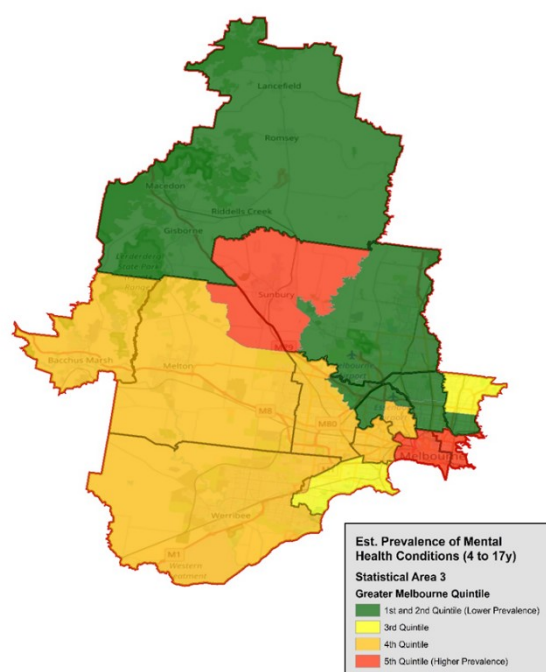
Based on an interview sample size of 6,310 families, the survey generated important information on the prevalence and severity of mental disorders but it did not allow direct, reliable estimates to be made in small geographic areas.

The Young Minds Matter survey data identified several socio-demographic characteristics that were associated with prevalence of mental disorders. These socio-demographic characteristics are known to vary across geographic areas in Australia.

Using this data, synthetic estimates of prevalence and severity of mental disorders were developed by combining statistical modelling of socio-demographic factors associated with mental disorder status from the YMM survey data, with information on the geographic distribution of those factors within each Primary Health Network region, drawing on the 2011 Census data.<sup>15, 16</sup>

These data estimate an elevated 12 month prevalence of mental illness within the inner-city regions of Melbourne and Yarra, and to a lesser extent in Sunbury (Table 8 and Figure 7 below). In interpreting the data, it is essential to acknowledge their limitations and that the results are indicative only. It is critical that users of the data note that the estimates are not based on actual counts but are statistically modelled and therefore subject to a degree of imprecision.

*Figure 7: Synthetic (modelled) estimates of prevalence of mental disorders within children and adolescents by age bracket across the NWMPHN region (The Second Australian Child and Adolescent Survey of Mental Health and Wellbeing 2015)*



<sup>15</sup> PHN Secure website

<sup>16</sup> The Second Australian Child and Adolescent Survey of Mental Health and Wellbeing 2015, <https://youngmindsmatter.telethonkids.org.au/our-research/>

Table 8: Synthetic (modelled) estimates of prevalence of mental disorders within children and adolescents by age bracket across the NWMPHN region (The Second Australian Child and Adolescent Survey of Mental Health and Wellbeing 2015)

| SA4                                   | SA3                | Est. Number<br>– 4 -11yr | Est. Prevalence<br>– 4 -11yr | Est. Number<br>– 12 - 17yr | Est. Prevalence<br>– 12 - 17yr | Est. Number<br>– 4-17yr | Est. Prevalence<br>– 4-17yr |
|---------------------------------------|--------------------|--------------------------|------------------------------|----------------------------|--------------------------------|-------------------------|-----------------------------|
| Melbourne - Inner                     | Brunswick - Coburg | 640                      | 10.5                         | 410                        | 11.1                           | 1,060                   | 10.7                        |
|                                       | Darebin - South    | 450                      | 10.3                         | 280                        | 11.7                           | 740                     | 10.8                        |
|                                       | Essendon           | 770                      | 13.7                         | 510                        | 12.5                           | 1,280                   | 13.2                        |
|                                       | Melbourne City     | 610                      | 18.8                         | 480                        | 16                             | 1,090                   | 17.5                        |
|                                       | Yarra              | 860                      | 18.2                         | 520                        | 19.3                           | 1,380                   | 18.6                        |
| Melbourne - N East                    | Darebin - North    | 840                      | 11                           | 680                        | 13.9                           | 1,520                   | 12.2                        |
| Melbourne - N West                    | Keilor             | 500                      | 9.7                          | 460                        | 11.7                           | 960                     | 10.6                        |
|                                       | Macedon Ranges     | 360                      | 10.9                         | 250                        | 10                             | 610                     | 10.5                        |
|                                       | Moreland - North   | 710                      | 10.7                         | 600                        | 12.6                           | 1,310                   | 11.5                        |
|                                       | Sunbury            | 550                      | 13.3                         | 470                        | 14.4                           | 1,020                   | 13.8                        |
|                                       | Tulla - Bmeadow    | 1,790                    | 10.5                         | 1,640                      | 12.2                           | 3,430                   | 11.2                        |
| Melbourne - West                      | Brimbank           | 2,040                    | 11.3                         | 1,970                      | 14.1                           | 4,010                   | 12.5                        |
|                                       | Hobsons Bay        | 840                      | 11.3                         | 700                        | 12.4                           | 1,540                   | 11.8                        |
|                                       | Maribyrnong        | 720                      | 11.7                         | 570                        | 15                             | 1,290                   | 13                          |
|                                       | Melton - B Marsh   | 2,130                    | 12.2                         | 1,650                      | 13.9                           | 3,770                   | 12.9                        |
|                                       | Wyndham            | 2,880                    | 12.8                         | 2,020                      | 13.2                           | 4,910                   | 13                          |
| Greater Capital City Statistical Area |                    |                          | 12.1 (10.6,13.6)             |                            | 13.2 (11.3,15.1)               |                         | 12.6 (11.4,13.8)            |
| NWMPHN                                |                    | 16,700                   | 12                           | 13,230                     | 13.3                           | 29,930                  | 12.5                        |

### 3.2.3 Homelessness

The ABS General Social Survey estimated that people who reported having a mental health condition were more than twice as likely to have experienced homelessness in their lifetime, compared with people who did not (25% compared with 10%). People who reported a mental health condition were also more than twice as likely to have experienced homelessness in the last 10 years compared with people who did not (15% compared with 6.1%).<sup>17, 18</sup>

Given these prevalence data and that more than one third of Victorian homeless persons are estimated to be within the NWMPHN catchment, this is a key target group for health service planning.

<sup>17</sup> ABS (2016) 4329.0.00.005 Mental Health and Experiences of Homelessness, Australia, 2014

<sup>18</sup> <http://www.aihw.gov.au/homelessness/specialist-homelessness-services-2015-16/mental-health/>

## 4 SERVICE RESPONSE

### 4.1 Use of services

Primary health services such as general practitioners (GPs) are often the first point of contact for people experiencing mental illness, and are critical in providing continuity of care and connection with specialist providers. GPs provided mental health-related services to approximately 465,000 Victorians in 2014–15<sup>19</sup>

The number of Victorians accessing Medicare subsidised GP mental health services has increased at a rate of about 5.5 per cent every year between 2010–11 and 2014–15. Table 9 (below) and

provide an estimation of the per capita rates of the usage of the specialist mental health items for GPs and clinical psychologists.

These data illustrate growth in usage of the items in all areas since 2011, but also a variation in usage across the catchment. In particular, there is much lower usage of clinical psychology services in the West and North West. This is unlikely to be related to lower prevalence, but more linked to a reduced availability of service because of affordability or workforce supply.

Table 9: Patients and services per 1,000 people for GP Mental Health items by provider location by SA3 area (PHN MBS data)<sup>20</sup> Department of Health)

| SA4                | SA3                | Patients per 1,000 people |      |      |       | Services per 1,000 people |       |       |       |
|--------------------|--------------------|---------------------------|------|------|-------|---------------------------|-------|-------|-------|
|                    |                    | 2011                      | 2012 | 2013 | 2014  | 2011                      | 2012  | 2013  | 2014  |
| Melbourne - Inner  | Brunswick - Coburg | 74.3                      | 79.5 | 85.9 | 91.4  | 136.4                     | 144.9 | 156.1 | 164.3 |
|                    | Darebin - South    | 79.7                      | 87.2 | 89.7 | 98.5  | 150.2                     | 154.5 | 159.2 | 175.5 |
|                    | Essendon           | 59.6                      | 64.2 | 70   | 75.5  | 107.8                     | 116.8 | 120.2 | 132.8 |
|                    | Melbourne City     | 56.9                      | 59.2 | 62.6 | 63.5  | 109                       | 110.8 | 116.5 | 122.7 |
|                    | Yarra              | 75.7                      | 78.1 | 82.5 | 89.1  | 141.9                     | 142.5 | 147.6 | 157.2 |
| Melbourne - N East | Darebin - North    | 60.6                      | 66.3 | 70.9 | 75.4  | 115.9                     | 126   | 131.6 | 138.9 |
| Melbourne - N West | Keilor             | 53.9                      | 58.3 | 62.9 | 70.7  | 93.1                      | 100.4 | 106.5 | 119.9 |
|                    | Macedon Ranges     | 72.4                      | 76.4 | 81.7 | 89.1  | 133.1                     | 140.6 | 156.5 | 172.4 |
|                    | Moreland - North   | 62.2                      | 66.3 | 71.2 | 75.4  | 116.7                     | 122.1 | 124.8 | 133.6 |
|                    | Sunbury            | 88.7                      | 90.8 | 96.3 | 105.7 | 165.9                     | 164.8 | 179   | 213.3 |
|                    | Tulla - Bmeadow    | 71.7                      | 81.2 | 87.2 | 90.5  | 122.5                     | 143.6 | 158.4 | 164.6 |
| Melbourne - West   | Brimbank           | 52.5                      | 59.1 | 65.5 | 69.2  | 97.7                      | 111.1 | 120.9 | 128.4 |
|                    | Hobsons Bay        | 60.2                      | 64.2 | 73.5 | 78.7  | 103.4                     | 109.4 | 129.6 | 137.9 |
|                    | Maribyrnong        | 59.9                      | 65   | 70.5 | 76.5  | 106.8                     | 115.1 | 123.7 | 138.4 |
|                    | Melton - B Marsh   | 74                        | 82.1 | 88.4 | 93.6  | 161.8                     | 186.5 | 192.2 | 206.7 |
|                    | Wyndham            | 57.1                      | 62.2 | 69.9 | 73.7  | 99.2                      | 107.7 | 126.9 | 127.5 |

<sup>19</sup> [http://www.health.gov.au/internet/main/publishing.nsf/Content/PHN-Mental\\_Health\\_Data#MBSDATA](http://www.health.gov.au/internet/main/publishing.nsf/Content/PHN-Mental_Health_Data#MBSDATA)  
Medicare Benefits Schedule – mental health specific items

<sup>20</sup> Item numbers: 170, 171, 172, 2574, 2575, 2577, 2578, 2700, 2701, 2702, 2704, 2705, 2707, 2708, 2710, 2712, 2713, 2715, 2717, 2719, 2721, 2723, 2725, 2727, 20104

Table 10: Patients and services per 1,000 people for Clinical Psychologists Mental Health items by provider location by SA3 area (PHN MBS data Department of Health)<sup>21</sup>

| SA4                | SA3                | Patients per 1,000 people |      |      |      | Services per 1,000 people |       |       |       |
|--------------------|--------------------|---------------------------|------|------|------|---------------------------|-------|-------|-------|
|                    |                    | 2011                      | 2012 | 2013 | 2014 | 2011                      | 2012  | 2013  | 2014  |
| Melbourne - Inner  | Brunswick - Coburg | 22.4                      | 27.4 | 30.1 | 31.7 | 123.2                     | 153.4 | 153.7 | 163.9 |
|                    | Darebin - South    | 23.6                      | 29.5 | 32.3 | 34.6 | 140.8                     | 174.6 | 171.9 | 186.4 |
|                    | Essendon           | 16.6                      | 19.3 | 23   | 23.9 | 90.2                      | 100.6 | 115.7 | 114.5 |
|                    | Melbourne City     | 13.9                      | 15.9 | 17.5 | 18.3 | 80.4                      | 88.5  | 87.8  | 90.2  |
|                    | Yarra              | 23.7                      | 27.5 | 30.7 | 31.8 | 137.1                     | 156.1 | 161.7 | 166   |
| Melbourne - N East | Darebin - North    | 12.7                      | 15.2 | 17.1 | 19.4 | 69.6                      | 83.8  | 81.9  | 95.3  |
| Melbourne - N West | Keilor             | 14.3                      | 17.3 | 21.1 | 22   | 78.1                      | 86.2  | 97.6  | 104.8 |
|                    | Macedon Ranges     | 8.5                       | 10.2 | 12.2 | 14.4 | 40.1                      | 50.6  | 57.4  | 64.3  |
|                    | Moreland - North   | 13.3                      | 15   | 16.5 | 18.4 | 69.1                      | 76.8  | 77.8  | 87.1  |
|                    | Sunbury            | 13.9                      | 14.6 | 15.8 | 18   | 68.8                      | 72.6  | 71.7  | 83.8  |
|                    | Tulla - Bmeadow    | 13.1                      | 14.4 | 16.1 | 16.5 | 61.4                      | 68.4  | 68.4  | 74.1  |
| Melbourne - West   | Brimbank           | 7.7                       | 9.8  | 12   | 13.2 | 38.6                      | 45.1  | 54.3  | 60.3  |
|                    | Hobsons Bay        | 11.3                      | 12.5 | 16.2 | 19.5 | 57.3                      | 62.6  | 80    | 89.3  |
|                    | Maribyrnong        | 13.8                      | 17.5 | 20.7 | 22.2 | 74.8                      | 91.5  | 102.5 | 110.2 |
|                    | Melton - B Marsh   | 11.9                      | 13.4 | 16.4 | 16.3 | 61.9                      | 66.7  | 74.9  | 74.7  |
|                    | Wyndham            | 8.9                       | 9.4  | 11.9 | 12.8 | 41.5                      | 44.7  | 54.4  | 56.6  |

## 4.2 Hospitalisations for mental health conditions and intentional self-harm

An understanding of the level of hospitalisation for a mental health condition can provide some insight into the prevalence of severe mental illness within communities and the communities' ability and capacity to provide supports for the person outside of a hospital admission.

The Australian Institute of Health and Welfare reports on hospitalisation by SA3, type of mental health condition and hospital type. These data identify that:

- The NWMPHN hospitalisation rate is largely at or below the Australian Metropolitan average for all conditions except for dementia<sup>22</sup>.
- At SA3 level, compared to the median Greater Melbourne hospitalisation rate:
  - a. Melbourne Inner: High overall rates throughout inner Melbourne SA3s. Values in the top 2 deciles for Greater Melbourne SA3s are observed for schizophrenia within Yarra, Melbourne City and Darebin-South; anxiety within Brunswick-Coburg; bipolar disorder within Darebin- South and Essendon; depression within Brunswick- Coburg; alcohol and other drugs within Yarra and Melbourne City; and dementia for Brunswick-Coburg and Melbourne City
  - b. In other parts of the catchment, very high rates are observed for:
    - i. Schizophrenia in Darebin-North) and Maribyrnong
    - ii. Anxiety within Sunbury and Melton- Bacchus Marsh
    - iii. Bipolar disorder in Keilor
    - iv. Dementia within Moreland-North, Maribyrnong and Wyndham.
  - c. Sunbury has very high rates for anxiety and intentional self-harm in conjunction with elevated rate for depression.

<sup>21</sup> Item numbers 80000, 80005, 80010, 80015, 80020

<sup>22</sup> <https://www.myhealthycommunities.gov.au/our-reports/mental-health-and-intentional-self-harm>

Table 11: Hospitalisation for Mental Health Condition by SA3 - Age Standardised Rate per 100,000 (AIHW Admitted Patient Mental Health Related Care 2014-15)

| SA3 Name   |                    | Total     | Schizoph. | Anxiety   | Bipolar  | Depression | Alcohol/<br>Oth Drugs | Dementia | Intentional<br>Self-Harm |
|--|--------------------|-----------|-----------|-----------|----------|------------|-----------------------|----------|--------------------------|
| <b>Metropolitan (Greater Melbourne SA3 Median)</b> |                    | 888 (847) | 159 (145) | 127 (103) | 99 (115) | 110 (104)  | 161 (102)             | 51 (53)  | 136 (100)                |
| <b>NWMPHN</b>                                      |                    | 788       | 166       | 95        | 100      | 90         | 95                    | 66       | 84                       |
| <b>Melb. - Inner</b>                               | Brunswick - Coburg | 983       | 167       | 124       | 133      | 134        | 128                   | 82       | 118                      |
|  | Darebin - South    | 928       | 220       | 104       | 150      | 80         | 124                   | 43       | 86                       |
|  | Essendon           | 929       | 166       | 99        | 172      | 126        | 125                   | 61       | 66                       |
|  | Melbourne City     | 973       | 247       | 113       | 76       | 83         | 170                   | 88       | 107                      |
|  | Yarra              | 1113      | 293       | 108       | 120      | 109        | 183                   | 61       | 115                      |
| <b>Melb. - N East</b>                              | Darebin - North    | 908       | 259       | 98        | 114      | 87         | 71                    | 60       | 101                      |
| <b>Melb. - N West</b>                              | Keilor             | 757       | 85        | 114       | 169      | 89         | 96                    | 48       | 96                       |
|  | Macedon Ranges     | 700       | 144       | 92        | 102      | 77         | 89                    | N/A      | N/A                      |
|  | Moreland - North   | 917       | 219       | 108       | 120      | 102        | 91                    | 85       | 76                       |
|  | Sunbury            | 843       | 61        | 139       | 110      | 127        | 91                    | 64       | 147                      |
|  | Tulla - Bmeadow    | 668       | 136       | 94        | 97       | 72         | 67                    | 52       | 64                       |
| <b>Melb. - West</b>                                | Brimbank           | 739       | 190       | 87        | 68       | 71         | 85                    | 67       | 68                       |
|  | Hobsons Bay        | 734       | 149       | 72        | 89       | 99         | 99                    | 52       | 66                       |
|  | Maribyrnong        | 910       | 246       | 90        | 74       | 98         | 87                    | 79       | 93                       |
|  | Melton - B Marsh   | 747       | 100       | 118       | 85       | 108        | 86                    | 70       | 102                      |
|  | Wyndham            | 593       | 107       | 69        | 77       | 74         | 57                    | 74       | 68                       |



### 4.3 MBS service usage

Medicare Benefits Schedule (MBS) usage data provides important information on the affordability and distribution of non-hospital services.

Table 12 (below) provides a summary of the average number of mental health services and the average fee excess for mental health services provided in 2014-15 – this is the amount payable by the patient above the MBS scheduled fee.

These data illustrate a pattern consistent with income distribution data (Figure 8, p.26), in that there are a higher number of services per patient and a higher excess fee per service in areas with higher income levels. Brimbank, Tullamarine-Broadmeadows and Wyndham are in the lowest 20% for out-of-pocket expenses and lowest 20% for services per patient, indicating service affordability and specialist access is a major contributing factor.

Table 12: MBS Mental health services 2014-15 – Excess Fees and Services provided per patient <sup>23</sup>

| SA4                       | SA3                | Mean Excess Fees per Service (\$) | Mean Services per Patient |
|---------------------------|--------------------|-----------------------------------|---------------------------|
| <b>Melbourne - Inner</b>  | Brunswick - Coburg | 27.59                             | 6.02                      |
|                           | Darebin - South    | 31.97                             | 6.77                      |
|                           | Essendon           | 29.64                             | 5.65                      |
|                           | Melbourne City     | 29.14                             | 5.71                      |
|                           | Yarra              | 34.87                             | 6.63                      |
| <b>Melbourne - N East</b> | Darebin - North    | 19.53                             | 5.36                      |
| <b>Melbourne - N West</b> | Keilor             | 25.73                             | 5.38                      |
|                           | Macedon Ranges     | 21.71                             | 5.22                      |
|                           | Moreland - North   | 18.14                             | 5.08                      |
|                           | Sunbury            | 15.05                             | 5.24                      |
|                           | Tulla - Bmeadow    | 9.57                              | 4.34                      |
| <b>Melbourne - West</b>   | Brimbank           | 12.42                             | 4.56                      |
|                           | Hobsons Bay        | 23.24                             | 5.19                      |
|                           | Maribyrnong        | 24.14                             | 5.26                      |
|                           | Melton - B Marsh   | 10.68                             | 4.62                      |
|                           | Wyndham            | 15.97                             | 4.46                      |
| <b>Victoria</b>           |                    | <b>23.92</b>                      | <b>5.32</b>               |
| <b>Australia</b>          |                    | <b>21.10</b>                      | <b>5.18</b>               |

The proportion of services provided by each provider type also illustrates this gradient across the region (Table 13). It is also significantly different between inner and outer areas with psychiatrists and clinical psychologists providing the bulk of mental health services within the inner areas, compared to outer SA3s, where it is generally less than 42%.

These data are consistent with the classification of much of the area as a District of Workforce Shortage for specialist psychiatry services, which provides incentives for psychiatrists to establish practice in these areas. <sup>24</sup>

<sup>23</sup> [http://www.health.gov.au/internet/main/publishing.nsf/Content/PHN-Mental\\_Health\\_Data#MBSDATA](http://www.health.gov.au/internet/main/publishing.nsf/Content/PHN-Mental_Health_Data#MBSDATA)

<sup>24</sup> <http://www.doctorconnect.gov.au/internet/otd/publishing.nsf/Content/dwsFactsheet>

Table 13: Proportion of MBS mental health services by provider type 2014-15

| SA4                       | SA3                | % Total MH Service Decile |                        |              |                     |
|---------------------------|--------------------|---------------------------|------------------------|--------------|---------------------|
|                           |                    | Psychiatrists             | Clinical Psychologists | GP           | Other Allied Health |
| <b>Melbourne - Inner</b>  | Brunswick - Coburg | 27.1%                     | 23.6%                  | 23.7%        | 25.7%               |
|                           | Darebin - South    | 31.3%                     | 22.0%                  | 20.8%        | 25.9%               |
|                           | Essendon           | 28.4%                     | 21.0%                  | 24.4%        | 26.2%               |
|                           | Melbourne City     | 33.4%                     | 18.7%                  | 25.4%        | 22.6%               |
|                           | Yarra              | 34.9%                     | 21.8%                  | 20.6%        | 22.7%               |
| <b>Melbourne - N East</b> | Darebin - North    | 26.7%                     | 18.8%                  | 27.3%        | 27.2%               |
| <b>Melbourne - N West</b> | Keilor             | 27.0%                     | 21.3%                  | 24.3%        | 27.4%               |
|                           | Macedon Ranges     | 22.2%                     | 11.4%                  | 30.6%        | 35.8%               |
|                           | Moreland - North   | 23.9%                     | 18.2%                  | 27.9%        | 30.0%               |
|                           | Sunbury            | 22.2%                     | 12.7%                  | 32.3%        | 32.8%               |
|                           | Tulla - Bmeadow    | 16.7%                     | 16.0%                  | 35.6%        | 31.7%               |
| <b>Melbourne - West</b>   | Brimbank           | 19.3%                     | 15.8%                  | 33.6%        | 31.3%               |
|                           | Hobsons Bay        | 22.6%                     | 17.8%                  | 27.4%        | 32.2%               |
|                           | Maribyrnong        | 21.4%                     | 22.5%                  | 28.2%        | 27.9%               |
|                           | Melton - B Marsh   | 13.8%                     | 14.9%                  | 41.2%        | 30.2%               |
|                           | Wyndham            | 18.3%                     | 14.6%                  | 32.9%        | 34.2%               |
| <b>NWMPHN</b>             |                    | <b>23.9%</b>              | <b>18.2%</b>           | <b>29.1%</b> | <b>28.8%</b>        |
| <b>Greater Melbourne</b>  |                    | <b>25.5%</b>              | <b>18.3%</b>           | <b>27.9%</b> | <b>28.2%</b>        |

#### 4.4 PBS service usage

The Pharmaceutical Benefits Scheme (PBS) provides funding for subsidised medicines to all Australians and other eligible people. Similarly to the analysis of the MBS data, analysis of the PBS data can be used to develop a better understanding of the distribution of services delivered.

The data presented below were developed by the National Health Performance Authority to provide a better understanding of the variation in practice across Australia in some prescribing patterns and other medical treatments.<sup>25</sup> These studies have been undertaken to understand quality, equity and efficiency in health care service delivery, as much of the variation is accounted for by the willingness and ability of doctors to offer treatment, rather than differences in illness or patient preference.

<sup>25</sup> <https://www.safetyandquality.gov.au/wp-content/uploads/2014/05/Exploring-Healthcare-Variation-in-Australia-Analyses-Resulting-from-an-OECD-Study.pdf>

## 4.5 Anti-depressant prescriptions

Anti-depressant prescription rates within the catchment are predominantly at, or below, the Greater Melbourne median rates across the age spectrum.

Very low rates are observed in Melbourne City for all age groups, while very low rates are also seen for people aged under 17 years in Tullamarine-Broadmeadows and Brimbank.

High rates were observed for all age groups in Sunbury, particularly the 18 to 64 years and 65 plus groups. Melton-Bacchus Marsh also possesses high or very high rates within the two older age groups.

*Table 14: PBS prescriptions dispensed for antidepressant medicines per 100,000 people, age standardised, by SA3, 2013–14*

| SA4                          | SA3                | Age Standardised Rate per 100,000 people |                |                       |
|------------------------------|--------------------|--|----------------|-----------------------|
|                              |                    | Under 17 years                           | 18 to 64 years | Greater than 65 years |
| Melbourne - Inner            | Brunswick - Coburg | 5,389                                    | 85,855         | 199,186               |
|                              | Darebin - South    | 7,816                                    | 89,115         | 183,475               |
|                              | Essendon           | 5,345                                    | 83,522         | 176,533               |
|                              | Melbourne City     | 2,679                                    | 64,188         | 150,572               |
|                              | Yarra              | 6,191                                    | 88,414         | 174,144               |
| Melbourne - N East           | Darebin - North    | 4,400                                    | 83,782         | 192,085               |
| Melbourne - N West           | Keilor             | 4,706                                    | 87,144         | 175,017               |
|                              | Macedon Ranges     | 8,097                                    | 96,307         | 178,070               |
|                              | Moreland - North   | 4,425                                    | 84,961         | 183,787               |
|                              | Sunbury            | 8,930                                    | 120,866        | 232,836               |
|                              | Tulla - Bmeadow    | 3,807                                    | 84,455         | 194,029               |
| Melbourne - West             | Brimbank           | 3,609                                    | 73,896         | 162,730               |
|                              | Hobsons Bay        | 5,311                                    | 94,601         | 185,406               |
|                              | Maribyrnong        | 5,294                                    | 79,564         | 171,740               |
|                              | Melton - B Marsh   | 5,983                                    | 101,895        | 227,323               |
|                              | Wyndham            | 6,714                                    | 83,950         | 192,342               |
| Greater Melbourne SA3 median |                    | 7,122                                    | 86,250         | 182,997               |
| Victoria                     |                    | 7,789                                    | 99,774         | 194,225               |

## 4.6 Anti-anxiolytic prescriptions

NWMPHN catchment displays mostly elevated anti-anxiolytic prescription rates across age groups and SA3 regions compared to the Greater Melbourne SA3 rate:

- Very low rates are seen in Macedon Ranges.
- Very high rates are seen in Darebin – North within the 18 to 64-year age group, as well as the over 65 year group in Melton – Bacchus Marsh. Yarra possesses high rates within both age groups.

Table 15: PBS prescriptions dispensed for anti-anxiolytic medicines per 100,000 people, age standardised, by SA3, 2013–14

| SA4                          | SA3                | Age Standardised Rate per 100,000 |                       |
|------------------------------|--------------------|-----------------------------------|-----------------------|
|                              |                    | 18 to 64 years                    | Greater than 65 years |
| Melbourne - Inner            | Brunswick - Coburg | 18,353                            | 47,923                |
|                              | Darebin - South    | 18,578                            | 44,866                |
|                              | Essendon           | 18,242                            | 47,625                |
|                              | Melbourne City     | 19,312                            | 40,196                |
|                              | Yarra              | 23,247                            | 49,069                |
| Melbourne - N East           | Darebin - North    | 27,666                            | 46,746                |
| Melbourne - N West           | Keilor             | 19,008                            | 41,825                |
|                              | Macedon Ranges     | 15,393                            | 31,833                |
|                              | Moreland - North   | 23,231                            | 46,095                |
|                              | Sunbury            | 21,555                            | 48,885                |
|                              | Tulla - Bmeadow    | 21,797                            | 47,806                |
| Melbourne - West             | Brimbank           | 19,384                            | 45,981                |
|                              | Hobsons Bay        | 22,437                            | 45,591                |
|                              | Maribyrnong        | 21,895                            | 52,362                |
|                              | Melton - B Marsh   | 20,031                            | 56,031                |
|                              | Wyndham            | 16,014                            | 47,671                |
| Greater Melbourne SA3 median |                    | 19,348                            | 45,574                |
| Victoria                     |                    | 20,689                            | 42,664                |

## 4.7 Anti-psychotic prescriptions

A similar, but more distributed, pattern is observed with anti-psychotic prescription rates when compared to anti-anxiolytic prescription rates with elevated rates compared to the Greater Melbourne median SA3 value:

- Yarra has very high rates across the older two age groups, with very high rates also seen in Darebin-North for the 18 to 64 year age group and Brunswick-Coburg, Melbourne city and Maribyrnong.
- Very low rates are observed in the older two age groups within Macedon Ranges, and within the 18 to 64 year age group for Wyndham and the under 17 year age group in Keilor. The under 17 year age group has very high rates of prescriptions within Wyndham.

Table 16: PBS prescriptions dispensed for antipsychotic medicines per 100,000 people, age standardised, by SA3, 2013–14

| SA4                          | SA3                | Age Standardised Rate per 100,000 people |                |                       |
|------------------------------|--------------------|--|----------------|-----------------------|
|                              |                    | Under 17 years                           | 18 to 64 years | Greater than 65 years |
| Melbourne - Inner            | Brunswick - Coburg | 1,316                                    | 20,585         | 45,117                |
|                              | Darebin - South    | 2,071                                    | 18,308         | 38,887                |
|                              | Essendon           | 876                                      | 17,642         | 34,991                |
|                              | Melbourne City     | 1,358                                    | 19,234         | 44,030                |
|                              | Yarra              | 1,278                                    | 26,440         | 57,130                |
| Melbourne - N East           | Darebin - North    | 1,786                                    | 24,942         | 37,986                |
| Melbourne - N West           | Keilor             | 799                                      | 16,790         | 29,983                |
|                              | Macedon Ranges     | 1,327                                    | 12,038         | 25,158                |
|                              | Moreland - North   | 1,270                                    | 20,070         | 33,907                |
|                              | Sunbury            | 1,949                                    | 14,168         | 33,800                |
|                              | Tulla - Bmeadow    | 1,060                                    | 17,734         | 34,700                |
| Melbourne - West             | Brimbank           | 1,403                                    | 19,267         | 33,403                |
|                              | Hobsons Bay        | 1,428                                    | 19,909         | 33,809                |
|                              | Maribyrnong        | 1,632                                    | 22,357         | 43,047                |
|                              | Melton - B Marsh   | 1,771                                    | 16,072         | 37,216                |
|                              | Wyndham            | 2,077                                    | 13,328         | 30,663                |
| Greater Melbourne SA3 median |                    | 1,356                                    | 16,779         | 30,771                |
| Victoria                     |                    | 1,774                                    | 19,663         | 31,763                |

In summarising prescription rates across the three main mental health pharmaceutical groups:

- Sunbury and Melton-Bacchus Marsh have elevated prescription rates across all drug types and age groups except for 18 to 64 year age group for anti-psychotics and the under 17 year age group for anti-depressants for Melton-Bacchus Marsh.
- Opportunities exist to develop programs that target areas of very low prescription rates as these are unlikely to be related to low population prevalence and more likely to relate to availability of specialist psychiatric service availability and GP practice quality.

## 5 ADDITIONAL FIGURES, TABLES AND MAPS

Figure 8: Median household income by SA2 and LGA. Deciles of the Victorian level, 2016 (ABS Census 2016)

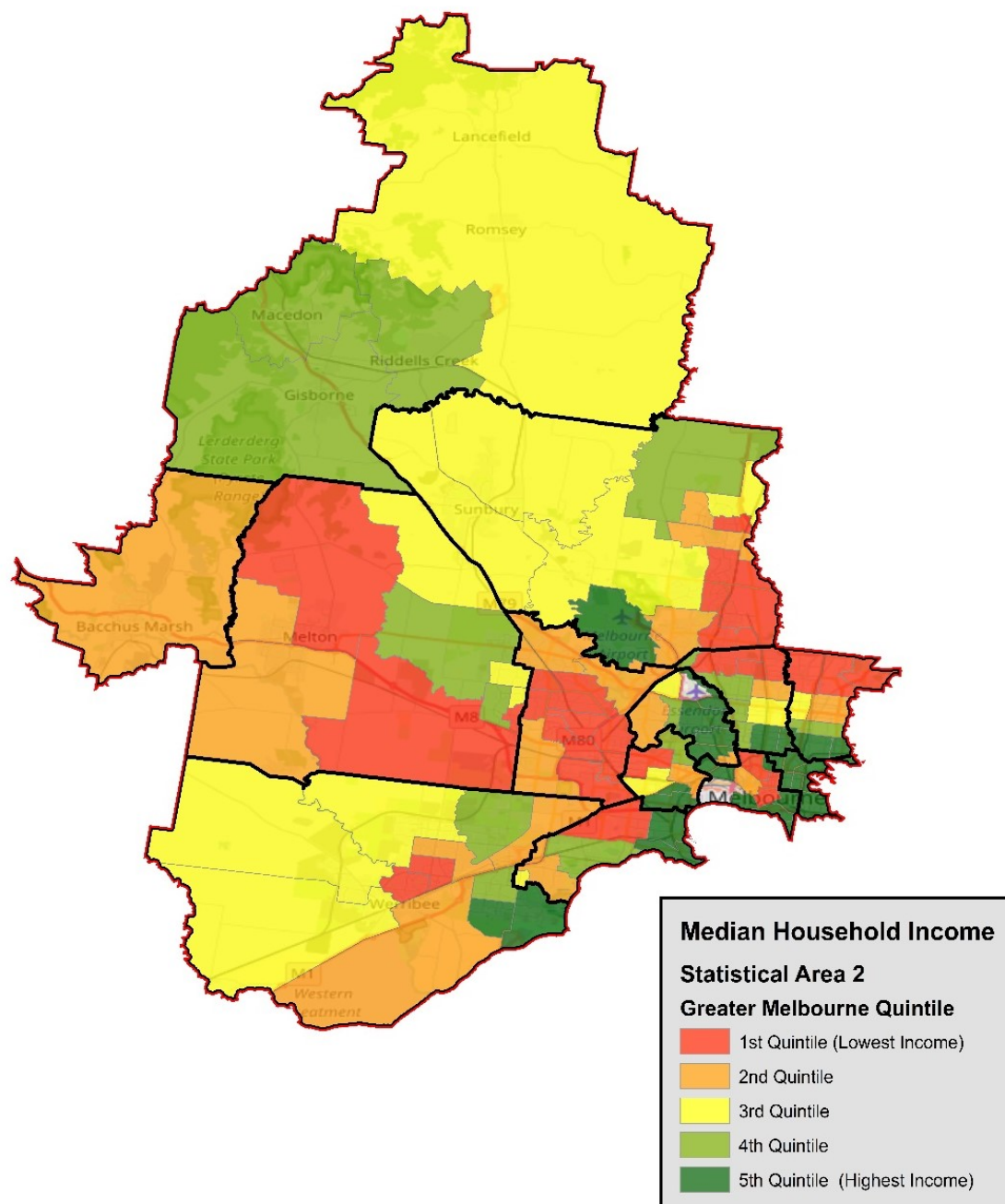


Figure 9: Proportion of the population that has completed year 9 or less by SA2 and LGA. Deciles of the Victorian level, 2016 (ABS Census 2016)

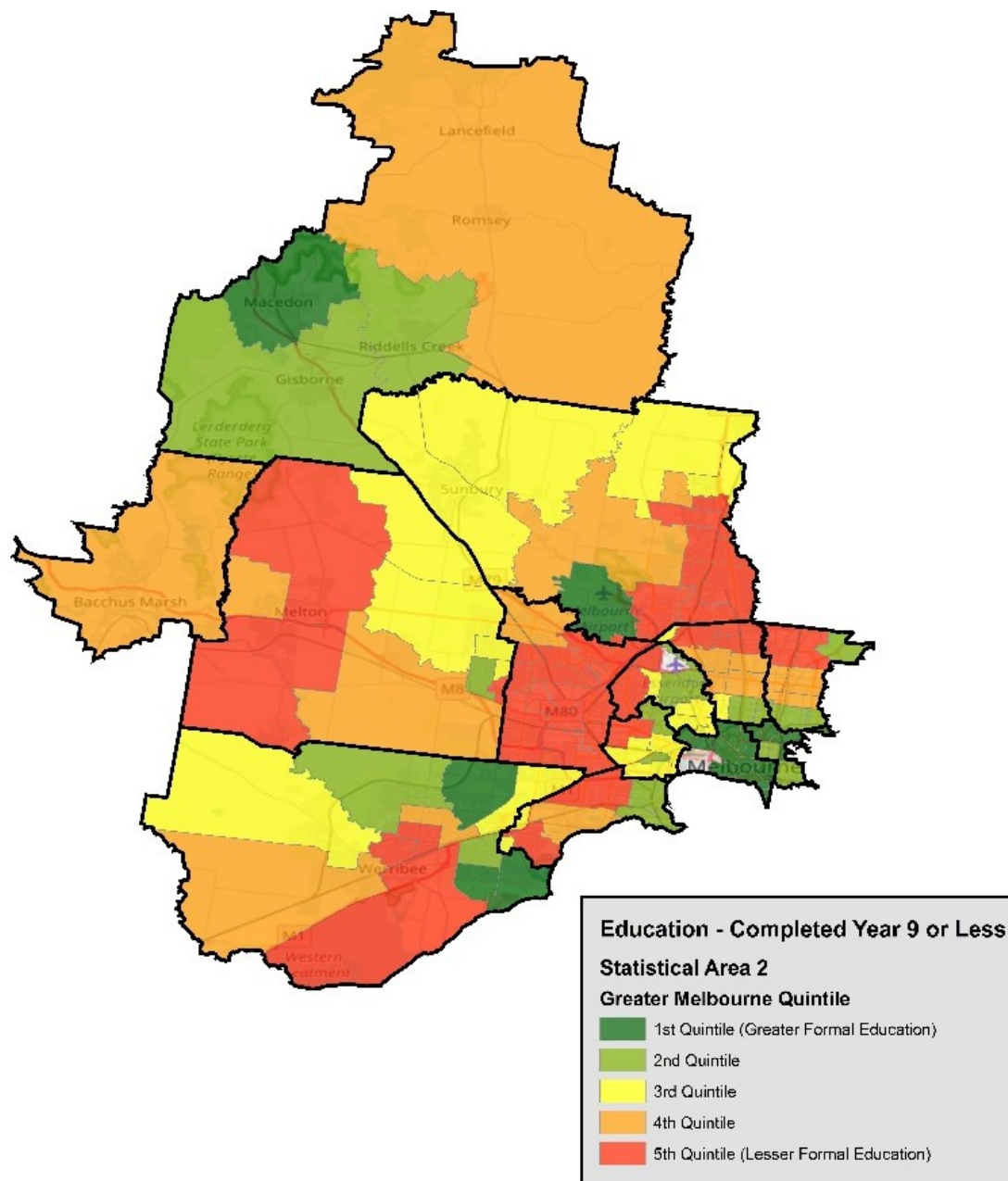




Figure 10: Proportion of the population that has completed year 12 or equivalent by SA2 and LGA. Deciles of the Victorian level, 2016 (ABS Census 2016)

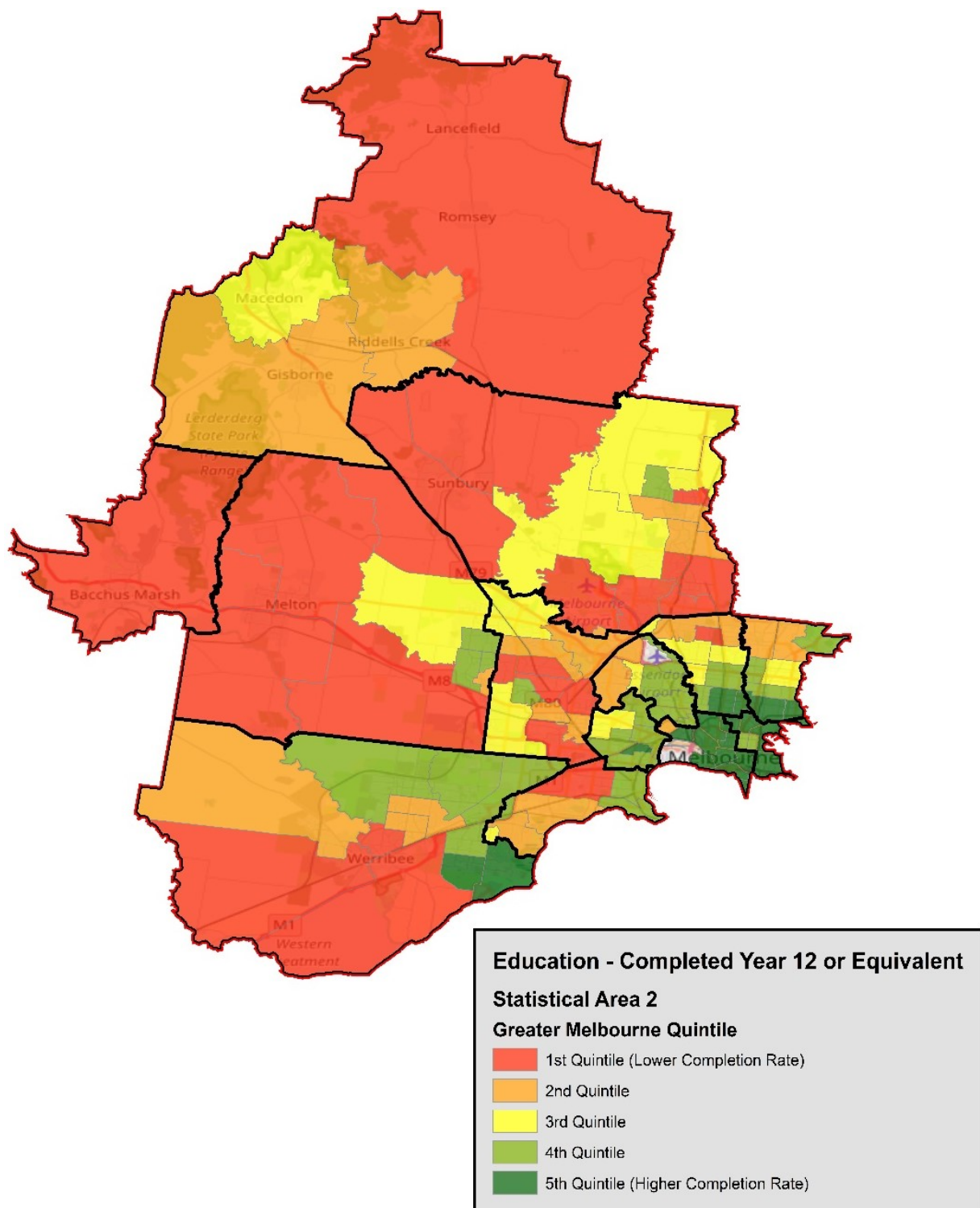




Figure 11: Estimated population aged 4-17 years that has a mental health condition. SA3 Quartiles of the Victorian level, 2016 (PHIDU, 2017)

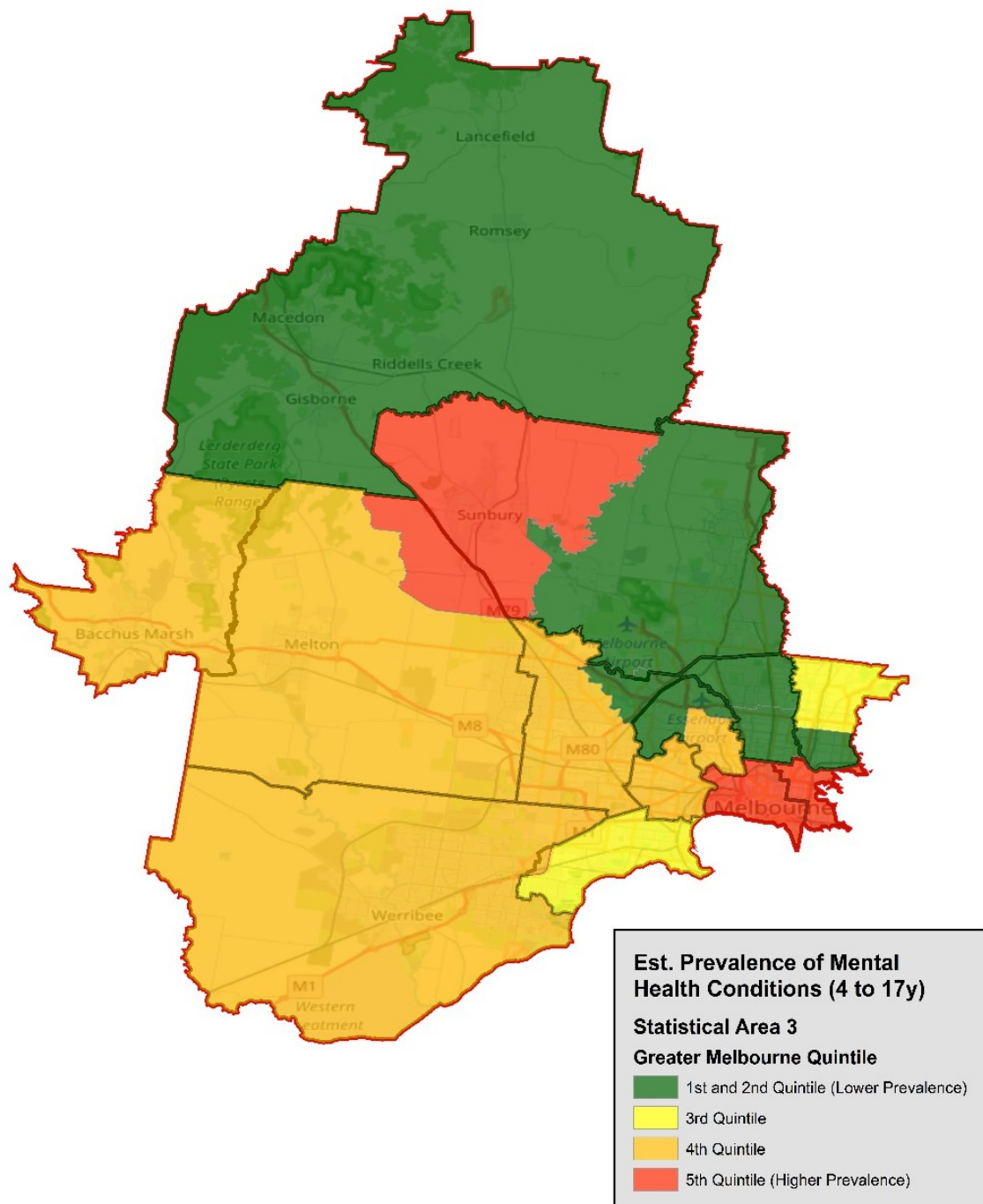


Table 17: Psychiatrist MBS Services 2014, Greater Melbourne Deciles by PHN (MBS)

| SA4                | SA3                | Mean Fees Per Service (\$) | Mean Services Per Patient | % Total MH Services | Fees Per Service Decile | Services Per Patient Decile | % Total MH Service Decile |
|--------------------|--------------------|----------------------------|---------------------------|---------------------|-------------------------|-----------------------------|---------------------------|
| Melbourne - Inner  | Brunswick - Coburg | 37.42                      | 8.31                      | 27.1%               | 5                       | 7                           | 6                         |
|                    | Darebin - South    | 39.67                      | 10.18                     | 31.3%               | 6                       | 10                          | 8                         |
|                    | Essendon           | 40.84                      | 8.38                      | 28.4%               | 6                       | 8                           | 7                         |
|                    | Melbourne City     | 38.36                      | 7.43                      | 33.4%               | 6                       | 6                           | 9                         |
|                    | Yarra              | 44.78                      | 10.59                     | 34.9%               | 9                       | 10                          | 9                         |
| Melbourne - N East | Darebin - North    | 26.89                      | 7.26                      | 26.7%               | 2                       | 5                           | 6                         |
| Melbourne - N West | Keilor             | 36.29                      | 7.37                      | 27.0%               | 4                       | 5                           | 6                         |
|                    | Macedon Ranges     | 33.89                      | 7.25                      | 22.2%               | 3                       | 4                           | 4                         |
|                    | Moreland - North   | 29.13                      | 6.90                      | 23.9%               | 3                       | 4                           | 5                         |
|                    | Sunbury            | 26.54                      | 7.26                      | 22.2%               | 2                       | 5                           | 4                         |
|                    | Tulla - Bmeadow    | 22.66                      | 4.83                      | 16.7%               | 1                       | 1                           | 1                         |
| Melbourne - West   | Brimbank           | 23.42                      | 5.35                      | 19.3%               | 1                       | 1                           | 3                         |
|                    | Hobsons Bay        | 37.49                      | 7.37                      | 22.6%               | 5                       | 5                           | 4                         |
|                    | Maribyrnong        | 36.61                      | 6.97                      | 21.4%               | 4                       | 4                           | 3                         |
|                    | Melton - B Marsh   | 24.24                      | 5.04                      | 13.8%               | 1                       | 1                           | 1                         |
|                    | Wyndham            | 25.60                      | 5.70                      | 18.3%               | 2                       | 2                           | 2                         |
| Greater Melbourne  |                    | 38.70                      | 7.46                      | 25.5%               |                         |                             |                           |
| NWMPHN             |                    | 33.68                      | 7.09                      | 23.9%               |                         |                             |                           |

Table 18: Clinical Psychologist MBS Services 2014, Greater Melbourne Deciles by PHN (MBS)

| SA4                | SA3                | Mean Fees Per Service (\$) | Mean Services Per Patient | % Total MH Services | Fees Per Service Decile | Services Per Patient Decile | % Total MH Service Decile |
|--------------------|--------------------|----------------------------|---------------------------|---------------------|-------------------------|-----------------------------|---------------------------|
| Melbourne - Inner  | Brunswick - Coburg | 29.95                      | 5.18                      | 23.6%               | 7                       | 10                          | 10                        |
|                    | Darebin - South    | 33.49                      | 5.39                      | 22.0%               | 9                       | 10                          | 10                        |
|                    | Essendon           | 29.85                      | 4.79                      | 21.0%               | 7                       | 6                           | 9                         |
|                    | Melbourne City     | 33.80                      | 4.94                      | 18.7%               | 9                       | 8                           | 5                         |
|                    | Yarra              | 33.30                      | 5.21                      | 21.8%               | 9                       | 10                          | 9                         |
| Melbourne - N East | Darebin - North    | 22.75                      | 4.91                      | 18.8%               | 5                       | 7                           | 5                         |
| Melbourne - N West | Keilor             | 26.70                      | 4.77                      | 21.3%               | 5                       | 6                           | 9                         |
|                    | Macedon Ranges     | 24.14                      | 4.48                      | 11.4%               | 5                       | 2                           | 1                         |
|                    | Moreland - North   | 20.12                      | 4.74                      | 18.2%               | 3                       | 5                           | 4                         |
|                    | Sunbury            | 20.94                      | 4.65                      | 12.7%               | 3                       | 4                           | 1                         |
|                    | Tulla - Bmeadow    | 10.31                      | 4.50                      | 16.0%               | 1                       | 3                           | 3                         |
| Melbourne - West   | Brimbank           | 13.92                      | 4.56                      | 15.8%               | 1                       | 3                           | 2                         |
|                    | Hobsons Bay        | 25.92                      | 4.58                      | 17.8%               | 5                       | 4                           | 3                         |
|                    | Maribyrnong        | 28.07                      | 4.97                      | 22.5%               | 6                       | 9                           | 10                        |
|                    | Melton - B Marsh   | 9.23                       | 4.57                      | 14.9%               | 1                       | 3                           | 2                         |
|                    | Wyndham            | 16.81                      | 4.41                      | 14.6%               | 2                       | 1                           | 1                         |
| Greater Melbourne  |                    | 25.54                      | 4.76                      | 18.3%               |                         |                             |                           |
| NWMPHN             |                    | 23.84                      | 4.81                      | 18.2%               |                         |                             |                           |

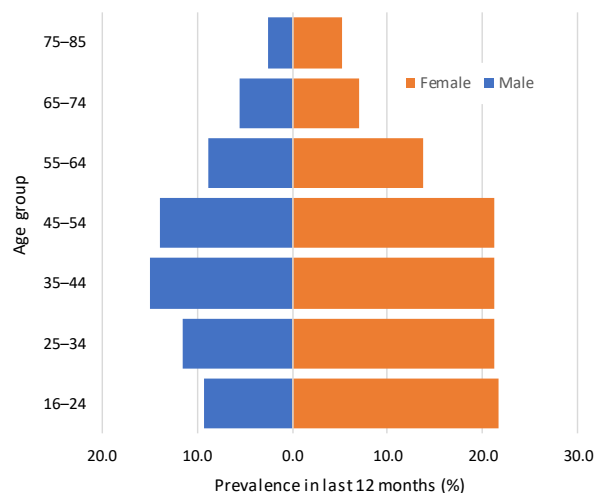
Table 19: GP MH MBS Services 2014, Greater Melbourne Deciles by PHN (MBS)

| SA4                | SA3                | Mean Fees Per Service (\$) | Mean Services Per Patient | % Total MH Services | Fees Per Service Decile | Services Per Patient Decile | % Total MH Service Decile |
|--------------------|--------------------|----------------------------|---------------------------|---------------------|-------------------------|-----------------------------|---------------------------|
| Melbourne - Inner  | Brunswick - Coburg | 6.29                       | 1.80                      | 23.7%               | 7                       | 6                           | 3                         |
|                    | Darebin - South    | 8.25                       | 1.78                      | 20.8%               | 8                       | 6                           | 1                         |
|                    | Essendon           | 6.15                       | 1.76                      | 24.4%               | 6                       | 4                           | 4                         |
|                    | Melbourne City     | 6.49                       | 1.93                      | 25.4%               | 7                       | 9                           | 5                         |
|                    | Yarra              | 10.40                      | 1.76                      | 20.6%               | 9                       | 4                           | 1                         |
| Melbourne - N East | Darebin - North    | 3.35                       | 1.84                      | 27.3%               | 3                       | 7                           | 6                         |
| Melbourne - N West | Keilor             | 5.21                       | 1.70                      | 24.3%               | 5                       | 1                           | 4                         |
|                    | Macedon Ranges     | 6.36                       | 1.94                      | 30.6%               | 7                       | 9                           | 8                         |
|                    | Moreland - North   | 2.99                       | 1.77                      | 27.9%               | 3                       | 5                           | 7                         |
|                    | Sunbury            | 2.22                       | 2.02                      | 32.3%               | 2                       | 10                          | 8                         |
|                    | Tulla - Bmeadow    | 1.01                       | 1.82                      | 35.6%               | 1                       | 7                           | 10                        |
| Melbourne - West   | Brimbank           | 1.76                       | 1.86                      | 33.6%               | 2                       | 8                           | 9                         |
|                    | Hobsons Bay        | 4.60                       | 1.75                      | 27.4%               | 4                       | 3                           | 6                         |
|                    | Maribyrnong        | 5.69                       | 1.81                      | 28.2%               | 5                       | 7                           | 7                         |
|                    | Melton - B Marsh   | 0.86                       | 2.21                      | 41.2%               | 1                       | 10                          | 10                        |
|                    | Wyndham            | 1.47                       | 1.73                      | 32.9%               | 1                       | 2                           | 9                         |
| Greater Melbourne  |                    | 5.26                       | 1.84                      | 27.9%               |                         |                             |                           |
| NWMPHN             |                    | 3.74                       | 1.85                      | 29.1%               |                         |                             |                           |

Table 20: Other Allied Health MH MBS Services 2014, Greater Melbourne Deciles by PHN (MBS)

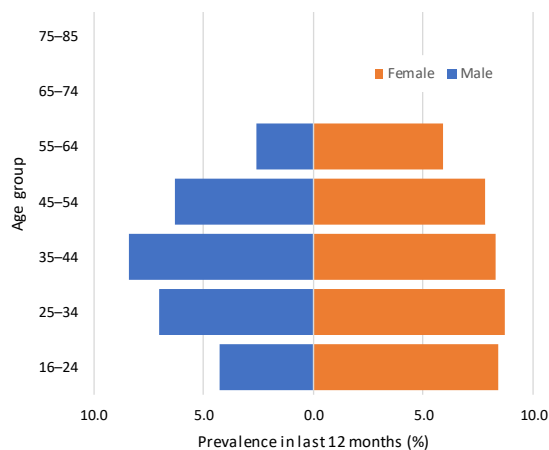
| SA4                | SA3                | Mean Fees Per Service (\$) | Mean Services Per Patient | % Total MH Services | Fees Per Service Decile | Services Per Patient Decile | % Total MH Service Decile |
|--------------------|--------------------|----------------------------|---------------------------|---------------------|-------------------------|-----------------------------|---------------------------|
| Melbourne - Inner  | Brunswick - Coburg | 34.69                      | 4.85                      | 25.7%               | 7                       | 9                           | 3                         |
|                    | Darebin - South    | 40.36                      | 5.16                      | 25.9%               | 9                       | 10                          | 4                         |
|                    | Essendon           | 39.12                      | 4.70                      | 26.2%               | 8                       | 7                           | 4                         |
|                    | Melbourne City     | 37.15                      | 4.82                      | 22.6%               | 8                       | 8                           | 1                         |
|                    | Yarra              | 43.37                      | 4.97                      | 22.7%               | 10                      | 10                          | 2                         |
| Melbourne - N East | Darebin - North    | 26.33                      | 4.67                      | 27.2%               | 4                       | 6                           | 5                         |
| Melbourne - N West | Keilor             | 32.77                      | 4.52                      | 27.4%               | 6                       | 4                           | 5                         |
|                    | Macedon Ranges     | 26.50                      | 4.52                      | 35.8%               | 4                       | 4                           | 10                        |
|                    | Moreland - North   | 22.30                      | 4.50                      | 30.0%               | 3                       | 3                           | 6                         |
|                    | Sunbury            | 17.61                      | 4.83                      | 32.8%               | 2                       | 9                           | 9                         |
|                    | Tulla - Bmeadow    | 11.91                      | 4.24                      | 31.7%               | 1                       | 1                           | 8                         |
| Melbourne - West   | Brimbank           | 16.33                      | 4.37                      | 31.3%               | 1                       | 2                           | 8                         |
|                    | Hobsons Bay        | 27.64                      | 4.54                      | 32.2%               | 5                       | 5                           | 9                         |
|                    | Maribyrnong        | 30.05                      | 4.65                      | 27.9%               | 5                       | 6                           | 5                         |
|                    | Melton - B Marsh   | 18.60                      | 4.20                      | 30.2%               | 2                       | 1                           | 7                         |
|                    | Wyndham            | 24.36                      | 4.37                      | 34.2%               | 4                       | 2                           | 10                        |
| Greater Melbourne  |                    | 27.97                      | 4.56                      | 28.2%               |                         |                             |                           |
| NWMPHN             |                    | 26.52                      | 4.55                      | 28.8%               |                         |                             |                           |

Figure 12: Prevalence of Anxiety mental health disorder in the previous 12 months, by age group - Australia



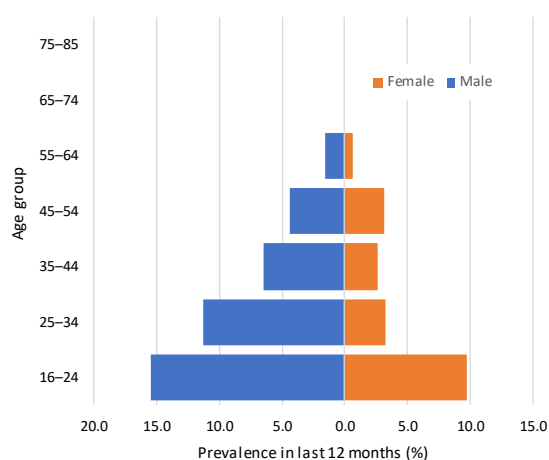
Source: ABS (2008) 4326.0 - National Survey of Mental Health and Wellbeing: Summary of Results, 2007

Figure 13: Prevalence of Affective disorders in the previous 12 months, by age group - Australia



Source: ABS (2008) 4326.0 - National Survey of Mental Health and Wellbeing: Summary of Results, 2007

Figure 14: Prevalence of Substance Use disorders in the previous 12 months, by age group - Australia



Source: ABS (2008) 4326.0 - National Survey of Mental Health and Wellbeing: Summary of Results, 2007