# Nepean Blue Mountains Primary Health Network

# Needs Assessment

**2023**

Australian Government
Department of Health

phn NEPEAN BLUE MOUNTAINS
An Australian Government Initiative

Wentworth Healthcare
Blue Mountains | Hawkesbury | Lithgow | Penrith

# Section 1 – Narrative

## Introduction

The Nepean Blue Mountains Primary Health Network (NBMPHN) is pleased to present our 2023 needs assessment, detailing the health and service needs of the Nepean Blue Mountains (NBM) region.

The needs assessment consists of two key components – a systematic **analysis** of the health and service needs of our local population, and an **assessment** of the gaps and relative priorities that will support planning opportunities within primary health to address needs in the region. Our needs assessment is underpinned by a requirement to meet the PHN objectives of efficiency and effectiveness of health services for patients, particularly those at risk of poor health outcomes, and considering opportunities to improve coordination of care.

The 2023 iteration of our needs assessment has been informed by previous needs assessments and the outcomes of the monitoring and evaluation of previous activities and investments by NBMPHN, captured within our annual activity plans and reports.

## About the Nepean Blue Mountains region

The Nepean Blue Mountains (NBM) region comprises four local government areas (LGA) with diverse geographical characteristics. It has a current population of 387,496, projected to reach 452,747 by 2041. The region has a higher proportion of Aboriginal and Torres Strait Islander residents compared to the NSW average. The region faces socio-economic disparities, with some areas experiencing extreme disadvantage, especially affecting access to health services.

Each LGA has its unique characteristics and demographics, which impact health and access to services in the NBM region.

**Blue Mountains LGA**

The Blue Mountains LGA has a population of 77,913 and encompasses a mix of residential, tourist and rural areas. 74% of the LGA is covered by World Heritage National Park. Major population centres include Katoomba and Springwood. More than half of resident's commute outside the LGA for work, and the primary mode of transport is by car.

**Hawkesbury LGA**

The Hawkesbury LGA has large areas of state and national parks and covers 2,800 sq km and is home to 67,862 residents. The LGA is divided by five river systems. Major population centres are Windsor and Richmond. Almost half of residents commute outside of the LGA for work, with more than half driving.

**Lithgow LGA**

National parks and state forests make up nearly two-thirds of the LGA. The LGA is predominately rural with mining activity, especially coal mining. Lithgow has the region's smallest population with 20,813 residents. Townships include Lithgow, Portland, and Wallerawang. 76% of residents work locally and the primary mode of transport to work is by car.

**Penrith LGA**

The Penrith LGA features residential, rural, and industrial areas. Most of the population lives along the Great Western Highway and the Western railway corridor. Penrith has the region's largest population with 220,908 residents. The region includes commercial and industrial areas, as well as agricultural land. The LGA has two major commercial centres, Penrith, and St Marys. Many residents commute outside the LGA for work, with the primary mode of transport being car. The construction of the Western Sydney Aerotropolis is expected to place higher demands on health services, particularly in Penrith LGA.

## Summary of the needs assessment process

The health and service needs **analysis** component of this needs assessment involved two key processes:

***Data collection and analysis***

- Demographic and epidemiological data, as well as social and economic determinants of health, inform data collection and analysis.
- De-identified data from general practices is aggregated to identify key population health gaps.
- MBS data is used to pinpoint service gaps in primary care, particularly in preventative health assessments and unmet need for primary mental healthcare services delivered by primary healthcare providers, GPs, specialists and for specific population groups such as Youth.
- Data from PHN commissioned mental health services is accessed via the Primary Mental Health Care – Minimum Data Set (PMHC-MDS).
- Data from PHN commissioned drug and alcohol treatment services is accessed at a regional level via the AOD Treatment Services National Minimum Data Set.
- Service and workforce mapping considers primary health workforce types and their linkages across health services, encompassing general practice, after-hours GP services, specialists, allied health, mental health, and drug and alcohol services.
- Workforce considerations focus on local primary healthcare professionals, with an emphasis on general practitioners, general practice nurses, allied health professionals, Aboriginal and Torres Strait Islander and Torres Strait Islander Health Workers, and specialists. This assessment also includes access, equity, quality, and service appropriateness.

***Consultations with key stakeholders***

- Consultation with local communities provide valuable qualitative insights.
- The Community Advisory Committee, representing each LGA in the region, offers essential feedback and consultation throughout the year and on a range of topics.
- Clinical Councils, including General Practice, Allied Health, and Integrating Care, serve as valuable sources of advice and consultation.
  Working groups, committees, and consultative groups from both community and clinician perspective provide qualitative insights and feedback.
- Collaboration with the NBM LHD mental health directorate helps identify regional mental health and suicide prevention needs.
- Consultation with external bodies, in including the NSW Ministry of Health, NSW Mental Health Commission, Cancer Institute NSW, local councils, local schools, non-government organisations and commissioned service providers, offer specific feedback on population health and service gaps.

The ***Assessment*** component of the needs assessment has synthesised the main themes, identified consistently throughout the analysis process, and triangulated these with available evidence to identify key opportunities, priorities, and options for the 23-24 annual plan for the region. Staff throughout the PHN are consulted and have input into their areas of responsibility and expertise.

## Summary of Key Issues

Within this section, we present an overview of the key findings in each area of focus, as detailed in the needs assessment.

### 1. General Population

***Cancer Screening and Prevention***

NBM bowel cancer screening rates have declined from 2019 to 2021 and are slightly lower than the NSW average. More than 50% of bowel cancer cases in the region are diagnosed at an advanced stage. Breast and cervical cancer screening rates in the region are lower than the NSW average, with the lowest participation rates in the Blue Mountains and Penrith. Participation in breast screening for Aboriginal and Torres Strait Islander women is also declining and well below the state average. Tobacco smoking is decreasing, however there is a higher rate of daily smoking in women during pregnancy compared to NSW. Smoking related hospitalisations are lower than the NSW average.

***Chronic and Preventable Conditions***

The NBM region faces significant health challenges with cardiovascular disease, having the second highest rate of related deaths amongst NSW PHNs. Obesity is a major concern, with 64.5% of adults in the region classified as overweight or obese, with projections indicating a rise in childhood obesity. Lithgow and Penrith LGAs have the highest rates of diabetes and diabetes related hospitalisations remain above the NSW average despite a slight decrease in recent years.

The NBM region exhibited slightly lower rates of potentially preventable hospitalisations (PPH) than NSW. However, PPHs for acute conditions was higher than the NSW average.

Childhood immunisation rates in the region are at or above the state averages for all children. The Blue Mountains and St Marys have the lowest immunisation rates in the region.

***Social Determinants of Health***

Social determinants of health, including education, income, and cultural background significantly impact the well-being of individuals in the region.

Many Lithgow LGA residents live in low socioeconomic suburbs. 12.63% of residents in NBM speak a language other than English at home, and 1.5% do not speak English well or at all.

Low health literacy is associated with lower education levels, socioeconomic status, and is prevalent in CALD, Aboriginal and Torres Strait Islander, and ageing populations in the region.

Lithgow LGA has the highest domestic violence cases in the region, exceeding statewide rates. Both Hawkesbury and Lithgow LGAs have experienced an increase in domestic violence related assaults. The region has a higher rate of sexual assault incidents against females than the state average, and Lithgow, Blue Mountains and Penrith have higher yearly rates of sexual assault incidents involving children.

***Palliative Care***

There is increasing need for palliative care and services that will allow people to die in their place of choice. The region faces various challenges in delivering effective palliative care, including poor coordination of services, limited capacity and capability of healthcare workers, and delayed referrals leading to late-stage palliative care initiation.

***Older Persons***

The ageing population in the NBM region is growing, with over 16% of the region's population aged over 65 and projected to reach 22% by 2041. This shift increases the demand for coordinated primary care services, and RACH bed numbers must increase to accommodate the growing need. Dementia, including Alzheimer's, is the second leading cause of death and its prevalence is expected to rise, particularly among Aboriginal and Torres Strait Islander populations.

***Access to Health Services***

Comprehensive primary healthcare services are vital for promoting health, preventing disease, and reducing health disparities. Access barriers include limited knowledge of local services, difficultly obtaining information, securing timely GP appointments, cost of appointments, and travel challenges due to transport issues. Some residents face difficulties in accessing GP services, with extended wait time in the Blue Mountains, where many GPs are not accepting new patients. Increasing the GP to population ratio in the region is necessary, along with addressing the shortage of nurses in general practices. There is a significant demand for afterhours health advice in the region.

## 2. Aboriginal and Torres Strait Islander Health

The NBM region has 17,906 Aboriginal and Torres Strait Islander and Torres Strait Islander residents, making up 4.7% of the population. The Aboriginal and Torres Strait Islander community faces greater socio-economic disadvantage and higher rates of chronic diseases, resulting in triple the rate of PPHs compared to non-Aboriginal and Torres Strait Islander residents. NBM has the highest rates of immunisations for Aboriginal and Torres Strait Islander children aged 24-27 months in NSW. The uptake of Aboriginal and Torres Strait Islander health checks is still lower compared to national and state averages. Additionally, the region has the lowest rate of follow up services for Aboriginal and Torres Strait Islander people among NSW PHNs. Cultural and geographical factors significantly impact access to culturally appropriate healthcare, as mainstream health services often do not align with Aboriginal and Torres Strait Islander concepts of wellbeing and country boundaries.

## 3. Primary Mental Health Care

***Suicide prevention***

Suicide rates in the NBM region, particularly in Lithgow LGA, are highest among young people. Intentional self-harm hospitalisations are also notable in the Richmond-Windsor and St Marys SA3 regions. The region's death rates from intentional self-harm have decreased slightly from 2020 to 2021. Self-harm hospitalisation rates in the region exceed the state average, particularly among young people. Concerns persist regarding the continuity of care for individuals after discharge from hospital, with heightened risk of suicide following discharge.

***Mental health***

A significant portion of the region's population require mental health support, including early intervention and relapse prevention needs, with 16.7% of the region's population likely to experience a mental illness in a year. Mental health issues are prevalent among the region's young people, with 13.77% of 4-17-year-olds having a mental health disorder, and a growing number of 15-19-year-olds experiencing psychological distress, especially among females and Aboriginal and Torres Strait Islander youth. The region also faces high rates of mental health related hospitalisations, particularly among Aboriginal and Torres Strait Islander populations. Access to psychiatric services remains challenging due to geographical factors coupled with the ability to fund adequate service provision across the region. Antipsychotic medication dispensing rates are high compared to state averages.

***Psychosocial support for people with severe mental illness***

Social and geographic isolation significantly affects the inclusion of NBM residents in community participation, particularly impacting the mental health of specific groups like Aboriginal and Torres Strait Islander communities, CALD communities, and homeless populations. These communities often lack mental health systems, knowledge of local services and understanding of how to navigate mental health systems. There is a high prevalence of co-existing mental health, substance use, and physical health conditions within this population.

## 4. Alcohol and Other Drugs

Alcohol, meth/amphetamines, and cannabinoids were the most common substances leading clients to seek treatment at NBM commissioned AOD treatment services in 2021/22. Although declining, there is still a high prevalence of prescription medication abuse. Young people in the NBM region face a high prevalence of problem substance use and are often under-serviced, with increasingly complex needs. The employment of Aboriginal and Torres Strait Islander staff has shown positive outcomes, but not all services have funded Aboriginal and Torres Strait Islander positions. Many clients with substance issues also have other chronic conditions, which often are left untreated, resulting in emergency department presentations.

## 5. Disaster Management

The NBM region is geographically diverse, experiencing extreme weather conditions and various natural disasters, all which impact community health and service provision. These disasters, combined with the COVID-19 pandemic, highlight the impact of compound risks in primary health care service delivery during emergencies. Disasters can strain resources and disrupt health systems, affecting physical, psychosocial, and economic aspects of communities, particularly the mental health of those impacted. Climate change is a significant global issue, with direct and indirect impacts on health and well-being, necessitating proactive health protection measures in response to climate change-induced disasters. There is a need to enhance awareness of emergency communication and preparedness, especially among vulnerable populations.

### Additional Data Needs and Gaps

The PHN has identified the following data needs and gaps:

- Accessing data from private hospitals in the region for a more comprehensive view.
- After-hours ED data will be used to identify gaps in after-hours primary care services.
- Our upcoming participation in the Right Care First Time Where You Live program will allow for better mental health service mapping particularly for youth.
- Enhancing analysis of de-identified, aggregated clinical data from general practices to better assess local needs.
- Identifying service gaps or inappropriate models of care is an ongoing challenge due to limitations in workforce data collection.

### Additional comments or feedback

The availability of additional resources from the Department of Health and AIHW will support future needs assessment and may include more current data sets that can be drilled down to regional and postcode level. For example, analysis of Australian refined diagnosis-related groups (AR-DRG) at the regional level would facilitate targeting of primary care services in relation to headline indicators such as potentially preventable hospitalisations.

# Section 2 – Outcomes of the health needs analysis

*This section summarises the findings of the health needs analysis in the table below.*

# General Population Health

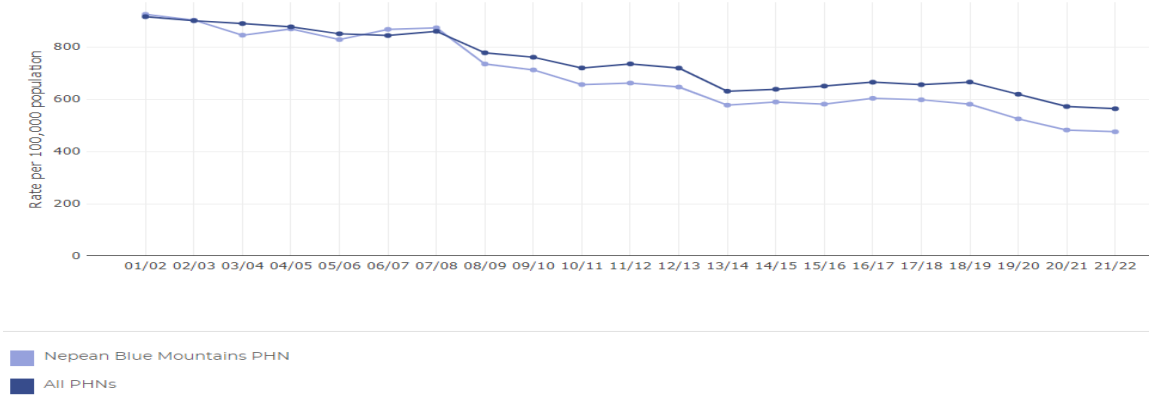
## Cancer Screening and Prevention

| **Outcomes of the health needs analysis – General Population Health: *Cancer Screening and Prevention*** | | |
|---|---|---|
| Identified Need | Key Issue | Description of Evidence |
| **Cancer screening and prevention** | Tobacco smoking – indicators of poorer performance in NBM compared to NSW | Tobacco is the leading cause of cancer in Australia (contributing 44% of the cancer burden). (AIHW 2021i).<br><br>**Smoking rates in the NBM region**<br>The Reporting for Better Cancer Outcomes insight report (Cancer Institute NSW 2022) shows:<br><br>• Daily smoking: 12.0% of adults. A decrease of 2.6% from 2020 to 2021. Equivalent to the NSW average.<br>• Occasional smoking: 3.0% of adults. Third lowest rate of all NSW PHNs.<br>• Smoking during pregnancy: 11.2% of women smoked during pregnancy. A decrease of 0.7% since 2019. Higher than the NSW average of 8.6%.<br>• Smoking during pregnancy, Aboriginal and Torres Strait Islander women: 34.1% smoked during pregnancy. A decrease of 0.8% since 2019. Lower than the NSW average of 41.7%.<br>• Calls to NSW Quitline: 5.8 persons per 100,000. Lower than the NSW average of 10.9 persons per 100,000. The lowest rate of all NSW PHNs.<br>• Smoking status recorded by GP: 60.3% of regular clients have a smoking status recorded at their GP, the lowest rate of all NSW PHNs.<br><br>**Smoking attributable hospitalisations in the NBM region**<br>The smoking attributable hospitalisation rate continues to decrease and was lower in 2021/22 than in 2020/21 (475.2 vs 481.8 per 100,000 respectively).<br><br>In 2021/2022 there were 2,166 hospitalisations attributed to smoking in NBM. The rate per 100,000 persons is well below the NSW average as shown in the table below. |

**Table:** Smoking attributable hospitalisations, number and age standardised rate per 100,000 population, 2021/2022.

| | Gender | Number NBM | Rate per 100,000 NBM | Rate per 100,000 NSW |
|---|---|---|---|---|
| **NBMPHN** | Male | 1,212 | 556.3 | 675.4 |
| | Female | 954 | 405 | 463.2 |
| | Total | 2,167 | 475.2 | 563.3 |

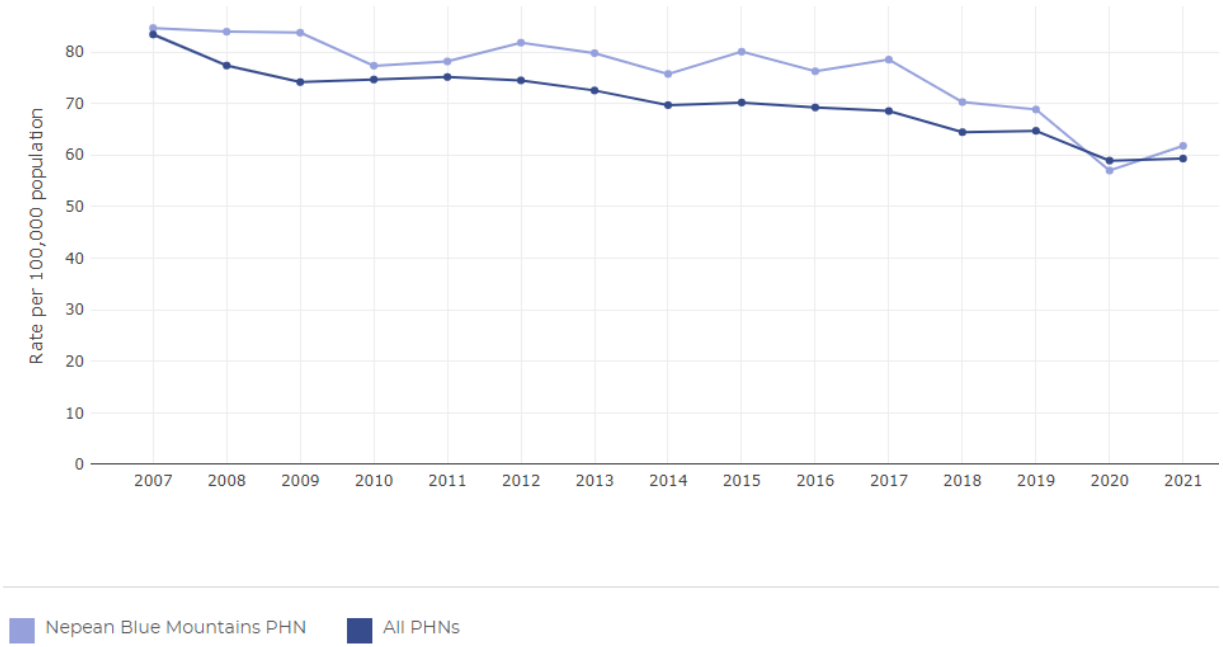
**Figure:** Smoking attributable hospitalisations, NBMPHN / NSW comparison, 2001-02 to 2021-22 (Centre for Epidemiology n.d.w).




**Smoking attributable deaths in the NBM region**
The rate has risen between 2020 and 2021, from 57.0 to 61.8 per 100,000. Higher than the NSW rate of 59.3 per 100,000.

For females: 47.8 per 100,000. Higher than the NSW rate of 46.3 per 100,000.
For males: 78.8 per 100,000. Higher than the NSW rate of 74.9 per 100,000.
(Centre for Epidemiology n.d.y).

**Figure:** Smoking attributable deaths, NBMPHN / NSW comparison, 2007 to 2021 (Centre for Epidemiology n.d.y).

| Outcomes of the health needs analysis – General Population Health: *Cancer Screening and Prevention* | | |
|---|---|---|
| | |  |
| **Cancer Screening Participation** | Lower cancer screening participation in NBM compared to NSW for breast and cervical cancer. | **Bowel Cancer**<br>Bowel cancer screening in NBM: 35.2% of eligible participants in 2021. A decrease of 4.1% from 2019. Slightly lower level of screening than for NSW (35.4%). (Cancer Institute NSW 2023).<br>For our region, in more than 50% of patients with bowel cancer it has been found at diagnosis that their cancer has already spread to adjacent organs and/or lymph nodes or to other parts of the body (54% in males and 55% in females). (Cancer Institute NSW 2023)<br><br>**Breast Cancer**<br>• Breast screening in NBM: 43.7% in 2020-21 among age-eligible women 50-74 years. A decrease from 48.8% in 2018-19. NBM screening rates are lower than the NSW average (47.7%).<br>• Breast screening for Aboriginal and Torres Strait Islander women in NBM: 33.9% in 2020-21 among age eligible Aboriginal and Torres Strait Islander women. A decrease from 33.2% in 2018-19. The screening rate remains well below the state average of 44.6% for Aboriginal and Torres Strait Islander women. |

## Outcomes of the health needs analysis – General Population Health: *Cancer Screening and Prevention*

- Breast screening for CALD women in NBM: 33.5% in 2020-21 among age eligible CALD women. A decrease from 41.1.% in 2018-19. The screening rate remains well below the state average of 35.7% for CALD women.
- Never attended a breast screen: 27.8% of age eligible women in 2022. An increase from 23.5% in 2019. Higher than the NSW state average of 23.8%. (Cancer Institute NSW 2022).

**Table: Breast Screening Participation rates for participants 50-74, Aboriginal and Torres Strait Islander participants 50-74 and CALD participants 50-74 (Cancer Institute NSW 2022).**

| LGA | Participation Rate | Participation Rate Aboriginal and Torres Strait Islander participants | Participation Rate CALD Participants |
|---|---|---|---|
| NSW | 46.1% | 44.6% | 35.7% |
| Hawkesbury | 45% | 31.9% | 38.8% |
| Lithgow | 44.2% | 33.4% | 48.8% |
| Blue Mountains | 43.7% | 33.4% | 29.3% |
| Penrith | 40.1% | 35.0% | 33.2% |

**Renewed National Cervical Screening Program**

Changes to the national cervical screening program in 2017 prevent direct comparisons of participation rates of previous years, however the participation rate among age-eligible women (25-74 years) in NBMPHN for 2018-2021 was 56.4%, only slightly lower than the NSW average of 60.6%. Further, the HPV vaccination rate for our region is 88.4%, only slightly higher than the state average of 88.3%, ranking us 6th out of the 10 NSW PHNs (Cancer Institute NSW 2022).

**Table: Participation rates by SA3 2018-2021**

| SA3 Region | Participation Rate |
|---|---|
| Hawkesbury | 64.7% |
| Blue Mountains | 61.9% |
| Rouse Hill-McGraths Hill | 60.3% |
| Richmond – Windsor | 57.6% |
| Lithgow-Mudgee | 54.7% |
| Penrith | 52.3% |
| St Marys | 49.8% |

## Chronic and Preventable Conditions

| **Outcomes of the health needs analysis – General Population Health: *Chronic and Preventable Conditions*** | | |
|---|---|---|
| Identified Need | Key Issue | Description of Evidence |
| **Cardiovascular Disease (CVD)** | | |
| **Cardiovascular Disease (CVD) disease burden** | Circulatory disease was the leading cause of death in NBM females and the second leading cause of death in NBM males in 2018. | CVD is a collective term for a range of circulatory conditions.<br><br>In 2018, cardiovascular diseases accounted for 13% of the total disease burden in Australia. This was second only to the disease burden for cancer, but equal to the burden from musculoskeletal conditions and mental and substance use disorders (all 13%) (AIHW 2021i).<br><br>In 2018, circulatory disease was the leading cause of death in females (143.0 per 100,000) in the NBM region and was the second leading cause of death in males (176.0 per 100,00) (Centre for Epidemiology and Evidence n.d.b). In 2018, there were 677 deaths due to circulatory disease at a rate of 159.3 per 100,000 persons. Although deaths caused by circulatory disease in NBMPHN have been steadily decreasing (178.7 per 100,000 in 2015 vs 159.3 per 100,000 in 2018) the death rate was still significantly higher than for NSW (130.7 deaths per 100,000 persons).<br><br>In 2020-2021 the NBM region had the second highest rates of cardiovascular deaths (144.0 per 100,000), far surpassing the NSW rate (118.6 per 100,000) (Centre for Epidemiology and Evidence n.d.ag).<br><br>There were 7,127 hospitalisations due to circulatory disease in the NBM region in 2018-19 (up from 6,416 in 2016-17), at a rate of 1,650.4 per 100,000 persons. This was slightly lower than the NSW state average at 1,672.4 per 100,000 persons (Centre for Epidemiology and Evidence n.d.c).<br><br>Behavioural risk factors for CVD including tobacco smoking, physical inactivity, poor diet, and risky alcohol consumption – lead to physiological risk factors in cardiovascular disease. These are high blood pressure, elevated blood lipids, diabetes mellitus, and overweight or obesity.<br><br>Psychological and social risk factors additionally contribute to the risk of developing coronary heart disease as well as the worsening of clinical course and prognosis. These factors include low socio-economic status; lack of social support; stress at work and family life; depression or anxiety; and hostility. These factors may act as barriers to treatment adherence and efforts to improve lifestyle in patients and populations. The introduction of MBS items for Heart Health Checks in April 2019, should provide some financial relief for those in lower |

| Outcomes of the health needs analysis – General Population Health: *Chronic and Preventable Conditions* | | |
|---|---|---|
| | | socioeconomic areas, allowing GPs to undertake broader health assessments leading to potentially earlier diagnosis and more timely and appropriate treatment (MBS 2019).<br><br>With advances in peadiatric treatment of congenital heart disease (CHD), patients are living longer, however this has shifted the burden of disease to the adult population. CHD patients in adulthood often require further assistance with a range of other health and lifestyle factors such as physical and dietary requirements, family planning, and physical limitations impacting patients in the areas of work and welfare (AIHW 2019b). This along with the decreasing death rate from CVD in our region (Centre for Epidemiology and Evidence n.d.c), is altering service needs across NBMPHN for our ageing population regarding CVD generally. |
| **Chronic Kidney Disease (CKD)** | | |
| **Chronic kidney disease (CKD) prevalence** | Lowest prevalence of CKD in the NBM region among 10 NSW PHN regions. | PHN-level data indicates the prevalence of CKD among NBM adults was 9.2% in 2011-12, with prevalence rising dramatically with age (NBM CKD prevalence was 12.7% among adults 55-74 years and 42.1% among persons 75+ years). This was the lowest population prevalence among 10 PHN regions in NSW. The NSW CKD prevalence rate was 10.6% (AIHW 2018a). |
| **CKD Disease Burden** | Lower rate of hospitalisations and deaths due to or associated with CKD in NBM compared with NSW. | There were 3,641 chronic kidney disease hospitalisations (excluding dialysis) in the NBM region in 2019-20 at a rate of 862.2 per 100,000 population. This was significantly lower than the NSW average (1,064.6 per 100,000). Further, there were 17,900 hospitalisations in the NBM region that had a principal diagnosis of dialysis with a lower hospitalisation rate than NSW (4,247.5 and 4,406.6 per 100,000 respectively) (Centre for Epidemiology n.d.z).<br><br>There were on average 206 deaths in the NBM region in 2017-2019 caused by CKD, at a rate of 51.7 per 100,000, which was slightly lower than NSW (57.7 per 100,000) for the same period. This is down from 56.7 deaths per 100,000 population in the previous period (2016-2018 (Centre for Epidemiology n.d.z). |
| **Diabetes** | | |
| **Diabetes prevalence** | Decreasing prevalence of diabetes in the NBM region and rates are lower compared to the NSW average. | The estimated prevalence of diabetes among persons aged 16 years and over decreased in the NBM region from 12.2% in 2018 to 10.5% in 2019 and was lower than the NSW average (11.3% in 2019). The estimated prevalence of diabetes in NSW also increased during this timeframe from 11.1% in 2018 to 11.3% in 2019 (Centre for Epidemiology n.d.a).<br><br>Whilst the prevalence of diabetes amongst males has remained higher than that of females, a sharp decrease can be seen in the prevalence of males with diabetes in NBM in 2019, down from 16.2% in 2018 to 11.9% in 2019. The prevalence of diabetes in females has risen from 8.3% in 2018 to 9.1% in 2019 (Centre for Epidemiology n.d.a). |

<table>
<tr><th colspan="3">Outcomes of the health needs analysis – General Population Health: Chronic and Preventable Conditions</th></tr>
<tr><td></td><td>The prevalence of diabetes in Lithgow and Penrith local government areas (LGAs) is higher than the state average.</td><td>National Diabetes Services Scheme (NDSS) is a voluntary scheme that people with diagnosed diabetes can enrol in. In 2020, 5.6% of NBMPHN population (5.4% for NSW) were registered with the NDSS, with the great majority diagnosed with Type 2 Diabetes (86.2%). Lithgow and Penrith LGA's have the largest proportion of people registered with NDSS (6.5% and 6.1% respectively compared with 5.4% for NSW).<br><br>Table: Proportion of NDSS registrations for the NBM and NSW population by type of diabetes, 2020 (NDSS 2021).
<table>
<tr><th>Diabetes Type</th><th>NBM (%)</th><th>NSW (%)</th></tr>
<tr><td>Type 1</td><td>10.2</td><td>9.1</td></tr>
<tr><td>Type 2</td><td>86.2</td><td>87.3</td></tr>
<tr><td>Gestational</td><td>2.9</td><td>2.9</td></tr>
<tr><td>Other</td><td>0.7</td><td>0.7</td></tr>
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</td></tr>
<tr><td>Hospitalisations for diabetes</td><td>Hospitalisation rates for diabetes as a principal diagnosis continue to rise and are higher than NSW average for Penrith and Lithgow LGAs.</td><td>In 2019-20, hospitalisation rates for diabetes recorded as a principal diagnosis decreased slightly from 2018-2019 (146.8 compared to 158.3 per 100,000 population) (Centre for Epidemiology n.d.aa) and were significantly higher in Penrith and Lithgow LGAs compared with NSW (Centre for Epidemiology n.d.q) with rate increases continuing to be seen across all LGAs except Blue Mountains (Centre for Epidemiology n.d.ab).<br><br>In 2017-18, the age-standardised rate of potentially preventable hospitalisations (PPH) for diabetes complications within NBM was highest in the St Marys SA3 at a rate of 209 per 100,000 persons, which was also higher than the national and state averages (187 and 150 per 100,000 persons respectively) (AIHW 2019c).</td></tr>
<tr><td colspan="3">Disability</td></tr>
<tr><td>People living with a disability</td><td>High proportion of people living with a disability in the Lithgow LGA compared to NSW.</td><td>Compared to people without disability, people with a disability report poorer general health; higher levels of psychological distress; insufficient levels of physical activity; higher smoking and alcohol consumption rates; are more likely to have poorer eating habits and be overweight or obese; and are more likely to face significant financial and physical barriers to accessing health services as well as discrimination (AIHW 2020b).<br><br>In 2016, there were 18,751 persons (or 5.5% of the NBM population) (PHIDU 2021) with a profound or severe disability, meaning they sometimes or always need help with daily self-care, mobility, or communication (AIHW 2020c). This was slightly lower than the NSW average of 5.6%. Within NBM, Lithgow (6.6%) and Blue Mountains (5.5%) had the highest proportion of people with disability and almost half of the people living with disability in NBM were aged 65 years and over (PHIDU 2021).</td></tr>
</table>

## Outcomes of the health needs analysis – General Population Health: *Chronic and Preventable Conditions*

### Immunisation

**Childhood immunisation**

1- and 2-year-old rates do not meet the national target.

Childhood immunisation coverage (%) in NBM and rank among NSW PHNs, June 2023 annualised data – all children and Aboriginal and Torres Strait Islander and Torres Strait Islander children.

| | | 12-<15 months | 24-<27 months | 60-<63 months |
|---|---|---|---|---|
| **All children** | **NBMPHN** | 93.17% | 92.02% | 95.38% |
| | **Rank among NSW PHNs** | 8/10 | 6/10 | 4/10 |
| **Aboriginal and Torres Strait Islander and Torres Strait Islander children** | **NBMPHN** | 91.09% | 94.88% | 97.05% |
| | **Rank among NSW PHNs** | 8/10 | 1/10 | 5/10 |

The lowest immunisation rates in the NBM region were observed in the Blue Mountains LGA.

Blue Mountains LGA has consistently underperformed in childhood immunisation rates, compared to the other LGAs, across all age groups (DOH 2022a). Among smaller NBM geographical areas, St Marys performs the worst in the NBM region for children in all three age groups.

**Table:** Childhood immunisation coverage (%) within NBM by SA3, annualised data – all children (DOH 2022c)

| | 12-<15 months | 24-<27 months | 60-<63 months |
|---|---|---|---|
| **Blue Mountains** | 93.12% | 91.64% | 93.89% |
| **Hawkesbury** | 95.68% | 94.0% | 96.44% |
| **Lithgow - Mudgee** | 94.51% | 93.74% | 95.56% |
| **Penrith** | 95.48% | 95.3% | 95.88% |
| **Richmond - Windsor** | 94.59% | 92.90% | 95.54% |
| **St Marys** | 92.19% | 90.71% | 93.42% |

### Influenza and Pneumonia

**Influenza and Pneumonia prevalence**

NBM rated 5th highest out of the 10 PHNs in NSW for hospitalisations due

In 2019-2020, the rate of hospitalisations due to influenza and pneumonia in the NBM region for all age groups was 358.5 per 100,000 population, rated 5th highest out of the 10 PHN regions in NSW and slightly higher than the NSW average of 353.2 per 100,000 (Centre for Epidemiology and Evidence n.d.d).

| Outcomes of the health needs analysis – General Population Health: *Chronic and Preventable Conditions* | | |
|---|---|---|
| | to influenza and pneumonia and slightly higher than NSW average.<br><br>High rates of antimicrobial medicines dispensing within NBM compared to NSW state-averages, for all SA3 locations. | The rate of hospitalisation for infants and children 0-4 years (679.1 per 100,000 persons) was the 3rd highest amongst the 10 PHN regions in NSW. (NSW 590.6 per 100,000 for this age group for hospitalisations due to influenza and pneumonia).<br><br>The AIHW (2019g), building on data from the Third Australian Atlas of Healthcare Variation (ACSQHC 2018) identified high prescribing rates for many of SA3 locations within NBM for all antimicrobials, amoxicillin and amoxicillin-clavulanate.<br>• All NBM locations had a *higher rate* than NSW state-average for all antimicrobials per 100,000 persons (NSW, 119,474): St Marys (148,586), Richmond-Windsor (137,931), Penrith (137,651), Hawkesbury (131,407), Rouse Hill – McGraths Hill (123,479), Blue Mountains (121,031), Lithgow-Mudgee (120,197) (AIHW 2020s).<br>• NBM locations with *higher rate* than NSW state-average for Amoxicillin per 100,000 persons (NSW, 22,105): St Marys (29,850), Penrith (27,344), Rouse Hill – McGraths Hill (24,470), Richmond-Windsor (23,704), and Hawkesbury (22,135) (AIHW 2020s).<br>• NBM locations with *higher rate* than NSW state-average for Amoxicillin-clavulanate per 100,000 persons (NSW, 19,918): St Marys (29,080), Penrith (25,832), Lithgow-Mudgee (23,830), Rouse Hill – McGraths Hill (23,146), Richmond-Windsor (22,813), and Hawkesbury (22,092) (AIHW 2020s). |
| **Influenza Immunisation** | Lower rates of Influenza Immunisation for NBM region for persons aged 65yrs+ compared to NSW | Annual influenza vaccination is strongly recommended for higher risk populations such as those aged 65 years or older. In 2020, NBMPHN had lower immunisation rates for people aged 65yrs+ compared to the NSW average (NBM 76% vs NSW 83.1%) and lower than the rate recorded in 2018/2019 which was 77.50% (Centre for Epidemiology and Evidence n.d.e). |
| **Overweight and obesity** | | |
| **Overweight and obesity** | High prevalence of overweight and obesity<br><br>Higher levels of overweight and obesity among NBM | In 2017, the prevalence of overweight and obesity among secondary school students aged 12-17 years in Western Sydney and Nepean Blue Mountains Local Health Districts (LHDs) was 24.5%. This was higher than the state average (20.6%) and the third highest in NSW (Centre for Epidemiology 2014). Whilst there are no more recent statistics on the prevalence of overweight and obesity among secondary school students, data shows that in 2017-2018 25.6% of children in NSW aged 5-17 years are overweight or obese (vs 24.9% for Australia) (ABS2018a; AIHW2020l). Further, in 2018-2019, 37.8% of Aboriginal and Torres Strait Islander and Torres Strait Islander children aged 2-17 years are overweight or obese, much higher than the proportion of non-Aboriginal and Torres Strait Islander children in the same age cohort which was 24.3% (2017-18) (ABS 2019b; AIHW2020l). |

| Outcomes of the health needs analysis – General Population Health: *Chronic and Preventable Conditions* | | |
|---|---|---|
| | secondary students compared to NSW.<br><br>Projected future increases in the prevalence of obesity and severe obesity in the NBM population. | In 2020, 64.5% of the NBM adult population were reported to be overweight or obese up from 63.8% in 2019 and much higher than the NSW rate of 56.8%. Compared to NSW, NBM had a higher prevalence of overweight (35.9% vs 34.3%) and obesity (28.5% vs 22.5%). The rate of obesity in the NBM region in 2020 was the fourth highest among 10 NSW PHN regions (Centre for Epidemiology n.d.n).<br>The prevalence of obesity and severe obesity in the NBM population is projected to increase (NBMLHD 2017a). If obesity rates remain steady, the NBM population by 2036 will include:<br><br>• 8.4% of children aged 2-15 years are projected to be obese.<br>• 42.5% of persons aged 16 years and older are projected to be obese.<br>• 2.5% of boys and 3.7% of girls aged 2-15 years are projected to be severely obese.<br>• 17.5% of persons aged 16 years and older are projected to be severely obese.<br><br>There are some regional variability obesity rates in NBM. In 2021, according to data collected from participating General Practices in the NBMPHN region, obesity rates for LGAs are as follows:<br><br>• Blue Mountains 23.28%<br>• Hawkesbury – 26.96%<br>• Lithgow – 32.68%<br>• Penrith – 29.11%<br><br>Males had higher proportions of overweight and obesity than females in every age group over 16 years:<br><br>• Males – overweight 36.10% and obese 36.47%<br>• Females – overweight 28.14% and obese 32.76%<br><br>The prevalence of people with one or more risk factor for obesity is high in the NBM region (NBMLHD 2017a). In 2014-15, 8 out of 10 people aged 18 years and older had one or more risk factors for obesity. Both males (80.6 per 100 population) and females (82.8) had significantly higher rates compared with NSW. The highest rates of risk factors were in the Penrith and Lithgow LGAs. Of these, Penrith had a significantly higher proportion of the population who were physically inactive, and who had an increased waist circumference (females) compared to NSW.<br><br>General Practice data shows that for patients with a waist recording in our region the following proportion have an increased or greatly increased waist circumference per LGA: |

<table>
<tr><th colspan="3">Outcomes of the health needs analysis – General Population Health: Chronic and Preventable Conditions</th></tr>
<tr><td></td><td></td><td>
<ul>
<li>Blue Mountains - 11.97%</li>
<li>Hawkesbury - 13.01%</li>
<li>Lithgow - 7.35%</li>
<li>Penrith - 7.11%</li>
</ul>
Further, General Practice data shows that of the patients with physical activity level recorded in their clinical record, 42.4% have recorded insufficient or sedentary levels of activity.
A range of social, economic, and individual health and lifestyle factors contribute to overweight and obesity, for example poor diet; low levels of physical activity; stress and mental ill-health; smoking, alcohol, and drug intake; lower education levels and higher economic disadvantage. Data for our region shows the following (Centre for Epidemiology n.d.n):
<ul>
<li>Only 8.4% of persons aged 16 years and over consume the required number of vegetables per day.</li>
<li>Only 34.2% of persons aged 16 years and over consume the required amount of fruit per day.</li>
<li>Almost half (42.3%) of persons aged 16 years and over had insufficient levels of physical activity per week.</li>
<li>Over 40% of persons aged 16 years and over consumed alcohol weekly and 32.9% consume at levels which pose long-term risk to their health.</li>
<li>20.8% of persons aged 16 years and over reported high or very high levels of psychological distress.</li>
<li>16.0% smoking prevalence in adults (12.4% daily, 3.6% occasional) in 2019.</li>
<li>There are pockets of socioeconomic disadvantage throughout NBM region, with Lithgow LGA one of the most disadvantaged LGAs in our region, being in the 5th quintile. Data suggests that 61.2% of adults within the 5th quintile socioeconomic status (most disadvantaged) were obese or overweight, vs 49.1% in the 1st Quintile (least disadvantaged).</li>
</ul>
</td></tr>
<tr><td colspan="3">Potentially Preventable Hospitalisations (PPH)</td></tr>
<tr><td>Potentially Preventable Hospitalisations (PPH)</td><td>6955 PPHs in NBM in 2021-22, however PPHs for Acute Conditions higher than NSW average.</td><td>
Analysis of 2021-22 data indicates that overall, NBM region had slightly lower rates of total PPHs (1690.4 per 100,000 people) compared to other NSW PHNs (1718.8 per 100,000 people), however PPH rates for Acute Conditions in NBM were higher than the reminder of NSW PHNs at 959.3 per 100,000 vs 921.3 per 100,000 respectively.
Table: Potentially preventable hospitalisation rates (per 100,000 pop.) for NBMPHN vs All PHNs, 2021-22):
<table>
<tr><th></th><th>NBMPHN</th><th>All PHNs in NSW</th></tr>
<tr><td>Chronic conditions</td><td>632.8</td><td>678.2</td></tr>
</table>
</td></tr>
</table>

| | | |
|---|---|---|
| **Acute conditions** | 959.3 | 921.3 |
| **Vaccine-preventable conditions** | 113.2 | 133.6 |

The *highest number of PPH presentations* for the NBM region in 2019-20 (Centre for Epidemiology and Evidence n.d.ac) were for:

- **All conditions:** Cellulitis (1,211 hospitalisations), Dental conditions (951), Urinary tract infections including pyelonephritis (938), COPD (822), Ear, nose, and throat infections (696).
- **Acute conditions:** Cellulitis (1,211 hospitalisations), Dental conditions (951), Urinary tract infections including pyelonephritis (938), Ear, nose, and throat infections (696), Convulsions and epilepsy (462).
- **Chronic conditions:** COPD (822 hospitalisations), Congestive cardiac failure (684), Iron deficiency anaemia (570), Diabetes complications (514), Asthma (397).
- **Vaccine preventable:** Pneumonia and influenza (566).

The *greatest number of bed days* among PPH conditions for the NBM region in 2019-2 (Centre for Epidemiology and Evidence n.d.ac) were for:

- **All conditions**: Cellulitis (5,242 bed days), Congestive cardiac failure (4,783), COPD (4,242), Urinary tract infections including pyelonephritis (3,320), Diabetes complications (3,140).
- **Acute conditions:** Cellulitis (5,242 bed days), Urinary tract infections including pyelonephritis (3,320), Convulsions and epilepsy (1,493), Dental conditions (1,279), Ear, nose, and throat infections (1,060).
- **Chronic conditions:** Congestive cardiac failure (4,783 bed days), COPD (4,242), Diabetes complications (3,140), Asthma (824), Iron deficiency anaemia (775).
- **Vaccine preventable:** Pneumonia and influenza (3,867).

The *greatest number of same day PPH* for the NBM region in 2017-18 were for:

- **All conditions**: Dental conditions (891 same day PPH), Iron deficiency anaemia (415), Ear nose and throat infections (342), Urinary tract infections including pyelonephritis (155), Convulsions and epilepsy (95).
- **Acute conditions:** Dental conditions (891 same day PPH), Ear nose and throat infections (342), Urinary tract infections including pyelonephritis (155), Convulsions and epilepsy (95), Cellulitis (54).
- **Chronic conditions:** Iron deficiency anaemia (415 same day PPH), Angina (86), Asthma (64), Diabetes complications (62), COPD (36).

**Respiratory disease**

| Outcomes of the health needs analysis – General Population Health: *Chronic and Preventable Conditions* | | |
|---|---|---|
| **Asthma prevalence** | Higher prevalence of asthma compared to the NSW state average and highest prevalence among metropolitan health regions for adults and second highest among children | Asthma is a common chronic inflammatory disease of the airways and thought to be caused by a combination of genetic and environmental factors. Asthma is a significant health problem in Australia with one of the highest rates of prevalence in the world. Prevalence of current asthma in the NBM region for the 2–15-year-old group in 2018-19 (15.7% of the population age group) was the second highest among the NSW PHN regions and higher than the NSW state average (12.9%) (Centre for Epidemiology and Evidence n.d.f).<br><br>For people 16 years and over, the prevalence of current asthma was 18.9%% in 2019 (up from 15.4% in 2018) and was the highest among the NSW PHN regions and much higher than the NSW state average (11.5%) (Centre for Epidemiology and Evidence n.d.g). |
| **Chronic Obstructive Pulmonary Disease (COPD) prevalence** | Some people with COPD in the NBM region may not be diagnosed or adequately managed for their condition in primary care. | National data indicates the prevalence of COPD is approximately 4.8% among adults aged 45 years and older, with prevalence rising with age and was higher in the lower socio-economic areas (AIHW 2020f).<br><br>General Practice data indicates there are 7,014 (3.33%) patients in the region with a coded COPD diagnosis. There are a further 2,510 patients with an indicated but not coded diagnosis of COPD. |

# Social Determinants of Health

<table>
<tr><th colspan="3">Outcomes of the health needs analysis – General Population Health: Social Determinants of Health</th></tr>
<tr><td>Identified Need</td><td>Key Issue</td><td>Description of Evidence</td></tr>
<tr><td>Socio-economic indicators and social determinants of health</td><td>Prominent levels of socioeconomic disadvantage exist in the Lithgow LGA.<br><br>Small pockets of disadvantage exist in the Blue Mountains, Hawkesbury, and Penrith LGAs.</td><td>Socio-economic indicators are an important in understanding the health of a population. There is strong evidence from Australia and other countries that socioeconomically disadvantaged groups experience more ill health, are more likely to engage in risky health behaviours and experience reduced access to health services.<br><br>The ABS SEIFA Index of Relative Socio-Economic Disadvantage (IRSD) is a suite of four indexes that reflect disadvantage such as low income, low educational attainment, high unemployment, and jobs in relatively unskilled occupations (ABS 2018b). Scores above 1,000 indicate a relative lack of disadvantage and those below 1,000 indicate relatively greater disadvantage.<br><br>Census 2021 data overall shows that the majority of NBM residents living in the Blue Mountains, Hawkesbury, and Penrith LGAs reside in postcode areas with IRSD Index decile above 5 (. idcommunity demographic resources n.d). However, most Lithgow LGA residents live in postcode areas with IRSD decile amongst the second lowest disadvantaged areas decile.<br><br>Table: Local Government Area (LGA) Index of Relative Socio-economic Disadvantage, 2021
<table>
<tr><th rowspan="2">2021 Local Government Area (LGA) Name</th><th colspan="2">Index of Relative Socio-economic Disadvantage</th><th colspan="2">Index of Relative Socio-economic Advantage and Disadvantage</th><th colspan="2">Index of Economic Resources</th><th colspan="2">Index of Education and Occupation</th></tr>
<tr><th>Score</th><th>Decile</th><th>Score</th><th>Decile</th><th>Score</th><th>Decile</th><th>Score</th><th>Decile</th></tr>
<tr><td>Blue Mountains (C)</td><td>1048</td><td>9</td><td>1042</td><td>9</td><td>1039</td><td>9</td><td>1063</td><td>9</td></tr>
<tr><td>Hawkesbury (C)</td><td>1026</td><td>8</td><td>1008</td><td>9</td><td>1056</td><td>10</td><td>969</td><td>7</td></tr>
<tr><td>Lithgow (C)</td><td>935</td><td>3</td><td>912</td><td>3</td><td>960</td><td>3</td><td>889</td><td>2</td></tr>
<tr><td>Penrith (C)</td><td>991</td><td>6</td><td>981</td><td>8</td><td>1015</td><td>8</td><td>949</td><td>6</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th colspan="3">Outcomes of the health needs analysis – General Population Health: Social Determinants of Health</th></tr>
<tr><td></td><td></td><td>2019 NSW data (Vidyattama Y et al. 2019) indicates that population groups most likely to be living in poverty/experiencing significant economic disadvantage include:<ul><li>Children: more than 1 in 6 children in NSW live below the poverty line</li><li>Aboriginal and Torres Strait Islander and Torres Strait Islander people and people with disability: experience double the rates of significant economic disadvantage compared to the general NSW population.</li><li>People without a job, including unemployed persons and others not in the labour force.</li><li>Single parents in regional NSW areas.</li><li>Households renting in the private market, in particular social housing tenants.</li></ul></td></tr>
<tr><td>Health Literacy as a social determinant of health</td><td>Health literacy is quickly developing as a focus area to help reduce health inequalities</td><td>Hawkesbury, Lithgow, and Penrith have SEIFA Index of Education and Occupation scores below 1,000 (indicating relatively greater disadvantage).<br><br>The Australian Commission on Safety and Quality in Health Care (2021) found that poor individual health literacy and a lack of services appropriately matched to a region’s health literacy levels contributed to higher levels of preventable hospitalisations; decreased ability for patients to manage diabetes and COPD exacerbations, episodes of cellulitis and understanding risk factors for heart failure and CKD; poor understanding of medicines and medication management; and decreased ability to seek appropriate, timely treatment and communicate health issues (ACSQHC 2021a).</td></tr>
<tr><td>Domestic and Sexual Violence</td><td>Higher incidence rate of domestic violence in Hawkesbury, Lithgow and Penrith LGAs compared to the NSW state average.</td><td>Domestic and sexual violence does not discriminate but does affect some groups more than others, the following groups are at higher risk of experiencing domestic and sexual violence in their lifetime (Levenberg et al. 2021):<ul><li>Women</li><li>People living with disability.</li><li>Aboriginal and Torres Strait Islander Australians</li><li>LGBTIQ+ persons</li><li>CALD communities</li></ul>Those living in rural and remote communities or in lower socioeconomic areas.<br>Domestic violence related assaults per 100,000 population for each LGAs and rankings (July 2022 to June 2023). Note that higher ranking indicates comparatively lower numbers of assaults:<br><br>
<table>
<tr><th>LGA</th><th>Number of Incidents</th><th>Rate per 100,000</th><th>Rank</th></tr>
<tr><td>Blue Mountains</td><td>236</td><td>301.2</td><td>86</td></tr>
<tr><td>Hawkesbury</td><td>312</td><td>461.7</td><td>63</td></tr>
<tr><td>Lithgow</td><td>157</td><td>759</td><td>29</td></tr>
<tr><td>Penrith</td><td>1,094</td><td>499.2</td><td>57</td></tr>
</table>
</td></tr>
</table>

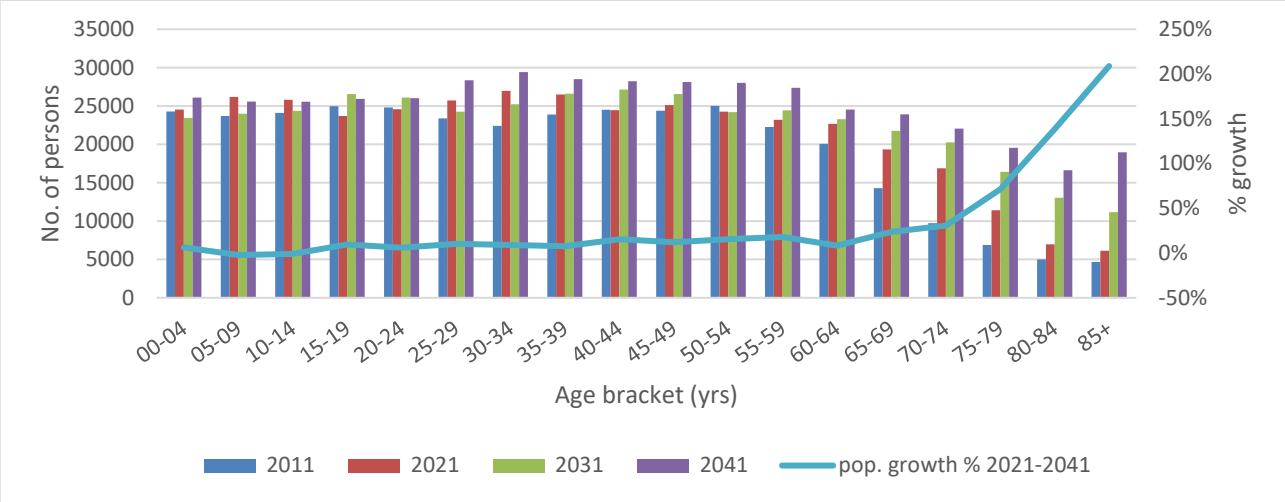
<table>
<tr><th colspan="3">Outcomes of the health needs analysis – General Population Health: Social Determinants of Health</th></tr>
<tr><td></td><td>Higher incidence rate of sexual violence than NSW average</td><td>NBM has a higher rate of sexual assault incidents on female victims 2018-2022 than NSW (74.9 per 100,000 per year vs 62.9 per 100,000 per year) (Bocsar 2023).<br>Lithgow and Penrith have the highest rates (90.8 and 84.1 per 100,000 per year)<br><br>Lithgow, Blue Mountains, and Penrith have rates of sexual assault on child victims higher than the NSW average.
<table>
<tr><th>LGA</th><th>Average yearly rate per 100,000</th></tr>
<tr><td>NSW</td><td>272.1</td></tr>
<tr><td>Lithgow</td><td>527.3</td></tr>
<tr><td>Blue Mountains</td><td>310.1</td></tr>
<tr><td>Penrith</td><td>295.9</td></tr>
</table></td></tr>
<tr><td>Culturally and Linguistically Diverse (CALD) population</td><td>Highest proportion of CALD population live in the Penrith LGA</td><td>In 2021, 19.7% of NBMPHN residents were born overseas compared with 29.3% for NSW (. idcommunity demographic resources 2022a). The five top countries of origin for predominantly non-English speaking countries were: India, Philippines, China, Malta, and Fiji, with the largest proportion being from India (2%). Within NBM, Penrith LGA had the highest proportion (23.3%) of its residents born overseas compared with other LGAs.<br><br>English language proficiency varies across NBM, overall, with Penrith LGA having the highest proportion of residents reporting they “speak English not well” or “not at all.” According to the ABS, individuals with limited English language proficiency have more difficulty in gaining access to health care, employment, education, and other services compared to English proficient individuals.<br><br>Table:
<table>
<tr><th></th><th>Blue Mountains</th><th>Hawkesbury</th><th>Lithgow</th><th>Penrith</th><th>NBM</th><th>NSW</th></tr>
<tr><td>Population born overseas</td><td>17.4</td><td>13.3</td><td>10.1</td><td>23.3</td><td>19.7</td><td>29.3</td></tr>
<tr><td>Speaks a language other than English at home</td><td>6.2</td><td>6.5</td><td>4.1</td><td>17.6</td><td>12.6</td><td>22.4</td></tr>
<tr><td>Speaks English ‘not well or not at all’</td><td>0.5</td><td>0.8</td><td>0.6</td><td>2.2</td><td>1.5</td><td>4.5</td></tr>
</table></td></tr>
<tr><td>Humanitarian entrants and refugees</td><td>Approximately 219 humanitarian refugees settled in the NBM region from January 2016 – March 2019</td><td>Under the Australian Humanitarian and Refugee Program, between January 2016 and March 2019, about 219* refugees settled in NBM (Australian Government Department of Social Services 2019). Penrith LGA was the single largest area of residence for refugees, with almost 9 out of 10 humanitarian entrants settling in the LGA over this period. In January-March 2019, 1,109 out of 1,302 (85.2%) refugees settling with NSW state reported having nil or poor English language proficiency skills, with similar rates for the 2016 to 2018 period. It is expected that such poor English proficiency skills will negatively impact the ability of refugees settling in the NBM region to access local health and social welfare services.</td></tr>
</table>

<table>
<tr><th colspan="3">Outcomes of the health needs analysis – General Population Health: Social Determinants of Health</th></tr>
<tr><td></td><td></td><td>Table:
<table>
<tr><th>LGA</th><th colspan="5">Number of humanitarian entrants</th></tr>
<tr><th></th><th>2016</th><th>2017</th><th>2018</th><th>Jan-Mar 2019</th><th>Total 2016 – Mar 2019</th></tr>
<tr><td>Blue Mountains</td><td>0</td><td>0</td><td>25</td><td><5</td><td>28</td></tr>
<tr><td>Hawkesbury</td><td>0</td><td>0</td><td>3</td><td>0</td><td><5</td></tr>
<tr><td>Lithgow</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>Penrith</td><td>108</td><td>56</td><td>14</td><td>10</td><td>188</td></tr>
<tr><td>Total NBM</td><td>108</td><td>56</td><td>42</td><td>13</td><td>219</td></tr>
</table>
*The actual number of entrants is not disclosed when <5 people. In these cases, we assume 3 humanitarian entrants settled in the area to calculate an estimate (total NBM).</td></tr>
<tr><td>Serious issues impacting on the health of refugee communities</td><td>Low literacy levels, health literacy, gambling, alcohol and other drugs, obesity, chronic disease, and access to health services including interpreters identified as serious issues impacting on health</td><td>Local stakeholder consultations indicate that key issues increasingly impacting on the health of refugee communities in the NBM region, include (NBMLHD 2017b; Renzaho and Dhingra 2016):<ul><li>Low literacy levels and poor health literacy, with associated challenges in health seeking and accessing timely and appropriate health services.</li><li>Problem gambling and misuse of alcohol and other drugs.</li><li>Increasing levels of obesity and chronic disease within local CALD communities.</li><li>Access to interpreter and translation services. Local services report increases in the number of people who use AUSLAN, the second highest use of interpreters in the NBM region following Arabic.</li><li>High prevalence of mental health problems due to trauma and complex challenges with settlement.</li><li>Lack of trust and or familiarity in the health system.</li></ul></td></tr>
</table>

## Palliative Care

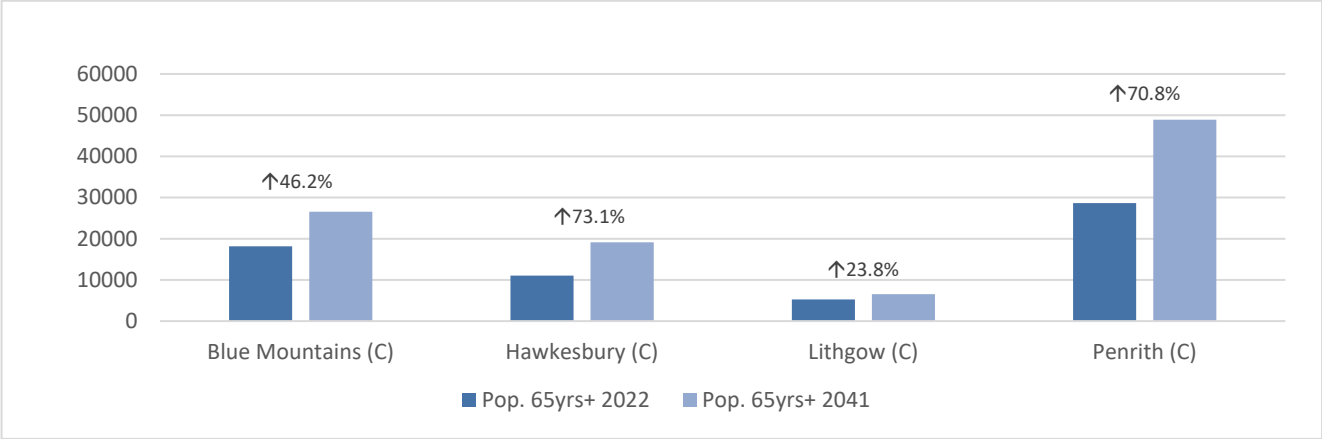
<table>
<tr><th colspan="3">Outcomes of the health needs analysis – General Population Health: Palliative Care</th></tr>
<tr><th>Identified Need</th><th>Key Issue</th><th>Description of Evidence</th></tr>
<tr><td>Palliative Care</td><td>Increase in projected need for palliative care in the NBM region</td><td>Deaths per year in the NBM region is expected to increase from 2,240 in 2022 to 3,500 by 2041 (NSW Planning, Industry & Environment 2022).<br><br>Table: Cause of Death (Centre for Epidemiology and Evidence n.d.aef)
<table>
<tr><th>Cause of Death</th><th>NBM (per 100,000)</th><th>NSW (per 100,000)</th></tr>
<tr><td>Respiratory Diseases (2019-2021)</td><td>48.8</td><td>41.5</td></tr>
<tr><td>Chronic Kidney Disease (2018-2020)</td><td>49.7</td><td>50.8</td></tr>
<tr><td>Cardiovascular Diseases (2020-2021)</td><td>144.0</td><td>118.6</td></tr>
</table>
<br>Modelling of mortality data and underlying cause of death codes (ICD10 codes) in 2017 for the NBMPHN region predicted that 72% of people entering their last year of life would benefit from end-of-life care (Rees et al. 2017).<br><br>Unfortunately, due to poor collection and reporting of palliative care data across Australia, it is difficult to determine current levels of care and service gaps to adequately identify future palliative care service needs for our region. Whilst the planned development of a National Palliative Care National Minimum Data Set (NMDS) will assist in part, there is still a need for local level data to allow adequate assessment of needs at the PHN level (PCA 2022).</td></tr>
</table>

## Older Persons

| Outcomes of the health needs analysis – General Population Health: *Older Persons* | | |
|---|---|---|
| Identified Need | Key Issue | Description of Evidence |
| **Ageing Population** | Projected increase of the population aged 65 years and over will significantly impact upon demand for primary care services in the NBM region. | 16.43% of NBM population is over 65, this is expected to increase to 22.33% by 2041, slightly lower than the NSW expected increase of 22.58% (NSW Planning, Industry & Environment 2022).<br><br>The NBM population growth of those over the age of 65 years is expected to be significant between 2021 and 2041:<br>• 71.25% for 75-79yrs<br>• 138.41% for 80-84yrs<br>• 208.87% for 85+yrs.<br><br>**Graph: Population Projections per 5yr age bracket, NBMPHN, 2011-2041** ***(Projections start from 2022)***<br><br>  |

## Outcomes of the health needs analysis – General Population Health: *Older Persons*

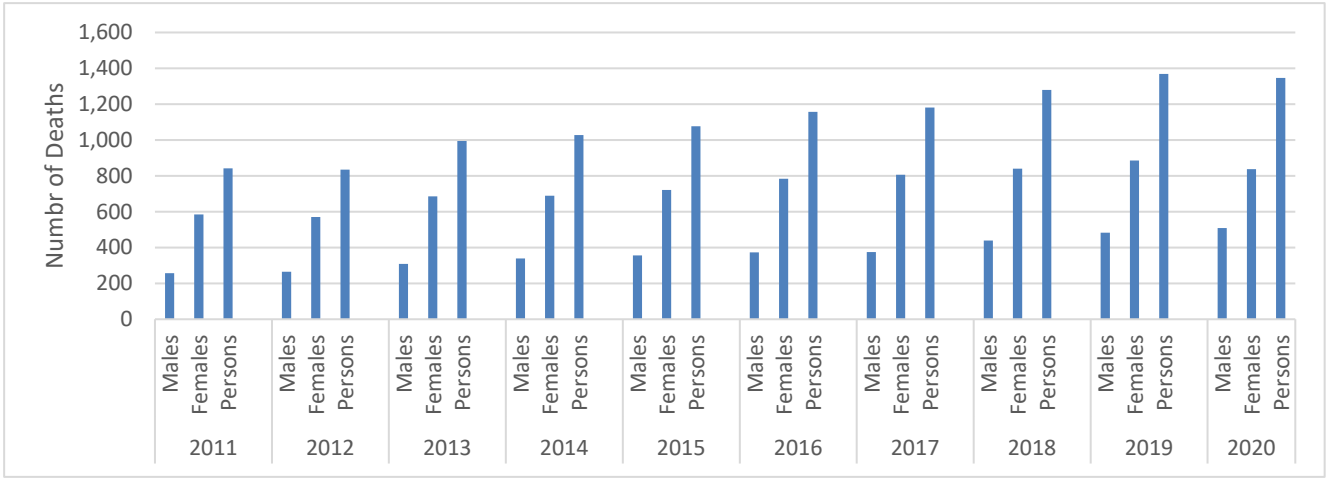
**Graph: Expected Population growth of NBM residents 65+ by LGA.**




| | | |
|---|---|---|
| **Prevalence of chronic conditions** | High prevalence of chronic conditions and multi-morbidity among older persons at general practice encounters. | Nearly all patients aged 65+ at a GP consultation had one or more diagnosed chronic condition (Britt et al. 2015). In the Australian population, 90% of this older group had a least one chronic condition, the majority (57%) had three or more (multi-morbidity), more than one-quarter (26.1%) had five or more chronic conditions (multi-morbidity) and almost one-tenth (9.4%) had seven or more diagnosed chronic conditions. |
| **Coordination of Services** | Resource use by people over 65 years shows substantial increases between 2001 and 2015 in general practice (Britt et al. 2015). | **Table: Resource use by 65+ 2001 vs 2015:** |
| **Dementia** | Increasing prevalence and severity of dementia in the NBM | Recent data from Dementia Australia (2018) suggests that for the NBM region there are an estimated 6,453 people living with dementia, and this figure is expected to increase to 16,075 persons by 2058. |

| Year | Encounters | GP clinical time | Problems managed | Medications | Tests Ordered | Referrals Made |
|---|---|---|---|---|---|---|
| 2001 | 22.8% | 23.9% | 26.9% | 28.2% | 24.9% | 24.2% |
| 2015 | 27.8% | 28.7% | 35.0% | 35.8% | 30.8% | 32.8% |

<table>
<tr><th colspan="3">Outcomes of the health needs analysis – General Population Health: Older Persons</th></tr>
<tr><td></td><td>population, among older persons.</td><td>Table: Breakdown by LGA:
<table>
<tr><th>LGA</th><th>2018</th><th>2058</th><th>% increase</th></tr>
<tr><td>Blue Mountains</td><td>1844</td><td>3898</td><td>111.39%</td></tr>
<tr><td>Hawkesbury</td><td>1156</td><td>3517</td><td>204.24%</td></tr>
<tr><td>Lithgow</td><td>572</td><td>870</td><td>52.09%</td></tr>
<tr><td>Penrith</td><td>2881</td><td>7790</td><td>170.39%</td></tr>
</table>
Table: Severity of dementia for NBM residents between 2016-2045 (Rees et l. 2018):
<table>
<tr><th>Severity</th><th>2016</th><th>2045</th></tr>
<tr><td>Mild dementia</td><td>55%</td><td>42%</td></tr>
<tr><td>Moderate dementia</td><td>30%</td><td>37%</td></tr>
<tr><td>Severe dementia</td><td>15%</td><td>20%</td></tr>
</table>
The prevalence of dementia amongst Aboriginal and Torres Strait Islander Australians is almost five times the rate in the general Australian population, and the proportion of Aboriginal and Torres Strait Islander persons aged 50+ years living in NBM (1.8%) is higher compared to NSW (1.6%) and Australia (1.4%) (Jackson Pulver et al. 2010).</td></tr>
<tr><td></td><td>Increasing burden of disease due to dementia among older persons</td><td>In 2022, dementia was the second overall leading cause of burden of disease and injury in Australia, second to coronary heart disease. In 2022, dementia was the leading cause of burden of disease for women and 5th for men. (AIHW 2023)<br>There was 1,585.5 per 100,000 population hospitalisations in NSW in 2020-21 for dementia (as the principal diagnosis or comorbidity), however hospital separations do not reflect the burden of dementia in the community as not all people living in the community with dementia enter the hospital system.<br><br>Table: Dementia hospitalisations (aged 65 years and over) per 100,000 NBM vs NSW (Centre for Epidemiology and Evidence n.d.h):
<table>
<tr><th>Period</th><th>NBM</th><th>NSW</th></tr>
<tr><td>13/14</td><td>2,280.50</td><td>2,123.50</td></tr>
<tr><td>14/15</td><td>2,175.30</td><td>2,130.70</td></tr>
<tr><td>15/16</td><td>1,777.40</td><td>1,692.00</td></tr>
<tr><td>16/17</td><td>1,623.90</td><td>1,634.20</td></tr>
<tr><td>17/18</td><td>1,701.50</td><td>1,641.90</td></tr>
<tr><td>18/19</td><td>1,612.30</td><td>1,617.70</td></tr>
<tr><td>19/20</td><td>1,568.30</td><td>1,698.40</td></tr>
<tr><td>20/21</td><td>1,398.70</td><td>1,585.50</td></tr>
</table></td></tr>
</table>

| Outcomes of the health needs analysis – General Population Health: *Older Persons* | | |
|---|---|---|
| | High mortality rates among persons with dementia in the NBM region. | Data from the ABS (2020a) suggests that in NSW deaths from Alzheimer's disease continue to increase and remain higher for females than males (837 and 509 deaths respectively), with 1,346 total deaths recorded in NSW in 2020 caused by Alzheimer's.<br><br>**Figure:** Number of deaths in NSW caused by Alzheimer's disease, 2011-2020<br>  <br><br><br>Similarly, for the NBM region, deaths from Dementia and Alzheimer's remain higher for females and continue to rise. Between 2015 and 2019 in the NBM region, there were 254 male and 474 female deaths due to Dementia and Alzheimer's disease, accounting for 4.3% and 8.4% of deaths from all causes, respectively. Dementia and Alzheimer's disease was the second leading cause of death by international classification of disease (ICD-10) code for all persons in the NBMPHN region during this time (728 deaths) (AIHW 2021j). |
| | Social Isolation | People living with dementia, especially those in residential aged care, are at risk of worsening dementia and psychiatric symptoms, and severe behavioural disturbances because of lockdown measures and social isolation (Numbers and Brodaty 2021).<br><br>Due to the COVID-19 pandemic and associated restrictions, people living with dementia, their families and carers have told Dementia Australia that some residential aged care homes have not been able to offer appropriate alternatives to essential visits and this has resulted in poor physical and psychological outcomes for residents with dementia (Dementia Australia 2020). |
| | Increased need for COVID-19 vaccinations for people with dementia | People living with dementia or mild cognitive impairment are more vulnerable to contracting severe COVID-19 and once infected, have an elevated risk of disease-related morbidity and mortality (Numbers and Brodaty 2021). |

| Outcomes of the health needs analysis – General Population Health: *Older Persons* | | |
|---|---|---|
| **Aged Care** | High prevalence of dementia in RACHs | Available data indicates that more than half (54.6%) of people using residential aged care services in NBM on 30 June 2020 had a diagnosis of dementia (AIHW 2020a) and 80% of these people were assessed as having high care needs for cognition and behaviour and have higher care needs ratings for activities of daily living than people without dementia (67% and 58% respectively) (AIHW 2021k). This is likely to impact heavily upon the levels of care and assistance required by those persons, including activities of daily living, cognition and behaviour, and complex health care. |
| | The greatest increases in high care needs among people living in permanent residential care are for complex health care. | Complex health care relates to the needs of the person for assistance in taking medications on a regular basis, and ongoing complex health care procedures and activities, such as: daily blood pressure and blood glucose measurement, weekly pain / complex pain management, skin integrity management, management of chronic infectious conditions, chronic skin wounds, Palliative care including EoLC, and many more. Between 2011 and 2020, the proportion of people in Australia in permanent residential aged care with high care needs ratings progressively increased across every domain of the Aged Care Funding Instrument, including activities of daily living (from 35.1% to 54.4%), cognition and behaviour (from 33.4% to 49.0%) and complex health care (from 24.1% to 42.0%). High care needs rating for the complex health care domain have decreased from 51.8% in 2016, to 42.0% in 2020 (AIHW 2021k). |
| | Influenza A outbreaks among aged care facilities | Available state influenza surveillance reports indicate that residents living in residential aged care homes are particularly prone to influenza outbreaks (DoH 2019i). In the year to April 2019, 27 of the 37 (73%) laboratory confirmed influenza outbreaks in institutions reported to NSW public health units were in residential aged care homes. All outbreaks were due to influenza A, with at least 135 residents reported to have symptoms, 25 requiring hospitalisation and 9 deaths in residents linked to these outbreaks. |
| **Social Isolation** | Social isolation and loneliness are increasing problems for older people with impacts including poorer physical health, mental health, and use of health services. | Social isolation and loneliness are particularly significant issues and contribute to under-addressed problems facing older people. In a 2023 report, almost 1 in 3 Australians feel lonely. (32%of women and 31% of men) (Ending Loneliness 2023).<br>One in 5 Australians are socially isolated (Australian Institute Health and Welfare, 2017) Poorer health is associated with higher rates of emotional loneliness and a lack of social support. Older people without adequate social connectedness are at an increased risk of experiencing poorer mental health and wellbeing, negatively impacting on older people's physical health and use of health services (NSW Health 2016). |

# Aboriginal and Torres Strait Islander Health

<table>
<tr><th colspan="3">Outcomes of the health needs analysis – Aboriginal and Torres Strait Islander Health</th></tr>
<tr><th>Identified Need</th><th>Key Issue</th><th>Description of Evidence</th></tr>
<tr><td rowspan="2">Aboriginal and Torres Strait Islander Population</td><td>Projected growth rates for the Aboriginal and Torres Strait Islander and Torres Strait Islander populations remain higher than projected rates for the non-Aboriginal and Torres Strait Islander population.</td><td>17,906 people in the NBM population identify as Aboriginal and Torres Strait Islander, comprising 4.7% of the total population (.idcommunity).<br>According to projected population estimates (ABS, 2019), the Aboriginal and Torres Strait Islander population for NSW is expected to increase by between 1.8% to 2.1% per year, which is higher than the growth rate projected for the total Australian population, which is expected to be between 1.3% to 1.7%.<br><br>Table: Distribution of Aboriginal and Torres Strait Islander and Torres Strait Islander population in Nepean Blue Mountains by LGA, 2021 (.idcommunity).
<table>
<tr><th>LGA</th><th>Aboriginal and Torres Strait Islander population</th><th>Proportion of Aboriginal and Torres Strait Islander people as a % of LGA population</th><th>% of NBM Aboriginal and Torres Strait Islander population</th></tr>
<tr><td>Blue Mountains</td><td>2,107</td><td>2.7%</td><td>11.76%</td></tr>
<tr><td>Hawkesbury</td><td>3,257</td><td>4.8%</td><td>18.19%</td></tr>
<tr><td>Lithgow</td><td>1,614</td><td>7.7%</td><td>9.01%</td></tr>
<tr><td>Penrith</td><td>10,928</td><td>5.0%</td><td>61.04%</td></tr>
<tr><td>Total</td><td>17,906</td><td>4.7%</td><td>100.0%</td></tr>
</table>
</td></tr>
<tr><td>Aboriginal and Torres Strait Islander residents in NBM demonstrate a younger age profile compared to non-Aboriginal and Torres Strait Islander residents</td><td>NBM Aboriginal and Torres Strait Islander people under 25 years of age represent 51.8% (ABS 2022b) of the total Aboriginal and Torres Strait Islander population, compared to 32.8% of people under 25 years of age in the non-Aboriginal and Torres Strait Islander population (Centre for Epidemiology and Evidence n.d.i).</td></tr>
<tr><td>Social determinants of health</td><td>Greater socio-economic disadvantage compared to the total population in NSW.</td><td>Selected socioeconomic indicators from the 2016 Census demonstrate the relative disadvantage in NSW of the Aboriginal and Torres Strait Islander population when compared with the non-Aboriginal and Torres Strait Islander population (ABS 2016).</td></tr>
</table>

<table>
<tr><th colspan="3">Outcomes of the health needs analysis – Aboriginal and Torres Strait Islander Health</th></tr>
<tr><td></td><td></td><td>
Table: Social determinant disparities from 2016 Census
<table>
<tr><th>Social Determinant</th><th>Aboriginal and Torres Strait Islander population NSW</th><th>Non-Aboriginal and Torres Strait Islander population NSW</th></tr>
<tr><td>Unemployed</td><td>15.3%</td><td>6.0%</td></tr>
<tr><td>No post-school qualifications</td><td>66.9%</td><td>48.7%</td></tr>
<tr><td>No household internet connection</td><td>22.5%</td><td>14.6%</td></tr>
<tr><td>Weekly household income <$500</td><td>15.4%</td><td>13.6%</td></tr>
<tr><td>Multi-family households</td><td>5.4%</td><td>3.3%</td></tr>
<tr><td>Reside in dwellings with 6+ people</td><td>8.4%</td><td>3.7%</td></tr>
</table>
NBM Aboriginal and Torres Strait Islander people broadly reported:
<ul>
<li>Segmentation of mainstream health services does not align with traditional concepts of Aboriginal and Torres Strait Islander wellbeing which inextricably link mind, body, and spirit as one.</li>
<li>Geographical boundaries dividing health services often do not align with ‘Aboriginal and Torres Strait Islander Country’ boundaries, impacting the ability of service provides to support families and communities across boundaries.</li>
<li>The key role of culture, and value of relational approaches as a foundation to healing is not often recognised or integrated into mainstream systems of care (Pross 2019).</li>
</ul>
</td></tr>
<tr><td>Chronic and preventable conditions</td><td>Higher rates of chronic and preventable disease.</td><td>
Aboriginal and Torres Strait Islander Australians continue to have:
<ul>
<li>lower life expectancy</li>
<li>increasing hospitalisation rates for mental health conditions</li>
<li>higher rates of chronic and preventable illnesses including:
<ul>
<li>respiratory diseases</li>
<li>circulatory diseases</li>
<li>Diabetes</li>
<li>chronic kidney disease</li>
<li>Cancer</li>
</ul>
</li>
<li>poorer self-reported health</li>
</ul>
</td></tr>
</table>

<table>
<tr><th colspan="3">Outcomes of the health needs analysis – Aboriginal and Torres Strait Islander Health</th></tr>
<tr><td></td><td></td><td>• higher likelihood of being hospitalised than non-Aboriginal and Torres Strait Islander Australians.<br><br>Diabetes prevalence for Aboriginal and Torres Strait Islander people remains higher than for non-Aboriginal and Torres Strait Islander persons across NSW in 2019 (13.7% vs 11.2%). In Australia from 2014-18, death rates from diabetes for Aboriginal and Torres Strait Islander Australians was 5 times higher than non-Aboriginal and Torres Strait Islander Australians. Further, between 2015-17 hospitalisation rates for diabetes for Aboriginal and Torres Strait Islander Australians were 3.6 times higher than for non-Aboriginal and Torres Strait Islander Australians (AIHW 2020r).</td></tr>
<tr><td></td><td>Higher prevalence of behavioural risk factors for chronic conditions.</td><td>Despite improvements in many of these areas, Aboriginal and Torres Strait Islander people in NSW continue to have a higher prevalence of most behavioural risk factors for chronic conditions compared to non-Aboriginal and Torres Strait Islander persons (Centre for Epidemiology n.d.j). These include:<br>• Smoking 26.4% vs 10.7%<br>• Adequate daily vegetable consumption 2.9% vs 6.3%<br>• Adequate daily fruit consumption 33.2% vs 40.6%<br>• Alcohol consumption, at levels that pose long term risk 48.7% vs 33.5%<br>• Insufficient physical activity 36.2% vs 38.5%<br>• Overweight and Obesity 67.8% vs 55.2%</td></tr>
<tr><td>Immunisation rates</td><td>Immunisation rates for Aboriginal and Torres Strait Islander children in the NBM region are higher than national average rates.</td><td>Strategies implemented by the NBMLHD to target an increase in Aboriginal and Torres Strait Islander children’s immunisation rates continue to prove successful. Immunisation rates for NBM Aboriginal and Torres Strait Islander children as at June 2023 were higher than the national average rates for 5-year-olds.<br><br>Table: Immunisation rates by age-group and year (DoH 2023).
<table>
<tr><th></th><th>1 year</th><th>2 years</th><th>5 years</th></tr>
<tr><td>2022-2023</td><td>91.09%</td><td>94.88%</td><td>97.50%</td></tr>
<tr><td>2021-2022</td><td>95.75%</td><td>92.37%</td><td>95.54%</td></tr>
<tr><td>2020-2021</td><td>94.49%</td><td>94.37%</td><td>97.25%</td></tr>
<tr><td>2019-2020</td><td>95.50%</td><td>92.26%</td><td>97.78%</td></tr>
<tr><td>2018-2019</td><td>95.4%</td><td>88.8%</td><td>98.7%</td></tr>
<tr><td>2017-2018</td><td>94.5%</td><td>87.7%</td><td>98.5%</td></tr>
<tr><td>2016-2017</td><td>94.0%</td><td>92.5%</td><td>98.0%</td></tr>
<tr><td>2015-2016</td><td>92.5%</td><td>89.0%</td><td>97.5%</td></tr>
</table></td></tr>
</table>

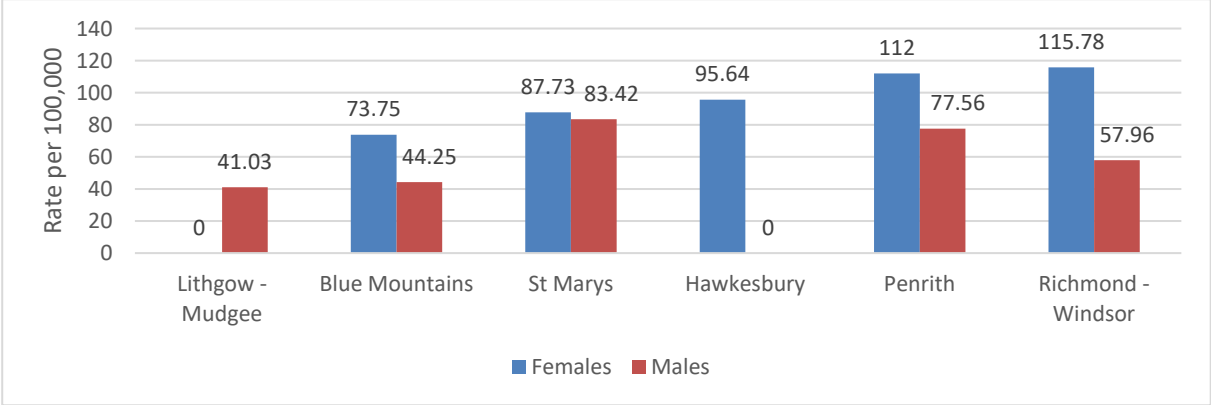
| Outcomes of the health needs analysis – Aboriginal and Torres Strait Islander Health | | |
|---|---|---|
| **Potentially preventable hospitalisations (PPHs) for chronic conditions** | Higher rates of PPHs due to chronic conditions among NBM Aboriginal and Torres Strait Islander persons than for non-Aboriginal and Torres Strait Islander Australians. | In 2017-2018, PPH rates for Aboriginal and Torres Strait Islander persons was 3 times higher than non-Aboriginal and Torres Strait Islander persons, increasing at a rate of 25% between 2012-13 and 2017-18, compared to increased rate of 15% for PPHs for non-Aboriginal and Torres Strait Islander Australians for the same period (AIHW 2020h).<br><br>There were 143 PPHs among NBM Aboriginal and Torres Strait Islander residents in 2016-17 due to chronic conditions, at a rate of 1,985 per 100,000 persons (NSW Health 2018a). This was more than double the rate of PPHs due to chronic conditions for non-Aboriginal and Torres Strait Islander people in the NBM region (918 per 100,000 persons), but lower than the rate for all Aboriginal and Torres Strait Islander people in NSW (2,826 per 100,000 persons).<br><br>The leading PPHs due to chronic conditions among Aboriginal and Torres Strait Islander persons in NSW in 2018-19 were: COPD (1,566 PPHs), diabetes complications (866) and Iron deficiency anaemia (575) (Centre for Epidemiology and Evidence n.d.j). |
| **Hospitalisation rates attributable to alcohol** | Higher alcohol consumption and higher rate of hospitalisations attributable to alcohol. | The alcohol attributable hospitalisation rate for Aboriginal and Torres Strait Islander people in NSW 2018-19 was 923.0 (per 100,000 population), more than 1.8 times higher than that for non-Aboriginal and Torres Strait Islander people (503.3) (Centre for Epidemiology and Evidence n.d.k). |
| **Maternal and infant health** | Poor antenatal outcomes for Aboriginal and Torres Strait Islander mothers. | The proportion of low weight births to Aboriginal and Torres Strait Islander mothers in NBM remains higher than the proportion of low-birth-weight births to non-Aboriginal and Torres Strait Islander mothers (9.2% vs 6.7% of births in 2019, respectively) (Centre for Epidemiology and Evidence n.d.l).<br><br>In 2019:<br>• The perinatal mortality rate among Aboriginal and Torres Strait Islander mothers in NSW was 10.3 deaths per 1,000 births. This was higher than the non-Aboriginal and Torres Strait Islander rate of 7.9 deaths per 1,000 births (Centre for Epidemiology and Evidence n.d.u.).<br>• In 2019, the proportion of NBM Aboriginal and Torres Strait Islander women who smoked during pregnancy was 34.9%. Despite a downward trend (42.3% of NBM Aboriginal and Torres Strait Islander women smoked during pregnancy in 2018), smoking rates during pregnancy remain significantly higher than for non-Aboriginal and Torres Strait Islander NBM mothers (10.6%) (Centre for Epidemiology and Evidence n.d.v).<br>• The percentage of Aboriginal and Torres Strait Islander women whose first antenatal visit occurred before 14 weeks gestation continues to increase, it remains lower than that of non-Aboriginal and Torres Strait Islander women in 2019 at 79.7% vs 85.4% respectively. |

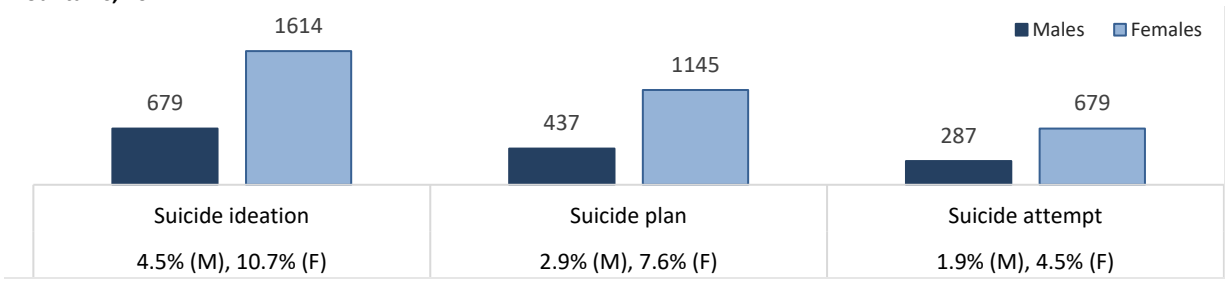
| Outcomes of the health needs analysis – Aboriginal and Torres Strait Islander Health | | |
|---|---|---|
| **Life expectancy** | Aboriginal and Torres Strait Islander males and females have lower life expectancy than the general population. | In 2015-2017, NSW Aboriginal and Torres Strait Islander males had a life expectancy of 71.6 years (NSW Health 2018c). This was 8.6 years lower than the life expectancy for the male non-Aboriginal and Torres Strait Islander population living in NSW. In 2015-2017, NSW Aboriginal and Torres Strait Islander females had a life expectancy of 75.6 years. This was 7.8 years lower than the life expectancy for the female non-Aboriginal and Torres Strait Islander population living in NSW.<br><br>Further, the life expectancy for Aboriginal and Torres Strait Islander persons living in lower socio-economic areas is around 4 years less than those living in the highest socio-economic areas, decreasing to about 68 years for males and 73 years for females in the lowest socio-economic areas vs 72 and 77 respectively in the highest socio-economic areas (AIHW 2020j). |
| **Causes of death** | Higher rate of deaths among Aboriginal and Torres Strait Islander people in NSW for the leading categories. | Causes of death for all NSW residents between 2011 and 2020 show that Aboriginal and Torres Strait Islander people have a higher rate of deaths compared to non-Aboriginal and Torres Strait Islander persons for the following leading categories of cause (ABS 2021a):<br>• Ischaemic heart diseases (112.2 vs. 50.8 per 100,000 persons).<br>• Malignant neoplasms (cancers) (146.6 vs. 85.2 per 100,000 persons).<br>• Chronic lower respiratory diseases (74.9 vs. 21.8 per 100,000 persons).<br>• Intentional self-harm (suicide) (27.9 vs. 11.8 per 100,000 persons).<br>• Diabetes (74.8 vs 15.2 per 100,000 persons). |
| | Smoking related deaths. | Smoking related lung disease also increased for Aboriginal and Torres Strait Islander persons between 2011 and 2020 with lung cancer death rates increasing by 16.3% for males and chronic lower respiratory disease death rates increasing by 26% for females (ABS 2021a). |

# Primary Mental Health Care

## Suicide Prevention

| **Outcomes of the health needs analysis – Primary Mental Health Care: *Suicide Prevention*** | | |
|---|---|---|
| Identified Need | Key Issue | Description of Evidence |
| **Suicide Deaths** | Death by intentional self-harm in the NBM region was higher than the state average.<br><br>Deaths by intentional self-harm in the NBM region remain above 2013 levels. | There were 40 deaths from suicide (10.3 per 100,000) in the Nepean Blue Mountains region in 2021, a decrease from 43 (11.1 per 100,000) in 2020 (AIHW 2023a).<br><br>Suicide rates in the NBMPHN region rose steeply from 2013 to 2014 (9.0 vs 13.7 per 100,000 respectively), remaining high until 2018 (13.0 per 100,000), until dropping to the current rate of 10.3 (per 100,000) in 2021 (AIHW 2021m).<br><br>For the NBM region for the period 2017-2021, suicide rates were highest in the Lithgow-Mudgee SA3 (38 deaths or 17.3 ASR per 100,000 population), and second highest for the Bue Mountains SA3 (53 deaths or 13.2 ASR per 100,000 population) (AIHW 2021o). |
| **Intentional self-harm hospitalisations** | Highest rate of intentional self-harm hospitalisations among women, in particular women in the Richmond-Windsor SA3. | In 2020-21, hospitalisations for intentional self-harm by NBM residents of all ages occurred at a rate of 81.9 per 100,000 for persons, higher than the NSW rate of 76.82 per 100,000). Self-harm hospitalisations were higher among females than males in all the region's SA3s, with the highest rate for males in the St Marys SA3 (83.4per 100,000) and highest rate for females in the Richmond-Windsor SA3 (115.8 per 100,000) (AIHW 2021e).<br><br>**Figure: Rate of intentional self-harm hospitalisations by Statistical Area 3 (SA3) and sex, 2020-21** |

| | | |
|---|---|---|
| | |  |
| **Males** | 3.2 times higher suicide rates for men than women. | Deaths from intentional self-harm is higher for males than females (AIHW 2021p). In 2020 the standardised suicide rate for Australian males was 3.2 times higher than for women. Between 2017 and 2019, suicide was the 9th leading cause of death for NBMPHN males however was not among the top 20 causes of death for NBMPHN females in the same period (AIHW 2021m).<br><br>Recent NSW health data for the period January 2022 to July 2022 continues to show higher rates of death by suicide for males than for females, with males accounting for 77% of all suspected or confirmed suicide deaths during the period (NSW Ministry of Health 2022).<br><br>Men are at greater risk of death by suicide accounting for over three quarters of suicide fatalities (76%) (AIHW 2021p), however are less likely to seek help (Terhaag et al. 2020). Men who have previously attempted suicide continue to be at higher risk for subsequently dying by suicide. One third of suicide deaths among men have no record of a previous psychosocial risk factor (AIHW 2021q). |
| | Difficulties navigating pathways of care for families/friends at risk of suicide. | Research has indicated:<br>• serious difficulties in negotiating relevant services.<br>• difficulties accessing appropriate and timely help including referral to a full range of supports (Macdonald et al. 2010). |
| **Comorbid Factors Associated with Suicide** | Over two thirds of intentional self-harm (suicide) deaths in 2020 were associated with psychosocial risk factors such as | In 2020, more than 90% of suicide deaths in Australia were identified as having at least one risk factor reported with both psychosocial risk factors and mental health and behavioural disorders present in more than two thirds of total suicide deaths (ABS 2022a). Psychosocial risk factors were most prevalent, occurring in 67.1% of all people who died by suicide, followed closely by those with mental and behavioural disorders at 65.6% (ABS 2022a). Mood disorders and substance use remain the first and |

<table>
<tr><th colspan="3">Outcomes of the health needs analysis – Primary Mental Health Care: Suicide Prevention</th></tr>
<tr><td></td><td>substance use, and mental health and behavioural disorders</td><td>second most common risk factors identified in suicide deaths (occurring in 40.3% and 29.3% of suicide deaths respectively) (ABS 2022a).<br><br>Further to the above, 3.2% of all suicides noted risk factors related to the COVID-19 pandemic, with almost 60% (58.6%) of these noting mood disorders as an associated cause, and over half (52.5%) noting problems related employment/unemployment as an associated cause (ABS 2022a).</td></tr>
<tr><td>Youth</td><td>A significant proportion of young women and men 12-17 years had contemplated suicide or had developed a suicide plan in 2017.</td><td>Estimates of the number of young people 12-17 years who had suicide ideation, made a suicide plan and made a suicide attempt in 2017 in the NBM population based upon the Young Minds Matter 2013-14 survey and 2017 population estimates for NBM LGAs are presented below (Lawrence et al. 2015; NBMLHD 2017d). This data, as well as more recent data from the fifth Biennial Youth Mental Health Report 2012-2020 (Mission Australia) (Brennan et al. 2021) indicates the magnitude of need for early intervention suicide prevention services within the NBM region for this cohort.<br><br>Figure: Estimated prevalence (number and %) of suicide behaviours among young people 12-17 years in Nepean Blue Mountains, 2017<br> 
</td></tr>
<tr><td></td><td>Prevalence of self-harm hospitalisations for young people in the NBM region is higher than the NSW average, and higher than for people of all ages.</td><td>In 2020-21 in NBM the hospitalisation rate for intentional self-harm for young persons aged 0-24 years was 108.7 per 100,000 population. This was higher than the NSW rate of 103.91 per 100,000 population for the same age cohort, and higher than that of NBM residents of all ages (81.9 per 100,000).<br><br>The rate of hospitalisations for intentional self-harm for young people aged 0-24 (per 100,000) was highest in the Penrith SA3 (139.9 per 100,000) which has increased from 100.1 per 100,000 since 2019-20 (AIHW 2021e).</td></tr>
<tr><td></td><td>Young people identifying as LGBTIQA+ are five times more likely to have</td><td>Compared to the general population, young LGBTIQA+ people are more likely to attempt suicide in their lifetime, to have thoughts of suicide, and to have engaged in self-harm in their lifetime, specifically (Robinson et.al 2014; LGBTIQ+ Health Australia 2021):</td></tr>
</table>

| Outcomes of the health needs analysis – Primary Mental Health Care: *Suicide Prevention* | | |
|---|---|---|
| | attempted suicide than other young people | • LGBTIQA+ young people aged 16 to 27 are five times more likely to have attempted suicide in their lifetime.<br>• Lesbian, gay, bisexual, and transgender young people are nearly twice as likely to engage in self-injury.<br>• Nationally, LGBTIQA+ people experience a rate of suicide over four times higher than people identifying as straight. |
| **LGBTIQA+ people** | High rates of suicide attempts for LGBTIQA+ people | Research indicates that mental ill-health, self-harm, suicide attempt and suicidal ideation rates amongst LGBTIQA+ people are disproportionately higher than the general population (Rosentreich 2013; LGBTIQ+ Health Australia 2021):<br>• 20% of transgender Australians and 15% of lesbian, gay, and bisexual Australians report current suicidal thoughts.<br>• Lesbian, gay, and bisexual Australians have up to 14 times higher rates of suicide attempts than their heterosexual peers.<br>• LGBTI people aged 18 years and over were more than eighteen times more likely to have had suicidal ideation in the previous 12 months.<br>• Up to 50% of transgender people have attempted suicide at least once.<br>• Anecdotal evidence suggests higher rates of suicidal and self-harming behaviour among intersex people compared to the general population.<br>• LGBTIQA+ people aged 16 years and over are between 5-18 times more likely to have thoughts of suicide than the general population. |
| **Aboriginal and Torres Strait Islander & Torres Strait Islander People** | High suicide rates for Aboriginal and Torres Strait Islander and Torres Strait Islander people in NSW – more than 2.2 times higher than for non-Aboriginal and Torres Strait Islander people | In 2020 suicide was the fourth leading cause of death for Aboriginal and Torres Strait Islander and Torres Strait Islander males, and the tenth leading cause of death for Aboriginal and Torres Strait Islander and Torres Strait Islander females in Australia (all ages). It remains the leading cause of death for Aboriginal and Torres Strait Islander and Torres Strait Islander persons between the ages of 15-44.<br><br>Between 2016-2020, the largest difference between Aboriginal and Torres Strait Islander and non-Aboriginal and Torres Strait Islander suicide rates occurred at younger ages, with the age-standardised rate more than 3 times higher for 15-24- and 25–34-year-olds (ABS 2020b). At a state level, the rate of suicides among Aboriginal and Torres Strait Islander persons in NSW from 2020 was 2.2 times higher compared to non-Aboriginal and Torres Strait Islander persons (21.6 vs. 9.8 per 100,000 persons) (ABS 2020c).<br><br>The rate of intentional self-harm hospitalisations for Aboriginal and Torres Strait Islander persons in 2019-20 was more than 3 times higher than that of non-Aboriginal and Torres Strait Islander Australians at 326 vs 108 per 100,000 persons (AIHW 2022a). |
| **CALD Communities** | Lack of data affects understanding of suicide risk and rates among local CALD communities. | Culture and ethnicity are not captured in ABS suicide data (ABS 2017). Data on suicide behaviour amongst migrant communities in the NBM region is not collected and it is not known whether CALD communities face higher than average suicide risk (NBMPHN 2016a). |

| Outcomes of the health needs analysis – Primary Mental Health Care: *Suicide Prevention* | | |
|---|---|---|
| | Surge in the rate of suicides and self-harm reported among the Pacific Islander community in Western Sydney in 2018 | Anecdotal evidence from community leaders (church leaders, school counsellors and NGOs) in Western Sydney (Nepean Blue Mountains and Western Sydney PHN regions) identified:<br>• a potential surge in suicides and attempted suicides (self-harm) in the first 6 months of 2018 among persons from the Pacific Islander community (Cook Islands, Samoa, Tonga, and Tokelau) (Pacific Islander Communities in Western Sydney 2018).<br>• Reportedly 12 young people between the ages 15-18 years have had their lives ended by suicide, with a further 20 attempts.<br>• Community perceptions of factors contributing to this increase in suicide deaths and suicide attempts include family issues and expectations, sexual abuse, and religious expectations. |
| **Age and Social Risk Factors** | Highest relative risk of suicide deaths nationally and in NSW are among:<br>• Young people aged 25-34 years.<br>• Unemployed males<br>• Persons separated from their relationship(s). | Analysis of suicide data collected by the National Coronial Information System between 2001 and 2013 revealed the following age and social factors were related to the relative risk of suicide deaths within Australia and/or NSW (Mindframe 2019).<br><br>**Age**: When accounting for differences in the age-structure of the population, the relative risk of suicide was highest among young people in Australia aged 25-34 years (Relative risk of 1.30 compared to persons aged 15-24 years).<br>**Occupation and employment status**: When accounting for differences in employment status within the population, the relative risk of suicide was highest among unemployed persons (relative risk of 1.51 compared to employed persons). The highest population suicide rates were observed for unemployed males aged 35-44, 25-34 and 45-54 years.<br>**Marital status:** The relative risk of suicide among people who were separated was more than four times higher compared to married persons (Relative risk of 4.35 compared to married persons). Recent data from AIHW (2021q) suggests that in 2020, 25.8% of suicides in males had a recorded psychosocial risk factor related to relationship problems including separation and divorce. This was higher than for females at 20.2%. |
| **Psychosocial Risk Factors** | The most common psycho-social risk factors for suicide include personal history of self-harm (people 64 years and under) and limitation of activities due to disability or death of family member | In 2020, of the 3,139 coroner-referred suicide deaths in Australia, 67.1% were found to have one or more associated psychosocial risk factors (AIHW 2021q). The proportion of suicide deaths with an associated risk factor differed throughout the lifespan. The most reported risk factors for all persons in all age groups except 65+ was 'personal history of self-harm', whilst other commonly reported risk factors of different age groups were (AIHW 2021r):<br>• All persons aged under 55 years: 'disruption of family by separation and divorce' and 'problems in relationship with spouse or partner'.<br>• Persons aged 65 years and older: 'limitation of activities due to disability' and 'disappearance and death of family member'.<br>• Males aged 25-54 years: 'Problems related to other legal circumstances' (associated with more than 10% of suicide deaths). |

| Outcomes of the health needs analysis – Primary Mental Health Care: *Suicide Prevention* | | |
|---|---|---|
| | | • Middle-aged males aged 45–54 and 55–64: 'other problems relating to economic circumstances' (associated with more than 10% of suicide deaths in these age groups). |
| **Risk Factors: Mental Illness and Drug & Alcohol** | People with mental illness and/or drug and alcohol use problems are at a higher risk of suicide, attempted suicide or experience suicidal ideation. | People with alcohol or drug use problems and persons with a mental illness have a higher risk of suicide than the general population. Suicide attempts are highest for persons with substance use disorders (3.1% of those affected), followed by affective and anxiety disorders (2.1% each). Suicidal ideation is highest for affective disorders (16.8%), followed by substance use disorders (10.8%) and anxiety disorders (8.9%). The comparative rate for no mental disorder is 0.8% (Beyond Blue 2014).<br><br>ABS data suggests that in 2020, the top 5 most frequently occurring associated causes for suicide deaths (not including psychosocial risk factors) are as follows:<br>1. Depressive episodes: associated with 38.1% of suicide deaths.<br>2. Other symptoms and signs involving emotional state (suicide ideation): associated with 23.5% of suicide deaths.<br>3. Other anxiety disorders: associated with 14.4% of suicide deaths.<br>4. Mental and behavioural disorders due to use of alcohol, acute intoxication: associated with 10.7% of suicide deaths.<br>5. Finding of hallucinogen in blood: associated with 9.4% of suicide deaths. |
| **Risk Factors: Prior Suicide Attempt Family History** | Individuals who have previously attempted suicide, have a family history of suicide, or are bereaved by a suicide are at very high risk of another suicide attempt. | People who have previously attempted suicide are at very high risk of making another suicide attempt or of dying by suicide. As many as 42% of child and youth suicides may be due to exposure to another person's suicide (Beyond Blue 2014; Mendoza and Rosenberg 2010; Connor et al. 2003; CCYPCG 2011). |
| **Risk Factors: Presence of chronic physical health conditions** | Physical chronic conditions are linked to increased risk of death by suicide. | Research has confirmed that many physical conditions are associated with risk of suicide death (Ahmedani et al. 2017). Nine physical conditions have been linked to risk of death after controlling for age, gender, and the presence of mental health and substance use disorders. These include back pain, brain injury, cancer, congestive heart failure, COPD, epilepsy, HIV/AIDS, migraine, and sleep disorders. People with two or more conditions had substantially increased risk. |
| **Hospital Discharge / Continuity of Care** | Higher risk of suicide following hospital discharge and or a reduction in treatment post discharge. | There is a higher risk of suicide after discharge from hospital or when treatment has been reduced. A UK study identified that 43% of suicide deaths occurred within a month of discharge, and 47% of those occurring before a first follow-up appointment. The first day and first week after discharge were particularly high-risk periods (Martin et al. 2010; Hunt 2009). |

# Mental Health

**Outcomes of the health needs analysis – Primary Mental Health Care: *Mental Health***

| Identified Need | Key Issue | Description of Evidence |
|---|---|---|
| **Prevalence of mental illness** | Significant prevalence of individuals needing mental health support. | It is estimated that approximately 64,693 people (16.7% of the total population) in the NBM region would be likely to have a mental illness in a 12-month period. A further 89,983 people (23.2% of the total population) are expected to be at risk of mental illness or may require some level of early intervention to prevent progression to a formal diagnosis and to manage distress. It is not expected that all these individuals will seek or require services within a 12-month period. |

**Table: Estimated prevalence of mental illness by age groups and severity level, NBM, 2019**

| Population / Age Group | 0-4 | 5-11 | 12-17 | 18-64 | 65+ | 65+ BPSD | Grand Total (all ages) | Grand Total (all ages, %) |
|---|---|---|---|---|---|---|---|---|
| **Total NBM population** | **24,990** | **35,790** | **31,307** | **239,448** | **55,819** | **-** | **387,354** | **100%** |
| **Prevalence population** | 5,506 | 10,360 | 8,407 | 112,432 | 15,699 | 2,272 | 154,677 | 39.9% |
| Early intervention | 1,649 | 4,807 | 3,632 | 41,539 | 6,087 | | 57,715 | 14.9% |
| Relapse prevention | - | - | - | 28,866 | 3,402 | - | 32,268 | 8.3% |
| Mild | 2,204 | 3,170 | 2,675 | 22,603 | 3,234 | 1,118 | 35,003 | 9.0% |
| Moderate | 1,102 | 1,587 | 1,365 | 11,434 | 1,617 | 650 | 17,755 | 4.6% |
| Severe | 551 | 769 | 735 | 7,990 | 1,359 | 504 | 11,935 | 3.1% |

*65+ age group is divided into two groups – BPSD: behavioural and psychological symptoms of dementia.*

**Table: NMHSPF-PST estimated demand for regional mental health services by age groups and severity level, NBM, 2019**

| Population / Age Group | 0-4 | 5-11 | 12-17 | 18-64 | 65+ | 65+ BPSD | Grand Total (all ages) | Grand Total (all ages, %) |
|---|---|---|---|---|---|---|---|---|
| **Population requiring services** | 4,184 | 6,746 | 5,700 | 42,281 | 5,157 | 1,583 | 65,652 | |
| Early intervention | 1,649 | 3,096 | 2,536 | 8,203 | 318 | - | 15,803 | 27% |
| Relapse prevention | - | - | - | 5,639 | 569 | - | 6,208 | 19% |
| Mild | 1,102 | 1,585 | 1,337 | 11,302 | 1,617 | 559 | 17,501 | 50% |
| Moderate | 882 | 1,269 | 1,092 | 9,147 | 1,294 | 520 | 14,204 | 80% |

<table>
<tr><th colspan="4">Outcomes of the health needs analysis – Primary Mental Health Care: Mental Health</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Severe</td><td>551</td><td>769</td><td>735</td><td>7,990</td><td>1,359</td><td>504</td><td>11,935</td><td>100%</td></tr>
</table>
65+ age group is divided into two groups – BPSD: behavioural and psychological symptoms of dementia.
</td></tr>
<tr><td></td><td>Levels of high psychological distress in NBM</td><td>It is estimated that 12.8% of peopled aged 18 and over have high psychological distress in the last 12 months (Mental Health Australia 2023).<ul><li>10.67% of males aged 18 and over.</li><li>13.62% of females aged 18 and over.</li></ul>Highest rates of psychological distress present in:<ul><li>People aged 18 to 24 (22.23%).</li><li>People aged 18 and over in lower middle-income households (15.13%).</li><li>People aged 18 and over and who are unemployed (26.75%).</li><li>People aged 18 and over in single parent households (24.32%).</li></ul>The Lithgow-Mudgee SA3 region has the highest rate of psychological distress (21.87%) followed by Hawkesbury (13.41%).</td></tr>
<tr><td></td><td>People with Mild Mental Illness</td><td>People with mild mental illness includes mostly those diagnosed with anxiety and depression, with a duration of less than 12 months and which have a minimal impact on functioning. The National Mental Health Service Planning Framework – Planning Support Tool (NMHSPF-PST) estimates that 9.0% of the NBM population or 35,003 persons have a mild mental illness in 2019. Of these, 17,501 will potentially need or seek treatment within a 12-month period. The estimated number of individuals with a mild mental illness by LGA in the NBM region in 2019 is indicated below (UoQ 2016).<ul><li>Blue Mountains: 7,570</li><li>Hawkesbury: 6,286</li><li>Lithgow: 1,873</li><li>Penrith: 19,339</li></ul></td></tr>
<tr><td></td><td>People with Moderate Mental Illness</td><td>People with moderate mental illness includes those with a diagnosed mental illness of more than 12 months duration but does not meet the definition for severe or has a moderate impact on functioning. The NMHSPF-PST estimates that 4.6% of the NBM population or 17,755 persons have a moderate mental illness in 2019. Of these, 14,204 will potentially need or seek treatment within a 12-month period. The estimated number of individuals with a moderate mental illness by LGA in the NBM region in 2019 is indicated below (UoQ 2016).<ul><li>Blue Mountains: 3,846</li><li>Hawkesbury: 3,189</li><li>Lithgow: 952</li><li>Penrith: 9,804</li></ul></td></tr>
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| Outcomes of the health needs analysis – Primary Mental Health Care: *Mental Health* | | |
|---|---|---|
| | People with Severe Mental Illness | Severe mental illnesses are defined by diagnosis type – including those "as severe as schizophrenia", any diagnosis of psychosis or bipolar; and impact on functioning – including other severe disorders with high impact, such as major depressive disorder requiring hospitalization, &/or had more than 60 days out of role in the last year, &/or experiencing very high distress, &/or is unable to work at the current time. The NMHSPF-PST estimates that 3.1% of the NBM population or 11,935 persons have a severe mental illness in 2019. All these persons (100%) will need or seek treatment within a 12-month period. The estimated number of individuals with a severe mental illness by LGA in the NBM region in 2019 is indicated below (UoQ 2016).<br>• Blue Mountains: 2,616<br>• Hawkesbury: 2,140<br>• Lithgow: 654<br>• Penrith: 6,545 |
| | Longer term mental behaviour conditions | In the NBMPHN region, it is estimated that in the last 12 months, 16.62% of people aged 15 and over have long term mental and behavioural conditions. Females are more likely to have a long term mental and behavioural condition (17.82%) compared to males (15.36%). People aged 15-24 have the highest rate of long term mental and behavioural conditions (22.55%) followed by people aged 25-44 (18.28%). Long term mental and behavioural conditions are also most common for people in single parent households (24.03%), who are not employed (29.89%) and in lower middle-income households (Mental Health Australia 2023). |
| | Children and youth mental health disorder prevalence | The fifth Biennial Youth Mental Health Report 2012-2020 (Mission Australia) (Brennan et al. 2021) on young people aged 15-19 further showed that there had been an increase in the proportion of young people with psychological distress in Australia from 18.6% in 2012 to 26.6% in 2020. While both proportions have risen between 2012 and 2020, the proportion of females with psychological distress has shown a much greater increase (11.7%) – from over one fifth (22.4%) in 2012 to over one third (34.1%) in 2020. Psychological distress scores may be reflective of when data was collected — the bulk of responses were collected in July-August 2020 after the impact of COVID-19 in Australia, except for Victoria, which was in lockdown during this time.<br><br>13.77% of active patients aged between 4-17yrs in the NBMPHN region (n = 58608) have a coded mental health disorder recorded (NBMPHN 2022b).<br><br>The specific diagnosis in order of frequency are as follows:<br>• ADHD – 5.39%<br>• Anxiety – 4.39%<br>• Autism – 3.29%<br>• Depression – 0.63%<br><br>11.11% of females and 16.34% of males in this age group have a mental health diagnosis.<br>However: |

| Outcomes of the health needs analysis – Primary Mental Health Care: *Mental Health* | | |
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| | | • Females have a higher rate of anxiety 5.28% compared to males 3.55%.<br>• Females have a higher rate of depression 0.95 % compared to males 0.32%. Female depression rates have dropped 0.78% since September 2021.<br>• Females have a higher rate of bipolar 0.08% compared to males 0.01%. Female bipolar rates have increased 0.03% since September 2021.<br>• Males have almost three times the diagnosis rate for ADHD 7.61% (2278 patients) compared to females 3.07% (879 patients).<br>• Males have almost three times the diagnosis rate for autism 4.82% (1443 patients) compared to females 1.70% (486 patients). An increase of 121 female patients have had an autism diagnosis since September 2021, whilst males have increased by 319. |
| | Persistent rise in youth psychological distress across Australia. | The Mission Australia and Black Dog Institute 2019 joint report indicates considerably more young people reported experiencing psychological distress in 2018 compared to 2012 (Hall et al. 2019).<br>Key findings included:<br>• Close to one in four young people met the criteria for experiencing psychological distress – a substantial increase over the past seven years (rising by 5.5% from 18.7% in 2012 to 24.2% in 2018).<br>• In 2018, more than three in ten (31.9%) of Aboriginal and Torres Strait Islander and Torres Strait Islander young people met the criteria for psychological distress, compared to 23.9% for non-Aboriginal and Torres Strait Islander young people.<br>• Females were twice as likely as males to experience psychological distress.<br>• Stigma and embarrassment, fear and a lack of support were the most cited barriers that prevent young people from seeking help.<br>• The top issues of personal concern for young Australians experiencing psychological distress were coping with stress, mental health and school or study problems. High levels of concern were also expressed about other issues including body image, suicide, family conflict and bullying/emotional abuse.<br>• Almost four times the proportion of young people with psychological distress reported concerns about suicide (35.6% compared with 9.4% of respondents without psychological distress).<br>• Young people experiencing psychological distress reported they would go to friend/s, parent/s or guardian/s and the internet as their top three sources of help. |
| **Burden of mental ill health.** | Mental health and substance use disorders were the second leading disease group contributing to the burden of disease in Australia | Data from the Australian Burden of Disease Study in 2018 indicate that mental health and substance use disorders were the second leading disease group contributing to the disease burden in Australia, accounting for 13% of the total disease burden. Specifically, a slight increase can be seen in the amount of suicide and self-inflicted injuries causing fatal burden (2003 vs 2018) with males contributing to 3 times more of this burden than females; and anxiety and depressive disorders were the second leading diseases contributing to non-fatal burden in 2018. |

| Outcomes of the health needs analysis – Primary Mental Health Care: *Mental Health* | | |
|---|---|---|
| | Higher prevalence of major physical conditions and reduced quality of life among people with mental health conditions. | Data examined from the 2017-18 ABS National Health Survey – first results (ABS 2018a) identified an association between mental and physical health conditions. Major physical conditions affecting people with mental health conditions include:<br><br>**Circulatory diseases:** Males with mental health conditions were 46.3% more likely and females with mental health conditions were 49.9% more likely to report having a circulatory system disease.<br>**Diabetes:** Males with mental health conditions were 45.5% more likely to report having diabetes and females with mental health conditions 37.2% more likely to report having diabetes compared to the general population. Research has also identified that metabolic side effects of many psychoactive medications may contribute to higher rates of obesity and diabetes among people with mental health conditions.<br>**Asthma:** Males with mental health conditions were 49% more likely to report having asthma, while women with mental health conditions were 68.3% more likely to report having asthma compared to the general population.<br>**Back problems**: Males with mental health conditions were 64.9% more likely to report having back pain, while women with mental health conditions were 72.4% more likely to report having back pain compared to the general population.<br>**Arthritis:** Males with mental health conditions were 60.4% more likely to report having arthritis, while women with mental health conditions were 47.5% more likely to report having arthritis compared to the general population.<br>**Chronic obstructive pulmonary disease (COPD):** Males with mental health conditions were 117.4% more likely to report having COPD, while women with mental health conditions were 103.9% more likely to report having COPD compared to the general population.<br>**Cancer:** Males with mental health conditions were 38.1% more likely to report having cancer, while women with mental health conditions were 53.4% more likely to report having cancer compared to the general population. |
| | Higher prevalence of behavioural and biomedical risk factors for chronic physical health conditions among persons with mental health conditions. | The prevalence of known behavioural and biomedical risk factors for chronic physical health multi-morbidities among people with mental health conditions are also known to be higher compared to the general Australian population (Harris et al. 2018). These include:<br><br>**Smoking:** People reporting mental health conditions are 54% more likely to smoke than the general population. Groups with mental health conditions found to have the highest smoking rates include persons with psychosis / severe mental illness, Aboriginal and Torres Strait Islander and Torres Strait Islander people and patients accessing psychiatric inpatient services.<br>**Alcohol:** People reporting mental health conditions are 12.5% more likely to report risky drinking (average alcohol consumption of more than two standard drinks per day over the past year).<br>**Physical inactivity:** People with mental health conditions are 9.5% more likely to not meet physical activity guidelines than the general population (meaning no or little exercise for fitness, recreation, sport or walking for transport in the last week).<br>**Obesity:** People with mental health conditions are 16% more likely to be obese than the general population.<br>**High cholesterol:** People with mental health conditions are 16% more likely to have high cholesterol than the general population. |

<table>
<tr><th colspan="3">Outcomes of the health needs analysis – Primary Mental Health Care: Mental Health</th></tr>
<tr><td rowspan="2">Mental health hospitalisations</td><td>Rate of hospitalisations for mental health disorders in NBMPHN higher than NSW.</td><td>In 2021-22, there were 7,820 hospitalisations for NBM residents caused by mental disorders. The NBM hospitalisation rate for mental health disorders (2,093.9 per 100,000 persons) was higher than the NSW average (1,812.1 per 100,000 persons) (Centre for Epidemiology and Evidence n.d.m).<br><br>In 2021-22, there were 4,921 mental health related presentations to emergency departments for NBM residents (1,275.5per 100,000 population, lower than the NSW rate (1,383.7 per 100,000).</td></tr>
<tr><td>Highest rates of mental health-related hospitalisations in the NBM region for drug and alcohol episodes, and anxiety and stress episodes.</td><td>In 2015-16 within Nepean Blue Mountains, hospitalisations for mental health conditions in both public and private hospitals were highest for drug and alcohol episodes, followed by anxiety and stress episodes (AIHW 2017b). The rate of bed days per 10,000 people for mental health condition hospitalisations however were highest for schizophrenia and delusional disorders, followed by depressive episodes. Across NBM SA3 areas, Blue Mountains has the highest hospitalisation rate for all mental health conditions, followed by St Marys and Penrith. This data does not account for individuals attending hospitals outside of their region due to accessibility barriers, for example, Hawkesbury residents travelling to Nepean Hospital in the Penrith LGA.<br><br>Table: Hospitalisations for mental health for NBM residents by mental health conditions, 2015-16 (AIHW 2017b).
<table>
<tr><th>Mental health conditions</th><th>Hospitalisations per 10,000 people (age-standardised)</th><th>Bed days per 10,000 people (age-standardised)</th><th>Number of hospitalisations</th><th>Number of bed days</th></tr>
<tr><td>Anxiety and stress episodes</td><td>21</td><td>185</td><td>748</td><td>6,757</td></tr>
<tr><td>Bipolar and mood disorders</td><td>8</td><td>146</td><td>304</td><td>5,338</td></tr>
<tr><td>Depressive episodes</td><td>16</td><td>248</td><td>581</td><td>9,166</td></tr>
<tr><td>Drug and alcohol episodes</td><td>28</td><td>216</td><td>969</td><td>7,636</td></tr>
<tr><td>Dementia</td><td>5</td><td>74</td><td>199</td><td>2,734</td></tr>
<tr><td>Schizophrenia and delusional disorders</td><td>16</td><td>453</td><td>554</td><td>16,079</td></tr>
<tr><td>Intentional self-harm</td><td>15</td><td>86</td><td>519</td><td>3,046</td></tr>
</table>
Whilst more recent local level data is not available for hospitalisations by mental health condition, data from AIHW (2021s) does provide current total rates of overnight admitted mental health-related care. Richmond-Windsor SA3 has the highest rate of</td></tr>
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<tr><th colspan="3">Outcomes of the health needs analysis – Primary Mental Health Care: Mental Health</th></tr>
<tr><td></td><td></td><td>overnight admitted mental health related separations in the NBM region (131.9 per 10,000 population) followed by Blue Mountains SA3 (123.5 per 10,000 population).<br><br>Table: Overnight admitted mental health related separation rate for NBM residents, by SA3 and NBMPHN, 2018-2019
<table>
<tr><th>Mental health conditions</th><th>Separations per 10,000 people (age-standardised)</th><th>Bed days per 10,000 people (age-standardised)</th><th>Number of separations</th><th>Number of bed days</th></tr>
<tr><td>Blue Mountains</td><td>123.5</td><td>1792.3</td><td>977</td><td>14,183</td></tr>
<tr><td>Hawkesbury</td><td>97.1</td><td>1,449.5</td><td>247</td><td>3,687</td></tr>
<tr><td>Lithgow-Mudgee</td><td>90.3</td><td>1,115.2</td><td>434</td><td>5,358</td></tr>
<tr><td>Penrith</td><td>115.9</td><td>1,525.9</td><td>1,742</td><td>22,928</td></tr>
<tr><td>Richmond-Windsor</td><td>131.9</td><td>1,652.7</td><td>499</td><td>6,253</td></tr>
<tr><td>St Marys</td><td>104.7</td><td>1,201.9</td><td>592</td><td>6,799</td></tr>
<tr><td>NBMPHN</td><td>113.2</td><td>1,500.6</td><td>4,285</td><td>56,799</td></tr>
</table></td></tr>
<tr><td rowspan="2">Mental health burden in Aboriginal and Torres Strait Islander and Torres Strait Islander population</td><td>High prevalence of long-term mental health conditions among Aboriginal and Torres Strait Islander and Torres Strait Islander people</td><td>The National Aboriginal and Torres Strait Islander Survey 2018-19 indicates that 24% of Aboriginal and Torres Strait Islander people aged 2 years and over have a long-term mental health condition, with anxiety and depression being the most common conditions reported, both being more common among females than males (21% and 12% respectively) (ABS 2019b).</td></tr>
<tr><td>Higher prevalence of high or very high psychological distress in Aboriginal and Torres Strait Islander adults.</td><td>The National Aboriginal and Torres Strait Islander Health Survey 2018-19 indicates that 31% of Aboriginal and Torres Strait Islander people aged 18 years and over have high or very high levels of psychological distress. After adjusting for differences in the age-structure of populations, Aboriginal and Torres Strait Islander adults were 2.3 times more likely to experience high or very high psychological distress compared to non-Aboriginal and Torres Strait Islander adults (ABS 2019b).<br><br>Research using the Sax Institute's 45 and Up Study cohort of NSW middle aged and older residents found that while high psychological distress was around three times higher among Aboriginal and Torres Strait Islander compared to non-Aboriginal and</td></tr>
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| Outcomes of the health needs analysis – Primary Mental Health Care: *Mental Health* | | |
|---|---|---|
| | | Torres Strait Islander participants, the major risk factors for distress – poorer health (multi-morbidity, physical disability, and functional limitations), lower social support and lower socioeconomic status were similar in both groups.<br><br>Differences in distress prevalence were accounted for by differences in physical morbidity and disability (McNamara et al. 2018). This is the first study in Australia showing that differences in the prevalence of psychological distress among Aboriginal and Torres Strait Islander people is attributable to greater physical ill health, combined with lower social support and lower socio-economic status. The authors conclude that greater attention is needed on primary prevention of the primary causes of physical morbidity, including improved screening for psychological distress and improved integration of social and emotional wellbeing in primary care and chronic disease management. |
| **Aboriginal and Torres Strait Islander people and service accessibility** | A low proportion of Aboriginal and Torres Strait Islander and Torres Strait Islander people access Medicare psychological and psychiatric services. | Based on MBS services claimed across Australia, Aboriginal and Torres Strait Islander Australians were less likely than non-Aboriginal and Torres Strait Islander Australians in 2017-18 to have claimed through Medicare for psychologist care (144 compared with 215 per 1,000) or psychiatric care (56 compared with 96 per 1,000) (AIHW 2020m).<br><br>In comparison, Aboriginal and Torres Strait Islander Australians across Australia utilised the Access to Allied Psychological Services program at 4.3 times the rate of non-Aboriginal and Torres Strait Islander Australians in 2015-16, had mental health related problems managed by GPs at 1.2 times the rate compared to non-Aboriginal and Torres Strait Islander Australians between 2010 and 2015, and accessed specialised community mental health services at 3.3 times the rate of contacts compared to non-Aboriginal and Torres Strait Islander Australians in 2017-18. These findings indicate that Aboriginal and Torres Strait Islander Australians are accessing primary care level mental health services more readily than specialist services, in comparison to non-Aboriginal and Torres Strait Islander Australians (AIHW 2020m). |
| **Aboriginal and Torres Strait Islander people hospitalisation rates** | The proportion of Aboriginal and Torres Strait Islander people hospitalised for mental health conditions is high relative to non-Aboriginal and Torres Strait Islander Australians. | Between July 2015 and June 2017, hospitalisations for mental health-related conditions were 1.8 times higher for Aboriginal and Torres Strait Islander Australians compared with non-Aboriginal and Torres Strait Islander Australians and was highest for those aged 35-44.<br>Between July 2015 and June 2017, hospitalisations for ambulatory-equivalent care were 0.3 times higher than for Aboriginal and Torres Strait Islander Australians than for non-Aboriginal and Torres Strait Islander Australians when involving specialised psychiatric care; however, were 2.6 times higher for services not involving specialised psychiatric care. Hospitalisations for admitted patient mental health care were twice as high for Aboriginal and Torres Strait Islander Australians than for non-Aboriginal and Torres Strait Islander Australians when with specialised psychiatric care and were 3.1 times as higher for services not involving specialised psychiatric care (AIHW 2020m). |
| **Mental health burden in CALD communities** | Significant presence of mental health issues within CALD communities in the NBM region. | The Breaking Barriers Bringing Understanding (3BU) project (Syeda 2016) studied the mental health perspectives of CALD communities in the NBM region and reported a significant presence of mental health issues in the participant CALD Communities. Depression and anxiety were the most common mental health issues related to migration and resettlement experiences. Other |

| Outcomes of the health needs analysis – Primary Mental Health Care: *Mental Health* | | |
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| | | contributing causes of mental health issues included low socio-economic status, migration, pre-migration (including traumatic events) and post-migration (financial stresses, unemployment, isolation, language barriers, family breakdown and acculturation). |
| | Mental health issues are common amongst local Syrian refugee intake. | Focus group discussions held with local Syrian refugee communities highlight common mental health issues experienced among this group include (Renzaho 2016):<br>• Sleeplessness<br>• Trauma<br>• Anxiety<br>• Depression<br>• Loneliness<br>• Isolation |
| **Poor mental health among LGBTIQA+ population** | Higher rates of poor mental health among LGBTIQA+ population. | Research indicates that LGBTIQA+ people in Australia experience disproportionately poorer mental health compared to their non-LGBTIQA+ peers, in particular (LGBTQI+ Health Australia 2021a):<br>• LGBTIQA+ people are almost 6 times mor likely than the general population to experience and be diagnosed with depression.<br>• 24.4% of LGBTIQA+ people 16 years and older met the full criteria for a major depressive episode.<br>• LGBTIQA+ people generally score higher on the Kessler Psychological Distress (K10) Scale than the general population, with LGBTIQA+ young people (16-17 years) 3 times more likely to report high/very high level of psychological distress compared to the general population (83.3% vs 27.3%).<br>• LGBTIQA+ people aged 16-17 years were nearly 3 times more likely to have attempted suicide in the past 12 months, with transgender people aged 14-25 years 15 times more likely than the general population to attempt suicide.<br>• Greater disparity in poorer mental health for young age groups: LGBTIQA+ young people have higher rates of mental health disorder diagnosis and are more than twice as likely to have attempted suicide than older LGBTQA+ people.<br><br>Key causal factors contributing to such elevated risk of poor mental health among LGBTIQA+ people include exposure to and fear of discrimination, and exclusion and social isolation within families and broader society. |
| **Service integration post release for prison population** | Prisons in the NBM region. | 4 correctional centres, 3 community corrections offices and 1 Youth Justice Centre are in the NBM region (NSW Government 2020; Communities and Justice 2019).<br><br>According to the NSW Justice Health and Forensic Mental Health Network Patient Health Survey (2015) the rates of people diagnosed with a mental illness at some stage in their life in the adult prison population have almost doubled. |

| Outcomes of the health needs analysis – Primary Mental Health Care: *Mental Health* | | |
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| **Mental health burden among homeless populations** | Moderate rates of mental health conditions amongst NBM homeless population. | According to estimates of homelessness in Australia from the 2021 Census (ABS 2018c), there were 122,494 people who were homeless, a rate of 48 people for every 10,000.<br><br>The AIHW's report on the health *of people experiencing homelessness (AIHW 2021t)* also identifies that of all clients accessing specialist homelessness services in Australia in 2020-21 (278,300 clients), almost 10% (26,300) had a current mental health issue.<br><br>Applying these proportions to the NBMPHN, the estimated numbers of people who were both homeless and experiencing mental illness in 2016 would be as follows (ABS 2018c):<br><br>• NBMPHN: 1,859 homeless (185 with mental illness) comprising:<br>  ○ Blue Mountains: 373 homeless (37 with mental illness)<br>  ○ Hawkesbury: 325 homeless (32 with mental illness)<br>  ○ Lithgow: 99 homeless (9 with mental illness)<br>  ○ Penrith: 1060 homeless (106 with mental illness) |
| | Significant negative impacts of homelessness upon health, mental health, and mental health service use among homeless people in the NBM region. | A local cross-sectoral and multi-agency partnership project conducted within the Penrith, Blue Mountains, and Hawkesbury LGA communities in 2016-17 identified persons experiencing homelessness and key issues faced by those persons, which are impacted and exacerbated by homelessness (Quinn 2018). These include:<br><br>• Dental health: 60% of persons interviewed reported having dental problems.<br>• Respiratory health: 45% of persons interviewed reported having asthma and 12% had emphysema.<br>• Mental health service use:<br>  ○ 64% of persons reported they have had some type of interaction with the mental health system.<br>  ○ 20% reported having been taken to hospital against their will.<br>  ○ 29% reported they had presented to the emergency department for a mental health concern.<br>  ○ 59% had spoken to a mental health professional in the last six months. |

## Psychosocial support for people with severe mental illness: (Commonwealth Psychosocial Support)

| Outcomes of the health needs analysis – Primary Mental Health Care: Psychosocial support for people with severe mental illness: (Commonwealth Psychosocial Support) | | |
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| **Identified Need** | **Key Issue** | **Description of Evidence** |
| **Social Isolation** | Social and geographical isolation is major factor excluding NBM consumers from community participation and is a key issue during periods of poor mental health. | Data sources and recent community consultations have indicated the following specific issues relating to social isolation and community participation (. idcommunity demographic resources n.d.; Redshaw and Ingham 2015; Transport NSW n.d.; NBMPHN 2018f; Graham et al. 2017; Forsman et al. 2011):<br><br>• Stigma around mental health was reported amongst consumers as a major factor excluding them from participation in social groups.<br>• Modelling on transport apps and anecdotal feedback identifies the Nepean Blue Mountains geography as a socially isolating factor. Transport options are limited and infrequent and many mental health services, creative interest groups and social activities are in the Penrith hub. An example of such service is Westclub which is now only available to NDIS participants or people in the closed programs CoS and NPS2. Consumers across all four LGAs consistently reported a lack of regional peer support groups and fun activities for people with lived experience of mental health particularly between the ages of 25 to 65.<br>• Connection to family, friends, religion, culture all help on the recovery journey but become difficult during periods of poor mental health.<br>• Amongst the 65 + age group there is an estimated 1527 people that fall within the NPS target cohort. |
| **NDIS Transition** | NDIS transition is impacted by:<br><br>• Navigating to the most appropriate and best supports for people requiring psychosocial assistance.<br>• Adjusting to the evolving requirements of psychosocial disability in the NDIS. | • **Lack of services to assist with the preparation of NDIS Access Requests –** Previous NPS service model does not have the provision for gathering evidence and preparing an Access Request, however the current CPS model has a great success rate for NDIS transition.<br>• **NDIS Access Request wait times** – 12 weeks continues to be the average response time between application submission and response. This causes issues as often consumers will be leaving or left the program due to time of engagement limitations prior to response and therefore additional administration is required to feedback response to consumer no longer engaged with program.<br>• **Delays in the review process for NDIS –** a request for review of ineligibility decision is taking more than 6 months.<br>• **Disengaged participants that could potentially fall through the gaps** – The reasons for this may include hospitalisation, homelessness, episodic nature of illness or fear and confusion after the closure of Commonwealth funded programs and avoidance of the NDIS. The exact reasons are difficult to clarify given the uncontactable nature of the cohort. |
| **Mental Health Literacy and system** | Poor mental health literacy, poor knowledge of local psychosocial services | Broad consultation flagged a regional theme of mental health literacy and a deficit in knowledge of how to navigate the mental health service system (NBMPHN 2018f; NBMPHN n.d.b; NBMPHN n.d.c.; Stronger Families Alliance 2016). Consumers reported they are not able to find psychosocial support when they need it. The mental health service sector surveys revealed very poor |

| Outcomes of the health needs analysis – Primary Mental Health Care: Psychosocial support for people with severe mental illness: (Commonwealth Psychosocial Support) | | |
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| **navigation knowledge** | available and how to navigate mental health service system by consumers is reported consistently across NBMPHN. | knowledge of psychosocial services available in the region. The recent changes to the psychosocial space regarding the NDIS, and cessation of commonwealth funded programs has caused greater confusion. WHL has been developing referral pathways to manage psychosocial support throughout the region. Education is underway but the need for greater understanding of referral pathways such as HASI, CLS and CPS, and the entry criteria for each is ongoing. |
| **Aboriginal and Torres Strait Islander and Torres Strait Islander Communities** | Lack of dedicated Aboriginal and Torres Strait Islander mental health clinicians and targeted psychosocial programs for Aboriginal and Torres Strait Islander and Torres Strait Islander communities impact negatively on engagement with regional mental health services. | Data sources and recent community consultations have indicated the following issues relating to psychosocial needs among Aboriginal and Torres Strait Islander and Torres Strait Islander communities in the NBM region (NBMPHN 2018f; AIHW 2015a; Commonwealth of Australia 2017; NBMPHN n.d.d.; DoH 2017a; headspace n.d.):<br>• 32 Aboriginal and Torres Strait Islander and Torres Strait Islander identified participants have received support through CPS.<br>• Overrepresentation in mental health statistics: 32.8% of Aboriginal and Torres Strait Islander adults have high or very high levels of psychological distress, at 2.6 times the rate compared to non-Aboriginal and Torres Strait Islander adults.<br>• Research cites lack of culturally validated models of mental health care, and this is evidenced in the low rates of engagement with mainstream youth and adult mental health services in the area.<br>• Qualitative feedback flags a social housing deficit and low referral rates into HASI programs. |
| **CALD Communities** | There is an identified need for different avenues which promote access to mental health promotion, psychosocial groups, and appropriate referral pathways in the NBM region across CALD community groups. | The following issues relating to psychosocial needs among CALD communities in the NBM region have been identified (headspace n.d.; idcommunity demographic resources n.d.; FECCA 2019; NBMPHN n.d.e; Cross and Singh 2012; CCNA n.d.):<br>• Lack of bilingual, culturally safe mental health services in the Nepean Blue Mountains. Anecdotally, service providers report that people travel out of area to find an appropriate service.<br>• Lack of bilingual GPs and mental health care professionals in the region. GP mental health treatment plans are necessary for Psychological Therapy Service referrals – this excludes many people in need from CALD communities from primary care mental health treatment. Statistics and qualitative feedback show these communities present at the Mental Health Services Triage and Assessment Centre (TAC) at Nepean Hospital.<br>• Limited use of interpreters in Primary Care settings.<br><br>Considering the above limitations to clinical care in the CALD communities, psychosocial needs assessment raised the following gaps:<br>• Access to gatekeeper mental health training to improve recognition, management, and knowledge of referral pathways across CALD community groups.<br>• Support for carers with different world views and consumer self-stigma around mental illness. |

| Outcomes of the health needs analysis – Primary Mental Health Care: Psychosocial support for people with severe mental illness: (Commonwealth Psychosocial Support) | | |
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| | | • Mental health promotion and advertising of psychosocial groups via different channels such as community radio for CALD populations with low English literacy and literacy in their first language. |
| **Homeless populations** | Persons with housing instability experience difficulties with NDIS applications, making this group likely to be eligible for the NPS.<br>High prevalence of mental illness and comorbid physical health conditions among homeless persons, and poor engagement with mainstream services.<br><br>Poor engagement between homelessness and mental health services in the NBM region.<br><br>Potential poor capacity among homeless sector services to respond to client mental health needs due to lack of mental health first aid training. | The following issues relating to psychosocial needs among homeless populations in the NBM region have been identified (NBMPHN 2018f; idcommunity demographic resources n.d.; Quinn 2018; Homelessness Australia 2016; Burich et al. 1998):<br>• Only 7% of homelessness service providers in the region have contact with mental health services.<br>• Vulnerabilities and national prevalence of mental illness and homelessness correlation amongst young people transitioning from state care systems.<br>• Research indicates 75% of homeless populations have at least one mental illness compared to 20% in the general population.<br>• Correlation and psychosocial causation are intertwined and difficult to unpick in this cohort as there are not enough data sets, but housing instability can make NDIS applications difficult and therefore this cohort a likely candidate for NPS. "*This included teething problems with the NDIS not adequately addressing psychosocial problems, criteria that discourages preventative mental health care, the lack of collaboration between mental health and drug and alcohol services, and the overall lack of mental health facilities and Housing and Support Initiative (HASI) packages in the Penrith region*" (Heading home. Wentworth Housing).<br>• Lack of stable housing and rough sleeping exacerbates comorbid physical health conditions (a specific recommendation for collaboration in the PHI report)<br>• Mental health consumers experiencing housing problems reported lack of engagement with mainstream services due to stigma and shame.<br>• Lack of mental health first aid training within homeless sector services as many are operated on minimal budgets and volunteer staff.<br><br>Recent data from the Head to Health services identifies that for the period September 2021 to 31 October 2022, 7.8% of patients who had visited the services were experiencing some level of homelessness, either in short term or emergency accommodation (4%) or sleeping rough in non-conventional accommodation (3.8%) (PMHCD 2022b). |
| **Comorbid mental health AOD and physical health conditions** | High prevalence of co-morbid mental health, AOD and physical health conditions among the NPS cohort. | Consultations and evidence indicate a high prevalence of co-morbid mental health, Alcohol and Other Drugs (AOD) and physical health conditions among the National Psychosocial Support (NPS) cohort. Specific issues include (AIHW 2016; Blue Mountains LDAT 2018):<br>• Access to mental health friendly GPs also an issue for this cohort but has particularly negative implications for people with comorbid physical health issues.<br>• GP interviews revealed financial constraints and lack of multidisciplinary case conferences to deal with co-morbidities. |

| Outcomes of the health needs analysis – Primary Mental Health Care: Psychosocial support for people with severe mental illness: (Commonwealth Psychosocial Support) | | |
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| | | • Lack of communication feedback loops with GP and primary care generally post discharge from acute mental health admissions were cited as a reason for deteriorating mental health and re-presentation to acute settings.<br>• Mental Health and Substance use disorders are the third largest cause of total disease burden in Australia and the leading cause of non-fatal disease burden.<br>• In Aboriginal and Torres Strait Islander and Torres Strait Islander populations comorbid mental health and substance use is the leading total disease burden. Aboriginal and Torres Strait Islander consumer feedback also identified a lack of medical specialists who bulk bill leading to physical health complications.<br>• Local Drug Action Team consultations reiterate themes of social isolation leading to comorbid mental health and AOD issues. |
| **Employment and Volunteering opportunities** | There is a lack of volunteering opportunities in the NBM region which would significantly benefit people with a lived experience to increase social and economic benefits, life skills and connection to community. | Consumer consultations and available research highlight the need for improved opportunities among potentially eligible Commonwealth Psychosocial Support (CPS) participants to participate in volunteering opportunities (NBMPHN 2018f; idcommunity demographic resources n.d.; The Centre for Volunteering n.d.; Nursing Standard 2014; Tabassum 2016).<br><br>Specific views and concerns expressed include:<br>• Consumers expressed a desire to volunteer (when able to) and give back to the community rather than be perceived as a burden. Numerous studies support the benefits of volunteering amongst people with lived experience of mental health to increase social and economic participation.<br>• 12.0% of the total Nepean Blue Mountains population report performing voluntary work, down from 17.2% in 2016, likely due to COVID restrictions (.idcommunity demographic resources 2022f). However, feedback from mental health consumers is that there is a lack of volunteering opportunities for them to enable the development of employment and life skills and to provide connection to community.<br><br>Qualitative data indicated that employers and volunteer organisations need education about mental health and how to make their workplaces and organisations more inclusive. |

# Alcohol and Other Drugs Substance Use

| Outcomes of the health needs analysis – Alcohol and Other Drugs: Substance Use *(Population prevalence and risk factors)* | | |
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| **Identified Need** | **Key Issue** | **Description of Evidence** |
| **Increasing demand for AOD services** | Use of cocaine and ecstasy increased while crystal methamphetamine use decreases. | NBMPHN analysis: Australian estimates indicate (AIHW 2014):<br>• Overall methamphetamine use declined between 2013 and 2019, with the proportion using crystal/ice remaining stable at 2.4%. This is a nominal increase in the rates of use.<br>• Since 2016 to 2019, there has been no significant difference in the rates of methamphetamine use in adults aged over 18 years.<br>• As of 2017, Australia has the highest rates of methamphetamine use globally.<br>• Use of ice is the main preferred form of methamphetamine replacing powder since 2010. The use of powder fell from 51% in 2010 to 29% in 2013, and further to 20% in 2016. At the same time the use of ice increased more than twofold from 22% in 2010 to 50% in 2013 survey, and to 57% in 2016. There has been a substantial decrease in the use of methamphetamine for people aged 20-29 (from 11.2% in 2001 to 2.4% in 2019). Overall, recent ice use increased across the population from 2010 to 2016, from 0.4% to 0.8%.<br>• Those using meth/amphetamine, particularly crystal/ice, are doing so with increased frequency. Between 2010 and 2016:<br>  ○ Daily and weekly use of meth/amphetamines more than doubled, from 9.3% to 20%<br>  ○ Daily and weekly use among people who reported using crystal/ice was even higher in 2016, increasing from 12.4% in 2010 to 25% in 2013 and to 32% in 2016.<br><br>More recent data from the AIHW (2020n) suggests that while the use of cocaine and ecstasy in the previous 12 months increased between 2016 and 2019, use of meth/amphetamines remained stable (1.4% in 2016 and 1.3% in 2019). However, people who used meth/amphetamines continued to use them more frequently than people who used cocaine and ecstasy. Cannabis continued to be the most frequently used illicit drug, with 37% using it weekly or more often; this was followed by meth/amphetamine use with 17% using it at least weekly. This increased to 29% among those who used crystal/ice as their main form of meth/amphetamines. Very few people who used ecstasy or cocaine used it weekly or more often—6.7% and 4.5% respectively.<br><br>Crystal/ice is still the main form of meth/amphetamine used. This trend has remained stable, with a large spike in 2010. Since 2010, the use of powder methamphetamine has fallen from 51% in 2010 to 51% in 2019 (AIHW 2020n).<br><br>NSW state estimates indicate (Centre for Alcohol and Other Drugs 2019; Uporova 2018):<br>• In NSW, crystal methamphetamine represented the greatest rise in the 'drug of choice' among a population sample of people who inject drugs, doubling from 13% to 26% between 2015 and 2017.<br>• The median days of use among this sample who had used some form of methamphetamine was 48 days for crystal methamphetamine use. Availability of Crystal was regarded as very easy by 57% of participants. |

| Outcomes of the health needs analysis – Alcohol and Other Drugs: Substance Use *(Population prevalence and risk factors)* | | |
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| | | • In 2017-18, 31% of people entering NSW correctional centres reported recent use of methamphetamine.<br>• Among people who reported recent use of methamphetamine, an increasing proportion reported frequent use, with injection increasingly the method of use and the high purity crystal form ('ice') the form most used.<br><br>Local data indicates:<br>• In 2020-2021 1884 clients aged 10 and over received AOD treatment at NBM PHN commissioned AOD treatment service. 26.96% of clients were aged between 10-19 years. In 2017-2018 (AIHW 2018b) amphetamines represented the highest reason for seeking treatment/primary drug of concern among clients. In 2020-2021, amphetamines are now the fifth highest reason (3.45%) whilst methamphetamine is third (18.58%). The top four most common drugs that led clients to seek treatment were alcohol (34.99%), cannabinoids (18.89%), methamphetamine (18.58%) and nicotine (17.80%) (NBMPHN 2022d). |
| | | Local stakeholder consultation in 2017 (NBMPHN 2017):<br>• Reported that increasing methamphetamine use was one of two key changes in the client population seeking treatment for AOD substance use over the twelve-month period to November 2017. The other was heroin use along with illicit fentanyl use.<br>• Ice (methamphetamine) use was regarded as the second highest used drug after alcohol for clients seeking treatment for AOD substance use in the NBM region. |
| | Decrease in hospitalisations related to methamphetamine use, with lower rates than the rest of NSW | Although NBM hospitalisations related to methamphetamine have increased since 2012-13, 2019-20 data shows a substantial decrease from 2018-19 (96.9 vs 112.6 per 100,000 population respectively), bringing them back in line with 2015-16 rates. NBM rates are also substantially lower than that of NSW (96.9 vs 154.5 per 100,000 population respectively for 2019-20) (Centre for Epidemiology and Evidence n.d.ad).<br><br>**Figure: Methamphetamine-related hospitalisations for persons aged 16yrs+, NBM and NSW, 2013-14 to 2019-20** |

| Outcomes of the health needs analysis – Alcohol and Other Drugs: Substance Use *(Population prevalence and risk factors)* | | |
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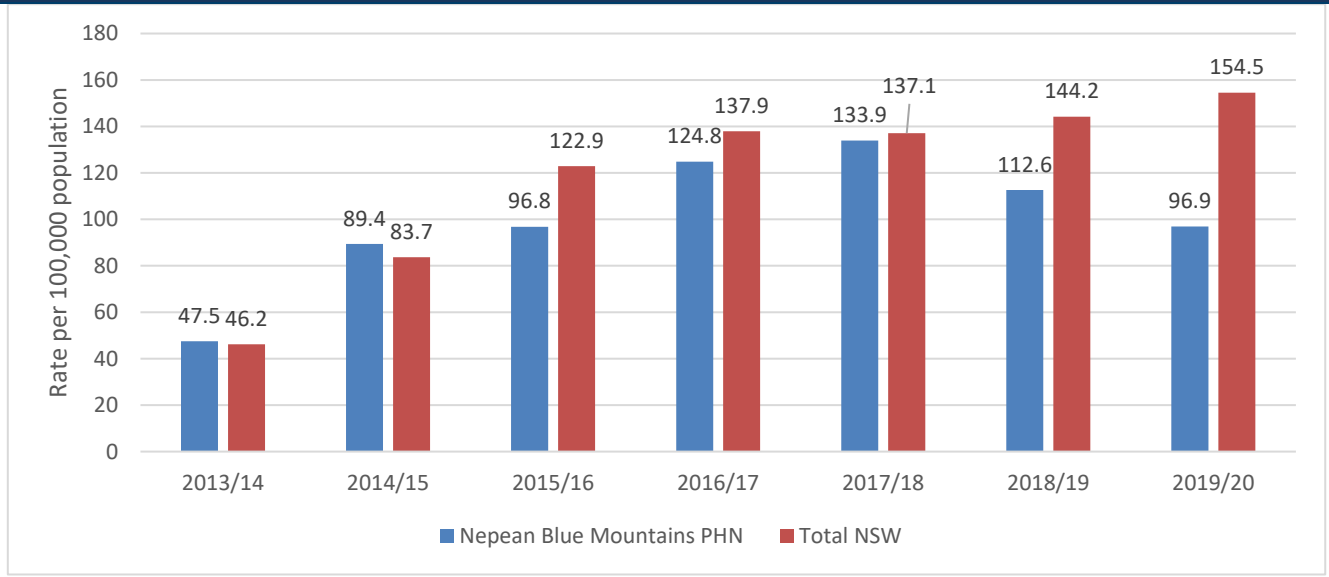
| | |  |
| | Polydrug use, including daily smoking, drinking alcohol at risky levels and use of illicit drugs is reported nationally. AOD clients with complex needs have become the norm | Estimates from the 2019 National Drug Strategy Household survey indicate (AIHW 2020t) for the NBM region:<br>• 11.2% of persons surveyed smoked daily (down from 14.3 in 2016).<br>• 14.2% of persons surveyed drink at risky levels (i.e. more than 2 standard drinks per day), up from 12.9% in 2016.<br>• 18.5% of persons surveyed indicated they used illicit drugs recently, a significant increase from 2016 rates of 11.9%.<br>• 6.9% of the NBM population aged 14yrs+ are at 'high risk' of substance dependence issues and are likely to require specialist assessment and treatment for their substance use.<br>Whilst more detailed data for NBM region is not available, data suggests (AIHW2020t, AIHW2020u):<br>• For NSW, the most used illegal drugs in 2019 were cannabis (11% up from 9.3 in 2016), cocaine (5% up from 3.4% in 2016), and ecstasy (3.1% up from 1.9% in 2016).<br>• Among NSW smokers in 2019, use of e-cigarettes was 9.6%, up from 3.9% in 2016.<br>• Nationally, people identified as high risk of alcohol dependence, were much more likely to have been diagnosed with or treated for a mental illness in the past 12mths than the general population (27% vs 16.7% respectively).<br>• More people in their 40s used illicit drugs in 2016 compared 2013 (increasing from 13.6% to 16.2%), particularly among males in their 40s. Nationally, in 2019, 55% of people aged 40-49 have indicated lifetime use of illicit drugs, increased from 42% in 2001. |

| Outcomes of the health needs analysis – Alcohol and Other Drugs: Substance Use *(Population prevalence and risk factors)* | | |
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| | | The Network of Alcohol and other Drugs Agencies' (NADA) 2013 submission to the NSW Parliament Legislative Council (NADA 2016a) highlighted the increasing complexity of clients attending AOD treatment. They reported that complex clients are now regarded as the norm and not the exceptional client. |
| **Alcohol use** | High rates of high-risk alcohol consumption | Estimates from the 2019 National Drug Household Survey (AIHW 2020t) and Report of the Chief Health Officer NSW (Epidemiology and Biostatistics 2016) related to alcohol indicate:<br>• In NSW, the survey lifetime risk of harm from alcohol use is 16.2% down from 16.7% in 2016, however the proportion of people abstaining from drinking has increased from 23.6% in 2016 to 26.1% in 2019, therefore decreases in rate of lifetime risk does not necessarily mean fewer people are at risk.<br>• In 2019, alcohol remained the main drug of concern for persons who have access specialist treatment services.<br>• 1 in 10 (9.9%) of recent drinkers in Australia meet the criteria for alcohol dependence.<br>• Men were more likely to drink alcohol daily in contrast to women surveyed.<br><br>NBMPHN analysis of other available data indicates (NBMPHN 2017a; AIHW 2018b; Centre of Epidemiology n.d.ae):<br>• Alcohol use was the highest reason for seeking treatment among persons attending NBM NGOs providing publicly funded treatment services for substance use in 2017-18. This represented 35.7% of NBM clients who received treatment for their own drug use (compared to 33.8% nationally).<br>• Local key stakeholders similarly identify alcohol as the most common primary drug of concern for people seeking treatment for AOD substance use in the NBM region. NBM NGO's also report an increase in alcohol use among persons seeking treatment.<br>• Provider-reported data indicates alcohol was the highest (59.7%) principal drug of concern among women with a dual diagnosis in NBM seeking AOD treatment services in 2017-18. This was followed by methamphetamines (16.1%).<br>• Alcohol attributable hospitalisations for the NBM PHN in 2019-20 were 388.9 per 100,000 population, down from 475.8 per 100,000 population in 2018-19, and much lower than the rate for all NSW PHNs (502.9 per 100,000 population).<br>• There was an average of 84.1 alcohol attributable deaths in the NBM PHN area in 2019-20, the second lowest among 10 NSW PHNs.<br><br>National data on the prevalence of chronic excessive alcohol consumption at general practice encounters indicate (Harrison et al. 2016):<br>• Prevalence is highest among men, persons aged 45-64 years, Aboriginal and Torres Strait Islander and Torres Strait Islander patients, and those from disadvantaged socioeconomic areas. |
| **Pharmaceutical misuse** | Decreasing rates of pharmaceutical misuse | NBMPHN analysis of available national and local data indicate (AIHW 2020n; Uporova 2018: NBMPHN 2018c; Project Skylight 2010):- medical use of pharmaceuticals declined between 2016 and 2019 from 4.8% to 4.2%.<br><br>The proportion of people using codeine for non-medical purposes has halved since 2016, from 3.0% to 1.5% in 2019. Codeine was made a prescription-only medication in 2018. |

| Outcomes of the health needs analysis – Alcohol and Other Drugs: Substance Use *(Population prevalence and risk factors)* | | |
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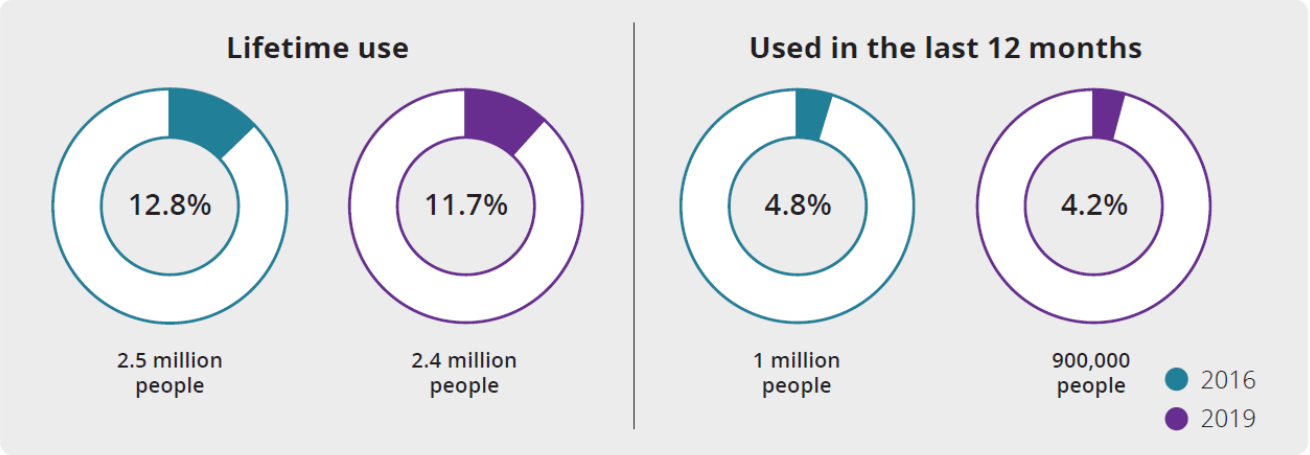
| | | People who used painkillers and opioids for non-medical purposes also used them less frequently, with the proportion using them at least weekly declining from 29% in 2016 to 19.5% in 2019.<br><br>Among people who did use painkillers and opioids for non-medical purposes, 31% said they could not reduce their use even though they wanted to.<br><br>  <br><br><br>• Almost 1 in 20 people (4.8%) misused a pharmaceutical in the previous 12 months to 2016, similar to 2013 (4.7%), however rising from 3.7% in 2007.<br>• The proportion who had ever misused a pharmaceutical drug increased to 12.8% in 2016, up from 11.4% in 2013 and 7.4% in 2010.<br>• Pharmaceuticals were the second most frequently misused illicit drugs in 2016, with 28% using daily or weekly.<br>• The class of pharmaceuticals most commonly misused were painkillers/analgesics and opioids (3.6%). Pain killers most commonly misused were primarily over the counter (OTC) products containing codeine (75% of users), followed by prescription codeine products such as Panedeine Forte (40%) and Oxycodone (Endone, OxyContin at 39.6%).<br>• People aged between 20-29 years and between 40-49 years were most likely to have misused pharmaceuticals in the previous 12 months, both at 5.7%.<br>• NBMPHN consultations with local primary care providers indicate high prevalence of abuse of prescription medications. |

| Outcomes of the health needs analysis – Alcohol and Other Drugs: Substance Use *(Population prevalence and risk factors)* | | |
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| **Substance use among young people.** | High prevalence of problem substance use among young people.<br><br>Young people in the NBM region are consistently reported to be under-serviced, have high needs in relation to AOD services and are increasingly presenting with greater (moderate to high) complexity to local AOD services. | NBMPHN analysis of available data indicates (Uporova 2018; Project Skylight 2010; NBMPHN 2018b):<br><br>• Compared with people their age in 2001, today's young people are less likely to smoke, drink and use illicit drugs. This may be due to the young people of 2001 carrying on similar habits as they age, today's young people having different habits from past generations, or a combination.<br>• Fewer young people nationally appear to be engaging in risky drinking (the proportion of persons who consumed 5 or more drinks at least monthly decreased from 25% in 2013 to 18% in 2016 for 14-19 year olds, and declined from 41.7% in 2013 to 39.9% for 20-29 year olds.<br>• However, alcohol consumption rates did not show changes between surveys and young people were the age group most likely to drink alcohol in risky quantities compared to all other age groups.<br>• Despite comparative national household survey data indicating that substance use among 14-29 year olds may have declined between 2001 and 2016, ongoing consultations with regional stakeholders and commissioned service providers continue to indicate the high prevalence of problem substance use among young people.<br>• Provider-reported data indicates the following principle drugs of concern among young people in NBM accessing AOD treatment services: Nicotine and other undeclared illicit substances (45%), cannabinoids (20%), alcohol (12%) and methamphetamine (6%). Note that Nicotine is believed to be chosen by high school students as the drug of choice to avoid mandatory school reporting of illicit substances.<br>• Young people in the NBM region using methamphetamines report severity of dependence scores 1.5 times higher than the marker for psychological dependence.<br>• Overall, young people in the NBM region are consistently reported to be under-serviced, have high needs in relation to AOD services and are increasingly presenting with greater (moderate to high) complexity to local AOD services.<br>• 2018/2019 surveys and structured consultations with Blue Mountains young people indicate lower than average scores on resilience in certain locations and for 16-19 year olds. Key vulnerabilities were coping with stress; focusing under pressure and discouraged by failure. Young people reported experiences of bullying on social media and young people who identified as LGBTIQA+ reported experiences of discrimination and social isolation (BMCC 2019; Stronger Families Alliance 2018). |
| | Young people identified to be at higher risk of substance misuse | Young people identified by stakeholders to be at a higher risk of substance misuse than others include (Blue Mountains LDAT 2018):<br>• Young people in out-of-home care<br>• Lesbian, gay, bisexual, transgender, intersex and queer (LGBTIQA+Q) young people<br>• Young people who have survived abuse<br>• Young people with anxiety, depression and mental illness<br>• Young Aboriginal and Torres Strait Islander people<br>• Young people from culturally and linguistically diverse communities |

| Outcomes of the health needs analysis – Alcohol and Other Drugs: Substance Use *(Population prevalence and risk factors)* | | |
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| | | • Young people who 'hang out' on the streets after hours<br>• Yong people who work in hospitality<br>• Provider reported data reported high proportions of young Aboriginal and Torres Strait Islander people at risk of dependency on substances associated with psychosocial issues. |
| | Young people in custody represent a high-risk group for high levels of drug use | A history of illicit drug use is almost universal among young people in custody. 92.5% or more than nine out of ten young people in custody surveyed had used illicit drugs at some time in the past, and 81.5% had use illicit drugs weekly or more frequently in the 12 months prior to custody. The main drug of concern was cannabis with 90.2% reporting having ever used cannabis. The rate of cannabis use was similar to that of nicotine and alcohol, making these the three substances most frequently ever used by young people in custody. Among the young people in custody who had used illicit drugs, 65.2% experienced consequent problems with their health, school, friends, parents or police (Justice Health & Forensic Mental Health Network 2017).<br><br>Data from the AIHW (2019a) suggests that the main drug of concern for prisoners is methamphetamine, being used by 43% of prison entrants in the previous 12 months. This was followed closely by cannabis, with 40% of prison entrants reporting use in the previous 12 months. Both the use of methamphetamine and cannabis declined with age, with cannabis use more prevalent in the 18-24 year cohort and more than half of all methamphetamine use occurring in prisoners between the age of 18 and 44 years. Compared to people in the community, prison entrants were 30 times more likely to report the use of methamphetamine. Further, 16% of prison discharges also reported using illicit drugs whilst in prison and this was most prevalent in discharges aged 25-34 (22%), followed closely by those aged 18-24 years (15%).<br><br>Encouragingly, the rate of young prison entrants (18-24 years) who are at high risk of alcohol-related harm is decreasing (28% in 2018 down from about 40% in 2015). |
| **Substance use presentations to general practice and community centres.** | There is a general mistrust of authority figures by young people (including general practitioners, psychiatrists and counsellors) and unwillingness to present to primary care with AOD as a | Previous findings from focus group discussions with at-risk students (those typically from unstable family situations including violence and substance abuse, homeless or involved with juvenile justice) indicate (Project Skylight 2010)<br>• Unwillingness to seek help from authority figures such as general practitioners and police<br>• Expressed mistrust of psychiatrists and counsellors based on their own experiences<br>• Willingness to trust youth workers from a local youth centre<br>• Emphasized the interconnectedness of substance abuse with grief and trauma<br>• Related the onset of their substance dependence and that of family members to traumatic events including childhood sexual abuse, suicide of a family member, and the death of a child.<br>• Raised issues concerning intergenerational substance misuse in families and their predisposition to substance dependence. |

| Outcomes of the health needs analysis – Alcohol and Other Drugs: Substance Use *(Population prevalence and risk factors)* | | |
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| | primary health concern | In addition, a survey of 19 general practitioners and Neighbourhood Centre managers in the Blue Mountains LGA (Project Skylight 2010) found only a small proportion of patients presented with AOD issues as their primary health concern although a significant proportion had an underlying problem with substance use:<br>• Alcohol was identified as the most prevalent problem substance.<br>• GPs identified young people and people with dual diagnosis as the groups most in need of services.<br>• Centre managers identified young people as those most in need of AOD services.<br>• Substance use was prevalent among disadvantaged clients and their families.<br>• The groups identified as highest priority amongst service providers were women with children; young people, particularly those from disadvantaged families; people with dual diagnosis and Aboriginal and Torres Strait Islander people. |
| **Priorities identified in Blue Mountains 2010 community consultations.** | Community priorities for effective service provision for young people | Community consultations in 2010 (Project Skylight 2010):<br>Young people identified the kind of services that were wanted or needed, including:<br>• Flexible counselling to support attitude change over a longer term<br>• More GPs with skills and understanding of addiction issues<br>• Day centre offering support and activities<br>• Crisis accommodation<br>• Information about needle exchange programs<br>• More community support for men<br>• Case management<br>• Exit strategies for people on methadone programs<br>• Soft entry programs such as outreach<br>• Education for prevention<br>• A mix of access was identified with location-based services together with central telephone intake and referral, as well as effective website access to services. |
| | Highest proportion of drug related offences in Lithgow and Penrith LGAs | NBMPHN analysis of available data indicates:<br>• 1,364 drug related offences were recorded from July 2019 to June 2021 within the region, out of which possession and / or use of illicit drugs accounted for the majority.<br>• Possession and/or use of cannabis related offenses were the predominant category.<br>• Rates of all categories and types of drug offenses were overall lower for all LGAs in the NBM region compared to the average for NSW.<br>• Lithgow (523.0 per 100,000 down from 569.3 in June 2020) and Penrith (419.3 per 100,000 down from 509.0 in June 2020) LGAs had the highest proportion of drug offences for all categories of offences combined (BOCSAR 2021b).<br><br>**Figure: Incidents of Drug Offences NBMPHN region vs NSW, LGA trends 2020 to 2021** |

| Outcomes of the health needs analysis – Alcohol and Other Drugs: Substance Use *(Population prevalence and risk factors)* | | |
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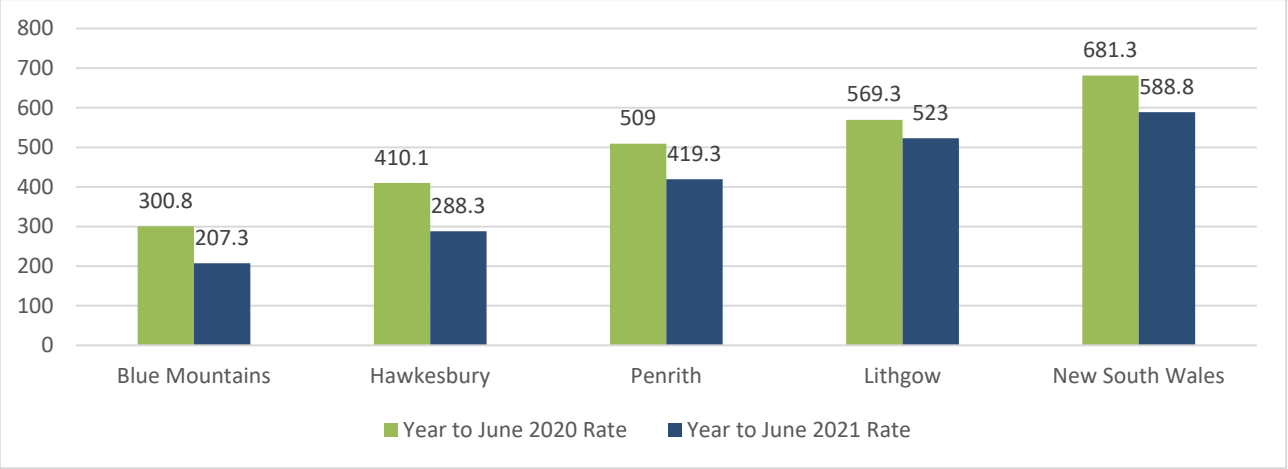
| | |  <br>Estimates from the 2019 National Drug Strategy Household Survey indicate (AIHW 2020n):<br>• More people were victims of an illicit drug-related incident in 2019 with the proportion of people reporting that they were verbally abused, physically abused or put in fear all increasing since 2016—*any incident* increased from 9.2% to 10.5%. The proportions of people experiencing verbal abuse, physical abuse and being put in fear all increased, driven by increases among males and people in their 30s, 50s, and aged 60 and over. |
| **Characteristics of substance and drug users: local and national.** | Drug use is higher among people with a mental illness or high psychological distress | **Drug use still higher among people with a mental illness or high psychological distress.**<br>Since 2010, people who had used an illicit drug in the previous 12 months have been at least twice as likely as people who have not used an illicit drug to experience high or very high levels of psychological distress in the 4 weeks before completing the survey. High levels of psychological distress is consistently greater among people who report meth/amphetamine use in the previous 12 months.<br>In 2019, compared with people who had not been diagnosed or treated for a mental health condition in the previous 12 months, people with a mental health condition were:<br>• twice as likely to smoke daily (20% compared with 9.9%)<br>• about 1.2 times as likely to drink alcohol at levels that exceed the lifetime risk (21% compared with 17.1%) and single occasion risk guidelines (at least monthly) (31% compared with 25%)<br>• 1.7 times as likely to have recently used any illicit drug (26% compared with 15.2%)<br>• about 2.2 times as likely to have used meth/amphetamine (2.6% compared with 1.2%)<br>• 2.1 times as likely to use pharmaceuticals for non-medical purposes (7.6% compared with 3.6%) |

| Outcomes of the health needs analysis – Alcohol and Other Drugs: Substance Use *(Population prevalence and risk factors)* | | |
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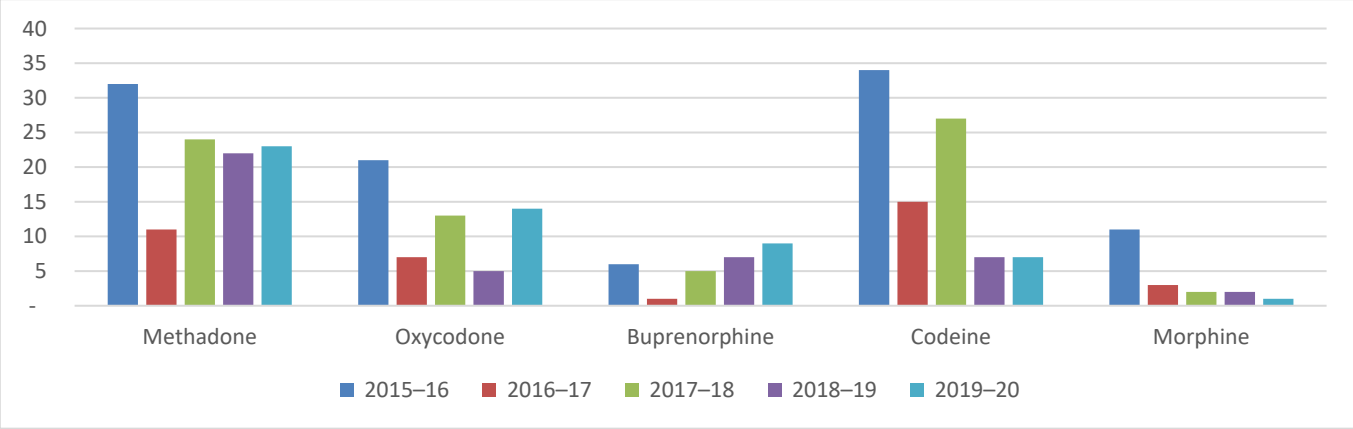
| | | NBMPHN analysis of available national and state data indicates (AIHW 2017c; Uporova 2018):<br>• There is a strong association between illicit drug use and mental health issues.<br>• In the context of self-medication, it is difficult to isolate to what degree drug use causes mental health problems, or to what degree mental health problems give rise to drug use.<br>• The rate of mental illness almost doubles with illicit drug use. Almost twice as many recent illicit drug users (26.0%) compared with non-users (15.2%) have been diagnosed with or treated for a mental illness (AIHW 2021d).<br>• Illicit drug users reported being more likely to experience high or very high levels of psychological distress in the four weeks before participating in the National Drug Strategy Household Survey (NDSHS) (22.2% compared with 9.7%).<br>• Among persons who inject drugs who participated in the 2017 NSW Illicit Drug Reporting System sample, 42% reported experiencing a mental health problem in the preceding six months (an increase from 35% in 2016) (AIHW 2021v).<br>• Among those who had experienced a mental health problem in the last 6-months, 72% reported that they had attended a professional for such problems, including: a psychiatrist (42%), a GP (39%), a psychologist (33%), a counsellor (18%), or community-health nurse (15%).<br>• In 2018, 45% of the sample self-reported that they had experienced a mental health problem in the preceding six months, stable from 2017 (43%; p=0.401). Amongst this group, the most commonly reported problems were depression (77%) and anxiety (67%). Smaller proportions reported post-traumatic stress disorder (19%), schizophrenia (16%), bipolar disorder (13%) and paranoia (12%).<br>• One-third of the total sample (29%; 66% of those who reported a mental health problem) had seen a mental health professional during the past six months, most commonly a GP (65%), psychiatrist (27%), psychologist (22%), and counsellor (16%). Three-fifths (58%) of those who reported a mental health problem had been prescribed medication for their mental health problem in the preceding six months, stable from 2017 (59%; p=0.847).<br>• Just under two-thirds of the IDRS sample (64%) was assessed as having 'high' to 'very high' levels of psychological distress. This was much higher than what has been reported among the general population (11%). |
| **Characteristics of substance and drug users: local and national** | Characteristics of people receiving opioid pharmacotherapy treatment | The leading drugs of concern in 2019-20 among NBM residents seeking treatment for their own drug use with regard to opioid use, were: methadone followed by oxycodone and Buprenorphine (AIHW 2021x).<br><br>**Figure: Number of closed treatment episodes for people seeking treatment for their own drug use, by principle drug of concern, 2015-16 to 2019-20 (AIHW 2021x).** |




Findings from the National Opioid Pharmacotherapy Statistics Annual Data Collection (2021) report indicate (AIHW 2021w):

- Nationally the rate of clients have (21 clients per 10,000 people) has remained relatively stable since 2011. However, rates have fluctuated in states and territories . In 2020, NSW had the highest rate of people receiving opioid pharmacotherapy treatment (28 clients per100,000 people). NSW remained the state with the highest rate of people receiving opioid pharmacotherapy treatment (21 clients per 10,000 people). On a snapshot day in 2020 53,316 people in Australia were on a course of pharmacotherapy treatment for their opioid dependence. This is a 4.7% increase if clients since 2019 and the largest increase in the number of clients over the last decade. Over the last 10-year period to 2020, client numbers of people receiving pharmacotherapy have increased by 15% (466,446 clients in 2021 and 53,316 clients in 2020).
- In 2020, the median age of clients across all pharmacotherapies was 44 years. This is an increased from 43 years in 2019 and 38 years in 2011.
- The rate of clients receiving pharmacotherapy was highest for people in the 40-49 age group for both males and females. This rate peaked at age 40 for males (96 clients per 10,000 population) The rate for females peaked at 41 years (47 clients per 10,000 population) .
- Around two-thirds (67% or 35,5000) of clients receiving pharmacotherapy in 2020 were male. This proportion was similar for each of the pharmacotherapy types (methadone, buprenorphine, buprenorphine-naloxone and buprenorphine LAI).
- Aboriginal and Torres Strait Islander Australians were around 3 times as likely to have received pharmacotherapy treatment compared to non-Aboriginal and Torres Strait Islander Australians. In 2020, those Aboriginal and Torres Strait Islander clients receiving pharmacotherapy treatment who identified was at a rate of 66 clients per 10,0000 Aboriginal and Torres Strait Islander Australians.

<table>
<tr><th colspan="3">Outcomes of the health needs analysis – Alcohol and Other Drugs: Substance Use (Population prevalence and risk factors)</th></tr>
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- Methadone was the most commonly prescribed pharmacotherapy type across most age groups. However, older clients (those aged 40 years and over) were more likely to receive methadone and less likely to receive buprenorphine and buprenorphine-naloxone than younger clients. Nationally in 2020, 37% of clients reported heroin as their opioid drug of dependence. Oxycodone (5.7%) was the next most commonly reported drug of dependence followed by buprenorphine (4.9%) and methadone (both 4.0%), codeine (3.8%), morphine (3.8%), and other pharmaceutical opioids (2.7%).

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<tr><td>Characteristics of substance and drug users: national</td><td>Increasing trends in accidental drug-related deaths due to opioids, benzodiazepines, amphetamines, cannabinoids and alcohol</td><td>

Preliminary findings from Australia's annual overdose report 2021 (Pennington Institute 2021) indicate that the number of both intentional and unintentional drug-related deaths in Australia continue to increase on average about 3% per year (period 2001-2019). There were 2,227 drug-related deaths in Australia in 2019 (up 80.9% from 1,231 in 2002) and of these, 1,644 were unintentional (up 82.1% from 903 in 2002). Unintentional drug-related deaths overtook the road toll in Australia for the first time in 2014.

Drug overdose is a leading cause of death for males and females aged 20-29 and remains the 3rd leading cause of death behind suicide and land transport accidents. For those aged 30-39, drug induced deaths were the second leading cause of death behind suicide for both males and female. Drug induced deaths were again the third leading cause of death in the 40-49 age group for both males and females.

Unintentional drug – induced deaths are higher for people residing in regional areas compared to those living within capital cities. Given as many of those deaths are attributed to the use of prescription opiate mediations, it is assumed that lack of access to health care services may be a driver to rising mortality in regional and remote populations.

A breakdown of the number of unintentional drug-induced deaths by drug type can be seen below *(please note that the sum of the number of deaths attributable to each drug type does not equal the total number of unintentional drug-related deaths as a combination of drug types may have contributed to a death, so for those individuals, they will be counted in multiple drug types)*:

**Table: Number of unintentional drug-induced deaths by drug type**

| Drug type | Number of deaths |
|---|---|
| Opioids | 882 |
| Benzodiazepines | 582 |
| Stimulants | 470 |
| Anti-depressants | 340 |
| Cannabinoids | 256 |
| Anti-psychotic | 197 |
| Anti-convulsant | 154 |

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| Outcomes of the health needs analysis – Alcohol and Other Drugs: Substance Use *(Population prevalence and risk factors)* | | |
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| | | Local rates in unintentional drug-related deaths within the NBMPHN region are broadly reflective of those seen for Australia (8.5 vs 8.7 per 100,000 population respectively). In 2015-19, the NBMPHN rate of unintentional drug-related deaths (8.5 per 100,000) was 3/10 highest among NSW PHNs, and 7/31 highest among PHNs in Australia. Between 2010-14 and 2015-19, the rate of unintentional drug-related deaths increased from 6.7 to 8.5 per 100,000 persons.<br><br>In 2021, opioids, in particular pharmaceutical opioids (including codeine, oxycodone, morphine and fentanyl) contributed the most to fatal overdose deaths in Australia. The number of unintentional drug-induced deaths involving opioids has nearly trebled in the last 14 years and accounts for more than 53% of all unintentional drug induced deaths. Fortunately, although increases were seen in unintentional deaths involving opioids from 2014 to 2017, the number can now be seen decreasing (1,090 in 2017 vs 882 in 2019).<br><br>While deaths involving pharmaceutical opioids have constituted the majority of unintentional deaths due to opioids since 2004, there has been a dramatic rise in deaths involving heroin since 2012, increasing from 149 in 2012 to 422 in 2019. Almost one in three (30.0%) unintentional drug-induced deaths involving pharmaceutical opioids were observed in people aged 50 and above.<br><br>Females had a higher proportion of unintentional drug-induced deaths involving pharmaceutical opioids than males (55.7% among females, compared with 44.2% among males), while males had a higher proportion of unintentional drug-induced deaths involving heroin (38.5% among males, compared with 23.2% among females).<br><br>Unintentional drug-induced deaths involving opioids predominantly occur in a poly-drug context. Deaths due to the most common combination of drugs – opioids plus benzodiazepines – have trebled, from 160 deaths in 2007 to 477 in 2019.<br><br>Detections of other drugs in accidental deaths is also increasing. Benzodiazepines, in-particular involving poly drug use, were the second most common drug class detected in accidental drug-related deaths. Detections of amphetamines (the third most common substance detected in accidental drug-related deaths in Australia, surpassing alcohol – likely driven by increased availability of 'ice'), cannabinoids and alcohol have all increased over the previous 15 years.<br>Population groups bearing the greatest burden of drug-related mortality include:<br>• Aboriginal and Torres Strait Islander: in 2021, accidental drug-related deaths among Aboriginal and Torres Strait Islander persons were at more than 4.0 times higher as for non-Aboriginal and Torres Strait Islander persons (5.9 vs. 20 per 100,000 persons respectively).<br>• Men: twice as many men died from overdose than women in 2019 (1,166 compared to 478 drug-related deaths).<br>• Middle aged Australians: persons aged 30-50+ years contribute almost 90% of the accidental drug-related deaths in Australia annually:<br>  ○ 30 years and under: 11.1%<br>  ○ Aged 30-39: 21.7% |

| Outcomes of the health needs analysis – Alcohol and Other Drugs: Substance Use *(Population prevalence and risk factors)* | | |
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| | | ○ Aged 40-49 years: 26.2%<br>○ Aged 50 years+: 41.1% |
| **High risk populations: prison inmates** | Impact of four adult and one juvenile correctional facilities within the NBM region, with higher risk of substance use among inmates compared to the general population. | There are four adult and one juvenile correctional facility in the NBM region. Consultations to date indicate:<br>• Inmates released from correctional facilities in the region are at elevated risk of dangerous substance use.<br>• There are also suggestions that inmates who have undergone drug treatment have difficulty receiving necessary support services to maintain abstinence or low risk substance use on release.<br>• Further research is required to establish any links between the number of correctional facilities, inmates released and needs that may be relevant to AOD treatment provision in the region. |
| | | The health of Australia's prisoners 2018 reported the following key indicators (AIHW 2019a):<br>• Three in four prison entrants are smokers (which is over 5 times the rate of the general population), and 85% said they had smoked at some stage in their lives.<br>• Almost 2 in 3 (65%) prison entrants used illicit drugs in the 12 months prior to prison.<br>• About 1 in 3 (34%) prison entrants were at elevated risk of alcohol-related harm during the previous 12 months.<br>• Prison entrants who did drink were more likely to drink at high-risk levels than people in the general community.<br><br>Other key indicators:<br>• The proportion of prison entrants who have ever been told by a doctor, psychiatrist, psychologist, or nurse, that they have a mental health disorder which may include drug and alcohol abuse is 40%.<br>• Almost 1 in 6 (16%) former prisoners reported using illicit drugs while in prison, with about 1 in 12 (8%) reported injecting drugs while in prison.<br>• 7% of entrants to prison reported being on opioid substitution therapy.<br>• 1.5% of prisoners in custody received medication for opioid dependence.<br>• 7% of former prisoners on an opiate substitution program while in prison with a plan to continue after release.<br>• 56% of former prisoners reported an elevated risk of alcohol-related harm prior to current incarceration (measure by the AUDIT-C).<br>• 8% of former prisoners accessed an alcohol treatment program in prison. |
| **Prevalence and treatment of chronic Hepatitis C virus** | Slightly lower prevalence of Hepatitis C among residents in the NBM region compared to NSW | NBMPHN analysis of available data (NSW Health 2020a; ASHM 2019):<br>• There has been an overall decrease in hepatitis C notifications in 2020 (2,2026 notifications) compared to 2019 (3,195 notifications) in NSW.<br>• There has been a 7.6% decrease in hepatitis C antibody tests in 2020 compared to 2019, however the reactivity rate has remained stable. |

| Outcomes of the health needs analysis – Alcohol and Other Drugs: Substance Use *(Population prevalence and risk factors)* | | |
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| | Lower number of hepatitis C treatment initiations in NBM compared to NSW<br><br>A high proportion of NBM residents with hepatitis C had their treatment initiated by their GP (78%) compared to their specialist (21%). | • Increased efforts are needed to achieve hepatitis C elimination buy 2028. In 2020, 2,828 initiated hepatitis C treatment in NSW however this number continues to decrease each quarter, despite hepatitis C curative treatments being introduced onto the PBS in 2016.<br>• Slightly lower prevalence of Hepatitis C among residents in the NBM region (0.96%) compared to NSW State average (1.04%) but a slightly higher prevalence than the national average of (0.94%) in 2016.<br>• At the end of 2018, an estimated 130,089 people in Australia were living with chronic hepatitis C, down from 188,951 at the start of 2016. There are approximately 10,000 new Hepatitis C virus infections occur in Australia per year with 95% due to injecting drug use.<br>• In 2019, there 3,225 hepatitis C notifications in NSW (40.4 per 100,000 population), 118 of those were in the NBM region with 60% of those being Male (39% Female).<br>• Prevalence of chronic hepatitis C (CHC) was slightly lower among NBM residents (0.96%) compared to NSW (1.04%), but slightly higher compared to the National average (0.94%) in 2016.<br>According to Health Stats NSW (Centre for Epidemiology and Evidence n.d.q):<br>• Despite the third highest proportion of residents with hepatitis C, who had their treatment initiated by their GP (78.0%) vs. specialist (21%) for NBMLHD compared to other NSW LHDs, for the period July 2018 – 31 December 2018,<br>• NBMLHD had a relatively low proportion of residents with hepatitis C who have initiated treatment compared to NSW LHDs: March 2016 – December 2018, NBMLHD (27.0%) vs. NSW (29.0%), and<br>• There were a lower number of hepatitis C treatment initiations (114) within NBM compared to the Ministry of Health target (155), for the period July 2018 – December 2018.<br>• Hepatitis C treatment numbers declined between 2016 and 2017 nationally (from 14.0% to 9.0% in NSW) and in all Australian PHN regions, including in NBMPHN.<br>• Within NBM, SA3 locations with a lower CHC treatment uptake than the NSW average (22.9%) include: Richmond-Windsor (13.1%), Penrith (16.4%) and St Marys (18.1%). |
| **Population characteristics** | Aboriginal and Torres Strait Islander people experience a significantly higher rate of hospitalisation that is attributable to alcohol, compared to non-Aboriginal and Torres Strait Islander people. | Whilst data suggests that Aboriginal and Torres Strait Islander Australians are more likely to abstain from drinking than non-Aboriginal and Torres Strait Islander Australians (AIHW 2021d), in 2018-2019, Aboriginal and Torres Strait Islander Australians over the age of 15 years were still 1.2 times more likely than non-Aboriginal and Torres Strait Islander Australians to exceed the lifetime alcohol risk guidelines, with rates much higher for Aboriginal and Torres Strait Islander males vs Aboriginal and Torres Strait Islander females (28% vs 10% respectively) (AIHW 2020i).<br><br>The alcohol attributable hospitalisation rate for Aboriginal and Torres Strait Islander people in NSW 2018-19 was 923.0 (per 100,000 population), more than 1.8 times higher than that for non-Aboriginal and Torres Strait Islander people (503.3) (Centre for Epidemiology and Evidence n.d.k). |
| **Substance use in Aboriginal and Torres Strait** | Prevalence of drug use in Aboriginal and | NBMPHN analysis of National data indicates that in 2018-19 (AIHW 2021d):<br>• Excluding ecstasy, cocaine and hallucinogens, Aboriginal and Torres Strait Islander Australians aged 14yrs+ use illicit drugs at a higher rate than non-Aboriginal and Torres Strait Islander Australians. |

| Outcomes of the health needs analysis – Alcohol and Other Drugs: Substance Use *(Population prevalence and risk factors)* | | |
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| **Islander communities** | Torres Strait Islander communities. | • Aboriginal and Torres Strait Islander Australians were 1.8 times more likely to use any illicit drug in the previous 12 months; 1.3 times more likely to use cannabis; 2.4 times more likely to use meth/amphetamines; and 1.9 times more likely to misuse pharmaceuticals, compared to non-Aboriginal and Torres Strait Islander people.<br>• These differences were still apparent after adjusting for differences in age structure of both populations, and although the gap between Aboriginal and Torres Strait Islander vs non-Aboriginal and Torres Strait Islander person has narrowed over time, this is mostly attributable to significant increases in illicit drug use among the non-Aboriginal and Torres Strait Islander populations.<br><br>Substance use in the last 12 months was highest for Aboriginal and Torres Strait Islander Australians aged 25-34 with Aboriginal and Torres Strait Islander males more likely than females to have used substances.<br><br>Further, in 2017, 84% of Aboriginal and Torres Strait Islander Australians detained by police tested positive to a drug compared with 73% of non-Aboriginal and Torres Strait Islander detainees (AIHW 2019e).<br><br>Aboriginal and Torres Strait Islander Sharing and Learning Circles (2015) identified drug and alcohol issues as a priority. The concerns raised across four LGAs were:<br>• High risk of substance use among a younger population. Approximately 55% of NBM Aboriginal and Torres Strait Islander people are under 25 years of age.<br>• The need for early intervention to reduce harm from alcohol and drugs.<br>• There is a high prevalence of cannabis use, this continues to rise with data from AIHW (2019e) suggesting the proportion of Aboriginal and Torres Strait Islander Australian aged 15 years+ using marijuana in the previous 12 months has increased from 14% in 2008 to 25% in 2018-2019 in remote areas and from 18% to 24% in non-remote areas.<br>• The need for more Aboriginal and Torres Strait Islander health workers in the region to be trained to provide support for drug and alcohol issues.<br>• Access to culturally relevant information about alcohol and drugs.<br>• The need for an Aboriginal and Torres Strait Islander detoxification unit. |
| **Aboriginal and Torres Strait Islander Youth and Substance Use** | Aboriginal and Torres Strait Islander Youth are identified as a priority area for substance use and mental health | Aboriginal and Torres Strait Islander community consultations in 2018 identified young Aboriginal and Torres Strait Islander people as a priority area within Aboriginal and Torres Strait Islander communities for substance use and mental health. Important issues impacting on young Aboriginal and Torres Strait Islander people include (NBMPHN &NBMLHD 2018a):<br>• The critical importance of identity and cultural connection (and impacts where knowledge of identity and culture is lacking).<br>• The presence of pressures including peer-pressures and bullying, including via social media and electronic communications.<br>• Diverse perspectives: lack of support of diversity and diverse cultures in communities today.<br>• The critical importance in ensuring cultural competence and cultural safety of services, including those accessed by young Aboriginal and Torres Strait Islander people. |

| Outcomes of the health needs analysis – Alcohol and Other Drugs: Substance Use *(Population prevalence and risk factors)* | | |
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| | Young Aboriginal and Torres Strait Islander persons within and/or on release from NBM correctional facilities represent a high-risk group in high need of support | Findings from the Corrective Services NSW (2019) inmates census reveal:<br>• The disproportionately high representation of young Aboriginal and Torres Strait Islander persons within NSW prisons and correctional facilities. This continues to be the case, with more recent data from AIHW (2022j) suggesting that in 2019-2020, half of the 863 young people in secure detention facilities on an average day were Aboriginal and Torres Strait Islander (50%), almost half (46%) of young people under community-based supervision were Aboriginal and Torres Strait Islander, and almost half (47%) of all young people under youth justice supervision were Aboriginal and Torres Strait Islander.<br>• Given consultations for the general population indicate that inmates released from correctional facilities in the NBM region are at high risk of risky substance use, or have difficulties receiving necessary support to maintain abstinence or low risk substance use on release, this population group (Young Aboriginal and Torres Strait Islander people within &/or on release from correctional facilities) likely represents a high-risk group in high need of support. 2018-2019 data suggests that Aboriginal and Torres Strait Islander prison entrants were 80% more likely than non-Aboriginal and Torres Strait Islander to be current smokers and were 26% more likely to be at high risk of alcohol related harm (AIHW 2020j). |
| | Local barriers to accessing services. | 2016 Community Yarn Up consultations:<br>Identified barriers to accessing culturally appropriate mental health services, which are likely to be relevant to understanding AOD treatment barriers in NBM region include (Nepean Community & Neighbourhood Services 2016):<br>1. Racism<br>2. Cultural Safety<br>3. Flexibility of services<br>4. Stigma<br>5. Support for Aboriginal and Torres Strait Islander staff.<br><br>2016 survey of NBM Aboriginal and Torres Strait Islander people admitted to hospital (BHI 2016):<br>• NBM Aboriginal and Torres Strait Islander people perceived a poorer hospitalisation experience compared to Aboriginal and Torres Strait Islander people for NSW and compared to non-Aboriginal and Torres Strait Islander people.<br>• Only 48% of adult admitted Aboriginal and Torres Strait Islander patients in NBMLHD rated the care they received in hospital as 'very good'. This was the lowest proportion in NSW.<br><br>Although 2019 results are available for Aboriginal and Torres Strait Islander people's experiences of hospital care (BHI 2021), the results provided are at state level only, so NBM regional information is not available. However, whilst 2019 results for NSW do indicate significant improvement in ratings of care provided to Aboriginal and Torres Strait Islander patients from 2014 to 2019, overall Aboriginal and Torres Strait Islander people still perceived a poorer hospital experience compared to non-Aboriginal and Torres Strait Islander persons. |

| Outcomes of the health needs analysis – Alcohol and Other Drugs: Substance Use *(Population prevalence and risk factors)* | | |
|---|---|---|
| | Aboriginal and Torres Strait Islander Community perceptions of health needs concerning substance use (Alcohol and Other Drugs) | The strongest themes arising from 2016 Aboriginal and Torres Strait Islander community forums on Alcohol and Other Drugs and Mental Health were around (NBMPHN 2016b):<br>• The governance, accountability, and congoing communication between the local Aboriginal and Torres Strait Islander Communities and services.<br>• Lack of access to appropriate services.<br>• Coordination of services.<br>• All topics raised were underpinned by a lack of understanding from the services about Aboriginal and Torres Strait Islander People and the complex issues Aboriginal and Torres Strait Islander people are dealing with.<br>• The experience of some Aboriginal and Torres Strait Islander people is that access to AOD services may be due to a mandated requirement through child protection and justice services, rather than in response to health needs.<br>• In addition to long standing Aboriginal and Torres Strait Islander community mistrust of health services providers, NBM Aboriginal and Torres Strait Islander people may regard providers of AOD services with even greater mistrust and fear, and consequently may avoid seeking assistance for emerging or long-standing dependence on substances.<br>• In response to these issues local service providers involved in the consultations and Aboriginal and Torres Strait Islander people, strongly identified the need for more Aboriginal and Torres Strait Islander people to be trained to facilitate and support access to AOD treatment on behalf of others because for many Aboriginal and Torres Strait Islander people self-referral is not considered.<br><br>Further consultation with local Aboriginal and Torres Strait Islander community controlled AOD service providers during 2016 indicated:<br>• Due to a range of factors including longstanding substance dependence, polydrug use, intergenerational and lived trauma, Aboriginal and Torres Strait Islander people often present for AOD treatment when they are in crisis and with multiple problems such as drug induced psychosis, acute physical illness and justice orders.<br>• The complexity of these problems often means that a single treatment provider is unable to provide the support and treatment that clients require.<br>• These complex Aboriginal and Torres Strait Islander clients are experiencing an unsatisfactory and circular journey among multiple service providers, as well as poor outcomes.<br>• Communities also consistently pointed to the need to develop better mechanisms to engage with local Aboriginal and Torres Strait Islander Communities in a more holistic way and more regularly. There is a need to engage with Aboriginal and Torres Strait Islander people in a way that values their lives as whole and listens to their perspectives on the relationship between factors in their lives and the complexities of dealing with their issues. |

# Disaster Management – Environmental and Pandemics

| Outcomes of the health needs analysis – Disaster Management – Environmental and Pandemics | | |
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| **Identified Need** | **Key Issue** | **Description of Evidence** |
| **Increased health needs during and after natural disasters** | Residents affected by natural disasters see an increase in health-related needs. | Community consultation conducted for the NBMPHN Flood Needs Assessment and Bushfire Needs Assessment identified:<br>• Residents with tank water in flood affected areas, no longer have access to freshwater.<br>• Flood waters and humid weather have increased the growth of mould and exposure.<br>• Physical sores developing on legs due to exposure to contaminated water.<br>• Increase in Asthma related ED presentations during Bushfire season.<br>• Increased risk of isolation and/or homelessness.<br>• Prolonged displacement increases the likelihood of PTSD, anxiety, and depression. |
| **Increased use of drugs and alcohol following natural disasters.** | Increased use of drugs and alcohol used to numb effects of cumulative disasters. | Residents in the high impact areas following the Victorian bushfires, reported an increase of 2.5% in heavy drinking. This trend was mirrored in the NBM region following the 2019 bushfires, with workers reporting a rise in alcohol use.<br><br>Consultation with an Aboriginal and Torres Strait Islander support worker reported an increase in drug and alcohol use, as a coping mechanism for some residents. Notably, there has been a bigger reliance and misuse of antidepressants. |
| **Cancer screening** | Impacts of COVID-19 on cancer screening rates | Although there is no data currently available to fully realise the impacts of COVID-19 on cancer screening rates broadly, we do know that breast cancer screening cancellations and non-attendances increased dramatically in March 2020 compared to March 2019, prior to breast screening services being suspended completely in NSW on 27 March 2020. Despite this, for 2019-2020 NSW managed to achieve 84.8% of its total screening target (Cancer Institute NSW 2020c).<br><br>There were slight fluctuations in mammograms and bowel cancer screening tests, however these cannot be directly attributable to the pandemic (AIHW 2021l). |
| **Diabetes Management** | Impacts of COVID-19 on diabetes management. | Compliance rates among NBM diabetic patients with glycaemic testing guidelines remained stable throughout the COVID-19 pandemic. Additionally, there was a marginal improvement in glycaemic control noted across all patient subgroups over this period. Nonetheless, the enduring effects of COVID-19 on the management of type 2 diabetes remain uncertain. |
| **Mental Health, Suicide and COVID-19** | The COVID-19 Pandemic was cited as a risk factor in 3.2% of suicide deaths between 2019 and 2020 | In Australia, the initial impacts of the pandemic appeared to have increased levels of psychological distress, particularly for adults aged 18–45 with mental health on average having a greater impact on life satisfaction than physical health (AIHW 2021ac). |

| Outcomes of the health needs analysis – Disaster Management – Environmental and Pandemics | | |
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| | | The social, economic and health conditions created by COVID-19 have also increased the prevalence of mental ill health in the Australian population (National Mental Health Commission 2020) and 3.2% of suicides reported in Australia between 2019 and 2020 cited the COVID-19 Pandemic as a direct or indirect risk factor. It is important to note however that of these patients 60% also have mood disorders, over 50% had problems relating to employment/unemployment and 25% also had problems related to their social environment including feeling isolated (AIHW 2021y). |
| **COVID impacts on older persons and vulnerable populations** | 75% of COVID deaths occurred in RACH.<br><br>Higher mortality rates for people in low socioeconomic regions. | Data suggests that in Australian in 2020, 7% of all COVID-19 cases and 75% of all deaths occurred in people living in residential aged care facilities (AIHW 2021l).<br><br>COVID-19 mortality rates were 2.6 times higher for people living in the lowest socioeconomic areas (AIHW 2021l). |
| **COVID-19 impact on social determinants** | Negative impacts on the social determinants of health because of COVID-19 continue to occur however the potential adverse effects on future population health and exacerbation of inequalities remains unknown (AIHW 2021l) | Whilst unemployment was seen to rise during the pandemic, it recovered to below pre-pandemic levels by June 2021 to 4.9% (vs 5.1% pre-pandemic). Underemployment also rose because of COVID-19 but then dropped back to below pre-pandemic levels by June 2021 and casual employment fell to its lowest level in 30 years. JobKeeper payments were introduced to help keep business trading and decrease the impacts on COVID-19 on employment. The number of income support recipients also rose during the pandemic as of March 2021 remain 11% higher than March 2020 (AIHW 2021l; AIHW 2021ac).<br><br>Housing prices have risen while renting accommodation availability has decreased with Pandemic Emergency Accommodation programs seeing over 40,000 people assisted in Victoria, New South Wales, Queensland, and South Australia (AIHW 2021ae).<br><br>Education has had to quickly adapt to an online learning environment with data suggesting that in May 2020, due to COVID-19 76% of adults with children had kept them home from school or childcare (AIHW 2021l). The full impact of COVID-19 on learning and teaching is yet to be fully understood. Locally, anecdotal evidence suggests parallels with outcomes to the National snapshot. |

| Outcomes of the health needs analysis – Disaster Management – Environmental and Pandemics | | |
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| **Vulnerable communities** | • CALD<br>• First Nations Peoples<br>• Homeless<br>• Disability<br>• Aged care<br>• Senio citizens | Individuals and communities can potentially face and experience greater risks of loss, injury, illness, and death during disasters. People may have impaired mobility and multiple chronic health conditions, and/or social and economic limitations with one or more of these characteristics reducing their ability to prepare for, respond to, and adapt during disasters.<br><br>Disaster may also disrupt vital support systems people with vulnerabilities may rely on. Vital services may be unavailable resulting in increased susceptibility of vulnerable populations to the impact of disasters.<br><br>Aboriginal and Torres Strait Islander people were among those most affected by the 2019–2020 bushfires in south-eastern Australia. Yet aside from renewed public interest in cultural burning practices, Aboriginal and Torres Strait Islander people have received little attention in relation to post-bushfire response (Williamson et al. 2020).<br><br>Culturally and linguistically diverse (CALD) backgrounds, are considerably less aware than others of emergency recovery communication and of the opportunities to become involved in either emergency preparedness or recovery activities (Gibbs et al. 2003). |
| **Domestic Violence** | Increased risk of domestic violence during disasters. | Police record data shows there is no evidence to suggest an increase in criminal Domestic Violence related incidents directly attributable to the first wave of COVID-19 social isolation restrictions including stay-at-home orders, however there is evidence to suggest an increase in non-criminal domestic disturbances requiring police assistance during that time (Freeman and Leung 2020).<br><br>Australia's National Research Organisation for Women's Safety (ANROWS) suggests the prevalence and complexity of domestic violence has in fact increased since the COVID-19 pandemic, particularly during the second wave. ANROWS recently launched report highlights the increase in intimate partner violence (IPV) against women and the barriers to seeking help during the COVID-19 pandemic. The report also highlighted that the most common relationship-level change reported by women who experienced the onset and/or escalation of IPV was family stress, followed by spending more time together, relationship conflict and the level of social contact (Boxall et al 2021).<br><br>Domestic violence situations which have arisen during and potentially because of the pandemic situation, will impact the health system well into the future post pandemic, as not all issues will resolve once the pandemic subsides, leaving providers with an increased number of domestic violence victims to support through their long-term recovery (Boxall et al 2021). |
| **Health Literacy as a social determinant of health** | Need to understand health literacy needs of our region. | The COVID-19 pandemic has highlighted that a solid understanding of the health literacy needs of our region allows the delivery of more timely and effective messaging during pandemic and emergency situations, leading to more efficient coordinated responses and better health outcomes (AIHW 2020g). |

# Section 3 – Outcomes of the service needs analysis

## General Population Health

### Access to Health Services

<table>
<tr><th colspan="3">Outcomes of the service needs analysis – General Population Health: Access to Health Services</th></tr>
<tr><td>Identified Need</td><td>Key Issue</td><td>Description of Evidence</td></tr>
<tr><td colspan="3">Population, geographical, social, and economic barriers to accessing services.</td></tr>
<tr><td>Population growth</td><td>Population growth will increase demand for health services in the Penrith and Hawkesbury LGAs</td><td>NBM is one of the faster growing regions in NSW, driven by population growth in Penrith as a part of the expansion of Greater Western Sydney. The estimated residential population (ERP) in NBM region was 387,496 in 2022 and is estimated to grow to 452,747 by 2041 (.idcommunity demographic resources 2022b).<br><br>Table: Population projections 2021 to 2041 (NSW Planning, Industry & Environment 2022):
<table>
<tr><th>LGA</th><th>2021 Population</th><th>2041 Population</th><th>Annual %</th></tr>
<tr><td>Penrith</td><td>216,075</td><td>270,477</td><td>1.13%</td></tr>
<tr><td>Hawkesbury</td><td>67,472</td><td>77,211</td><td>0.68%</td></tr>
<tr><td>Blue Mountains</td><td>79,373</td><td>83,951</td><td>0.28%</td></tr>
<tr><td>Lithgow</td><td>21,477</td><td>21,174</td><td>-0.7%</td></tr>
</table></td></tr>
<tr><td>Diverse geography impacts access to health services</td><td>NBM is a geographically diverse region with isolation, poor access to public transport and poor access to services in some parts of the region.</td><td>52.9% of NBM residents work in the region, with 44.0% living and working in the same LGA<br>47.3% of NBM residents travelled to work by car compared to 34.2% in Greater Sydney.<br>2.3% of residents in NBM used public transport compared to 5.5% in Greater Sydney.<br>In Lithgow LGA 63.2% travelled to work by car and only 0.5% used public transport. (.idcommunity demographic resources n.d).</td></tr>
<tr><td>Impact of Western Sydney Aerotropolis</td><td>Impact of changing environment and population on health services in the region</td><td>The development of the new Western Sydney Aerotropolis is expected to impact both health and service needs in the NBM area (Commonwealth of Australia 2018). There are around 28,000 new jobs also predicted in aviation, aerospace, defence industries and advanced manufacturing (Greater Sydney Commission 2018). These factors will substantially affect both health access and health workforce in the region. Several Council led initiatives have partnered with NBMPHN and SWS PHN and corresponding Local Health Districts and formed a local Health Alliance to address local needs over the development period.</td></tr>
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| Outcomes of the service needs analysis – General Population Health: *Access to Health Services* | | |
|---|---|---|
| **Barriers reported by consumers in accessing health services** | Major barriers to accessing health services previously reported by consumers include:<br>• Availability of transport<br>• Difficulty accessing specialist care.<br>• Inadequate awareness and information about services and eligibility requirements<br>• Inadequate support and lack of services for aged care and carers | In 2021, consumers in the Nepean Blue Mountains region were invited to review the previous Health Needs Assessment and to provide comments on service needs. The following is qualitative feedback from a consumer in the Hawkesbury.<br><br>*The Hawkesbury region has equivalent hospital admission rates to Penrith, however, given the Hospital is in Penrith, the need may be higher when transport and economic factors are included. Transport is an issue for most of the region, in particular west of the river and more regional areas. The region also has limited access to out-of-hours services, in particular chemists and an emergency department. Mental health is also a noted area of concern for the region, with a need for dedicated mental health service which can provide support for prevention programs, early assessment, diagnosis, and specialised treatment planning. There is a need for youth mental health services, including a youth Psychiatrist. Other service gaps were also noted, including occupational therapy, speech therapy, in-home disability services and in-home palliative care. The adoption and promotion of digital platforms such as MyHealthRecord is lacking amongst health services in the region. The consumer emphasised that the service needs listed above are exacerbated for consumers in regional areas, particularly those impacted by the recent droughts, bushfires, and floods.* |
| **Cost of health services impact residents accessing health services** | Cost is a barrier to accessing healthcare services for NBM residents: | **Total out-of-pocket costs per patient:**<br>• 40.6% of all NBM patients incurred out-of-pocket costs for non-hospital Medicare services in 2016-17. This proportion was relatively low compared to Australia (49.8%) and the **5th lowest** among PHNs in Australia.<br>• For these patients with costs, the median amount spent in the year was $152 per patient. This was $10 higher per patient compared to the average for Australia ($142 per patient) and the 7th highest among PHNs in Australia.<br>• There was wide variation in the proportion of NBM patients who incurred out-of-pocket costs for non-hospital Medicare services. This ranged from one-quarter (25.7%) of patients in St Marys to more than double that number in the Hawkesbury (51.0%), Blue Mountains (54.2%) and Dural-Wisemans Ferry (58.5%) SA3.<br>• The median total out-of-pocket cost also varied significantly, from $117 in Lithgow-Mudgee to $187 in Dural-Wisemans Ferry SA3.<br><br>**Out-of-pocket costs for specialist and obstetric attendances:**<br>• NBM patients were most likely to pay for specialist services, where 72.0% of patients incurred specialist out-of-pocket costs in 2016-17. This was the same as the Australian average, with 71.9% of patients incurring out-of-pocket specialist costs.<br>• A lower proportion of NBM patients (40.5%) incurred obstetric out-of-pocket costs compared to all patients in Australia (44.2%), however the median cost per obstetric service was similar ($81 vs. $78).<br><br>**Out-of-pocket costs per GP attendance:**<br>• Only 16.4% of NBM patients incurred out of pocket GP costs in 2016-17. This was less than half the proportion of patients in Australia with GP costs (33.8%) and was the **third lowest** among PHNs in Australia. |

| Outcomes of the service needs analysis – General Population Health: *Access to Health Services* | | |
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| | | • The median out-of-pocket cost per GP attendance for NBM patients was $13.<br>**Out-of-pocket costs per diagnostic imaging service:**<br>• Similarly, only 9.6% of NBM patients incurred out of pocket costs for diagnostic imaging services in 2016-17. This was less than half the proportion of patients in Australia with diagnostic imaging costs (23.5%) and was the **second lowest** among PHNs in Australia.<br>• The median out-of-pocket cost per diagnostic imaging service for NBM patients was $38 nearly half of the national median out of pocket cost which was $60.<br>**People who delayed or did not see a medical specialist, GP, get an imaging test or get a pathology test due to cost:**<br>• 8.8% of NBM residents aged 15 years and over said the cost of services was the reason they delayed or did not seek specialist, GP, imaging, or pathology services when they needed them, in the 12 months prior to 2016-17. This was higher than the national average (7.6%) and the **seventh highest** among PHNs in Australia.<br>**People who delayed or did not seek GP care due to cost:**<br>• 3.5% of NBM residents aged 15 years and over said the cost of services was the reason they delayed or did not seek GP care when they needed them, in the 12-months prior to 2015-16. This was slightly lower than the National average for PHNs at 4.1%. |
| **Lower levels of private health insurance across the region** | A slightly lower proportion of the NBM population (55.1%) has private health insurance hospital cover compared to the Australian average (56.5%). | The estimated percentage of people aged 18 years and over with private health insurance hospital cover in 2019-20 was 55.1% across the NBMPHN region, compared to 56.5% in Australia (ABS 2021b). Although there is no more recent data at SA3 level, the breakdown by LGA for 2014-2015 was as follows: 58.7% in Blue Mountains, 54.0% in Hawkesbury LGA, 39.3% in Lithgow LGA and 44.9% in Penrith LGA (PHIDU 2017; PHIDU 2018). |
| **Low health literacy levels can negatively impact health outcomes** | Low health literacy is a risk factor for poor health – influencing capacity to make decisions about health and health care. | The latest (2018) Australian Bureau of Statistics survey on health literacy found that (AIHW 2020g):<br>- 4.2% of people did not feel supported and understood by their healthcare provider.<br>- 2.8% did not have sufficient information to manage their health.<br>- 8.5% did not feel that they were actively managing their health.<br>- 17.2% felt they could not adequately appraise health information.<br>The likelihood of a person experiencing barriers to health literacy is greater among people who speak English as a second language, have lower educational attainment, people with a disability and among people on low incomes (ACSQHC 2014).<br><br>In 2022, Wentworth Healthcare launched the Health Literacy Framework which will foster progress to the vision of people in the Nepean Blue Mountains region receiving information and advice about their health care that is easy to understand and will assist them to make informed decisions. |
| **Distribution of GP Services** | Distribution of GP services in the NBM region. | There were 134 General Practices in the region as of October 2023.<br>• Penrith LGA – 74<br>• Blue Mountains LGA – 24 |

| Outcomes of the service needs analysis – General Population Health: *Access to Health Services* | | |
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| | | • Hawkesbury LGA – 28<br>• Lithgow LGA - 8 |
| **Increased population will increase GP demand** | An additional 193 GPs will be required to practice in the NBM region by 2036 to maintain the same GP to population ratio. | As of June 2022, the GP to population ratio in the NBM region was 5 per 1,000 persons, with a total of 495.2 Full Time Equivalent GPs. To maintain the same GP to population ratio by the year 2036, an additional 193 Full Time Equivalent GPs (total of 688 GPs) will be required to practice in the NBM region within this timeframe (NSW Planning, Industry & Environment 2022). |
| **Declining health capacity in regional areas** | Except for GPs, there is a marked decline in the workforce capacity / service availability for most primary healthcare professionals in Australia in regional areas. | There is marked decline in the health professional workforce capacity / service availability (measured by the FTE rate) for most types of healthcare professionals across Australia, except for general practitioners (GPs) as the remoteness area increases. This includes Psychologists, Podiatrists, Physiotherapists, Pharmacists, Optometrists, Occupational Therapists, Specialist Medical Practitioners, Dentists and Chiropractors. However, although the FTE rate for GPs seems to increase with increasing remoteness, this data should be interpreted with caution, as the work arrangements for GPs in remote areas differs substantially to that of GPs in less remote areas (hours of operation, undertaking procedural and hospital-based work), which can impact the availability and distribution of GPs in those areas (AIHW 2020q).<br><br>Based on the 2020-2021 Patient Experience Survey (ABS 2021c), there was little difference in the proportion of people who visited a GP between major cities and areas with increasing remoteness. However, people who lived in regional areas were less likely:<br>• to have seen a GP after-hours (3.6% vs. 5.8%)<br>• to have visited a dental professional (38.9% vs. 49.8%)<br>• to have visited a medical specialist (35.1% vs. 37.7%).<br><br>The AIHW Australia's Health 2018 report suggests the relative lack of specialists and primary care professionals outside of major cities may be why people living in inner regional and outer regional/remote/very remote areas were more likely to have visited a hospital emergency department in the previous year (AIHW 2018f). |
| **Access to continuity of GP services is limited for certain groups of people and in certain geographies.** | High unmet need for GP services in the NBMPHN region | Findings from the AIHW 2016 Survey of Health Care reveal that a higher proportion of patients (3.6% in NBMPHN, 2.5% nationally) don't have a usual GP or a usual place of care (AIHW 2018c). This is equivalent to 14,315 people based on current population estimates for the NBM region. Patient groups less likely to have a usual GP or place of care included:<br>• People younger than age 75<br>• Lived outside of major cities / metropolitan areas.<br>• Did not speak English at home.<br>• Had lower levels of education.<br>• Did not have private health insurance.<br>• Reported better health and less long-term health conditions. |

| Outcomes of the service needs analysis – General Population Health: *Access to Health Services* | | |
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| | | Not having a usual GP or a usual place of care was high in the NBM region compared to other PHN regions in Australia, ranking 7 of 31 PHNs. However, a higher proportion of patients in the NBMPHN (85.5%) region rated their care as excellent or very good compared to PHNs in Australia (84.1%), placing 9 of 31 PHNs.<br><br>Since 2017, reduced access to bulk billed GP visits has been experienced in the Blue Mountains, as well as longer waiting times to get an appointment to see a GP (NBMPHN and NBMLHD 2018b). |
| **Barriers experienced with accessing care for long term health conditions** | High need for primary care services. | Results from the Australian Bureau of Statistics 2019-20 Patient Experience Survey (ABS 2021c) show that a larger proportion of NBM adults report excellent, very good or good health (88.7% up from 82.6% in 2018-2019) compared to Australia (87.5%, 8 of 31 PHNs) and a greater proportion report having a long-term health condition (52.7%) compared to Australia (51.6%, 17 of 31 PHNs).<br><br>Despite having the highest proportion of adults who saw a GP in the previous 12-months in Australia (87.1%, 1 of 31 PHNs), indicating a high level of demand for GP care, NBM adults also reported the following barriers to accessing primary healthcare services:<br>• Lower than national average for proportion who saw a GP for urgent medical care in the preceding 12 months – (5.5% vs. 10.0%, NBM 30 of 31 PHNs).<br>• Higher than national average for proportion who felt they waited longer than acceptable to get an appointment with a GP – (19.1% vs. 18.6%), NBM 18 of 31 PHNs).<br>• Fifth highest ranked PHN for proportion who needed to see a GP but did not in the preceding 12 months – (16.8% vs. 13.2%, NBM 5 of 31 PHNs). |
| **Impact of changing environment on After-hours services** | Impacts of the changed environment for service providers working in the After-Hours and Medical Deputising Service (MDS) space includes a reduction in the number of MDS providers, reduced MDS service demand and workforce shortages specifically in Lithgow LGA and the Blue Mountains LGA (Upper Mountains postcodes). | Currently in the NBM region, there are several Medical Deputising Services operating; however, this number has reduced. There remains no MDS in most of this region. Upper Mountains saw the withdrawal of the MDS in January 2018, due to the solo practitioner reaching retirement; Lower Mountains have a NBMPHN commissioned MDS however this service is often unavailable due to GPs workforce shortages. Service utilisation since March 2018; the Nepean area has 2-3 MDS operating; Hawkesbury has 1-2 MDS depending on location (2 in Windsor and Richmond, 1 in outer areas).<br><br>Consumer feedback consistently points to Medical Deputising Services not having a large enough workforce to adequately cover this region. Consumers report that the home visiting services often don't have a doctor available in the after-hours period (NBMPHN 2018n).<br><br>Due to the pandemic, there has been a reduction in presentations at the two PHN commissioned after hours-GP clinics, making it harder for these services to remain financially viable. Hawkesbury After Hours Clinic closed in 2022. |

| Outcomes of the service needs analysis – General Population Health: *Access to Health Services* | | |
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| **Impact of the After-Hours Practice Incentive Program (PIP) on primary cre providers** | A total of 81 (62.8%) NBM General Practices received an After-Hours PIP incentive payment in July 2018. | As at July 2018, 38 general practices were participating in the After-Hours PIP at varying degrees of afterhours coverage. The number of NBM PIP general practices receiving After Hours payments between Q2 2017 and Q2 2018 remained steady, with only 1 additional practice receiving Level 5 After Hours payments in this period (QlikSense 2019).<br><br>Between January 2013 and June 2016, a large portion of after-hours primary services (94.7%) was carried out at a GP clinic, 4.0% at Residential Aged Care Homes (RACH) and 1.3% at home. Analysis of trends in after-hours GP attendances per person in the Nepean-Blue Mountains region compared to Australia for 2013-14 to 2016-17 illustrates steady growth in the average number of after-hours GP attendances per person in NBM, and this occurred at a higher rate compared to the national average (Services Australia n.d.).<br>The highest rates of attendances per person consistently occurred in the St Marys and Penrith SA3 areas, and lowest rates consistently occurred in the Lithgow-Mudgee and Blue Mountains SA3 areas. Such low rates of after-hours GP attendances likely reflect inadequate coverage and/or poor access to after-hours GP services for residents living in these areas.<br><br>In October 2015, NBMPHN interviewed 15 RACHs across the region and it was noted that access to a resident's regular GP limited in the afterhours period (NBMPHN 2017j).<br><br>There is some concern nationally regarding RACH visits provided by MDS doctors who do not have any long-term relationship with RACH residents. This potentially reduces the quality of service compared with attendance by the patient's own GP, who knows them and their medical history well.<br><br>Pond (2016) summarised the barriers to GPs visiting RACH residents, including 'poor level of GP remuneration, increased time seeing patients, difficulty in finding staff (or indeed the patient), and staff with training below the levels of registered or enrolled nurse who are unable to hand over the patient history in a manner that makes medical sense'.<br><br>Workforce shortage is one of the key challenges to delivering after hours primary care services in the NBM region. Most areas in the region are currently classified as District of Workforce Shortage (DWS), evidencing the need for more GPs. The shortfall of doctors and the trend for doctors to prioritise work-life balance in the interests of sustainable practice and professional longevity are putting pressure on the provision of after-hours services. |
| **Workforce challenges in maintaining local After-Hours GP services in the Hawkesbury region** | Threefold increase in utilisation of the Penrith After Hours Doctors (after-hours GP service) since 2017 compared to the previous 10-year period. | An after-hours GP clinic staffed by local GPs operated on the grounds of Nepean Hospital for 10 years. In July 2017, as part of NBMPHN's move to commissioned services, Penrith After Hours Doctors successfully tendered to deliver the service and have been operating from the Nepean Centro shopping complex since that time. This service has seen a threefold increase in patient's accessing services compared to the Nepean Hospital After Hours GP clinic (NBMPHN 2018n). |

<table>
<tr><th colspan="3">Outcomes of the service needs analysis – General Population Health: Access to Health Services</th></tr>
<tr><td></td><td></td><td>Medicare data for the period 2016-17 to 2020-21 for After-Hours GP clinic-based services (urgent and non-urgent items) in the NBM region demonstrates there was a large increase in services claimed, from 145,682 services in 2016-17 to 199,720 in 2020-21 (37.1% increase) (AIHW 2021z).<br><br>The NBMPHN commissioned Hawkesbury After Hours GP Clinic closed in 2022.</td></tr>
<tr><td>After Hours Use of Emergency Department Services</td><td>The high rate of after-hours Emergency Department attendances in Lithgow-Mudgee compared to other NBM smaller areas is likely to reflect inadequate coverage &/or poor access to after-hours GP services for residents.</td><td>Significant regional variation exists in the rate of after-hours Emergency Department attendances (utilisation) per 1,000 people in NBM by smaller geographical areas in 2015-16 to 2018-19 (AIHW 2020p). The highest rates per 1,000 consistently occurred in the Lithgow-Mudgee SA3 area (136.7 per 1,000 pop in 2018-2019), and was among the highest rates among NSW PHNs, remaining in the top 10 from 2015 to 2019. Such high rates of after-hours ED attendances likely reflect inadequate coverage &/or poor access to after-hours GP services for residents.<br>Table: After-hours attendance by SA3 region per 100,000:
<table>
<tr><th>SA3 name</th><th>After-hours lower urgency ED per 1,000 population</th></tr>
<tr><td>National</td><td>55.8</td></tr>
<tr><td>Lithgow - Mudgee</td><td>136.7</td></tr>
<tr><td>Hawkesbury</td><td>67.9</td></tr>
<tr><td>Blue Mountains</td><td>60.6</td></tr>
<tr><td>Blue Mountains - South</td><td>n.p.</td></tr>
<tr><td>Penrith</td><td>58.6</td></tr>
<tr><td>Richmond - Windsor</td><td>73.1</td></tr>
<tr><td>St Marys</td><td>56.2</td></tr>
</table></td></tr>
<tr><td>High demand remains for health advice and access to a doctor in the after-hours period.</td><td>There is significant demand for After-Hours primary care services in the NBM region.</td><td>From 1 July 2017 to 30 June 2018, 19,065 calls were made to the Healthdirect Nurse Triage Helpline from residents in the NBMPHN region (HealthDirect 2018). Of these, almost three quarters (73.1%) were made during the following after-hours periods:<ul><li>Time 1 (6pm to 11pm weeknights) – 4,624 (24.3% of all calls)</li><li>Time 2 (11pm to 8am weekdays) – 2,638 (13.8% of all calls)</li><li>Time 3 (outside 8am to 12pm Saturday) – 2,527 (13.3% of all calls)</li><li>Time 4 (all day on Sundays and public holidays) – 4,145 (21.7% of all calls)</li></ul>1,417 (7.4%) of these calls were later transferred to the After-Hours GP Helpline. Callers to the Nurse Triage Helpline firstly speak with a registered nurse, who assesses their situation and advises what to do next.</td></tr>
</table>

| Outcomes of the service needs analysis – General Population Health: *Access to Health Services* | | |
|---|---|---|
| | | In 2017, of callers from the NBM region to the Healthdirect Nurse Triage Helpline:<br>• 28.6% were advised to activate 000 or attend ED (despite 34.4% of people originally calling with this intention)<br>• 8.5% were advised to see an After-Hours GP<br>• 26.4% to see a doctor within the next 2-12 hours.<br>• 7.6% to see a doctor within the next 1-3 days.<br>• 4.6% to schedule an appointment with your GP at a convenient time.<br>• 20.6% of the callers did not know what to do and 12.2% were seeking advice for home/self-care. |
| **Increased consumer knowledge of local Health services and Information for is needed** | Inappropriate presentations at hospital emergency departments. | Inadequate information about available services and eligibility has been raised previously by consumers from all LGAs (NBMML 2012). Residents were not able to access existing services because of lack of awareness of those services. GPs and allied health professionals also experienced similar difficulties obtaining up to date information about available services and eligibility requirements. |
| **Specialist Healthcare Services** | 36.99% of NBM residents visited a specialist outside of hospital. | AIHW (2021z) data suggests that in 2020-21, more than one third (36.99%) of Nepean Blue Mountains (NBM) residents visited a specialist outside of hospital. This was higher than the national average (31.51%) and the third highest proportion of people using specialist services among PHN regions in Australia (n = 31).<br><br>The proportion of the NBM population that visited a Medicare subsidised specialist (36.99%) or psychiatrist (2.06%) service outside of hospital in 2020-21 was higher than the national average. Despite this, significant regional variation exists within the NBM region regarding utilisation of specialist and psychiatry services:<br><br>• The proportion of residents who visited a specialist was lowest in the St Marys (32.87%), Lithgow-Mudgee (34.09%) and Penrith (35.23%) SA3 areas.<br>• The number of specialist services used per 100 people was lowest in the Lithgow-Mudgee SA3 (102.57) and was comparable to the national average (102.13). The number of specialist services used were next lowest in the St Marys (106.41) and Penrith (117.62) SA3 areas.<br>• The proportion of residents who visited a psychiatrist in the St Marys (1.36%) and Lithgow-Mudgee (1.63%) SA3 areas was lower compared to the national average (1.65%).<br>• The number of psychiatry services used per 100 people in the St Marys (4.87), Lithgow-Mudgee (5.81) and Penrith (7.10) SA3 areas was lower compared to the national average (6.81).<br><br>This data correlates to SEIFA Index of Relative Socio-economic Disadvantage scores for the NBM region, indicating that the poorest access to all specialist and psychiatry health care services tends to occur within NBM locations with the greatest disadvantage (Lithgow, St Marys and Penrith). |

| Outcomes of the service needs analysis – General Population Health: *Access to Health Services* | | |
|---|---|---|
| **Allied Health Services** | NBM residents using Medicare-subsidised allied health services increased from 2017-18 to 2020-21 | Between 2017–18 and 2020-21, the population proportion of NBM residents using Medicare-subsidised allied health services increased from 35.7% to 38.91%. In the same period, the number of services per 100 people rose from 88.3 to 103.14 per 100 people. These increases parallel the national uptake for this period (AIHW 2021z; AIHW 2019f).<br><br>More than 1 in 3 NBM residents or 38.91% of the NBM population (equivalent to 149,695 persons) accessed at least one Medicare-subsidised allied health service in 2020–21, including:<br>• Optometry services (30.8% of the NBM population, equivalent to 118,516 persons).<br>• Psychology and other allied mental healthcare (5.45%, 20,974 persons).<br>• Physical Health Care, including physiotherapy, exercise physiology, chiropractic services and osteopathy (4.82%, 18,562 persons).<br>• Other allied healthcare, including podiatry, dietetics, occupational therapy, speech pathology, diabetes education, audiology, and other allied health services (6.28%, 24,169 persons).<br>• The proportion of NBM residents who accessed an allied mental health care service was lower than the national average (5.38%) in all SA3 areas except Blue Mountains (Lithgow-Mudgee (3.54%), St Marys (3.72%), Hawkesbury (4.9%), Penrith (5.12%) and Richmond-Windsor (5.20%).<br>• The proportion of NBM residents who accessed an allied physical health care service (including physiotherapy, exercise physiology, chiropractic services and osteopathy) in the Lithgow-Mudgee SA3 (2.64%) was just over half the national average (5.17%), and was lower in the Penrith (4.55%), Hawkesbury (4.55%) and Blue Mountains (4.80%) SA3 areas compared to the national average (5.17%).<br>• The proportion of NBM residents who accessed other allied health care services (including podiatry, dietetics, occupational therapy, speech pathology, diabetes education, audiology, and other allied health services) was lower in the Hawkesbury (5.57%) and St Marys (5.62%) SA3 areas compared to the national average (6.04%).<br><br>2020-2021 data suggests that access to allied Mental Health Services across NBMPHN appears to have worsened, with all SA3 regions in NBMPHN now have lower rates of access than the national average, except Blue Mountains SA3 |
| **Ageing Workforce** | High levels of attrition of general practice workforce due to aging of NBM workforce. | Consultations with general practitioners and regular retirements indicate that the NBM general practice workforce is ageing and may not be replaced at the same rate as retirement. This is a particular concern among GPs from the Blue Mountains and may also be indicated by the consistent District of Workforce Shortage status of the Blue Mountains (NBMPHN 2018n; NBMPHN 2016g). There are ongoing difficulties recruiting vocationally registered GPs to the outer metropolitan and rural areas of Blue Mountains and Lithgow. This is placing a considerable strain on the existing GP workforce.<br><br>Local consultations indicate that the changes to the processes involved in general practice registrar placement may further compound GP workforce shortages. Practices can no longer rely on a Registrar being place with them. Registrars have a greater degree of choice now as to where they complete their training. Under the new arrangements it is more difficult to |

<table>
<tr><th colspan="3">Outcomes of the service needs analysis – General Population Health: Access to Health Services</th></tr>
<tr><td></td><td></td><td>attract general practice registrars to regional and outer metro areas. The cessation of the Outer Metropolitan Incentive Grant (OMRIG) has imposed further challenges on retaining GP registrar in the region.</td></tr>
<tr><td>Relative shortage of GP workforce</td><td>Relative shortage of GP workforce in Blue Mountains LGA.</td><td>The estimated number of FTE GPs per 100,000 residents in 2023 for the NBMPHN region was 130.6.<br><br>Table: Number and rate of Full Time Equivalent (FTE) General Practitioners in the Nepean Blue Mountains PHN region, by LGAs, 2023 (per 1,000 residents) (HeaDS UPP 2023)
<table>
<tr><th></th><th>Blue Mountains</th><th>Hawkesbury</th><th>Lithgow</th><th>Penrith</th></tr>
<tr><td>Number of GPs</td><td>169</td><td>158</td><td>53</td><td>402</td></tr>
<tr><td>GP Full-time Equivalent (GP FTE)</td><td>80.5</td><td>88.0</td><td>26.9</td><td>309.1</td></tr>
<tr><td>GP FTE per 1,000 residents (ERP)</td><td>1</td><td>1.3</td><td>1.3</td><td>1.4</td></tr>
</table></td></tr>
<tr><td>Less nurses employed in NBM general practices than national average</td><td>A smaller proportion of General Practices in the NBM region employ a nurse.</td><td>There has been slow yet steady growth in the number of practice nurses in the four NBM LGAs between 2013 and 2022. Please be aware that these figures do not represent unique nurses, some nurses may be counted multiple times as they work in multiple locations across the region.<br>Table: Nurses by LGA 2013-2022:
<table>
<tr><th></th><th>Blue Mountains</th><th>Lithgow</th><th>Penrith</th><th>Hawkesbury</th><th>Total</th></tr>
<tr><td>2013</td><td>32</td><td>15</td><td>57</td><td>21</td><td>125</td></tr>
<tr><td>2014</td><td>33</td><td>11</td><td>77</td><td>22</td><td>143</td></tr>
<tr><td>2015</td><td>36</td><td>14</td><td>65</td><td>22</td><td>137</td></tr>
<tr><td>2017</td><td>36</td><td>15</td><td>71</td><td>28</td><td>150</td></tr>
<tr><td>2018</td><td>47</td><td>19</td><td>89</td><td>28</td><td>183</td></tr>
<tr><td>2019</td><td>48</td><td>19</td><td>92</td><td>31</td><td>190</td></tr>
<tr><td>2020</td><td>45</td><td>20</td><td>98</td><td>35</td><td>198</td></tr>
<tr><td>2021</td><td>48</td><td>20</td><td>124</td><td>34</td><td>226</td></tr>
<tr><td>2022</td><td>55</td><td>21</td><td>127</td><td>48</td><td>251</td></tr>
</table>
A simulation model developed to project changes to the General Practice Nursing (GPN) workforce in Australia for the 2012-2025 period found the Australian Practice Nurse workforce is predicted to move into a position of shortage (Heywood and Laurence 2018). The impact of GPN shortages on practices are likely to include:<br>• Difficulty managing the increasing rates of complex health conditions and chronic disease.</td></tr>
</table>

| Outcomes of the service needs analysis – General Population Health: *Access to Health Services* | | |
|---|---|---|
| | | • Increased GP workloads<br>• Limited practice participation in new models of care and result in increased costs of care. |
| **Limited health workforce capacity affecting CALD Populations** | Need for enhanced workforce training to support special needs of CALD populations with mental illness. | A range of workforce issues have been identified affecting CALD populations. These include awareness of support services for CALD populations (translator services) and transcultural competency.<br><br>The concerns raised in preliminary stakeholder consultation include the following (NBMPHN 2016d; NBMPHN 2016e):<br>• More education is needed for clinicians in relation to the high number of psychosomatic disorders within the CALD community.<br>• GP's need more education in working with CALD communities in relation to their mental health – lack of cultural understanding.<br>• Lack of training provided to GP's / Allied Health in using Telephone Translation Services.<br>• Lack of public/service provider awareness of CALD mental health provision.<br>• Lack of transcultural competency in workforce.<br>• Education, information, and mental health literacy for CALD community organisations on existing mental health services so they can support their communities adequately. |
| **Increase the meaningful use of My Health Record by health care providers** | My Health Record expansion program through engagement and working with private specialist practices and community health organisations to register and use My Heard Record. | NBM region has 124 General Practices (of the 126 computerised Practices in the region) registered to upload shared health summaries. For the 2022-23 FY 28,809 shared health summaries were uploaded by General Practices in the NBM region; 4,675 event summaries were uploaded, and 921,827 prescriptions were uploaded.<br><br>The pandemic has also accelerated several digital health technologies such as electronic prescribing (eScript) and the use of telehealth video consultations.<br><br>In 2020-21 FY, NBMPHN engaged and assisted 100% of Pharmacies in our region to support their adoption and readiness for electronic prescriptions. Electronic prescriptions have been central in enabling pharmacies and patients to adapt to the challenges during lockdown. Overwhelmingly, 96% of the Pharmacies in the region were eScript enabled. Increases continue to be seen in uploads of both dispense and prescription records for our region.<br><br>NBMPHN in partnership with Healthdirect Australia rolled out Healthdirect Video Call, a telehealth video service that is scalable, secure, and sustainable model that is simple and convenient for clinicians and patients to use. It enables telehealth as a whole-of-population model of care during the COVID-19 pandemic to protect the health and wellbeing of practitioners and patients. NBMPHN enrolled 34 general practices in using Healthdirect Video Call. This included supporting practices in planning and establishing workflow processes, setting up equipment and room conditions and training clinicians and administrative staff on how to use the service. During the Greater Sydney lockdown (1 July - 31 Oct 2021), there were over 1,070 Healthdirect Video Call consults made lasting more than 6 minutes per consult. |

| Outcomes of the service needs analysis – General Population Health: *Access to Health Services* | | |
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| **Health transport for NBM residents is limited.** | NBM residents often have difficulty or are unable to travel for health care due to inadequate transport options. This is exacerbated for residents in more regional and remote areas such as Hawkesbury and Lithgow. | Consumer forums previously undertaken across the region have consistently reported that transport options were inadequate for their needs either due to high cost or lack of suitable transport services. The region is geographically diverse and depending on the LGA and remoteness of the location, the main transport flows may run contrary to the location of the nearest specialist health services. Long waiting times are often experienced for public transport and private transport may be costly due to long distances travelled.<br><br>Examples of problems experienced by consumers include discharge from hospital after hours and no available transport services; difficulties accessing dialysis via public transport requiring multiple modes of transport; hospital parking difficulty and expense (NBMML 2012).<br>The Health Transport Initiative established by the NBMPHN brought together key stakeholders involved in health and transport services, together with consumer representatives to develop options for improved transport services for health consumers, especially targeting special needs groups (NBMPHN 2015b). Research identified that 10,438 residents had reported often having difficulty or were unable to travel to places due to lack of transport over a 12-month period. This Group proposed that there was increasing demand for health transport and inadequate funding throughout NSW and found that special needs groups such as Aboriginal and Torres Strait Islander people and people with cancer were especially disadvantaged by inadequate transport options in the region. The group reported that inadequate transport may deny special needs groups access to basic health services.<br><br>The NBMPHN Community Health Transport Initiative has compiled and made available local transport options for each LGA.<br><br>Health consumers in the NBM cited the following specific issues and challenges experienced with accessing health transport across the region in 2017 (NBMPHN 2017e):<br>• Hawkesbury LGA - limited North-South transport options between Hawkesbury and Penrith (Penrith has a relatively higher concentration of specialist services).<br>• Hawkesbury LGA – no direct trains into the city or to Westmead (to access Westmead hospital).<br>• Lithgow LGA – high cost of transport due to long travel distance to Nepean Hospital and high cost of fares via the local private bus company.<br>• Lithgow LGA - to get to Lithgow station you must pay twice due to Opal ticket rules where a bus trip does not count towards the cost of a fare due to rural classification.<br>• High relative cost of transport for persons from low socioeconomic backgrounds.<br>• Poor transport availability after-hours, e.g., 6am or after hours at night.<br>• High number of connections and travel-time required to get to destination.<br>• Public transport is often not an option due to illness or mobility limitations. |

| Outcomes of the service needs analysis – General Population Health: *Access to Health Services* | | |
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| | | • Community transport operators frequently cancel services at short notice due to a lack of drivers.<br>• Difficulties in accessing specialist appointments due to inability to find suitable transport. |
| **Support and services for people with disability is limited.** | High level of unmet need for GP services among persons with a disability. | It is estimated that there were approximately 73,302 people (20% of the population) living with disability in the NBM region in 2020 based on national survey findings in 2018 (38.5k in Penrith LGA, 11.2k in Hawkesbury LGA, 5.9k in Lithgow LGA and 17.5k in Blue Mountains LGA) (ABS 2018d). People with a disability have higher rated of use of GP services 93% compared with 82% of those without disability (AIHW 2020c).<br><br>2018 survey findings also demonstrate a high level of unmet need for GP care from this cohort. Of those surveyed who had a disability in Australia, 36% needed to see a GP at least once in last 12 months but did not due to either cost or other reasons (including decided not to seek care, too busy or no time due to work, personal, family responsibilities), waiting time too long or not available at time required) (AIHW 2020c). Converted to our population of persons living with disability, this means approximately 26,388 persons potentially needed to see a GP at least once in last 12 months but did not. |

## Cancer Screening and Prevention

| **Outcomes of the service needs analysis – General Population Health: *Cancer Screening and Prevention*** | | |
|---|---|---|
| Identified Need | Key Issue | Description of Evidence |
| **Engaging patients and communities in cancer screening** | Service provider barriers to engaging patients and community members in cancer screening | Qualitative evaluation of previous NBMPHN cancer screening program activities identified the following service provider barriers to engaging patients and community members in screening (Trankle et al. 2018, NBMPHN 2023):<br>• Information technology challenges with general practice clinical software.<br>• Lack of GP time, competing priorities or financial incentives to engage patients in screening.<br>• Disconnect between the National Bowel Cancer Screening Program implementation and general practice.<br>• Lack of standardized electronic systems for reporting screening results electronically into general practice clinical software.<br>• Examples of poor teamwork within general practice teams due to lack of leadership.<br>• Geographic and physical accessibility barriers to the mobile BreastScreen van<br>• Lack of consistent information regarding BreastScreen van location. |
| **Systems for cancer screening results and reminders in primary care require enhancement** | Poor integration of electronic systems for breast, cervical and bowel cancer screening results and reminders in primary care | Previous consultations with general practices in the NBM region indicate poor integration exists between the electronic systems that primary care providers use to receive cancer screening test results, manage recalls and reminders for cancer screening, and to accurately identify under-screened or never-screened patients.<br><br>Specific areas of poor integration include (NBMPHN 2017i):<br>• The default option is for practices to receive paper-based results for the National Bowel Cancer Screening Program.<br>• Lack of standardisation in electronic 'coding' of Pap-test pathology results among pathology providers.<br>• Poor or no recording of cancer screening results into relevant 'fields' in Practice clinical software systems, without reliance on manual data entry by General Practitioners.<br>• Poor quality of practice data on patients screened, never screened and last attended screening.<br>• High levels of difficulty or no ability of General Practitioners to interface with the relevant state-based cancer screening register to identify a patient's screening history.<br>• Difficulties in accurately identifying patients never screened or overdue for screening using aggregate data within clinical software or external data extraction tools. |
| **General practice referrals for patients undergoing colorectal screening** | **Extended wait times for colonoscopy compounded by limited referral information from General Practitioners** | A retrospective evaluation of 265 general practitioner referrals to specialist gastroenterologists for patients undergoing colorectal cancer screening (colonoscopy) at Nepean Hospital between September 2017 and May 2018 identified the following issues (Eslick 2018):<br>• The mean time from GP referral to colonoscopy was approximately double recommended by clinical guidelines for triage category 1 (within 30 days) and 2 (within 90 days) patients.<br>• There was a low rate of colonoscopies performed within the time limit for patients within triage categories 1 and 2. |

| Outcomes of the service needs analysis – General Population Health: *Cancer Screening and Prevention* | | |
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| | | • GP letters for colorectal screening frequently miss important information, such as past surgical history, past psychological history, relevant clinical findings, results of investigations to date, outline of management to date, or a possible differential diagnosis.<br>• Not all GPs received follow-up letters from the gastroenterologist, if the patient did not attend a follow-up consultation with the gastroenterologist, then a letter was not provided.<br>• There is need for a pre-developed template or standardization of GP referral letters for colorectal cancer screening so that no important clinical information is missing. |
| **Barriers to Bowel Cancer Screening amongst CALD men** | Common barriers to bowel cancer screening participation among CALD men in the NBM region included:<br>• Lack of knowledge<br>• Low perceived risk<br>• Fear and fatalism<br>• Cultural health beliefs and customs<br>• Test concerns and misconceptions<br>• Lack of GP recommendation | Qualitative research between October 2017 and February 2018 identified the following barriers to participating in the National Bowel Cancer Screening Program (NBCSP)a mong men from different CALD groups in the NBM region (Sonego and McBride 2018b):<br>• Lack of knowledge: being unaware of screening and low healthy literacy.<br>• Low perceived risk: a belief there was no need to screen due to lack of digestive symptoms or family history of cancer.<br>• Fear and fatalism: helplessness and futility regarding cancer, not wanting to know the test result.<br>• Sociocultural factors: language barriers, education level, transportation, income, health beliefs and customs.<br>• Test concerns and misconceptions: unpleasant, embarrassing and confusion with other tests and physical exams.<br>• Lack of GP recommendation: low endorsement of screening in primary care.<br><br>Identified barriers to promoting the NBCSP among NBM primary care providers were:<br>• Limited opportunities to prompt participation as men “don’t come in much anyway”, that “getting men to visit the doctor is difficult” or when men did visit the doctor there were often other more pressing priorities to deal with.<br>• Many male participants refused to do the test, despite its importance being explained.<br>• Men tended to place more importance on other cancers such as prostate cancer.<br>• Practical difficulties among male patients using the test kit, including a perception the test procedure and instructions were too complex, particularly for patients with low health literacy or who experience language barriers. |
| **Barriers to Cervical and Breast Cancer Screening amongst CALD women** | Common barriers to cervical and breast screening participation among CALD women in the NBM region include:<br>• Access to Medicare and costs | Qualitative research between October 2017 and February 2018 identified the following barriers to participating in cervical and breast cancer screening among women from different CALD groups in the NBM region (Sonego and McBride 2018a):<br>• Financial: lack of Medicare due to residency status and costs for follow-up appointments.<br>• Low education and health literacy.<br>• Language barriers and identity of interpreters.<br>• Fear and fatalism: avoidance of cancer screening due to the belief that once diagnosed there is no cure, side effects of treatment outweigh benefits, or God’s will.<br>• Individual barriers: past cancer screening experiences (their own and other women). |

| Outcomes of the service needs analysis – General Population Health: *Cancer Screening and Prevention* | | |
|---|---|---|
| | • Low education and health literacy<br>• Language barriers and access to interpreters<br>• Fear and fatalism<br>• Individual barriers related to past screening experiences | Barriers specific to participation in cervical screening included:<br>• A clear preference for having a female practitioner perform screening / lack of availability of a female GP. necessitating the need for referral elsewhere; preference for / availability of female-oriented health services; and need for complete privacy during screening.<br>• Modesty; sensitivities and stigma in discussing sexual activities with health practitioners; history of trauma and genital mutilation; and dominant views from male relationships.<br>• Discomfort and invasiveness of the test itself.<br><br>Barriers specific to participation in breast screening included:<br>• Difficulties among providers to establish if their patients had attended a breast-screen until receiving notification weeks later; transportation to the BreastScreen van, and for some lack of prompting by their GP.<br>• Lack of awareness of the importance or possible benefits of breast screening due to earlier detection.<br>• Individual prioritisation and knowledge of screening, misinformation about the perceived safety of screening, and physical discomfort experienced during a mammogram.<br><br>Needs and issues identified by NBM primary care providers to promote and maximise cervical and breast screening included:<br>• Referral networks and culturally appropriate services: female providers and culturally appropriate referral services that general practice and other providers could use to arrange cervical screening and preventive health advice for female patients and facilitate tracing of results for regular GPs.<br>• Training needs: Education and upskilling on breast examination, the new HPV screening process and screening in general for practice nurses, supported by a protocol around how to encourage screening in each of the screening programs; and training for all primary care providers in identifying and sensitively managing vulnerable and at-risk populations.<br>• Extended consultation time limits: increased appointment time where there were language barriers, presence of multiple health complaints or complex conditions, and where there was low awareness cancer screening.<br>• The new HPV testing program: ongoing education of patients about the HPV vaccination, changes relating to the new program and continued need for cervical screening, especially because of concerns that the new test targets the HPV virus, not abnormal cells. |
| **Access to cervical screening among Refugee women and women from vulnerable groups** | Poor access to cervical cancer screening among newly arrived Refugee women | Consultations with local service provider stakeholders have highlighted the following issues relating to poor access to cervical cancer screening among newly arrived Refugee women, women who have experienced trauma and women from vulnerable groups in the NBM region, particularly those settling or living in the Penrith LGA (NBMPHN 2017h):<br><br>• Limited number of primary care providers that understand and provide trauma informed care.<br>• Poor knowledge of screening programs among Refugee women. |

| Outcomes of the service needs analysis – General Population Health: *Cancer Screening and Prevention* | | |
|---|---|---|
| | Poor access to cervical cancer screening among women who have experienced trauma or are from vulnerable groups | • Limited number of providers who are sensitive to patient histories, have awareness of cultural issues and are perceived as culturally aware and safe (e.g. for Aboriginal and Torres Strait Islander and Torres Strait Islander women).<br>• Limited access to female cervical screening providers.<br>• Limited use of interpreters within primary care to assist with comprehensive and thorough histories.<br>• Limited provision of health promotion among primary care providers that targets health issues for women from CALD backgrounds.<br>• Limited provision of long consultations in primary care for addressing women's health issues including cervical screening. |

## Chronic and Preventable Conditions

| **Outcomes of the service needs analysis – General Population Health: *Chronic and Preventable Conditions*** | | |
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| Identified Need | Key Issue | Description of Evidence |
| **Use of chronic disease planning items for persons with asthma is under utilised** | Significant proportions of adults with asthma in the NBM region are not accessing chronic disease planning items by General Practitioners. | Data from 100 of 135 (74%) of local general practices in the NBM region (NBMPHN 2022f) indicates that within the previous 15-months of those patients diagnosed with asthma aged 16 years and older:<br>• 12.99% had a GP Management plan.<br>• 10.76% had team care arrangements.<br>• 6.73% had their GP management plan or team care arrangements reviewed.<br><br>This data indicates a significant proportion of patients with asthma in the NBM region may be eligible for but are not accessing available MBS chronic disease planning items, coordinated by their general practitioner to assist management of their condition. |
| **Undertreatment of CVD risk** | Low rates of absolute cardiovascular risk assessments completed in General Practice. | Assessment of absolute CVD risk combines known risk factors to calculate the probability that an individual will develop a cardiovascular event, such as a myocardial infarction or stroke, or other vascular disease within a specified time frame (usually five years).<br><br>Guidelines for preventive activities in general practice recommend targeted screening and treatment for absolute CVD risk assessment at least every 2-years for all adults aged 45-74 years, and Aboriginal and Torres Strait Islander and Torres Strait Islander peoples aged 35 years and older, who are not known to have CVD or to be clinically determined to be at high risk. The National Heart Health report (Dunbar et al. 2017) suggests there is widespread under-treatment of CVD risk and poor routine incorporation in routine general practice. This is reflected in NBM general practice data (NBMPHN 2022g), which indicates that among 100 of 135 (74%) of general practices in the NBM region, 41.17% of patients aged 45-74 years and 43.69% of Aboriginal and Torres Strait Islander and Torres Strait Islander patients aged 35-74 years had not had their CVD risk measured or recorded within the previous 2-years. |
| **Use of chronic disease planning items for persons with CVD are under utilised** | Significant proportions of people with CVD in the NBM region are not accessing chronic disease planning items by General Practitioners. | Data from 100 of 135 (74%) of local general practices in the NBM region indicates that within the previous 15-months of those patients diagnosed with CVD and aged 18 years and older (NBMPHN 2022g):<br>• 36.41% had a GP Management plan.<br>• 30.03% had team care arrangements.<br>• 25.91% had their GP management plan or team care arrangements reviewed.<br><br>This data indicates a significant proportion of patients with CVD in the NBM region may be eligible for but are not accessing available MBS chronic disease planning items coordinated by their general practitioner, to assist management of their condition. |

| Outcomes of the service needs analysis – General Population Health: *Chronic and Preventable Conditions* | | |
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| **COPD services are limited** | Lack of existing Pulmonary Rehabilitation services and resources. | Previous consultations with service providers across the NBM region have indicated that patients with COPD in the Hawkesbury LGA have very few options available for hospital avoidance in times of acute exacerbation – the 'safest' option is to present to the local Emergency Department (NBMPHN 2018k; NBMPHN 2017g, NBMPN 2023a).<br><br>The following issues have been identified:<br>• Lack of preventative intervention services for COPD.<br>• Challenges in collaboration across acute and primary health settings.<br>• Difficulties experienced by patients accessing services due to distance and no public transport links available to connect with other services (i.e., Nepean Hospital in Penrith).<br>• No dedicated COPD community health services in the Hawkesbury region.<br>• Perception of COPD rehabilitation as a hospital rather than health promotion/ prevention service.<br>• Lack of access to supported/funded post-acute rehabilitation programs due to HDHS private hospital status.<br>• Very little to no public allied health services are available or delivered for chronic and complex patients in the Hawkesbury.<br>• Inability of the Hawkesbury Hospital team to discharge COPD patients earlier from hospital due to a lack of supports available post-discharge.<br>• General practitioners in Hawkesbury report being unable to refer their patients with COPD to education support programs which are accessible.<br>• Lack of services in the Lithgow region, no access to CALM or LIA.<br><br>Throughout the region timely access to spirometry services and capacity within primary care nurses to use and interpret existing spirometry to full effect could be enhanced. Up to 50% of local General Practices in Hawkesbury indicate they offer spirometry; however, others indicate limitations in time and capability to complete patient spirometry assessments. Is it important to note that many practices are not offering spirometry any more due to COVID infection control measures. Availability of local spirometry services is limited in Hawkesbury with current availability through Nepean Hospital Respiratory Services (with extreme travel/distance barriers for patients) and private Respiratory Physicians with associated wait times and costs.<br><br>Care coordination services for patients with COPD are limited, resulting in patients attending ED for aspects of care that could otherwise be addressed in part through increased connection to services and aspects of self-management. |
| **Regional COPD service redesign is required** | Identified service issues and needs for effective COPD management in the NBM | The HealthPathways COPD Clinical Working Group identified the following service issues relating to effective management of COPD patients between primary and tertiary care settings (NBMPHN 2018j): |

| Outcomes of the service needs analysis – General Population Health: *Chronic and Preventable Conditions* | | |
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| | region indicate clear opportunities for enhancing service provision and integration between primary and tertiary levels of healthcare. | • The need for improved interpretation and quality of spirometry in General Practice (GP and Practice Nurse Education, Redesign, and HealthPathways to address).<br>• Long wait times for COPD patients to see specialist at Nepean respiratory outpatient department (HealthPathways – clear referral criteria and transfer back to GP guidelines for shared care).<br>• Need for availability of GP advice for patient exacerbations (Redesign/HealthPathways).<br>• Poor communication between primary and tertiary services at transfers of patient care (Redesign):<br>- GPs not able to access the hospital records system (CERNA)<br>- Hospital/GP/Community records are not linked.<br>- No alerts provided to GPs for patient admissions or on discharge from hospital.<br>• Insufficient smoking cessation services / need for smoking cessation clinics in all areas (Redesign).<br>• Need for respiratory training for community nurses (Education).<br>• Need for GP supports when discussing the move from active management to palliative care with patients and their families – difficult discussions (Education).<br>• Erratic arrival of the flu vaccine at GP clinics (Redesign). |
| **Chronic Pain** | Indications there may be sub-optimal management of non-specific low back-pain in general practice compared to clinical guidelines. | A 2019 survey by local medical students revealed the following differences between management of nonspecific low back pain (NSLBP) and guideline recommendations within general practices in Greater Western Sydney (Roy et al. 2019):<br><br>• Low overall adherence to guidelines for the use of imaging, pharmacological and non-pharmacological treatment.<br>• Most (80%) participants used imaging as part of their diagnostic approach (not indicated by guidelines).<br>• More than half (53.3%) had previously prescribed opioids as first-line treatment (not indicated by guidelines).<br>• Bed rest was recommended by almost half (46.7%) of participants despite strong recommendations against this by guidelines.<br>• One third (33.3%) of respondents did not use any guidelines to assist in their management of NSLPB.<br>• Participant-reported barriers to effective management included cost of allied-health services, presence of comorbidities, and patient beliefs/expectations about back pain management (that immediate treatment is required). |
| **Assessment of overweight and obesity in general practice is limited** | A significant proportion of general practice patients in the NBM region have never had their body mass index or waist circumference assessed. | Guidelines for preventive activities in general practice recommend that body mass index (BMI) and waist circumference should be measured every two years and recorded in the medical record for all adults aged 18 years and older (RACGP 2016).<br><br>Analysis of local data from 100 of 135 (74%) of general practices in the NBM region however indicates that 55.83% of active patients aged 18+ years had never previously had their body mass index (body mass and height) assessed at their general practice (NBMPHN 2022h). A further 86.45% of male patients and 87.27% of female patients aged 18+ years had never previously had their waist circumference assessed. This compares to estimates showing that 66.90% of adults in the NBM |

| Outcomes of the service needs analysis – General Population Health: *Chronic and Preventable Conditions* | | |
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| | | region were overweight or obese in 2022 This data indicates a significant proportion of persons attending general practices in the NBM region who are overweight or obese are likely to have missed opportunities for assessment of their BMI and waist circumference, and offered appropriate support (such as individual lifestyle education and skills training) or referral (such as for self-management support) to assist weight loss according to recommended preventive guidelines. |
| **Obesity management across health sectors is limited** | Identified service issues and needs for effective obesity management in the NBM region indicate clear opportunities for enhancing service provision and integration between primary and tertiary levels of healthcare. | The HealthPathways Obesity Clinical Working Group identified the following service issues and needs relating to effective management of obese patients between primary and tertiary care settings (NBMPHN 2018i; NBMPHN 2023b):<br>• General Practitioner and Practice Nurse training in strategies for effective management patients with obesity is needed (education).<br>• Several new non-surgical treatment options (pharmacological) that GPs could be educated/upskilled on.<br>• Education needed on use of management plans for clinical obesity.<br>• Limited access to publicly funded dietitians / allied health professionals (for example there are 2.5 FTE funded dietitian positions for the entire NBM region) (Redesign).<br>• Private services such as those providing education, exercise &/or healthy eating advice are not known to GPs (HealthPathways).<br>• The Nepean Blue Mountains Family Metabolic Service (FMHS) at Nepean Hospital has long waiting times for its services (currently 3 months to 4 years depending on medical category).<br>• No electronic referral forms available for the FMHS – GPs are time poor and reluctant to complete clinic specific referrals that are not electronic (HealthPathways).<br>• Existing inclusion criteria for the FMHS are complicated (HealthPathways).<br>• Access to the FMHS is limited to business hours – difficult for employed people to attend. Virtual attendance options are available (Redesign).<br>• Need for a multidisciplinary approach for obesity management in the community (Redesign).<br>• Need for upskilling of allied health professionals (e.g., Physiotherapists, Exercise Physiologists, Dietitians, Psychologists) with current evidence-based information (Education). Need for change in MBS to allow longer consultations with GPs and to ensure MDT approach is possible through greater allied health sessions.<br>• Likely need for virtual care program to completement GP care, especially in regions where GP appointments are difficult to access and/or the patient has low mobility.<br>• Engagement of social services and disability support should be considered for all patients with severe and complicated obesity.<br>• Education and access to mental health support and highly effective medications for obesity, in addition to public bariatric surgery, should be improved. |

| Outcomes of the service needs analysis – General Population Health: *Chronic and Preventable Conditions* | | |
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| **Service integration between primary and tertiary care is limited** | A lack of existing capacity across the NBMPHN and NBMLHD to address redesign initiatives the joint NBM HealthPathways initiative. | Recommendations from Clinical Working Group meetings taking place as a part of the local NBM "HealthPathways" initiative frequently identify system issues between primary and tertiary levels of healthcare that require well-funded and well-supported 'redesign' initiatives or projects, with dedicated staff at both the NBM Primary Health Network and Local Health District to be successfully addressed (NBMPHN 2018h). This capacity does not currently exist and if available, would provide an important enabler for driving successful primary and tertiary healthcare redesign, integration, and local system reform. |

## Social Determinants of Health

| Outcomes of the service needs analysis – General Population Health: *Social Determinants of Health* | | |
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| **Identified Need** | **Key Issue** | **Description of Evidence** |
| **Culturally appropriate services** | Poor access to culturally appropriate and assertive follow- up services for newly arrived refugees in primary care | Interviews with service providers who provide health, mental health, and community and settlement services to Syrian and Iraqi refugees settling in the NBM region identified significant challenges in meeting the complex needs of the diverse populations (Renzaho 2016).<br>Complex needs include:<br>• mental health issues including trauma from issues of torture<br>• physical health issues including diabetes<br>• dental health<br>• women's sexual and reproductive health<br>• diet related issues such as malnutrition and changing food patterns post-migration leading to obesity.<br><br>Barriers to health seeking:<br>• Poor awareness of physical and mental health issues, and lack of seeking physical and mental health services<br>• Lack of cultural appropriateness or modification to meet the needs of refugee communities among some services.<br>• Cases of breaches in client confidentiality by interpreters<br>• Fear of being diagnosed with a mental illness.<br>• Cost (MBS gap fees)<br><br>Health service provision:<br>• Existing health service staff under constant pressure, overworked and understaffed.<br>• Under resourcing a reason for lack of modification of services to increase outreach and engagement with refugee communities<br>• Most services provided in English and limited use of interpretation services.<br>• Poor cultural awareness among General Practitioners and lack of awareness of settlement services for referral purposes<br>• Poor patient follow-up and mechanisms for recording patient background information<br>• Poor communication and engagement among service providers<br>• Need to identify General Practitioners who are committed and interested in working closely with refugees |

| Outcomes of the service needs analysis – General Population Health: *Social Determinants of Health* | | |
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| | High cost of Interpreter services | Interpreter services for accessing Allied Health services is not funded by any source. Service providers who can access a funded priority line include GPs, Pharmacists and Real Estate Agents. It is therefore cost-prohibitive to access Allied Health services by persons who do not speak English well or do not speak English at all (NBMPHN 2017f). |

## Palliative Care

| Outcomes of the service needs analysis – General Population Health: *Palliative Care* | | |
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| **Identified Need** | **Key Issue/s** | **Description of Evidence** |
| **Palliative Care** | Palliative care discussions often commence at a time of crisis. | Consultations with health service providers and other stakeholders in the NBM region highlighted referrals to palliative care often occur at a time of crisis, instead of earlier in a life-limiting illness trajectory (NBMPHN 2022l).<br><br>Key drivers for this issue identified during consultations include:<br>• Workload pressures in community health results in referrals for early palliative care being delayed.<br>• Current model of care has limitations, therefore early palliative care needs may not be identified.<br>• Access to GP services limited, caused by a myriad of workforce issues, including recruitment and retention shortages, GP workforce extremely busy and facing burnout, ageing generation retiring, etc.<br>• Lack of experience in palliative care across GP workforce, with many GPs unaware of the current palliative care system and the services available for their patients in the region.<br>• High turnover of residential aged care home (RACH) staff who may not know the resident's clinical condition, meaning resident's palliative care needs not identified early affecting appropriate care plans. |
| | Poor coordination of palliative care across the region | Key themes of this issue identified during consultations include:<br>• Absence of integrated electronic shared care plan accessible to all involved in care.<br>• Gap in interface between specialist palliative care services and the patient's GP, with current Medicare Benefits Schedule unable to support extended or after-hours consultations or home visits.<br>• Mixed reporting lines and silos between services<br>• Inconsistency of advance care planning conversations<br>• Lack of clear case coordination, leading to a perceived lack of accountability for care across the system |
| | Capacity and capability of health workforce to support palliative care is limited throughout the region. | Key themes of this issue identified during consultations include:<br>• Specialist palliative care workforce based within the main hospital centres with many community health nurses not specialising in palliative care and coverage to regional areas more limited.<br>• Absence of allied health workforce within current palliative care model due to lack of funding.<br>• Diminished volunteer and community workforce post COVID-19 pandemic needing stronger community engagement.<br>• Need for workforce capacity building opportunities. |
| **Advance Care Directives and advance care planning conversations** | Inconsistency of advance care planning conversations | Consultations with health service providers and other stakeholders in the NBM region highlighted inconsistencies of advance care planning conversations, especially in residential aged care homes (RACHs), which creates challenges in developing an integrated care plan for at home palliative care (NBMPHN 2022l). |

| Outcomes of the service needs analysis – General Population Health: *Palliative Care* | | |
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| | | In general practices, advance care planning conversations usually occur during the Health Assessment for Older Persons (75+), however these conversations should also be occurring with younger people.<br><br>In RACHs, advance care planning conversations usually commence on admission of the patient to the facility, but there is little evidence to demonstrate consistency in follow up. Furthermore, many RACHs prefer using their own branded advance care planning paperwork, leading to inconsistencies in information. Inexperienced staff admitting the resident and/or initiating advance care planning conversations, may also lead to inconsistencies in documentation.<br><br>Patients and/or families may also be reluctant to accept the diagnosis of a life-limiting illness, further impacting on advance care planning conversations, which can be further exacerbated by the medical model's treatment/recovery pathway until signs of end-stage illness evident.<br><br>Late and crisis-point advance care planning conversations are known to impact care and cause stress for patients and their loved ones.<br><br>Ideally, outcomes of advance care planning conversations or completed Advance Care Directives are uploaded to the person's My Health Record. However, some health professionals have limited access to My Health Record. |
| **Death Literacy** | Death literacy index (DLI) scores among Blue Mountains residents and palliative care workers suggests poor factual knowledge and understanding of the death system and the role of the community. | Results from a 2019 Death Literacy Survey completed by 139 Blue Mountains residents to measure people's Death Literacy (DLI, consisting of four subscales: Experiential Knowledge, Factual Knowledge, Practical Knowledge, and Community Knowledge) indicated that (WSU and GSP 2019):<br>• Residents with and without experience in end-of-life care achieved higher scores for their DLI, Experiential Knowledge, and Practical Knowledge, compared to the national average.<br>• Both groups scored poorly on Factual Knowledge suggesting a need for more education on the death system for both the public and workers.<br>• Despite Blue Mountains residents with work volunteering or training experience scoring higher on Experiential Knowledge and Practical Knowledge than the national average, they did not score highly on Community Knowledge. This suggests a need for educating palliative care workers in the role of the community.<br>• There are high levels of local experience in providing emotional support to carers, but much lower levels of providing practical support.<br><br>Intervention strategies informed by people's life experiences included:<br>• Interventions which encourage expression such as through art, music, performance, or social media, and which are powerful forms of public communication could be encouraged in this community.<br>• Need for the provision of carer support with the practical aspects of caring, for example opportunities for co-facilitated care or feedback so they know how they could be more helpful. |

## Older Persons

| Outcomes of the service needs analysis – General Population Health, Priority Theme 6: *Older Persons* | | |
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| **Identified Need** | **Key Issue** | **Description of Evidence** |
| **Limited access to health services** | Indications that access to services is hindered due to transport issues, cost of transport, waiting lists and operating hours of service. | Consultations and review of the previous NBM Medicare Local needs assessment 2014 indicate (NBMLHD (n.d); NBMML 2014; NBMPHN 2017e) poor access due to:<br>• long wait lists for ACAT/ CHC's.<br>• long wait times, lack of service availability and high demand for: domestic assistance, personal care and respite serves.<br>• Limited parking availability and parking costs.<br>• unsuitable and high costs of public transport, in particular private bus company services in Lithgow LGA.<br>• limited North-South public transport available between Hawkesbury and Penrith LGAs.<br>• unreliable community transport – frequent cancellations due to a lack of drivers.<br>• lack of after-hours and weekend services.<br>• difficulties navigating available services, including knowledge of who providers are, where they go, eligibility criteria.<br>• not having Information Technology (IT) or being IT literate.<br><br>In the Blue Mountains (BMCC 2021):<br>• transport to and from health services is of specific concern, particularly in terms of availability and cost.<br>• public transport travel times to Nepean Hospital from Katoomba Hospital is nearly two hours and requires transfers between trains and buses or walks of nearly 20 minutes.<br>• Additional accessible and safer parking facilities needed at key destination sites such as the Hospital.<br>• People in aged care, they are not eligible for community or patient transport.<br>• Need for the resumption of the Westmead and Kingswood train stops within the Blue Mountains link, or a specific Western Sydney hospital link. |
| **Home Care** | Increasing support needs for older persons to be cared for at home. | Care for the cognitively impaired among older people is inadequate to meet present and increasing needs for home-based care.<br><br>Support for independent living at home is inadequate to meet present and increasing needs in primary care services (NBMPHN 2015a; Rees et al. 2018).<br><br>Navigating the new My Aged Care portal, for consumers and GPs, to navigate care needs has been identified as problematic. |
| **Residential Aged Care** | The number of beds in residential aged care is | The NBM region has 29 Residential aged care homes (RACH) with capacity for 2599 residents. If ageing projections are fulfilled, there will not be enough RACH beds or GPs working within RACHs to cater for the needs of the ageing population. Further, the |

| Outcomes of the service needs analysis – General Population Health, Priority Theme 6: *Older Persons* | | |
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| | inadequate for projected population growth. | increasing number of people with dementia is also driving increased demand for aged care services, with more than half of aged care residents having a diagnosis of dementia as of 30 June 2021 (DoH 2021e; DoH 2021f).<br><br>The number of RACHs and beds/places in each LGA is):<br>• Blue Mountains – 7 facilities; 762 beds<br>• Hawkesbury – 5 facilities; 430 beds<br>• Lithgow – 3 facilities; 167 beds<br>• Penrith – 14 facilities; 1342 beds<br><br>Comparison of service data indicates there are relatively fewer places available per 1,000 people in residential care for the NBM population 70 years and older (67.5) compared to the NSW state (77.5) and nationally (75.9). Service data further indicates fewer NBM residents (40.0) per 1,000 population aged 65 years and older accessed residential care to June 2018 compared to NSW (47.6) and Australia (46.4) (DPS 2017). While further research is needed to explore why fewer NBM residents accessed residential care compared to state and national rates, local anecdotal evidence indicates a relative shortage in places available (supply) is a contributing factor. |
| | Poor access to, representation and utilisation of General Practitioner services among Residential aged care homes | Currently attracting a workforce of general practitioners to support the care of RACH residents is also an identified challenge. Interviews with RACH service providers in the NBM region have revealed several issues around poor access to and utilisation of General Practitioner services within RACHs (NBMPHN 2017d). These include:<br>• Poor access to General Practitioner services<br>• Under-utilisation of General Practitioner preventive health services, for example low rates of immunisations<br>• Lack of 24-hour access to nursing care and support due to lack of available nursing staff after hours.<br>• Increasing patient presentations to hospital ED for minor issues such as wound care, due to shortages in skilled nursing workforce available after hours |
| | Aged Care Reform | The government's Aged Care reform plan (DoH 2021h) is focused around 5 pillars:<br>1) **Home care** – supporting senior Australians who choose to remain in their own home.<br>2) **Residential aged care services and sustainability** – improving and simplifying residential aged care services and access.<br>3) **Residential aged care quality and safety** – improving residential aged care quality and safety.<br>4) **Workforce** – supporting and growing a better skilled care workforce.<br>5) **Governance** – new legislation and stronger governance.<br><br>The Commonwealth's Royal Commission into Aged Care Quality and Safety (Pagone and Briggs 2021) made 148 recommendations under the following overarching themes:<br>• Developing a new Aged Care Act and new Aged Care Program. |

| Outcomes of the service needs analysis – General Population Health, Priority Theme 6: *Older Persons* | | |
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| | | • Enhancing governance of a new aged care system and improved provider governance with quality regulation and advocacy.<br>• High quality aged care and safety with:<br>  ○ Support for informal carers and volunteers<br>  ○ Appropriate aged care accommodation for older people<br>  ○ Aged care for Aboriginal and Torres Strait Islander and Torres Strait Islander people and older people with a disability<br>  ○ Provision for aged care in regional, rural, and remote areas<br>  ○ Better access to health care – primary care, specialists, and allied health<br>  ○ No younger people in residential aged care<br>  ○ Aged care workforce planning<br>  ○ Research and development and aged care data, innovation, and technology.<br>Funding for and financing the new aged care system with prudential regulation and financial oversight and personal contributions and means testing. |
| **Dementia** | Diagnosis and services are limited for people living with dementia. | Key issues and needs identified by carers, people living with dementia and primary care professionals in 2022 were similar to those identified previously (Rees et al. 2018):<br>• Services vary between the four NBM areas with unique organisations based in each LGA.<br>• Current referral pathways are very ad hoc and can depend on the level of training, interest, and background of the service or general practitioner.<br>• Immediate needs of the patient and carer were important for services.<br>• Dementia Australia is a highly respected and known source of information across all professions, however they are not well utilised in the community "*the support lines are always a good service to refer patients or family*" (primary care representative)<br>• Local support services have changed the way they deliver services in recent years, and this has created some uncertainty for carers.<br>• All primary care stakeholders consulted were interested to learn more about the available community services and groups.<br>• There is a need for allied health, community services and GPs to understand younger onset dementia and role of the NDIS.<br>• GPs generally know the clinical referral pathways available but may be unaware of the community supports to refer their patients. The preferred format overwhelmingly for GPs to access information was via HealthPathways followed by |

| Outcomes of the service needs analysis – General Population Health, Priority Theme 6: *Older Persons* | | |
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| | | resources imbedded into desktop and website references. The preferred method to pass information to patients was using printed material or brochures from desktop and information packs. Priorities included screening and assessment tools recommended, transport, respite and continence information, and Younger Onset dementia support services.<br><br>Local data extracted from participating general practices in the NBM region shows the following (NBMPHN 2022i):<br>• 1330 patients have a dementia diagnosis (Males 544 – 40.90%, Females 784 – 58.95%, Not recorded 2 – 0.15%)<br>• Of those diagnosed: the highest proportion of diagnosed males are aged between 80-84 (23.53%), the highest proportion of diagnosed females are aged between 85-89 (22.45%)<br>  ○ 76.62% are non-Aboriginal and Torres Strait Islander.<br>  ○ 1.73% identify as Aboriginal and Torres Strait Islander.<br>• In the past 15 months (NBMPHN 2021j):<br>  ○ only 4.67% of patients diagnosed with dementia have had a mental health treatment plan completed.<br>  ○ only 0.53% of patients diagnosed with dementia have had a mental health treatment plan review.<br>  ○ only 3.46% have had a mental health consult.<br>  ○ only 27.07% have had a GP Management Plan (GPMP) completed.<br>  ○ only 23.00% have had a Team Care Arrangement (TCA) completed.<br>  ○ only 17.14% have had a GPMP/TCA review. |
| **Awareness of and Access to Services** | Inadequate awareness of available support and services for older persons among primary care providers. | Access to services before crisis point and after-hours support is impeded by lack of awareness of services amongst health professionals, carers, and older people. Consumers have identified increasing social isolation as a major and increasing risk negatively impacting on older people. |
| **Aged Care** | Premature placement of older persons into RACHs and lack of appropriate age-based care services to support independent living at home | An emerging issue across NSW is the premature placement of older persons in residential aged care homes (RACHs). This is occurring due to a lack of community based aged care places to support people to remain living independently at home (Pagone and Briggs 2021). The result is lengthy delays on waiting lists for home-based service provision. This in turn leads to carer/ family stress and older people are being prematurely placed into RACHs. |

# Aboriginal and Torres Strait Islander Health

<table>
<tr><th colspan="3">Outcomes of the service needs analysis – Aboriginal and Torres Strait Islander Health</th></tr>
<tr><th>Identified Need</th><th>Key Issue</th><th>Description of Evidence</th></tr>
<tr><td>Use of the Aboriginal and Torres Strait Islander health check MBS item</td><td>Relatively poor uptake of the Aboriginal and Torres Strait Islander Health Assessment.</td><td>The proportion of NBM Aboriginal and Torres Strait Islander persons undertaking a health assessment (17.8%) was lower than Australia and in NSW in 2019-20 (23.5% and 22.8% respectively) (AIHW 2021b).<br><br>Table: MBS Aboriginal and Torres Strait Islander-specific health checks (face-to-face & telehealth), for selected geographical areas (Australia, NSW and NBMPHN), 2021-22 (AIHW 2021b).<br><table><tr><th>Geographical area</th><th>Number of patients, MBS Aboriginal and Torres Strait Islander-specific health checks (face-to-face & telehealth)</th><th>Rate of service use (% of Aboriginal and Torres Strait Islander population)</th></tr><tr><td>Australia</td><td>208620</td><td>23.5%</td></tr><tr><td>New South Wales</td><td>67279</td><td>22.8%</td></tr><tr><td>NBM PHN</td><td>3358</td><td>17.8%</td></tr></table></td></tr>
<tr><td>Use of the Aboriginal and Torres Strait Islander follow-up care MBS items</td><td>Low rate of Aboriginal and Torres Strait Islander-specific follow up services within 12 months of an Aboriginal and Torres Strait Islander health check.</td><td>The proportion of NBM Aboriginal and Torres Strait Islander people who received an Aboriginal and Torres Strait Islander-specific follow-up service within 12 months of an Aboriginal and Torres Strait Islander-specific health check (27.6%) was third lowest among PHNs in NSW, and the sixth lowest rate among PHNs in Australia.<br><br>Table: MBS data for items 10987, 81300 to 81360, 93200, 93202, 93048 and 93061 for selected geographical areas (Australia, NSW, NBMPHN and NBM SA3 locations), 2020-21 (AIHW 2021b)<br><table><tr><th>Geographical area</th><th>Number of follow up patients</th><th>Rate of follow-up (% of health check patients)</th></tr><tr><td>Australia</td><td>109181</td><td>46.1%</td></tr><tr><td>New South Wales</td><td>29,059</td><td>38.0%</td></tr><tr><td>NBM PHN</td><td>1094</td><td>27.6%</td></tr></table></td></tr>
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| Outcomes of the service needs analysis – Aboriginal and Torres Strait Islander Health | | |
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| **General practice assessment of absolute cardiovascular risk** | Suboptimal routine assessment of absolute CVD risk in general practice for Aboriginal and Torres Strait Islander patients. | NBM general practice data (NBMPHN 2022g), indicates 43.69% of Aboriginal and Torres Strait Islander and Torres Strait Islander patients aged 35-74 years have not had their CVD risk measured or recorded within the previous 2-years. |
| **Barriers to Accessing Health Care** | Lack of culturally appropriate access to health care | Issues raised through consultation and review of access to services for Aboriginal and Torres Strait Islander people indicate (NBMLHD 2013; NBMPHN 2017k; NBMLHD 2016a):<br>• Inequitable access to health services.<br>• Shortage of Aboriginal and Torres Strait Islander Health Workers in the NBM region, in the Hawkesbury and Lithgow LGAs.<br>• Poor access for transport to health services, particularly for Aboriginal and Torres Strait Islander people living in the Hawkesbury and Lithgow LGAs without access to personal transport &/or with disability, mobility issues &/or multiple chronic health issues.<br><br>Although only provided at NSW state level, data presented in the 2019 Aboriginal and Torres Strait Islander people's experiences of hospital care (BHI 2021), show that whilst there was significant improvement in ratings of care provided to Aboriginal and Torres Strait Islander patients from 2014 to 2019, overall Aboriginal and Torres Strait Islander people still perceived a poorer hospital experience compared to non-Aboriginal and Torres Strait Islander persons including in the following areas:<br>- Aboriginal and Torres Strait Islander patients are less likely to provide positive ratings of communication.<br>- Aboriginal and Torres Strait Islander women receiving maternity care reported feeling less informed than non-Aboriginal and Torres Strait Islander women and reported lower ratings of their experiences during labour and birth, and after-birth care than non-Aboriginal and Torres Strait Islander women.<br>- Aboriginal and Torres Strait Islander patients' ratings of health professionals' respect for their cultural beliefs declined, especially in urban hospitals.<br>- Aboriginal and Torres Strait Islander patients' ratings of the organisation of their care declined. |

# Primary Mental Health Care

## Suicide Prevention

| Outcomes of the service needs analysis – Primary Mental Health Care: *Suicide Prevention* | | |
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| **Identified Need** | **Key Issue** | **Description of Evidence** |
| **Referral pathways** | Wide variation in referral pathways for people at risk of suicide. | The perceived barriers and problems concerned with referral for people at risk of suicide include (NBMPHN 2016a; NBMLHD 2016c, Mental Health Commission of NSW 2022, NBMPHN 2020b):<br>• Lack of easily understood and accessible clinical referral pathways.<br>• Lack of easily understood and accessible community program referral pathways.<br>• Lack of utilisation in some regions of Psychological Therapy Services "Seek Out Support" for mild to moderate suicidality.<br>• A lack of coordinated care for people who need to access several services at the same time.<br>• Services lack focus on relevant social, cultural, and environmental factors. |
| **Gaps and barriers to service provision** | There are several key barriers to accessing appropriate services to support people in the community, who have a history of self-harm, suicide ideation or suicide attempt. | Previous stakeholder consultation has identified the following concerns regarding barriers to service provision for suicide prevention (NBMPHN 2016f; NBMPHN 2016a; DoH 2016c):<br>• Lack of support in the community following discharge from MH inpatient unit.<br>• Limited access to community MH programs due to waiting lists. Lack of appropriate community programs in the region.<br>• Lack of interventions for people who repeatedly self-harm or attempt suicide e.g., similar to Early Psychosis Intervention program for young people.<br>• Lack of long-term interventions for young people who are engaged with homelessness services or with previous foster care and/or family breakdowns. |
| **Culturally safe suicide prevention for Aboriginal and Torres Strait Islander people** | Appropriate and culturally safe suicide prevention programs are very limited within the NBM region. | Previous stakeholder feedback indicated that suicide prevention programs that involve Aboriginal and Torres Strait Islander people in service provision are needed to support Aboriginal and Torres Strait Islander people at risk of suicide (NBMPHN 2016a; NBMLHD 2016c). It has been widely acknowledged by stakeholders that suicide prevention programs run by Aboriginal and Torres Strait Islander people are generally absent from the NBM region. |

| Outcomes of the service needs analysis – Primary Mental Health Care: *Suicide Prevention* | | |
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| **Skills and training capacity** | Appropriate skills and training for suicide prevention and follow up support is generally regarded as inadequate throughout the NBM region. | Stakeholders have indicated that (NBMPHN 2016a):<br>• Suicide prevention training and capacity amongst primary healthcare providers is unclear.<br>• Need for education and training for non-clinical workers who have contact with high-risk people e.g., police, ambulance.<br>• Lack of DBT (Dialectical Behaviour Therapy) training and services in the region.<br>• Lack of relevant staff and training in youth specific mental health first aid at local schools.<br>• Lack of cross-cultural suicide training for workers. |
| **Continuity and transfer of care** | Barriers to follow up and support after assessment for people at risk of suicide indicate breakdowns in continuity of care. | Stakeholders have identified barriers to follow up and support between hospital discharge and the community-based access teams (NBMPHN 2016a; NBMLHD 2016c):<br>• Lack of follow-up from Access teams, which is likely due to time constraints and difficulty in contacting people.<br>• People discharged from Access teams may not have a GP, aren't followed up by a GP or don't make an appointment.<br>• Lack of support for family members when people are discharged from hospital into their care. |
| **Absence of quantitative evidence to support analysis of demand for services** | Access to current data to support analysis of demand for suicide prevention services is poor. | Stakeholders have indicated that it would be particularly important to analyse the extent to which vulnerable populations such as Aboriginal and Torres Strait Islander people, adult men, and youth, utilise telephone services NBMPHN 2016a). |
| **General population awareness of support for suicide prevention** | Community awareness of suicide and risks is perceived as inadequate at the regional level. | Stakeholders have indicated that there is (NBMPHN 2016a):<br>• Lack of community engagement and understanding of suicide - prevalence is hidden.<br>• Lack of education and awareness to reach people who don't access mental health services. Some national public health campaigns are not localised. |
| **Evaluation of service models** | Existing models of care provided to the community to prevent suicide and support people at risk may not be properly evaluated to evaluate if they are meeting the needs of the community. | Previous stakeholder consultations indicated a lack of evaluation of existing service models for suicide prevention and support services (NBMPHN 2016a). |
| **Support for suicide prevention** | Limited post suicide prevention support services available for young people | Local service provider consultations indicate (NBMPHN 2018g; NBMPHN 2017b):<br>• there is a lack of post suicide prevention support services available for young people, particularly in the Lithgow LGA<br>• Young people are most likely to seek support from their friends, then parents and relatives. It is viewed that only a small proportion (e.g., 5-10%) of young people who may be at risk of suicide seek out support from agencies. |

| Outcomes of the service needs analysis – Primary Mental Health Care: *Suicide Prevention* | | |
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| | | • Consideration of the broader range of health, social and cultural factors for young people and what else is going on in their lives was recommended, as was moving towards peer support and online programs for supporting young people.<br>• As private counselling and community organisations including the headspace youth service do not provide long-term follow-up, it was recommended that programs consider how they are viewed to be relevant, affordable, and accessible by young people. |
| **Short term psychological intervention** | Access to the Psychological Therapy suicide prevention and support services is varied across the NBM region. | The NBMPHN funded, psychological therapy suicide prevention service has consistently been utilised to its full funding capacity and is a well-regarded and supported service among GP referrers and allied health providers.<br><br>In 2022-23, PTS providers saw 1907 unique clients (492 per 100,000).<br><br>This service fills a previous regional gap by providing a GP referral pathway for people at mild to moderate risk of suicide in accessing targeted, quick response short term psychological therapy services within the primary care sector. In previous years, referrals for this service have been uneven across the region however the introduction of telehealth services in 2019 as a response to the Covid-19 pandemic has helped to increase service distribution equality. |

| Outcomes of the service needs analysis – Primary Mental Health Care: *Mental Health* | | |
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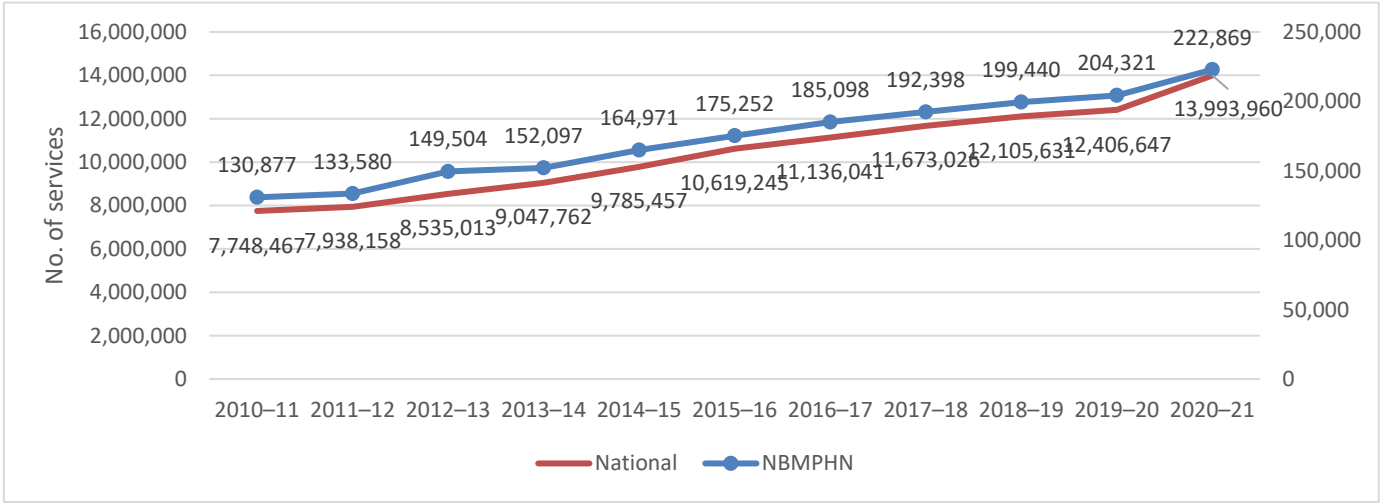
| **Identified Need** | **Key Issue** | **Description of Evidence** |
| **Demand for Commonwealth funded mental health services** | Positive trends can be identified in the uptake of Commonwealth funded MBS mental health service items by GPs, allied health, and psychiatrists. | Analysis of Medicare Australia MBS data for mental health service items shows that 49,599 patients (12.85% of the NBMPHN population in 2021) residing in NBMPHN accessed a total of 222,869 Commonwealth funded MBS mental health services in 2020-21 (AIHW 2022c; Centre for Epidemiology and Evidence n.d.t).<br>The number of mental health MBS services claimed by NBMPHN residents increased by 9.1% between 2019-2020 (204,321 services) and 2020-2021 (222,869 services). These increases appear to be like the trends seen across Australia during this period, and likely reflect increases in population size and demand for Commonwealth funded mental health services.<br><br>**Figure: Total of Commonwealth funded MBS Mental Health services delivered - NBMPHN vs. Australia, 2011-12 to 2020-21 (AIHW 2022c; NMHSPF n.d).**<br>  <br><br>The largest growth in Commonwealth funded MBS mental health services claimed between 2019-2020 and 2020-21 by service type was by: "Other Allied Health Providers" (40.69%), "clinical psychologists" (18.45%), and "other psychologists" (12.55%) (AIHW 2022c). |
| **Geographic access to Medicare mental** | The uptake of MBS funded | In 2020-21, the number and proportion of patients receiving MBS funded mental health-specific services in the NBM region by SA3 local area was highest in the Penrith followed by Blue Mountains and are summarised below (AIHW 2022c). |

| Outcomes of the service needs analysis – Primary Mental Health Care: *Mental Health* | | |
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| **health-specific services in the NBMPHN** | mental health-specific services appear to be highest in the Penrith and Blue Mountains SA3 areas. | • Penrith: 19,300 people (38.04% of patients)<br>• Blue Mountains: 12,255 people (24.16% of patients)<br>• St Marys: 6,378 people (12.57% of patients)<br>• Lithgow-Mudgee: 4,879 people (9.62% of patients)<br>• Richmond-Windsor: 4,870 people (9.60% of patients)<br>• Hawkesbury: 3,052 people (6.02% of patients) |
| **Mental health care provided by General Practitioners** | Proportion of general practice encounters that are mental health-related and number of GP MBS mental health-related services continues to increase. | Recent data from the RACGP (2021a) suggests that mental health presentations continue to increase, with over 70% of GPs indicating mental health as the most reported reason for GP presentations in 2021 up 9% from 2017.<br>Although the number of GP MH-specific services in the NBMPHN region in 2020-21 decreased slightly compared to 2019-20 (72,576 and 71,506 respectively), GPs still provided almost a third (32.56%, n = 72,576) of all MBS mental health-specific services in 2020-21. |
| **General practice mental health treatment plans** | Demand for GP Mental Health Treatment Plans in the NBM region. | General practice data indicates in the 15 months prior to May 2023, 17,320 (4.60%) active patients had a Mental Health treatment plan completed. 5,345 (1.42%) mental health treatment plan reviews and 14,361 (3.81%) mental health consults were conducted. |
| **Antipsychotic PBS prescriptions dispensed for mental health patients** | High rates of antipsychotic medicines dispensing. | Review of available data indicates the following (ACSQHC 2018):<br>• The rate of prescribing antipsychotic medicines to persons 17 years and under is relatively high compared to state averages in St Marys, Richmond-Windsor, Lithgow-Mudgee, and Penrith SA3 areas.<br>• The rate of prescribing antipsychotic medicines to persons 18-64 years is relatively high compared to state averages in Lithgow-Mudgee, Blue Mountains, St Marys, and Penrith SA3 areas.<br>• The rate of prescribing antipsychotic medicines to persons 65 years and older is relatively high compared to state averages in all Nepean Blue Mountains SA3 areas. |

| Outcomes of the service needs analysis – Primary Mental Health Care: *Mental Health* | | |
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| **Mental Health Nurse Incentive Program (MHNIP clients)** | Positive trends continue to be identified in the uptake of MHNIP services. | In 2018/2019 there were 182 patients receiving services through MHNIP. The number of patients receiving this service remained stable in 2019-2020 and 2020-2021 despite the impact of the Covid 19 pandemic. In 2021/2022 there were 244 patients receiving services through MHNIP (PMHC 2022a). There was a slight decrease in 2022/2023 with 222 patients receiving services. |
| | The Mental Health Nurse Incentive Program (MHNIP), delivered by mental health nurses in association with GPs, is a major source of clinical support to people with severe and persistent mental illness | GPs on the Clinical Council have previously stated that MHNIP services are valued by GPs but overall, there are insufficient services available, and the distribution of available services is unequal across the region (NBMPHN 2017c). Consultation with mental health nurses who provide MHNIP services have raised the following issues (NBMPHN 2016d):<br>• The therapeutic relationship and intervention between the consumer and mental health nurse is crucial to successful service delivery.<br>• Long term therapeutic relationship (using a variety of evidence-based therapy modes) can keep consumers out of hospital and off Community Treatment Orders.<br>• Consumers with complex trauma/post-traumatic stress disorder may not engage well with LHD community mental health services but may benefit from an ongoing therapeutic relationship with a mental health nurse.<br>• In addition to the therapeutic role mental health nurses also provide clinical care co-ordination, ongoing monitoring of mental state, contribute to medication reviews and monitor effects of medications and consider physical health needs. As such they are in a key position to meet the needs of certain clients on several levels.<br>• For some consumers, long term therapy supports them to manage their own lives in a better way.<br>• Mental health nurses provide ongoing stability and continuity of care which is important for this cohort and assists them in managing their mental health condition better. |
| | Unmet need: Workforce | Referrals across the region have been uneven in distribution. Attracting and retaining credentialled mental health nurses has been a significant barrier in being able to provide the services needed in underserviced LGA's such as Lithgow.<br>The development of a stable, and sustainable credentialed Mental Health Nurse workforce in the region is imperative to improve access to services for people with more severe and complex mental illness. |
| **Continuity of care after discharge from acute services** | Consultations indicate that there are possible breakdowns in the continuity of care for patients discharged from | Further investigations are required to examine possible sources of breakdowns in continuity of care. Stakeholders have previously expressed the following views (NBMPHN 2018d; NBMPHN 2016c; NBMPHN 2016h; NBMPHN 2017c; Mental Health Commission of New South Wales 2019; NBMPHN 2016k):<br>• Referring GPs do not consistently receive discharge information for acute mental health inpatient stays; the Nepean Hospital Triage and Assessment Centre does not provide any discharge or follow up letter to referring GPs.<br>• Lack of consistent approach to discharge planning including lack of coordinated follow up after discharge (unless consumer is on a Community Treatment Order).<br>• People discharged from Mental Health Inpatient Unit do not always make a follow up appointment with their GP. |

| Outcomes of the service needs analysis – Primary Mental Health Care: *Mental Health* | | |
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| | acute mental health services. | • Aftercare teams often receive limited information about requirements for patient follow-up.<br>• Consumers need to be offered active support at time of discharge in particular consumers who lack appropriate family support would benefit from personal and practical support (e.g., peer support workers) at time of discharge.<br>• Regular follow up phone calls with consumers and carers after discharge from hospital can positively support and influence adjustment period after discharge.<br><br>In September 2018, Nepean Blue Mountains Local Health District commenced a Supported Transfer Model of Care (funded by NSW Ministry of Health), implemented by Peer Workers. The service offers a 6-week program for persons following discharge from the acute mental health inpatient unit. It aims to connect identified persons with a range of community supports, assist them with stepping up and down to relevant services and provide appropriate follow-up during this period. This service is intended to complement the Peer led aftercare service for persons who have made an attempt on their life, following acute discharge (funded by NBMPHN). |
| **Coordination of care** | Mental health services across the region appear to be impacted by fragmentation of services. | Preliminary stakeholder consultation indicates a wide range of issues that may be sourced back to fragmentation of service delivery. Stakeholders have expressed the following views that may be related to fragmentation of services (NBMPHN 2018d; NBMPHN 2016c; NBMPHN 2016h; Trankle and Reath 2015; NBMPHN 2018e; NBMLHD 2016c):<br>• Episodic nature and lack of effective coordination, integration and follow up between acute and primary mental health care. Lack of care coordination, referral pathway coordination and case management (including public and private sector and clinical as well as nonclinical services) to support consumer centred care based on consumer need rather than available service options.<br>• Lack of service coordination and linkages to support seamless step up or step down from services.<br>• Consumers with complex trauma need access to long-term integrated care between GP, psychiatrist, mental health nurse and psychologist (or equivalent) to support recovery journey.<br>• Significant number of consumers are not connected to GP and do not have a 'medical home'.<br>• Significant number of consumers without a carer - they are especially vulnerable, particularly in the older age group, and in need of care coordination.<br>• Lack of coordination between outreach areas and Nepean Hospital for acute mental health issues.<br>• Lack of coordination and sharing of information/results of regular screening for physical health issues between GPs and Community Mental Health.<br>• Need for clinical multidisciplinary approach to care and sharing of information between public and private sector.<br>• Lack of access to consumer mental health information by NGOs.<br>• The availability of multiple entry points for patients to access care within the tertiary mental health system other than through a GP, potentially erodes continuity of care and provision of appropriate follow-up of care by GPs post discharge. This frequently presents a challenge for GPs in identifying:<br>o The point at which patients are discharged.<br>o If adequate follow-up care is / isn't being provided.<br>o Lines of responsibility for follow-up care. |

| Outcomes of the service needs analysis – Primary Mental Health Care: *Mental Health* | | |
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| | | ○ The point at which care should be transferred back to GPs.<br>• Need for case workers or capacity for case management to assist patients / consumers accessing care, particularly their physical health care.<br>• Need for a "Passport of care" to assist patients / consumers navigate the required steps up and or down. |
| **Psychiatry service gaps** | There is a perceived lack of specialist psychiatric services in the NBM region. | Stakeholders have indicated the following concerns regarding access to specialist psychiatric services (NBMPHN 2016d; NBMPHN 2016h; Trankle and Reath 2015; NBMPHN 2018e; NBMPHN 2017c):<br>• Lack of psychiatric services across the region (AIHW 2021v; DoH 2016a).<br>• Lack of sufficient bulkbilling by private psychiatrists (long waiting lists for those who do bulkbill).<br>• Long waiting lists to access public psychiatrists.<br>• Limited access to psychiatrists is perceived to be a significant barrier for patients to access the services they need by local GPs.<br>• Telepsychiatry services have been commenced from April 2023 to meet some of this need. This approach was endorsed by the GPCC (GP Clinical Council). |
| **Gaps in service provision** | Stakeholder perceptions of gaps in service provision. | Stakeholders have previously expressed the following concerns (NBMPHN 2018d; NBMPHN 2016c; NBMPHN 2016h; NBMPHN 2018e; NBMPHN 2017c; Dalton et al. 2018; Aboriginal and Torres Strait Islander Sharing and Learning Circles 2015):<br>• Lack of awareness of other services in the community among many service providers, a lack of understanding of the role of different mental health services and if and how these are integrated, and lack of knowledge about the role of mental health clinical and support services among service providers and community members. This makes referral pathways problematic and results in duplication of some services.<br>• Lack of evidence-based treatment services for consumers with complex trauma (often diagnosed with personality disorders).<br>• Lack of step-down facilities from acute to sub- or non-acute care, and lack of stepdown services from severe to moderate mental illness.<br>• Lack of appropriate integrated service options (including between LHD and primary care) for consumers with dual mental health and D&A diagnosis.<br>• Lack of sufficient subsidised group work (e.g., mindfulness-based stress reduction).<br>• Inconsistent provision of psychosocial services and appropriate social support to support consumers at all stages of their recovery journey across the region (particularly Blue Mountains, Lithgow, and Hawkesbury).<br>• Lack of community based specific post-natal depression services available.<br>• Need for advance statements for Mental Health which can be uploaded to MyHealth Record – this will help avoid consumers having to retell their story repeatedly (which can lead to reliving trauma) when engaging with new clinical services.<br>• Need for approaches that enable consumers and carers to have a broad and clear understanding and visibility of services available across the system, what they do and their referral or access pathways. |

| Outcomes of the service needs analysis – Primary Mental Health Care: *Mental Health* | | |
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| **Gaps and barriers to accessing housing and accommodation** | Access to housing and accommodation for people with mental illness is inadequate across the NBM region. | Relevant research and stakeholder feedback indicates that there is a lack of housing options for people with mental illness in the region and that this is having negative consequences for the wellbeing and ongoing treatment of people with mental health problems. Stakeholders have raised the following concerns (NBMPHN 2016d; NBMPHN 2018d; NBMPHN 2016c; NBMPHN 2016h; NBMPHN 2018e; Dalton et al. 2018):<br>• Lack of appropriate accommodation for homeless people results in discharged from hospital to unstable accommodation and increases likelihood of re-admission.<br>• Lack of available accommodation for homeless people can result in unnecessary longer hospital stay (social admission).<br>• Lack of stable long term quality accommodation which is socially supported and economically sustainable and considers the special needs of consumers (e.g., HASI type services).<br>• Lack of mental health outreach services for homeless people in the region.<br>• Insufficient emergency accommodation. |
| **Capacity building to support carers and consumers** | Respite care and other types of support for carers and consumers may be inadequate in the NBM region. | Stakeholders have raised the following concerns (NBMPHN 2018d; NBMPHN 2016c; NBMPHN 2016h; NBMPHN 2018d):<br>• Carers and families not sufficiently included and not receiving sufficient support (e.g., respite options).<br>• Carers and families not adequately informed about the mental health condition of the person they care about so they can stay safe and supportive in their own environment.<br>• Lack of support for financial management – consumers accumulate debts which jeopardise payment for accommodation and living expenses, increases anxiety and can contribute to homelessness.<br>• Insufficient education of consumers about prescribed medications including side effects.<br>• Need for local mental health care support groups for carers &/or consumers. |
| **Workforce capacity** | Workforce capacity for mental health in the region could be substantially improved with training and skills development. | Further research is needed to examine the potential sources of the issues raised by stakeholders to develop appropriate options. Concerns previously raised by stakeholders include (NBMPHN 2018d; NBMPHN 2016c; NBMPHN 2016h; NBMPHN 2018e; DoHAC 2022e):<br>• Increase GPs knowledge of available clinical and non-clinical services and their referral pathways.<br>• Increase GP capacity to identify early if consumer needs more intensive treatment (not provided through Psychological Therapy Services or Medicare) such as MHNIP.<br>• Need for trauma education for health professionals.<br>• Lack of GP Education dual diagnosis drug and alcohol & severe mental illness.<br>• Insufficient dual diagnosis support and supervision for private therapists.<br>• Lack of GP education in relation to depression in the elderly.<br>• Lack of peer workers to help increase consumer health literacy, understanding of treatment and psycho-social support options and to provide support for people while in acute care and in the community – identified as a high need by consumer group.<br>• Consumer and carer peer workers only make up 5% and 14% of the NMHSPF target respectively.<br>• Lack of support workers who are available after hours and on weekends. |

| Outcomes of the service needs analysis – Primary Mental Health Care: *Mental Health* | | |
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| | | • Need to develop a set of referral options or services algorithm for Allied Health professionals (other than psychologists, e.g., Pharmacists) to increase Allied Health capacity to discuss appropriate referral or local service options with clients / consumers with mental health concerns. |
| **Lack of culturally safe mental health services** | Lack of culturally safe mental health services available to Aboriginal and Torres Strait Islander people in the region. | Mental health services provided to Aboriginal and Torres Strait Islander people in the region are generally not regarded as culturally secure and supportive of the needs of Aboriginal and Torres Strait Islander people. Aboriginal and Torres Strait Islander staff make up less than 1% of the New South Wales Mental Health Workforce. In Nepean Blue Mountains the target is for 11.7 Aboriginal and Torres Strait Islander staff members (1 AMHW/1000 population) in 2016 the region is only meeting 26% of that target with 3 Aboriginal and Torres Strait Islander Mental Health Workers and Clinical Leaders employed (Audit Office of New South Wales 2019).<br><br>The following issues have previously been identified via community consultations with Aboriginal and Torres Strait Islander people held in 2014 and 2016 (NBMPHN 2016e):<br><br>• Lack of Aboriginal and Torres Strait Islander programs run by Aboriginal and Torres Strait Islander people.<br>• Lack of culturally appropriate services and lack of Aboriginal and Torres Strait Islander workers in identified roles, including community programs, psychiatrists, and psychologists.<br>• Lack of focus and provision of early intervention services and programs.<br>• No Aboriginal and Torres Strait Islander Controlled Medical Service available in Lithgow, Hawkesbury, and Blue Mountains LGAs.<br>• Need for improved and enhanced dual diagnosis mental health and D&A services.<br><br>Further consultation with Aboriginal and Torres Strait Islander community members in each of the region's LGA confirmed previously stated concerns and in addition raised the following issues (NBMPHN 2016a; NBMPHN 2016h; NBMLHD 2016c; Shared Path 2016; Nepean Community & Neighbourhood Services 2016; NBMPHN 2016j):<br>• Need for regular Aboriginal and Torres Strait Islander health clinics &/or forums in local hospitals and Community health centres.<br>• Need for alternative, complimentary programs/services that build on cultural strengths to engage and support people in developing positive coping strategies.<br>• Need for people centred approaches (i.e., to examine issues from the whole person's perspective to identify appropriate solutions).<br>• Need to develop partnerships and pool resources with other non-health sectors (e.g., police, education, housing, sport, and recreation).<br>• Intergenerational trauma needs to be recognised and addressed through innovative, locally developed and coordinated programs.<br>• Address and eradicate systemic, institutionalised racism in health services – this will help develop trust with Aboriginal and Torres Strait Islander communities.<br>• Increase the number of preventative services to address underlying issues before people reach crisis, particularly for children and young people. |

| Outcomes of the service needs analysis – Primary Mental Health Care: *Mental Health* | | |
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| | | • Lack of dual diagnosis (mental health and alcohol/other drugs) unit means people bounce between detox and psychiatric units.<br>• Short funding cycles for services do not allow for trust to be built.<br>• Need for Aboriginal and Torres Strait Islander Community hubs in each LGA to provide a safe meeting space.<br>• Need for Aboriginal and Torres Strait Islander controlled health services in each LGA.<br>Need for culturally appropriate services which take a holistic and whole of family approach to emotional health and well-being. |
| **Workforce training and capacity building** | Widely perceived lack of awareness of Aboriginal and Torres Strait Islander mental health needs from service providers. | Stakeholders have indicated a general lack of awareness of the needs of Aboriginal and Torres Strait Islander people with mental illness, as well as the need to develop programs to target those needs. The concerns raised by stakeholders in preliminary consultations included the following (NBMPHN 2016e; NBMPHN 2016h):<br>• Mental health services need to willingly to engage with Aboriginal and Torres Strait Islander communities and need proper guidance from community members (Elders) to build trust.<br>• Need to increase designated Aboriginal and Torres Strait Islander specific clinical positions in mental health.<br>• Lack of understanding of stressors affecting the mental health of Aboriginal and Torres Strait Islander people, particularly intergenerational trauma, and associated PTSD.<br>• Lack of Aboriginal and Torres Strait Islander mentors for people undergoing treatment and therapy.<br>• Need to increase mental health literacy in Aboriginal and Torres Strait Islander communities.<br><br>Consultations with Aboriginal and Torres Strait Islander community members in Penrith, Hawkesbury, Blue Mountains, and Lithgow and with Aboriginal and Torres Strait Islander workers in Penrith and Lithgow confirmed the points stated above and in addition raised the following (NBMPHN & NBMLHD 2018, NBMLHD 2017c; Nepean Community & Neighbourhood Services 2016; NBMPHN 2016j):<br>• Communities have higher expectations of professionals in Aboriginal and Torres Strait Islander identified positions than of mainstream mental health workers.<br>• There are insufficient Aboriginal and Torres Strait Islander workers in dedicated health and mental health positions – this puts a lot of pressure and strain on existing Aboriginal and Torres Strait Islander health workers.<br>• The experience of Aboriginal and Torres Strait Islander workers is too often discounted when they do not have health or allied health qualifications.<br>• Aboriginal and Torres Strait Islander health workers need to be accepted as integral members of clinical teams, with the importance of these positions to the Aboriginal and Torres Strait Islander communities recognized.<br>• There is insufficient gender mix of Aboriginal and Torres Strait Islander health workers.<br>• Community expect support from Aboriginal and Torres Strait Islander health workers which often does not fit the narrower and often inflexible expectations of the employer, i.e., workers are expected to get involved in all sorts of issues which is outside their designated job description. This can create stress and tension in Aboriginal and Torres Strait Islander workers.<br>• There is a high expectation from community that Aboriginal and Torres Strait Islander Health Workers have skills and capacity to provide a wide range of supports and services at the one place. |

| Outcomes of the service needs analysis – Primary Mental Health Care: *Mental Health* | | |
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| | | • There is a need for more Aboriginal and Torres Strait Islander workers who can act as cultural translators and support community members to navigate and access mainstream services.<br>• There is a lack of cultural supervision and mentoring to support Aboriginal and Torres Strait Islander workers.<br>• There is an ongoing need for cultural awareness and competency training for all non-Aboriginal and Torres Strait Islander health service providers to improve cultural safety for Aboriginal and Torres Strait Islander people accessing services.<br>• Issues of burnout are common among Aboriginal and Torres Strait Islander health service providers, due to significant demand placed upon Aboriginal and Torres Strait Islander health and social workers with limited support or staffing capacity to meet expectations. |
| **Service accessibility among CALD communities** | Lack of targeted support for CALD populations across a range of mental health service needs. | A range of service support needs have been identified for CALD populations including suicide prevention, outreach services, and specialist services include post-natal support for depression. A positive finding of the 3BU project was that most participants viewed their GP as the first point of contact to provide a referral to a psychologist or the mental health service system. The concerns raised by stakeholders include the following (NBMPHN 2016h; Syeda 2016; NBMPHN 2018e; Shared Path 2016):<br>• Lack of appropriate transcultural services in suicide prevention in all LGAs.<br>• Lack of mental health outreach services for CALD people.<br>• Lack of culturally appropriate psychiatric and psychological services, and poor level of cultural competency among mental health service providers in general.<br>• Lack of CALD clinicians, e.g., counselling services in own language.<br>• Lack or poor use of interpreters, or poor skills in the use of interpreter services.<br>• Lack of post-natal support/services for people suffering post-natal depression.<br>• Need to support people from CALD communities who remain isolated in their own homes and remain hesitant to access mental health services.<br>• Stigma of mental illness and denial of mental health issues within some CALD communities hamper early intervention.<br>• Lack of mental health literacy.<br>• Unfamiliarity with health and mental health systems and lack of knowledge how to navigate system.<br>• Reluctance to use medications by some CALD communities.<br>• Services limited by criteria which do not meet need of CALD communities.<br>• Absence of CALD focused performance indicators and accountability standards. |
| **Workforce training and capacity development for CALD populations** | Need for enhanced workforce training to support special needs of CALD | A range of workforce issues have been identified for CALD populations. These include awareness of support services for CALD populations (translator services) and transcultural competency.<br><br>The concerns raised in previous stakeholder consultations include the following (NBMPHN 2016h; Shared Path 2016; Syeda 2016):<br>• More education is needed for clinicians in relation to the high number of psychosomatic disorders within the CALD community.<br>• GP's need more education in working with CALD communities in relation to their mental health – lack of cultural understanding. |

| Outcomes of the service needs analysis – Primary Mental Health Care: *Mental Health* | | |
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| | populations with mental illness. | • Lack of training provided to GP's / Allied Health in using Telephone Translation Services.<br>• Lack of transcultural competency in workforce.<br>• Lack of bi-lingual health/mental health clinicians.<br>• Education, information, and mental health literacy for CALD community organisations on existing mental health services so they can support their communities adequately. |
| **Communication For CALD populations** | Inadequate communication for CALD populations regarding mental health service information and resources. | A range of communication issues have been identified for CALD populations. These include awareness of support services in relevant languages, mental health educational resources and the need for CALD specific directories of services. The concerns raised in stakeholder consultations include the following (Shared Path 2016; Syeda 2016):<br>• Lack of easy to access services outside the clinical setting.<br>• Lack of education in relation to stigma and discrimination with regards to mental health in CALD communities.<br>• Lack of awareness on how to navigate the mental health system and what supports are available.<br>• Lack of local mental health related resources in different languages. |
| **Homelessness and mental health** | Inadequate referral pathways between clinical and social support services for mental health patients with housing and accommodation problems. | Concerns continue to be raised by NBM stakeholders regarding the difficulties encountered by people with mental illness in relation to housing (Shared Path 2016). These include:<br>• The inadequacy of the number of HASI packages and the criteria for eligibility.<br>• Lack of mental health skills amongst homelessness assertive outreach workers.<br>• Lack of referral pathways between clinical and non-clinical mental health service providers for people who are homeless. |
| **Service needs for prisoners upon release.** | Prisoners transitioning to the community have high needs. | Correctional services stakeholders from the NBM region have indicated that the mental health needs of former inmates are not currently being met in a substantive or systematic way post-release. The NBMPHN Clinical Council and NBMLHD Aboriginal and Torres Strait Islander Health workers have additionally raised there is currently a lack of and poor-quality aftercare for persons newly released from prison in the Lithgow LGA (NBMLHD 2017c; NBMPHN 2016i). |
| **Regional variation in the provision of services** | Inadequate mental health services in outer | Stakeholders have indicated concerns specific to the outer areas of the NBM region, in particular Lithgow and Hawkesbury LGAs. Stakeholder consultations have raised a wide range of issues, including the following (NBMPHN 2016h; NBMPHN 2018e; NBMPHN & NBMLHD 2018; Mental Health Commission of NSW 2019): |

| Outcomes of the service needs analysis – Primary Mental Health Care: *Mental Health* | | |
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| | LGAs of NBM region. | Lithgow and Hawkesbury –<br>• Most mental health consumers in Lithgow and Hawkesbury are unable to afford the gap for Medicare-subsidised (private) psychology services.<br>• Social isolation in outer regional areas particularly Lithgow and Hawkesbury LGAs.<br><br>Hawkesbury –<br>• Minimal mental health support – Nepean hospital is main MH inpatient unit which often has bed block.<br>• Lack of a drop-in space for mental health consumers to get help or information, or for family members to seek help.<br>• No psychiatrist or medication review consultations are available for non-acute patients.<br>• Ongoing staffing capacity challenges at the Community Mental Health team in Windsor.<br><br>Lithgow –<br>• Social determinants such as housing, transport, lack of finances and lack of employment are significant barriers for having good mental health.<br>• There is a lack of crisis support.<br>• The geographical location of Lithgow being "the end of the train line" is challenging for mental health service provision and how far people travel to access services.<br>• Limited and poor access to psychiatrists and clinical psychologists, with waiting lists / times, gap payments and transport (for those who sought specialist care in areas outside of Lithgow) identified as key barriers.<br>• Limited availability/location of specialist mental health clinical services – Katoomba hospital is the closest MH inpatient unit for MH patients from Lithgow.<br>• A perception that LHD specialist mental health services are difficult to access due to a focus on severe mental illness, and services not being available for less serious patients.<br>• Limited awareness of support service options (including employment access, training, welfare and housing support) for people with a mental illness, and concern these services often work beyond their skills and capacity due to a lack of access to specialist mental health services in the areas.<br>• No mechanisms for escalating clients with deteriorating mental health because of difficulties in accessing more specialist clinical mental health care. |
| **Service accessibility among LGBTIQA+ communities** | Lack of services for LGBTIQA+ people with mental illness | Mental Health services working specifically with the LGBTIQA+ community are limited in NBM (LGBTIQ+ Health Australia 2021b). Previous consultations have strengthened this view, indicating that LGBTIQA+ people living in the NBM region may not be receiving adequate support for mental illness (NBMPHN 2018e; NBMPHN 2020a). However, several local social and support groups exist for adult and young LGBTIQA+ people in Katoomba, the Blue Mountains and Penrith. Clinical services including medical, nursing, and social work are provided through the Sexual Health and HIV Clinic at Blue Mountains and Nepean (Penrith), and the NBMLHD Health Promotion team provide health promotion, education, and referral services relevant to the NBM LGBTIQA+ communities. |

| Outcomes of the service needs analysis – Primary Mental Health Care: *Mental Health* | | |
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| **Short term focused psychological interventions.** | Major barriers to accessing NBMPHN coordinated Psychological Therapy Services. | The NBMPHN Psychological Therapy Services (formerly known as ATAPS) provide short-term support to people who have mild to moderate mental health concerns and identify with one or more under-serviced groups. Under this service, individuals can have up to 10 sessions in a calendar unless otherwise noted below. Therapeutic services available are for community members who identify within 1 of 10 priority groups (NBMPHN n.d.a).<br><br>In 2020-21, 1605 people accessed NBMPHN Psychological Therapy Services. The number decreased to 1415 in 2021-2022. In 2022-2023 the number increased to 1865.<br><br>Service provider feedback to NBMPHN indicates that the existing service structure stream has led to the following gaps in services:<br>• Most streams require the participant to hold a health care card, yet there is a need for individuals to have cost effective access to psychological intervention in times of temporary or sporadic financial crisis. As many in this situation do not have a health care card they do not qualify and therefore need to find a Practitioner that will bulk bill.<br>• Availability of psychologists and AHPs in the region is limited, with long wait times and a lack of those that bulk bill.<br>• The introduction of the Extended referral stream in 2018 allowed those with moderate to severe mental illness with added complexity inclusive of trauma, to receive 49 hours of support over a two-year period. This stream is for people over the age of 25 yet there have been several referrals requesting this service for people under the age of 25. More recently as patients come to the end of their two-year program there has been a high demand for ongoing support beyond two years.<br>Increased demand in the SOS suicide prevention stream and extended stream has contributed to the demand capacity issues of AHPs offering Psychological Therapy Services in the region (NBMPHN 2021e; NBMPHN 2020c). |
| **Gaps in services and barriers to accessing services for children and youth.** | Inadequate paediatric and adolescent service provision in psychiatry and mental health. | There are indications that the apparent increase in mental illness amongst children and adolescents over recent decades has not been met in the NBM region by increasing the range and number of services targeting this population. Stakeholder consultations have raised the following concerns regarding gaps in services and barriers to service provision for this population (NBMPHN 2016h; NBMPHN 2018e; headspace 2018; Shared Path 2016):<br><br>• Lack of psychiatric services for children and young people.<br>• Lack of general intervention programs for children under 12 to support complex needs.<br>• Difficulty in finding services for 18–25-year-olds, and no provision for people under 18 to be admitted to Nepean Hospital Mental Health Unit.<br>• Inadequate sessions available through Medicare subsidised and PHN-funded psychological therapy services, for persons with long-term moderate to severe mental illness / support needs, who often use up the available services quickly within the calendar year.<br>• Costs of services for those with moderate to severe and complex mental illness who are not in crisis are perceived to be prohibitive outside the public health system.<br>• Limited availability of online information for public mental health services to assist young people determine if the service can meet their needs. |

| Outcomes of the service needs analysis – Primary Mental Health Care: *Mental Health* | | |
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| | | • Limited skills among health practitioners and/or capacity within public services to effectively assist young people with multiple diagnoses &/or complex conditions, such as eating disorders and borderline personality disorder.<br>• Safety checks (to identify those who may be at risk of suicide) completed by Community teams are often very basic and not viewed as adequate.<br>• Unwillingness of less acute services to continue to provide support for young people who identify they have attempted suicide, self-harm, or experienced suicide ideation. This interrupts service continuity for the range of supports needed by young people to maintain mental wellbeing. |
| **Services for vulnerable groups within young populations** | The overall perceived lack of services for young people in the region appears to be aggravated for young people in vulnerable groups. | Stakeholders have indicated that children and young people who are especially vulnerable have unmet service needs. Stakeholders raised the following concerns (NBMPHN 2016h; NBMPHN 2018e; NBMPHN 2017c; Shared Path 2016):<br>• Need for better connection for young people in and out of Home Care, Juvenile Justice, FACS, Health and NGOs, through sharing data and information to support integrated care with clinical in-reach. There are many services but little or no communication feedback loops.<br>• Lack of service provision for children high on the Autism Spectrum.<br>• Lack of support for young people identifying as LGBTIQA+.<br>• Lack of Aboriginal and Torres Strait Islander and CALD youth/child mental health services.<br>• Limited-service provision for young mothers with children who are experiencing symptoms of anxiety and depression, and antenatal services for young mothers with perinatal depression.<br>• Lack of appropriate support for homeless youth. |
| **Adequacy of supported accommodation available for young people with a mental illness** | Supported accommodation available for young people with a mental health illness are inadequate and or not fit for purpose | Stakeholders have raised the following issues (NBMPHN & NBMLHD 2018):<br>• Inadequacy of housing available for young people with a mental health illness.<br>• Limited places available in care facilities that cater for people with a mental illness, and which are age-appropriate for young people.<br>• Care facilities are poorly equipped to provide appropriate support for people with a mental illness.<br>• Lack of safe and secure care facilities available for young people with a mental illness. |
| **Regional variation in provision of services** | The perceived lack of service provision for children and youth may be aggravated in the upper Blue | Stakeholders have identified the potential for poorer service availability in locations where there are higher proportions of young people. Concerns raised by stakeholders included the following (NBMPHN 2016h; NBMPHN 2018e; Shared Path 2016):<br>• Lack of mental health services in the Upper Mountains and Hawkesbury.<br>• Lack of Youth acute services available in Hawkesbury.<br>• Lack of outreach services across all 4 LGAs.<br>• Lack of tertiary mental health unit for children and youth in the region. |

| Outcomes of the service needs analysis – Primary Mental Health Care: *Mental Health* | | |
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| | Mountains and Hawkesbury | • Lack of GP's who can take children/youth. |
| **headspace services within region** | There are three headspace centres in the region, located in Penrith, Katoomba, and Lithgow | headspace Penrith has been in operation since May 2013 to deliver services addressing mental health, physical and sexual health, drug and alcohol and vocational issues for young people aged 12-25 years in the region. Since 2014 headspace Penrith also operates a headspace Youth Early Psychosis Program as a spoke of the western Sydney hub and spoke model. Concerns have been raised that headspace is not well integrated with GPs and that GPs do not always receive feedback when they have made a referral (NBMPHN 2017c). In 2018, NBMPHN commissioned Parramatta Mission (now Uniting) to offer an additional Youth Severe service at the Penrith headspace centre, with outreach to Hawkesbury and Blue Mountains. The service targets young people aged 12-25 years at risk of or with a severe (non-psychotic) mental illness and is intended to provide wrap-around services with clearly defined clinical care.<br><br>In August 2019, NPMPHN commissioned a headspace satellite service, operated by Marathon Health Ltd. in Lithgow. The satellite service offers a mix of outreach into schools, in centre and telehealth appointments for young people aged 12-25 years with low to mild mental health, alcohol and other drugs, physical and/or sexual health and work and study needs. Marathon Health also delivers a youth severe service out of headspace Lithgow, Youth Plus. This is a brief intervention service available in the Lithgow area that offers young people aged 12-25 years, who are in crisis, a set of specific individual appointments that aim to provide support, help navigate them through a crisis and link them in with other services as needed.<br><br>The lack of and need for headspace type services in upper Blue Mountains and Hawkesbury has been raised at various stakeholder consultations (NBMPHN 2016h; NBMPHN 2018e; NBMPHN 2017c; NBMPHN 2019e; NBMPHN 2021h). Following these community concerns and consultations, the NBMPHN was successful in advocating for funding for a headspace satellite service, in Katoomba. This satellite service opened in 2020 and is operated by Uniting and attached to its parent site headspace Penrith. headspace Katoomba offers young people aged 12-25 years assistance with low to moderate mental health support, as well as support with work and study and alcohol and/or other drugs.<br><br>NBMPHN was successful in securing funding for a full headspace centre for the Hawkesbury region in 2022. To assist the young people in the Hawkesbury communities in the meantime, especially following several years of consecutive natural disasters, including droughts, floods and the Covid-19 pandemic, an outreach service from headspace Penrith into the Hawkesbury community operates with a clinician available at several pop-up locations throughout the region. |
| **Community wide communication to support people at risk of mental illness** | Enhanced and targeted communication methods are required to engage and inform the | Suicide Prevention Australia (2022) and previous stakeholder consultations have raised concerns regarding community wide engagement and education concerning mental health, risks, and wellbeing (NBMPHN 2016h; NBMPHN 2017c; NBMLHD 2016c):<br>• Need for resources and education that promote mental wellbeing in non-clinical settings.<br>• Lack of service navigation website or tool to find appropriate services and interventions across the stepped care model.<br>• Lack of guidance available to access appropriate, evidence-based digital interventions.<br>• Need for support to use e-health interventions in the home. |

| Outcomes of the service needs analysis – Primary Mental Health Care: *Mental Health* | | |
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| | general population about the risks of mental illness and available supports. | • Need for early intervention and access to low intensity services for high school and university students to start intervention before there is significant illness.<br><br>The Commonwealth Department of Health launched *'Head to Health' the* new digital mental health gateway for low intensity mental health services in October 2017 (NBMPHN 2019d). Some of the stakeholder concerns regarding lack of a service navigation tool have been addressed through the development and launch of NBMPHN's *'Mental Health Help'* website, a new regional Mental Health Navigation Tool.<br><br>In response to this mental health need NBMPHN has delivered two mental health pathways by way of the IAR Intake service, introduced in September 2021 and the Penrith Head to Health Centre.<br><br>The IAR Intake team consists of 5 clinicians made up of mental health nurses, trained clinical social workers and psychologists, with a dedicated Pop-Up offering peer support, counselling, and social workers to provide face to face and telehealth mental health services. The Pop Up supports all ages of referrals including child and youth referrals and has a no wrong door policy. The Pop Up is based in Richmond in the Hawkesbury LHD. With the Pop Up being able to cater for child and youth referrals has helped to manage demand for the very successful headspace programs at Penrith and Katoomba as well.<br><br>The Penrith Head to Health Centre was established in December 2021 and offers face to face mental health supports with a wide range of service available from peer support to counselling to mental health clinical treatment. The Centre is open 7 days a week and offers evening access until 9:30pm 6 days a week to support those unable to access service during the day. The service accepts referrals through the IAR Intake line or clients can walk in and access care.<br><br>Both the Penrith Head to Health Centre and Hawkesbury Satellite are free to access to the public, no referral is required, and both services offer a no wrong door policy. |
| **Impacts of COVID** | COVID impacted accessibility of mental health services. | The national H2H phone line and consequently our IAR clinical intake and pop up were a direct response to COVID-19 and a Govt directive to get things up within a 4-week timeframe in Sep 2021. The Adult Mental Health Centre located in Penrith was in concurrent development and opened in December 2021. |
| **Services to support people with low intensity mental health needs** | Local 'bricks and mortar' services are available, but they are not 'joined up' into a network and awareness of | There is a broad range of services available within the NBMPHN catchment that include counselling and advice services. These comprise of (NBMPHN n.d.a):<br>• General counselling<br>• Family counselling (or family support services)<br>• Financial counselling, information, advice, education, and referral services<br>• Mental health advocacy services<br>• Legal information and advice. |

| Outcomes of the service needs analysis – Primary Mental Health Care: *Mental Health* | | |
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| | their capacity amongst GPs and other relevant service providers (e.g., emergency departments) is limited. | In 2019, Live Life Get Active Pty Ltd were commissioned to deliver low intensity mental health services involving an outdoor physical exercise program targeting people with emerging mental health issues or who are risk of developing mild to moderate mental illness. These programs became available is all LGAs. |
| | On-line services to support people with low intensity mental health needs are increasingly available; details on awareness and use of these services needs exploration. | There is a high awareness of Lifeline, but this is focused on supporting people in crisis. There is a need to promote mental health e-services to stakeholders. It is expected that Australia's national digital mental health gateway 'Head to Health' will facilitate access to digital mental health services as well as complementary face-to-face therapies.<br><br>In early 2022, NBMPHN launched the ability for any consumer to engage directly with the Head to Health Intake team via an online portal available for access 24 hours a day, 7 days a week. This portal will allow consumers to book a call back, access resources and start an action plan to improve their mental health outlook. All call back requests will be actioned within 24 hours during business days to ensure the need is met and the consumer engaged. |

## Psychosocial support for people with severe mental illness: (Commonwealth Psychosocial Support)

| **Outcomes of the service needs analysis – Primary Mental Health Care: Mental Health *(Psychosocial support for people with severe mental illness)*** | | |
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| **Identified Need** | **Key Issue** | **Description of Evidence** |
| **Systems reform** | Significant opportunities for (and barriers to) system reform exist to assist health professionals and consumers identify appropriate psychosocial referral options. | Examination of available evidence and local consultations highlight the following issues across the local service system (NBMPHN 2018f; Harvey et al. 2016):<br>• Psychosocial service system is fragmented and confusing for health professionals and consumers alike. GPs are unsure what clinical presentations are suitable for what psychosocial service.<br>• Referral criteria is confusing and there is not central triage point with system expertise and reach.<br>• Consumers must retell their story as psychosocial services not connected to clinical care in meaningful ways.<br>• Transitional policies and short funding cycles of psychosocial services leads to operational scaling up and winding down in rapid succession. This is not conducive to therapeutic relationships and does not give services opportunity to mature.<br><br>A key finding of the Productivity Commission Mental Health Report (2020) asserts as a recommendation the importance in improving the availability of psychosocial supports (Recommendation no. 17) through a systemic shift in the way these supports are planned and funded and recognising their importance for consumers in the mental health system. This includes addressing the impact of issues caused by funding arrangements - short funding cycles limit the effectiveness of services and exploring systemic issues, in particular reform to governance, the integration and coordination of services and workforce arrangements for community mental health sector. |
| **Aboriginal and Torres Strait Islander identified staff and culturally safe services** | Lack of investment in Aboriginal and Torres Strait Islander staff in both clinical settings and psychosocial services. | A lack of investment in the local Aboriginal and Torres Strait Islander workforce is identified, including (NBMPHN 2018f; AHMAC 2016; DoH 2017a):<br>• Lack of Aboriginal and Torres Strait Islander staff in both clinical settings and psychosocial services.<br>• Lack of cultural engagement frameworks and best practice solutions to attracting and retaining Aboriginal and Torres Strait Islander staff. |
| **Overall lack of mental health support services** | Limited resourcing, long waiting lists and poor demand management strategies for psychosocial programs. | Consumer consultations indicate an overall lack of local mental health support services, specifically (NBMPHN 2018f):<br>• Limited government resources for psychosocial programs<br>• Long waiting lists and poor demand management strategies<br>• Short funding cycles leading to reduced quality of care |
| **Barriers to access** | Identified need to create consumer- | Identified barriers to accessing local services include (NBMPHN 2018f; Dalton et al. 2018; HCCC 2017; Department of Health 2015; BMCC 2016): |

| Outcomes of the service needs analysis – Primary Mental Health Care: Mental Health *(Psychosocial support for people with severe mental illness)* | | |
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| | oriented pathways to accessing services, such as a soft entry hub model / drop-in centre. | • Referral is system oriented and not consumer oriented.<br>• Soft entry via a hub model/drop-in centre was identified across all LGAs.<br>• Transport as a geographic barrier to service remains an issue across all LGAs. |
| **Out of Hours Access** | Limited access to afterhours GP services | Consumers perceive limited access to GP services and support after hours (Dalton et al. 2018). Outside standard operational hours is often the time consumers seek help and present to acute care settings. |
| **Broader system needs capacity building and education around mental health** | Identified need for basic mental health training for mainstream services. | Basic mental health training for mainstream services such as Centrelink, Housing, Police, employers, and community organisations to make them more inclusive (NBMPHN 2018f). |
| **Hoarding and Squalor** | Limited services available to assist those suffering from hoarding and living in squalor. | Hoarding is associated with severe mental health conditions and data suggests that 12% of all NSW Fire fatalities are reportedly hoarders or were living in squalor conditions (City of Sydney 2021; Fire NSW 2021). There are limited specific treatment options and services available, with Buried in Treasures (Catholic Care) seemingly the only program available short term (Catholic Healthcare n.d; Penrith City Council n.d.). |

# Alcohol and Other Drug Treatment Needs

| Outcomes of the service needs analysis – Alcohol and Other Drugs | | |
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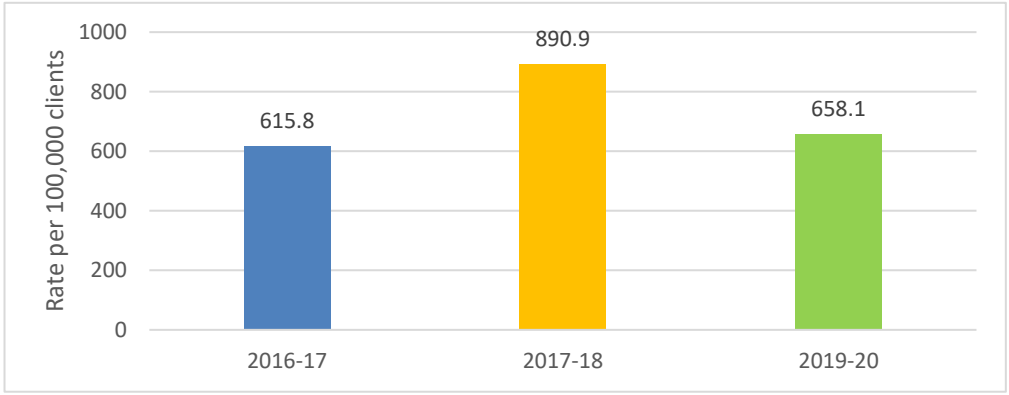
| **Identified Need** | **Key Issue** | **Description of Evidence** |
| **AOD treatment** | High and increasing demand for local drug and alcohol treatment service provision in the NBM region. | Analysis of Alcohol and Other Drug Treatment Services National Minimum Data Set (AODTS NMDS) related to specialist, publicly funded drug and alcohol treatment providers in the NBM region in 2019-20 includes (AIHW 2021x):<br><br>**Utilisation of AOD treatment services:**<br>• 3,419 closed AOD treatment episodes were (AIHW 2019d) provided in NBM in 2019-20.<br>• NBM had the highest rate of closed treatment episodes for AOD treatment services among metropolitan PHN regions in NSW (excluding ACT), 2019-20. This indicates relatively high demand for NBM AOD treatment services compared to similar metropolitan NSW regions.<br>• Additionally, the per 100,000 population rate of closed treatment episodes increased by 44.7% between 2016-17 and 2017-18, indicating significantly growing demand for local AOD treatment services over this 12-month period. However, this rate has since dropped to 658.1per 100,000 population (third highest out of all NSW PHNs).<br>• In 2021-22, 1711 clients accessed NBM commissioned AOD services, or 445 per 100,000 population showing a decrease (NBMPHN 2022d)<br>**Figure: Closed treatment episodes, trends, NBMPHN 2016-17 (NBMPHN 2019c) to 2019-20 (AIHW 2021x)**<br>  <br> |

| Outcomes of the service needs analysis – Alcohol and Other Drugs | | |
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| | | **AOD Treatment Delivery Setting**<br>• There were 45 AOD treatment agencies that delivered publicly funded services in the NBMPHN region.<br>• The majority (78.6%) of closed AOD treatment services occurred within non-residential treatment facilities, with a smaller number of services occurring in residential treatment facilities (18.3%) or by outreach (0.5%).<br>• Between 2018-19 and 2019-20, there was growth in the number of closed AOD treatment services held within non-residential (20.7% increase) and the home setting (4.8%), and although only a small number of closed episodes occurred in the outreach setting, this grew from 7 to 17, a growth rate of 142.9%.<br>**AOD treatment type:**<br>• More than one third (37.9%) of closed AOD treatment episodes were counselling. This was followed by assessment only (26.6%) and withdrawal management (10.1%).<br>• The number and proportion of support and case management closed treatment episodes increased significantly between 2018-19 and 2019-20 compared to other treatment types, rising from 320 to 516 episodes (increase of 61%), followed by assessment only, rising from 753 to 910 and then counselling, rising from 1,090 to 1,295.<br>**Source of referral: AOD Treatment**<br>• The primary source of client referrals to AOD treatment services was by clients/family members (57.8%), followed by health service referrals (22.8%).<br>• The proportion of NBM client/family member referrals to AOD treatment services (57.8%) was significantly greater than the total for Australia (35.6%).<br>• The greatest change in source of referrals to NBM AOD treatment services between 2018-19 and 2019-20 was from sources other than Self/family, health service, corrections or diversion, increasing from 301 (9.7% of all referrals) to 577 (16.9% of all referrals) a growth rate of 91.7%.<br>**Client demographics:**<br>• An estimated 2,141 clients in NBM received AOD treatment services in 2019-20.<br>• Of these, 98.4% of clients received treatment for their own alcohol and other drug use, 1.6% received treatment for other's alcohol and other drug use.<br>• The highest proportion of clients were aged 30-39 years (24.7%), 20-29 years (23.1%) and 40-49 years (21.3%).<br>• 20.5% of clients identified as Aboriginal and Torres Strait Islander.<br><br>Local stakeholders expressed concerns around the accuracy and limited interpretation of data possible from analysis of this AODTS minimum dataset, including (NBMPHN 2018c):<br>• The view that the dataset is not representative of the full range of local service providers providing AOD treatment services, due to the lack of data included from private providers such as pharmacies and private rehabilitation services. |

| Outcomes of the service needs analysis – Alcohol and Other Drugs | | |
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| | | • Highlighting trends in treatment services by delivery setting is a direct reflection of government policy and funding requirements, rather than indicative of current service capacity or the most effective treatment options available.<br>• Presentation of data by closed treatment episodes does not provide any insight into the number or quality of treatment sessions / services provided to clients. |
| **AOD treatment services** | Minimal options for local access to AOD treatment. | NBMPHN preliminary investigation and consultations to date have not supported the view that certain people wish to access AOD treatment services outside their local area. NBM community consultations have indicated a strong preference for the provision of these services locally, particularly where families are involved. For example, services for youth, men and women with children at home.<br><br>Lack of specialised addiction support services was the top reason cited among Lithgow survey respondents who said they would not feel comfortable in accessing a local AOD service &/or recommending a service to another person. Other reasons included not being aware of local service network and not accessible / long waiting list. The need for alcohol and other drug education and awareness raising with the whole community, including of local services available was highlighted.<br><br>Transportation within the region also presents a significant barrier for consumers seeking access to AOD rehab services. Many people requiring AOD treatment services will also require treatment for significant mental health concerns such as anxiety or depression. This increases the complexity and the barriers in seeking or engaging with services outside of the clients LGA/local area.<br><br>Consultations conducted with AOD service providers indicated that there is unmet demand regionally, particularly for both adult and youth services in Lithgow, Hawkesbury and upper Blue Mountains that cannot be provided under current funding. Lithgow has a part time service and there is no NGO provider in the Hawkesbury. Transport issues are a major issue in access to services especially in the Hawkesbury and Lithgow.<br><br>Preliminary mapping of AOD services undertaken below has been limited to local services in response to these findings. Additions will include services primarily aimed at providing mental health that also provides some AOD support with counselling. Further mapping of these services is required throughout 2022.<br><br>Opioid treatment programs (OTP) (NSW Health n.d.):<br>Review of accredited and active OTP prescribers indicate that excluding prescribers employed by NBMLHD, there are eight community-based OTP prescribers accredited who have current clients in the NBM region.<br>• 3 x Penrith LGA<br>• 3 x Hawkesbury LGA<br>• 1 x Blue Mountains LGA. |

| Outcomes of the service needs analysis – Alcohol and Other Drugs | | |
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| | | Consultations with stakeholders identified that there is an acute need to increase the number of GP opioid prescribers which reduces burden on LHD services who are at capacity. Opioid prescribers have reduced in the last few months. Poor access to prescribers could lead to increased substance use and risk behaviours instead of managed opioid substitution treatment; which offers stabilisation of dependence and psychosocial factors.<br><br>NBMPHN Commissioned AOD Treatment Services, 2019-20<br>• Aftercare/treatment for relapse prevention: targeting clients recovering from alcohol and/or other drugs addiction involving assessment and one-on-one aftercare.<br>• Making Choices Program based at Katoomba and Lithgow and operated by Lives Lived Well. This program targets adults including people recently released from prison.<br>• Aftercare Outreach Program based at Penrith and Hawkesbury LGAs and operated by ONE80TC. This program targets adults including people recently released from prison.<br>• WHOS Penrith Hub: Day Rehabilitation including specialist liaison support for General Practitioners in Penrith LGA<br>• Ted Noffs Foundation: Penrith Street University with targeted early intervention for young people involved in risky behaviours especially ice. This program includes outreach to young people in upper Blue Mountains and Lithgow.<br>• Lives Lived Well: Day rehabilitation for women with dual diagnosis based in Katoomba<br>• Lives Lived Well: Professional development for general practice staff regarding alcohol and other drugs. |
| **Detoxification services** | Shortage of local detoxification services relative to population density one local public and one local private detoxification. | NBM local detoxification services (FACS 2016):<br>• NBM Drug and Alcohol Service, Penrith: Men, women and youth. Inpatient and outpatient detoxification. Supports drug use in pregnancy and opioid substitution.<br>• St John of God, Richmond (Private Hospital): Men and women. Detoxification for all drugs. Provides medicated detoxification, group and individual counselling, aftercare program. 3-week in-patient rehabilitation. Psychiatrist's referral with assessment report preferred. GPs may also refer.<br><br>Key issues relating to availability and access to local detoxification services include:<br>• Only one local public detoxification service located in the Penrith LGA is available to NBM residents. Significant travel time to this service is at least 2.5 hours one way for residents of Lithgow LGA and 0.5 to 1-5 hours for residents of Hawkesbury and Blue Mountains LGAs.<br>• Only one local private detoxification is available to residents of NBM region. This is located within the Hawkesbury LGA with travel time ranging from 2.5 hours to 0.5 hours, one way.<br>• Lengthy travel time is a barrier to inpatient detoxification and is also likely to be barrier to participants with family who need to stay in touch during an inpatient program. |

| Outcomes of the service needs analysis – Alcohol and Other Drugs | | |
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| | | • Stakeholders have reported a noticeable shortage of localized detoxification services relative to the size of NBM region and population density (NBMPHN 2017a).<br>• A range of metropolitan services are available outside the NBM region that would require considerable train or road travel. A number of these services are private hospitals requiring private hospital health insurance coverage. |
| **Outpatient detoxification-counselling and non-residential rehabilitation services** | Shortage of local outpatient detoxification &/or non-residential rehabilitation services for Hawkesbury and Lithgow (for men only) LGAs.<br><br>Lack of culturally secure services exist for Aboriginal and Torres Strait Islander people in the NBM region. | NBM Local services (FACS 2016):<br>• Dianella Cottage, Katoomba: commissioned by NBMPHN. For women only. Payment by donation if affordable. This is a non-residential day program with group work, 1:1 work, drop in facilities, access to SMART recovery meetings.<br>• Dianella Cottage, Lithgow: commissioned by NBMPHN, this service provides non-residential day rehabilitation for men and women (now mixed gender compared to women-only previously).<br>• Woodlands Clinic: Blue Mountains Hospital: Comprehensive medicated assisted treatment program for opioid dependence as an outpatient service.<br>• WHOs West, Penrith: Men and women. WHO's West offers assessment, referral services and residential supported care for individuals from the NBM districts. There are 6 transitional housing beds located in Penrith and 7 residential care beds located at the Roselle Campus.<br>• Pathways Penrith (NBMAOD): Men, women and youth. Inpatient and outpatient detoxification, drug use in pregnancy, and opioid substitution.<br>• A range of State Community Health Centres: provide youth and adult counselling, and other AOD support services. These services are located at the Nepean Campus (Opioid Treatment Program and Outreach), Penrith Community Health Centre, St Mary's Community Health Centre, Cranebrook Community Health Centre and Katoomba Community Health Centre.<br><br>Key issues relating to availability and access to services include:<br>• The main regional outpatient service is provided by NBMLHD at Penrith and Katoomba locations.<br>• A range of metropolitan services outside NBM are available that would require considerable train or road travel. A number of these services are private hospitals requiring private hospital health insurance coverage.<br>• Lengthy travel time is a barrier to ambulatory detoxification and is also likely to be barrier to participants with family who need to stay in touch during an inpatient program.<br>• There are no culturally secure services identified in the region areas that provide specialised AOD services for Aboriginal and Torres Strait Islander people, according to reports accessed. However just outside the regional boundaries, Marrin Weejali, an ACCHO is located on the eastern border near to Penrith. |
| **Residential rehabilitation & therapeutic communities** | Highly selective criteria to access local residential rehabilitation in or close to NBM region – for young men | NBM Local Services (FACS 2016):<br>• ONE80TC (formerly teen challenge), Richmond: Males only 18-35 years. Long term (12 month) residential rehabilitation. Detoxification needed prior to entering program. Living skills programs, life skills management. May take co-morbid clients on case-by-case basis. |

| Outcomes of the service needs analysis – Alcohol and Other Drugs | | |
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| | or adult men at risk of or homeless only. | • WHOs West, Penrith: Men and women. WHO's West offers assessment, referral services and residential supported care for individuals from the NBM districts. There are 6 transitional housing beds located in Penrith and 7 residential care beds located at the Rozelle Campus.<br><br>Key issues relating to availability and access to services include:<br>• The identified state funded residential rehabilitation beds for the NBM region are not located in the region. They are in a specialist facility approximately 1 hour drive from eastern border of the region and Penrith.<br>• One NGO provides residential rehabilitation in the NBM region. This is a long term (3 & 12 months) residential rehabilitation, with beds open to men based on selective criteria delivered by ONE80TC.<br>• Adele House is located at Werrington and borders on the NBM region to the east, for men only. This is a 9–12-month program for adult men at risk of or homeless with MERIT beds. This program is likely to cease delivering services during 2019-20 due to funding issues.<br>• Similar to other AOD treatment categories, a range of metropolitan residential rehabilitation services are available that would require considerable train or road travel. A number of these services are private hospitals requiring private hospital health insurance coverage. Lengthy travel time is a barrier to participants with family who need to stay in touch during a residential program.<br>• There are no reported self-indicated culturally secure residential rehabilitation beds for Aboriginal and Torres Strait Islander people in metropolitan Sydney or NBM region. |
| **Other specialist services** | Significant travel time to youth specialist services and specialist women's service in regions bordering NBM is identified as a key barrier for residents in outlying areas. | NBM Local Services (FACS 2016; NADA 2016b):<br>• *Family Drug Support, Leura (Bridging the Divide):* Primarily volunteer programs to offer support to families impacted by substance use. Bridging the Divide builds partnerships with treatment services and other relevant communities and organisations to improve client engagement with services and increase effectiveness of treatment. It also aims to improve service integration between treatment providers and community service providers.<br>• *Bernado's Penrith, Cranebrook:* Temporary accommodation, crisis intake. Child and family support.<br>• *NBMLHD Youth Drug and Alcohol Service has been expanded to deliver services across the region with specialist support for young people with complex needs including social worker, family and paediatric support.*<br><br>Key issues relating to availability and access to services include:<br>• Two youth specialist services and one specialist women's service operate in western Sydney and regions bordering NBM. Travel time for NBM residents would range from 1 to 4 hours, one way.<br>• One specialist youth service supports non-specialist counselling for Aboriginal and Torres Strait Islander people in the adjoining region of Western Sydney. |

| Outcomes of the service needs analysis – Alcohol and Other Drugs | | |
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| | | NBMPHN funded Ted Noffs Foundation established 2019-20 to deliver early intervention for Aboriginal and Torres Strait Islander young people across the region. Deadly Dreaming is delivered in high schools and juvenile justice remand centre. This program is supported by culturally safe case management and counselling support. |
| **Poor access to rehabilitation services for women** | Improved access to services for women and particularly women with children was identified as the highest priority | The NBMLHD drug and alcohol program for Substance Use in Pregnancy has been expanded for the Penrith LGA and is expected to outreach to other LGAs including Blue Mountains; Lithgow and Hawkesbury.<br><br>Community consultations in Blue Mountains 2010 (Project Skylight 2010):<br>• Improved access to services for women and particularly women with children was identified as the highest priority by a large proportion of respondents.<br><br>Respondents recommended the following interventions:<br>• Community based options for detoxification in safe environments for women with children<br>• Intensive support, service co-ordination and case management for women with children, possibly using a mobile-outreach model<br>• Coordinated support for pregnant substance users<br>• Childcare for recovery groups<br>• Outreach to Blue Mountains women's services<br>• Capacity development of community-based workers.<br><br>ONE80TC has established a women's residential facility in Kurmond (Hawkesbury LGA), however the service does not accept women with children.<br><br>• NBMPHN funds specialized dual diagnosis day rehabilitation services for women in Katoomba and Lithgow only (Dianella Cottage).<br>• NBMLHD has expanded Substance Use in Pregnancy program. |
| **Early intervention and shared care** | Inadequate service models for early intervention and shared care between the regional drug and alcohol service and general practice. | Preliminary consultation with service providers indicates that (NBMPHN 2016l):<br>• Drug and alcohol presentations represent approximately 20% of all presentations to ED.<br>• It is likely that one in four inpatients could meet criteria for D&A treatment however most of these patients are not aware that they have a problem.<br>• Excluding detoxification - drug and alcohol related hospital separations are one of the top 5 medical diagnosis related groups with an average of 80 separations per month.<br>• There are difficulties obtaining D&A consultations for patients presenting to ED and other hospital services.<br>• There are currently no mechanisms or links for shared care or advice between the regional drug and alcohol service and general practice. |

| Outcomes of the service needs analysis – Alcohol and Other Drugs | | |
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| | | NBMPHN to further explore the implementation of a general practice liaison service in the Penrith region in 2022-2025 |
| **Early intervention, counselling and aftercare services** | Strong indications that access to early intervention, counselling and aftercare is fragmented and inadequately resourced.<br><br>Poor access due to limited service hours and availability of counselling | Post-care or aftercare is recognised as important to prevent relapse following treatment. NADA (2013) reported that there is currently no systematic approach or dedicated funding to AOD services for the provision of post care programs across the sector.<br><br>Consultation and review of Drug and Alcohol services indicate (NBMLHD 2013; NBMLHD n.d.):<br>• Limited after hour services particularly for youth (12-20 yrs)<br>• Lack of addiction medicine specialists in community setting<br>• Low staffing levels and long wait lists<br>• Very limited outreach clinics for youth (12-20yrs)<br>• Limited GP experience in dealing with D&A clients<br>• Poorer access for Aboriginal and Torres Strait Islander clients<br>• Drug and alcohol services are poor due to hours-of-service operation, inadequate staffing levels and difficult for youth and Aboriginal and Torres Strait Islander clients |
| **Coordination of Care** | D&A services operate independently of mental health services, largely operate independently of each other, have limited focus on client's holistic well-being and the 'whole of family' approach has not been adopted. | Consultation and review of D&A services indicate (LDAT 2018; NBMLHD 2013):<br>• Prevalence of dual diagnoses with mental health and D&A clients<br>• Absence of service co-location with mental health services<br>• Absence of service integration between AOD treatment services, including services delivered by NBMLHD, commissioned by NBMPHN and local NGO services<br>• Poor focus on holistic care / physical well being<br>• Lack of 'whole of family' approach in treatment plan and therapy<br>• Greater need identified for services that support co-morbid AOD and mental health<br><br>Further research is required to explore models of care that incorporate holistic management.<br>• NBMLHD has funded St Vincent's to deliver care coordination for aftercare in NBM region. Established 2019-20. |
| **Child and Youth D&A Services** | Lack of appropriate detoxification service for young people for drug or alcohol withdrawal. | Stakeholders have raised the following concerns (NBMPHN 2018d; NBMPHN 2016c; NBMPHN 2016e):<br>• There is need for specific detoxification services to support the withdrawal of young people from long term drug or alcohol substance use. Further research is required to examine existing detoxification treatment options for young people in the NBM region.<br>• Lack of provision for young people within the detox facility at Nepean Drug and Alcohol Service, with regards to being in the same environment as adults.<br>• NBMLHD Youth Drug & Alcohol service has been expanded to provide specialist support for young people with complex needs. |

| Outcomes of the service needs analysis – Alcohol and Other Drugs | | |
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| | | • NBMLHD Youth Drug and Alcohol service supports young people for inpatient detoxification at Nepean facility from 16 years of age. |
| **Corrections Drug Treatment Programs** | Corrections NSW drug treatment programs provide some post discharge access to support. This is limited to the location and availability of staff. | The Corrections NSW program for 6-8 months and using Open Rolling groups to deliver more individualized treatment (NBMPHN 2017a). The first part of the program looks at Real Understanding of Self Help (RUSH). RUSH provides skills and works on minimising drug use.<br><br>Additional post discharge support for ex-prisoners is now provided via NBMPHN Aftercare programs at Kingswood, Katoomba and Lithgow. |
| **Community Wide Communication for Youth: D&A** | Enhanced and targeted communication methods are required to engage and inform young people about the use of drugs and alcohol. | Stakeholders have raised the following concerns regarding community wide engagement and education of young people (NBMPHN 2018d; NBMPHN 2016c; NBMPHN 2016e):<br>• Lack of D&A services within the community to help engage and educate young people.<br>• Lack of education for young people in relation to the effects of Drug and Alcohol.<br>• Lack of community education and understanding of Ice. |
| **Workforce capacity of primary care sector** | There is a general view that workforce capacity for drug and alcohol services in the region could be substantially improved with training and skills development. | Further research is needed to examine the potential sources of the issues raised by stakeholders to develop appropriate options. The concerns raised by stakeholders were (NBMPHN 2016c; NBMPHN 2018d; NBMPHN 2016d):<br>• Poor or no engagement of persons who use drugs by local general practitioners<br>• Increase GPs knowledge of available clinical and non-clinical services and their referral pathways.<br>• Increase GP capacity to identify early if consumer has substance use problems<br>• Need for trauma education for health professionals.<br>• Lack of GP Education dual diagnosis drug and alcohol & severe mental illness.<br>• Insufficient dual diagnosis support and supervision for private therapist.<br>• Lack of support workers who are available after hours and on weekends.<br><br>Consultations with NBM primary care providers in 2019 including GPs and pharmacies to better understand how a "Communities of Practice" framework for AOD treatment could work indicated (NBMPHN 2019b):<br>• GPs with greater interest and experience working with AOD issues still experienced similar barriers and challenges as their colleagues with less experience and interest.<br>• Primarily these were around: inadequate access to local support services for their patients (including pharmacies who will does under OTP and the Pain Clinic), noting GPs are not equipped to solely manage a continuum of care for patients requiring AOD treatment and care.<br>• Pathways in and out of specialized treatment, including community-based counselling and treatment services or more intensive interventional treatments such as Pain Clinics and withdrawal management, OTP or residential services, are not |

| Outcomes of the service needs analysis – Alcohol and Other Drugs | | |
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| | | accessible to GPs nor do they have the time or resources to chase them up. The way these external services worked was not clear to the GPs consulted.<br>• Time and patient engagement issues complicate GPs confidence and ability to provide consistent care and contribute to reluctance to take on people who have complex presentations.<br>• GPs saw AOD as an important part of their work and indicated that improved access to information, resources and training as well as a specialist &/or peer support framework would be of benefit.<br>• The COVID response has consumed General Practice and put additional strain on the GP workforce, creating a barrier to engaging this group in developing an interest and a network focusing on addressing the needs of AOD in the region. |
| **Aboriginal and Torres Strait Islander corporations – community services** | The NBM region has several active Aboriginal and Torres Strait Islander corporations, especially in the Blue Mountains region to support Aboriginal and Torres Strait Islander community engagement with AOD regional planning for Aboriginal and Torres Strait Islander people. | NBM region (FACS 2016):<br>• Cawarra Women's Refuge Aboriginal and Torres Strait Islander Corporation, Kingswood: Provides accommodation and counselling support.<br>• Aboriginal and Torres Strait Islander Disability Advocacy Services, Penrith: Disability services.<br>• Merana Aboriginal and Torres Strait Islander Community Association for the Hawkesbury, Richmond: Community development, support, programs and resources.<br>• Blue Mountains Aboriginal and Torres Strait Islander Cultural and Resource Centre, Katoomba: Cultural services including advocacy and resources.<br>• Gundungurra Aboriginal and Torres Strait Islander Heritage Association Inc., Lawson: Cultural services, awareness programs and recording sacred sites.<br>• Gundungurra Tribal Council Aboriginal and Torres Strait Islander Corporation, Katoomba: Cultural services, representing Gungungurra people.<br>• Katoomba Aboriginal and Torres Strait Islander Outreach, Katoomba: Drop in information, advisory and advocacy service.<br>• Muru Mittigar Aboriginal and Torres Strait Islander Education and Resource Centre, Castlereagh: Employment services supporting Aboriginal and Torres Strait Islander people and cultural awareness. |
| **Mainstream (NGO) programs with Aboriginal and Torres Strait Islander workers** | The NBM region has access to several NGOs with Aboriginal and Torres Strait Islander liaison and community workers to support Aboriginal and Torres Strait Islander community engagement with AOD regional planning for | **NBM Region (FACS 2016):**<br>• Blue Mountains Youth Accommodation and Support Service Inc, Springwood: Assisting homeless youth.<br>• Nepean Community and Neighbourhood Services, South Penrith: Community development.<br>• Miimali Aboriginal and Torres Strait Islander Community Association, St Mary's: Supporting Aboriginal and Torres Strait Islander youth 12-18 years.<br>• Greater Western Aboriginal and Torres Strait Islander Health Service (GWAHS) established an AMS in Penrith during 2019.<br><br>NBMLHD and NBMPHN Joint Aboriginal and Torres Strait Islander Advisory Committee for AOD and mental health: |

| Outcomes of the service needs analysis – Alcohol and Other Drugs | | |
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| | Aboriginal and Torres Strait Islander people. | • Established in 2016, has successfully provided ongoing input and feedback from Aboriginal and Torres Strait Islander communities across the region.<br>• Has been responsible for the co-design of newly commissioned Aboriginal and Torres Strait Islander specific AOD and mental health programs for the NBM region.<br>• These programs support all LGAs and target complex needs of Aboriginal and Torres Strait Islander people with dual diagnosis, early intervention for Aboriginal and Torres Strait Islander young people, and capacity building of Aboriginal and Torres Strait Islander workforce for AOD and mental health.<br><br>NBMPHN has commissioned GWAHS to provide Social Emotional Wellbeing (SEWB) services for the Penrith LGA together with linkages between the AMS and Day Rehabilitation service at Penrith. This service will assist integration of services between AMS and day rehabilitation and will support culturally safe wholistic care for Aboriginal and Torres Strait Islander people in the primary care setting. |
| **Provision of services for Aboriginal and Torres Strait Islander people** | Inadequate service models for early intervention and effective support and treatment | In addition to the 2016 consultation with service providers indicated the same findings as for the general population (p17). Preliminary consultation with service providers indicates that (NBMLHD 2016b):<br>• Drug and alcohol presentations represent approximately 20% of all presentations to ED<br>• There are insufficient numbers of Aboriginal and Torres Strait Islander health workers in drug and alcohol services<br>• Commissioned training for Aboriginal and Torres Strait Islander people to obtain Diploma in Mental Health specialising in AOD. June 2019 - 9 Aboriginal and Torres Strait Islander students graduated from the Poche Program and are currently working in the NBM region. These graduates have more than doubled the number of trained Aboriginal and Torres Strait Islander workforce for AOD and mental health.<br>• Commissioned Ted Noffs Foundation to deliver early intervention to Aboriginal and Torres Strait Islander young people via two linked programs. Program Deadly Dreaming delivers early intervention to high schools across the region. Program 2 Case Management & Support follows Deadly Dreaming to support Aboriginal and Torres Strait Islander young people and families that have been identified at risk. Preliminary results indicate that 50-80% of Aboriginal and Torres Strait Islander young people in NBM high schools are at high risk for substance use and self-harm. |
| **Provision of services for Aboriginal and Torres Strait Islander people** | Inadequate access to culturally secure detoxification and rehabilitation and aftercare services in the region. | Previous 2010 service provider concerns and recommendations for improving access to services for Aboriginal and Torres Strait Islander people involved in substance use include (Project Skylight 2010):<br>• Concerns regarding lack of aftercare to support people who were living in an environment with other substance users and experienced peer pressure to resume substance use following rehabilitation.<br>• Training for service providers to improve awareness of the link between substance use and Stolen Generation issues<br>• Strategies to reach young people who may be at the crossroads of substance use and substance addiction<br>• Soft entry options for access to AOD treatment when AOD issues arise in the context of other service provision<br>• Post treatment support for Aboriginal and Torres Strait Islander people who have been through residential rehabilitation programs |

| Outcomes of the service needs analysis – Alcohol and Other Drugs | | |
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| | | • A culturally secure drop-in centre with male and female Aboriginal and Torres Strait Islander workers.<br><br>WHOS Penrith Hub for day rehabilitation has been established in collaboration with Marrin Weejali Aboriginal and Torres Strait Islander Corporation who deliver and support 2 trained Aboriginal and Torres Strait Islander workers to this service. Marrin Weejali is in Western Sydney and without this service collaboration could not deliver culturally safe services directly to NBM Aboriginal and Torres Strait Islander residents. |
| **Capacity of Services for Aboriginal and Torres Strait Islander People** | Inadequate capacity of service capacity within primary health to respond to Aboriginal and Torres Strait Islander health needs. | 2015 Aboriginal and Torres Strait Islander community consultations in each LGA identified the importance of building service capacity to meet a broad range need for Aboriginal and Torres Strait Islander health service provision, including (Aboriginal and Torres Strait Islander Sharing and Learning Circles 2015).<br>• **Inadequate knowledge of health services**: The primary concern is one of knowledge and lack of access to relevant information to support equitable and necessary access to health services. This prevents Aboriginal and Torres Strait Islander people from attempting to access a range of services.<br>• **Lack of trust** in mainstream service providers was identified as a barrier to access by each of the community groups.<br>• **Cultural safety**: Inadequate supply of culturally safe drug and alcohol services within the region. Additional services are needed especially to support Aboriginal and Torres Strait Islander people with mental health problems, and for culturally safe detoxification services or a dedicated facility.<br>• **Mental Health:** There is need for more appropriate follow up and support for dual diagnosis substance abuse and mental health issues. The importance of mentoring was identified as part of a culturally safe response to mental health issues.<br>• **Engagement with services by Aboriginal and Torres Strait Islander people**: there are no clear mechanisms for Aboriginal and Torres Strait Islander people to become involved in the governance of health services in the NBM region. The broad issues raised were the need for information, forums, engagement with identified providers to facilitate access and linkages to other services.<br><br>Commissioned GWAHS SEWB Linkworker program (described above also) to support the broad range of primary health needs for Aboriginal and Torres Strait Islander people living in Penrith LGA. |

# Disaster Management – Environmental and Pandemics

<table>
<tr><th colspan="3">Outcomes of the service needs analysis – Disaster Management – Environmental and Pandemics</th></tr>
<tr><th>Identified Need</th><th>Key Issue</th><th>Description of Evidence</th></tr>
<tr><td rowspan="2">Increasing demands on health service delivery during and post after disasters</td><td>Sudden-impact disasters cause social disruption, health issues and additional pressures on health service delivery.</td><td>• Increase of numbers of health workforce (GPs, General Practice, Medical Staff, specialists, and volunteers) to cope with surge capacity during and after disasters.<br>• Initiatives that encourage changes in public health behaviour. Support purposeful activities to strengthen preventative health actions.<br>• Education for general practices and communities on the direct and indirect impact of disasters on health to build capacity and reduce the burden on high resource usage on the healthcare system during disasters.<br><br>Resulting pressure threatens service provision continuity particularly of general practices (RACGP 2017):<br>• Damage to practice infrastructure<br>• Increased demand for services<br>• Increased presentation of patients with injuries or highly infectious symptoms<br>• Loss of critical equipment and supplies/key information/access to essential systems, networks, and communications<br>• Reduction in capacity and the loss of key staff<br>• Loss of/disruption to power supply<br>Risk of practice closure.</td></tr>
<tr><td>GPs rerouted to vaccine roll out.</td><td>COVID-19 is estimated to rank about 135th out of 219 diseases in terms of total burden of disease in Australia (AIHW 2021ad).<br><br>Table: COVID-19 vaccination rates for NBM residents as at 31.8.2023.
<table>
<tr><th rowspan="2">LGA</th><th colspan="2">Residents 12 +</th><th colspan="2">Aboriginal and Torres Strait Islander Residents 12+</th><th colspan="2">Residents 5-11</th><th colspan="2">Aboriginal and Torres Strait Islander Residents 5-11</th></tr>
<tr><th>Dose 1</th><th>Dose 2</th><th>Dose 1</th><th>Dose 2</th><th>Dose 1</th><th>Dose 2</th><th>Dose 1</th><th>Dose 2</th></tr>
<tr><td>Blue Mountains</td><td>89.54%</td><td>88.79%</td><td>89.50%</td><td>88.20%</td><td>50.75%</td><td>44.15%</td><td>42.11%</td><td>35.41%</td></tr>
<tr><td>Hawkesbury</td><td>89.66%</td><td>88.67%</td><td>88.74%</td><td>87.15%</td><td>38.77%</td><td>30.20%</td><td>29.45%</td><td>19.33%</td></tr>
<tr><td>Lithgow</td><td>89.58%</td><td>88.56%</td><td>87.17%</td><td>85.03%</td><td>38.06%</td><td>29.97%</td><td>25.30%</td><td>21.69%</td></tr>
<tr><td>Penrith</td><td>88.66%</td><td>87.38%</td><td>88.62%</td><td>86.45%</td><td>38.31%</td><td>30.73%</td><td>27.11%</td><td>20.68%</td></tr>
</table>
In the aged care sector personal protective equipment (PPE) shortages, disparate guidelines for their use, a lack of clarity around chains of command, and mixed messaging from state and territory governments placed pressure on an under-resourced workforce lacking the</td></tr>
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| Outcomes of the service needs analysis – Disaster Management – Environmental and Pandemics | | |
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| | | adequate training required to respond to the issues associated with a pandemic (Connolly et al.; Pagone et al. 2020; Malone 2020). Furthermore, the social, economic and health conditions created by COVID-19 have also increased the prevalence of mental health illness in the Australian population (National Mental Health Commission 2020).<br><br>Data suggests that in NSW 7.8% of patients who suffered from COVID-19 continue to suffer persistent symptoms (ACI 2021) and that those with pre-existing co-morbidities take longer to recover (Liu et al. 2021). |
| **Difficulty for communities accessing first aid or primary health services, including general practice, pharmacy, and mental health care services.** | During a disaster event, it is generally expected that the demand for healthcare services will rise.<br><br>General Practices overwhelmed or no access to their services during disasters | During the 2019/20 Summer Bushfires, damage to infrastructure caused widespread blackouts and telecommunication failures, with those at-risk unable to obtain bushfire warnings or access to health information. Road closures resulted in isolation, concerns for food security and forced medical evacuations.<br><br>Regional flooding saw:<br>• Major roads blocked off with residents unable to access essential services such as groceries and medical supplies which had to be moved by boat across the river.<br>• Closure of the major roads due to the flooding resulted in many patients unable to access the GP practices.<br><br>Patients should be encouraged to ensure they have action plans regarding their medical care i.e., having medication lists available or uploaded to My Health Record (NBMPHN 2023). |
| **Support for GPs, General Practice and Pharmacies to prepare for, respond to and recover from disasters** | Assist general practices to better prepare for, respond to and recover from the impacts of emergencies. | • Ensure that practices have an up-to-date and tested emergency response plan in place.<br>• Support practices to be well stocked and best positioned to respond to the crises and the health needs of their communities during disasters.<br>• Provide educational resource for general practice staff in relation to emergency preparation and response efforts.<br>• Coordinate the provision of clinically relevant health information and emergency management resources to support GPs and their communities. |
| **Increase number of volunteer GPs during disasters** | The recruitment and management of volunteer primary care practitioners is a key element of incorporating primary healthcare in disaster response. | • Initiatives that encourage GP volunteer take up.<br>• General practitioners are appropriately and effectively deployed to evacuation centres.<br>• Registration of additional extra primary care volunteers before a disaster occurs to ensure continuity of service during incidents.<br>• Attending practitioners have the necessary familiarity with emergency arrangements.<br>• Continued safety and protection for volunteers.<br>• Mental health support for emergency responders, including volunteers, as well as training on the impact of trauma and recovery processes for these professions.<br>• Protocols to keep themselves and others safe and avoid comprising other aspect of the disaster response process. |

| Outcomes of the service needs analysis – Disaster Management – Environmental and Pandemics | | |
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| **Short- and long-term effects of COVID-19 increase demand for health services.** | Pandemics can greatly increase morbidity and mortality and cause significant economic, social, and political disruption (Jones 2008) | • Planning required for the increased additional stress on primary healthcare services in relation to pandemics.<br>• Ongoing health issues (effects on lung and heart function and post-viral fatigue) resulting in survivors requiring ongoing support.<br>• Understanding the medium-long term impact of COVID-19 infection will be crucial to develop improved post-COVID-19 clinical care and guide future health service requirements and delivery. |
| **Pressure on health system and populations from current and future impacts of climate change** | Increasing health burden attributable to climate change is compounding health system sustainability issues (Rychetnik et al 2018) and placing additional pressure on the healthcare workforce. | The increase in morbidity and mortality resulting from higher temperatures and heatwaves, particularly among vulnerable groups such as elderly people and those with pre-existing cardiovascular and respiratory diseases.<br><br>Air pollution is closely linked to climate change - the main driver of climate change is fossil fuel combustion which is also a major contributor to air pollution - and efforts to mitigate one can improve the other. In the 15 countries that emit the most greenhouse gas emissions, the health impacts of air pollution are estimated to cost more than 4% of their GDP.<br><br>• Ensuring patients who are particularly vulnerable to heat take precautions and are monitored.<br>• Patients and local community have access to and respond to public health advice, such as disaster and weather warnings from health departments and emergency services.<br>• Need to recognise that climate change exacerbates health inequities through the unequal impacts of extreme weather events.<br>• Investment required to expand the health care system to ensure continuity of services relating to future disasters associated with climate change.<br>• Governments, policymakers, and health leaders commit to transitioning towards a resilient health system.<br>• Actions required to reduce the carbon footprint of the healthcare to ensure the future prosperity of populations and planet.<br>• Support GPs to understand and communicate the causes, health risks and consequences of climate change as well as mitigating actions at individual and population level. |
| **Multiple stressors and concurrent drivers severely challenge health service provision and responses during disasters.** | Recent local intersecting crises and cascading disasters such as fires, floods and COIVD-19 have brough the health sectors vulnerability | • Specific risk matrix development to prioritise the health and safety of health workforce during converging disasters.<br>• Planning required to address the additional pressure to the health system in relation to compound and cascading disasters.<br>• Pre-planning required for procurement of medical stockpiles.<br>• Need to establish mechanism for regular sharing of information between jurisdictions in relation to stockpiling and storage (COVID-19 during floods)<br>• Support for increased mental health issues (PTSD, depression, anxiety) (Makwana 2019)<br>• Needs of vulnerable communities i.e., First Nations, disability, elderly addressed through cultural and holistic approaches.<br>• Identify capacity and capability gaps in the context of compound and cascading disaster scenarios and their effects on health service systems. |

| Outcomes of the service needs analysis – Disaster Management – Environmental and Pandemics | | |
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| | during disasters into focus. | |
| **Vulnerable populations.** | Vulnerable populations will suffer disproportionately during disasters and the adverse health impact of climate change. | • Identification of local populations who are vulnerable, or who may become vulnerable during disasters.<br>• Disaster management arrangements and planning, embed plans to support vulnerable populations more effectively during disasters.<br>• Initiatives to improve health preparedness planning for vulnerable communities.<br>• Collaborative arrangements with health and partners that provide services to vulnerable communities during disasters.<br>• Tailored culturally appropriate support relating to wellbeing, connections, knowledge, and security during and after incidents.<br>• Evaluation of current service provision to identify gaps and improvements of service to vulnerable communities during disasters.<br>• Rely on a place-based approach (Vinson et al 2007) & data to identify and inform funding opportunities that reflect local health needs for vulnerable communities.<br>• Representation of vulnerable communities in the prepare, response and recovery process. |

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