Australian Government
Department of Health

phn
An Australian Government Initiative

Primary Health Network

Needs Assessment Reporting Template

Perth North PHN – Mental Health

Version 2.0, published 28 February 2018

The November 2017 PHN Needs Assessments were constructed using data from a wide range of sources, much of which is in the public domain. WA Primary Health Alliance (on behalf of Country WA PHN, Perth North PHN and Perth South PHN) also enjoys data sharing arrangements with a number of organisations, including WA Health and the Commonwealth Department of Health and Aging. These agencies provide sensitive and confidential data which underpin the Needs Assessments. This document has therefore been amended to remove confidential and sensitive data. The broad content and conclusions remain unchanged from the original document. For any queries relating to the underlying data sources, please contact Dr Christina Read, christina.read@wapha.org.au.

Section 1 – Narrative

Needs Assessment process and issues

Data for Perth North PHN's third round of needs assessments have been split between Core (population health), mental health and alcohol and other drugs (AOD). All three reports are based on the consideration of the holistic needs of people living in places where demand is high and supply inadequate.

This document is the first time mental health and suicide prevention needs are reported independently, and therefore provides opportunity to focus on specific mental health needs of local communities.

This Template consolidates the following sources of information:

1. baseline needs assessment (2015-2016)
2. refresh of quantitative data sets,
3. observations from ongoing stakeholder engagements, and
4. early findings from the PHN commissioned Richmond Wellbeing Integrated System of Care for AoD and mental health (MH) (Aboriginal and Mainstream residents) place-based consultations.

A constant comparative method was applied to refine and realign section 2 (health needs), section 3 (service needs) and section 4 (priorities). Based on the PHN's subject matter analysis and place-based teams, consolidated options have been determined to address identified needs in priority locations. The locations where there is likely to be high demand for mental health related services have been identified as distinct priorities in section 4.

All datasets were combined to identify locations of highest needs at the finest possible granularity. Datasets listed below were refreshed in this analysis supported by published regional, state, national and international evidence:

1. PHIDU – Social Health Atlas of Australia: Population Health Atlas (Public Health Area – aggregates of SA2)
2. Medicare Benefit Scheme Data – PHN data portal (SA3)
3. Pharmaceutical Benefits Scheme Data - PHN data portal (SA3); NPS MedicineInsight (HSA)
4. Emergency Dataset - WA Department of Health (Postcode)
5. Hospitalisations for mental health conditions and intentional self-harm in 2014-15 - AIHW (SA3)
6. Australian Bureau of Statistics ABS (SA2)
7. Mental health services in Australia – AIHW (national)
8. WA Mental Health and AOD Atlas – WA Mental Health Commission (September 2017) (suburbs)
9. Primary Mental Health Care Minimum Data Set – Department of Health (Postcode)

Qualitative evidence was collected from consultation reports, notes from community consultations, stakeholder engagement, and meeting records from Clinical Commissioning Committee (CCC), and Community Engagement Committees (CEC).

Alliance Against Depression (AAD) Framing

The WA Primary Health Alliance has endorsed and launched the Alliance Against Depression (AAD) framework, which has been adopted from the European Alliance Against Depression (EAAD) framework, in this needs assessment to structure the consideration of needs and options in place.

The AAD pillars are:

A. Primary care and mental health care
B. General public: awareness campaign
C. Patients, high-risk groups and relatives
D. Community facilitators and stakeholders

The AAD principles to reflect the Western Australia primary health care context are:

i. Integration
ii. Place-based
iii. Community driven
iv. Sustainable
v. Alliance approach

Further Developmental Work

Section 4 identifies priorities of needs to improve mental health and wellbeing outcomes. This section also includes a range of options – or strategies – that can be implemented to change population health outcomes. The PHN will not necessarily lead all the options but intends to be an integral part of the process, working in collaboration with key stakeholders. The PHN will further consolidate these priorities, in conjunction with those identified in the Core and AOD needs assessments, in order to address areas of greatest unmet health needs.

Hotspots or areas of greatest mental health needs have been identified as Perth (including Perth city, Stirling, Bayswater-Bassendean), Mundaring, Wanneroo, Joondalup and Swan. The Perth North PHN 2018-19 Activity Plan will integrate priorities across these regions. Further work is required to build on current strategies and further implement place-based solutions, in collaboration with primary care providers and local communities.

WAPHA has implemented an Outcomes Framework that includes an outcomes map to capture service measures. This will be applied across all commissioned services with the overarching aim to optimise patient's health and the health system in order to demonstrate increased efficiency and effectiveness.

Additional Data Needs and Gaps

Perth North PHN is a diverse region with differences between resident populations across the catchment. Synthesising data across all regions to determine potential priorities is challenging and currently available data may not fully represent health priorities in each locality.

Most data sets have some quality limitations. The main limitations relating to the data accessed for the Phase 3 Needs Assessment Report include:

- The lack of granular level data available for analysis – having access to this type of data (i.e. de-identified patient level data) would allow sophisticated modelling. The small sample sizes, and consequently large confidence intervals, for the majority of the modelled estimates at SA3 levels created challenges in establishing statistical significance to the comparators (state/national/PHN or comparison among SA3s).
- Incomplete data sets especially in relation to service provision e.g. the Mental Health & Alcohol and Drugs Atlas.
- Manual data set curation instead of programmatic retrieval of publicly accessible information of service providers.

- Potential under-identification of Aboriginal and Torres Strait Islander people in the available data sets.
- Changes in data coding affecting comparability over time, especially in relation to hospitalisation information.
- Time lags: some data sets are not recent thus impacting on the validity of data.
- Inconsistent ways of collecting and interpreting data means there are conflicting interpretations of data; for example, NPS MedicineInsight data is at the health service area and health district level rather than SA3 level.
- Limited data on vulnerable populations e.g. homeless people, prison populations.
- The data used to determine suicide rates is a modelled estimate, so must be interpreted with caution. In the instances where there is no number provided for a location or area, there may have been no suicides, or no data was available to determine a rate. When numbers are very low, or zero, they will not appear on graphs. There is a potential that the data may be skewed, as the coroner does not always release suicide information.
- Poor access to community and stakeholder feedback in some regions.
- Lack of quality primary care and general practice performance and activity data.
- Limited and/or selective release of utilisation data, especially with eHealth uptake and utilization - including unexplained under-reporting or absence of Medicare Benefits Scheme (MBS) claims in certain SA3 regions, making it difficult to provide an accurate reflection of regional utilisation.

Service mapping data for this assessment is based on the WA Mental Health and AOD Atlas updated at September 2017, supplemented by the PHN staff's local knowledge of service offerings. Digital solution is required to ensure access to service mapping data in real time.

PHN data sets have been valuable resource to support the needs assessment; however, SA3 level data is insufficient granularity to support place-based analysis.

The PHN will utilise the National Mental Health Planning Framework planning tool for mental health service planning. The tool will be used to translate findings from this needs assessment in the activity planning process between 15th of November 2017 to March 2018.

Additional comments or feedback

WA Primary Health Alliance (WAPHA) oversees the strategic commissioning functions of the three WA PHNs. This state-wide perspective has created substantial benefits in undertaking the Needs Assessments for all WA PHNs. Our analysis considers the differences between the individual PHNs as well as comparisons to overall state trends. Additionally, options to address needs and commissioning activities can be applied and compared across PHN boundaries.

The whole of state approach provides a platform for data sharing across organisations in a way that has not been possible historically or at least not on the current scale. This approach has been further strengthened as more stakeholders become familiar and engaged in our work, including Local Government Agencies. We recognise this is an evolutionary process and each PHN has the capacity to adapt as we understand our regions in more depth.

In February 2016, a Deed of Agreement was established between WAPHA and WA Department of Health. The Needs Assessment has prompted collaboration and data sharing amongst a range of

government and non-government agencies (e.g. Area Health Services, local hospitals, WA Mental Health Commission and the Aboriginal Health Council of Western Australia).

WAPHA have also negotiated data sharing with St John Ambulance, NPS Medicine insights, the Western Australian Network of Alcohol and Other Drug Agencies and a number of General Practice organisations via the use of PenCS CAT Plus. These different data sources allow for further detailed health analytics to be undertaken and provide a rigorous framework for comprehensive needs assessment and population planning activity.

The role of the Clinical Commissioning Committees and Community Engagement Committees has been fundamental in critically reviewing the needs assessment data on an ongoing basis. This further contributes to our evolving understanding of local place-based priority health needs, and effective and efficient solutions ('options') that can be applied in the local context.

WAPHA engaged Curtin University as its academic partner to work on a number of population health, research and evaluation projects. There have been various benefits of working with an academic institution, most notably is the ready access to specialist skills sets (health economists, spatial analysts etc.) as well as the ability to store and manipulate big data sets. This is an area where Curtin will work closely with WAPHA to enable comprehensive understanding of patient profiles and pathways through the health system in WA. Next steps involve predictive risk analysis around key areas, deep dives into specific regions and areas of need, and a focus on evaluating the effectiveness of service provision across the PHN.

Glossary – Needs Assessment

After-hours	The after-hours period refers to the time: before 8am and after 6pm weekdays; before 8am and after 12pm Saturdays; and all-day Sundays and public holidays.
ASR	Age standardised rate: a method of adjusting a crude rate to eliminate the effect of differences in population age structures.
Allied health workforce	Includes: Aboriginal Health Practitioners; Dental Practitioners; Nurses & Midwives (total and Aboriginal Health Services); Occupational Therapists; Pharmacists; Physiotherapists.
Ambulatory-sensitive hospitalisations	Certain conditions for which hospitalisation is considered potentially avoidable through preventive care and early disease management, usually delivered in a primary care setting. Also called Potentially Preventable Hospitalisations (PPHs).
Avoidable mortality	Potentially avoidable deaths comprise potentially preventable deaths and potentially treatable deaths. Potentially preventable deaths are those which are amenable to screening and primary prevention, such as immunisation, and reflect the effectiveness of the current preventive health activities of the health sector. Deaths from potentially treatable conditions are those which are amenable to therapeutic interventions, and reflect the safety and quality of the current treatment system.
CALD	Those who come from a culturally and linguistically diverse background, defined as people born in predominantly non-English speaking countries.
DRG	Diagnostic Related Group: an Australian admitted patient classification system which provides a clinically meaningful way of relating the number and type of patients treated in a hospital to the resources required by the hospital.
Factors influencing health status	Defined as a person who may or may not be sick encounters the health services for some specific purpose, such as to receive limited care or service for a current condition, to donate an organ or tissue, to receive prophylactic vaccination or to discuss a problem which is in itself not a disease or injury, or when some circumstance or problem is present which influences the person's health status but is not in itself a current illness or injury.
FASD	Fetal alcohol spectrum disorders are a spectrum of lifelong physical and neurocognitive disorders, caused by alcohol use in pregnancy.
Frequent flyers	Defined as having four or more visits per year. These patients have been shown to have more psychiatric, psychosocial, and substance abuse issues than the general population and tend to be complex to manage.
HealthPathways	A web-based information portal supporting primary care clinicians to plan patient care through primary, community and secondary health care systems within Western Australia.
IARE	Indigenous Area. Medium sized geographical units designed to facilitate the release of more detailed statistics, with names based on area/community which the boundary encompasses. There is 429 IAREs across Australia.
Ill-defined conditions	No classifiable diagnosis.
IRSEO	Indigenous Relative Socio-economic Outcome Index. Reflects relative advantage or disadvantage at the Indigenous Area level, where a score of 1 represents the most advantaged area and a score of 100 represents the most disadvantaged area.

ITC	Integrated Team Care. Program commissioned by WAPHA to contribute to improving health outcomes for Aboriginal and Torres Strait Islander people with chronic health conditions through better access to coordinated and multidisciplinary care.
LGBTQI	Those who identify as lesbian, gay, bisexual, transgender, queer, intersex
MBS	Medicare Benefits Schedule: a listing of the Medicare services subsidised by the Australian government.
Multimorbid	The occurrence of two or more chronic conditions in an individual.
Non-urgent ED attendances	Emergency Department visits which are classified as triage category 4 (semi-urgent) and category 5 (non-urgent). These categories could potentially be seen in a primary care setting.
PBS	Pharmaceutical Benefits Scheme: information on medicines subsidised by the Australian Government.
Person-centred care	Holistic care involving GPs and support services in partnership with the people they care for.
PHA	Population Health Area. Comprised of a combination of whole SA2s and multiple (aggregates of) SA2s, where the SA2 is an area in the ABS structure.
Place-based	WAPHA commissions services at a place-based level, responding to local need.
Primary health care	Primary health care is the entry level to the health system and, as such, is usually a person's first encounter with the health system.
PHN	Primary Health Network
PPH	Potentially preventable hospitalisations. An admission to hospital which may be prevented through the provision of appropriate individualised preventative health interventions and early disease management usually delivered in primary care and community settings by general practitioners (GPs), medical specialists, dentists, nurses or allied health professionals.
SA2 / SA3	Statistical Areas Level 3 (SA3s) are geographical areas that will be used for the output of regional data, including 2016 Census Data. There is no equivalent unit in the Australian Standard Geographical Classification (ASGC). The aim of SA3s is to create a standard framework for the analysis of ABS data at the regional level through clustering groups of SA2s that have similar regional characteristics. There are 351 SA3s covering the whole of Australia without gaps or overlaps. They are built up of whole SA2s. Whole SA3s aggregate directly to SA4s.
Secondary health care	'Secondary care' is medical care provided by a specialist or facility upon referral by a primary care physician.
SEIFA	Socio-economic Index for Areas (SEIFA) defines the relative social and economic disadvantage of the whole of population within a region.
Tertiary health care	Hospital services provided by both public and private hospitals.

Section 2 – Outcomes of the health needs analysis

Outcomes of the health needs analysis		
Identified Need	Key Issue	Description of Evidence
HN1 Reduce harmful effects of mental health conditions on a person's health outcomes	1.1 Mental illness and disorders are widely recognised as being a significant risk factor for suicide and self-harm.	Globally, for every suicide, there are approximately 20 suicide attempts. Since the mid-1980s, the number of Australians who died by suicide has averaged around 2,000 annually, while for over a decade, more than 20,000 Australians have been admitted to hospital annually as a result of intentionally self-inflicted injuries. Mental disorders such as major depression, psychotic illnesses and eating disorders are associated with an increased risk of suicide especially after discharge from hospital or when treatment has been reduced, and people with alcohol or drug abuse problems have a higher risk of dying by suicide than the general population. **Across PHN** *Suicide* Suicide is among the top 10 leading causes of death in Perth North (ASR=12.0 per 100,000). The rate ratio relative to all of Australia was 1.07. The suicide rate was much higher for males (ASR=17.8 per 100,000) compared to females (ASR=6.4 per 100,000). However, the rate ratio relative to all of Australia was 1.19 for females compared to 1.04 for males. *Intentional self-harm* Perth North had a higher hospitalisation rate for intentional self-harm (ASR=182 per 100,000) than the National average (ASR=161 per 100,000). The bed day rate for Perth North was almost 1.6 times the National average. Compared to the National average, Perth North had a higher proportion of intentional self-harm hospitalisations in specialised care (38.2% versus 26.4%) and a higher proportion of bed days in specialised care (69.4% versus 57.4%).

Outcomes of the health needs analysis		
		Youth suicide In Western Australia, suicide is the main cause of preventable deaths for 15-24 year olds. The 2014 State Ombudsman's investigation into 36 suicide deaths by youth aged 13-17 years found that the majority had experienced trauma from abuse and/or neglect. Aboriginal youth made up 36% of suicide deaths but accounted for only 6% of the youth population in Western Australia. Suicide accounted for 21.9% of deaths among 15-19 year old males and 28.7% of deaths among 20-24 year old males in 2012. For females, these rates are 32.6% and 25.2% respectively.
		Place-based *Suicide* Mundaring, Stirling and Bayswater – Bassendean SA3s had the top three suicide rates in Perth North. These areas all had suicide rates that were more than 1.3 times the National rate. Mundaring had the highest rate for males (ASR=26.0 per 100,000), and (from data available) Stirling had the highest rate for females (ASR=8.7 per 100,000). *Intentional self-harm* Joondalup SA3 had the highest hospitalisation rate for intentional self-harm (ASR=217 per 100,000), and Perth City SA3 had the highest bed day rate (ASR=1,947 per 100,000) in Perth North.

Outcomes of the health needs analysis		
HN2 Perinatal care for the mother and baby to act as a protective factor to prevent future mental health problems	2.1 Pregnant women and women who have just given birth are more likely to experience depression	Data from the 2010 Australian National Infant Feeding Survey showed that 1 in 5 mothers of children aged 24 months or less had been diagnosed with depression. More than half of these mothers reported that their diagnosed depression was perinatal (that is, the depression was diagnosed from pregnancy until the child's first birthday). Perinatal depression was most commonly reported among mothers who: • were younger (aged under 25) • were smokers • came from lower income households • spoke English at home • were overweight or obese • had an emergency caesarean section.
	2.2 Affected mothers may negatively impact children's development	**Across PHN** The percentage of children who were developmentally vulnerable on one or more domains was lower in Perth North PHN (19.4%) compared with Western Australia (21.3%) and Australia overall (22.0%). However, there were sub-regions with relatively high rates (refer to discussion below).
		Place-based Within Perth North PHN, Mundaring SA3 had the highest percentage of children who were developmentally vulnerable (24.2%), followed by Swan SA3 (23.4%) and Kalamunda SA3 (23.1%).
HN3 Reduce impact of mental health conditions on medium and long-term physical health morbidity and multi-morbidities	3.1 People with chronic conditions are at higher risk of developing co-occurring physical and mental health conditions or exacerbation of pre-existing conditions	Comorbidity can involve more than one mental disorder, or one mental disorder and one or more physical conditions. Mental health problems are known to have high rates of comorbidity with chronic physical conditions. Around one in nine Australians aged 16-85 had a mental disorder and physical condition at the same time. People living in the most disadvantaged areas of Australia were 65% more likely to have a comorbidity than those living in the least disadvantaged areas.
HN 4 People with persistent mental illness need to be able to	4.1 People living with severe and complex mental illness are	**Across PHN** *Schizophrenia and delusional disorders*

Outcomes of the health needs analysis		
access appropriate and timely primary care to avoid hospitalisations	more likely to present to hospitals when primary health care is not accessible	Overall, Perth North had a lower rate of hospitalisations (ASR=137 per 100,000) for schizophrenia and delusional disorders compared to the National average (ASR=164 per 100,000). However, the data indicates that there are areas of high need within Perth North. *Bipolar and mood disorders* Perth North had a higher hospitalisation rate (ASR=124 per 100,000) for bipolar and mood disorders compared to the National average (ASR=101 per 100,000). Moreover, the bed day rate for Perth North was almost 1.4 times the National average. *Children and Youth* Prevalence rates for severe mental disorders among children and youth in the Perth North PHN are lower than national averages.
		Place-based *Schizophrenia and delusional disorders* Perth City SA3 had the highest hospitalisation rate (ASR=270 per 100,000) for schizophrenia and delusional disorders in Perth North. This rate was more than 1.6 times the National average and almost twice the PHN average. The bed day rate (ASR=7742 per 100,000) was more than twice the National and PHN averages. Mundaring and Bayswater – Bassendean SA3s had hospitalisation and bed day rates above the PHN average. *Bipolar and mood disorders* Perth City SA3 had the highest hospitalisation rate (ASR=182 per 100,000) for bipolar and mood disorders in Perth North and the highest bed day rate (ASR=3701 per 100,000). Cottesloe – Claremont, Stirling and Bayswater – Bassendean SA3s also had hospitalisation and bed day rates above the PHN average. *Children and Youth* The SA3 with the highest estimated prevalence of severe mental disorders in 4-11 year olds is Swan, and in 12-17 years is Mundaring .
		Across PHN

<table>
<tr><th colspan="3">Outcomes of the health needs analysis</th></tr>
<tr><td rowspan="2">HN5 Children and youth are a priority area of focus, along with the early intervention to increase access and improve outcomes</td><td rowspan="2">5.1 There are sub-regions in Perth North PHN with a relatively high prevalence of mental disorders among youth.</td><td>Perth North PHN had a lower estimated prevalence of mental disorders among 4-17 year olds compared to the National average.

Child abuse is a significant factor affecting youth mental health, with far-reaching consequences throughout life. Recent child protection data indicated that between July 2016 and June 2017, the suburb of Midland in the Swan SA3 received the highest number of mandatory reports in the Perth North PHN.</td></tr>
<tr><td>Place-based
The table below highlights the SA3s with the highest prevalence by age group and severity of mental disorder.

<table><tr><th></th><th>Mild</th><th>Moderate</th><th>Severe</th></tr><tr><td>4 - 11 years</td><td>Wanneroo</td><td>Swan, Wanneroo</td><td>Swan</td></tr><tr><td>12 - 17 years</td><td>Kalamunda</td><td>Wanneroo</td><td>Mundaring</td></tr></table></td></tr>
<tr><td>HN6 Demand and future demand for service related to vulnerable individuals who are not accessing services</td><td>6.1 Socio-economic factors such as over-crowding and sub-standard housing, low household income, long-term unemployment and lower educational attainment can lead to long-term physical and mental health problems.</td><td colspan="2">There is a strong association between socioeconomic disadvantage and the prevalence of mental problems and illness. The Socio-Economic Index for Areas (SEIFA) Index of Disadvantage can be used to determine the relative level of disadvantage of different areas based on a range of statistics gathered through census surveys. The indicators reflecting social disadvantage include low income, low educational attainment, high unemployment, and jobs in relatively unskilled occupations.

Across PHN
Perth North PHN has a SEIFA index of 1045 (Australia is the baseline at 1000).
Between one third and one half of the differences in life expectancy are considered to be explained by differences in the social determinants of health.
Socio-economic factors such as over-crowded housing, low household income, and high imprisonment rates put Aboriginal people at higher risk of poor physical and mental health. In addition, access to mainstream health services is more difficult for this population group due to socioeconomic disadvantage, relatively high mobility, poor record keeping and a lack of culturally appropriate mainstream health services.</td></tr>
</table>

Outcomes of the health needs analysis		
		• Mental disorders have a range of risk and protective factors that are related to socioeconomic and environmental determinants, such as poverty, war and inequity, but also individual and family-related determinants.
		Place-based • The most disadvantaged areas based on the Socio-Economic Index for Areas (SEIFA) scores in the PHN are the SA3s of Swan (1014) and Bayswater - Bassendean (1017). • Swan SA3 also has four out of five of the selected disadvantage indicators, including: people who left school at Year 10 or below, or did not go to school; single parent families with children aged less than 15 years; dwellings rented from the government housing authority; housing suitability, families requiring extra bedrooms; and dwellings with no motor vehicle.

	6.2 People from minority groups can be more vulnerable to poorer physical and mental health problems.	Individuals in vulnerable or disadvantaged groups are more likely to experiences adverse health outcomes. As such, they can be frequent users of the healthcare system and other social system supports, if accessible.
		
		Across PHN
		• Perth North PHN has the lowest proportion of Aboriginal people in WA, at 1.4% of the population, 14,103 people.
		• There is a higher number of culturally and linguistically diverse (CALD[1]) populations in the Perth North PHN (18.6%) than the WA (16.6%) and Australian (17.9%) averages. This equates to 188,694 people.
		  ○ About 4.1% of the Perth North PHN population was born in a predominantly non-English speaking country and had been a resident in Australia for less than five years, similar to WA (3.9%) and Australia (3.8%).
		  ○ An estimated 2.3% of the PHN residents had low English proficiency in 2016, which was lower than the Australian average (2.9%).
		• During 2010-15, 2,943 humanitarian migrants were settled into Perth North PHN.
		• About 3.9% of the Perth North PHN population was living with a profound or severe disability. Health differences between people with disabilities and the general population

[1] CALD is defined as people born in predominantly non-English speaking countries.

Outcomes of the health needs analysis		
		are likely to be socially determined, leaving people who live with a disability more vulnerable to poor health outcomes. • In Perth North PHN, 9.8% of residents aged 15 years and over were providing unpaid assistance to persons with a disability.
		Place-based • The Mundaring SA3 (3.6%) had the highest proportion of Aboriginal people in the Perth North PHN. • The Swan SA3 had the highest number of Aboriginal people in the Perth North PHN (3,516). • Stirling (24.9%) and Perth City (24.5%) SA3s had the largest proportion of CALD residents. • In Perth North PHN, the highest number of recorded homeless people was in Perth (909), Stirling (419), and Wanneroo (302). • The highest proportion of residents aged 15 years and over providing unpaid assistance to persons with disability was in Mundaring SA3 (11.1%).
HN7 Consumer capacity to respond to mental health conditions through effective communications and awareness raising through a stepped care approach	7.1 Patients have limited understanding how to access the right care at the right time in the right place	**Across PHN** Stakeholder feedback indicates that mental health patients often have difficulty navigating the health system due to the complexity of the system. It is important that patients and/or carers know how to access the right care early on, to prevent the need for hospitalisation. It is also important that coordinated care is provided for patients in the community, after they have been discharged from hospital. Poor discharge practices have been shown to result in readmission to hospital within 28 days and more serious adverse outcomes for patients and their families.
		Place-based Interviews with stakeholders indicated that the majority of mental health cases presenting to hospital are psychosocial in nature such as patients facing housing challenges and dealing with alcohol and/or drug issues. The increased volume of admissions magnifies issues surrounding discharge and highlights the need for adequate coordination of mental health care in the community. The stakeholder forum reported that it was difficult to find and access services in the community prior to a crisis point being reached. It was emphasised that if the right care could be accessed at an early stage, it would potentially prevent emergency department presentations.

Outcomes of the health needs analysis		
		Another group of stakeholders indicated that knowledge, access and information flow between services was a key issue and that, prior to entry into tertiary care, a patient's knowledge of services was minimal. The public sector, in particular, lacked organisation and fragmentation of the system made it difficult to obtain information about services.

Section 3 – Outcomes of the service needs analysis

Outcomes of the service needs analysis		
Identified Need	Key Issue	Description of Evidence
SN1 Model of care focus on early intervention to enable effective self-management and prevent exacerbation of existing mental health conditions, or development of suicidal ideation	1.1 There are sub-regions in Perth North PHN with relatively high levels of psychological distress and/or mental and behavioural disorders.	**Across PHN** *Psychological distress* Overall, Perth North had a lower estimated rate of people living with a high level of psychological distress (ASR=9.5%) compared to the National (ASR=11.7%) and State (ASR=9.8%) averages. *Mental and behavioural disorders* The estimated rate of mental and behavioural disorders in Perth North overall (ASR=13.6%) was not significantly higher than the State (ASR=14.0%) or National (ASR=13.6%) averages. However, the estimated rate for females in Perth North (ASR=14.6%) was significantly higher than for males (ASR=12.6%).
		Place-based *Psychological distress* Swan SA3 had a significantly higher rate of people living with a high level of psychological distress (ASR=11.6%) compared to the PHN average (ASR=9.5%). *Mental and behavioural disorders* Perth City, Stirling and Bayswater - Bassendean SA3s had the highest estimated rates of mental and behavioural disorders in Perth North (ASR > 14%). Stirling and Swan had the highest estimated rates for females (both ASR=15.2%), while Perth City had the highest rate for males (ASR=13.9%).
	1.2 Limited early intervention services available across the PHN for people with	**Across PHN** Interviews with stakeholders indicated a lack of prevention and early intervention services in the community leading to patients being treated at a later stage and in a more acute setting.

<table>
<tr><th colspan="3">Outcomes of the service needs analysis</th></tr>
<tr><td></td><td>mental and behavioural issues, and suicide risk</td><td>Place-based
A stakeholder group noted that early intervention/prevention services were limited in both their availability and quality. Patients and carers reported that day programs were not of a high standard and had limited variety in their activity offerings.

Another stakeholder group reported that patients in higher risk groups often had difficulty accessing community mental health services. It was not uncommon for a patient to be referred to a service and then rejected because their case was deemed too complex or high risk.</td></tr>
<tr><td rowspan="2">SN2 Capacity of the health workforce to recognise and respond to mental health presentations</td><td rowspan="2">2.1 Inadequate supply of primary care services mean people with health care needs are not able to access the right care at the right time in order to effectively manage their health</td><td>Across PHN
Workforce supply
Perth North had a higher number of psychologists and psychiatrists per 10,000 residents compared to WA overall in 2015. The number of psychologists in Perth North was about twice the number of general practitioners (GPs) and about 10 times the number of psychiatrists per 10,000 residents.

MBS utilisation
Overall, the mental health MBS service utilisation in Perth North was higher than WA but lower than Australia overall. However, the utilisation of psychologists in Perth North was substantially higher than both WA and Australia.</td></tr>
<tr><td>Place-based
Workforce supply
In Perth North, the lowest supply of psychologists was in Kalamunda SA3 . Mundaring SA3 had the lowest supply of GPs in Perth North. In contrast, Perth City SA3 had the largest supply of psychologists, GPs and psychiatrists per 10,000 residents in Perth North. .

MBS utilisation
The table below identifies the SA3s in Perth North with the highest and lowest mental health service utilisation rates.

<table>
<tr><th></th><th>Highest service utilisation</th><th>Lowest service utilisation</th></tr>
<tr><td>Overall</td><td>Perth City</td><td>Wanneroo</td></tr>
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Outcomes of the service needs analysis				
		Psychiatrist	Cottesloe - Claremont	Wanneroo
		Clinical Psychologist	Perth City	Wanneroo
		GP	Wanneroo	Stirling
		Other allied health	Mundaring	Cottesloe - Claremont
	2.2 Current mental health interventions have high reliance on pharmaceutical interventions	**Across PHN** *PBS utilisation* The rate of mental health-related prescriptions in Perth North was similar to rates observed in WA and Australia overall, with antidepressants being the most commonly prescribed medication.		
		Place-based *PBS utilisation* Perth City SA3 had the highest rates of mental health-related prescriptions in Perth North and Mundaring SA3 had the lowest.		
SN3 Reduce over-reliance on the acute sector	3.1 Current investment focus more on high cost low volume acute care rather than the high volume community based services earlier in the care continuum	**Across PHN** Perth North PHN had a lower number of public hospital separations per 1000 residents for mild, moderate and severe mental disorders compared to Western Australia overall.		
		Place-based *Acute admissions by severity of mental disorder* Perth City SA3 had the highest number of public hospital separations per 1000 residents for mild, moderate and severe mental disorders in Perth North PHN. *Acute admissions by diagnosis-related group (DRG)* Perth City SA3 had the highest number of public hospital separations per 1000 residents for five out of eight diagnosis-related groups (DRGs). Mundaring SA3 had the highest rate for anxiety, Wanneroo SA3 for childhood mental disorders and Joondalup SA3 for eating disorders and obsessive compulsive disorders.		
	3.2 Non-urgent mental health-related ED presentations is a reflection of poor	**Across PHN** There is evidence across the PHN that people with mental illness are being treated in the acute care setting when their care may be managed in primary / community care. In the Perth North PHN, there were about 8200 ED presentations		

Outcomes of the service needs analysis		
	management of mental health condition in primary health care	that were non-urgent[2] and categorised as primarily mental health-related in the two year period between 1st July 2013 and 30th June 2015. This equates to around 4100 ED presentations per year in Perth North that are potentially treatable in primary care. The most common diagnoses overall were alcohol-related mental disorders (20.5%) and stress-related mental disorders (18.0%). About 10.1% of presentations were diagnosed as depressive episodes. On further analysis, the largest group was males aged between 26 and 45 years (22.2%).
		Place-based Perth City, Bayswater – Bassendean and Mundaring SA3s had the highest rates of non-urgent mental health-related ED presentations (per 1000 persons per year) in Perth North. Perth City had the highest percentage of presentations for alcohol-related mental disorders (30.5%) and Bayswater – Bassendean had the highest percentage for stress-related mental disorders (19.2%).
	3.3 People with mental illness are not linked in with GPs or primary mental health services, including after-hours care	**Across PHN** In 2012, the Stokes Review identified that in Western Australia, delays in access to treatment were causing mental health, alcohol and drug problems to worsen, leading to the need for higher cost treatment. MindSpot is a digital mental health service providing a free service for Australian adults experiencing difficulties with anxiety, stress, depression and low mood through online screening assessments and treatment courses. This service can be used as an early intervention service, and can indicate the need for such services at a place-based level. No referral is necessary, and it gives an indication of those who are linked in with a GP. The data indicated that the majority of patients in Perth North PHN would not discuss their mental health with their GP. *After-hours care* Perth North PHN had a high proportion of after-hours emergency department presentations for non-urgent mental health-related conditions (64.2%). This may indicate a shortage of after-hours mental health services.
		Place-based Perth City SA3 had the highest utilisation of GP mental health, allied health and allied mental health MBS items in the Perth North PHN. Stirling SA3 had the lowest utilisation of GP mental health plans and Bayswater – Bassendean SA3 had the lowest utilisation of allied mental health items.

[2] Triage category 4 or 5.

Outcomes of the service needs analysis		
		After-hours care Within Perth North PHN, Mundaring SA3 had the highest proportion of after-hours emergency department presentations for non-urgent mental health-related conditions (68.8%). . Recent co-design workshops identified a gap in after-hours mental health service provision in the Midland, Kalamunda and Mundaring areas. *Accessibility* In Perth North PHN, there are sub-regions where mental health services may be more difficult to access for reasons including lack of access to the internet and/or transport. In Perth City SA3, about 4.4% of adults had difficulty accessing places with transport, or were housebound. Bayswater – Bassendean SA3 had the lowest percentage of households connected to the internet (83.4%) and the highest percentage (1.7%) of adults who experienced a barrier to accessing healthcare when needed in the last 12 months, with the main reason being cost of service. Recent co-design workshops identified that transport limitations, including lack of infrastructure and cost, were a significant barrier to accessing mental health services for people residing in the Midland, Kalamunda and Mundaring areas.
SN4 Culturally secure mental health services for Aboriginal people, and CALD population (i.e. use of appropriate communication tools such as language, culture, print-size etc.)	4.1 Poor access of existing services by Aboriginal people, and people from culturally and linguistically diverse backgrounds, culture security of service delivery can be improved	**Across PHN** Interviews with stakeholders indicated restricted access to culturally secure services for Aboriginal people living with chronic conditions, including mental health conditions. Some of the issues identified include: • lack of referral by GPs to culturally-appropriate allied health providers, • cultural and language barriers, • the need to travel to Perth for some types of treatment, • lack of access to transport, and • lack of awareness of services by the community and providers.
		Place-based The headspace centres in the Perth North PHN have a relatively low utilisation by CALD youth, particularly in Midland. The Wanneroo mental health pilot, which commenced at the beginning of June 2017, had no referrals of people who identify as Aboriginal or Torres Strait Islander either through a GP or self-referral. There were also limited referrals received for people with a CALD background.

Outcomes of the service needs analysis		
	4.2 Lack of Aboriginal mental health services in sub-regions with higher density of Aboriginal population	There is a shortage of mental health services for Aboriginal people in the Perth North PHN.
SN5 Services meeting the needs of, and accessible for socioeconomically disadvantaged, and aged population groups	5.1 Lack of appropriately targeted services for the socioeconomically disadvantaged groups	**Across PHN** Perth North PHN has a low level of socioeconomic disadvantage compared to Western Australia overall (refer to HN6). However, there are sub-regions within Perth North that have higher levels of disadvantage (refer to place-based discussion below).
		Place-based Within Perth North PHN, the areas with the highest levels of socioeconomic disadvantage are Swan and Bayswater – Bassendean SA3s. Both areas have relatively high rates of psychological distress; however, MBS mental health-related utilisation rates are relatively low. This indicates that there is a need for appropriately targeted mental health services in these areas.
	5.2 Lack of appropriately targeted services for the aged group	**Across PHN** To date, there have been few studies examining the mental health of older adults. A report by SANE Australia found that most studies focused on dementia and physical health problems and that there was a lack of attention given to mental illness in the elderly. There is also a shortage of mental health services for older adults, especially those living in supported accommodation. The report indicated that there is a need for targeted mental health services for the elderly and for easily accessible information about these services for both patients and carers. In Western Australia, older adults aged 65 years and over were significantly more likely to have used a primary, hospital based or allied health service than younger adults (16-64 years), but were significantly less likely to have used mental or alternative health services. In the Perth North PHN, about 13.6% of the population is aged 65 years or older. However, there is a shortage of mental health services targeted to the aged group.

Outcomes of the service needs analysis		
		Place-based Within the Perth North PHN, the Stirling SA3 has the highest number (n=30,376) and the Cottesloe - Claremont SA3 has the highest percentage (18.0%) of residents aged 65 years or older. However, there is a shortage of targeted mental health services in these areas.

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